Full wwPDB X-ray Structure Validation Report (i)

Feb 1, 2016 – 09:52 PM GMT

PDB ID	:	4V5R
Title	:	The crystal structure of EF-Tu and Trp-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
A user guide is available at
http://wwpdb.org/validation/2016/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The following versions of software and data (see references (1)) were used in the production of this report:

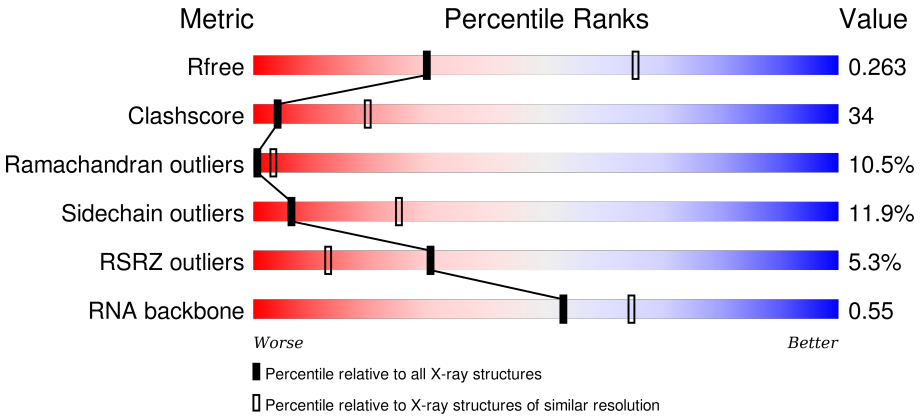
MolProbity	:	4.02b-467
Mogul	:	1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix)	:	1.9-1692
EDS	:	rb-20026688
Percentile statistics	:	20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac	:	5.8.0135
CCP4	:	6.5.0
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	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_{free}	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	38% 48% 11%
1	CA	1522	42% 45% 10%
2	AB	256	30% 50% 10% 9%
2	CB	256	33% 46% 11% 9%

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Mol	Chain	Length	Quality of chain
3	AC	239	31% 46% 9% 14%
3	CC	239	32% 46% 8% 14%
4	AD	209	5% 37% 49% 13%
4	CD	209	2% 37% 48% 13%
5	AE	162	51% 36% 6% 7%
5	CE	162	51% 34% 7% 7%
6	AF	101	39% 50% 12%
6	CF	101	42% 48% 11%
7	AG	156	6% 49% 46%
7	CG	156	51% 45%
8	AH	138	55% 39% 6%
8	CH	138	55% 38% 7%
9	AI	128	15% 40% 49% 10%
9	CI	128	2% 39% 51% 9%
10	AJ	105	21% 33% 49% 10% 7%
10	CJ	105	6% 33% 49% 10% 7%
11	AK	129	5% 49% 36% 8% 8%
11	CK	129	3% 51% 33% 8% 8%
12	AL	131	4% 37% 46% 11% 5%
12	CL	131	37% 47% 11% 5%
13	AM	126	11% 28% 56% 13%
13	CM	126	6% 33% 52% 13%
14	AN	61	2% 30% 49% 16%
14	CN	61	2% 28% 49% 18%
15	AO	89	44% 48% 7%

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Mol	Chain	Length	Quality of chain
15	CO	89	44% 48% 7%
16	AP	88	5% 40% 41% 14% 6%
16	CP	88	2% 36% 45% 13% 6%
17	AQ	105	3% 49% 37% 8% 6%
17	CQ	105	44% 42% 8% 6%
18	AR	88	3% 36% 36% 7% 20%
18	CR	88	% 36% 34% 9% 20%
19	AS	93	5% 23% 40% 19% 16%
19	CS	93	6% 25% 39% 18% 16%
20	AT	106	6% 29% 51% 12% 7%
20	CT	106	5% 28% 52% 12% 7%
21	AU	27	11% 30% 52% 7% 11%
21	CU	27	4% 22% 59% 7% 11%
22	AV	76	% 39% 37% 22%
22	AW	76	14% 25% 53% 22%
22	CV	76	% 41% 34% 24%
22	CW	76	16% 28% 53% 18%
23	AX	27	7% 26% 15% 15% 7% 37%
23	CX	27	4% 19% 30% 7% 7% 37%
24	AY	77	% 23% 52% 25%
24	CY	77	5% 29% 48% 23%
25	AZ	405	35% 27% 51% 14% 5%
25	CZ	405	6% 29% 50% 13% 5%
26	B0	85	11% 46% 45% 6%
26	D0	85	8% 47% 45% 5%

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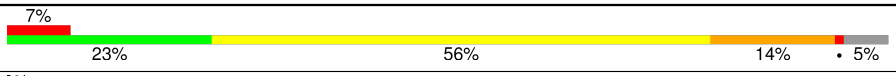
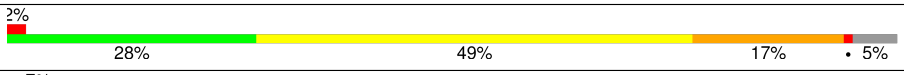
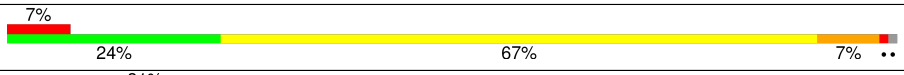
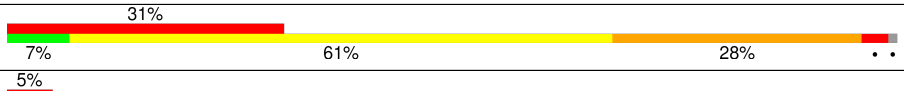
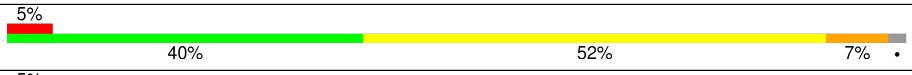
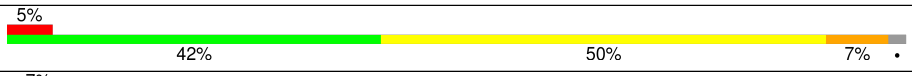
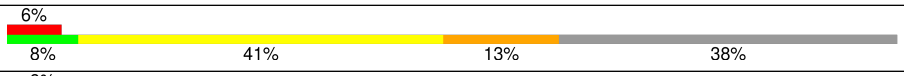
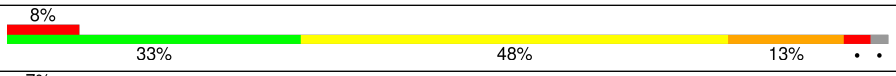
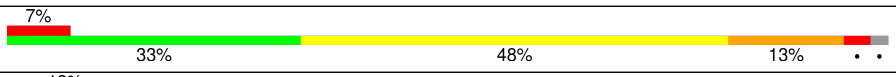
Mol	Chain	Length	Quality of chain
27	B1	98	
27	D1	98	
28	B2	72	
28	D2	72	
29	B3	60	
29	D3	60	
30	B4	71	
30	D4	71	
31	B5	60	
31	D5	60	
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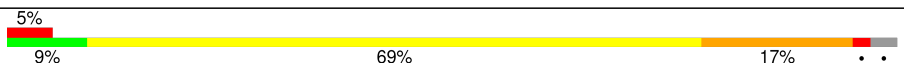
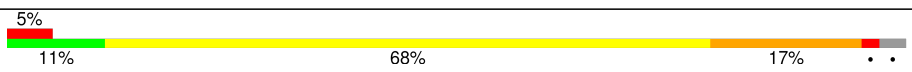
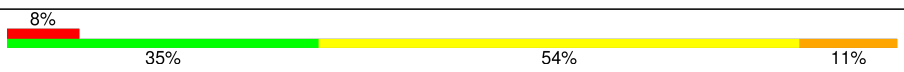
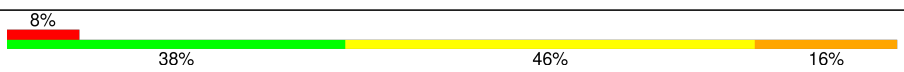
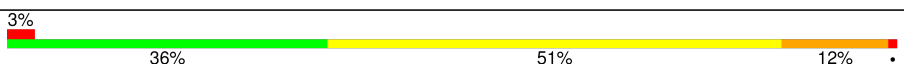
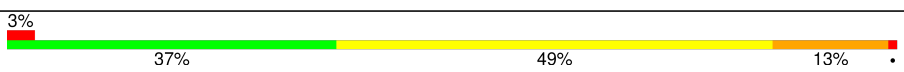
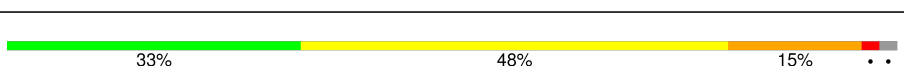
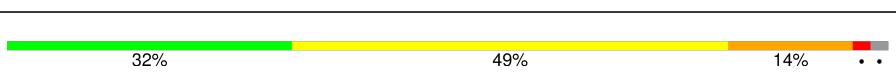
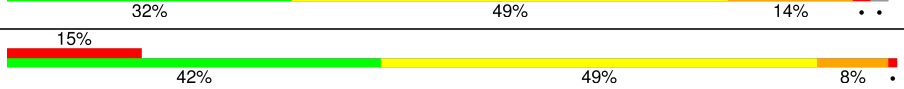
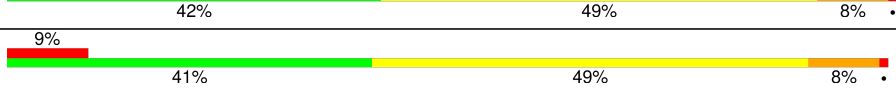
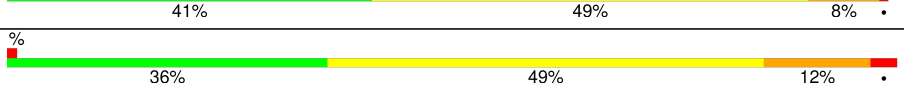
32	D6	54	
33	B7	49	
33	D7	49	
34	B8	65	
34	D8	65	
35	B9	37	
35	D9	37	
36	BA	2915	
36	DA	2915	
37	BB	122	
37	DB	122	
38	BC	229	
38	DC	229	
39	BD	276	

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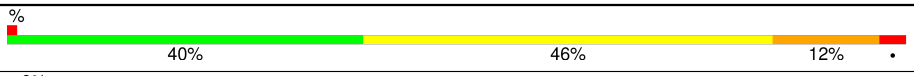
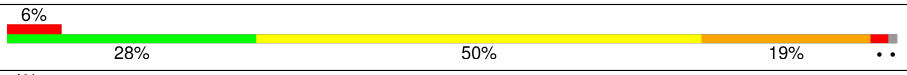
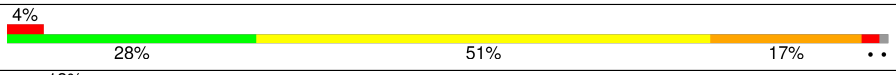
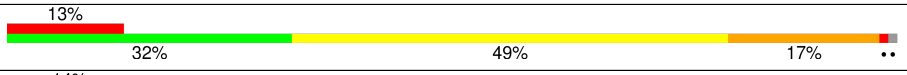
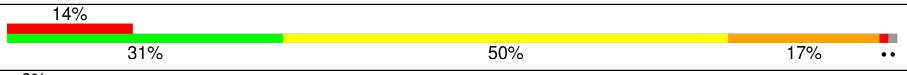
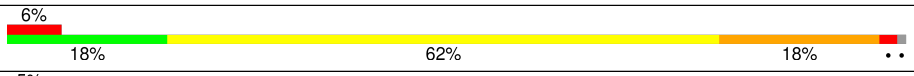
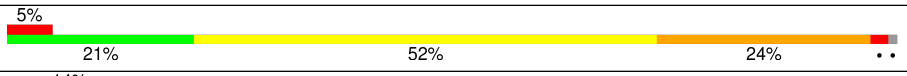
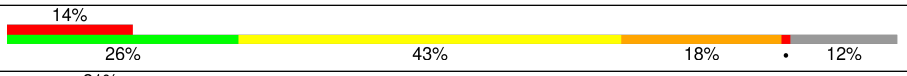
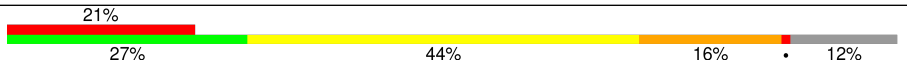
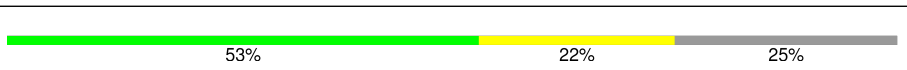
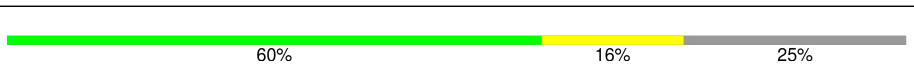
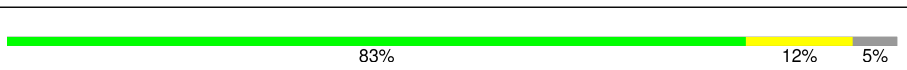
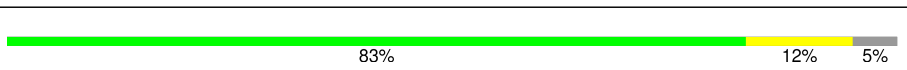
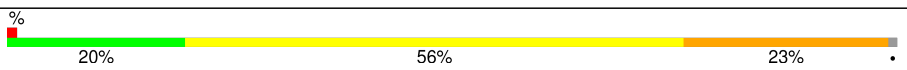
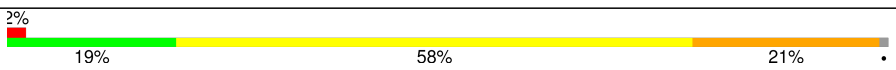
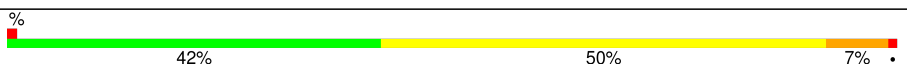
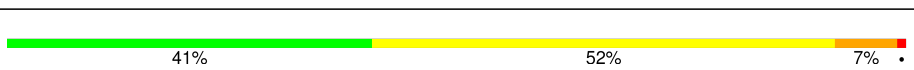
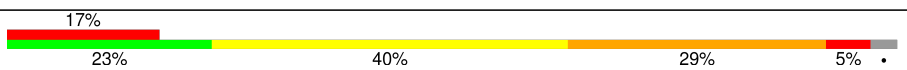
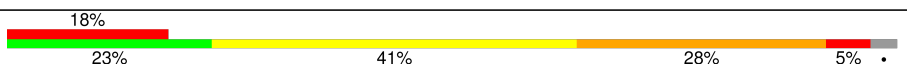
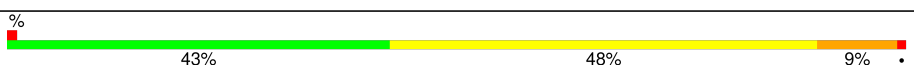
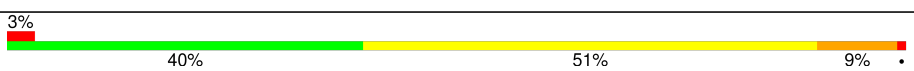
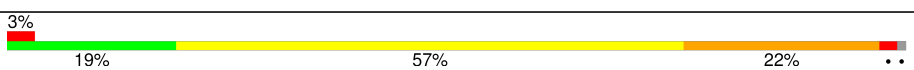
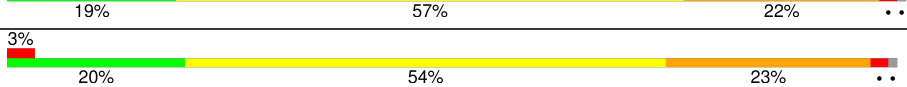
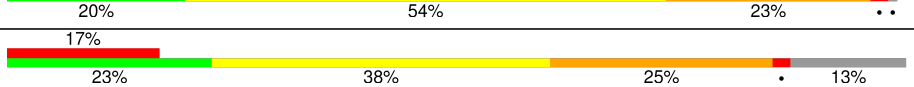
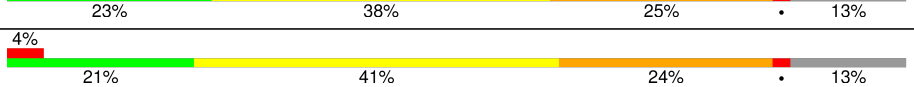
Mol	Chain	Length	Quality of chain
39	DD	276	
40	BE	206	
40	DE	206	
41	BF	210	
41	DF	210	
42	BG	182	
42	DG	182	
43	BH	180	
43	DH	180	
44	BJ	173	
44	DJ	173	
45	BK	147	
45	DK	147	
46	BN	140	
46	DN	140	
47	BO	122	
47	DO	122	
48	BP	150	
48	DP	150	
49	BQ	141	
49	DQ	141	
50	BR	118	
50	DR	118	
51	BS	112	
51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

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Mol	Chain	Length	Quality of chain
52	BT	146	6% 15% 51% 24% 6%
52	DT	146	9% 16% 49% 25% 6%
53	BU	118	3% 32% 59% 8%
53	DU	118	2% 31% 61% 8%
54	BV	101	9% 25% 51% 21%
54	DV	101	10% 27% 50% 21%
55	BW	113	7% 42% 51% 6%
55	DW	113	8% 42% 50% 7%
56	BX	96	5% 26% 59% 9%
56	DX	96	8% 28% 58% 8%
57	BY	110	35% 14% 45% 28% 5% 9%
57	DY	110	36% 15% 44% 29% 9%
58	BZ	206	2% 17% 50% 17% 15%
58	DZ	206	4% 23% 44% 17% 15%

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	AZ	501	-	-	X	-
61	KIR	AZ	502	-	-	-	X

2 Entry composition

There are 61 unique types of molecules in this entry. The entry contains 307330 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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 TRP-TRNA TRP.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
24	AY	77	Total	C	N	O	P	S	0	0	0
			1645	742	289	536	76	2			
24	CY	77	Total	C	N	O	P	S	0	0	0
			1645	742	289	536	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			

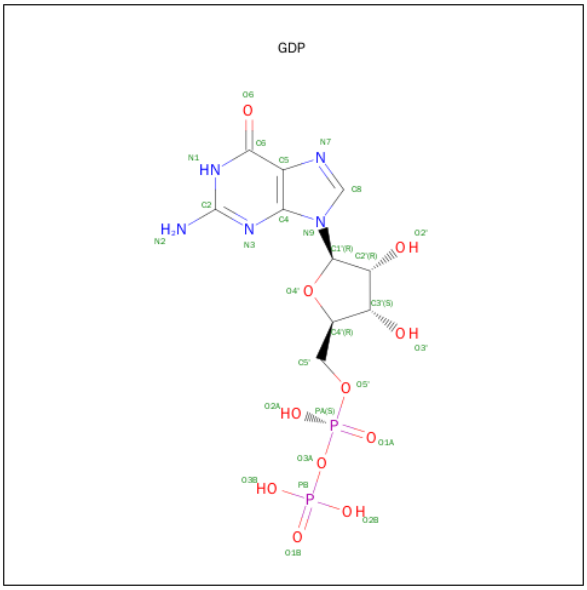
- Molecule 58 is a protein called 50S RIBOSOMAL PROTEIN L25.

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

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

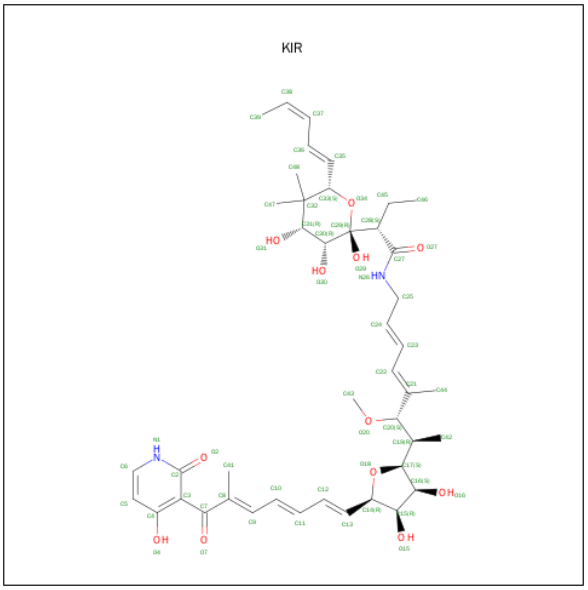
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	B4	1	Total	Zn	0	0
			1	1		
59	CN	1	Total	Zn	0	0
			1	1		
59	AN	1	Total	Zn	0	0
			1	1		
59	B9	1	Total	Zn	0	0
			1	1		
59	D9	1	Total	Zn	0	0
			1	1		
59	D4	1	Total	Zn	0	0
			1	1		
59	CD	1	Total	Zn	0	0
			1	1		
59	AD	1	Total	Zn	0	0
			1	1		

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



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

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



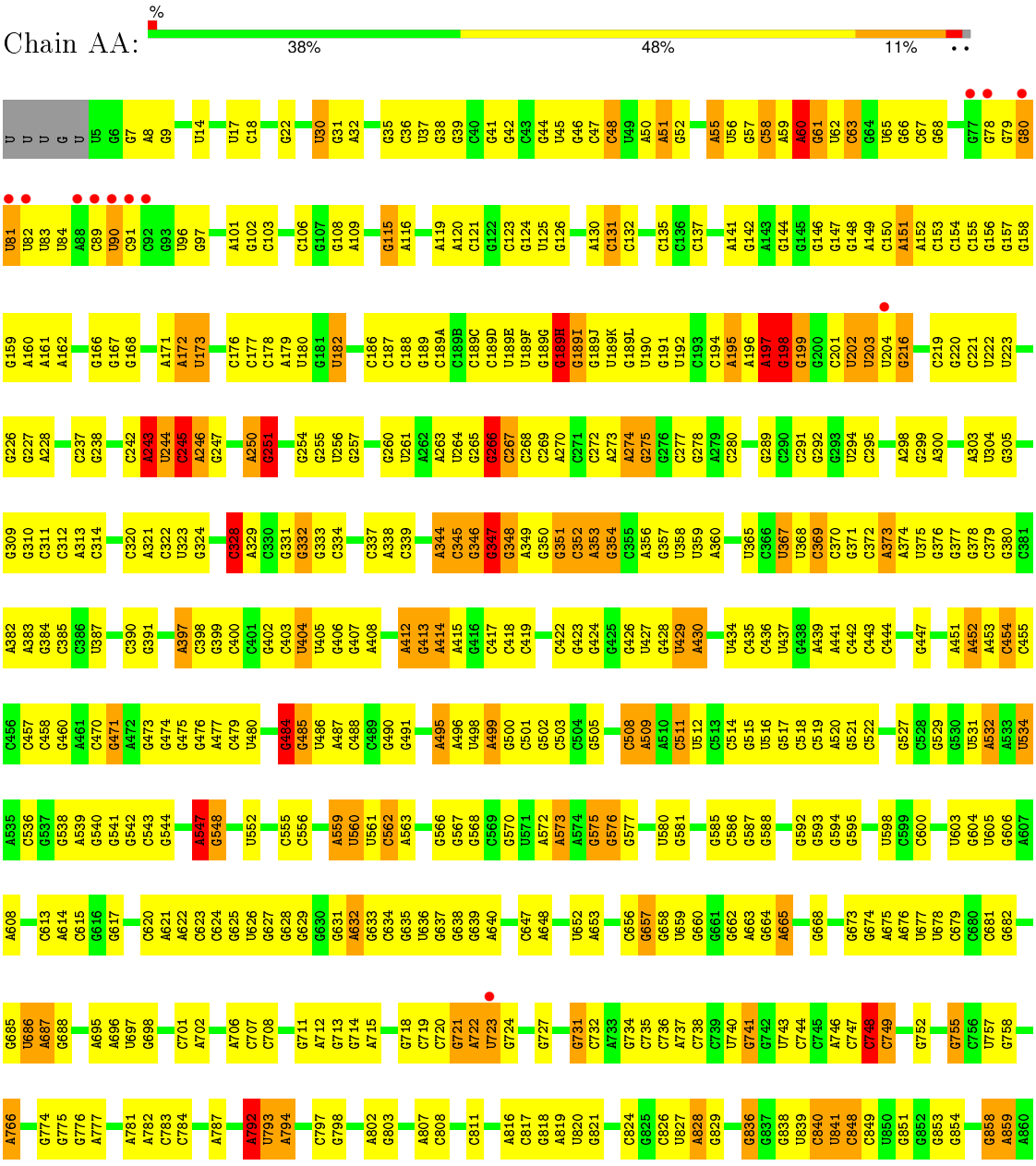
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
61	AZ	1	Total	C	N	O	0	0
			57	43	2	12		
61	CZ	1	Total	C	N	O	0	0
			57	43	2	12		

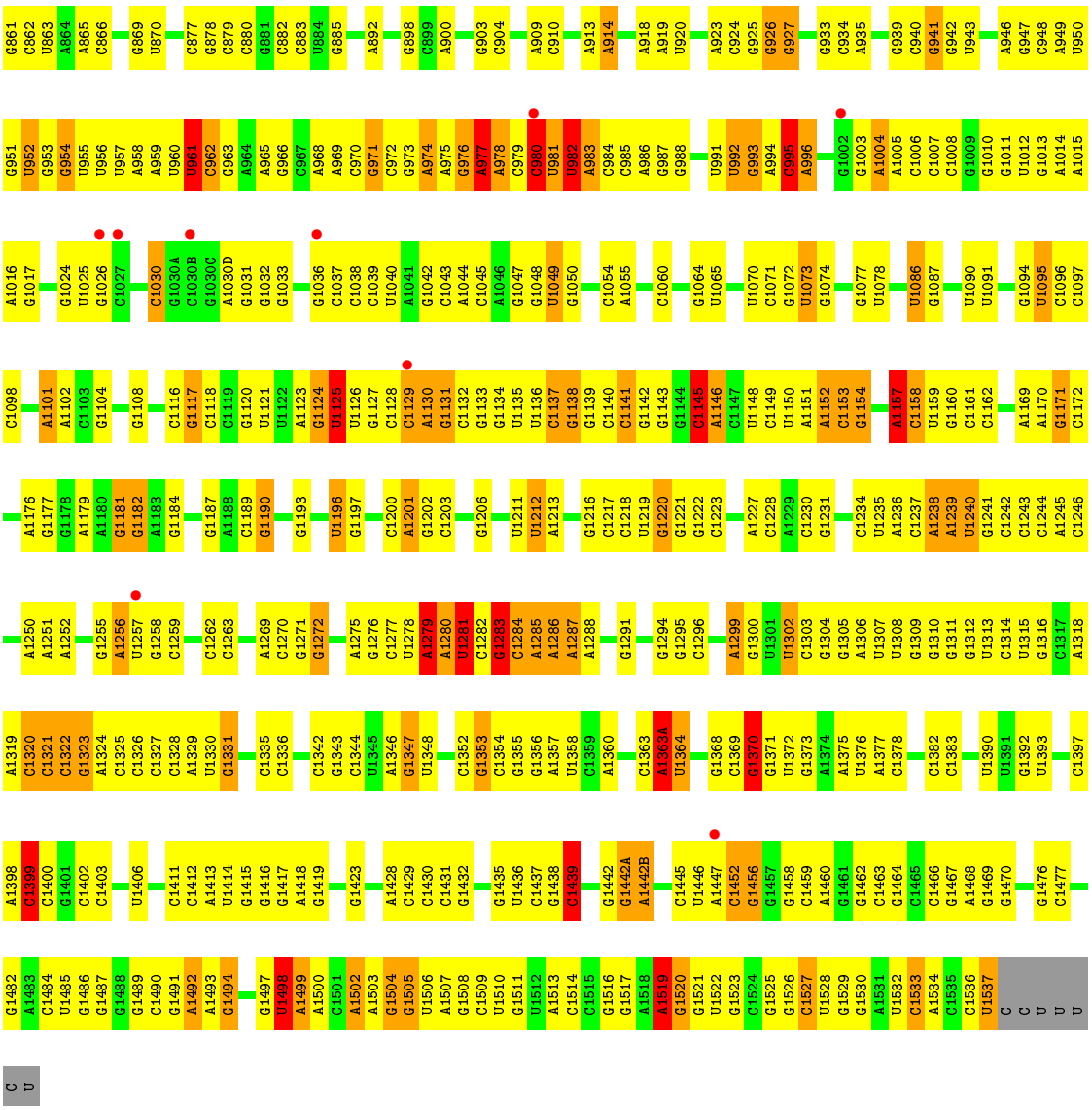
3 Residue-property plots (i)

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

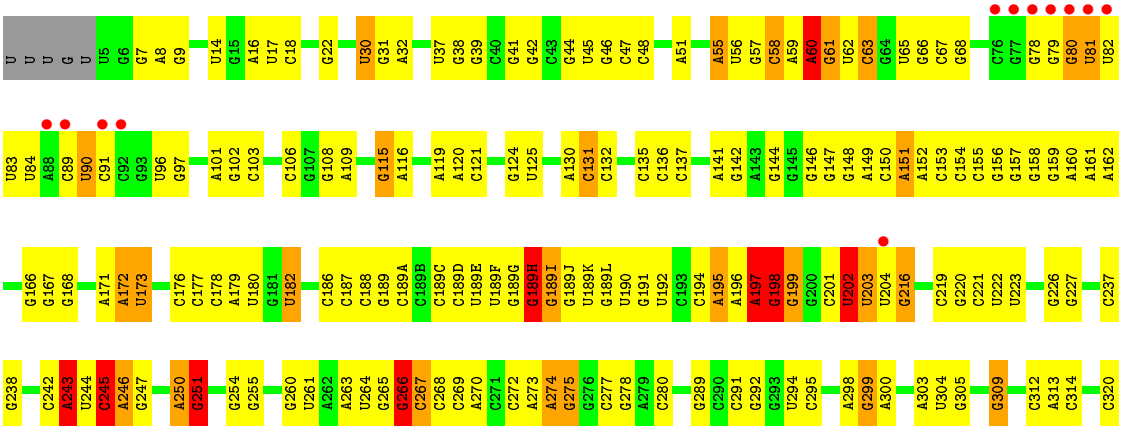
Chain AA:

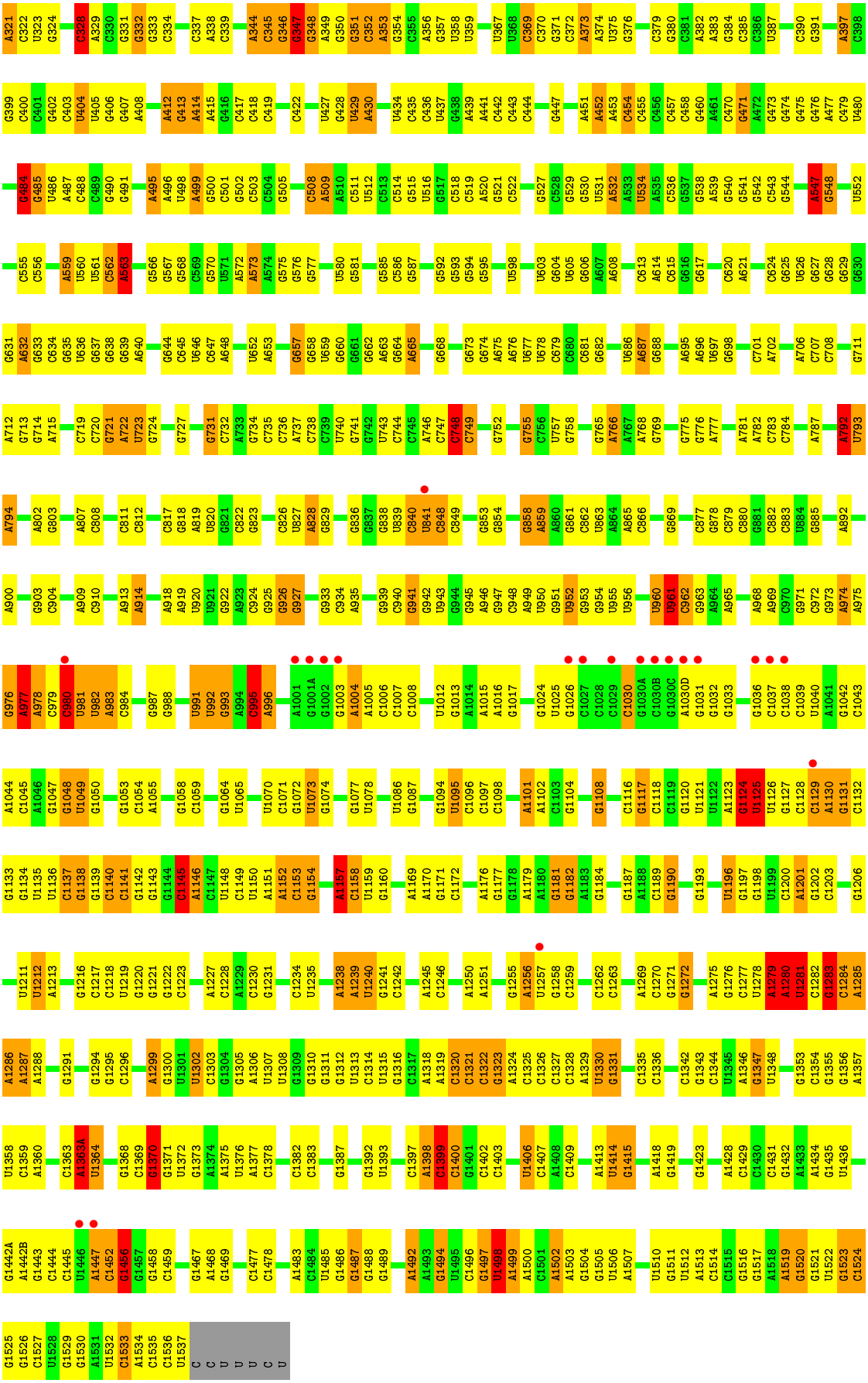




• Molecule 1: 16S RRNA

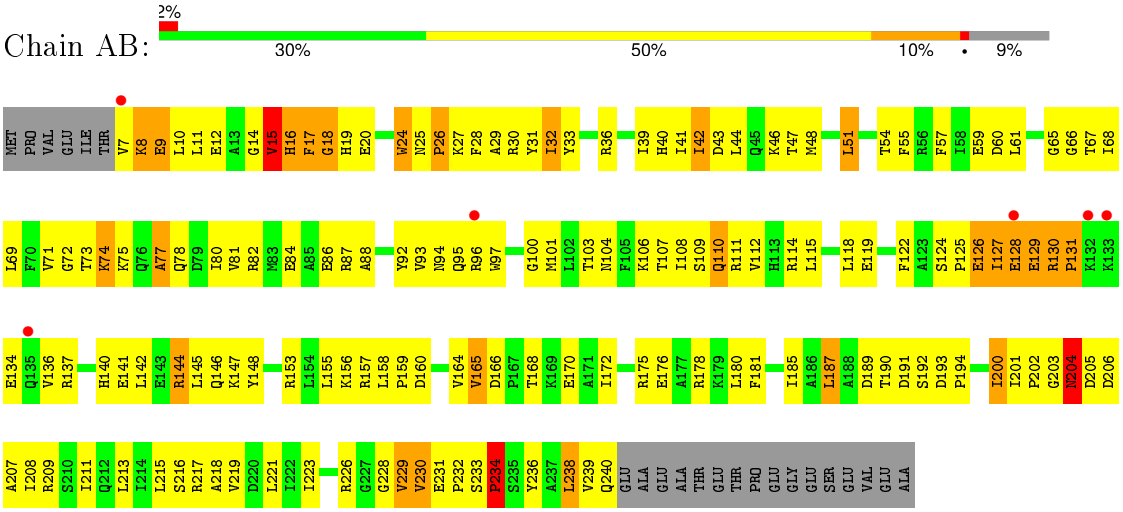
Chain CA:





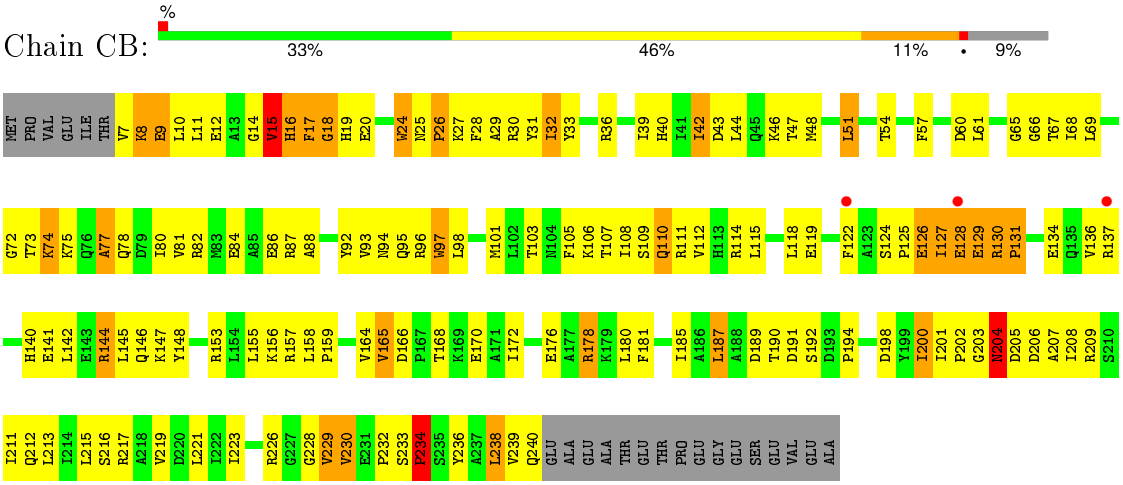
• Molecule 2: 30S RIBOSOMAL PROTEIN S2

Chain AB:



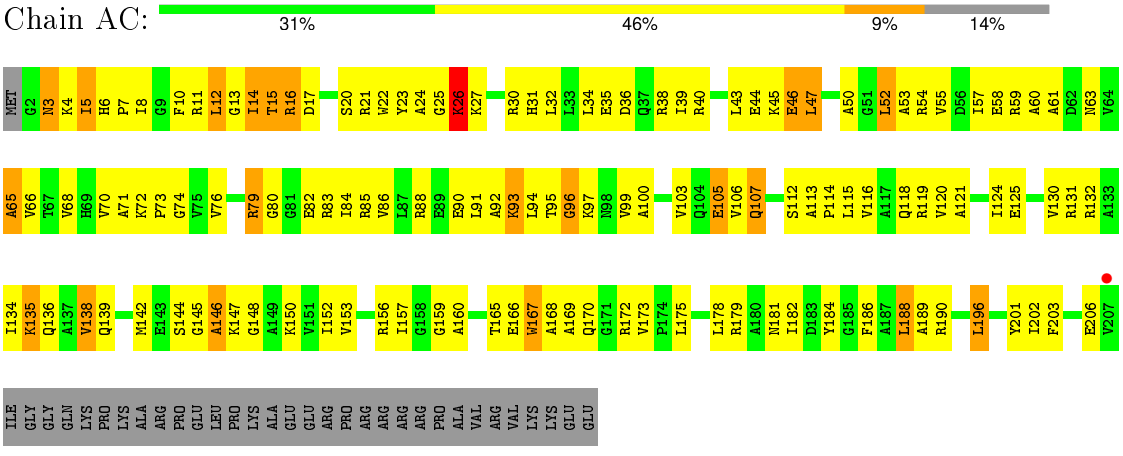
• Molecule 2: 30S RIBOSOMAL PROTEIN S2

Chain CB:



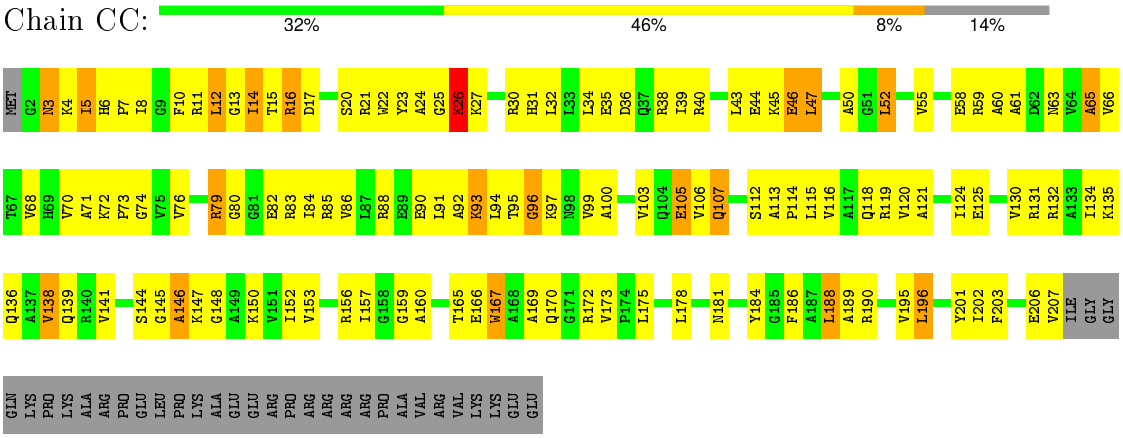
• Molecule 3: 30S RIBOSOMAL PROTEIN S3

Chain AC:



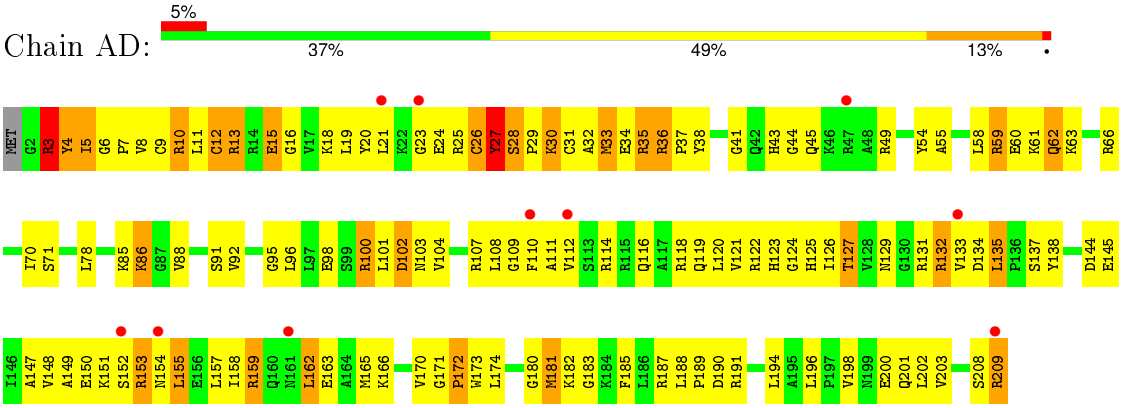
• Molecule 3: 30S RIBOSOMAL PROTEIN S3

Chain CC:



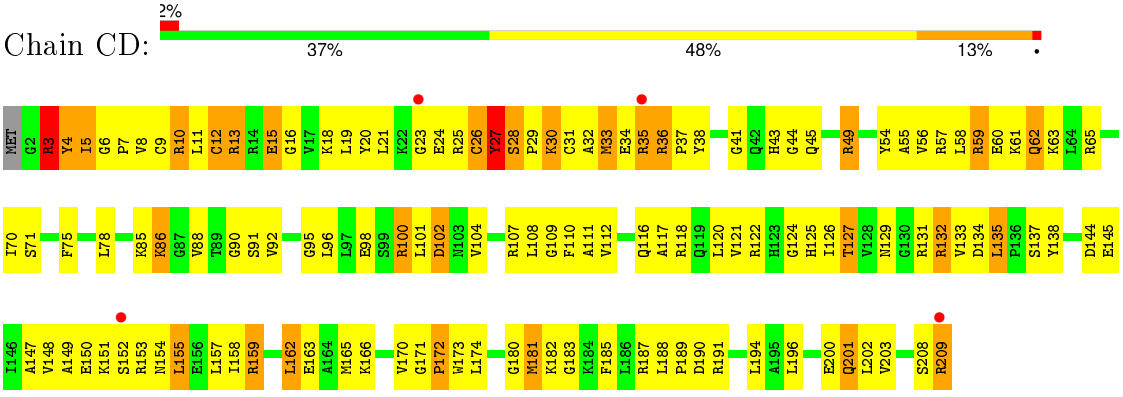
- Molecule 4: 30S RIBOSOMAL PROTEIN S4

Chain AD:



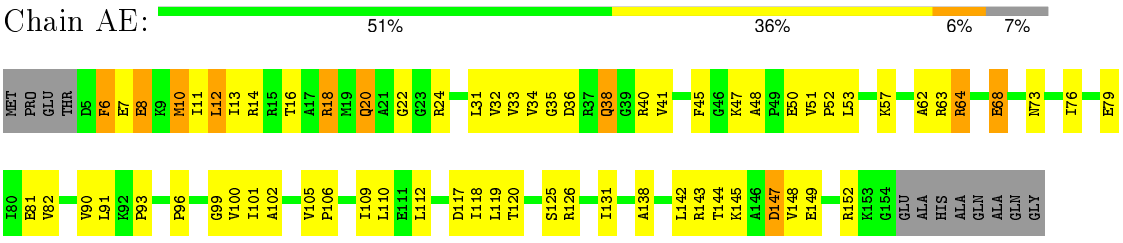
- Molecule 4: 30S RIBOSOMAL PROTEIN S4

Chain CD:



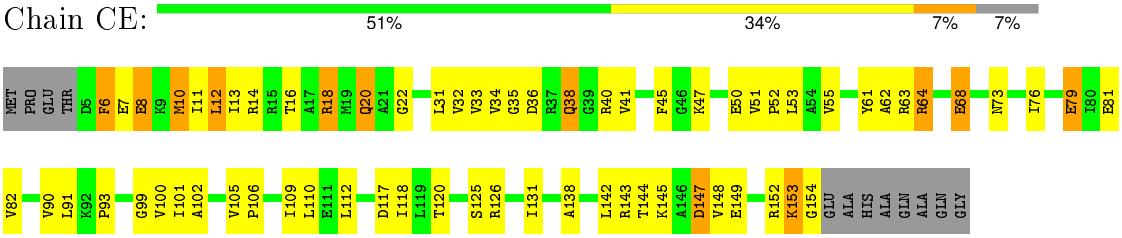
- Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain AE:



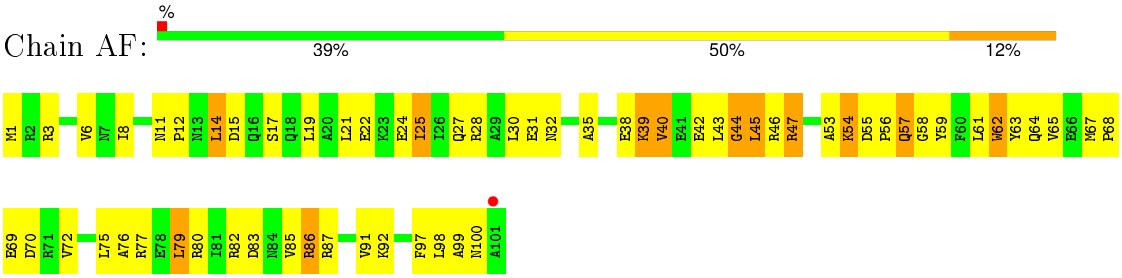
- Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain CE:



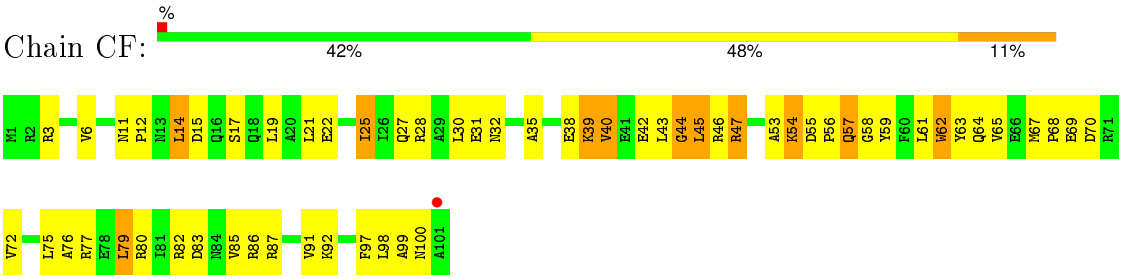
- Molecule 6: 30S RIBOSOMAL PROTEIN S6

Chain AF:



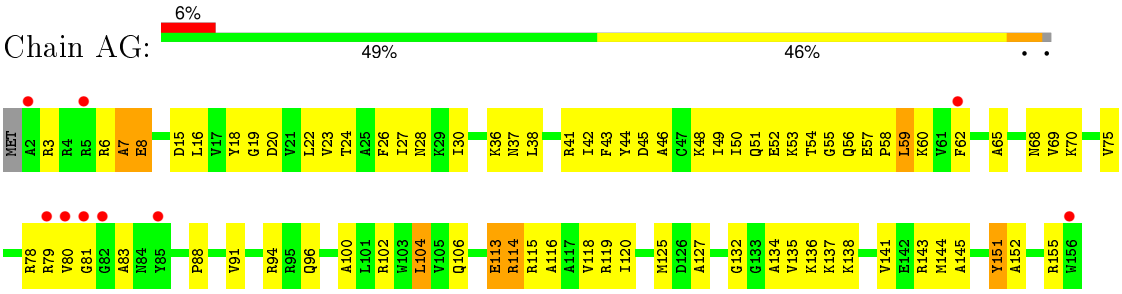
- Molecule 6: 30S RIBOSOMAL PROTEIN S6

Chain CF:



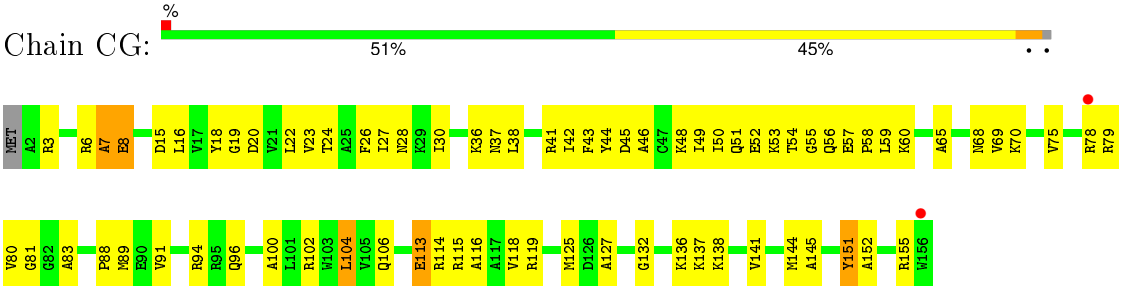
- Molecule 7: 30S RIBOSOMAL PROTEIN S7

Chain AG:



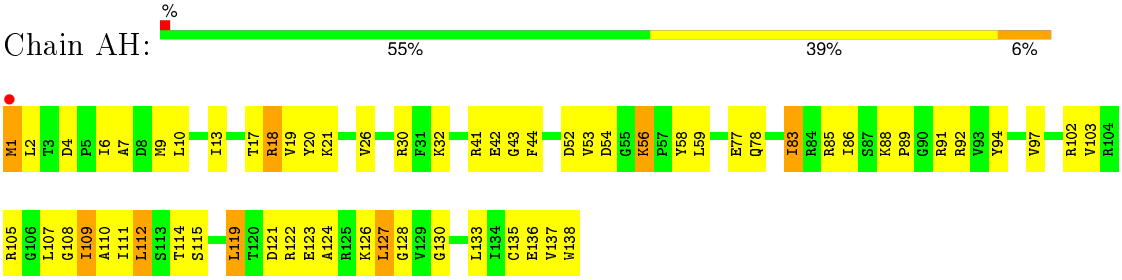
- Molecule 7: 30S RIBOSOMAL PROTEIN S7

Chain CG:



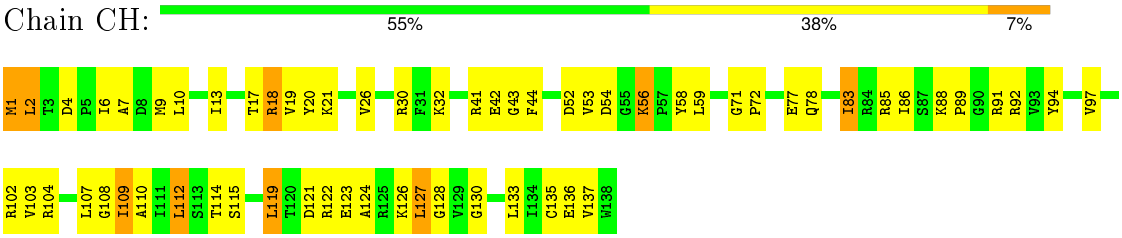
• Molecule 8: 30S RIBOSOMAL PROTEIN S8

Chain AH:



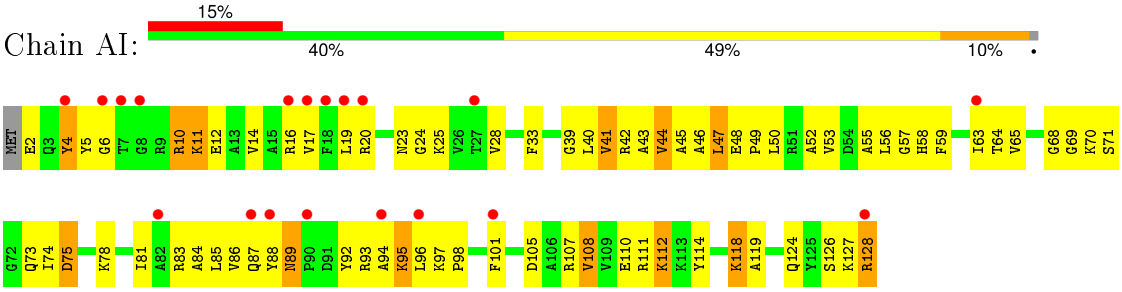
• Molecule 8: 30S RIBOSOMAL PROTEIN S8

Chain CH:



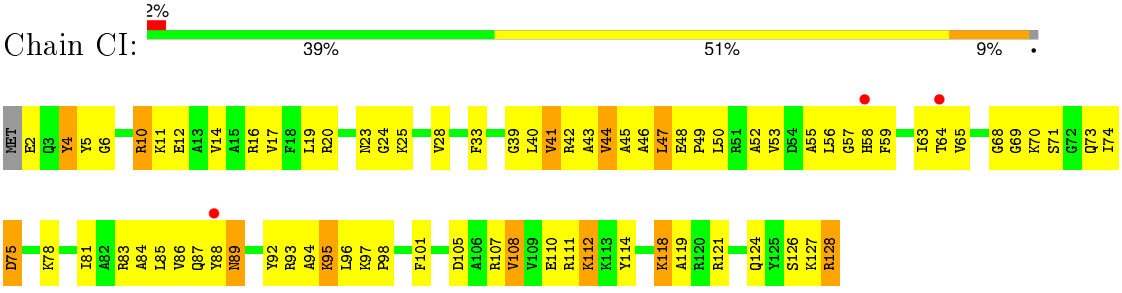
• Molecule 9: 30S RIBOSOMAL PROTEIN S9

Chain AI:



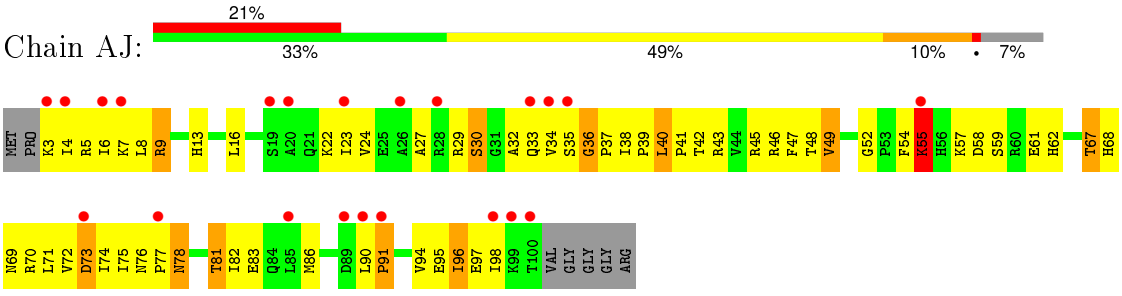
• Molecule 9: 30S RIBOSOMAL PROTEIN S9

Chain CI:



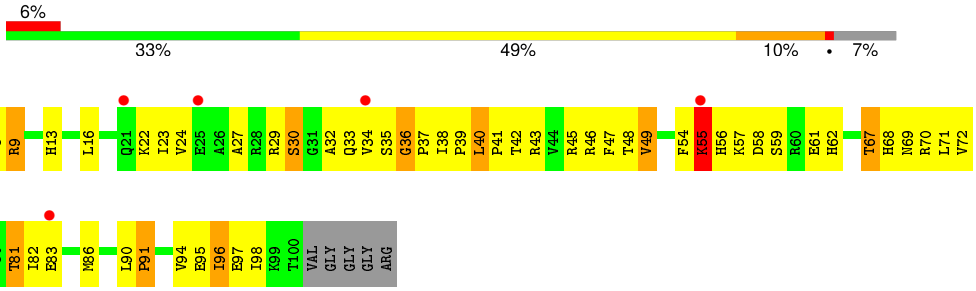
• Molecule 10: 30S RIBOSOMAL PROTEIN S10

Chain AJ:



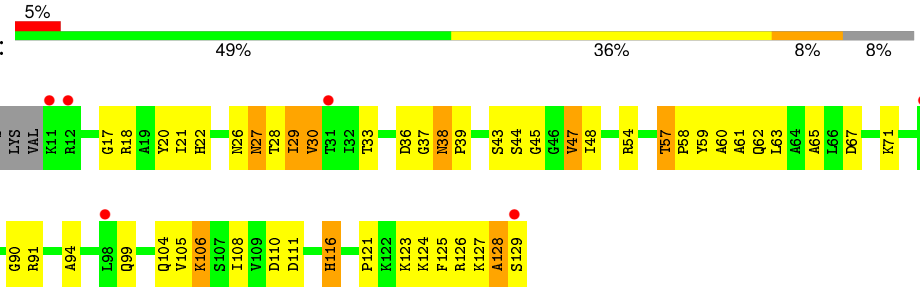
• Molecule 10: 30S RIBOSOMAL PROTEIN S10

Chain CJ:



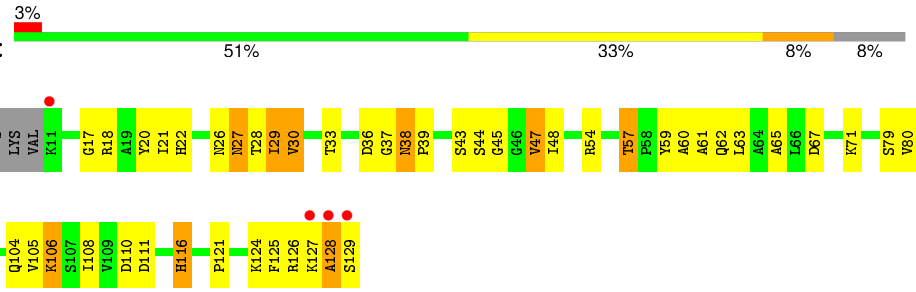
• Molecule 11: 30S RIBOSOMAL PROTEIN S11

Chain AK:



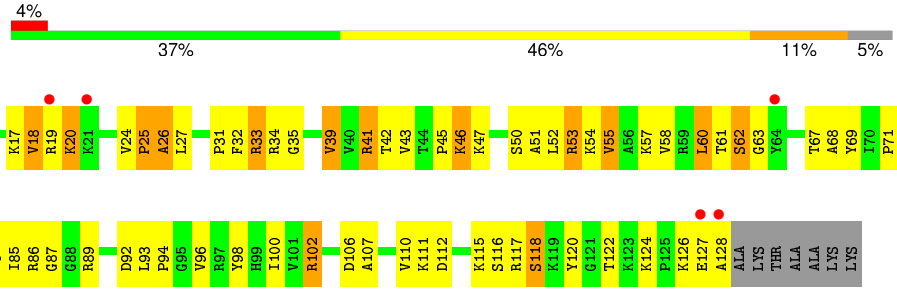
• Molecule 11: 30S RIBOSOMAL PROTEIN S11

Chain CK:



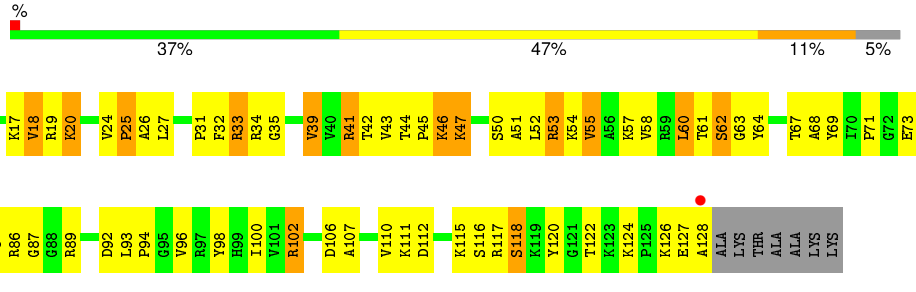
• Molecule 12: 30S RIBOSOMAL PROTEIN S12

Chain AL:



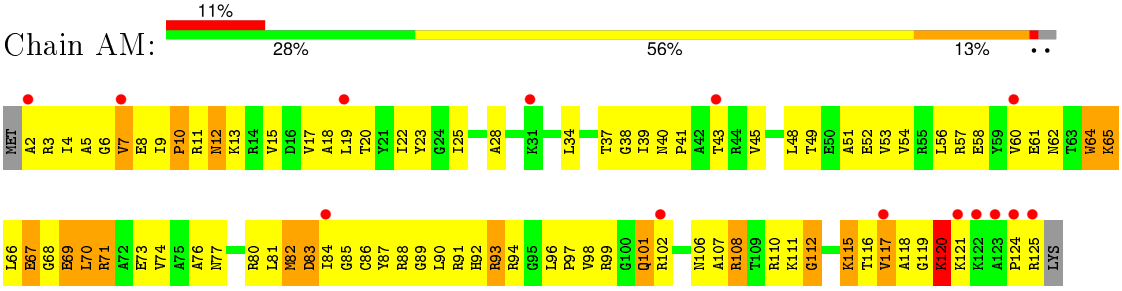
• Molecule 12: 30S RIBOSOMAL PROTEIN S12

Chain CL:



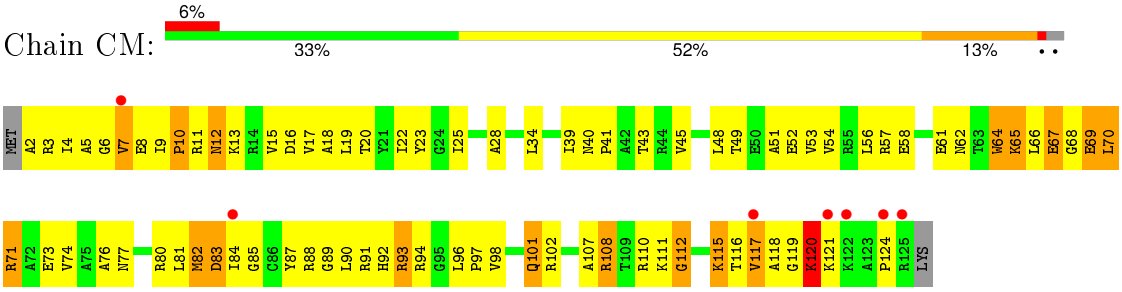
• Molecule 13: 30S RIBOSOMAL PROTEIN S13

Chain AM:



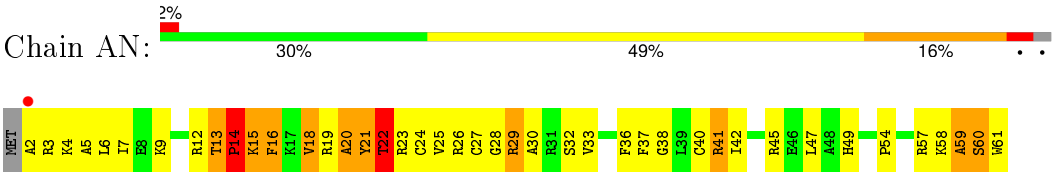
• Molecule 13: 30S RIBOSOMAL PROTEIN S13

Chain CM:



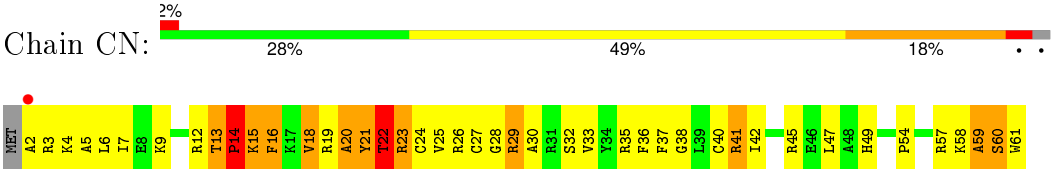
• Molecule 14: 30S RIBOSOMAL PROTEIN S14

Chain AN:



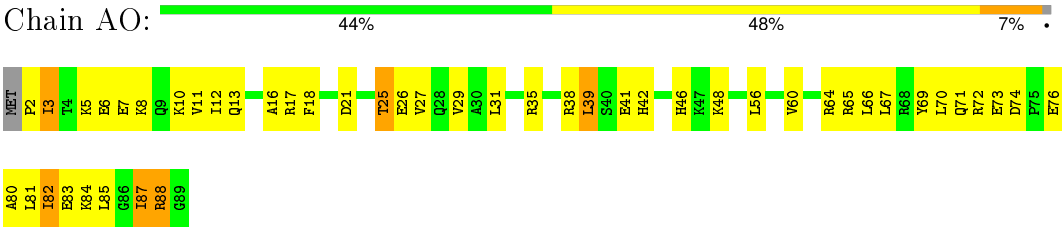
• Molecule 14: 30S RIBOSOMAL PROTEIN S14

Chain CN:



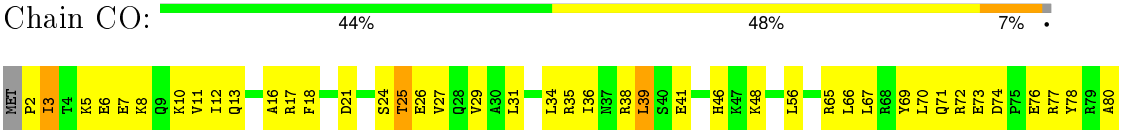
• Molecule 15: 30S RIBOSOMAL PROTEIN S15

Chain AO:



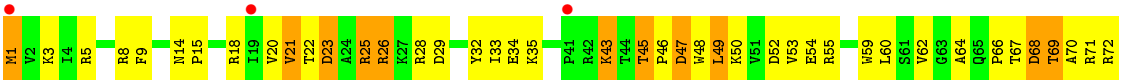
• Molecule 15: 30S RIBOSOMAL PROTEIN S15

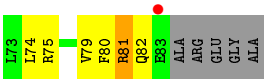
Chain CO:



• Molecule 16: 30S RIBOSOMAL PROTEIN S16

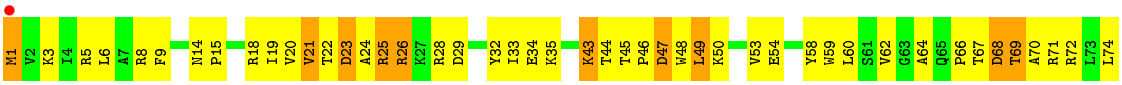
Chain AP:

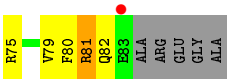




• Molecule 16: 30S RIBOSOMAL PROTEIN S16

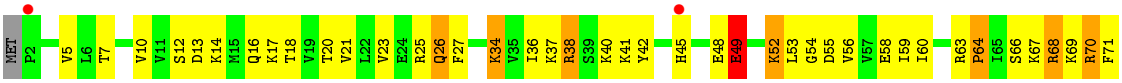
Chain CP:





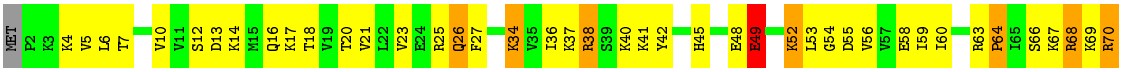
• Molecule 17: 30S RIBOSOMAL PROTEIN S17

Chain AQ:



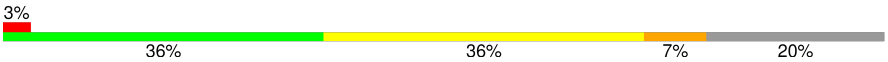
• Molecule 17: 30S RIBOSOMAL PROTEIN S17

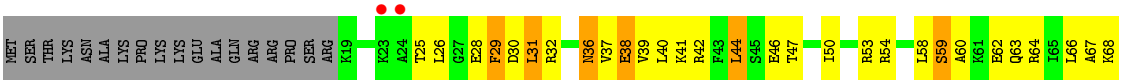
Chain CQ:

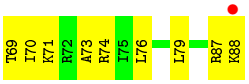


• Molecule 18: 30S RIBOSOMAL PROTEIN S18

Chain AR:

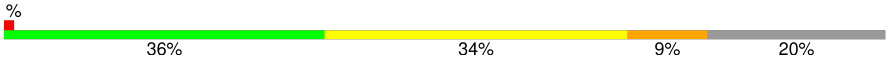


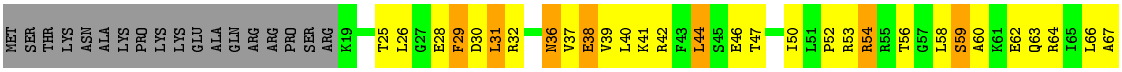




- Molecule 18: 30S RIBOSOMAL PROTEIN S18

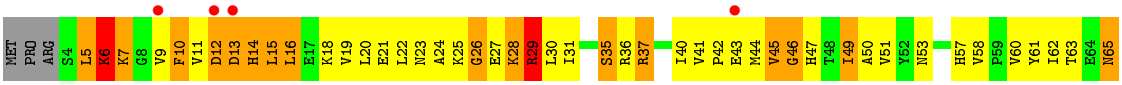
Chain CR:

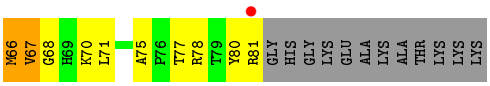




- Molecule 19: 30S RIBOSOMAL PROTEIN S19

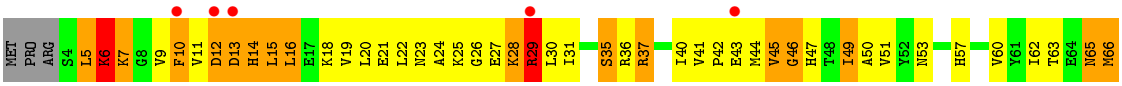
Chain AS:

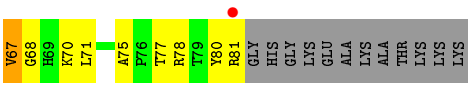




- Molecule 19: 30S RIBOSOMAL PROTEIN S19

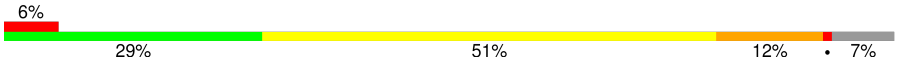
Chain CS:

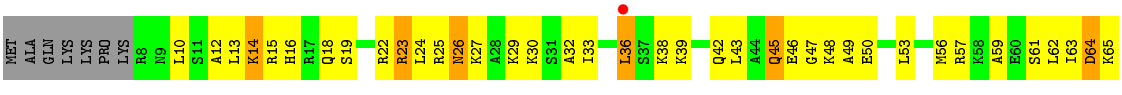


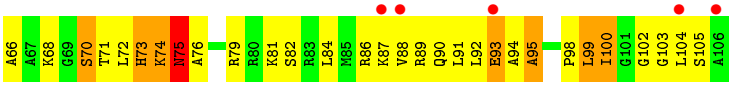


- Molecule 20: 30S RIBOSOMAL PROTEIN S20

Chain AT:

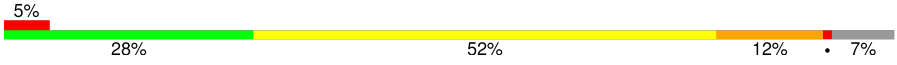


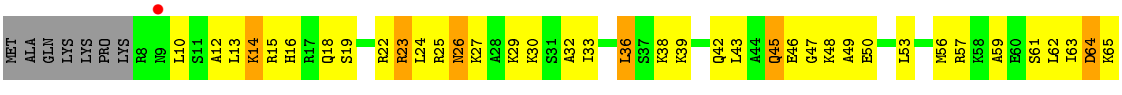


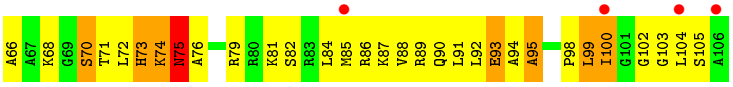


- Molecule 20: 30S RIBOSOMAL PROTEIN S20

Chain CT:

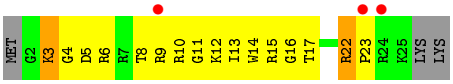






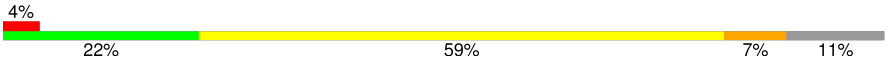
• Molecule 21: 30S RIBOSOMAL PROTEIN THX

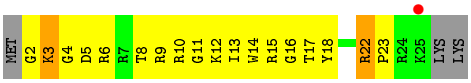
Chain AU:



• Molecule 21: 30S RIBOSOMAL PROTEIN THX

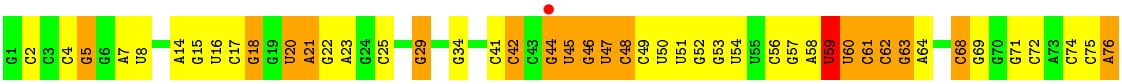
Chain CU:





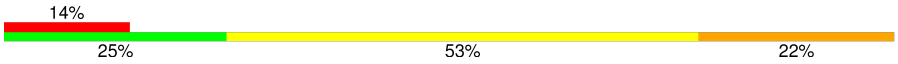
• Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE

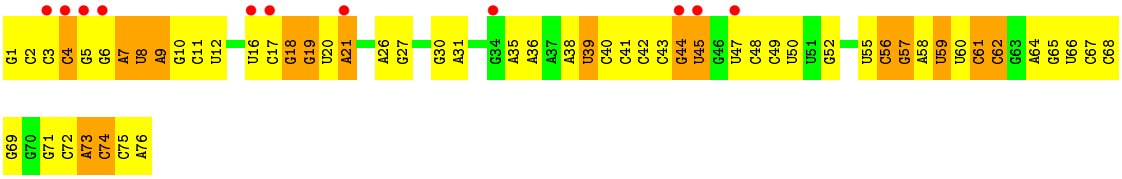
Chain AV:



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

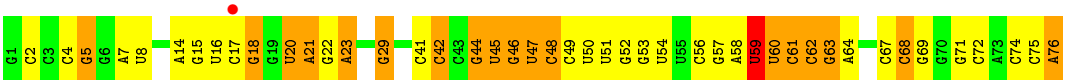
Chain AW:





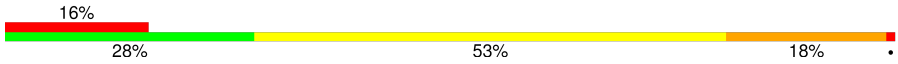
• Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE

Chain CV:



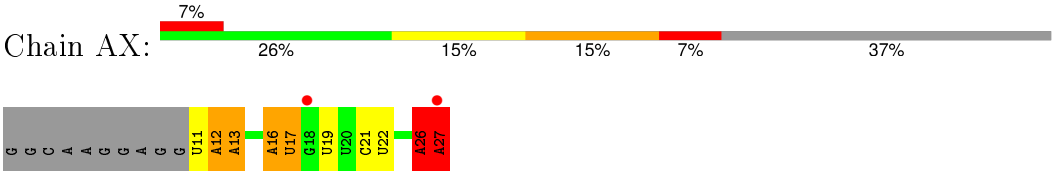
• Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE

Chain CW:



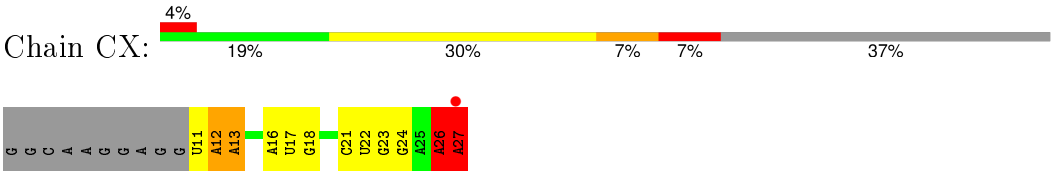
• Molecule 23: MRNA

Chain AX:



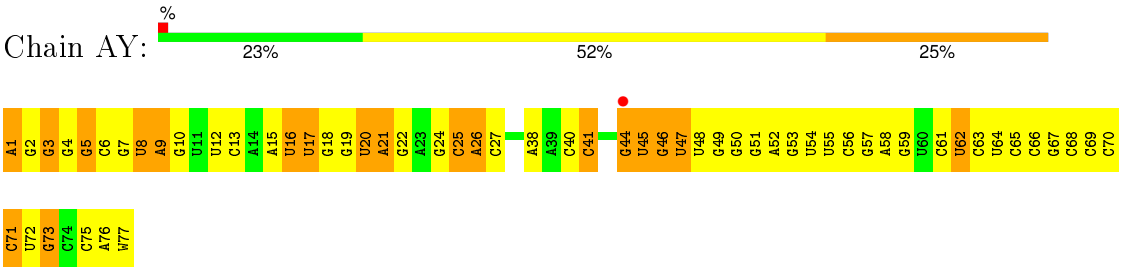
• Molecule 23: MRNA

Chain CX:



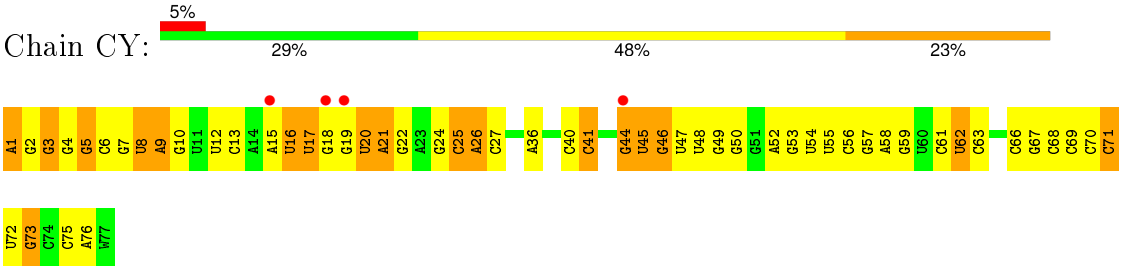
• Molecule 24: A-SITE TRNA TRP-TRNA TRP

Chain AY:



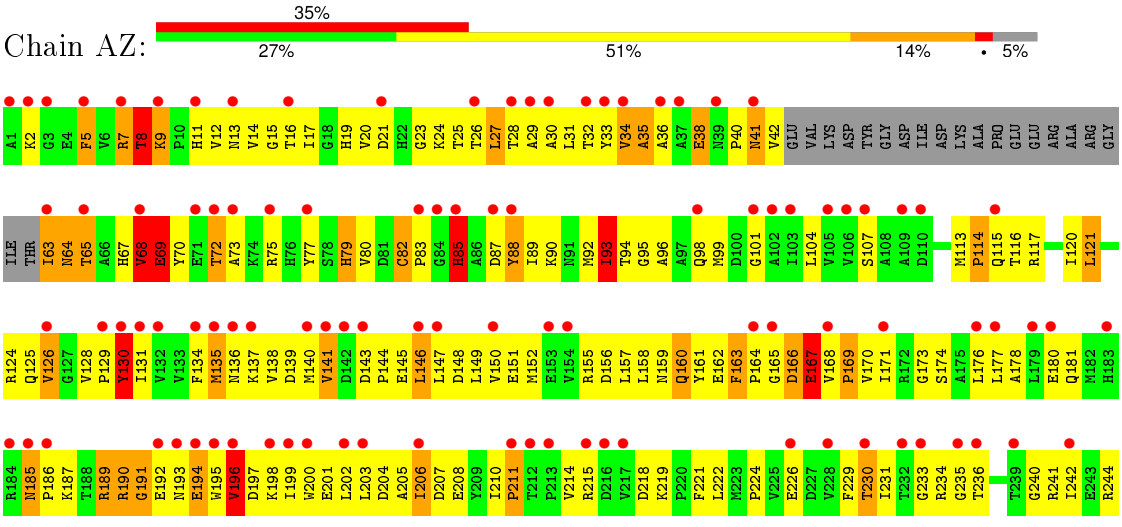
• Molecule 24: A-SITE TRNA TRP-TRNA TRP

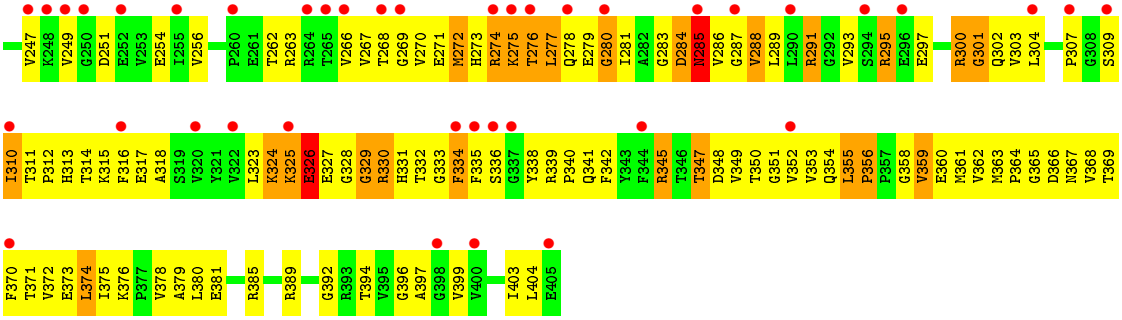
Chain CY:



• Molecule 25: ELONGATION FACTOR TU

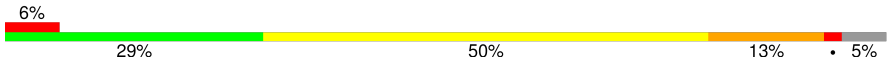
Chain AZ:

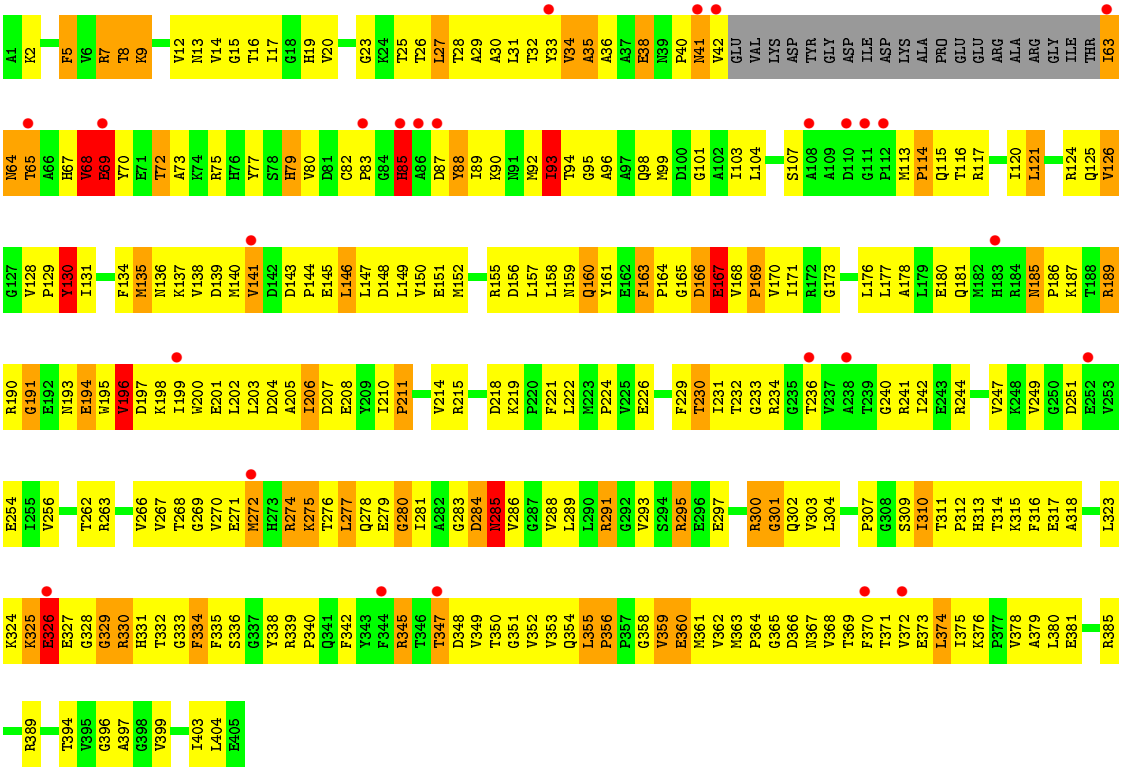




- Molecule 25: ELONGATION FACTOR TU

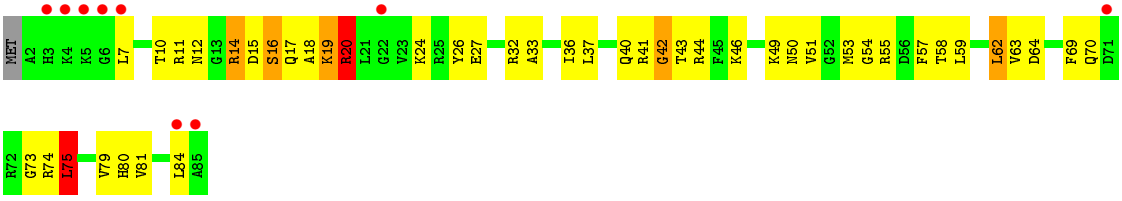
Chain CZ:





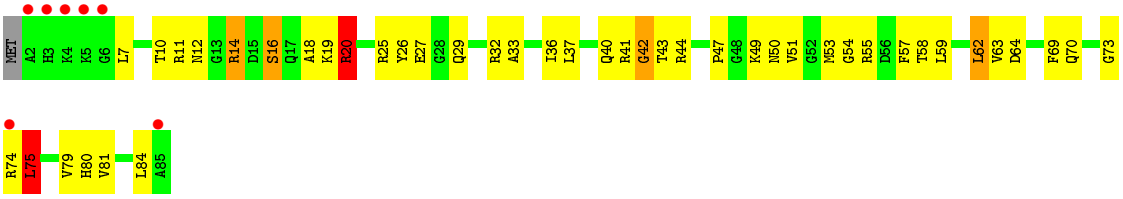
- Molecule 26: 50S RIBOSOMAL PROTEIN L27

Chain B0:



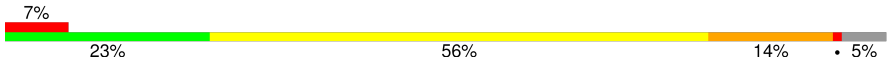
- Molecule 26: 50S RIBOSOMAL PROTEIN L27

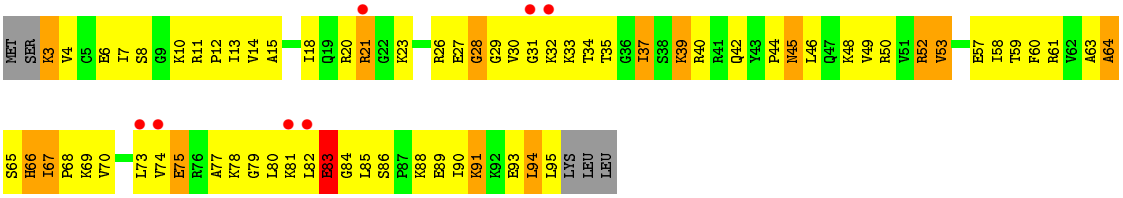
Chain D0:



• Molecule 27: 50S RIBOSOMAL PROTEIN L28

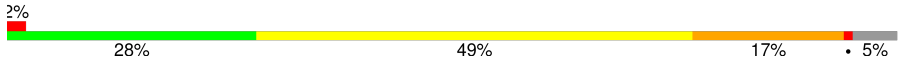
Chain B1:

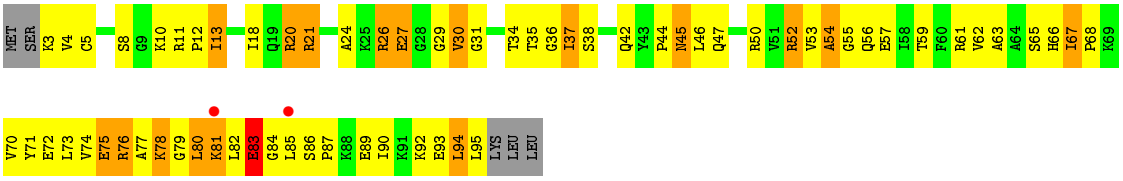




• Molecule 27: 50S RIBOSOMAL PROTEIN L28

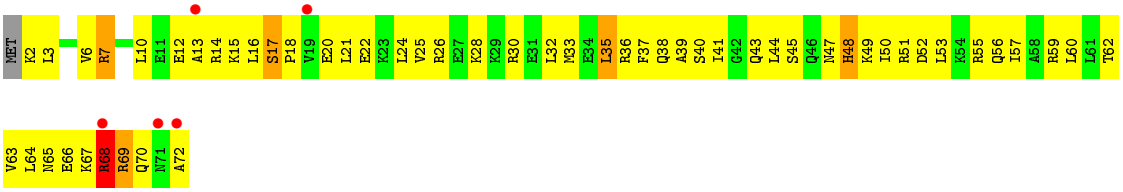
Chain D1:





• Molecule 28: 50S RIBOSOMAL PROTEIN L29

Chain B2:

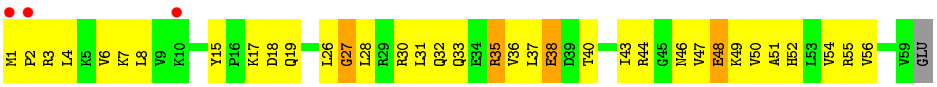


• Molecule 28: 50S RIBOSOMAL PROTEIN L29

Chain D2:

• Molecule 29: 50S RIBOSOMAL PROTEIN L30

Chain B3:

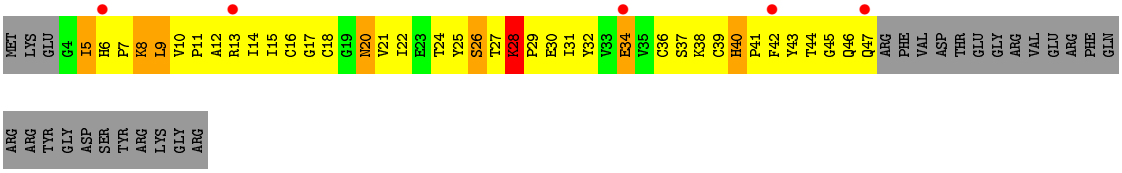


• Molecule 29: 50S RIBOSOMAL PROTEIN L30

Chain D3:

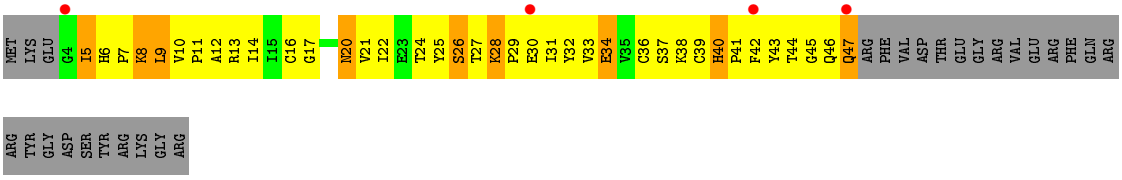
• Molecule 30: 50S RIBOSOMAL PROTEIN L31

Chain B4:



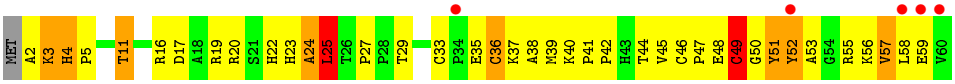
• Molecule 30: 50S RIBOSOMAL PROTEIN L31

Chain D4:



• Molecule 31: 50S RIBOSOMAL PROTEIN L32

Chain B5:

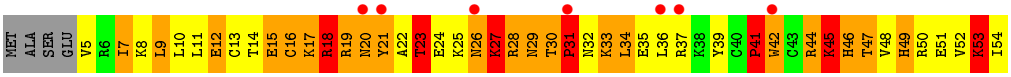


• Molecule 31: 50S RIBOSOMAL PROTEIN L32

Chain D5:

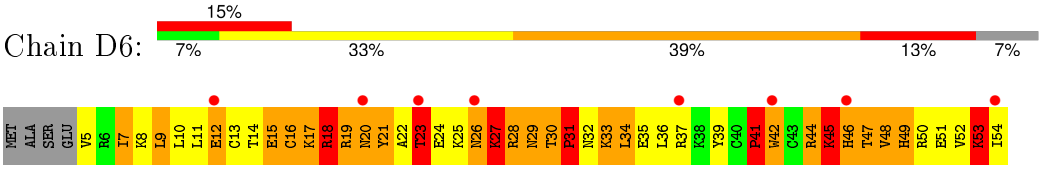
• Molecule 32: 50S RIBOSOMAL PROTEIN L33

Chain B6:



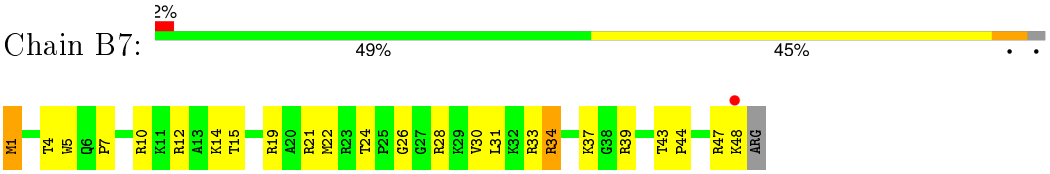
• Molecule 32: 50S RIBOSOMAL PROTEIN L33

Chain D6:



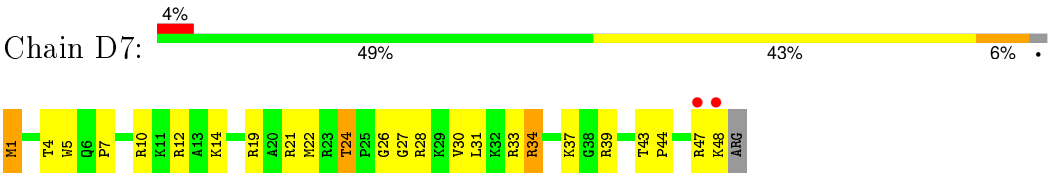
• Molecule 33: 50S RIBOSOMAL PROTEIN L34

Chain B7:



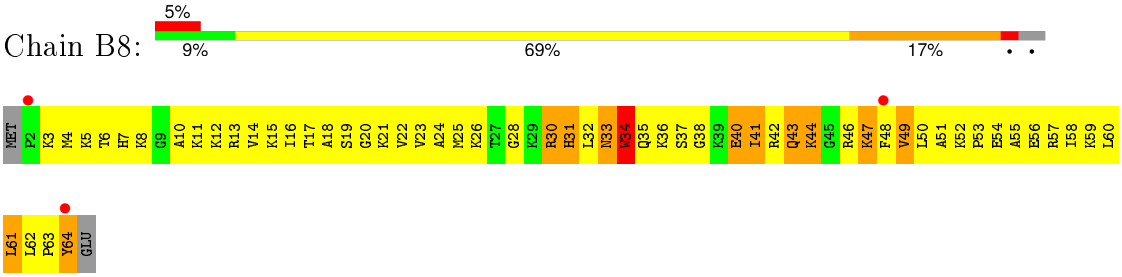
• Molecule 33: 50S RIBOSOMAL PROTEIN L34

Chain D7:



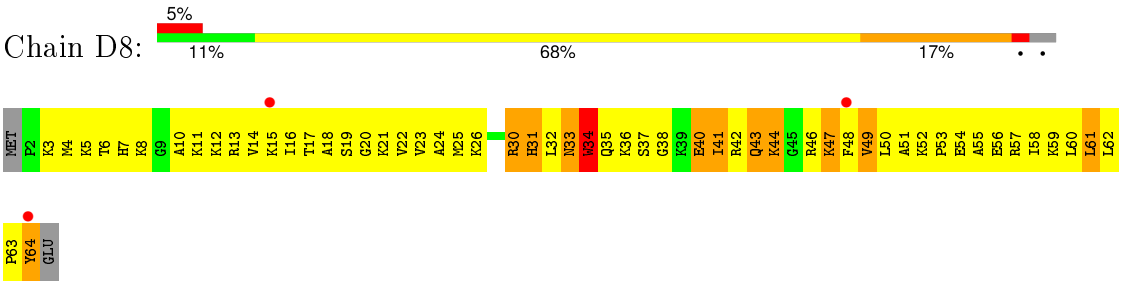
• Molecule 34: 50S RIBOSOMAL PROTEIN L35

Chain B8:



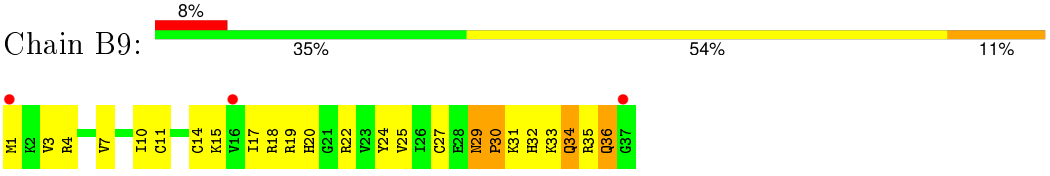
• Molecule 34: 50S RIBOSOMAL PROTEIN L35

Chain D8:



• Molecule 35: 50S RIBOSOMAL PROTEIN L36

Chain B9:

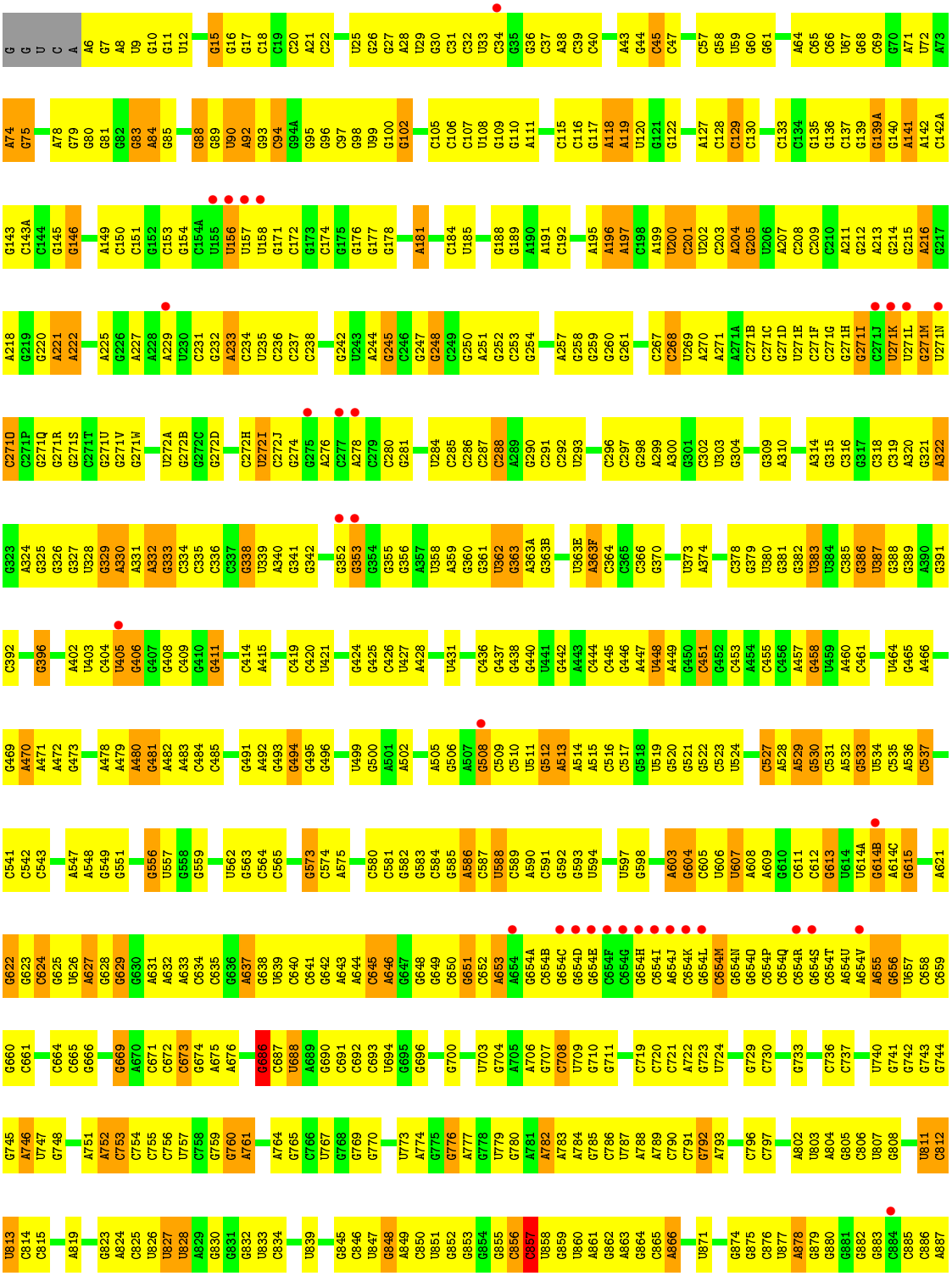


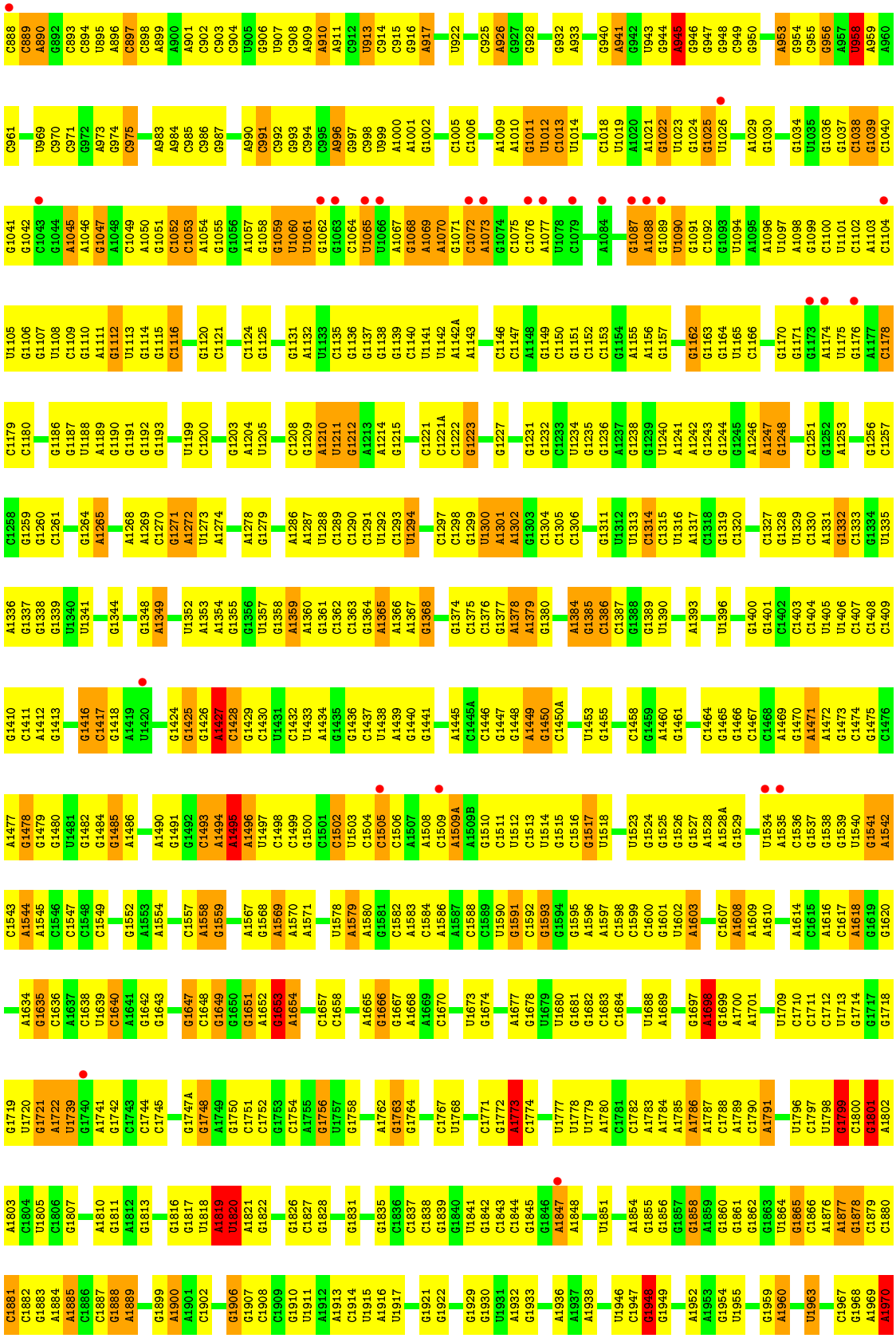
• Molecule 35: 50S RIBOSOMAL PROTEIN L36

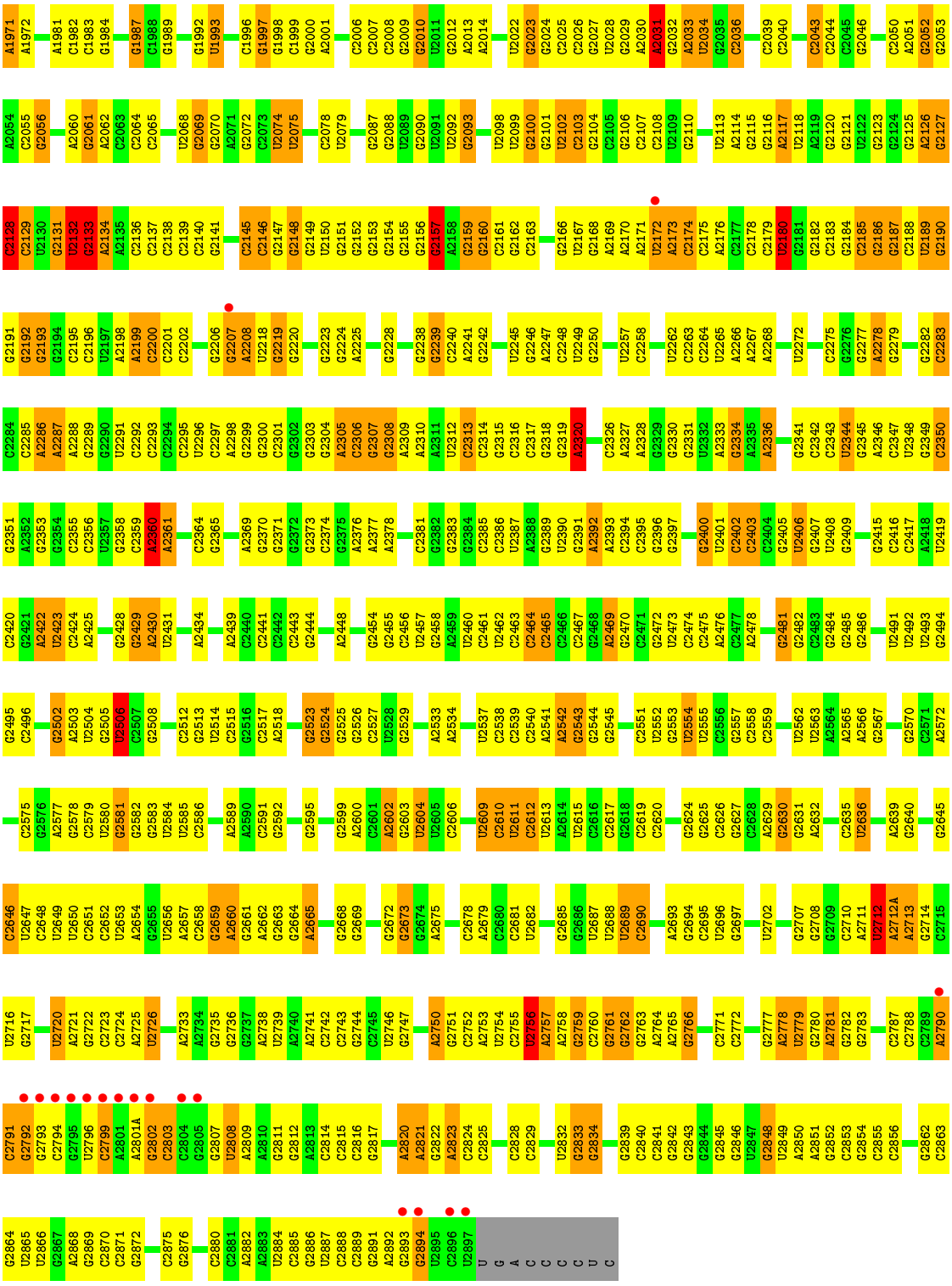
Chain D9:

• Molecule 36: 23S RIBOSOMAL RNA

Chain BA:

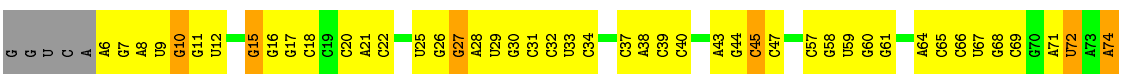


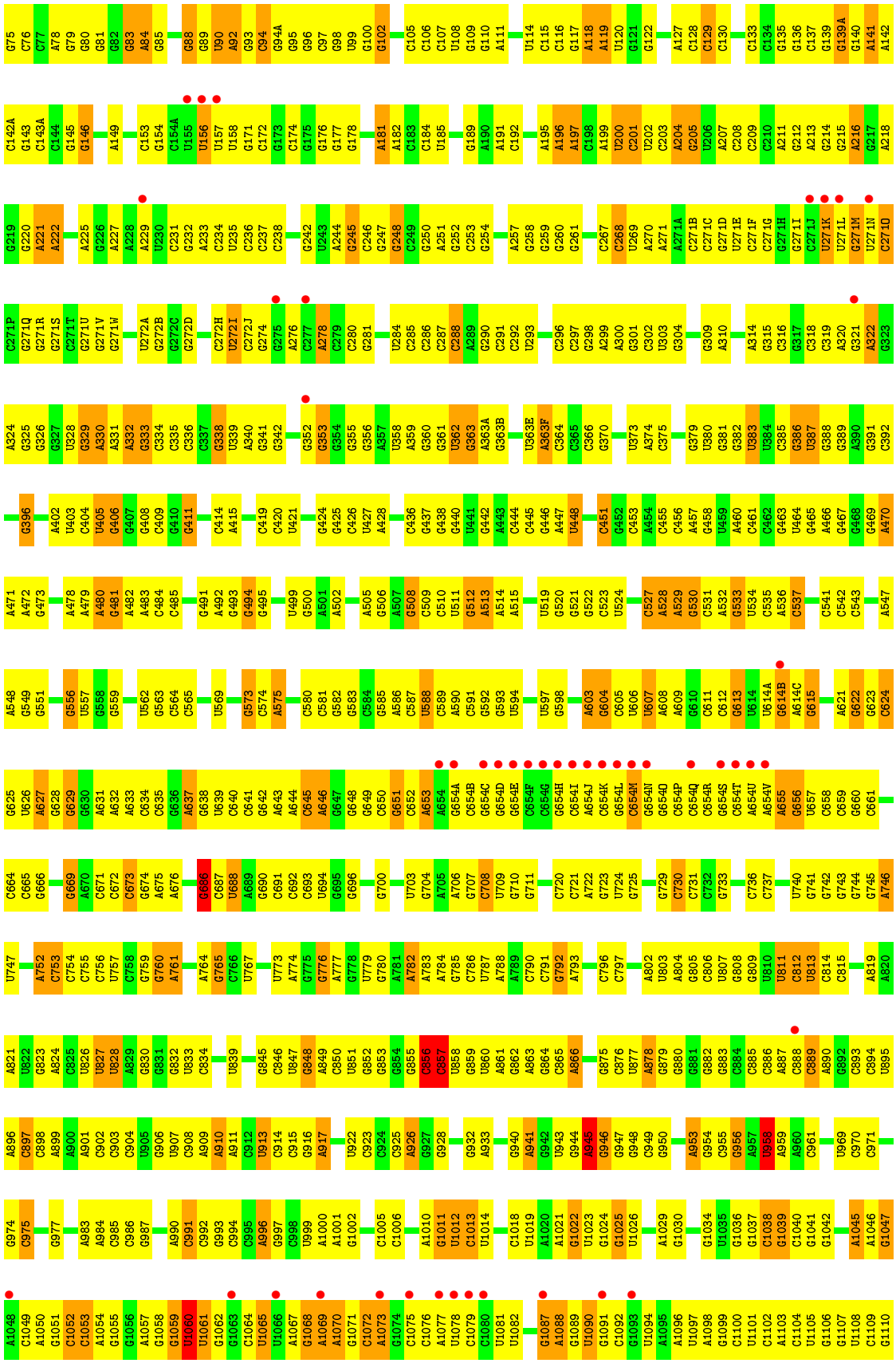




- Molecule 36: 23S RIBOSOMAL RNA

Chain DA:




G75 C76 C77 A78 G79 G80 G81 G82 G83 A84 G85 G88 G89 U90 A92 G93 C94 G94A G95 G96 C97 G98 U99 G100 G102 C105 C106 C107 U108 G109 G110 A111 U114 C115 C116 G117 A118 A119 U120 G121 G122 A127 C128 C129 C130 C133 C134 G135 G136 C137 G139 G139A G140 A141 A142
C142A G143 C143A C144 G145 G146 A149 C153 G154 C154A U155 U156 U157 U158 G171 C172 G173 C174 G175 G176 G177 G178 A181 A182 C183 C184 U185 G189 A190 A191 C192 A195 A196 A197 C198 A199 U200 C201 U202 C203 A204 G205 U206 A207 C208 C209 C210 A211 G212 A213 G214 G215 A216 G217 A218
G219 G220 A221 A222 A225 G226 A227 A228 A229 U230 C231 G232 A233 C234 U235 C236 C237 C238 G242 U243 A244 G245 C246 G247 G248 C249 G250 A251 G252 C253 G254 A257 G258 G259 G260 G261 C267 C268 U269 A270 A271 A271A C271B C271C C271D U271E C271F C271G G271H G271I C271J U271K U271L G271M U271N C2710
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A324 G325 G326 G327 U328 G329 A330 A331 A332 G333 C334 C335 C336 C337 G338 U339 A340 G341 G342 G352 G353 G354 G355 G356 A357 U358 A359 G360 C361 U362 G363 A363A A363B U363E A363F C364 C365 C366 G370 U373 A374 C375 G379 U380 G381 G382 U383 U384 C385 G386 U387 G388 G389 A390 G391 C392
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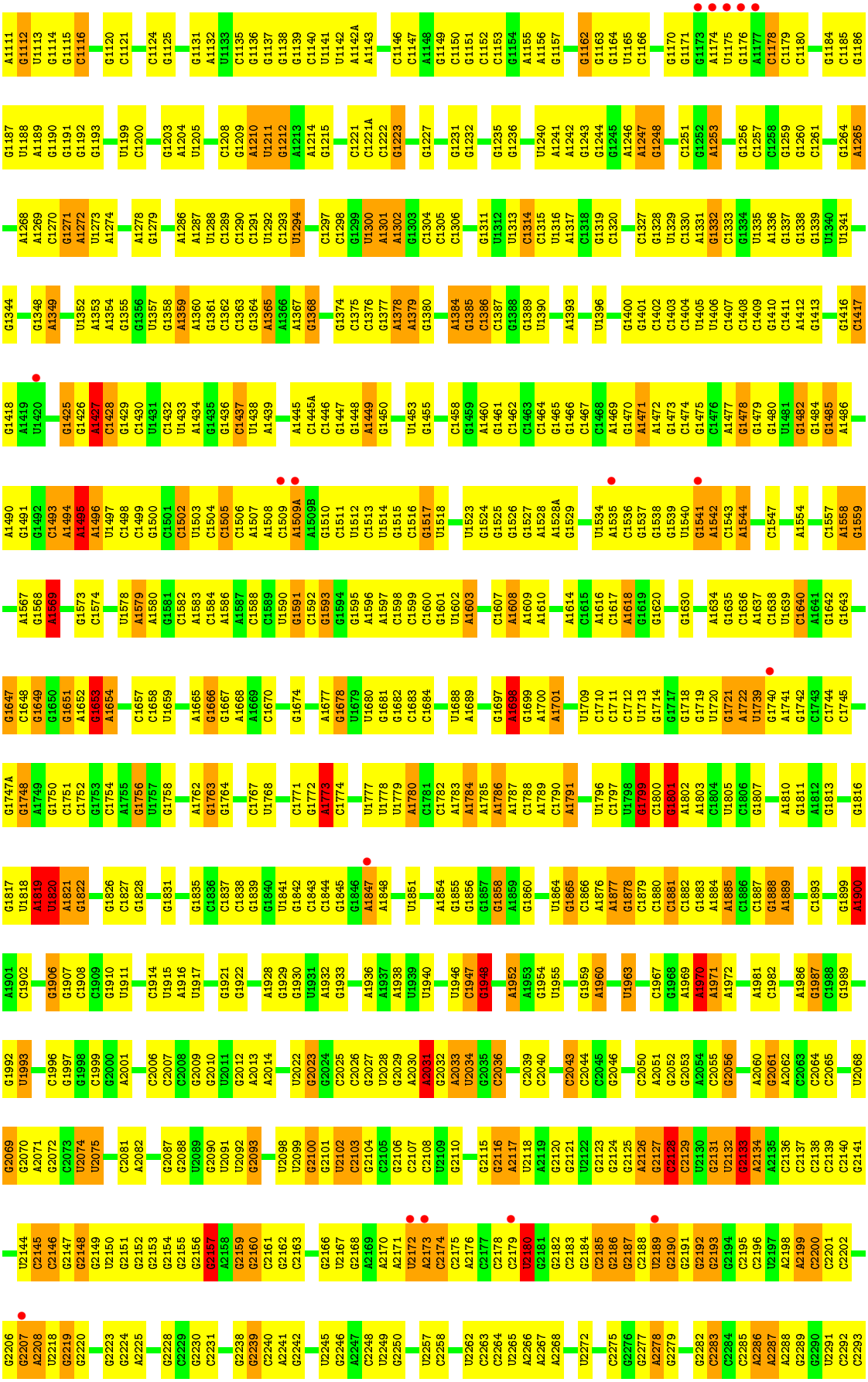
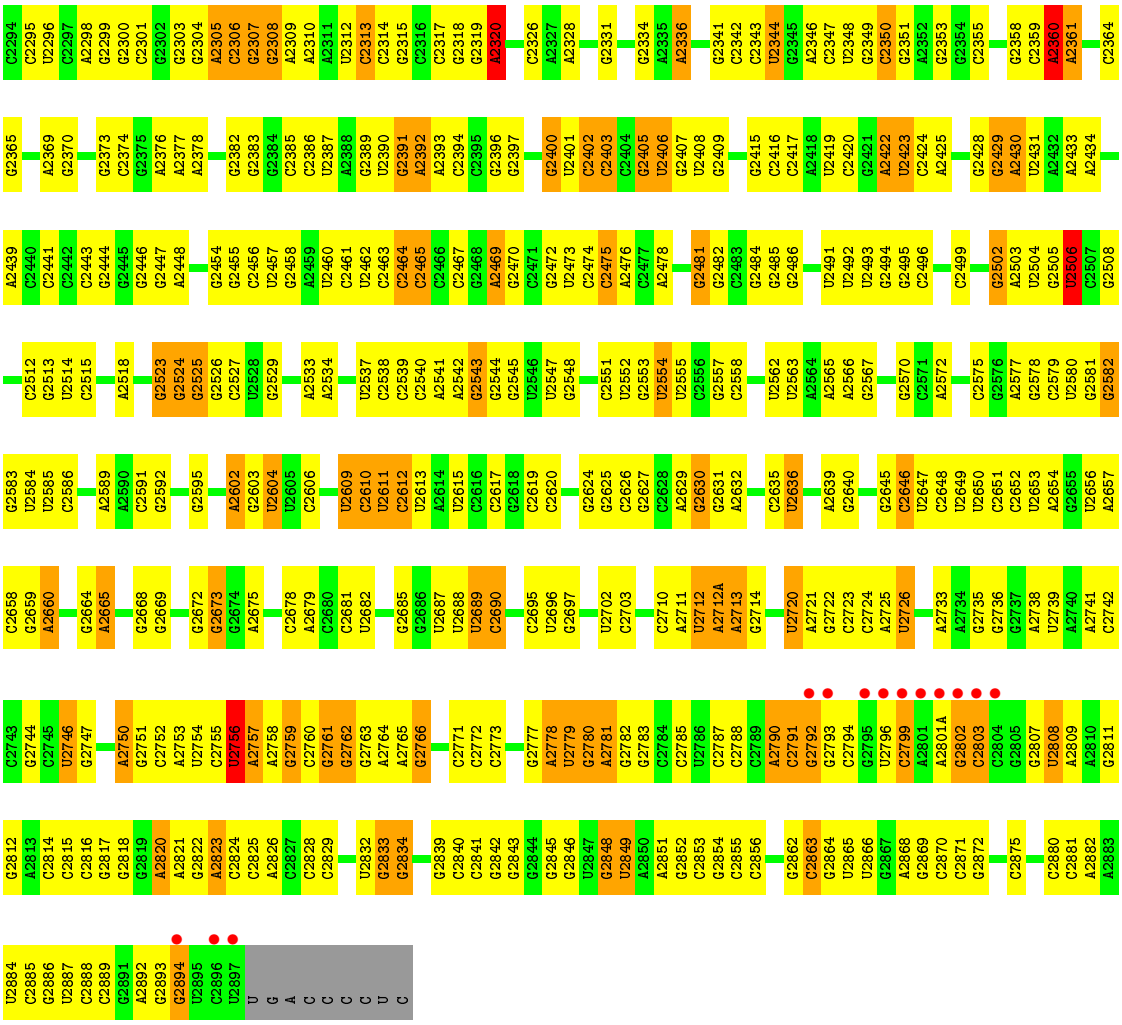
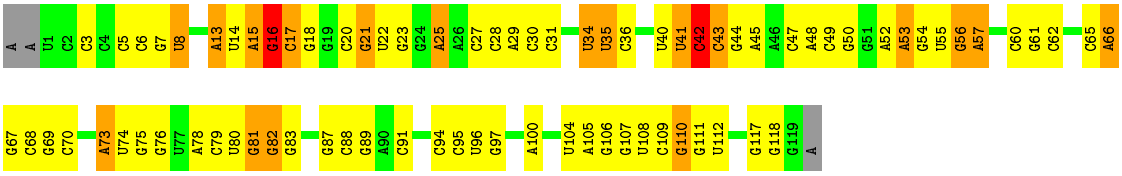




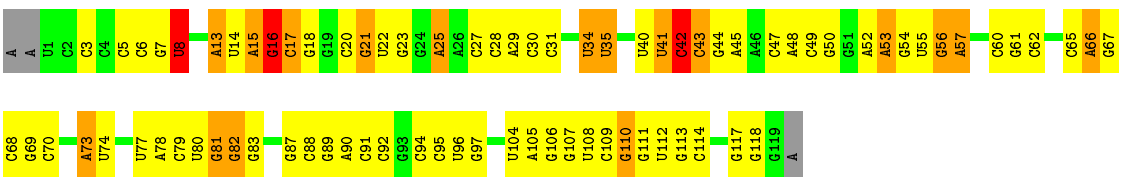
• Molecule 37: 5S RIBOSOMAL RNA

Chain BB:



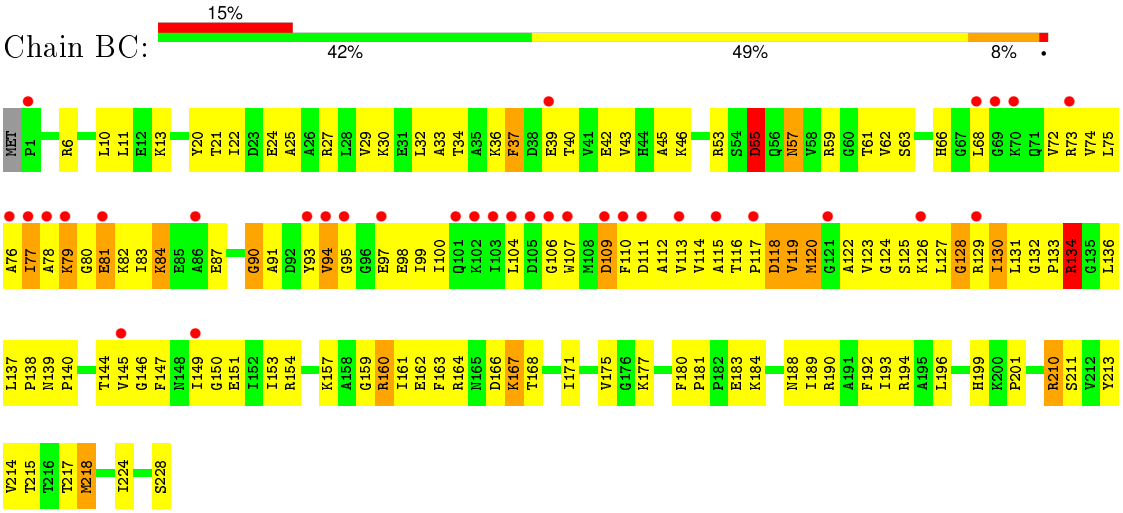
• Molecule 37: 5S RIBOSOMAL RNA

Chain DB:



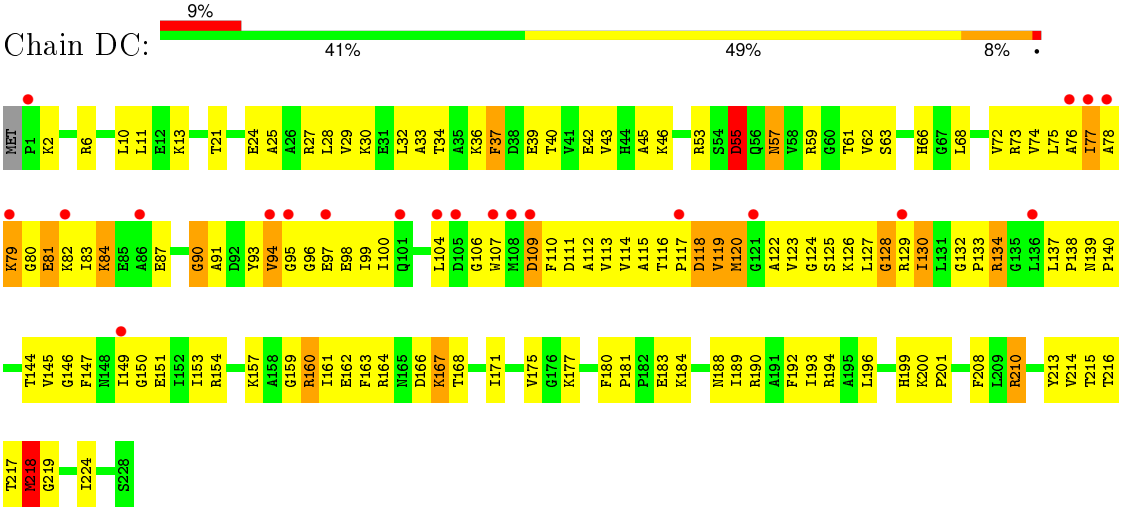
• Molecule 38: 50S RIBOSOMAL PROTEIN L1

Chain BC:



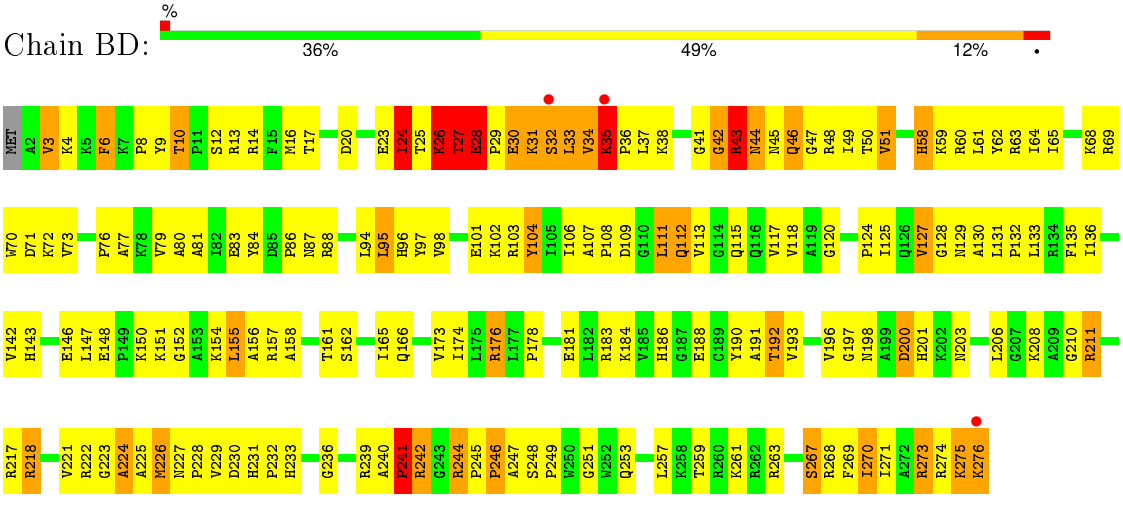
• Molecule 38: 50S RIBOSOMAL PROTEIN L1

Chain DC:



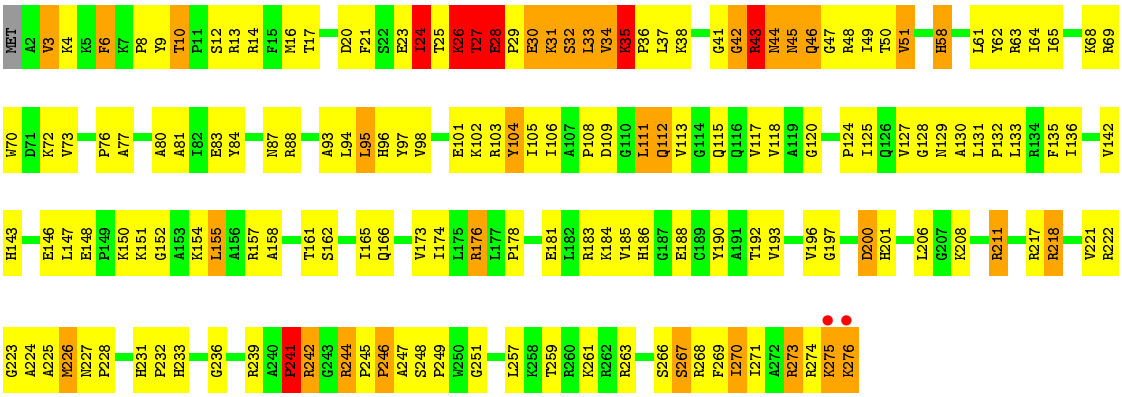
• Molecule 39: 50S RIBOSOMAL PROTEIN L2

Chain BD:



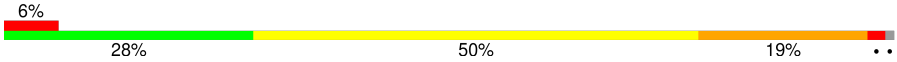
• Molecule 39: 50S RIBOSOMAL PROTEIN L2

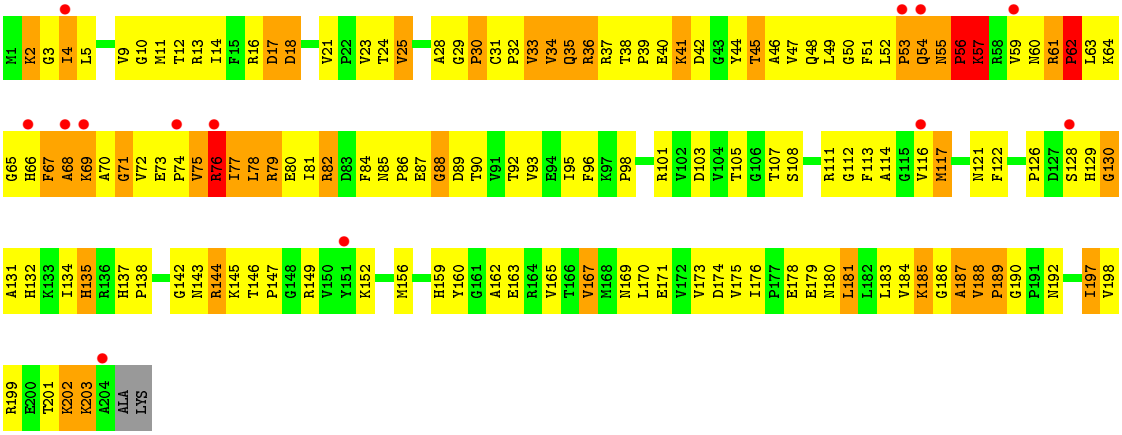
Chain DD:



• Molecule 40: 50S RIBOSOMAL PROTEIN L3

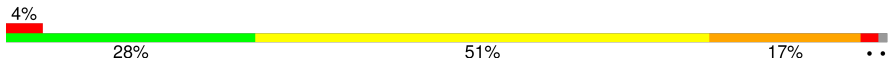
Chain BE:

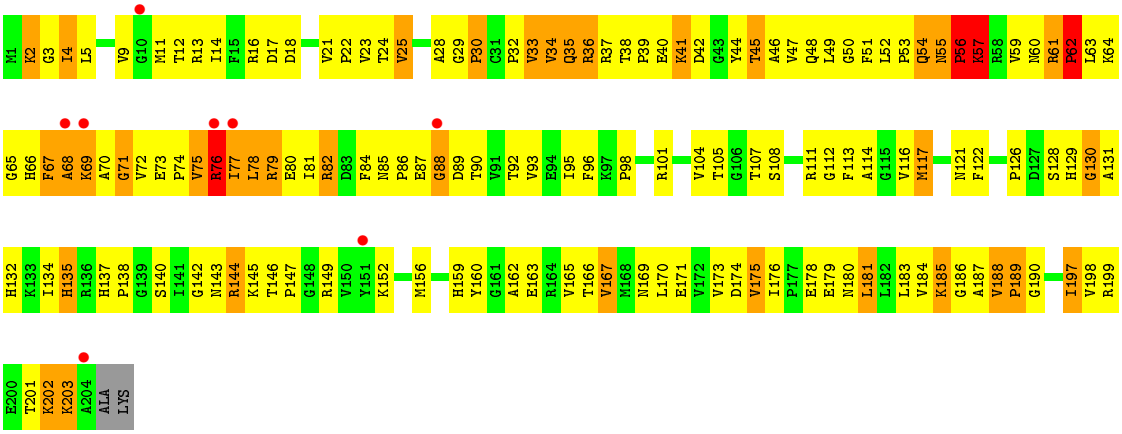




• Molecule 40: 50S RIBOSOMAL PROTEIN L3

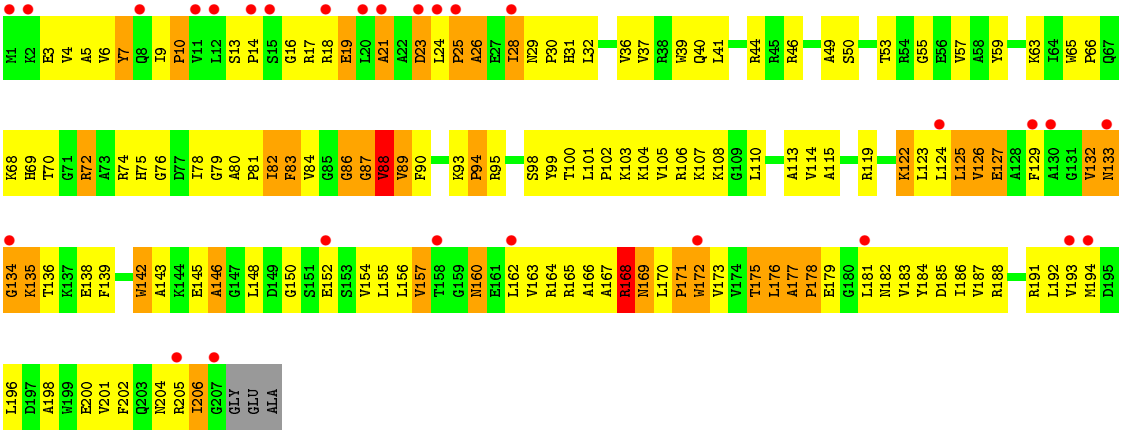
Chain DE:



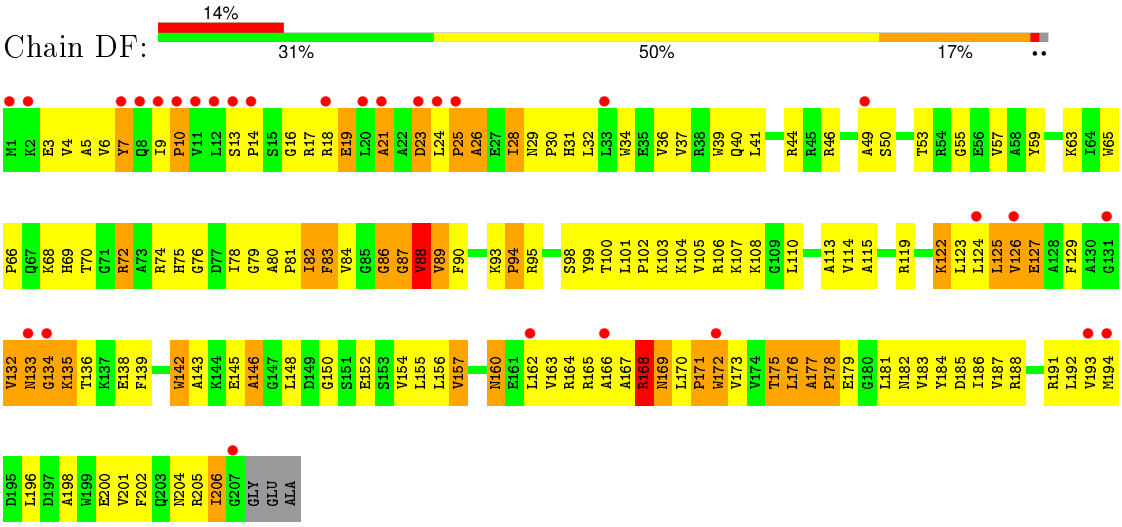


• Molecule 41: 50S RIBOSOMAL PROTEIN L4

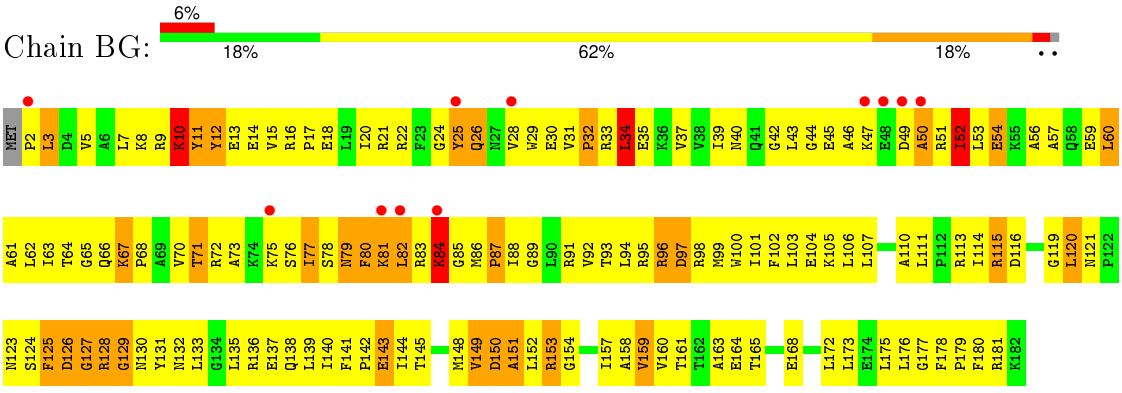
Chain BF:



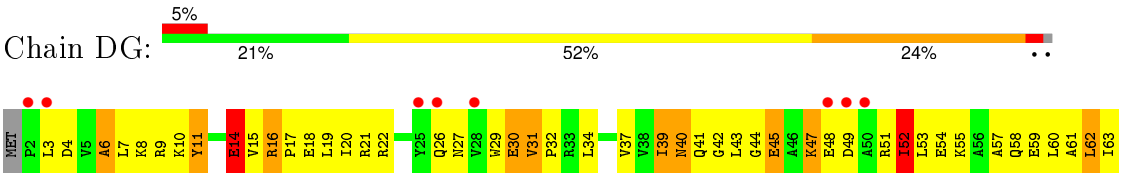
- Molecule 41: 50S RIBOSOMAL PROTEIN L4

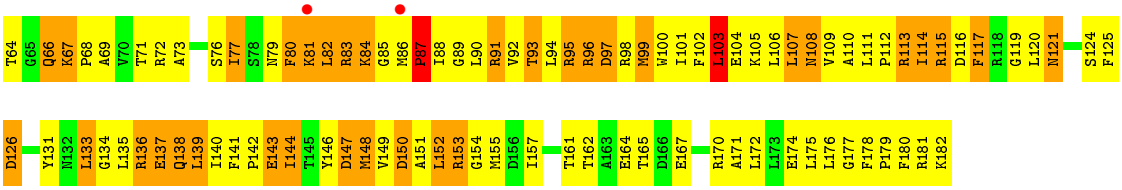


- Molecule 42: 50S RIBOSOMAL PROTEIN L5



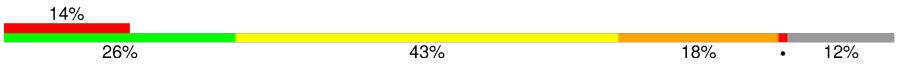
- Molecule 42: 50S RIBOSOMAL PROTEIN L5

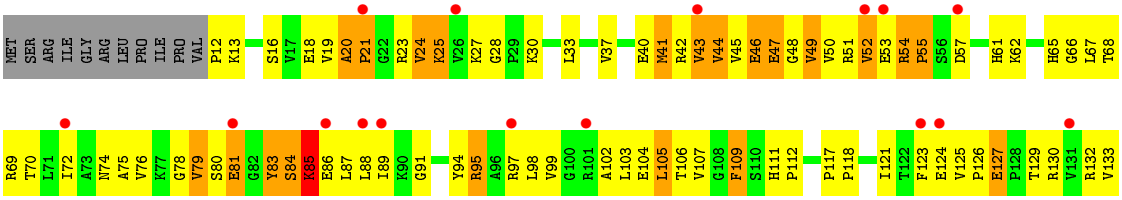


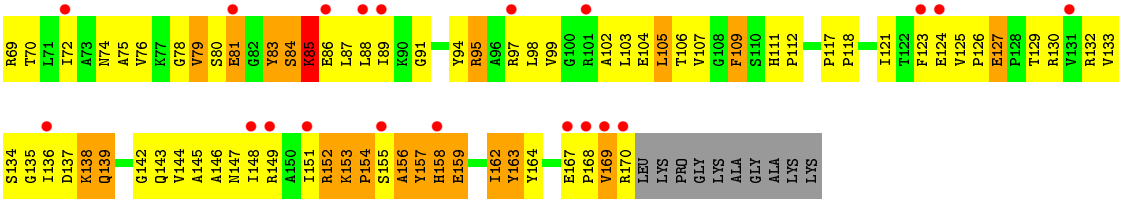


• Molecule 43: 50S RIBOSOMAL PROTEIN L6

Chain BH:

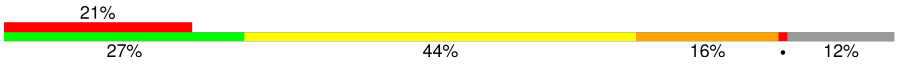


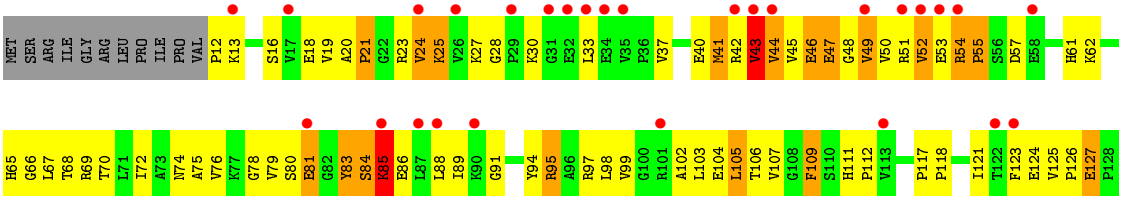


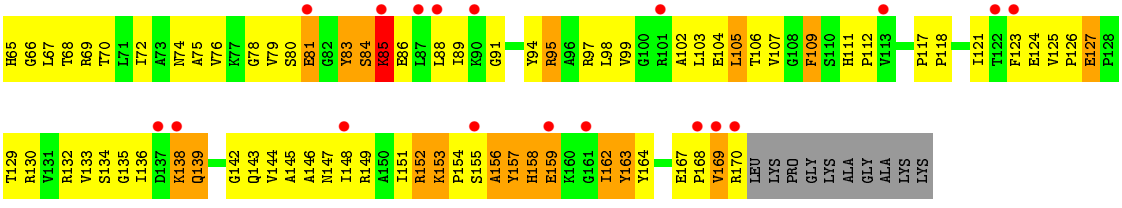


• Molecule 43: 50S RIBOSOMAL PROTEIN L6

Chain DH:

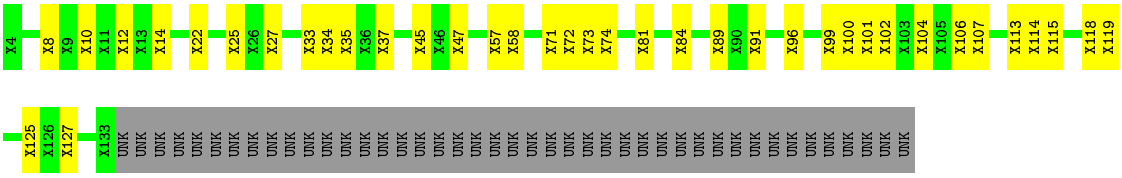






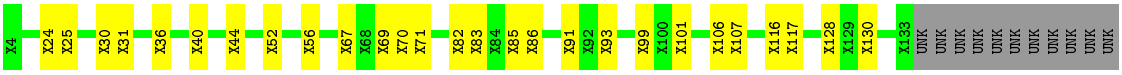
• Molecule 44: 50S RIBOSOMAL PROTEIN L10

Chain BJ:



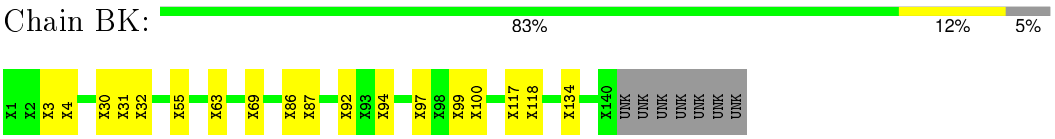
• Molecule 44: 50S RIBOSOMAL PROTEIN L10

Chain DJ:



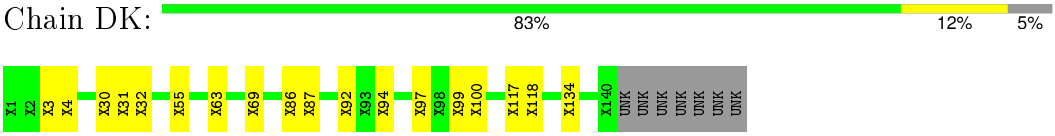
- Molecule 45: 50S RIBOSOMAL PROTEIN L11

Chain BK:



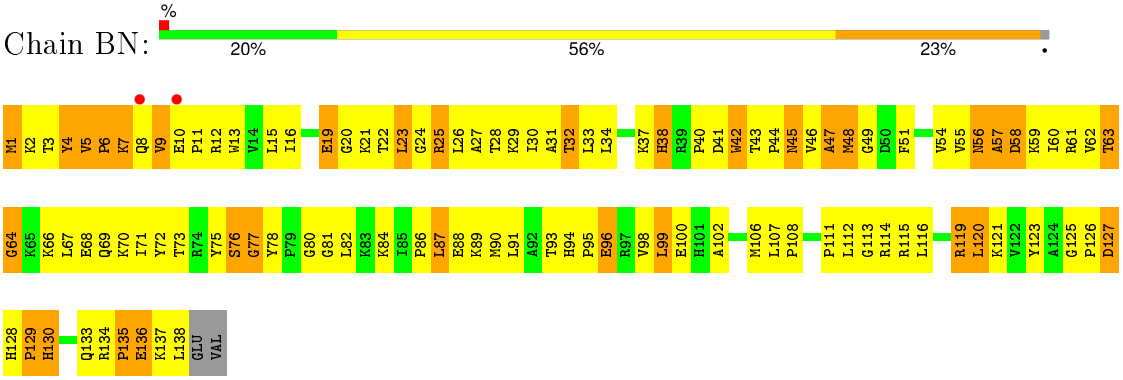
- Molecule 45: 50S RIBOSOMAL PROTEIN L11

Chain DK:



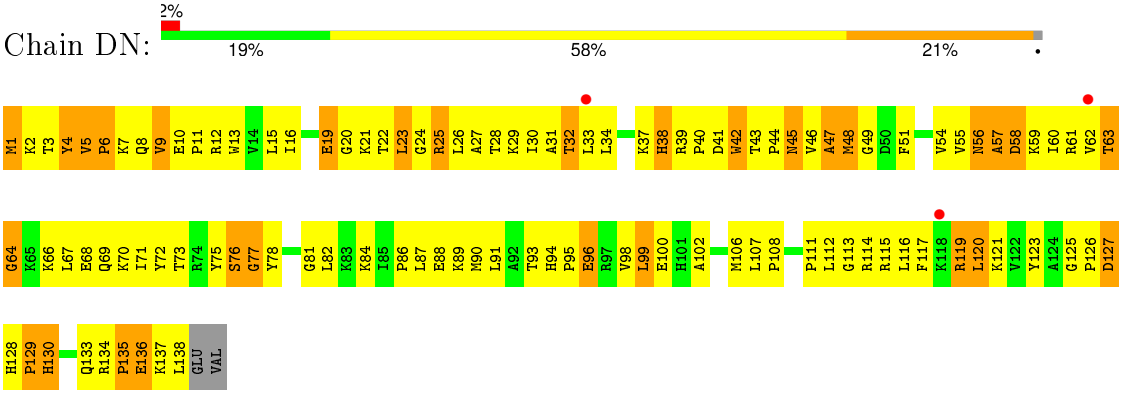
- Molecule 46: 50S RIBOSOMAL PROTEIN L13

Chain BN:



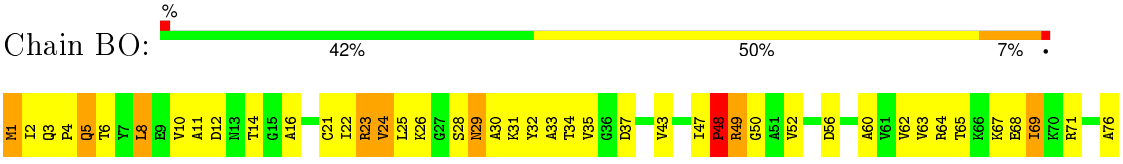
- Molecule 46: 50S RIBOSOMAL PROTEIN L13

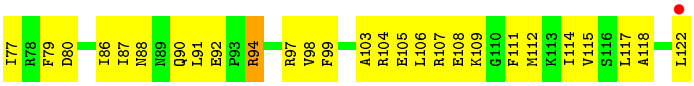
Chain DN:



- Molecule 47: 50S RIBOSOMAL PROTEIN L14

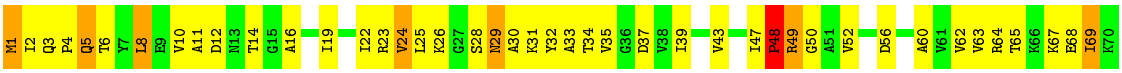
Chain BO:

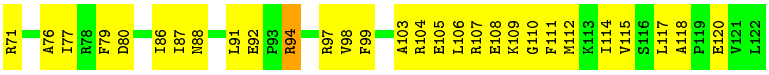




• Molecule 47: 50S RIBOSOMAL PROTEIN L14

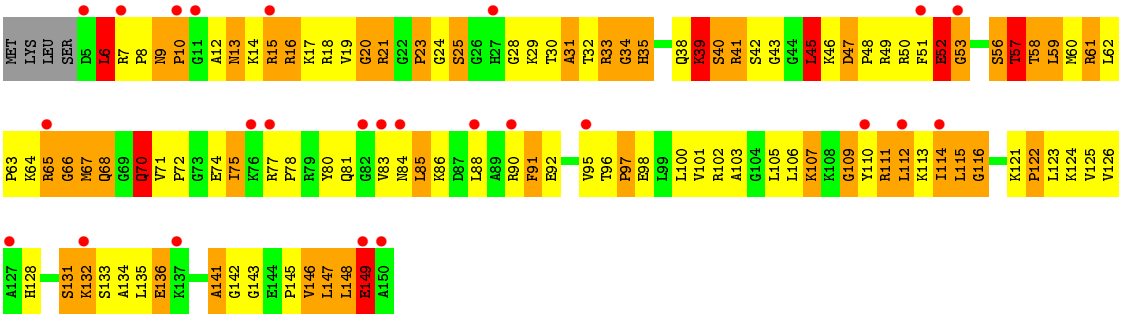
Chain DO:





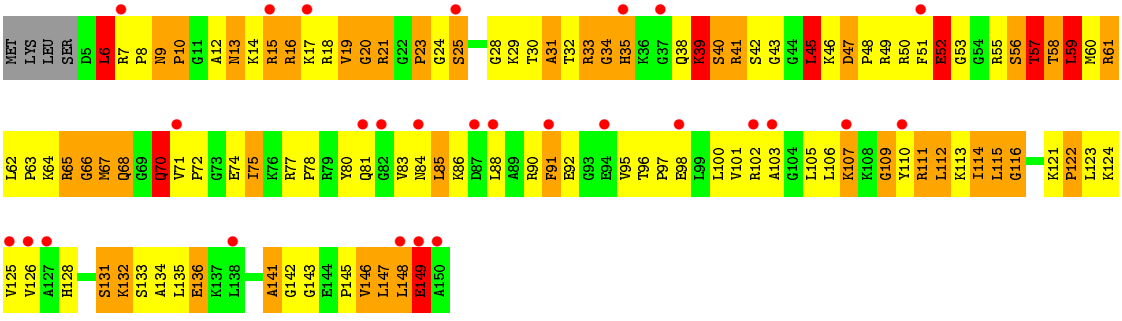
• Molecule 48: 50S RIBOSOMAL PROTEIN L15

Chain BP:



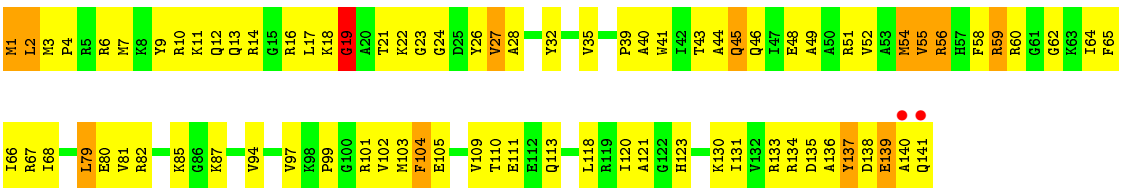
• Molecule 48: 50S RIBOSOMAL PROTEIN L15

Chain DP:



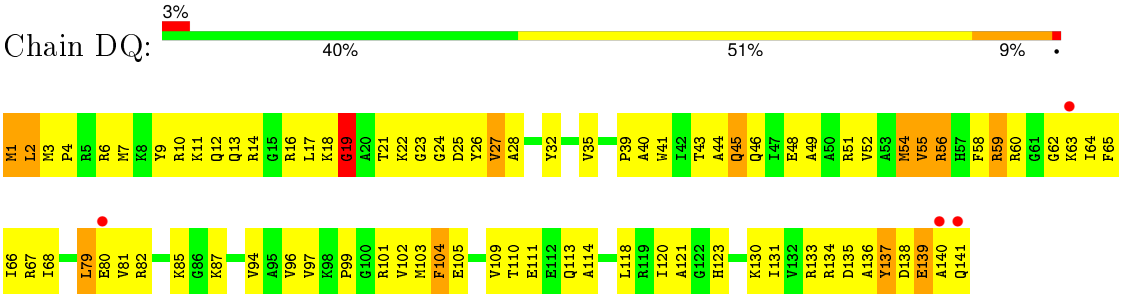
• Molecule 49: 50S RIBOSOMAL PROTEIN L16

Chain BQ:



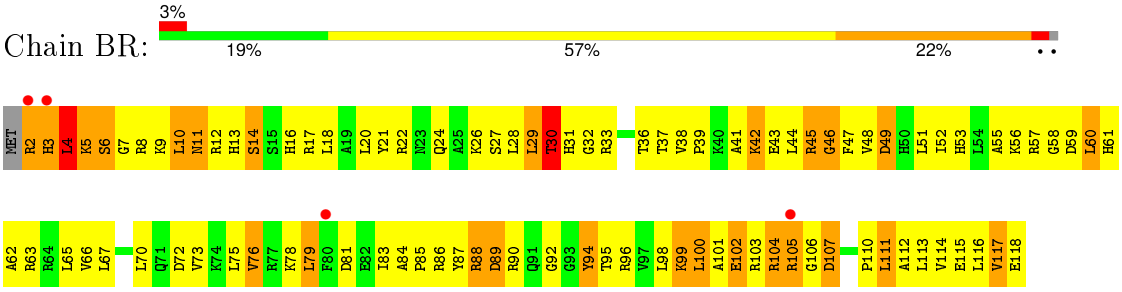
• Molecule 49: 50S RIBOSOMAL PROTEIN L16

Chain DQ:



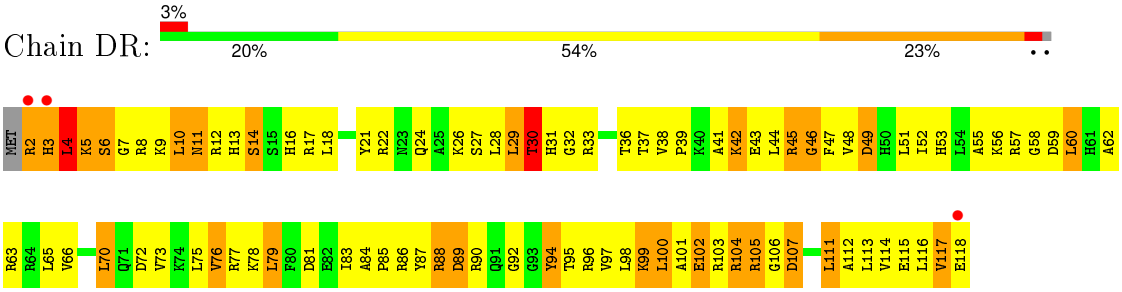
• Molecule 50: 50S RIBOSOMAL PROTEIN L17

Chain BR:



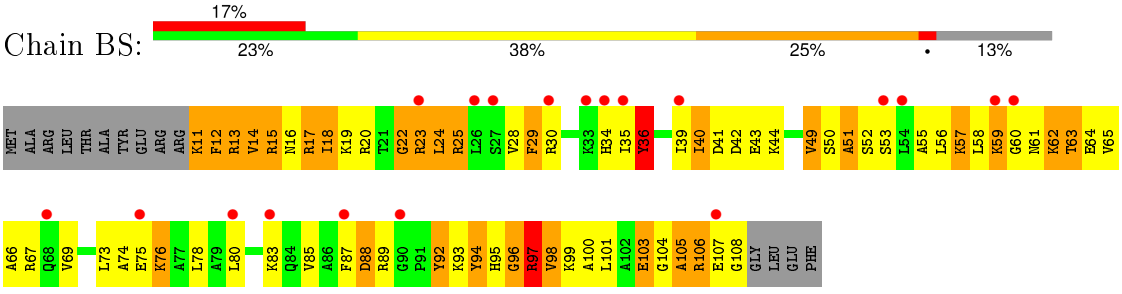
• Molecule 50: 50S RIBOSOMAL PROTEIN L17

Chain DR:



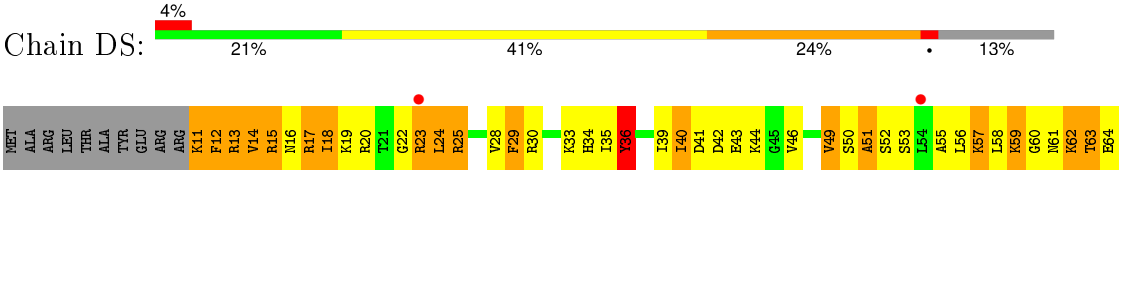
• Molecule 51: 50S RIBOSOMAL PROTEIN L18

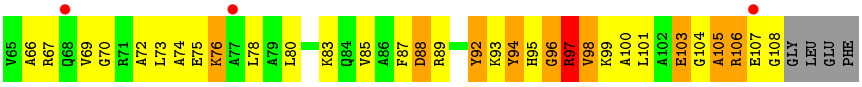
Chain BS:



• Molecule 51: 50S RIBOSOMAL PROTEIN L18

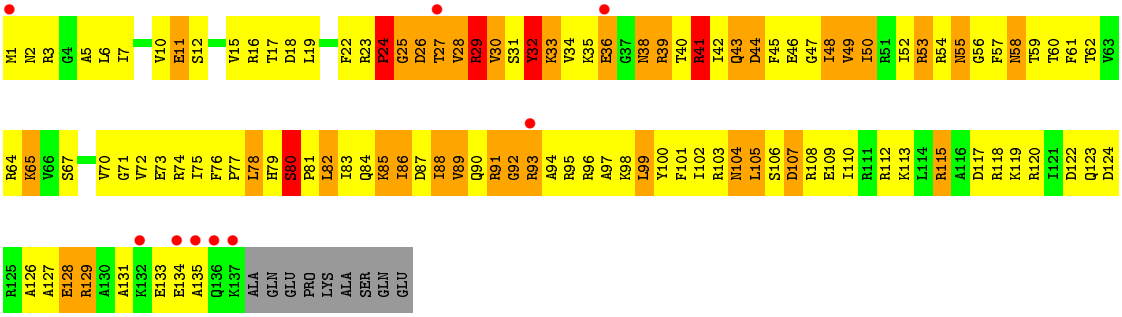
Chain DS:





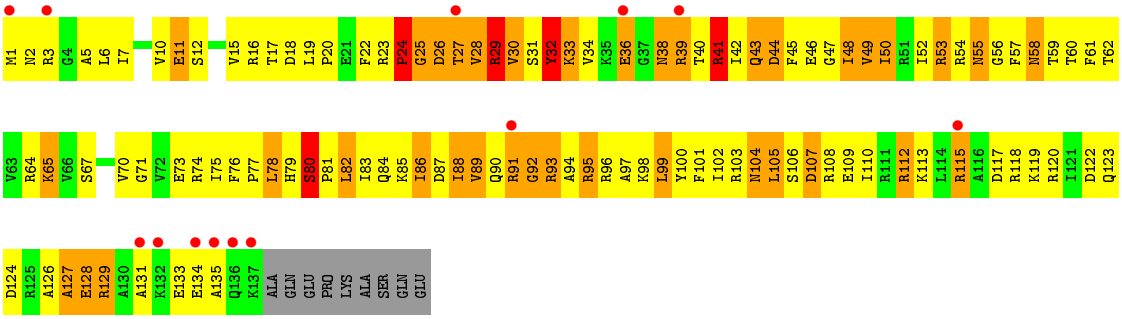
• Molecule 52: 50S RIBOSOMAL PROTEIN L19

Chain BT:



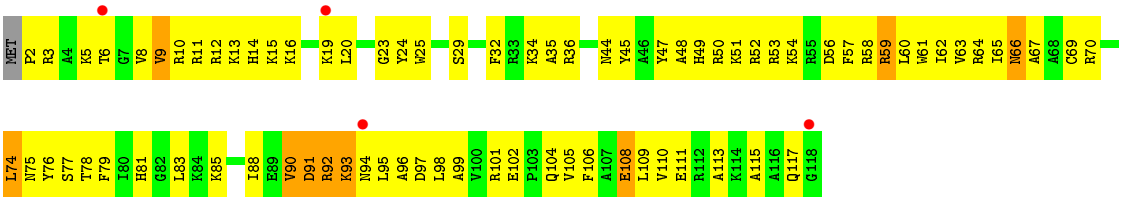
• Molecule 52: 50S RIBOSOMAL PROTEIN L19

Chain DT:



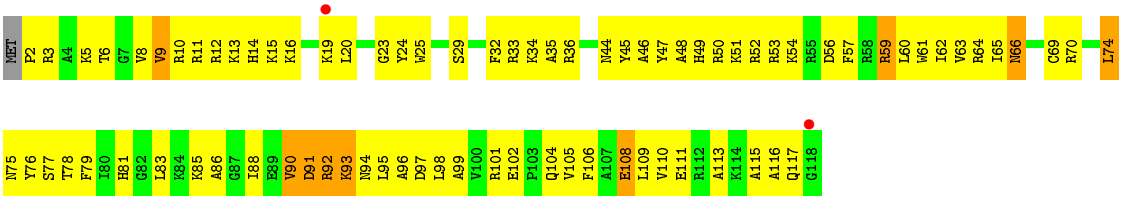
• Molecule 53: 50S RIBOSOMAL PROTEIN L20

Chain BU:



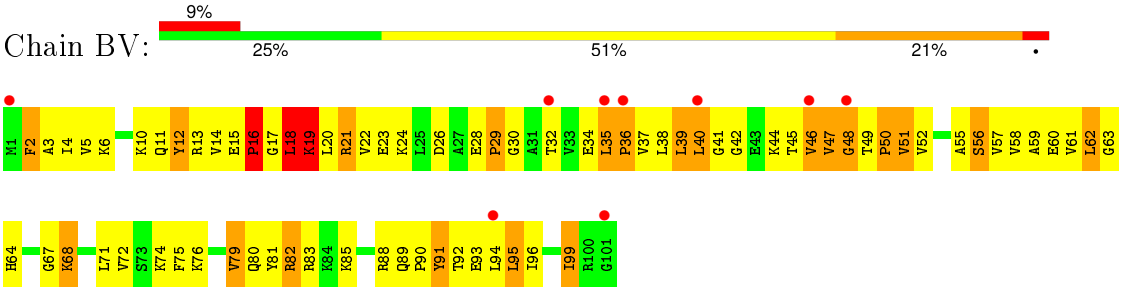
• Molecule 53: 50S RIBOSOMAL PROTEIN L20

Chain DU:



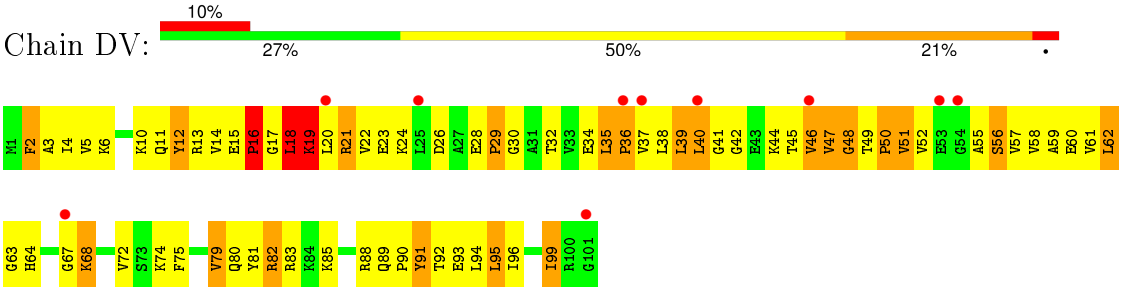
• Molecule 54: 50S RIBOSOMAL PROTEIN L21

Chain BV:



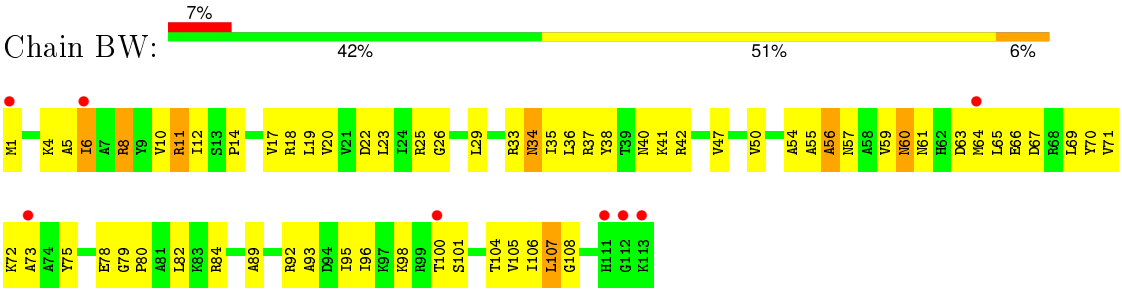
• Molecule 54: 50S RIBOSOMAL PROTEIN L21

Chain DV:



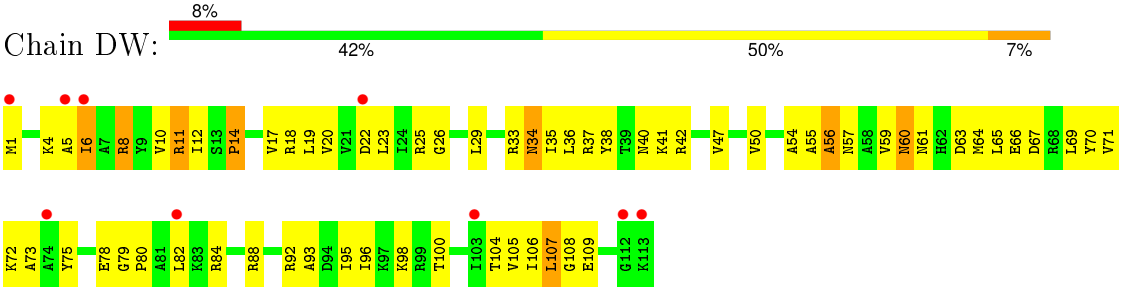
• Molecule 55: 50S RIBOSOMAL PROTEIN L22

Chain BW:



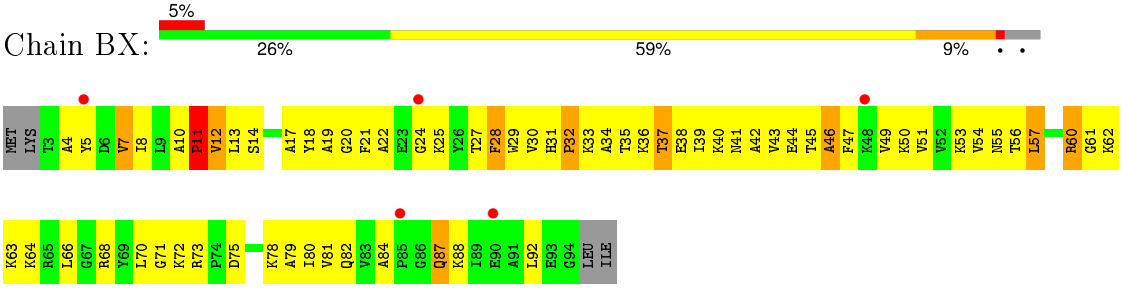
• Molecule 55: 50S RIBOSOMAL PROTEIN L22

Chain DW:



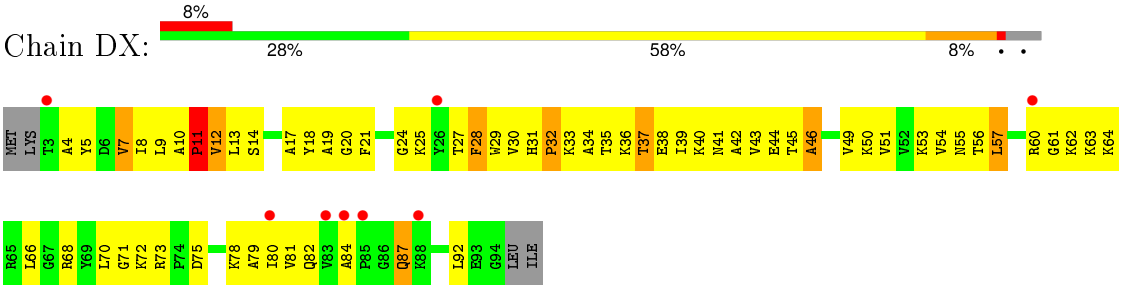
• Molecule 56: 50S RIBOSOMAL PROTEIN L23

Chain BX:



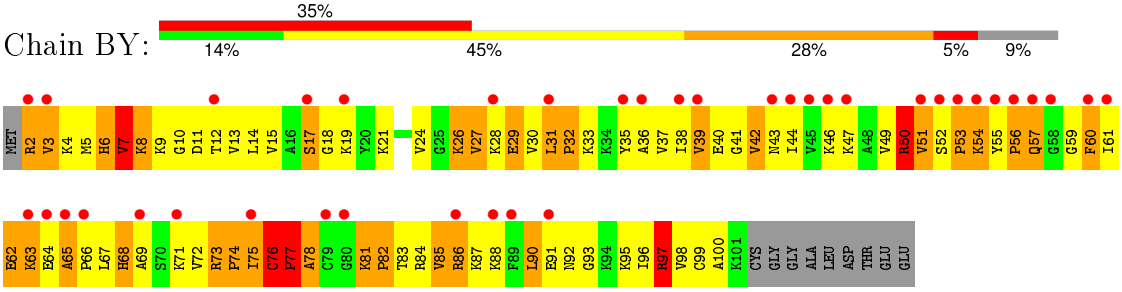
• Molecule 56: 50S RIBOSOMAL PROTEIN L23

Chain DX:



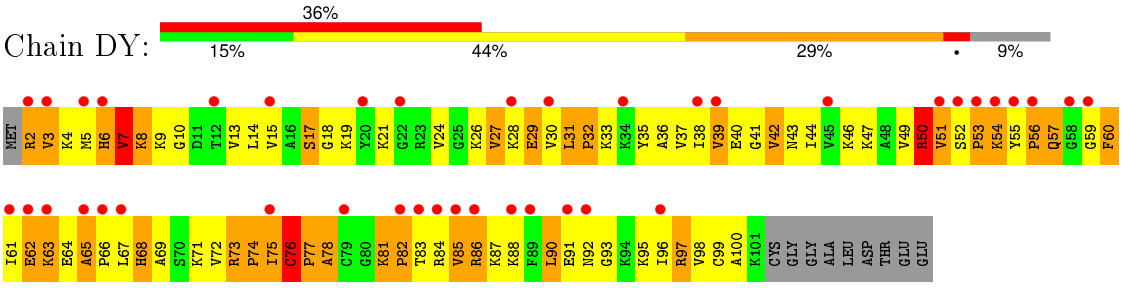
• Molecule 57: 50S RIBOSOMAL PROTEIN L24

Chain BY:



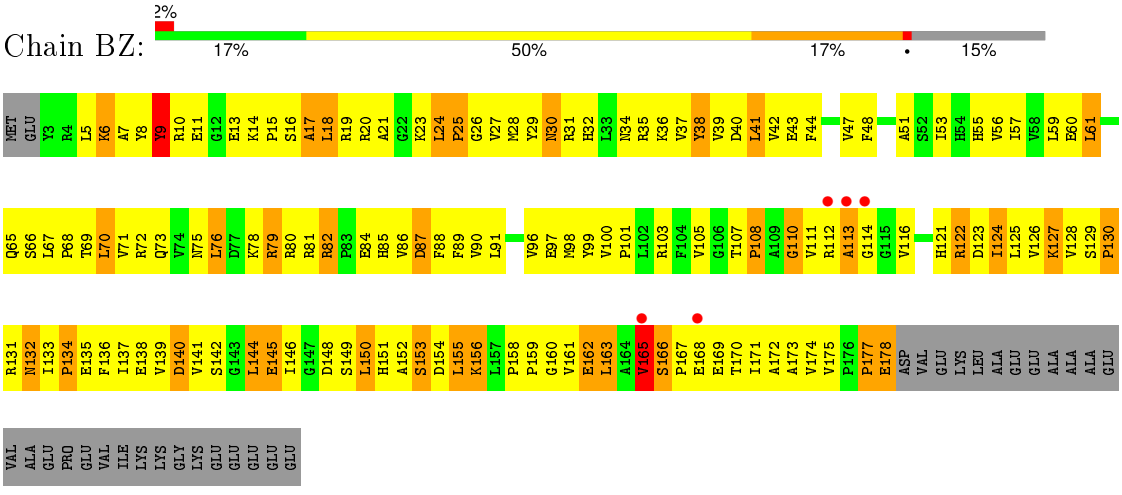
• Molecule 57: 50S RIBOSOMAL PROTEIN L24

Chain DY:



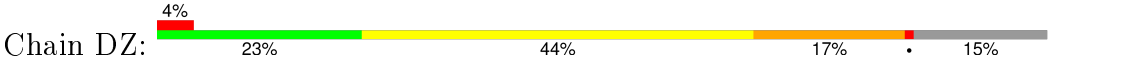
• Molecule 58: 50S RIBOSOMAL PROTEIN L25

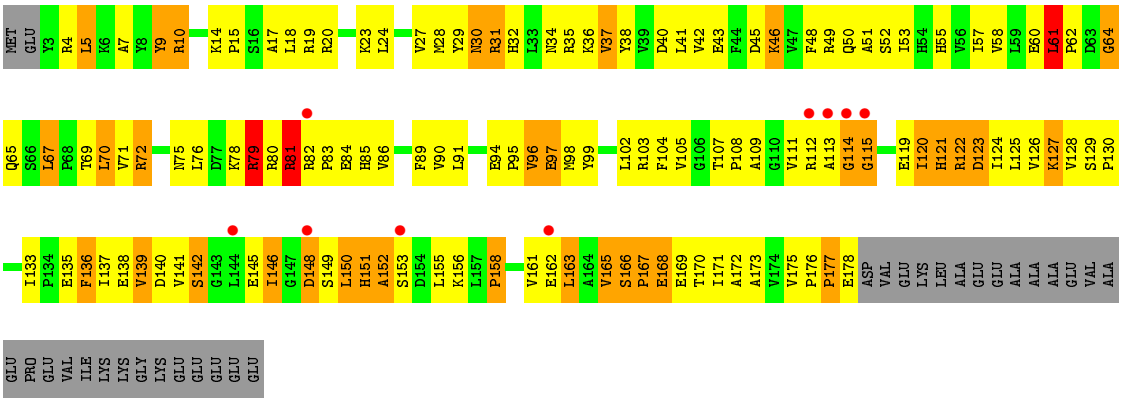
Chain BZ:



• Molecule 58: 50S RIBOSOMAL PROTEIN L25

Chain DZ:




MET GLU Y3 R4 L5 K6 A7 Y8 Y9 R10 K14 P15 S16 A17 L18 R19 R20 K23 L24 V27 M28 Y29 N30 R31 H32 L33 N34 R35 K36 V37 Y38 V39 D40 L41 V42 E43 F44 D45 K46 V47 F48 R49 Q50 A51 S52 I53 H54 H55 V56 I57 V58 L59 E60 L61 P62 D63 G64
Q65 S66 L67 P68 T69 L70 V71 R72 N75 L76 D77 K78 R79 R80 R81 R82 P83 E84 H85 V86 F89 V90 L91 E94 P95 V96 E97 N98 Y99 L102 R103 F104 V105 G106 T107 P108 A109 G110 V111 R112 A113 G114 G115 E119 I120 H121 R122 D123 I124 L125 V126 K127 V128 S129 P130
I133 P134 E135 F136 I137 E138 V139 D140 V141 S142 G143 L144 E145 I146 G147 D148 S149 L150 H151 A152 S153 D154 L155 K156 L157 P158 V161 E162 L163 A164 V165 S166 P167 E168 E169 T170 I171 A172 A173 V174 V175 P176 P177 E178 ASP VAL GLU LYS LEU ALA GLU GLU ALA ALA ALA GLU VAL ALA
GLU PRO GLU VAL ILE LYS LYS GLY LYS GLU GLU GLU GLU GLU

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	290.20Å 269.20Å 404.00Å 90.00° 91.54° 90.00°	Depositor
Resolution (Å)	50.00 – 3.10 49.51 – 2.90	Depositor EDS
% Data completeness (in resolution range)	99.8 (50.00-3.10) 92.4 (49.51-2.90)	Depositor EDS
R_{merge}	0.02	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.36 (at 2.91Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.237 , 0.264 0.237 , 0.263	Depositor DCC
R_{free} test set	55683 reflections (5.25%)	DCC
Wilson B-factor (Å^2)	79.7	Xtriage
Anisotropy	0.030	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 68.2	EDS
Estimated twinning fraction	0.026 for h,-k,-l	Xtriage
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.27$	Xtriage
Outliers	1 of 1263345 reflections (0.000%)	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	307330	wwPDB-VP
Average B, all atoms (Å^2)	100.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 8.44% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ 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	0.57	6/36325 (0.0%)	0.75	35/56695 (0.1%)
1	CA	0.64	11/36325 (0.0%)	0.76	45/56695 (0.1%)
2	AB	0.49	0/1935	0.69	0/2609
2	CB	0.49	0/1935	0.69	0/2609
3	AC	0.53	0/1636	0.72	1/2205 (0.0%)
3	CC	0.58	0/1636	0.73	1/2205 (0.0%)
4	AD	0.45	0/1733	0.69	1/2318 (0.0%)
4	CD	0.43	0/1733	0.68	1/2318 (0.0%)
5	AE	0.56	0/1162	0.75	0/1564
5	CE	0.59	0/1162	0.76	0/1564
6	AF	0.43	0/856	0.68	0/1154
6	CF	0.42	0/856	0.67	0/1154
7	AG	0.45	0/1276	0.64	0/1709
7	CG	0.47	0/1276	0.64	0/1709
8	AH	0.48	0/1136	0.73	0/1527
8	CH	0.49	0/1136	0.75	0/1527
9	AI	0.45	0/1029	0.68	0/1379
9	CI	0.46	0/1029	0.68	0/1379
10	AJ	0.44	0/807	0.73	0/1085
10	CJ	0.47	0/807	0.74	0/1085
11	AK	0.49	0/900	0.72	0/1213
11	CK	0.52	0/900	0.72	0/1213
12	AL	0.49	0/986	0.77	0/1320
12	CL	0.51	0/986	0.78	0/1320
13	AM	0.45	0/998	0.73	0/1336
13	CM	0.46	0/998	0.73	0/1336
14	AN	0.62	0/501	0.81	0/664
14	CN	0.56	0/501	0.80	0/664
15	AO	0.47	0/745	0.67	0/992
15	CO	0.47	0/745	0.67	0/992
16	AP	0.43	0/716	0.70	0/963
16	CP	0.43	0/716	0.70	0/963

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.50	0/836	0.70	0/1117
17	CQ	0.50	0/836	0.70	0/1117
18	AR	0.50	0/579	0.66	0/768
18	CR	0.47	0/579	0.65	0/768
19	AS	0.47	0/642	0.71	0/865
19	CS	0.49	0/642	0.72	0/865
20	AT	0.40	0/765	0.66	0/1007
20	CT	0.42	0/765	0.67	0/1007
21	AU	0.51	0/212	0.65	0/277
21	CU	0.47	0/212	0.64	0/277
22	AV	0.66	0/1809	0.83	1/2819 (0.0%)
22	AW	0.55	0/1809	0.75	0/2819
22	CV	0.72	0/1809	0.82	1/2819 (0.0%)
22	CW	0.57	1/1809 (0.1%)	0.76	0/2819
23	AX	0.69	0/406	0.87	2/631 (0.3%)
23	CX	0.80	0/406	0.90	3/631 (0.5%)
24	AY	0.49	1/1619 (0.1%)	0.70	0/2516
24	CY	0.50	1/1619 (0.1%)	0.70	0/2516
25	AZ	0.67	3/3042 (0.1%)	0.76	7/4129 (0.2%)
25	CZ	0.65	4/3042 (0.1%)	0.76	6/4129 (0.1%)
26	B0	0.45	0/671	0.70	0/892
26	D0	0.44	0/671	0.70	0/892
27	B1	0.43	0/738	0.72	0/981
27	D1	0.51	0/738	0.83	0/981
28	B2	0.35	0/600	0.63	0/793
28	D2	0.40	0/600	0.82	0/793
29	B3	0.35	0/472	0.60	0/634
29	D3	0.36	0/472	0.61	0/634
30	B4	0.41	0/349	0.64	0/474
30	D4	0.42	0/349	0.65	0/474
31	B5	0.40	0/473	0.64	0/639
31	D5	0.39	0/473	0.63	0/639
32	B6	0.62	0/440	0.95	0/586
32	D6	0.67	0/440	0.97	0/586
33	B7	0.45	0/426	0.71	0/561
33	D7	0.43	0/426	0.72	0/561
34	B8	0.55	0/515	0.77	0/679
34	D8	0.58	0/515	0.77	0/679
35	B9	0.53	0/310	0.70	0/407
35	D9	0.50	0/310	0.69	0/407
36	BA	0.52	5/69976 (0.0%)	0.72	27/109244 (0.0%)
36	DA	0.53	5/69976 (0.0%)	0.72	35/109244 (0.0%)
37	BB	0.49	0/2853	0.74	0/4451

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
37	DB	0.44	0/2853	0.74	1/4451 (0.0%)
38	BC	0.42	1/1774 (0.1%)	0.74	3/2391 (0.1%)
38	DC	0.43	2/1774 (0.1%)	0.75	3/2391 (0.1%)
39	BD	0.52	0/2195	0.88	4/2955 (0.1%)
39	DD	0.54	0/2195	0.90	4/2955 (0.1%)
40	BE	0.43	0/1596	0.71	0/2153
40	DE	0.44	0/1596	0.71	0/2153
41	BF	0.38	0/1658	0.74	3/2244 (0.1%)
41	DF	0.36	0/1658	0.74	3/2244 (0.1%)
42	BG	0.39	0/1499	0.70	1/2016 (0.0%)
42	DG	0.47	0/1499	0.80	0/2016
43	BH	0.35	0/1245	0.67	0/1682
43	DH	0.35	0/1245	0.67	0/1682
46	BN	0.39	0/1131	0.71	1/1525 (0.1%)
46	DN	0.39	0/1131	0.71	1/1525 (0.1%)
47	BO	0.52	1/943 (0.1%)	0.71	0/1269
47	DO	0.51	0/943	0.72	0/1269
48	BP	0.43	0/1131	0.89	3/1504 (0.2%)
48	DP	0.44	0/1131	0.90	4/1504 (0.3%)
49	BQ	0.51	0/1143	0.72	1/1527 (0.1%)
49	DQ	0.54	0/1143	0.72	1/1527 (0.1%)
50	BR	0.38	0/974	0.72	1/1302 (0.1%)
50	DR	0.39	0/974	0.72	1/1302 (0.1%)
51	BS	0.43	0/778	0.75	0/1036
51	DS	0.41	0/778	0.75	0/1036
52	BT	0.44	0/1155	0.76	2/1542 (0.1%)
52	DT	0.45	0/1155	0.77	2/1542 (0.1%)
53	BU	0.44	0/975	0.67	0/1297
53	DU	0.42	0/975	0.67	0/1297
54	BV	0.38	0/790	0.67	0/1057
54	DV	0.36	0/790	0.67	0/1057
55	BW	0.38	0/907	0.64	0/1216
55	DW	0.37	0/907	0.65	0/1216
56	BX	0.43	0/739	0.91	3/993 (0.3%)
56	DX	0.42	0/739	0.89	3/993 (0.3%)
57	BY	0.37	0/788	0.68	1/1051 (0.1%)
57	DY	0.37	0/788	0.68	1/1051 (0.1%)
58	BZ	0.46	0/1435	0.74	0/1949
58	DZ	0.49	0/1435	0.79	3/1949 (0.2%)
All	All	0.53	41/330278 (0.0%)	0.73	216/493462 (0.0%)

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

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	4	59
1	CA	4	49
22	AV	0	3
22	CV	0	2
23	AX	0	2
23	CX	0	1
36	BA	2	63
36	DA	2	72
37	BB	0	2
37	DB	0	2
49	BQ	0	1
49	DQ	0	1
All	All	12	257

All (41) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	CZ	68	VAL	C-O	-20.43	0.84	1.23
25	AZ	68	VAL	C-O	-19.95	0.85	1.23
36	DA	761	A	C5-C6	-10.79	1.31	1.41
36	BA	761	A	C5-C6	-10.15	1.31	1.41
1	CA	858	G	C5-C6	-10.08	1.32	1.42
25	CZ	69	GLU	CG-CD	-8.68	1.39	1.51
36	BA	2506	U	N1-C2	8.44	1.46	1.38
25	AZ	69	GLU	CG-CD	-8.39	1.39	1.51
36	DA	2506	U	N1-C2	7.62	1.45	1.38
24	CY	1	A	OP3-P	-7.14	1.52	1.61
24	AY	1	A	OP3-P	-7.07	1.52	1.61
1	AA	858	G	C5-C6	-6.99	1.35	1.42
1	CA	858	G	N1-C2	6.52	1.43	1.37
1	CA	980	C	C4-C5	6.46	1.48	1.43
25	AZ	68	VAL	CA-CB	-6.43	1.41	1.54
1	AA	858	G	N1-C2	6.33	1.42	1.37
25	CZ	68	VAL	CA-CB	-6.29	1.41	1.54
1	CA	1125	U	O3'-P	6.21	1.68	1.61
1	CA	1108	G	C6-O6	6.06	1.29	1.24
38	BC	120	MET	CG-SD	5.98	1.96	1.81
1	AA	766	A	P-OP2	5.93	1.59	1.49
1	CA	1125	U	C3'-O3'	5.88	1.50	1.42
1	CA	1125	U	O5'-C5'	5.85	1.53	1.44
36	DA	2180	U	N1-C2	5.85	1.43	1.38

Continued on next page...

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	DA	761	A	C5-C4	5.80	1.42	1.38
1	CA	766	A	P-OP2	5.79	1.58	1.49
1	AA	858	G	C5-C4	5.77	1.42	1.38
1	CA	299	G	C6-O6	5.69	1.29	1.24
1	CA	858	G	C5-C4	5.61	1.42	1.38
38	DC	120	MET	CG-SD	5.61	1.95	1.81
25	CZ	68	VAL	CB-CG1	-5.53	1.41	1.52
36	DA	1678	G	C5-C6	-5.48	1.36	1.42
1	AA	1125	U	O3'-P	5.37	1.67	1.61
36	BA	761	A	C5-C4	5.28	1.42	1.38
36	BA	2180	U	N1-C2	5.20	1.43	1.38
38	DC	218	MET	CG-SD	5.20	1.94	1.81
1	AA	1125	U	C3'-O3'	5.19	1.49	1.42
36	BA	1968	G	C5-C6	-5.12	1.37	1.42
22	CW	39	U	N1-C2	5.08	1.43	1.38
1	CA	980	C	C5-C6	5.04	1.38	1.34
47	BO	21	CYS	CB-SG	-5.00	1.73	1.81

All (216) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	DC	134	ARG	NE-CZ-NH2	-14.36	113.12	120.30
39	DD	43	ARG	NE-CZ-NH1	14.15	127.37	120.30
41	BF	168	ARG	NE-CZ-NH2	-13.66	113.47	120.30
38	DC	134	ARG	NE-CZ-NH1	13.54	127.07	120.30
38	BC	134	ARG	NE-CZ-NH2	-13.34	113.63	120.30
39	DD	43	ARG	NE-CZ-NH2	-13.29	113.65	120.30
56	BX	60	ARG	NE-CZ-NH1	13.14	126.87	120.30
38	BC	134	ARG	NE-CZ-NH1	13.12	126.86	120.30
41	DF	168	ARG	NE-CZ-NH2	-13.06	113.77	120.30
56	BX	60	ARG	NE-CZ-NH2	-12.98	113.81	120.30
41	BF	168	ARG	NE-CZ-NH1	12.88	126.74	120.30
41	DF	168	ARG	NE-CZ-NH1	12.52	126.56	120.30
56	DX	60	ARG	NE-CZ-NH2	-12.24	114.18	120.30
39	BD	43	ARG	NE-CZ-NH1	12.21	126.41	120.30
56	DX	60	ARG	NE-CZ-NH1	11.98	126.29	120.30
39	BD	43	ARG	NE-CZ-NH2	-11.71	114.45	120.30
1	CA	1498	U	C2'-C3'-O3'	11.22	134.18	109.50
1	AA	1498	U	C2'-C3'-O3'	10.97	133.63	109.50
25	CZ	68	VAL	O-C-N	-10.97	105.15	122.70
25	AZ	68	VAL	O-C-N	-10.79	105.43	122.70
1	CA	1363(A)	A	C2'-C3'-O3'	10.75	133.16	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1363(A)	A	C2'-C3'-O3'	10.24	132.02	109.50
1	CA	508	C	C2'-C3'-O3'	10.13	131.78	109.50
25	AZ	68	VAL	CA-C-N	10.07	139.35	117.20
1	AA	508	C	C2'-C3'-O3'	9.90	131.29	109.50
25	CZ	68	VAL	CA-C-N	9.76	138.68	117.20
36	DA	1820	U	C2'-C3'-O3'	9.58	130.58	109.50
36	BA	1786	A	N9-C1'-C2'	9.32	126.12	114.00
1	AA	1399	C	C2'-C3'-O3'	9.21	129.77	109.50
36	DA	1786	A	N9-C1'-C2'	9.19	125.95	114.00
36	BA	1820	U	C2'-C3'-O3'	9.11	129.54	109.50
25	AZ	69	GLU	OE1-CD-OE2	8.86	133.93	123.30
25	CZ	69	GLU	OE1-CD-OE2	8.74	133.79	123.30
1	CA	115	G	C2'-C3'-O3'	8.60	128.42	109.50
1	AA	115	G	C2'-C3'-O3'	8.47	128.14	109.50
4	AD	12	CYS	CA-CB-SG	8.40	129.12	114.00
1	CA	687	A	C2'-C3'-O3'	8.37	127.92	109.50
1	AA	243	A	C2'-C3'-O3'	8.37	127.91	109.50
1	CA	1101	A	C2'-C3'-O3'	8.27	127.69	109.50
1	AA	687	A	C2'-C3'-O3'	8.25	127.66	109.50
36	BA	1819	A	C2'-C3'-O3'	8.20	127.55	109.50
1	CA	982	U	C2'-C3'-O3'	8.13	127.40	109.50
1	CA	961	U	N1-C1'-C2'	-8.12	103.06	112.00
36	DA	1819	A	C2'-C3'-O3'	8.11	127.35	109.50
1	CA	243	A	C2'-C3'-O3'	8.10	127.33	109.50
1	AA	982	U	C2'-C3'-O3'	7.97	127.04	109.50
1	CA	547	A	C2'-C3'-O3'	7.90	126.89	109.50
36	BA	1427	A	C2'-C3'-O3'	7.84	126.74	109.50
36	DA	1948	G	C5'-C4'-O4'	-7.83	99.71	109.10
1	AA	547	A	C2'-C3'-O3'	7.81	126.68	109.50
48	DP	52	GLU	N-CA-C	7.80	132.05	111.00
48	BP	52	GLU	N-CA-C	7.77	131.97	111.00
1	CA	1399	C	C2'-C3'-O3'	7.76	126.56	109.50
39	DD	43	ARG	CD-NE-CZ	7.68	134.36	123.60
1	AA	1101	A	C2'-C3'-O3'	7.68	126.40	109.50
1	AA	961	U	N1-C1'-C2'	-7.67	103.56	112.00
36	DA	1427	A	C2'-C3'-O3'	7.67	126.36	109.50
36	DA	1799	G	C2'-C3'-O3'	7.58	126.19	109.50
1	AA	60	A	C2'-C3'-O3'	7.54	126.08	109.50
1	CA	792	A	C2'-C3'-O3'	7.47	125.94	109.50
36	DA	1970	A	C5'-C4'-O4'	7.47	118.06	109.10
1	CA	995	C	N1-C1'-C2'	-7.44	103.81	112.00
36	DA	1653	G	C2'-C3'-O3'	7.44	125.87	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	CA	60	A	C2'-C3'-O3'	7.38	125.75	109.50
38	BC	134	ARG	CD-NE-CZ	7.22	133.70	123.60
48	DP	53	GLY	N-CA-C	-7.20	95.11	113.10
36	BA	945	A	N9-C1'-C2'	7.20	123.35	114.00
1	CA	980	C	N1-C1'-C2'	7.19	123.34	114.00
36	BA	1653	G	C2'-C3'-O3'	7.18	125.29	109.50
48	BP	53	GLY	N-CA-C	-7.17	95.17	113.10
36	BA	2610	C	C2'-C3'-O3'	7.10	125.12	109.50
1	AA	792	A	C2'-C3'-O3'	7.09	125.10	109.50
39	BD	43	ARG	CD-NE-CZ	7.08	133.50	123.60
1	CA	1502	A	N9-C1'-C2'	7.06	123.18	114.00
36	BA	1799	G	C2'-C3'-O3'	7.02	124.95	109.50
36	BA	1698	A	O4'-C1'-N9	6.97	113.77	108.20
25	CZ	189	ARG	NE-CZ-NH2	-6.95	116.83	120.30
38	DC	134	ARG	CD-NE-CZ	6.94	133.32	123.60
36	DA	2360	A	N9-C1'-C2'	-6.89	104.42	112.00
36	BA	2360	A	N9-C1'-C2'	-6.88	104.44	112.00
36	DA	1698	A	O4'-C1'-N9	6.87	113.70	108.20
36	DA	2610	C	C2'-C3'-O3'	6.83	124.64	113.70
1	AA	495	A	C2'-C3'-O3'	6.83	124.63	113.70
1	AA	995	C	N1-C1'-C2'	-6.80	104.52	112.00
36	BA	1970	A	C5'-C4'-O4'	6.77	117.22	109.10
1	AA	980	C	N1-C1'-C2'	6.69	122.70	114.00
4	CD	12	CYS	CA-CB-SG	6.69	126.05	114.00
1	CA	495	A	C2'-C3'-O3'	6.69	124.40	113.70
25	AZ	69	GLU	CG-CD-OE1	-6.58	105.13	118.30
56	BX	60	ARG	CD-NE-CZ	6.57	132.79	123.60
36	BA	1948	G	C5'-C4'-O4'	-6.53	101.26	109.10
1	AA	1283	G	N9-C1'-C2'	-6.46	104.90	112.00
41	BF	168	ARG	CD-NE-CZ	6.39	132.55	123.60
36	DA	945	A	N9-C1'-C2'	6.39	122.31	114.00
41	DF	168	ARG	CD-NE-CZ	6.36	132.50	123.60
36	BA	1300	U	C2'-C3'-O3'	6.35	123.86	113.70
22	CV	59	U	N1-C1'-C2'	-6.35	105.02	112.00
39	BD	35	LYS	N-CA-C	6.34	128.11	111.00
1	CA	1283	G	N9-C1'-C2'	-6.32	105.05	112.00
56	DX	60	ARG	CD-NE-CZ	6.30	132.43	123.60
22	AV	59	U	N1-C1'-C2'	-6.29	105.08	112.00
39	DD	35	LYS	N-CA-C	6.22	127.78	111.00
36	DA	1300	U	C2'-C3'-O3'	6.20	123.62	113.70
58	DZ	79	ARG	N-CA-C	-6.19	94.28	111.00
25	CZ	69	GLU	CG-CD-OE1	-6.19	105.93	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	CA	1399	C	C4'-C3'-O3'	6.17	125.34	113.00
1	CA	977	A	C5'-C4'-C3'	-6.15	106.16	116.00
1	CA	1125	U	C4'-C3'-O3'	6.13	125.25	113.00
42	BG	34	LEU	CA-CB-CG	6.02	129.15	115.30
36	BA	1495	A	N9-C1'-C2'	5.97	121.77	114.00
58	DZ	115	GLY	N-CA-C	5.95	127.97	113.10
1	AA	686	U	N1-C1'-C2'	5.92	121.70	114.00
1	CA	1279	A	N9-C1'-C2'	5.89	121.66	114.00
36	DA	1987	G	C5'-C4'-C3'	-5.89	106.57	116.00
36	BA	1970	A	C5'-C4'-C3'	5.89	125.42	116.00
49	DQ	19	GLY	N-CA-C	5.88	127.81	113.10
1	CA	197	A	N9-C1'-C2'	5.85	121.61	114.00
36	BA	1987	G	C5'-C4'-C3'	-5.84	106.65	116.00
1	AA	197	A	N9-C1'-C2'	5.84	121.59	114.00
36	DA	1819	A	C4'-C3'-O3'	5.82	124.63	113.00
1	CA	328	C	N1-C1'-C2'	5.82	121.56	114.00
1	AA	266	G	C2'-C3'-O3'	5.81	123.00	113.70
36	DA	1495	A	N9-C1'-C2'	5.81	121.55	114.00
1	CA	686	U	N1-C1'-C2'	5.79	121.53	114.00
52	DT	29	ARG	N-CA-C	5.77	126.57	111.00
36	DA	1970	A	C5'-C4'-C3'	5.76	125.22	116.00
36	DA	857	C	C5'-C4'-C3'	-5.73	106.83	116.00
52	BT	29	ARG	N-CA-C	5.71	126.43	111.00
23	AX	27	A	C2'-C3'-O3'	5.70	122.82	113.70
49	BQ	19	GLY	N-CA-C	5.68	127.30	113.10
36	DA	2128	C	N1-C1'-C2'	-5.68	105.75	112.00
1	AA	1125	U	C4'-C3'-O3'	5.67	124.34	113.00
36	DA	2278	A	C5'-C4'-C3'	5.67	125.07	116.00
1	CA	1125	U	O4'-C1'-C2'	-5.67	100.13	105.80
1	AA	977	A	C5'-C4'-C3'	-5.66	106.94	116.00
36	BA	527	C	O4'-C1'-N1	5.65	112.72	108.20
50	DR	4	LEU	CA-CB-CG	5.62	128.24	115.30
48	DP	45	LEU	N-CA-C	-5.59	95.91	111.00
23	CX	27	A	C2'-C3'-O3'	5.58	122.64	113.70
36	DA	2405	G	N9-C1'-C2'	5.57	121.24	114.00
1	CA	189(H)	G	N9-C1'-C2'	-5.57	105.87	112.00
36	BA	857	C	C5'-C4'-C3'	-5.57	107.09	116.00
1	CA	245	C	N1-C1'-C2'	-5.57	105.88	112.00
36	BA	906	G	C5'-C4'-C3'	-5.56	107.10	116.00
1	CA	858	G	C6-C5-N7	-5.56	127.06	130.40
3	AC	196	LEU	CA-CB-CG	5.55	128.07	115.30
23	CX	26	A	C5'-C4'-C3'	5.54	124.87	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	BT	80	SER	N-CA-C	5.53	125.92	111.00
25	AZ	68	VAL	C-N-CA	5.52	135.50	121.70
48	BP	45	LEU	N-CA-C	-5.51	96.11	111.00
23	AX	26	A	C5'-C4'-C3'	5.51	124.82	116.00
1	AA	328	C	N1-C1'-C2'	5.50	121.14	114.00
1	AA	1502	A	N9-C1'-C2'	5.49	121.14	114.00
1	CA	1498	U	N1-C1'-C2'	5.49	121.14	114.00
3	CC	196	LEU	CA-CB-CG	5.49	127.92	115.30
36	BA	2278	A	C5'-C4'-C3'	5.49	124.78	116.00
36	BA	1819	A	C4'-C3'-O3'	5.47	123.95	113.00
1	AA	1279	A	N9-C1'-C2'	5.46	121.10	114.00
1	AA	189(H)	G	N9-C1'-C2'	-5.44	106.01	112.00
36	DA	387	U	C2'-C3'-O3'	5.44	122.41	113.70
52	DT	80	SER	N-CA-C	5.44	125.69	111.00
58	DZ	61	LEU	CA-CB-CG	5.43	127.79	115.30
50	BR	4	LEU	CA-CB-CG	5.42	127.77	115.30
1	CA	563	A	N9-C1'-C2'	5.41	121.04	114.00
36	DA	2756	U	C2'-C3'-O3'	5.41	122.36	113.70
36	DA	527	C	O4'-C1'-N1	5.41	112.53	108.20
46	DN	77	GLY	N-CA-C	-5.40	99.59	113.10
36	DA	1947	C	C5'-C4'-C3'	-5.40	107.36	116.00
23	CX	16	A	C5'-C4'-C3'	5.39	124.63	116.00
1	CA	858	G	N1-C6-O6	5.36	123.12	119.90
25	AZ	288	VAL	CG1-CB-CG2	-5.36	102.33	110.90
1	AA	245	C	N1-C1'-C2'	-5.35	106.11	112.00
57	DY	54	LYS	N-CA-C	-5.34	96.58	111.00
46	BN	77	GLY	N-CA-C	-5.31	99.83	113.10
36	BA	387	U	C2'-C3'-O3'	5.30	122.18	113.70
25	CZ	68	VAL	C-N-CA	5.29	134.92	121.70
1	AA	1125	U	O4'-C1'-C2'	-5.25	100.55	105.80
1	CA	266	G	C2'-C3'-O3'	5.25	122.10	113.70
36	BA	2405	G	N9-C1'-C2'	5.24	120.81	114.00
1	CA	1145	C	C2'-C3'-O3'	5.23	122.07	113.70
1	AA	347	G	N9-C1'-C2'	-5.23	106.25	112.00
25	AZ	68	VAL	CA-CB-CG1	-5.22	103.06	110.90
1	AA	484	G	N9-C1'-C2'	5.22	120.79	114.00
36	DA	761	A	C6-C5-N7	-5.21	128.65	132.30
1	CA	30	U	N1-C1'-C2'	5.21	120.78	114.00
57	BY	54	LYS	N-CA-C	-5.21	96.94	111.00
1	CA	960	U	N1-C1'-C2'	5.20	120.76	114.00
36	DA	1701	A	C5'-C4'-C3'	-5.20	107.68	116.00
36	DA	2286	A	N9-C1'-C2'	5.20	120.76	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	DB	8	U	C5'-C4'-O4'	-5.19	102.87	109.10
1	CA	1053	G	OP1-P-O3'	5.19	116.61	105.20
36	DA	958	U	N1-C1'-C2'	5.18	120.74	114.00
1	CA	1198	G	O5'-P-OP2	5.17	116.91	110.70
36	BA	2756	U	C2'-C3'-O3'	5.17	121.97	113.70
1	CA	1124	G	N9-C1'-C2'	5.16	120.71	114.00
36	BA	2559	C	C5'-C4'-C3'	-5.16	107.75	116.00
1	CA	1280	A	OP1-P-O3'	5.15	116.53	105.20
1	CA	347	G	N9-C1'-C2'	-5.14	106.34	112.00
36	DA	906	G	C5'-C4'-C3'	-5.14	107.78	116.00
1	AA	1145	C	C2'-C3'-O3'	5.14	121.92	113.70
36	DA	2031	A	N9-C1'-C2'	5.14	120.68	114.00
36	DA	2132	U	N1-C1'-C2'	5.14	120.68	114.00
36	DA	856	C	C2'-C3'-O3'	5.11	121.87	113.70
1	CA	1387	G	C5'-C4'-C3'	-5.10	107.84	116.00
36	DA	761	A	N1-C6-N6	5.08	121.65	118.60
1	AA	858	G	N1-C6-O6	5.04	122.92	119.90
1	CA	484	G	N9-C1'-C2'	5.03	120.54	114.00
1	AA	858	G	O4'-C1'-N9	-5.02	104.18	108.20
1	AA	1399	C	C4'-C3'-O3'	5.02	123.05	113.00
48	DP	59	LEU	CA-CB-CG	5.02	126.85	115.30
36	BA	2286	A	N9-C1'-C2'	5.02	120.53	114.00
36	BA	2128	C	N1-C1'-C2'	-5.02	106.48	112.00
1	CA	836	G	C5'-C4'-C3'	5.02	124.03	116.00
1	CA	1456	G	N9-C1'-C2'	5.02	120.52	114.00
1	AA	836	G	C5'-C4'-C3'	5.01	124.01	116.00
36	DA	1986	A	C5'-C4'-C3'	-5.00	107.99	116.00

All (12) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	508	C	C3'
1	AA	1363(A)	A	C3'
1	AA	1399	C	C3'
1	AA	1498	U	C3'
36	BA	1819	A	C3'
36	BA	1820	U	C3'
1	CA	508	C	C3'
1	CA	1363(A)	A	C3'
1	CA	1399	C	C3'
1	CA	1498	U	C3'
36	DA	1819	A	C3'

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Mol	Chain	Res	Type	Atom
36	DA	1820	U	C3'

All (257) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1073	U	Sidechain
1	AA	1077	G	Sidechain
1	AA	1086	U	Sidechain
1	AA	1125	U	Sidechain
1	AA	1153	C	Sidechain
1	AA	1157	A	Sidechain
1	AA	1181	G	Sidechain
1	AA	1190	G	Sidechain
1	AA	1196	U	Sidechain
1	AA	1220	G	Sidechain
1	AA	1279	A	Sidechain
1	AA	1281	U	Sidechain
1	AA	1283	G	Sidechain
1	AA	1370	G	Sidechain
1	AA	1390	U	Sidechain
1	AA	14	U	Sidechain
1	AA	1406	U	Sidechain
1	AA	1414	U	Sidechain
1	AA	1439	C	Sidechain
1	AA	1498	U	Sidechain
1	AA	1504	G	Sidechain
1	AA	1505	G	Sidechain
1	AA	1516	G	Sidechain
1	AA	1519	A	Sidechain
1	AA	1527	C	Sidechain
1	AA	1528	U	Sidechain
1	AA	189(G)	G	Sidechain
1	AA	189(H)	G	Sidechain
1	AA	197	A	Sidechain
1	AA	198	G	Sidechain
1	AA	244	U	Sidechain
1	AA	245	C	Sidechain
1	AA	251	G	Sidechain
1	AA	30	U	Sidechain
1	AA	347	G	Sidechain
1	AA	37	U	Sidechain
1	AA	380	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	387	U	Sidechain
1	AA	404	U	Sidechain
1	AA	498	U	Sidechain
1	AA	529	G	Sidechain
1	AA	560	U	Sidechain
1	AA	570	G	Sidechain
1	AA	573	A	Sidechain
1	AA	60	A	Sidechain
1	AA	657	G	Sidechain
1	AA	727	G	Sidechain
1	AA	741	G	Sidechain
1	AA	748	C	Sidechain
1	AA	898	G	Sidechain
1	AA	941	G	Sidechain
1	AA	952	U	Sidechain
1	AA	954	G	Sidechain
1	AA	961	U	Sidechain
1	AA	970	C	Sidechain
1	AA	971	G	Sidechain
1	AA	980	C	Sidechain
1	AA	982	U	Sidechain
1	AA	995	C	Sidechain
22	AV	25	C	Sidechain
22	AV	29	G	Sidechain
22	AV	59	U	Sidechain
23	AX	19	U	Sidechain
23	AX	26	A	Sidechain
36	BA	1156	A	Sidechain
36	BA	1162	G	Sidechain
36	BA	1238	G	Sidechain
36	BA	1393	A	Sidechain
36	BA	1425	G	Sidechain
36	BA	15	G	Sidechain
36	BA	1647	G	Sidechain
36	BA	1649	G	Sidechain
36	BA	1673	U	Sidechain
36	BA	1772	G	Sidechain
36	BA	1773	A	Sidechain
36	BA	1798	U	Sidechain
36	BA	1801	G	Sidechain
36	BA	1807	G	Sidechain
36	BA	1822	G	Sidechain

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Mol	Chain	Res	Type	Group
36	BA	1831	G	Sidechain
36	BA	1841	U	Sidechain
36	BA	1954	G	Sidechain
36	BA	2000	G	Sidechain
36	BA	201	C	Sidechain
36	BA	2010	G	Sidechain
36	BA	2031	A	Sidechain
36	BA	2052	G	Sidechain
36	BA	2061	G	Sidechain
36	BA	2074	U	Sidechain
36	BA	2075	U	Sidechain
36	BA	2128	C	Sidechain
36	BA	2132	U	Sidechain
36	BA	2133	G	Sidechain
36	BA	2134	A	Sidechain
36	BA	2157	G	Sidechain
36	BA	2250	G	Sidechain
36	BA	2320	A	Sidechain
36	BA	2344	U	Sidechain
36	BA	2360	A	Sidechain
36	BA	2464	C	Sidechain
36	BA	2481	G	Sidechain
36	BA	2504	U	Sidechain
36	BA	2506	U	Sidechain
36	BA	2508	G	Sidechain
36	BA	2523	G	Sidechain
36	BA	2542	A	Sidechain
36	BA	2581	G	Sidechain
36	BA	2595	G	Sidechain
36	BA	2659	G	Sidechain
36	BA	2665	A	Sidechain
36	BA	2685	G	Sidechain
36	BA	2712	U	Sidechain
36	BA	2848	G	Sidechain
36	BA	383	U	Sidechain
36	BA	631	A	Sidechain
36	BA	632	A	Sidechain
36	BA	686	G	Sidechain
36	BA	688	U	Sidechain
36	BA	700	G	Sidechain
36	BA	746	A	Sidechain
36	BA	760	G	Sidechain

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Mol	Chain	Res	Type	Group
36	BA	792	G	Sidechain
36	BA	813	U	Sidechain
36	BA	913	U	Sidechain
36	BA	945	A	Sidechain
36	BA	956	G	Sidechain
36	BA	958	U	Sidechain
37	BB	16	G	Sidechain
37	BB	42	C	Sidechain
49	BQ	9	TYR	Sidechain
1	CA	1048	G	Sidechain
1	CA	1073	U	Sidechain
1	CA	1077	G	Sidechain
1	CA	1125	U	Sidechain
1	CA	1153	C	Sidechain
1	CA	1157	A	Sidechain
1	CA	1181	G	Sidechain
1	CA	1190	G	Sidechain
1	CA	1196	U	Sidechain
1	CA	1279	A	Sidechain
1	CA	1281	U	Sidechain
1	CA	1283	G	Sidechain
1	CA	1330	U	Sidechain
1	CA	1370	G	Sidechain
1	CA	1397	C	Sidechain
1	CA	14	U	Sidechain
1	CA	1406	U	Sidechain
1	CA	1414	U	Sidechain
1	CA	1415	G	Sidechain
1	CA	1467	G	Sidechain
1	CA	1494	G	Sidechain
1	CA	1498	U	Sidechain
1	CA	1516	G	Sidechain
1	CA	1523	G	Sidechain
1	CA	189(G)	G	Sidechain
1	CA	189(H)	G	Sidechain
1	CA	197	A	Sidechain
1	CA	198	G	Sidechain
1	CA	202	U	Sidechain
1	CA	245	C	Sidechain
1	CA	251	G	Sidechain
1	CA	309	G	Sidechain
1	CA	347	G	Sidechain

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Mol	Chain	Res	Type	Group
1	CA	37	U	Sidechain
1	CA	380	G	Sidechain
1	CA	387	U	Sidechain
1	CA	404	U	Sidechain
1	CA	498	U	Sidechain
1	CA	529	G	Sidechain
1	CA	570	G	Sidechain
1	CA	573	A	Sidechain
1	CA	657	G	Sidechain
1	CA	727	G	Sidechain
1	CA	748	C	Sidechain
1	CA	941	G	Sidechain
1	CA	952	U	Sidechain
1	CA	961	U	Sidechain
1	CA	980	C	Sidechain
1	CA	995	C	Sidechain
22	CV	29	G	Sidechain
22	CV	59	U	Sidechain
23	CX	26	A	Sidechain
36	DA	1060	U	Sidechain
36	DA	114	U	Sidechain
36	DA	1156	A	Sidechain
36	DA	1162	G	Sidechain
36	DA	1393	A	Sidechain
36	DA	1425	G	Sidechain
36	DA	15	G	Sidechain
36	DA	1569	A	Sidechain
36	DA	1647	G	Sidechain
36	DA	1649	G	Sidechain
36	DA	1772	G	Sidechain
36	DA	1773	A	Sidechain
36	DA	1784	A	Sidechain
36	DA	1801	G	Sidechain
36	DA	1807	G	Sidechain
36	DA	1822	G	Sidechain
36	DA	1831	G	Sidechain
36	DA	1841	U	Sidechain
36	DA	1900	A	Sidechain
36	DA	1928	A	Sidechain
36	DA	1940	U	Sidechain
36	DA	1952	A	Sidechain
36	DA	1954	G	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	201	C	Sidechain
36	DA	2031	A	Sidechain
36	DA	2052	G	Sidechain
36	DA	2061	G	Sidechain
36	DA	2074	U	Sidechain
36	DA	2075	U	Sidechain
36	DA	2128	C	Sidechain
36	DA	2133	G	Sidechain
36	DA	2134	A	Sidechain
36	DA	2157	G	Sidechain
36	DA	2250	G	Sidechain
36	DA	2320	A	Sidechain
36	DA	2344	U	Sidechain
36	DA	2360	A	Sidechain
36	DA	2391	G	Sidechain
36	DA	2464	C	Sidechain
36	DA	2475	C	Sidechain
36	DA	2481	G	Sidechain
36	DA	2504	U	Sidechain
36	DA	2506	U	Sidechain
36	DA	2508	G	Sidechain
36	DA	2523	G	Sidechain
36	DA	2525	G	Sidechain
36	DA	2542	A	Sidechain
36	DA	2582	G	Sidechain
36	DA	2595	G	Sidechain
36	DA	2665	A	Sidechain
36	DA	2685	G	Sidechain
36	DA	2746	U	Sidechain
36	DA	2818	G	Sidechain
36	DA	2848	G	Sidechain
36	DA	383	U	Sidechain
36	DA	463	G	Sidechain
36	DA	467	G	Sidechain
36	DA	528	A	Sidechain
36	DA	631	A	Sidechain
36	DA	632	A	Sidechain
36	DA	686	G	Sidechain
36	DA	688	U	Sidechain
36	DA	700	G	Sidechain
36	DA	746	A	Sidechain
36	DA	760	G	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	792	G	Sidechain
36	DA	813	U	Sidechain
36	DA	913	U	Sidechain
36	DA	945	A	Sidechain
36	DA	946	G	Sidechain
36	DA	956	G	Sidechain
36	DA	958	U	Sidechain
37	DB	16	G	Sidechain
37	DB	42	C	Sidechain
49	DQ	9	TYR	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32451	0	16382	929	0
1	CA	32451	0	16382	850	0
2	AB	1900	0	1951	185	2
2	CB	1900	0	1951	176	2
3	AC	1612	0	1677	145	0
3	CC	1612	0	1677	141	0
4	AD	1703	0	1765	168	0
4	CD	1703	0	1765	156	0
5	AE	1146	0	1207	69	0
5	CE	1146	0	1207	69	0
6	AF	843	0	857	64	0
6	CF	843	0	857	59	0
7	AG	1257	0	1296	70	0
7	CG	1257	0	1296	63	0
8	AH	1116	0	1177	55	0
8	CH	1116	0	1177	49	0
9	AI	1010	0	1037	109	0
9	CI	1010	0	1037	109	0
10	AJ	794	0	840	116	0
10	CJ	794	0	840	116	0
11	AK	885	0	904	58	0
11	CK	885	0	904	57	0
12	AL	970	0	1057	99	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	CL	970	0	1057	97	0
13	AM	987	0	1059	116	0
13	CM	987	0	1059	116	0
14	AN	492	0	530	57	0
14	CN	492	0	530	62	0
15	AO	734	0	771	44	0
15	CO	734	0	771	43	0
16	AP	700	0	720	75	0
16	CP	700	0	720	80	0
17	AQ	823	0	891	60	0
17	CQ	823	0	891	62	0
18	AR	574	0	644	46	0
18	CR	574	0	644	50	0
19	AS	629	0	652	76	0
19	CS	629	0	652	73	0
20	AT	763	0	861	97	0
20	CT	763	0	861	99	0
21	AU	208	0	221	25	0
21	CU	208	0	221	29	0
22	AV	1619	0	822	59	0
22	AW	1619	0	822	82	0
22	CV	1619	0	822	58	0
22	CW	1619	0	822	76	0
23	AX	362	0	184	15	0
23	CX	362	0	184	14	0
24	AY	1645	0	853	132	0
24	CY	1645	0	853	89	0
25	AZ	2984	0	2997	475	0
25	CZ	2984	0	2997	384	0
26	B0	662	0	688	66	0
26	D0	662	0	688	65	0
27	B1	731	0	808	84	0
27	D1	731	0	808	80	0
28	B2	598	0	653	87	0
28	D2	598	0	653	215	0
29	B3	467	0	523	35	0
29	D3	467	0	523	35	0
30	B4	340	0	337	53	0
30	D4	340	0	336	58	0
31	B5	459	0	480	84	0
31	D5	459	0	480	76	0
32	B6	433	0	461	123	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	D6	433	0	461	121	0
33	B7	418	0	467	38	0
33	D7	418	0	467	37	0
34	B8	507	0	576	130	0
34	D8	507	0	576	128	0
35	B9	307	0	337	33	0
35	D9	307	0	335	31	0
36	BA	62477	0	31497	2071	0
36	DA	62477	0	31497	2074	0
37	BB	2551	0	1295	93	0
37	DB	2551	0	1295	101	0
38	BC	1742	0	1800	162	2
38	DC	1742	0	1800	153	2
39	BD	2145	0	2234	254	0
39	DD	2145	0	2234	240	0
40	BE	1563	0	1629	237	0
40	DE	1563	0	1629	235	0
41	BF	1623	0	1677	214	0
41	DF	1623	0	1677	216	0
42	BG	1474	0	1535	236	0
42	DG	1474	0	1535	269	0
43	BH	1222	0	1282	159	0
43	DH	1222	0	1282	155	0
44	BJ	651	0	156	23	0
44	DJ	651	0	166	16	0
45	BK	700	0	167	9	0
45	DK	700	0	167	9	0
46	BN	1104	0	1180	160	0
46	DN	1104	0	1180	157	0
47	BO	933	0	996	86	0
47	DO	933	0	996	88	0
48	BP	1114	0	1187	267	0
48	DP	1114	0	1187	264	0
49	BQ	1122	0	1179	119	0
49	DQ	1122	0	1179	128	0
50	BR	960	0	1021	151	0
50	DR	960	0	1021	150	0
51	BS	770	0	832	135	0
51	DS	770	0	832	138	0
52	BT	1141	0	1202	207	0
52	DT	1141	0	1202	207	0
53	BU	958	0	1015	129	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	DU	958	0	1015	132	0
54	BV	779	0	852	139	0
54	DV	779	0	852	141	0
55	BW	896	0	953	84	0
55	DW	896	0	953	84	0
56	BX	725	0	778	100	0
56	DX	725	0	778	92	0
57	BY	775	0	870	177	0
57	DY	775	0	870	169	0
58	BZ	1403	0	1432	211	0
58	DZ	1403	0	1432	189	0
59	AD	1	0	0	1	0
59	AN	1	0	0	1	0
59	B4	1	0	0	1	0
59	B9	1	0	0	1	0
59	CD	1	0	0	1	0
59	CN	1	0	0	1	0
59	D4	1	0	0	0	0
59	D9	1	0	0	0	0
60	AZ	28	0	12	15	0
60	CZ	28	0	12	8	0
61	AZ	57	0	58	13	0
61	CZ	57	0	58	9	0
All	All	307330	0	208699	17315	4

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 34.

All (17315) 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:355:LEU:CD2	25:AZ:370:PHE:HB3	1.63	1.28
25:CZ:355:LEU:CD2	25:CZ:370:PHE:HB3	1.63	1.24
39:DD:35:LYS:HG3	39:DD:104:TYR:CE2	1.73	1.23
25:AZ:2:LYS:O	25:AZ:275:LYS:HE3	1.42	1.20
25:CZ:355:LEU:HD23	25:CZ:370:PHE:CB	1.73	1.19
39:BD:35:LYS:HG3	39:BD:104:TYR:CE2	1.77	1.19
25:AZ:355:LEU:HD23	25:AZ:370:PHE:CB	1.72	1.18
36:BA:2645:G:H3'	36:BA:2646:C:H5'	1.25	1.18
36:BA:1484:G:H2'	36:BA:1485:G:H5"	1.24	1.18
25:AZ:355:LEU:HB2	25:AZ:356:PRO:CD	1.73	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2092:U:H4'	36:DA:2093:G:H5"	1.21	1.17
36:DA:1378:A:O2'	36:DA:1379:A:H5'	1.44	1.17
25:CZ:355:LEU:HB2	25:CZ:356:PRO:CD	1.73	1.15
42:BG:139:LEU:HA	42:BG:144:ILE:HG12	1.27	1.15
15:CO:87:ILE:HG22	15:CO:88:ARG:H	1.07	1.15
39:DD:43:ARG:HH11	39:DD:44:ASN:ND2	1.44	1.15
36:DA:2833:G:H3'	36:DA:2834:G:H5"	1.29	1.15
36:DA:2645:G:H3'	36:DA:2646:C:H5'	1.27	1.14
56:BX:35:THR:HG22	56:BX:37:THR:H	1.05	1.14
20:CT:57:ARG:HH11	20:CT:102:GLY:HA2	1.12	1.14
24:CY:25:C:H2'	24:CY:26:A:H5'	1.28	1.14
36:BA:2833:G:H3'	36:BA:2834:G:H5"	1.29	1.13
29:D3:35:ARG:HB2	29:D3:35:ARG:HH11	1.12	1.13
36:BA:2092:U:H4'	36:BA:2093:G:H5"	1.19	1.13
36:BA:925:C:H2'	36:BA:926:A:H5"	1.29	1.13
36:BA:1899:G:N2	36:BA:1902:C:H41	1.48	1.12
24:AY:25:C:H2'	24:AY:26:A:H5'	1.28	1.12
22:CV:46:G:H3'	22:CV:47:U:H5"	1.13	1.12
25:CZ:2:LYS:O	25:CZ:275:LYS:HE3	1.45	1.11
15:AO:87:ILE:HG22	15:AO:88:ARG:H	1.10	1.11
58:BZ:69:THR:HG22	58:BZ:90:VAL:HA	1.22	1.11
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.14	1.11
36:BA:1378:A:O2'	36:BA:1379:A:H5'	1.48	1.11
48:DP:58:THR:HG22	48:DP:61:ARG:HE	1.06	1.11
1:CA:1305:G:H22	1:CA:1331:G:H2'	1.13	1.10
56:BX:12:VAL:HB	56:BX:17:ALA:HB1	1.34	1.10
56:DX:35:THR:HG22	56:DX:37:THR:H	1.05	1.10
32:D6:30:THR:HG22	32:D6:31:PRO:HD2	1.29	1.10
51:DS:30:ARG:HH22	51:DS:62:LYS:HD3	1.11	1.10
28:D2:47:ASN:HA	28:D2:50:ILE:HB	1.32	1.10
22:AV:46:G:H3'	22:AV:47:U:H5"	1.13	1.10
36:DA:628:G:H2'	36:DA:629:G:H5"	1.32	1.10
24:AY:4:G:H2'	24:AY:5:G:H5"	1.28	1.10
28:D2:39:ALA:HA	28:D2:45:SER:HB3	1.18	1.09
57:DY:8:LYS:H	57:DY:8:LYS:HD2	1.17	1.09
56:BX:12:VAL:HG23	56:BX:13:LEU:H	1.14	1.09
36:DA:1484:G:H2'	36:DA:1485:G:H5"	1.24	1.09
31:B5:4:HIS:HB2	31:B5:5:PRO:HD3	1.31	1.09
36:DA:1899:G:N2	36:DA:1902:C:H41	1.48	1.09
56:DX:12:VAL:HG23	56:DX:13:LEU:H	1.13	1.08
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.31	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:4:G:H2'	24:CY:5:G:H5"	1.28	1.08
41:BF:24:LEU:HB3	41:BF:25:PRO:HD2	1.36	1.08
28:D2:34:GLU:HA	28:D2:37:PHE:HB2	1.09	1.07
34:B8:62:LEU:HD13	36:BA:242:G:H5"	1.31	1.07
54:BV:62:LEU:HD21	54:BV:95:LEU:HB2	1.33	1.07
25:CZ:29:ALA:O	25:CZ:33:TYR:HD2	1.37	1.07
24:AY:77:TRP:O	25:AZ:273:HIS:HA	1.55	1.07
48:BP:58:THR:HG22	48:BP:61:ARG:HE	1.09	1.07
32:B6:30:THR:HG22	32:B6:31:PRO:HD2	1.29	1.07
54:DV:62:LEU:HD21	54:DV:95:LEU:HB2	1.34	1.07
36:DA:2187:G:H2'	36:DA:2188:C:H5'	1.35	1.07
32:D6:35:GLU:HB3	32:D6:51:GLU:HB2	1.34	1.07
24:AY:24:G:H2'	24:AY:25:C:H5"	1.36	1.06
28:B2:35:LEU:HD11	28:B2:50:ILE:HG13	1.31	1.06
34:D8:62:LEU:HD13	36:DA:242:G:H5"	1.30	1.06
28:D2:21:LEU:HB3	28:D2:64:LEU:HG	1.34	1.06
36:DA:925:C:H2'	36:DA:926:A:H5"	1.30	1.06
24:CY:24:G:H2'	24:CY:25:C:H5"	1.38	1.06
31:D5:4:HIS:HB2	31:D5:5:PRO:HD3	1.31	1.06
20:AT:57:ARG:HH11	20:AT:102:GLY:HA2	1.11	1.06
28:D2:47:ASN:HD22	28:D2:51:ARG:HG3	0.97	1.06
36:DA:2761:G:H2'	36:DA:2762:G:H5"	1.37	1.06
1:AA:975:A:H4'	1:AA:976:G:H5"	1.38	1.06
42:DG:67:LYS:H	42:DG:67:LYS:HD3	1.18	1.06
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.31	1.06
56:BX:63:LYS:HE2	56:BX:72:LYS:HE3	1.39	1.05
52:BT:82:LEU:HD12	52:BT:82:LEU:H	1.19	1.05
25:AZ:355:LEU:HB2	25:AZ:356:PRO:HD3	1.36	1.05
32:D6:18:ARG:HG2	32:D6:18:ARG:HH11	1.18	1.05
52:DT:82:LEU:H	52:DT:82:LEU:HD12	1.19	1.05
1:CA:1532:U:H2'	1:CA:1533:C:H5"	1.30	1.05
1:AA:1532:U:H2'	1:AA:1533:C:H5"	1.34	1.05
26:B0:10:THR:HG22	26:B0:12:ASN:H	1.17	1.05
2:CB:165:VAL:HG23	2:CB:166:ASP:H	1.20	1.05
36:DA:272(H):C:H2'	36:DA:272(I):U:H5"	1.38	1.05
7:CG:54:THR:HG22	7:CG:56:GLN:H	1.19	1.05
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.20	1.05
29:B3:35:ARG:HB2	29:B3:35:ARG:HH11	1.13	1.05
25:CZ:241:ARG:HB3	25:CZ:241:ARG:HH11	1.21	1.05
36:BA:2761:G:H2'	36:BA:2762:G:H5"	1.38	1.05
28:D2:29:LYS:HA	28:D2:32:LEU:HB3	1.39	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:18:ARG:HG2	32:B6:18:ARG:HH11	1.20	1.04
36:BA:2603:G:H2'	36:BA:2604:U:H5"	1.35	1.04
40:BE:57:LYS:HA	40:BE:57:LYS:HE3	1.39	1.04
36:BA:628:G:H2'	36:BA:629:G:H5"	1.34	1.04
28:D2:35:LEU:HD21	28:D2:50:ILE:HA	1.30	1.04
51:BS:30:ARG:HH22	51:BS:62:LYS:HD3	1.13	1.04
36:BA:1301:A:O2'	36:BA:1302:A:H2'	1.55	1.04
42:DG:55:LYS:HA	42:DG:58:GLN:HG2	1.37	1.04
42:BG:72:ARG:HB2	42:BG:87:PRO:HD2	1.37	1.04
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.19	1.04
41:BF:192:LEU:HD21	41:BF:194:MET:HG3	1.37	1.04
38:BC:175:VAL:HG12	38:BC:188:ASN:HB3	1.40	1.04
51:DS:49:VAL:HG12	51:DS:50:SER:H	1.20	1.04
22:CV:4:C:H2'	22:CV:5:G:H5"	1.39	1.04
1:CA:979:C:H3'	1:CA:980:C:H5"	1.35	1.04
51:BS:49:VAL:HG12	51:BS:50:SER:H	1.20	1.04
41:DF:192:LEU:HD21	41:DF:194:MET:HG3	1.37	1.04
57:BY:8:LYS:H	57:BY:8:LYS:HD2	1.17	1.04
56:DX:12:VAL:HB	56:DX:17:ALA:HB1	1.35	1.04
36:DA:1024:G:H3'	36:DA:1025:G:H5"	1.39	1.04
25:AZ:29:ALA:O	25:AZ:33:TYR:HD2	1.41	1.03
36:DA:2603:G:H2'	36:DA:2604:U:H5"	1.36	1.03
36:DA:1301:A:O2'	36:DA:1302:A:H2'	1.58	1.03
41:DF:24:LEU:HB3	41:DF:25:PRO:HD2	1.37	1.03
36:DA:2012:G:H4'	55:DW:96:ILE:HD11	1.40	1.03
49:DQ:141:GLN:NE2	58:DZ:72:ARG:HA	1.73	1.03
32:B6:19:ARG:HG2	32:B6:20:ASN:H	1.20	1.03
40:DE:57:LYS:HA	40:DE:57:LYS:HE3	1.38	1.03
36:BA:1665:A:H2'	36:BA:1666:G:H5"	1.38	1.03
37:DB:20:C:H2'	37:DB:21:G:H5"	1.39	1.03
36:DA:1747(A):G:H2'	36:DA:1748:G:H5"	1.40	1.03
36:DA:2312:U:O3'	42:DG:71:THR:HG21	1.58	1.03
27:B1:65:SER:O	27:B1:66:HIS:HB2	1.55	1.03
39:DD:30:GLU:HB3	39:DD:35:LYS:HZ3	1.19	1.03
32:D6:19:ARG:HG2	32:D6:20:ASN:H	1.19	1.03
38:DC:175:VAL:HG12	38:DC:188:ASN:HB3	1.39	1.03
1:AA:979:C:H3'	1:AA:980:C:H5"	1.39	1.03
2:AB:200:ILE:HD12	2:AB:200:ILE:H	1.23	1.03
36:BA:272(H):C:H2'	36:BA:272(I):U:H5"	1.38	1.03
28:B2:68:ARG:HB2	28:B2:68:ARG:HH11	1.18	1.02
32:B6:35:GLU:HB3	32:B6:51:GLU:HB2	1.34	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1271:G:H2'	1:CA:1272:G:H5"	1.37	1.02
49:DQ:60:ARG:HB3	49:DQ:60:ARG:HH11	1.22	1.02
49:DQ:141:GLN:HE21	58:DZ:72:ARG:HA	0.87	1.02
1:AA:1271:G:H2'	1:AA:1272:G:H5"	1.37	1.02
37:BB:20:C:H2'	37:BB:21:G:H5"	1.41	1.02
36:DA:1665:A:H2'	36:DA:1666:G:H5"	1.36	1.02
22:AV:42:C:H6	22:AV:42:C:H5'	1.24	1.02
36:BA:1959:G:H2'	36:BA:1960:A:H5"	1.40	1.02
36:DA:1884:A:H2'	36:DA:1885:A:H5"	1.37	1.02
52:BT:28:VAL:O	52:BT:29:ARG:HD2	1.60	1.02
43:BH:85:LYS:HZ3	43:BH:133:VAL:N	1.57	1.02
25:CZ:355:LEU:HB2	25:CZ:356:PRO:HD3	1.38	1.02
36:BA:2187:G:H2'	36:BA:2188:C:H5'	1.41	1.02
7:AG:54:THR:HG22	7:AG:56:GLN:H	1.22	1.02
52:DT:80:SER:HB3	52:DT:81:PRO:HD3	1.41	1.02
43:DH:106:THR:HG22	43:DH:112:PRO:HB3	1.42	1.02
36:BA:1884:A:H2'	36:BA:1885:A:H5"	1.40	1.02
1:CA:975:A:H4'	1:CA:976:G:H5"	1.38	1.02
43:BH:153:LYS:H	43:BH:153:LYS:HD3	1.25	1.01
22:AV:4:C:H2'	22:AV:5:G:H5"	1.38	1.01
36:BA:330:A:HO2'	36:BA:331:A:H8	1.05	1.01
1:AA:358:U:H4'	25:AZ:234:ARG:C	1.79	1.01
1:CA:1537:U:H5'	18:CR:54:ARG:HH22	1.23	1.01
36:BA:1024:G:H3'	36:BA:1025:G:H5"	1.41	1.01
1:AA:1305:G:N2	1:AA:1331:G:H2'	1.74	1.01
49:BQ:60:ARG:HH11	49:BQ:60:ARG:HB3	1.21	1.01
22:AW:18:G:H1	22:AW:55:U:H1'	1.26	1.01
28:D2:23:LYS:HA	28:D2:26:ARG:HB3	1.42	1.01
36:DA:654(H):G:H2'	36:DA:654(I):C:H5'	1.42	1.01
41:DF:155:LEU:HD11	41:DF:176:LEU:HD22	1.41	1.00
2:CB:200:ILE:HD12	2:CB:200:ILE:H	1.22	1.00
36:BA:2012:G:H4'	55:BW:96:ILE:HD11	1.40	1.00
36:DA:27:G:H22	36:DA:512:G:H2'	1.25	1.00
48:DP:62:LEU:H	48:DP:62:LEU:HD23	1.24	1.00
36:BA:1747(A):G:H2'	36:BA:1748:G:H5"	1.40	1.00
28:D2:48:HIS:HA	36:DA:95:G:O3'	1.61	1.00
48:BP:62:LEU:HD23	48:BP:62:LEU:H	1.24	1.00
43:BH:106:THR:HG22	43:BH:112:PRO:HB3	1.42	1.00
26:D0:10:THR:HG22	26:D0:12:ASN:H	1.20	1.00
41:BF:155:LEU:HD11	41:BF:176:LEU:HD22	1.41	0.99
39:BD:30:GLU:HB3	39:BD:35:LYS:HZ3	1.25	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1305:G:N2	1:CA:1331:G:H2'	1.75	0.99
22:CV:42:C:H6	22:CV:42:C:H5'	1.24	0.99
32:D6:19:ARG:CG	32:D6:20:ASN:H	1.76	0.99
36:DA:1959:G:H2'	36:DA:1960:A:H5"	1.42	0.99
57:BY:13:VAL:HG11	57:BY:28:LYS:HD3	1.44	0.99
22:CW:18:G:H1	22:CW:55:U:H1'	1.25	0.99
40:DE:38:THR:HG22	40:DE:40:GLU:H	1.25	0.99
36:BA:27:G:H22	36:BA:512:G:H2'	1.28	0.99
36:DA:2833:G:H3'	36:DA:2834:G:C5'	1.93	0.99
28:D2:47:ASN:HD22	28:D2:51:ARG:CG	1.76	0.99
25:AZ:241:ARG:HH11	25:AZ:241:ARG:HB3	1.23	0.99
52:DT:28:VAL:O	52:DT:29:ARG:HD2	1.61	0.99
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.22	0.99
39:BD:34:VAL:HG23	39:BD:35:LYS:H	1.27	0.98
52:BT:53:ARG:HH11	52:BT:53:ARG:HB3	1.28	0.98
36:BA:654(H):G:H2'	36:BA:654(I):C:H5'	1.42	0.98
43:BH:169:VAL:HG22	43:BH:170:ARG:H	1.28	0.98
32:B6:19:ARG:CG	32:B6:20:ASN:H	1.76	0.98
1:CA:858:G:C6	1:CA:869:G:N7	2.31	0.98
28:D2:29:LYS:HD2	28:D2:32:LEU:HD13	1.41	0.98
36:BA:271(L):U:H5"	36:BA:271(M):G:H5'	1.45	0.98
43:DH:85:LYS:HZ3	43:DH:133:VAL:N	1.61	0.98
48:BP:146:VAL:HG22	48:BP:147:LEU:H	1.25	0.98
46:BN:23:LEU:HD23	46:BN:24:GLY:N	1.78	0.98
41:BF:37:VAL:HG11	48:BP:7:ARG:HH22	1.27	0.98
41:DF:37:VAL:HG11	48:DP:7:ARG:HH22	1.28	0.98
19:CS:16:LEU:HD12	19:CS:16:LEU:H	1.27	0.98
4:CD:59:ARG:HA	4:CD:59:ARG:HE	1.28	0.98
28:D2:47:ASN:ND2	28:D2:51:ARG:HG3	1.76	0.98
48:DP:146:VAL:HG22	48:DP:147:LEU:H	1.24	0.98
52:DT:53:ARG:HH11	52:DT:53:ARG:HB3	1.29	0.98
36:BA:2833:G:H3'	36:BA:2834:G:C5'	1.93	0.98
1:CA:1534:A:H62	23:CX:12:A:H2	1.11	0.98
36:DA:1948:G:H5'	36:DA:1948:G:H8	1.27	0.98
24:CY:25:C:H2'	24:CY:26:A:C5'	1.93	0.98
36:DA:2307:G:H21	36:DA:2308:G:H5"	1.28	0.98
19:AS:16:LEU:H	19:AS:16:LEU:HD12	1.28	0.98
46:DN:23:LEU:HD23	46:DN:24:GLY:N	1.79	0.97
24:CY:24:G:H2'	24:CY:25:C:C5'	1.94	0.97
22:CV:41:C:H2'	22:CV:42:C:H5"	1.45	0.97
40:BE:38:THR:HG22	40:BE:40:GLU:H	1.27	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:63:LYS:HD3	56:DX:70:LEU:HD21	1.47	0.97
37:BB:8:U:H5'	37:BB:8:U:H6	1.29	0.97
42:BG:67:LYS:H	42:BG:67:LYS:HD3	1.29	0.97
57:DY:13:VAL:HG11	57:DY:28:LYS:HD3	1.44	0.97
36:BA:1948:G:H8	36:BA:1948:G:H5'	1.27	0.97
28:D2:51:ARG:HB3	28:D2:51:ARG:HH11	1.29	0.97
36:BA:2307:G:H21	36:BA:2308:G:H5"	1.30	0.97
55:BW:5:ALA:HB2	55:BW:54:ALA:HB2	1.46	0.97
24:AY:25:C:H2'	24:AY:26:A:C5'	1.94	0.97
56:DX:63:LYS:HE2	56:DX:72:LYS:HE3	1.44	0.97
36:DA:271(L):U:H5"	36:DA:271(M):G:H5'	1.45	0.97
47:DO:104:ARG:HH21	52:DT:33:LYS:HE2	1.29	0.97
36:BA:2317:C:H2'	36:BA:2318:G:H5'	1.45	0.97
46:DN:111:PRO:HA	46:DN:114:ARG:HH12	1.26	0.97
57:DY:50:ARG:HD2	57:DY:53:PRO:HA	1.47	0.97
26:B0:49:LYS:N	26:B0:80:HIS:HD1	1.63	0.97
25:AZ:359:VAL:O	25:AZ:362:VAL:HG23	1.64	0.97
24:AY:24:G:C2'	24:AY:25:C:H5"	1.95	0.97
1:AA:452:A:HO2'	1:AA:453:A:H8	1.06	0.97
4:CD:28:SER:HB3	4:CD:29:PRO:HD2	1.44	0.97
4:AD:59:ARG:HA	4:AD:59:ARG:HE	1.27	0.97
42:DG:103:LEU:HD23	42:DG:107:LEU:HD21	1.44	0.96
24:AY:24:G:H2'	24:AY:25:C:C5'	1.94	0.96
57:BY:50:ARG:HD2	57:BY:53:PRO:HA	1.47	0.96
32:D6:16:CYS:SG	32:D6:48:VAL:HG22	2.05	0.96
14:AN:22:THR:HB	14:AN:33:VAL:HG21	1.45	0.96
41:BF:132:VAL:HG22	41:BF:133:ASN:H	1.27	0.96
36:BA:1887:C:H2'	36:BA:1888:G:H5"	1.47	0.96
25:CZ:359:VAL:O	25:CZ:362:VAL:HG23	1.64	0.96
1:AA:150:C:H2'	1:AA:151:A:H5"	1.45	0.96
36:BA:1069:A:H1'	36:BA:1070:A:OP1	1.66	0.96
36:DA:2603:G:C2'	36:DA:2604:U:H5"	1.94	0.96
31:B5:44:THR:HG21	50:BR:101:ALA:HB2	1.48	0.96
52:BT:80:SER:HB3	52:BT:81:PRO:HD3	1.44	0.96
46:BN:111:PRO:HA	46:BN:114:ARG:HH12	1.25	0.96
32:B6:16:CYS:SG	32:B6:48:VAL:HG22	2.04	0.96
28:D2:30:ARG:HA	28:D2:33:MET:HB2	1.46	0.96
36:DA:2317:C:H2'	36:DA:2318:G:H5'	1.48	0.95
36:BA:2603:G:C2'	36:BA:2604:U:H5"	1.95	0.95
52:BT:28:VAL:HG22	52:BT:47:GLY:N	1.80	0.95
4:AD:28:SER:HB3	4:AD:29:PRO:HD2	1.44	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1899:G:H21	36:DA:1902:C:H41	0.99	0.95
52:DT:28:VAL:HG22	52:DT:47:GLY:N	1.81	0.95
36:BA:259:G:H21	36:BA:621:A:H8	1.08	0.95
39:DD:34:VAL:HG23	39:DD:35:LYS:H	1.28	0.95
24:CY:24:G:C2'	24:CY:25:C:H5"	1.96	0.95
5:AE:10:MET:HG3	5:AE:13:ILE:HD11	1.48	0.95
13:AM:101:GLN:H	13:AM:101:GLN:HE21	1.15	0.95
36:BA:1543:C:H3'	36:BA:1544:A:H5"	1.48	0.95
26:D0:49:LYS:N	26:D0:80:HIS:HD1	1.62	0.95
47:BO:104:ARG:HH21	52:BT:33:LYS:HE2	1.28	0.95
36:DA:2248:C:H2'	36:DA:2249:U:H5'	1.49	0.95
57:BY:10:GLY:HA2	57:BY:27:VAL:HG13	1.48	0.95
43:DH:169:VAL:HG22	43:DH:170:ARG:H	1.31	0.95
4:AD:26:CYS:HG	4:AD:31:CYS:HG	1.07	0.95
39:BD:267:SER:O	39:BD:269:PHE:N	1.99	0.95
33:B7:37:LYS:HD2	33:B7:39:ARG:HD3	1.49	0.95
39:DD:267:SER:O	39:DD:269:PHE:N	1.99	0.95
1:CA:150:C:H2'	1:CA:151:A:H5"	1.45	0.95
36:DA:1887:C:H2'	36:DA:1888:G:H5"	1.48	0.95
57:DY:10:GLY:HA2	57:DY:27:VAL:HG13	1.48	0.94
32:B6:41:PRO:HD2	32:B6:46:HIS:H	1.29	0.94
36:DA:330:A:HO2'	36:DA:331:A:H8	1.06	0.94
1:AA:858:G:C6	1:AA:869:G:N7	2.34	0.94
36:DA:1543:C:H3'	36:DA:1544:A:H5"	1.49	0.94
41:DF:132:VAL:HG22	41:DF:133:ASN:H	1.28	0.94
24:AY:76:A:P	25:AZ:274:ARG:HG3	2.07	0.94
42:BG:63:ILE:HA	42:BG:143:GLU:HG3	1.48	0.94
32:D6:15:GLU:CD	32:D6:18:ARG:CZ	2.36	0.94
32:D6:41:PRO:HD2	32:D6:46:HIS:H	1.30	0.94
41:BF:6:VAL:HG12	41:BF:7:TYR:H	1.33	0.94
36:DA:1069:A:H1'	36:DA:1070:A:OP1	1.66	0.94
37:DB:8:U:H5'	37:DB:8:U:H6	1.31	0.94
42:DG:77:ILE:HD13	42:DG:83:ARG:HB3	1.49	0.94
31:D5:44:THR:HG21	50:DR:101:ALA:HB2	1.46	0.94
41:DF:6:VAL:HG12	41:DF:7:TYR:H	1.32	0.94
20:AT:57:ARG:NH1	20:AT:102:GLY:HA2	1.83	0.94
36:DA:2245:U:H5'	36:DA:2246:G:H5'	1.47	0.94
28:D2:34:GLU:HA	28:D2:37:PHE:CB	1.96	0.94
36:BA:1826:G:H4'	39:BD:242:ARG:HH21	1.29	0.94
22:AV:46:G:H3'	22:AV:47:U:C5'	1.98	0.94
24:AY:77:TRP:O	25:AZ:273:HIS:CA	2.15	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:63:LYS:HD3	56:BX:70:LEU:HD21	1.49	0.94
14:CN:22:THR:HB	14:CN:33:VAL:HG21	1.49	0.94
55:DW:5:ALA:HB2	55:DW:54:ALA:HB2	1.49	0.94
34:B8:15:LYS:HD3	48:BP:65:ARG:HH22	1.32	0.94
56:BX:8:ILE:H	56:BX:8:ILE:HD12	1.28	0.94
36:BA:2101:G:H2'	36:BA:2102:U:H5"	1.49	0.94
2:CB:172:ILE:H	2:CB:172:ILE:HD12	1.33	0.94
36:BA:628:G:C2'	36:BA:629:G:H5"	1.98	0.94
56:DX:8:ILE:H	56:DX:8:ILE:HD12	1.31	0.94
51:BS:52:SER:HB3	51:BS:55:ALA:HB3	1.48	0.94
36:DA:654(E):G:N2	36:DA:654(Q):C:H1'	1.81	0.94
48:DP:47:ASP:HB2	48:DP:51:PHE:HB2	1.50	0.94
36:BA:1190:G:H5'	48:BP:35:HIS:H	1.31	0.94
24:AY:4:G:C2'	24:AY:5:G:H5"	1.97	0.93
1:CA:351:G:H4'	1:CA:352:C:OP2	1.69	0.93
48:BP:47:ASP:HB2	48:BP:51:PHE:HB2	1.50	0.93
5:CE:10:MET:HG3	5:CE:13:ILE:HD11	1.50	0.93
47:BO:14:THR:HG21	47:BO:86:ILE:HD13	1.48	0.93
36:BA:654(E):G:N2	36:BA:654(Q):C:H1'	1.82	0.93
33:D7:37:LYS:HD2	33:D7:39:ARG:HD3	1.51	0.93
58:DZ:102:LEU:HD23	58:DZ:137:ILE:HB	1.49	0.93
42:BG:32:PRO:HB2	42:BG:172:LEU:HG	1.48	0.93
36:DA:2101:G:H2'	36:DA:2102:U:H5"	1.49	0.93
1:AA:942:G:H21	9:AI:124:GLN:NE2	1.65	0.93
58:BZ:163:LEU:HD11	58:BZ:165:VAL:HG13	1.47	0.93
43:DH:153:LYS:HD3	43:DH:153:LYS:H	1.29	0.93
52:BT:85:LYS:NZ	52:BT:85:LYS:HB3	1.84	0.93
36:BA:1948:G:C8	36:BA:1948:G:H5'	2.04	0.93
20:CT:57:ARG:NH1	20:CT:102:GLY:HA2	1.84	0.93
57:DY:28:LYS:HB3	57:DY:39:VAL:H	1.33	0.93
22:AV:41:C:H2'	22:AV:42:C:H5"	1.47	0.93
48:DP:147:LEU:HG	48:DP:148:LEU:H	1.32	0.93
36:DA:259:G:H21	36:DA:621:A:H8	1.09	0.93
40:DE:52:LEU:HD11	52:DT:1:MET:HG2	1.49	0.93
36:BA:1602:U:H3'	36:BA:1603:A:H5'	1.50	0.93
42:BG:125:PHE:HD1	42:BG:126:ASP:H	1.14	0.93
40:BE:52:LEU:HD11	52:BT:1:MET:HG2	1.51	0.93
36:BA:1047:G:H2'	36:BA:1110:G:H21	1.32	0.93
41:BF:28:ILE:HD13	41:BF:28:ILE:H	1.34	0.93
1:AA:351:G:H4'	1:AA:352:C:OP2	1.67	0.93
34:D8:6:THR:HB	34:D8:11:LYS:NZ	1.84	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:5:VAL:HB	42:BG:8:LYS:HB2	1.51	0.93
22:CV:46:G:H3'	22:CV:47:U:C5'	1.98	0.92
34:B8:62:LEU:HD13	36:BA:242:G:C5'	2.00	0.92
25:CZ:355:LEU:HD23	25:CZ:370:PHE:HB3	0.92	0.92
36:DA:1484:G:C2'	36:DA:1485:G:H5"	1.98	0.92
25:CZ:29:ALA:O	25:CZ:33:TYR:CD2	2.22	0.92
48:BP:147:LEU:HG	48:BP:148:LEU:H	1.31	0.92
36:DA:1047:G:H2'	36:DA:1110:G:H21	1.33	0.92
36:BA:2160:G:H8	36:BA:2160:G:H5'	1.34	0.92
36:DA:654(E):G:H22	36:DA:654(Q):C:H1'	1.34	0.92
36:BA:654(E):G:H22	36:BA:654(Q):C:H1'	1.34	0.92
1:AA:367:U:C5'	25:AZ:291:ARG:HE	1.82	0.92
36:BA:2245:U:H5'	36:BA:2246:G:H5'	1.47	0.92
34:B8:6:THR:HB	34:B8:11:LYS:NZ	1.84	0.92
51:DS:52:SER:HB3	51:DS:55:ALA:HB3	1.49	0.92
10:AJ:40:LEU:HD23	10:AJ:40:LEU:H	1.33	0.92
24:AY:65:C:H4'	25:AZ:341:GLN:HG2	1.49	0.92
40:BE:16:ARG:HD3	40:BE:21:VAL:HG11	1.51	0.92
32:B6:33:LYS:HA	32:B6:33:LYS:HE2	1.49	0.92
58:DZ:115:GLY:HA2	58:DZ:177:PRO:HD3	1.52	0.92
48:DP:58:THR:HG22	48:DP:61:ARG:NE	1.84	0.92
42:DG:52:ILE:HG12	42:DG:53:LEU:H	1.35	0.92
42:BG:73:ALA:H	42:BG:87:PRO:HG2	1.35	0.92
36:DA:1190:G:H5'	48:DP:35:HIS:H	1.34	0.92
36:DA:1826:G:H4'	39:DD:242:ARG:HH21	1.31	0.92
36:DA:761:A:O5'	36:DA:761:A:H8	1.53	0.92
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.05	0.92
48:DP:132:LYS:HD2	48:DP:132:LYS:H	1.35	0.92
9:CI:4:TYR:CZ	9:CI:88:TYR:HB2	2.04	0.92
28:D2:39:ALA:CA	28:D2:45:SER:HB3	1.99	0.92
41:DF:28:ILE:HD13	41:DF:28:ILE:H	1.34	0.92
48:DP:65:ARG:HB3	48:DP:68:GLN:HE22	1.35	0.92
24:CY:4:G:C2'	24:CY:5:G:H5"	1.97	0.92
43:DH:85:LYS:HZ3	43:DH:133:VAL:H	1.14	0.92
52:DT:53:ARG:HB3	52:DT:53:ARG:NH1	1.85	0.92
51:DS:106:ARG:HB3	51:DS:106:ARG:NH1	1.84	0.92
36:BA:654(C):G:H2'	36:BA:654(D):G:H5'	1.51	0.92
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.33	0.92
57:BY:28:LYS:HB3	57:BY:39:VAL:H	1.34	0.91
36:DA:2160:G:H8	36:DA:2160:G:H5'	1.32	0.91
36:BA:2248:C:H2'	36:BA:2249:U:H5'	1.48	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:85:LYS:HZ3	43:BH:133:VAL:H	1.12	0.91
36:BA:1484:G:C2'	36:BA:1485:G:H5"	1.99	0.91
6:CF:97:PHE:HD1	18:CR:31:LEU:HD21	1.36	0.91
36:BA:761:A:H8	36:BA:761:A:O5'	1.53	0.91
52:BT:53:ARG:NH1	52:BT:53:ARG:HB3	1.83	0.91
34:D8:15:LYS:HD3	48:DP:65:ARG:HH22	1.32	0.91
14:CN:13:THR:N	14:CN:14:PRO:HD2	1.85	0.91
39:DD:35:LYS:HG3	39:DD:104:TYR:HE2	1.35	0.91
36:DA:628:G:C2'	36:DA:629:G:H5"	1.99	0.91
1:CA:1281:U:H5'	1:CA:1282:C:C5	2.06	0.91
1:AA:1281:U:H5'	1:AA:1282:C:C5	2.06	0.91
24:AY:65:C:H4'	25:AZ:341:GLN:CG	1.99	0.91
25:CZ:277:LEU:HD13	25:CZ:278:GLN:H	1.36	0.91
25:AZ:89:ILE:O	25:AZ:93:ILE:HG22	1.70	0.91
25:CZ:113:MET:HG3	25:CZ:114:PRO:HD2	1.50	0.91
25:AZ:355:LEU:HD23	25:AZ:370:PHE:HB3	0.92	0.91
39:BD:35:LYS:HD3	39:BD:63:ARG:HG2	1.53	0.91
37:DB:3:C:H42	37:DB:118:G:H1	1.15	0.91
31:B5:3:LYS:HD3	36:BA:747:U:OP1	1.71	0.91
27:B1:45:ASN:HD21	36:BA:2090:G:H21	1.14	0.91
36:DA:654(C):G:H2'	36:DA:654(D):G:H5'	1.52	0.91
28:D2:66:GLU:OE2	28:D2:67:LYS:HB2	1.69	0.91
42:DG:7:LEU:HD21	42:DG:176:LEU:HD21	1.50	0.91
48:DP:9:ASN:H	48:DP:10:PRO:HD2	1.34	0.91
26:D0:50:ASN:HD22	26:D0:63:VAL:HG21	1.34	0.91
40:DE:16:ARG:HD3	40:DE:21:VAL:HG11	1.53	0.91
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.00	0.90
29:D3:35:ARG:NH1	29:D3:35:ARG:HB2	1.87	0.90
36:BA:925:C:C2'	36:BA:926:A:H5"	2.00	0.90
1:CA:1532:U:C2'	1:CA:1533:C:H5"	2.02	0.90
36:DA:1948:G:H5'	36:DA:1948:G:C8	2.06	0.90
36:BA:1779:U:H5	36:BA:1784:A:N7	1.69	0.90
34:B8:61:LEU:HD12	34:B8:61:LEU:H	1.35	0.90
25:AZ:7:ARG:NH2	25:AZ:281:ILE:HD11	1.87	0.90
36:DA:925:C:C2'	36:DA:926:A:H5"	2.01	0.90
42:DG:40:ASN:HB2	42:DG:91:ARG:HB2	1.52	0.90
42:DG:97:ASP:H	42:DG:99:MET:CE	1.84	0.90
52:DT:85:LYS:NZ	52:DT:85:LYS:HB3	1.84	0.90
48:DP:16:ARG:NH1	48:DP:16:ARG:HB2	1.86	0.90
10:CJ:40:LEU:HD23	10:CJ:40:LEU:H	1.32	0.90
48:BP:16:ARG:HB2	48:BP:16:ARG:NH1	1.86	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.00	0.90
26:B0:50:ASN:HD22	26:B0:63:VAL:HG21	1.33	0.90
24:AY:77:TRP:N	25:AZ:285:ASN:O	2.05	0.90
36:BA:1899:G:H21	36:BA:1902:C:H41	1.00	0.90
42:BG:133:LEU:HD11	42:BG:157:ILE:HD12	1.53	0.90
36:DA:1076:C:H4'	58:DZ:112:ARG:HH21	1.36	0.90
54:DV:18:LEU:HD23	54:DV:19:LYS:H	1.36	0.90
42:BG:60:LEU:HD22	42:BG:63:ILE:HD11	1.51	0.90
32:D6:33:LYS:HA	32:D6:33:LYS:HE2	1.51	0.90
5:AE:11:ILE:HB	5:AE:31:LEU:HD12	1.52	0.90
13:CM:23:TYR:HB3	13:CM:67:GLU:HB3	1.54	0.90
25:AZ:277:LEU:HD13	25:AZ:278:GLN:H	1.36	0.90
1:AA:358:U:H1'	25:AZ:233:GLY:HA2	1.54	0.90
1:CA:1537:U:H5'	18:CR:54:ARG:NH2	1.87	0.90
48:BP:132:LYS:H	48:BP:132:LYS:HD2	1.35	0.90
49:DQ:56:ARG:HG3	49:DQ:56:ARG:HH11	1.36	0.90
48:BP:58:THR:HG22	48:BP:61:ARG:NE	1.87	0.89
25:AZ:29:ALA:O	25:AZ:33:TYR:CD2	2.25	0.89
42:BG:135:LEU:HD13	42:BG:140:ILE:HD11	1.52	0.89
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.54	0.89
10:CJ:54:PHE:CZ	10:CJ:55:LYS:NZ	2.39	0.89
36:BA:2092:U:C4'	36:BA:2093:G:H5"	2.02	0.89
34:D8:62:LEU:HD13	36:DA:242:G:C5'	2.00	0.89
31:D5:3:LYS:HD3	36:DA:747:U:OP1	1.72	0.89
25:CZ:7:ARG:NH2	25:CZ:281:ILE:HD11	1.87	0.89
36:DA:1877:A:H2'	36:DA:1878:G:H5'	1.51	0.89
31:D5:40:LYS:HZ1	31:D5:46:CYS:H	1.17	0.89
36:BA:2068:U:H3	36:BA:2430:A:H2	0.91	0.89
51:BS:106:ARG:HB3	51:BS:106:ARG:NH1	1.86	0.89
6:AF:97:PHE:HD1	18:AR:31:LEU:HD21	1.37	0.89
13:AM:23:TYR:HB3	13:AM:67:GLU:HB3	1.51	0.89
51:DS:97:ARG:NH2	51:DS:98:VAL:HA	1.87	0.89
36:BA:27:G:N2	36:BA:512:G:H2'	1.86	0.89
48:BP:9:ASN:H	48:BP:10:PRO:HD2	1.35	0.89
9:AI:4:TYR:CZ	9:AI:88:TYR:HB2	2.07	0.89
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.53	0.89
58:BZ:18:LEU:H	58:BZ:18:LEU:HD12	1.36	0.89
1:AA:975:A:C4'	1:AA:976:G:H5"	2.03	0.89
51:BS:97:ARG:NH2	51:BS:98:VAL:HA	1.87	0.89
24:AY:2:G:C2'	24:AY:3:G:H5"	2.03	0.89
58:DZ:151:HIS:CB	58:DZ:170:THR:HA	2.03	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:39:LEU:HA	54:DV:47:VAL:HG11	1.55	0.89
37:BB:3:C:H42	37:BB:118:G:H1	1.15	0.89
40:BE:111:ARG:HG3	40:BE:160:TYR:CD2	2.08	0.89
36:DA:2092:U:C4'	36:DA:2093:G:H5"	2.02	0.89
31:B5:40:LYS:NZ	31:B5:46:CYS:H	1.71	0.89
48:DP:23:PRO:HD2	48:DP:33:ARG:HE	1.38	0.89
36:DA:2712:U:O2'	36:DA:2712(A):A:H5"	1.73	0.89
51:BS:59:LYS:HG2	51:BS:60:GLY:H	1.38	0.89
56:DX:35:THR:HG22	56:DX:37:THR:N	1.88	0.89
9:AI:16:ARG:HB2	9:AI:64:THR:HB	1.55	0.89
47:DO:14:THR:HG21	47:DO:86:ILE:HD13	1.53	0.89
42:BG:77:ILE:H	42:BG:77:ILE:HD13	1.36	0.89
36:DA:1902:C:O2'	39:DD:244:ARG:HB3	1.71	0.89
36:DA:27:G:N2	36:DA:512:G:H2'	1.86	0.89
48:BP:65:ARG:HB3	48:BP:68:GLN:HE22	1.37	0.89
40:DE:4:ILE:HD11	40:DE:28:ALA:HB1	1.55	0.89
36:DA:1602:U:H3'	36:DA:1603:A:H5'	1.52	0.89
24:CY:2:G:H2'	24:CY:3:G:H5"	1.51	0.89
54:BV:18:LEU:HD23	54:BV:19:LYS:H	1.37	0.89
12:AL:20:LYS:H	12:AL:20:LYS:HD3	1.38	0.89
36:BA:2415:G:O3'	48:BP:66:GLY:HA3	1.69	0.89
24:AY:2:G:H2'	24:AY:3:G:H5"	1.52	0.89
9:CI:19:LEU:HD11	9:CI:59:PHE:HD2	1.38	0.89
4:CD:23:GLY:HA3	4:CD:112:VAL:HG22	1.55	0.89
52:BT:28:VAL:HG13	52:BT:46:GLU:HA	1.54	0.89
58:BZ:166:SER:HB2	58:BZ:168:GLU:N	1.88	0.89
25:AZ:113:MET:HG3	25:AZ:114:PRO:HD2	1.52	0.89
36:DA:2756:U:H1'	36:DA:2757:A:H5"	1.55	0.89
50:BR:99:LYS:H	50:BR:99:LYS:HD2	1.38	0.89
36:BA:1877:A:H2'	36:BA:1878:G:H5'	1.52	0.89
41:BF:160:ASN:HD21	41:BF:162:LEU:HB2	1.38	0.88
40:DE:77:ILE:HG22	40:DE:78:LEU:HD12	1.55	0.88
34:D8:59:LYS:HE2	48:DP:50:ARG:HB3	1.54	0.88
24:CY:2:G:C2'	24:CY:3:G:H5"	2.03	0.88
36:BA:2580:U:H5'	40:BE:131:ALA:HB2	1.54	0.88
31:D5:3:LYS:H	31:D5:3:LYS:HD2	1.38	0.88
27:D1:46:LEU:O	27:D1:46:LEU:HD12	1.73	0.88
36:BA:1293:C:H2'	36:BA:1294:U:H5"	1.54	0.88
39:DD:226:MET:HE2	39:DD:231:HIS:HB2	1.55	0.88
40:DE:111:ARG:HG3	40:DE:160:TYR:CD2	2.08	0.88
25:AZ:7:ARG:HH11	25:AZ:7:ARG:HG2	1.36	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:77:ILE:HG22	40:BE:78:LEU:HD12	1.55	0.88
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	2.03	0.88
12:CL:20:LYS:H	12:CL:20:LYS:HD3	1.37	0.88
1:AA:1271:G:C2'	1:AA:1272:G:H5"	2.02	0.88
13:CM:10:PRO:CB	13:CM:18:ALA:HB1	2.03	0.88
32:D6:53:LYS:HG2	32:D6:54:ILE:H	1.39	0.88
36:DA:1747(A):G:C2'	36:DA:1748:G:H5"	2.03	0.88
1:CA:1271:G:C2'	1:CA:1272:G:H5"	2.04	0.88
20:AT:45:GLN:HB3	20:AT:91:LEU:HD13	1.56	0.88
33:D7:10:ARG:HH12	33:D7:14:LYS:HE3	1.39	0.88
56:BX:35:THR:HG22	56:BX:37:THR:N	1.89	0.88
57:DY:81:LYS:HD3	57:DY:97:ARG:O	1.74	0.88
29:B3:35:ARG:NH1	29:B3:35:ARG:HB2	1.87	0.88
36:DA:2068:U:H3	36:DA:2430:A:H2	0.92	0.88
41:BF:122:LYS:HG3	41:BF:191:ARG:HG3	1.55	0.88
5:CE:11:ILE:HB	5:CE:31:LEU:HD12	1.56	0.88
39:DD:30:GLU:CB	39:DD:35:LYS:HZ3	1.87	0.88
36:DA:2762:G:H8	36:DA:2762:G:H5'	1.38	0.88
52:DT:85:LYS:HZ3	52:DT:85:LYS:HB3	1.38	0.88
20:CT:45:GLN:HB3	20:CT:91:LEU:HD13	1.55	0.88
32:B6:53:LYS:HG2	32:B6:54:ILE:H	1.38	0.88
41:BF:32:LEU:O	41:BF:36:VAL:HG23	1.74	0.88
51:BS:34:HIS:HB2	51:BS:36:TYR:HE1	1.39	0.88
36:DA:2415:G:O3'	48:DP:66:GLY:HA3	1.73	0.88
55:BW:26:GLY:H	55:BW:71:VAL:HG23	1.39	0.88
36:DA:1293:C:H2'	36:DA:1294:U:H5"	1.53	0.88
58:DZ:4:ARG:HG2	58:DZ:58:VAL:HB	1.56	0.88
41:BF:125:LEU:H	41:BF:125:LEU:HD23	1.38	0.88
56:DX:35:THR:HB	56:DX:38:GLU:HB2	1.53	0.87
34:D8:61:LEU:HD12	34:D8:61:LEU:H	1.38	0.87
27:D1:90:ILE:O	27:D1:94:LEU:HD23	1.74	0.87
36:DA:2656:U:H3	36:DA:2665:A:H2	1.21	0.87
36:BA:1058:G:H2'	36:BA:1059:G:H5"	1.56	0.87
56:BX:35:THR:HB	56:BX:38:GLU:HB2	1.55	0.87
28:D2:34:GLU:CA	28:D2:37:PHE:HB2	2.01	0.87
32:D6:15:GLU:HB2	32:D6:20:ASN:HB3	1.56	0.87
40:BE:4:ILE:HD11	40:BE:28:ALA:HB1	1.55	0.87
16:CP:53:VAL:HG23	16:CP:54:GLU:H	1.39	0.87
36:BA:2675:A:H5'	47:BO:31:LYS:HE3	1.56	0.87
3:AC:8:ILE:HG23	3:AC:16:ARG:HG2	1.56	0.87
32:B6:15:GLU:HB2	32:B6:20:ASN:HB3	1.57	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:11:PRO:HA	56:DX:28:PHE:HB3	1.56	0.87
36:BA:2712:U:O2'	36:BA:2712(A):A:H5"	1.73	0.87
54:BV:39:LEU:HA	54:BV:47:VAL:HG11	1.56	0.87
42:DG:39:ILE:HG22	42:DG:157:ILE:HG12	1.55	0.87
36:BA:2761:G:C2'	36:BA:2762:G:H5"	2.03	0.87
40:BE:3:GLY:HA3	40:BE:81:ILE:HD12	1.56	0.87
36:DA:2126:A:H4'	36:DA:2127:G:O5'	1.75	0.87
16:AP:53:VAL:HG23	16:AP:54:GLU:H	1.40	0.87
58:BZ:30:ASN:HD22	58:BZ:32:HIS:H	1.23	0.87
25:AZ:277:LEU:HD13	25:AZ:278:GLN:N	1.89	0.87
36:DA:2761:G:C2'	36:DA:2762:G:H5"	2.04	0.87
52:DT:27:THR:O	52:DT:28:VAL:HB	1.72	0.87
22:CV:41:C:C2'	22:CV:42:C:H5"	2.03	0.87
51:BS:106:ARG:HB3	51:BS:106:ARG:HH11	1.40	0.87
48:BP:126:VAL:HA	48:BP:145:PRO:HG2	1.55	0.87
48:BP:23:PRO:HD2	48:BP:33:ARG:HE	1.39	0.87
34:B8:59:LYS:HE2	48:BP:50:ARG:HB3	1.55	0.87
31:D5:40:LYS:NZ	31:D5:46:CYS:H	1.71	0.87
36:BA:2491:U:H5'	36:BA:2570:G:H5"	1.55	0.87
36:BA:2126:A:H4'	36:BA:2127:G:O5'	1.73	0.87
4:AD:194:LEU:HB3	4:AD:196:LEU:HD13	1.57	0.87
31:B5:50:GLY:HA3	31:B5:56:LYS:HD3	1.57	0.87
54:DV:15:GLU:HB3	54:DV:16:PRO:HD2	1.56	0.87
17:CQ:10:VAL:HG22	17:CQ:55:ASP:H	1.39	0.87
36:DA:2580:U:H5'	40:DE:131:ALA:HB2	1.57	0.87
39:DD:63:ARG:HG3	39:DD:63:ARG:HH11	1.40	0.87
36:BA:1747(A):G:C2'	36:BA:1748:G:H5"	2.03	0.87
14:CN:57:ARG:HB2	14:CN:57:ARG:HH11	1.40	0.87
51:DS:59:LYS:HG2	51:DS:60:GLY:H	1.38	0.87
36:BA:2756:U:H1'	36:BA:2757:A:H5"	1.55	0.87
39:DD:176:ARG:HH11	39:DD:176:ARG:HG2	1.38	0.87
58:BZ:51:ALA:HB1	58:BZ:57:ILE:HD11	1.54	0.86
54:BV:15:GLU:HB3	54:BV:16:PRO:HD2	1.57	0.86
36:DA:1697:G:H3'	36:DA:1698:A:H5"	1.56	0.86
36:BA:1517:G:H8	36:BA:1517:G:H5'	1.40	0.86
22:AV:41:C:C2'	22:AV:42:C:H5"	2.04	0.86
41:DF:32:LEU:O	41:DF:36:VAL:HG23	1.74	0.86
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.54	0.86
4:AD:158:ILE:O	4:AD:162:LEU:HB2	1.74	0.86
4:CD:158:ILE:O	4:CD:162:LEU:HB2	1.75	0.86
55:DW:107:LEU:H	55:DW:107:LEU:HD12	1.41	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:79:ARG:HB3	58:BZ:79:ARG:HH11	1.38	0.86
41:DF:125:LEU:HD23	41:DF:125:LEU:H	1.38	0.86
34:D8:32:LEU:HD23	34:D8:36:LYS:HZ1	1.38	0.86
36:BA:1876:A:H2'	36:BA:1877:A:H5"	1.56	0.86
25:CZ:89:ILE:O	25:CZ:93:ILE:HG22	1.73	0.86
48:DP:126:VAL:HA	48:DP:145:PRO:HG2	1.56	0.86
12:CL:102:ARG:NH1	12:CL:110:VAL:HG22	1.89	0.86
53:BU:92:ARG:NH2	54:BV:10:LYS:HB3	1.89	0.86
49:BQ:56:ARG:HG3	49:BQ:56:ARG:HH11	1.39	0.86
1:AA:706:A:O4'	11:AK:29:ILE:HD11	1.73	0.86
36:DA:1012:U:O4	46:DN:28:THR:HG21	1.76	0.86
28:D2:51:ARG:NE	36:DA:94(A):G:H21	1.72	0.86
36:BA:1012:U:O4	46:BN:28:THR:HG21	1.74	0.86
58:BZ:89:PHE:HE2	58:BZ:96:VAL:HG21	1.41	0.86
25:CZ:277:LEU:HD13	25:CZ:278:GLN:N	1.89	0.86
54:DV:2:PHE:HB2	54:DV:42:GLY:HA2	1.56	0.86
13:CM:101:GLN:HE21	13:CM:101:GLN:H	1.21	0.86
41:DF:160:ASN:HD21	41:DF:162:LEU:HB2	1.39	0.86
49:DQ:141:GLN:HE21	58:DZ:72:ARG:CA	1.82	0.86
19:AS:16:LEU:HA	19:AS:19:VAL:HB	1.58	0.86
49:BQ:141:GLN:HE21	58:BZ:72:ARG:HA	1.38	0.86
54:BV:2:PHE:HB2	54:BV:42:GLY:HA2	1.56	0.86
1:AA:1439:C:H41	1:AA:1462:G:H1	1.23	0.86
17:AQ:10:VAL:HG22	17:AQ:55:ASP:H	1.39	0.86
36:DA:1678:G:N2	36:DA:1989:G:H22	1.74	0.86
57:BY:81:LYS:HD3	57:BY:97:ARG:O	1.75	0.86
41:DF:3:GLU:HA	41:DF:24:LEU:HG	1.58	0.86
36:DA:1665:A:C2'	36:DA:1666:G:H5"	2.06	0.86
52:DT:28:VAL:HG13	52:DT:46:GLU:HA	1.58	0.86
9:CI:53:VAL:HG13	9:CI:95:LYS:NZ	1.91	0.86
36:DA:1517:G:H5'	36:DA:1517:G:H8	1.39	0.86
3:CC:8:ILE:HG23	3:CC:16:ARG:HG2	1.58	0.86
36:BA:2131:G:H1'	36:BA:2133:G:N2	1.90	0.86
1:CA:189(H):G:HO2'	1:CA:189(I):G:H8	1.22	0.86
50:DR:73:VAL:O	50:DR:76:VAL:HG12	1.76	0.86
16:CP:20:VAL:HG21	16:CP:32:TYR:HB2	1.55	0.86
15:CO:87:ILE:HG22	15:CO:88:ARG:N	1.90	0.86
28:D2:25:VAL:HG13	28:D2:29:LYS:HG3	1.55	0.86
41:BF:3:GLU:HA	41:BF:24:LEU:HG	1.58	0.86
57:BY:49:VAL:O	57:BY:50:ARG:HB2	1.76	0.86
27:B1:21:ARG:HH11	27:B1:21:ARG:HB3	1.39	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:60:ARG:HB3	49:DQ:60:ARG:NH1	1.90	0.85
52:BT:28:VAL:HG11	52:BT:46:GLU:HG3	1.56	0.85
25:CZ:277:LEU:CD1	25:CZ:280:GLY:H	1.88	0.85
40:BE:111:ARG:HB3	50:BR:2:ARG:HH12	1.41	0.85
50:DR:99:LYS:H	50:DR:99:LYS:HD2	1.41	0.85
36:DA:2491:U:H5'	36:DA:2570:G:H5"	1.57	0.85
36:DA:2187:G:C2'	36:DA:2188:C:H5'	2.06	0.85
36:DA:2604:U:H6	36:DA:2604:U:H5'	1.42	0.85
42:DG:77:ILE:H	42:DG:77:ILE:HD13	1.39	0.85
36:DA:330:A:H2	36:DA:1210:A:H2'	1.41	0.85
51:DS:106:ARG:HH11	51:DS:106:ARG:HB3	1.38	0.85
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.06	0.85
36:DA:2131:G:H1'	36:DA:2133:G:N2	1.90	0.85
1:CA:1502:A:H2	1:CA:1505:G:H1	1.23	0.85
25:CZ:163:PHE:HD1	25:CZ:164:PRO:HD2	1.41	0.85
39:DD:35:LYS:HD3	39:DD:63:ARG:HG2	1.55	0.85
9:AI:19:LEU:HD11	9:AI:59:PHE:HD2	1.41	0.85
26:B0:43:THR:H	36:BA:2331:G:H4'	1.40	0.85
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.58	0.85
30:D4:25:TYR:HB2	42:DG:101:ILE:HD13	1.58	0.85
1:AA:1502:A:H2	1:AA:1505:G:H1	1.25	0.85
26:D0:43:THR:H	36:DA:2331:G:H4'	1.41	0.85
49:BQ:60:ARG:NH1	49:BQ:60:ARG:HB3	1.90	0.85
8:AH:7:ALA:HB2	8:AH:85:ARG:HD3	1.59	0.85
58:DZ:120:ILE:HG22	58:DZ:121:HIS:H	1.42	0.85
14:AN:13:THR:N	14:AN:14:PRO:HD2	1.90	0.85
32:B6:15:GLU:CD	32:B6:18:ARG:CZ	2.44	0.85
42:BG:131:TYR:HB3	42:BG:159:VAL:HG13	1.57	0.85
1:AA:358:U:O3'	25:AZ:235:GLY:HA2	1.76	0.85
38:DC:119:VAL:HG23	38:DC:120:MET:HE2	1.59	0.85
50:BR:73:VAL:O	50:BR:76:VAL:HG12	1.75	0.85
50:DR:38:VAL:HB	50:DR:39:PRO:HD3	1.58	0.85
54:DV:99:ILE:H	54:DV:99:ILE:HD13	1.40	0.85
1:CA:502:G:OP1	12:CL:118:SER:HB3	1.77	0.85
36:BA:1697:G:H3'	36:BA:1698:A:H5"	1.57	0.85
1:AA:358:U:H1'	25:AZ:233:GLY:CA	2.07	0.85
40:DE:111:ARG:HB3	50:DR:2:ARG:NH1	1.91	0.85
15:AO:82:ILE:HD13	15:AO:83:GLU:N	1.92	0.85
50:BR:38:VAL:HB	50:BR:39:PRO:HD3	1.58	0.85
33:B7:10:ARG:HH12	33:B7:14:LYS:HE3	1.41	0.85
36:BA:2604:U:H5'	36:BA:2604:U:H6	1.42	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:4:C:C2'	22:AV:5:G:H5"	2.06	0.85
36:BA:1279:G:H4'	50:BR:31:HIS:CD2	2.11	0.85
2:AB:114:ARG:HH11	2:AB:118:LEU:HD21	1.41	0.85
34:B8:59:LYS:HB2	34:B8:59:LYS:NZ	1.92	0.85
33:D7:34:ARG:HD2	33:D7:39:ARG:HG3	1.58	0.85
25:CZ:7:ARG:HG2	25:CZ:7:ARG:HH11	1.42	0.85
36:DA:1876:A:H2'	36:DA:1877:A:H5"	1.58	0.85
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB2	1.57	0.85
7:AG:18:TYR:HB3	7:AG:59:LEU:HD22	1.57	0.85
12:AL:102:ARG:NH1	12:AL:110:VAL:HG22	1.92	0.85
51:DS:34:HIS:HB2	51:DS:36:TYR:HE1	1.40	0.85
57:BY:28:LYS:O	57:BY:38:ILE:HG22	1.76	0.85
36:BA:1959:G:C2'	36:BA:1960:A:H5"	2.07	0.85
52:BT:27:THR:O	52:BT:28:VAL:HB	1.74	0.85
36:DA:321:G:H21	41:DF:165:ARG:HH21	1.24	0.85
4:CD:12:CYS:HA	4:CD:19:LEU:HD12	1.59	0.85
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.41	0.85
1:AA:8:A:H62	4:AD:208:SER:HB2	1.42	0.85
39:BD:63:ARG:HH11	39:BD:63:ARG:HG3	1.42	0.84
36:DA:2189:U:C3'	36:DA:2190:G:H4'	2.07	0.84
32:D6:11:LEU:HD21	32:D6:51:GLU:CG	2.07	0.84
36:BA:2762:G:H8	36:BA:2762:G:H5'	1.40	0.84
19:CS:16:LEU:HA	19:CS:19:VAL:HB	1.59	0.84
31:D5:50:GLY:HA3	31:D5:56:LYS:HD3	1.58	0.84
20:CT:23:ARG:O	20:CT:27:LYS:HB2	1.77	0.84
4:CD:194:LEU:HB3	4:CD:196:LEU:HD13	1.58	0.84
55:BW:107:LEU:H	55:BW:107:LEU:HD12	1.42	0.84
24:CY:25:C:C2'	24:CY:26:A:H5'	2.07	0.84
22:CV:4:C:C2'	22:CV:5:G:H5"	2.06	0.84
52:DT:28:VAL:HG22	52:DT:47:GLY:H	1.42	0.84
49:BQ:141:GLN:HG3	58:BZ:72:ARG:NH1	1.92	0.84
15:CO:82:ILE:HD13	15:CO:83:GLU:N	1.92	0.84
41:DF:122:LYS:HG3	41:DF:191:ARG:HG3	1.57	0.84
56:BX:11:PRO:HA	56:BX:28:PHE:HB3	1.59	0.84
1:CA:706:A:O4'	11:CK:29:ILE:HD11	1.77	0.84
10:AJ:54:PHE:CZ	10:AJ:55:LYS:NZ	2.45	0.84
12:CL:33:ARG:HH11	12:CL:62:SER:HB3	1.40	0.84
31:B5:3:LYS:H	31:B5:3:LYS:HD2	1.40	0.84
39:DD:267:SER:C	39:DD:269:PHE:H	1.81	0.84
55:DW:26:GLY:H	55:DW:71:VAL:HG23	1.42	0.84
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1378:A:H4'	36:DA:1379:A:OP1	1.76	0.84
28:D2:3:LEU:HA	28:D2:7:ARG:HG3	1.57	0.84
36:BA:1665:A:C2'	36:BA:1666:G:H5"	2.06	0.84
28:B2:25:VAL:HG22	28:B2:60:LEU:HD13	1.57	0.84
36:BA:2189:U:C3'	36:BA:2190:G:H4'	2.07	0.84
4:AD:12:CYS:HA	4:AD:19:LEU:HD12	1.58	0.84
40:DE:111:ARG:HB3	50:DR:2:ARG:HH12	1.40	0.84
12:AL:102:ARG:HH11	12:AL:102:ARG:HG2	1.42	0.84
58:BZ:7:ALA:HB3	58:BZ:61:LEU:HD23	1.58	0.84
43:BH:103:LEU:HB2	43:BH:123:PHE:HD2	1.42	0.84
36:BA:1050:A:H2'	36:BA:1051:G:H5'	1.59	0.84
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.57	0.84
58:BZ:163:LEU:HG	58:BZ:165:VAL:HG22	1.57	0.84
40:BE:111:ARG:HB3	50:BR:2:ARG:NH1	1.93	0.84
58:DZ:30:ASN:ND2	58:DZ:32:HIS:H	1.74	0.84
36:BA:321:G:H21	41:BF:165:ARG:HH21	1.25	0.84
54:BV:99:ILE:H	54:BV:99:ILE:HD13	1.43	0.84
38:DC:53:ARG:HH11	38:DC:53:ARG:HB3	1.41	0.84
25:CZ:241:ARG:NH1	25:CZ:241:ARG:HB3	1.91	0.84
33:B7:34:ARG:HD2	33:B7:39:ARG:HG3	1.57	0.84
36:DA:1678:G:H22	36:DA:1989:G:H22	1.23	0.84
38:BC:119:VAL:HG23	38:BC:120:MET:HE2	1.60	0.84
36:DA:1884:A:C2'	36:DA:1885:A:H5"	2.07	0.84
36:BA:2317:C:C2'	36:BA:2318:G:H5'	2.06	0.84
36:DA:1539:G:H2'	36:DA:1540:U:H5'	1.60	0.84
53:DU:92:ARG:NH2	54:DV:10:LYS:HB3	1.92	0.84
8:AH:42:GLU:HG3	8:AH:109:ILE:HD12	1.60	0.84
38:BC:53:ARG:HB3	38:BC:53:ARG:HH11	1.43	0.84
34:B8:32:LEU:HD23	34:B8:36:LYS:HZ1	1.38	0.84
46:BN:111:PRO:HA	46:BN:114:ARG:NH1	1.92	0.84
1:AA:1363(A):A:H4'	1:AA:1364:U:H5"	1.59	0.84
36:DA:1050:A:H2'	36:DA:1051:G:H5'	1.59	0.84
36:DA:1058:G:H2'	36:DA:1059:G:H5"	1.57	0.84
1:AA:353:A:H5'	1:AA:353:A:H8	1.42	0.84
40:DE:132:HIS:HA	40:DE:135:HIS:CE1	2.13	0.84
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.42	0.84
42:BG:79:ASN:O	42:BG:80:PHE:HB2	1.76	0.84
1:CA:975:A:C4'	1:CA:976:G:H5"	2.07	0.84
46:DN:111:PRO:HA	46:DN:114:ARG:NH1	1.91	0.84
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB2	1.57	0.84
37:DB:16:G:HO2'	37:DB:17:C:H6	1.23	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:23:ARG:O	20:AT:27:LYS:HB2	1.76	0.84
1:AA:503:C:OP2	12:AL:116:SER:HB3	1.77	0.84
9:AI:105:ASP:OD1	9:AI:107:ARG:HD3	1.77	0.84
36:DA:272(H):C:C2'	36:DA:272(I):U:H5"	2.08	0.83
36:DA:2317:C:C2'	36:DA:2318:G:H5'	2.07	0.83
36:BA:2159:G:C2'	36:BA:2160:G:H5"	2.08	0.83
36:DA:2068:U:N3	36:DA:2430:A:H2	1.74	0.83
48:DP:40:SER:C	48:DP:41:ARG:HD2	1.98	0.83
22:AW:43:C:H2'	22:AW:44:G:H1'	1.60	0.83
36:BA:673:C:H6	36:BA:673:C:H5'	1.42	0.83
48:BP:58:THR:C	48:BP:60:MET:H	1.79	0.83
42:DG:47:LYS:HG3	42:DG:81:LYS:HG3	1.58	0.83
36:BA:1539:G:H2'	36:BA:1540:U:H5'	1.60	0.83
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.43	0.83
1:CA:942:G:H21	9:CI:124:GLN:NE2	1.75	0.83
36:DA:673:C:H5'	36:DA:673:C:H6	1.43	0.83
52:DT:100:TYR:HD2	52:DT:103:ARG:HH21	1.27	0.83
15:AO:87:ILE:HG22	15:AO:88:ARG:N	1.92	0.83
57:DY:28:LYS:O	57:DY:38:ILE:HG22	1.76	0.83
52:BT:32:TYR:CD2	52:BT:81:PRO:HB2	2.13	0.83
1:AA:453:A:H4'	16:AP:72:ARG:HG3	1.59	0.83
36:BA:1602:U:H3'	36:BA:1603:A:C5'	2.08	0.83
16:AP:20:VAL:HG21	16:AP:32:TYR:HB2	1.61	0.83
1:CA:8:A:H62	4:CD:208:SER:HB2	1.43	0.83
4:AD:100:ARG:HH21	4:AD:118:ARG:HH12	1.26	0.83
25:CZ:355:LEU:HB2	25:CZ:356:PRO:HD2	1.58	0.83
36:BA:1378:A:H4'	36:BA:1379:A:OP1	1.76	0.83
52:DT:32:TYR:CD2	52:DT:81:PRO:HB2	2.13	0.83
58:BZ:162:GLU:O	58:BZ:163:LEU:HD23	1.76	0.83
25:AZ:241:ARG:NH1	25:AZ:241:ARG:HB3	1.93	0.83
42:BG:131:TYR:HB3	42:BG:159:VAL:CG1	2.08	0.83
58:BZ:6:LYS:HG3	58:BZ:60:GLU:CG	2.09	0.83
25:CZ:135:MET:HE3	25:CZ:150:VAL:HG11	1.60	0.83
10:AJ:4:ILE:HB	10:AJ:74:ILE:HD11	1.59	0.83
36:BA:1227:G:OP1	53:BU:13:LYS:HD2	1.78	0.83
9:CI:105:ASP:OD1	9:CI:107:ARG:HD3	1.77	0.83
43:DH:41:MET:HG3	43:DH:42:ARG:H	1.44	0.83
36:BA:612:C:H2'	36:BA:613:G:C5'	2.08	0.83
36:BA:272(H):C:C2'	36:BA:272(I):U:H5"	2.09	0.83
36:BA:330:A:H2	36:BA:1210:A:H2'	1.42	0.83
57:DY:49:VAL:O	57:DY:50:ARG:HB2	1.76	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:101:LEU:HD12	41:BF:102:PRO:HD2	1.58	0.83
58:DZ:151:HIS:HB3	58:DZ:170:THR:HA	1.60	0.83
36:DA:1279:G:H4'	50:DR:31:HIS:CD2	2.13	0.83
25:CZ:159:ASN:ND2	25:CZ:166:ASP:OD1	2.11	0.83
4:AD:100:ARG:NH2	4:AD:118:ARG:HH12	1.76	0.83
27:D1:36:GLY:O	27:D1:37:ILE:HG13	1.78	0.83
9:CI:16:ARG:HB2	9:CI:64:THR:HB	1.59	0.83
36:BA:860:U:H5	36:BA:917:A:N7	1.75	0.83
36:BA:1899:G:N2	36:BA:1902:C:N4	2.25	0.83
34:D8:32:LEU:HD11	36:DA:2391:G:P	2.18	0.83
25:AZ:277:LEU:CD1	25:AZ:280:GLY:H	1.91	0.83
31:D5:4:HIS:HB2	31:D5:5:PRO:CD	2.07	0.83
25:CZ:277:LEU:HD12	25:CZ:280:GLY:H	1.41	0.83
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.57	0.83
35:B9:4:ARG:O	35:B9:36:GLN:HA	1.78	0.83
8:CH:114:THR:HG22	8:CH:130:GLY:O	1.77	0.83
25:AZ:163:PHE:HD1	25:AZ:164:PRO:HD2	1.42	0.83
1:CA:353:A:H5'	1:CA:353:A:H8	1.41	0.83
22:CW:38:A:H2'	22:CW:39:U:H5"	1.60	0.83
24:AY:25:C:C2'	24:AY:26:A:H5'	2.07	0.83
1:CA:1532:U:H2'	1:CA:1533:C:C5'	2.07	0.83
58:BZ:163:LEU:CD1	58:BZ:165:VAL:HG13	2.09	0.83
5:AE:148:VAL:HG21	8:AH:107:LEU:HD13	1.60	0.83
7:CG:18:TYR:HB3	7:CG:59:LEU:HD22	1.61	0.83
17:CQ:60:ILE:HB	17:CQ:74:LEU:HD23	1.60	0.83
43:DH:126:PRO:O	43:DH:127:GLU:HG2	1.77	0.83
25:AZ:274:ARG:HG2	25:AZ:274:ARG:HH11	1.42	0.83
51:BS:24:LEU:HB3	51:BS:85:VAL:HG12	1.61	0.83
36:BA:2777:G:H5"	36:BA:2778:A:H5'	1.61	0.83
40:DE:14:ILE:HD11	40:DE:173:VAL:HG11	1.60	0.83
48:BP:40:SER:C	48:BP:41:ARG:HD2	1.99	0.83
34:B8:32:LEU:HD11	36:BA:2391:G:P	2.18	0.83
42:DG:66:GLN:HG3	42:DG:94:LEU:HD21	1.59	0.83
42:BG:82:LEU:HD13	42:BG:87:PRO:HA	1.60	0.83
20:CT:26:ASN:HB2	20:CT:71:THR:HG23	1.61	0.83
9:AI:53:VAL:HG13	9:AI:95:LYS:NZ	1.94	0.83
43:DH:103:LEU:HB2	43:DH:123:PHE:HD2	1.44	0.83
36:DA:2675:A:H5'	47:DO:31:LYS:HE3	1.60	0.83
39:BD:43:ARG:HH21	39:BD:44:ASN:ND2	1.77	0.83
43:DH:70:THR:HG22	43:DH:74:ASN:HD21	1.43	0.83
57:DY:95:LYS:HE3	57:DY:99:CYS:O	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:19:LYS:HG2	54:BV:94:LEU:HB2	1.61	0.82
4:AD:150:GLU:CD	4:AD:151:LYS:H	1.83	0.82
40:BE:132:HIS:HA	40:BE:135:HIS:CE1	2.14	0.82
36:DA:2110:G:H1	36:DA:2178:C:H5	1.26	0.82
39:BD:176:ARG:HG2	39:BD:176:ARG:HH11	1.40	0.82
41:DF:37:VAL:CG1	48:DP:7:ARG:HH22	1.93	0.82
36:DA:2159:G:C2'	36:DA:2160:G:H5"	2.09	0.82
3:AC:5:ILE:CD1	3:AC:5:ILE:H	1.92	0.82
3:CC:5:ILE:CD1	3:CC:5:ILE:H	1.92	0.82
21:AU:6:ARG:HD3	21:AU:15:ARG:NH1	1.95	0.82
36:DA:1779:U:H5	36:DA:1784:A:N7	1.76	0.82
52:DT:28:VAL:HG11	52:DT:46:GLU:HG3	1.58	0.82
36:DA:1959:G:C2'	36:DA:1960:A:H5"	2.08	0.82
36:DA:1602:U:H3'	36:DA:1603:A:C5'	2.08	0.82
43:BH:41:MET:HG3	43:BH:42:ARG:H	1.44	0.82
14:AN:57:ARG:HH11	14:AN:57:ARG:HB2	1.44	0.82
41:BF:37:VAL:HG11	48:BP:7:ARG:NH2	1.94	0.82
48:BP:47:ASP:HB3	48:BP:48:PRO:CA	2.10	0.82
25:AZ:64:ASN:N	25:AZ:64:ASN:HD22	1.73	0.82
49:DQ:51:ARG:O	49:DQ:55:VAL:HG12	1.79	0.82
1:AA:502:G:OP1	12:AL:118:SER:HB3	1.79	0.82
39:DD:43:ARG:HH11	39:DD:44:ASN:HD21	1.21	0.82
26:B0:10:THR:HG22	26:B0:12:ASN:N	1.95	0.82
48:DP:7:ARG:O	48:DP:10:PRO:HD2	1.79	0.82
31:B5:40:LYS:HZ1	31:B5:46:CYS:H	1.24	0.82
36:BA:2656:U:H3	36:BA:2665:A:H2	1.21	0.82
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.61	0.82
11:AK:18:ARG:HH21	11:AK:37:GLY:N	1.78	0.82
36:BA:658:C:H2'	36:BA:659:C:C6	2.14	0.82
36:DA:860:U:H5	36:DA:917:A:N7	1.76	0.82
1:CA:1432:G:OP1	52:DT:107:ASP:HB2	1.78	0.82
46:BN:73:THR:CG2	46:BN:82:LEU:HD11	2.09	0.82
4:CD:100:ARG:NH2	4:CD:118:ARG:HH12	1.76	0.82
25:AZ:355:LEU:HB2	25:AZ:356:PRO:HD2	1.61	0.82
36:BA:2189:U:H2'	36:BA:2190:G:H4'	1.60	0.82
3:CC:16:ARG:HB2	3:CC:16:ARG:HH11	1.44	0.82
24:CY:9:A:H2	24:CY:44:G:HO2'	1.25	0.82
36:BA:1434:A:H61	36:BA:1558:A:H62	1.28	0.82
1:CA:1363(A):A:H4'	1:CA:1364:U:H5"	1.61	0.82
25:CZ:64:ASN:N	25:CZ:64:ASN:HD22	1.75	0.82
36:DA:658:C:H2'	36:DA:659:C:C6	2.14	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1899:G:N2	36:DA:1902:C:N4	2.26	0.82
26:B0:62:LEU:H	26:B0:62:LEU:HD23	1.44	0.82
33:D7:10:ARG:NH1	33:D7:14:LYS:HE3	1.94	0.82
25:AZ:159:ASN:ND2	25:AZ:166:ASP:OD1	2.12	0.82
13:CM:119:GLY:O	13:CM:120:LYS:HB2	1.80	0.82
25:CZ:145:GLU:HG2	25:CZ:149:LEU:HB2	1.59	0.82
36:BA:2179:C:H4'	36:BA:2180:U:C2	2.15	0.82
25:AZ:135:MET:HE3	25:AZ:150:VAL:HG11	1.62	0.82
42:DG:114:ILE:CG2	42:DG:117:PHE:HB2	2.10	0.82
42:DG:52:ILE:HD13	42:DG:52:ILE:H	1.43	0.82
41:DF:29:ASN:HD22	41:DF:32:LEU:HB2	1.43	0.82
4:AD:108:LEU:HD11	4:AD:174:LEU:HD13	1.61	0.82
2:CB:114:ARG:HH11	2:CB:118:LEU:HD21	1.42	0.82
28:D2:47:ASN:HA	28:D2:50:ILE:CB	2.09	0.82
32:B6:11:LEU:HD21	32:B6:51:GLU:CG	2.09	0.82
36:DA:321:G:N2	41:DF:165:ARG:HH21	1.77	0.82
25:AZ:274:ARG:HG2	25:AZ:274:ARG:NH1	1.95	0.82
36:BA:2068:U:N3	36:BA:2430:A:H2	1.74	0.82
1:CA:1442(B):A:OP2	1:CA:1442(B):A:H3'	1.79	0.82
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.45	0.82
1:CA:1096:C:H5"	2:CB:137:ARG:HH21	1.43	0.82
4:CD:150:GLU:CD	4:CD:151:LYS:H	1.83	0.82
25:CZ:274:ARG:HH11	25:CZ:274:ARG:HG2	1.41	0.82
3:CC:26:LYS:HE3	3:CC:26:LYS:H	1.43	0.82
57:DY:8:LYS:HD2	57:DY:8:LYS:N	1.95	0.82
30:D4:9:LEU:HD13	30:D4:10:VAL:H	1.44	0.82
42:DG:62:LEU:HD12	42:DG:62:LEU:H	1.43	0.82
41:DF:178:PRO:HG2	41:DF:179:GLU:OE1	1.79	0.82
58:BZ:6:LYS:HG3	58:BZ:60:GLU:HG3	1.60	0.82
48:BP:124:LYS:HD3	48:BP:143:GLY:HA3	1.62	0.82
11:AK:79:SER:OG	11:AK:106:LYS:HD2	1.80	0.82
36:DA:1899:G:O2'	36:DA:1900:A:H5"	1.80	0.81
32:D6:11:LEU:HD21	32:D6:51:GLU:HG2	1.63	0.81
42:BG:85:GLY:C	42:BG:87:PRO:HD3	2.00	0.81
1:AA:358:U:H4'	25:AZ:235:GLY:N	1.94	0.81
36:BA:321:G:N2	41:BF:165:ARG:HH21	1.77	0.81
33:B7:10:ARG:NH1	33:B7:14:LYS:HE3	1.94	0.81
25:AZ:145:GLU:HG2	25:AZ:149:LEU:HB2	1.61	0.81
35:D9:4:ARG:O	35:D9:36:GLN:HA	1.80	0.81
31:B5:4:HIS:HB2	31:B5:5:PRO:CD	2.09	0.81
22:CW:57:G:C2'	22:CW:58:A:H5'	2.10	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:7:ARG:O	48:BP:10:PRO:HD2	1.78	0.81
38:BC:6:ARG:O	38:BC:10:LEU:HD23	1.80	0.81
25:CZ:65:THR:CG2	25:CZ:80:VAL:HG13	2.10	0.81
36:BA:1678:G:H22	36:BA:1989:G:H22	1.27	0.81
46:DN:30:ILE:O	46:DN:34:LEU:HB2	1.80	0.81
39:DD:35:LYS:HD2	39:DD:36:PRO:N	1.96	0.81
30:B4:9:LEU:HD13	30:B4:10:VAL:H	1.45	0.81
36:BA:1884:A:C2'	36:BA:1885:A:H5"	2.10	0.81
41:BF:37:VAL:CG1	48:BP:7:ARG:HH22	1.93	0.81
39:BD:267:SER:C	39:BD:269:PHE:H	1.82	0.81
1:AA:367:U:H4'	25:AZ:291:ARG:HE	1.45	0.81
36:DA:733:G:N7	36:DA:761:A:C6	2.48	0.81
51:DS:85:VAL:HG23	51:DS:106:ARG:HG3	1.61	0.81
40:DE:3:GLY:HA3	40:DE:81:ILE:HD12	1.62	0.81
49:BQ:51:ARG:O	49:BQ:55:VAL:HG12	1.81	0.81
2:AB:75:LYS:HA	2:AB:78:GLN:HE21	1.45	0.81
36:DA:2777:G:H5"	36:DA:2778:A:H5'	1.62	0.81
36:BA:2524:G:H8	36:BA:2524:G:H5'	1.44	0.81
58:BZ:151:HIS:HB3	58:BZ:170:THR:HA	1.60	0.81
40:DE:105:THR:HB	40:DE:197:ILE:HG23	1.63	0.81
25:CZ:193:ASN:C	25:CZ:195:TRP:H	1.82	0.81
48:DP:124:LYS:HD3	48:DP:143:GLY:HA3	1.62	0.81
36:BA:910:A:H62	49:BQ:12:GLN:HA	1.45	0.81
51:DS:78:LEU:HD11	51:DS:103:GLU:HG3	1.62	0.81
13:CM:88:ARG:HG3	13:CM:98:VAL:HG13	1.63	0.81
39:BD:8:PRO:HB3	39:BD:14:ARG:HB3	1.61	0.81
4:CD:108:LEU:HD11	4:CD:174:LEU:HD13	1.61	0.81
37:BB:16:G:HO2'	37:BB:17:C:H6	1.27	0.81
25:AZ:277:LEU:HD12	25:AZ:280:GLY:H	1.44	0.81
32:B6:35:GLU:CB	32:B6:51:GLU:HB2	2.10	0.81
51:BS:89:ARG:HB3	51:BS:92:TYR:HB3	1.61	0.81
36:BA:1348:G:H2'	36:BA:1349:A:H5"	1.63	0.81
28:D2:47:ASN:CA	28:D2:50:ILE:HB	2.10	0.81
42:DG:77:ILE:H	42:DG:83:ARG:HB3	1.45	0.81
36:BA:2185:C:H2'	36:BA:2186:G:H5'	1.63	0.81
26:D0:10:THR:HG22	26:D0:12:ASN:N	1.95	0.81
53:BU:65:ILE:HD11	53:BU:96:ALA:HB3	1.62	0.81
12:CL:102:ARG:HG2	12:CL:102:ARG:HH11	1.45	0.81
36:DA:612:C:H2'	36:DA:613:G:C5'	2.10	0.81
52:BT:100:TYR:HD2	52:BT:103:ARG:HH21	1.28	0.81
50:DR:72:ASP:HB3	50:DR:75:LEU:HB3	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:73:THR:CG2	46:DN:82:LEU:HD11	2.10	0.81
1:CA:503:C:OP2	12:CL:116:SER:HB3	1.81	0.81
39:BD:35:LYS:HD2	39:BD:36:PRO:N	1.96	0.81
48:DP:58:THR:HB	48:DP:61:ARG:HH21	1.46	0.81
36:DA:2189:U:H2'	36:DA:2190:G:H4'	1.61	0.81
41:DF:37:VAL:HG11	48:DP:7:ARG:NH2	1.94	0.81
43:BH:70:THR:HG22	43:BH:74:ASN:HD21	1.45	0.81
8:CH:42:GLU:HG3	8:CH:109:ILE:HD12	1.61	0.81
38:BC:181:PRO:HG2	38:BC:184:LYS:HG2	1.61	0.81
22:AW:38:A:H2'	22:AW:39:U:H5"	1.63	0.81
58:BZ:122:ARG:HH11	58:BZ:122:ARG:HG2	1.44	0.81
36:BA:2110:G:H1	36:BA:2178:C:H5	1.25	0.81
39:BD:35:LYS:HG3	39:BD:104:TYR:HE2	1.39	0.81
41:DF:29:ASN:ND2	41:DF:32:LEU:HB2	1.96	0.81
50:BR:24:GLN:NE2	50:BR:36:THR:HG21	1.96	0.81
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.11	0.81
35:B9:14:CYS:SG	59:B9:101:ZN:ZN	1.69	0.81
54:DV:64:HIS:ND1	54:DV:92:THR:HG22	1.96	0.81
36:DA:1227:G:OP1	53:DU:13:LYS:HD2	1.79	0.81
4:CD:187:ARG:HH11	4:CD:187:ARG:HB3	1.45	0.81
1:CA:961:U:HO2'	1:CA:962:C:H6	1.27	0.81
11:CK:82:VAL:HG13	11:CK:108:ILE:HA	1.63	0.81
48:DP:58:THR:C	48:DP:60:MET:H	1.80	0.81
14:AN:22:THR:CB	14:AN:33:VAL:HG21	2.10	0.81
24:AY:76:A:OP2	25:AZ:274:ARG:CG	2.28	0.81
51:BS:36:TYR:HD1	51:BS:36:TYR:N	1.78	0.81
36:BA:2131:G:N3	36:BA:2133:G:N2	2.29	0.81
27:D1:42:GLN:HE22	36:DA:379:G:H21	1.28	0.81
36:BA:122:G:H1	36:BA:129:C:H42	1.29	0.81
36:DA:1689:A:H62	36:DA:1698:A:H2	1.27	0.80
12:AL:33:ARG:HH11	12:AL:62:SER:HB3	1.44	0.80
36:DA:2179:C:H4'	36:DA:2180:U:C2	2.16	0.80
34:B8:52:LYS:N	34:B8:53:PRO:HD2	1.96	0.80
43:BH:126:PRO:O	43:BH:127:GLU:HG2	1.80	0.80
28:B2:35:LEU:HD11	28:B2:50:ILE:CG1	2.10	0.80
57:BY:8:LYS:HD2	57:BY:8:LYS:N	1.95	0.80
48:DP:47:ASP:HB3	48:DP:48:PRO:CA	2.10	0.80
50:DR:24:GLN:NE2	50:DR:36:THR:HG21	1.95	0.80
58:DZ:104:PHE:HA	58:DZ:139:VAL:HG22	1.61	0.80
36:BA:1683:C:H2'	36:BA:1684:C:H6	1.46	0.80
36:DA:2645:G:H3'	36:DA:2646:C:C5'	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1305:G:H5'	21:AU:4:GLY:HA3	1.64	0.80
36:DA:1348:G:H2'	36:DA:1349:A:H5"	1.63	0.80
37:DB:48:A:H4'	51:DS:95:HIS:HD2	1.46	0.80
32:B6:11:LEU:HD21	32:B6:51:GLU:HG2	1.63	0.80
1:CA:150:C:C2'	1:CA:151:A:H5"	2.11	0.80
36:BA:2248:C:C2'	36:BA:2249:U:H5'	2.11	0.80
51:BS:78:LEU:HD11	51:BS:103:GLU:HG3	1.61	0.80
58:DZ:104:PHE:HA	58:DZ:139:VAL:CG2	2.11	0.80
36:BA:1689:A:H62	36:BA:1698:A:H2	1.27	0.80
53:BU:15:LYS:O	53:BU:19:LYS:HG2	1.82	0.80
40:BE:14:ILE:HD11	40:BE:173:VAL:HG11	1.62	0.80
22:CW:43:C:H2'	22:CW:44:G:H1'	1.61	0.80
1:AA:1086:U:H2'	1:AA:1087:G:H5'	1.62	0.80
36:DA:122:G:H1	36:DA:129:C:H42	1.29	0.80
32:D6:12:GLU:HG3	32:D6:23:THR:CG2	2.11	0.80
1:AA:1532:U:C2'	1:AA:1533:C:H5"	2.09	0.80
57:BY:95:LYS:HE3	57:BY:99:CYS:O	1.80	0.80
24:CY:41:C:H6	24:CY:41:C:H5'	1.46	0.80
25:AZ:219:LYS:HB3	25:AZ:244:ARG:HD2	1.64	0.80
25:AZ:137:LYS:HG2	60:AZ:501:GDP:C2	2.16	0.80
11:CK:18:ARG:HH21	11:CK:37:GLY:N	1.78	0.80
36:DA:1434:A:H61	36:DA:1558:A:H62	1.27	0.80
52:DT:115:ARG:HH11	52:DT:115:ARG:HG3	1.44	0.80
30:B4:31:ILE:HG21	42:BG:142:PRO:HB2	1.63	0.80
1:AA:1439:C:N4	1:AA:1462:G:H1	1.80	0.80
43:DH:42:ARG:O	43:DH:43:VAL:HG13	1.81	0.80
25:AZ:164:PRO:HB2	25:AZ:167:GLU:OE2	1.82	0.80
25:CZ:274:ARG:HG2	25:CZ:274:ARG:NH1	1.93	0.80
1:AA:1321:C:H3'	1:AA:1322:C:H5"	1.62	0.80
58:DZ:166:SER:HB2	58:DZ:168:GLU:H	1.45	0.80
8:CH:7:ALA:HB2	8:CH:85:ARG:HD3	1.63	0.80
46:DN:72:TYR:HD2	46:DN:90:MET:HG3	1.46	0.80
46:BN:22:THR:HA	46:BN:61:ARG:HB2	1.63	0.80
58:BZ:30:ASN:ND2	58:BZ:32:HIS:H	1.78	0.80
32:B6:7:ILE:HB	32:B6:27:LYS:HZ2	1.47	0.80
51:DS:36:TYR:HD1	51:DS:36:TYR:N	1.78	0.80
1:AA:1532:U:H2'	1:AA:1533:C:C5'	2.12	0.80
32:B6:12:GLU:HG3	32:B6:23:THR:CG2	2.11	0.80
50:DR:92:GLY:H	50:DR:94:TYR:HE1	1.29	0.80
36:BA:1678:G:N2	36:BA:1989:G:H22	1.80	0.80
46:BN:72:TYR:HD2	46:BN:90:MET:HG3	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:114:THR:HG22	8:AH:130:GLY:O	1.82	0.80
2:CB:7:VAL:O	2:CB:11:LEU:HB2	1.81	0.80
24:AY:41:C:H5'	24:AY:41:C:H6	1.44	0.80
1:AA:975:A:H5"	1:AA:976:G:H5"	1.64	0.80
42:BG:67:LYS:HD3	42:BG:67:LYS:N	1.97	0.80
34:D8:59:LYS:HB2	34:D8:59:LYS:NZ	1.95	0.80
31:D5:40:LYS:HE2	31:D5:46:CYS:HB3	1.62	0.80
46:DN:72:TYR:CD2	46:DN:90:MET:HG3	2.16	0.80
46:BN:72:TYR:CD2	46:BN:90:MET:HG3	2.16	0.80
17:CQ:69:LYS:C	17:CQ:70:ARG:HD2	2.02	0.80
1:AA:1378:C:H4'	7:AG:94:ARG:HH22	1.44	0.80
11:CK:27:ASN:HD22	11:CK:28:THR:H	1.28	0.80
11:AK:121:PRO:HG2	11:AK:126:ARG:HB2	1.64	0.80
3:AC:26:LYS:H	3:AC:26:LYS:HE3	1.45	0.80
47:BO:47:ILE:HG23	47:BO:48:PRO:HD2	1.62	0.80
42:DG:77:ILE:N	42:DG:83:ARG:HB3	1.96	0.80
41:BF:178:PRO:HG2	41:BF:179:GLU:OE1	1.81	0.80
36:BA:1876:A:C2'	36:BA:1877:A:H5"	2.12	0.80
36:DA:2131:G:N3	36:DA:2133:G:N2	2.29	0.80
50:BR:92:GLY:H	50:BR:94:TYR:HE1	1.30	0.80
49:DQ:134:ARG:NH1	58:DZ:122:ARG:HH21	1.79	0.80
40:BE:105:THR:HB	40:BE:197:ILE:HG23	1.64	0.80
42:BG:47:LYS:HD3	42:BG:81:LYS:HG3	1.64	0.80
36:BA:2189:U:C2'	36:BA:2190:G:H4'	2.10	0.80
36:DA:654(H):G:C2'	36:DA:654(I):C:H5'	2.12	0.80
25:AZ:2:LYS:O	25:AZ:275:LYS:CE	2.29	0.80
36:BA:654(H):G:C2'	36:BA:654(I):C:H5'	2.12	0.80
58:BZ:23:LYS:O	58:BZ:24:LEU:HB3	1.82	0.80
52:BT:24:PRO:HD3	52:BT:52:ILE:HD12	1.63	0.80
1:CA:1086:U:H2'	1:CA:1087:G:H5'	1.62	0.80
39:DD:44:ASN:HB3	39:DD:49:ILE:HA	1.63	0.79
24:AY:77:TRP:CA	25:AZ:285:ASN:O	2.31	0.79
36:DA:2189:U:C2'	36:DA:2190:G:H4'	2.11	0.79
32:B6:18:ARG:HG2	32:B6:18:ARG:NH1	1.90	0.79
31:B5:33:CYS:HG	31:B5:49:CYS:HG	1.03	0.79
4:CD:100:ARG:HH21	4:CD:118:ARG:HH12	1.27	0.79
34:B8:17:THR:CG2	34:B8:21:LYS:HB2	2.12	0.79
52:DT:23:ARG:HG2	52:DT:120:ARG:HH12	1.47	0.79
1:CA:1378:C:H4'	7:CG:94:ARG:HH22	1.45	0.79
28:B2:10:LEU:HD21	28:B2:14:ARG:CZ	2.11	0.79
1:AA:1096:C:H5"	2:AB:137:ARG:HH21	1.46	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:75:LYS:HA	2:CB:78:GLN:HE21	1.45	0.79
32:D6:35:GLU:CB	32:D6:51:GLU:HB2	2.12	0.79
28:B2:68:ARG:O	28:B2:69:ARG:HG3	1.83	0.79
52:BT:28:VAL:HG22	52:BT:47:GLY:H	1.41	0.79
36:BA:296:C:O2'	36:BA:297:C:H5'	1.82	0.79
36:BA:621:A:H2'	36:BA:622:G:H5'	1.65	0.79
33:D7:10:ARG:HH11	33:D7:10:ARG:HG2	1.47	0.79
22:CW:9:A:H2	22:CW:45:U:O4	1.64	0.79
11:AK:126:ARG:HH11	11:AK:126:ARG:HB3	1.47	0.79
52:BT:23:ARG:HG2	52:BT:120:ARG:HH12	1.46	0.79
4:AD:187:ARG:HH11	4:AD:187:ARG:HB3	1.45	0.79
36:DA:2485:G:H5"	49:DQ:46:GLN:HE21	1.46	0.79
3:CC:46:GLU:O	3:CC:47:LEU:HB2	1.81	0.79
28:D2:35:LEU:HD23	28:D2:53:LEU:HD12	1.64	0.79
57:DY:10:GLY:CA	57:DY:27:VAL:HG13	2.12	0.79
41:DF:101:LEU:HD12	41:DF:102:PRO:HD2	1.62	0.79
51:BS:13:ARG:HG3	51:BS:14:VAL:H	1.47	0.79
36:BA:1865:G:H5'	36:BA:1866:C:OP2	1.82	0.79
52:BT:115:ARG:HG3	52:BT:115:ARG:HH11	1.44	0.79
36:DA:586:A:H5'	41:DF:89:VAL:HG21	1.64	0.79
36:DA:2248:C:C2'	36:DA:2249:U:H5'	2.13	0.79
40:BE:111:ARG:HA	50:BR:2:ARG:HG3	1.64	0.79
53:BU:92:ARG:O	53:BU:94:ASN:N	2.15	0.79
25:CZ:191:GLY:HA2	25:CZ:197:ASP:OD1	1.81	0.79
36:DA:2524:G:H8	36:DA:2524:G:H5'	1.47	0.79
38:DC:181:PRO:HG2	38:DC:184:LYS:HG2	1.63	0.79
16:CP:25:ARG:CB	16:CP:25:ARG:HH11	1.96	0.79
25:CZ:359:VAL:O	25:CZ:362:VAL:CG2	2.31	0.79
56:BX:24:GLY:O	56:BX:82:GLN:HA	1.83	0.79
57:BY:10:GLY:CA	57:BY:27:VAL:HG13	2.13	0.79
1:AA:358:U:H2'	1:AA:359:U:C6	2.16	0.79
40:DE:111:ARG:HA	50:DR:2:ARG:HG3	1.63	0.79
38:BC:76:ALA:HB3	38:BC:94:VAL:HG13	1.65	0.79
16:AP:25:ARG:HH11	16:AP:25:ARG:CB	1.96	0.79
4:CD:200:GLU:HG2	4:CD:201:GLN:N	1.97	0.79
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.18	0.79
2:AB:7:VAL:O	2:AB:11:LEU:HB2	1.82	0.79
36:BA:2645:G:H3'	36:BA:2646:C:C5'	2.10	0.79
25:CZ:7:ARG:HH22	25:CZ:281:ILE:HD11	1.47	0.79
54:DV:19:LYS:HG2	54:DV:94:LEU:HB2	1.63	0.79
38:DC:6:ARG:O	38:DC:10:LEU:HD23	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1279:G:H4'	50:BR:31:HIS:HD2	1.45	0.79
48:DP:41:ARG:HH11	48:DP:41:ARG:CA	1.96	0.79
3:AC:5:ILE:HD13	3:AC:5:ILE:N	1.98	0.79
25:CZ:64:ASN:HD22	25:CZ:64:ASN:H	1.30	0.79
42:BG:51:ARG:HD3	42:BG:53:LEU:HD21	1.64	0.79
36:BA:586:A:H5'	41:BF:89:VAL:HG21	1.64	0.79
53:DU:15:LYS:O	53:DU:19:LYS:HG2	1.83	0.79
17:AQ:69:LYS:C	17:AQ:70:ARG:HD2	2.03	0.79
36:BA:1902:C:O2'	39:BD:244:ARG:HB3	1.83	0.79
25:AZ:7:ARG:HG2	25:AZ:7:ARG:NH1	1.98	0.79
57:BY:8:LYS:H	57:BY:8:LYS:CD	1.96	0.79
36:BA:2187:G:C2'	36:BA:2188:C:H5'	2.12	0.79
22:AW:57:G:C2'	22:AW:58:A:H5'	2.11	0.79
46:DN:22:THR:HA	46:DN:61:ARG:HB2	1.65	0.79
41:BF:29:ASN:HD22	41:BF:32:LEU:HB2	1.45	0.79
13:AM:101:GLN:HE21	13:AM:101:GLN:N	1.81	0.79
3:AC:16:ARG:HH11	3:AC:16:ARG:HB2	1.47	0.79
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.62	0.79
22:AW:9:A:H2	22:AW:45:U:O4	1.65	0.79
4:CD:108:LEU:CD1	4:CD:174:LEU:HD13	2.12	0.79
46:DN:47:ALA:HB2	46:DN:112:LEU:HD11	1.63	0.79
36:DA:886:C:O2'	36:DA:887:A:H4'	1.82	0.79
1:CA:1152:A:H5"	10:CJ:13:HIS:CD2	2.18	0.79
47:DO:47:ILE:HG23	47:DO:48:PRO:HD2	1.62	0.79
1:CA:453:A:H4'	16:CP:72:ARG:HG3	1.62	0.79
39:DD:186:HIS:HD2	39:DD:188:GLU:H	1.30	0.79
36:DA:512:G:HO2'	36:DA:513:A:H8	1.27	0.79
52:BT:55:ASN:H	52:BT:59:THR:HG22	1.48	0.79
1:AA:150:C:C2'	1:AA:151:A:H5"	2.12	0.79
36:DA:1887:C:C2'	36:DA:1888:G:H5"	2.12	0.79
25:CZ:8:THR:OG1	25:CZ:9:LYS:HG2	1.82	0.79
51:BS:85:VAL:HG23	51:BS:106:ARG:HG3	1.62	0.79
38:DC:76:ALA:HB3	38:DC:94:VAL:HG13	1.64	0.79
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.63	0.79
36:BA:655:A:H4'	36:BA:656:G:H5'	1.65	0.79
11:AK:82:VAL:HG13	11:AK:108:ILE:HA	1.64	0.79
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.64	0.79
21:CU:6:ARG:HD3	21:CU:15:ARG:NH1	1.96	0.79
36:BA:886:C:O2'	36:BA:887:A:H4'	1.83	0.79
28:D2:25:VAL:HG22	28:D2:29:LYS:HD3	1.64	0.79
36:DA:2185:C:H2'	36:DA:2186:G:H5'	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:296:C:O2'	36:DA:297:C:H5'	1.82	0.79
36:BA:2159:G:H2'	36:BA:2160:G:H5"	1.65	0.79
36:BA:612:C:H2'	36:BA:613:G:H5'	1.63	0.79
50:BR:18:LEU:HD11	50:BR:22:ARG:CZ	2.13	0.79
41:BF:46:ARG:HH11	41:BF:46:ARG:HG2	1.48	0.79
36:DA:1681:G:O2'	36:DA:1762:A:H2'	1.82	0.79
57:BY:13:VAL:HG23	57:BY:73:ARG:O	1.82	0.79
36:DA:330:A:C2	36:DA:1210:A:H2'	2.18	0.79
36:DA:2875:C:H4'	52:DT:5:ALA:HB3	1.65	0.79
1:AA:368:U:OP2	25:AZ:268:THR:HG21	1.82	0.79
34:D8:52:LYS:N	34:D8:53:PRO:HD2	1.97	0.79
2:AB:168:THR:OG1	2:AB:192:SER:HB2	1.82	0.79
25:AZ:359:VAL:O	25:AZ:362:VAL:CG2	2.31	0.78
42:BG:63:ILE:HG22	42:BG:143:GLU:HB2	1.63	0.78
28:D2:3:LEU:HG	28:D2:7:ARG:HD3	1.65	0.78
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.81	0.78
1:CA:1321:C:H3'	1:CA:1322:C:H5"	1.65	0.78
53:DU:65:ILE:HD11	53:DU:96:ALA:HB3	1.64	0.78
1:AA:1502:A:H2	1:AA:1505:G:N1	1.79	0.78
16:AP:25:ARG:HH11	16:AP:25:ARG:CG	1.96	0.78
4:AD:108:LEU:CD1	4:AD:174:LEU:HD13	2.13	0.78
52:DT:24:PRO:HD3	52:DT:52:ILE:HD12	1.65	0.78
36:BA:1803:A:O3'	39:BD:259:THR:HG21	1.83	0.78
1:AA:664:G:H22	1:AA:741:G:H1	1.31	0.78
1:AA:1030:C:H41	1:AA:1032:G:H21	1.31	0.78
22:AW:59:U:H2'	22:AW:60:U:H5'	1.65	0.78
56:BX:12:VAL:HG23	56:BX:13:LEU:N	1.97	0.78
28:D2:2:LYS:HG3	28:D2:6:VAL:HG21	1.63	0.78
41:BF:24:LEU:HB3	41:BF:25:PRO:CD	2.13	0.78
36:DA:2760:C:H2'	36:DA:2761:G:H5"	1.64	0.78
32:B6:17:LYS:HB3	32:B6:18:ARG:HH12	1.48	0.78
24:AY:76:A:P	25:AZ:274:ARG:CG	2.72	0.78
36:BA:733:G:N7	36:BA:761:A:C6	2.51	0.78
25:AZ:397:ALA:HB2	61:AZ:502:KIR:H252	1.64	0.78
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.19	0.78
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.18	0.78
42:BG:114:ILE:O	42:BG:116:ASP:N	2.15	0.78
25:AZ:65:THR:CG2	25:AZ:80:VAL:HG13	2.14	0.78
50:DR:18:LEU:HD11	50:DR:22:ARG:CZ	2.13	0.78
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.18	0.78
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	1.82	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:53:THR:HG23	41:DF:55:GLY:H	1.47	0.78
1:AA:722:A:H2'	1:AA:722:A:N3	1.98	0.78
36:DA:1865:G:H5'	36:DA:1866:C:OP2	1.81	0.78
36:DA:1683:C:H2'	36:DA:1684:C:H6	1.47	0.78
56:DX:12:VAL:HG23	56:DX:13:LEU:N	1.97	0.78
57:DY:8:LYS:CD	57:DY:8:LYS:H	1.95	0.78
42:DG:67:LYS:CD	42:DG:67:LYS:H	1.95	0.78
22:CV:42:C:C6	22:CV:42:C:H5'	2.15	0.78
40:BE:167:VAL:HG12	40:BE:189:PRO:HD3	1.65	0.78
46:DN:46:VAL:CG1	46:DN:48:MET:HG3	2.14	0.78
36:DA:2801(A):A:H4'	36:DA:2802:G:H5'	1.65	0.78
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	1.83	0.78
36:DA:655:A:H4'	36:DA:656:G:H5'	1.66	0.78
54:BV:64:HIS:ND1	54:BV:92:THR:HG22	1.98	0.78
11:CK:126:ARG:HH11	11:CK:126:ARG:HB3	1.47	0.78
51:DS:30:ARG:NH2	51:DS:62:LYS:HD3	1.94	0.78
34:B8:4:MET:O	34:B8:62:LEU:HD11	1.83	0.78
51:DS:89:ARG:HB3	51:DS:92:TYR:HB3	1.64	0.78
10:CJ:4:ILE:HB	10:CJ:74:ILE:HD11	1.64	0.78
13:AM:119:GLY:O	13:AM:120:LYS:HB2	1.82	0.78
25:AZ:193:ASN:C	25:AZ:195:TRP:H	1.82	0.78
24:AY:77:TRP:O	25:AZ:273:HIS:N	2.16	0.78
4:CD:62:GLN:HA	4:CD:62:GLN:HE21	1.47	0.78
36:BA:1887:C:C2'	36:BA:1888:G:H5"	2.12	0.78
41:BF:29:ASN:ND2	41:BF:32:LEU:HB2	1.98	0.78
36:BA:2101:G:C2'	36:BA:2102:U:H5"	2.14	0.78
17:AQ:60:ILE:HB	17:AQ:74:LEU:HD23	1.63	0.78
36:DA:612:C:H2'	36:DA:613:G:H5'	1.64	0.78
32:B6:11:LEU:HD22	32:B6:12:GLU:H	1.48	0.78
1:AA:367:U:H4'	25:AZ:291:ARG:NE	1.98	0.78
36:BA:2572:A:C8	40:BE:144:ARG:HD2	2.19	0.78
9:CI:40:LEU:HD11	9:CI:70:LYS:HG2	1.65	0.78
30:B4:18:CYS:SG	59:B4:101:ZN:ZN	1.70	0.78
39:DD:8:PRO:HB3	39:DD:14:ARG:HB3	1.66	0.78
22:AW:74:C:H5'	22:AW:74:C:H6	1.49	0.78
13:AM:88:ARG:HG3	13:AM:98:VAL:HG13	1.64	0.78
25:AZ:8:THR:OG1	25:AZ:9:LYS:HG2	1.84	0.78
36:BA:1720:U:H3'	36:BA:1721:G:H5"	1.66	0.78
56:BX:12:VAL:CG2	56:BX:13:LEU:H	1.95	0.78
25:AZ:7:ARG:HH22	25:AZ:281:ILE:HD11	1.47	0.78
34:D8:4:MET:O	34:D8:62:LEU:HD11	1.84	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:42:ARG:O	43:BH:43:VAL:HG13	1.82	0.78
58:BZ:151:HIS:CB	58:BZ:170:THR:HA	2.14	0.78
36:BA:2801(A):A:H4'	36:BA:2802:G:H5'	1.65	0.78
1:CA:1030:C:H41	1:CA:1032:G:H21	1.32	0.78
36:BA:1039:G:H1	36:BA:1116:C:H42	1.32	0.78
46:BN:30:ILE:O	46:BN:34:LEU:HB2	1.83	0.78
32:D6:17:LYS:HB3	32:D6:18:ARG:HH12	1.49	0.78
36:DA:1279:G:H4'	50:DR:31:HIS:HD2	1.48	0.78
38:BC:123:VAL:HG23	38:BC:127:LEU:HD13	1.65	0.78
48:BP:41:ARG:CA	48:BP:41:ARG:HH11	1.97	0.78
46:DN:51:PHE:CZ	46:DN:119:ARG:HD2	2.19	0.78
19:CS:31:ILE:HG23	19:CS:49:ILE:HA	1.66	0.78
53:DU:48:ALA:O	53:DU:52:ARG:HG3	1.84	0.78
36:DA:1039:G:H1	36:DA:1116:C:H42	1.32	0.78
31:D5:3:LYS:HD3	36:DA:747:U:P	2.23	0.78
27:B1:8:SER:HB3	27:B1:66:HIS:CE1	2.19	0.78
58:BZ:152:ALA:O	58:BZ:155:LEU:HD22	1.84	0.78
51:BS:12:PHE:HD1	51:BS:12:PHE:C	1.86	0.78
16:CP:25:ARG:HH11	16:CP:25:ARG:CG	1.96	0.78
1:AA:1277:C:HO2'	1:AA:1279:A:H8	1.32	0.78
36:DA:970:C:H2'	36:DA:971:C:H6	1.49	0.78
36:BA:225:A:O2'	36:BA:257:A:H4'	1.83	0.78
57:DY:2:ARG:HD3	57:DY:3:VAL:HG23	1.66	0.78
3:AC:46:GLU:O	3:AC:47:LEU:HB2	1.82	0.78
24:AY:25:C:H6	24:AY:25:C:H5'	1.49	0.77
42:DG:59:GLU:HA	42:DG:62:LEU:HD13	1.66	0.77
36:BA:2760:C:H2'	36:BA:2761:G:H5"	1.64	0.77
36:DA:621:A:H2'	36:DA:622:G:H5'	1.65	0.77
36:DA:1876:A:C2'	36:DA:1877:A:H5"	2.13	0.77
2:AB:114:ARG:NH1	2:AB:118:LEU:HD21	1.98	0.77
36:DA:1059:G:H5'	36:DA:1060:U:H2'	1.66	0.77
19:AS:29:ARG:HD2	19:AS:30:LEU:N	1.99	0.77
1:AA:723:U:C4	1:AA:1537:U:H2'	2.18	0.77
41:BF:53:THR:HG23	41:BF:55:GLY:H	1.49	0.77
51:DS:12:PHE:C	51:DS:12:PHE:HD1	1.88	0.77
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.18	0.77
28:B2:33:MET:O	28:B2:37:PHE:HB2	1.84	0.77
53:BU:48:ALA:O	53:BU:52:ARG:HG3	1.84	0.77
31:B5:3:LYS:HD3	36:BA:747:U:P	2.24	0.77
42:DG:97:ASP:H	42:DG:99:MET:HE1	1.46	0.77
26:B0:14:ARG:HH11	26:B0:14:ARG:HG3	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:47:ALA:HB2	46:BN:112:LEU:HD11	1.63	0.77
36:BA:2173:A:H2'	36:BA:2173:A:N3	1.99	0.77
31:D5:24:ALA:O	31:D5:25:LEU:HB2	1.82	0.77
24:AY:45:U:H3'	24:AY:46:7MG:H5"	1.65	0.77
43:BH:85:LYS:NZ	43:BH:133:VAL:H	1.81	0.77
34:D8:15:LYS:CD	48:DP:65:ARG:HH22	1.97	0.77
58:BZ:24:LEU:O	58:BZ:24:LEU:HD23	1.84	0.77
36:BA:2131:G:H1'	36:BA:2133:G:H21	1.48	0.77
46:BN:46:VAL:CG1	46:BN:48:MET:HG3	2.12	0.77
39:DD:69:ARG:NH2	39:DD:128:GLY:O	2.17	0.77
40:DE:167:VAL:HG12	40:DE:189:PRO:HD3	1.67	0.77
13:CM:57:ARG:NH1	30:D4:34:GLU:HG3	1.98	0.77
39:BD:186:HIS:HD2	39:BD:188:GLU:H	1.31	0.77
58:BZ:9:TYR:HE1	58:BZ:35:ARG:CZ	1.98	0.77
1:AA:975:A:H4'	1:AA:976:G:C5'	2.15	0.77
37:DB:20:C:C2'	37:DB:21:G:H5"	2.15	0.77
36:BA:330:A:C2	36:BA:1210:A:H2'	2.18	0.77
34:D8:8:LYS:HB3	34:D8:12:LYS:HE3	1.65	0.77
1:AA:1117:G:H5'	1:AA:1117:G:H8	1.47	0.77
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.20	0.77
27:B1:15:ALA:HB2	27:B1:42:GLN:HG3	1.66	0.77
53:DU:3:ARG:HH12	53:DU:5:LYS:HB3	1.49	0.77
36:BA:1264:G:H3'	36:BA:1265:A:H5"	1.65	0.77
27:D1:45:ASN:ND2	36:DA:2090:G:H21	1.81	0.77
51:DS:101:LEU:O	51:DS:101:LEU:HD12	1.85	0.77
1:CA:1534:A:N6	23:CX:12:A:H2	1.82	0.77
28:B2:68:ARG:HA	28:B2:72:ALA:HB3	1.67	0.77
36:BA:512:G:HO2'	36:BA:513:A:H8	1.29	0.77
52:BT:55:ASN:N	52:BT:59:THR:HG22	2.00	0.77
34:B8:8:LYS:HB3	34:B8:12:LYS:HE3	1.66	0.77
38:DC:123:VAL:HG23	38:DC:127:LEU:HD13	1.66	0.77
36:BA:1038:C:H2'	36:BA:1039:G:H5"	1.65	0.77
51:DS:13:ARG:HG3	51:DS:14:VAL:H	1.50	0.77
36:DA:141:A:H8	36:DA:1408:C:HO2'	1.30	0.77
22:AW:35:A:H2'	22:AW:36:A:H8	1.50	0.77
57:BY:2:ARG:HD3	57:BY:3:VAL:HG23	1.66	0.77
52:DT:39:ARG:H	52:DT:39:ARG:HD2	1.48	0.77
42:DG:99:MET:HG3	42:DG:100:TRP:CD1	2.18	0.77
57:BY:7:VAL:HG21	57:BY:8:LYS:NZ	2.00	0.77
36:DA:2604:U:C6	36:DA:2604:U:H5'	2.20	0.77
36:DA:2305:A:H3'	36:DA:2306:C:H5"	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:117:PRO:HB3	43:DH:123:PHE:CE1	2.20	0.77
12:AL:24:VAL:HG11	12:AL:27:LEU:HD22	1.67	0.77
36:DA:225:A:O2'	36:DA:257:A:H4'	1.83	0.77
48:BP:112:LEU:H	48:BP:128:HIS:HD2	1.33	0.77
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.66	0.77
39:DD:31:LYS:NZ	39:DD:33:LEU:HG	2.00	0.77
56:DX:24:GLY:O	56:DX:82:GLN:HA	1.85	0.77
57:BY:28:LYS:HD2	57:BY:39:VAL:HG22	1.66	0.77
54:DV:15:GLU:HB3	54:DV:16:PRO:CD	2.15	0.77
53:DU:92:ARG:O	53:DU:94:ASN:N	2.18	0.77
34:D8:17:THR:CG2	34:D8:21:LYS:HB2	2.15	0.77
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	1.67	0.77
36:DA:2173:A:N3	36:DA:2173:A:H2'	1.99	0.77
58:DZ:114:GLY:CA	58:DZ:146:ILE:HG21	2.15	0.77
39:BD:69:ARG:NH2	39:BD:128:GLY:O	2.17	0.77
56:BX:12:VAL:HB	56:BX:17:ALA:CB	2.13	0.77
22:AV:42:C:C6	22:AV:42:C:H5'	2.15	0.77
36:BA:2186:G:H2'	36:BA:2187:G:C8	2.20	0.77
2:CB:200:ILE:HD12	2:CB:200:ILE:N	1.98	0.77
24:AY:76:A:OP2	25:AZ:274:ARG:HG3	1.83	0.77
36:BA:672:C:C2'	36:BA:673:C:H5"	2.14	0.77
3:CC:5:ILE:HD13	3:CC:5:ILE:N	2.00	0.77
25:AZ:191:GLY:HA2	25:AZ:197:ASP:OD1	1.84	0.77
31:B5:24:ALA:O	31:B5:25:LEU:HB2	1.82	0.77
36:DA:2668:G:O2'	36:DA:2669:G:H5'	1.85	0.77
36:BA:1403:C:H5"	36:BA:1471:A:H1'	1.67	0.77
51:DS:66:ALA:HA	51:DS:69:VAL:HG12	1.65	0.77
19:AS:13:ASP:O	19:AS:14:HIS:HB3	1.85	0.77
43:BH:16:SER:HB2	43:BH:27:LYS:HB2	1.66	0.77
48:DP:58:THR:O	48:DP:61:ARG:NE	2.17	0.77
56:DX:12:VAL:CG2	56:DX:13:LEU:H	1.95	0.77
25:AZ:70:TYR:O	25:AZ:77:TYR:HB2	1.84	0.77
48:BP:58:THR:HB	48:BP:61:ARG:HH21	1.49	0.77
32:B6:19:ARG:HG2	32:B6:20:ASN:N	1.98	0.77
41:DF:24:LEU:HB3	41:DF:25:PRO:CD	2.15	0.77
51:DS:24:LEU:HB3	51:DS:85:VAL:HG12	1.65	0.77
48:DP:38:GLN:HG3	48:DP:39:LYS:H	1.48	0.77
2:CB:15:VAL:H	2:CB:16:HIS:CE1	2.03	0.77
36:BA:2485:G:H5"	49:BQ:46:GLN:HE21	1.48	0.77
4:AD:200:GLU:HG2	4:AD:201:GLN:N	1.99	0.77
34:B8:32:LEU:HD13	36:BA:2391:G:H3'	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2186:G:H2'	36:DA:2187:G:C8	2.20	0.77
1:AA:975:A:C5'	1:AA:976:G:H5"	2.15	0.77
36:DA:28:A:N6	36:DA:512:G:H1'	2.00	0.77
36:BA:28:A:N6	36:BA:512:G:H1'	2.00	0.77
4:AD:62:GLN:HE21	4:AD:62:GLN:HA	1.50	0.77
2:AB:75:LYS:HA	2:AB:78:GLN:NE2	2.00	0.77
22:CW:59:U:H2'	22:CW:60:U:H5'	1.64	0.77
29:B3:6:VAL:HG12	29:B3:56:VAL:HG22	1.67	0.77
1:AA:627:G:O2'	1:AA:628:G:H5'	1.84	0.77
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	1.65	0.76
41:DF:132:VAL:HG13	41:DF:133:ASN:ND2	2.00	0.76
36:BA:1826:G:H4'	39:BD:242:ARG:NH2	2.00	0.76
1:CA:963:G:H21	10:CJ:55:LYS:CE	1.98	0.76
50:BR:72:ASP:HB3	50:BR:75:LEU:HB3	1.65	0.76
36:BA:658:C:H2'	36:BA:659:C:H6	1.51	0.76
46:DN:46:VAL:HG13	46:DN:48:MET:HG3	1.67	0.76
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.67	0.76
46:BN:51:PHE:CZ	46:BN:119:ARG:HD2	2.20	0.76
54:DV:29:PRO:HA	54:DV:61:VAL:HG23	1.67	0.76
58:DZ:70:LEU:HD22	58:DZ:91:LEU:HD21	1.67	0.76
54:BV:29:PRO:HA	54:BV:61:VAL:HG23	1.65	0.76
39:DD:25:THR:HG22	39:DD:26:LYS:HE2	1.67	0.76
36:DA:2101:G:C2'	36:DA:2102:U:H5"	2.14	0.76
42:DG:51:ARG:HE	42:DG:51:ARG:HA	1.50	0.76
38:DC:82:LYS:HA	38:DC:82:LYS:HE2	1.67	0.76
2:CB:114:ARG:NH1	2:CB:118:LEU:HD21	2.00	0.76
36:DA:2796:U:H3'	36:DA:2799:C:H5'	1.66	0.76
29:D3:35:ARG:HH11	29:D3:35:ARG:CB	1.96	0.76
32:D6:19:ARG:HG2	32:D6:20:ASN:N	1.97	0.76
36:BA:2305:A:H3'	36:BA:2306:C:H5"	1.68	0.76
22:AW:57:G:H2'	22:AW:58:A:H5'	1.66	0.76
4:CD:28:SER:HB3	4:CD:29:PRO:CD	2.15	0.76
33:B7:10:ARG:HG2	33:B7:10:ARG:HH11	1.51	0.76
36:DA:1038:C:H2'	36:DA:1039:G:H5"	1.66	0.76
22:CW:74:C:H6	22:CW:74:C:H5'	1.50	0.76
3:CC:95:THR:HG22	3:CC:95:THR:O	1.85	0.76
51:BS:66:ALA:HA	51:BS:69:VAL:HG12	1.66	0.76
36:BA:1681:G:O2'	36:BA:1762:A:H2'	1.85	0.76
36:DA:2036:C:H6	36:DA:2036:C:H5'	1.49	0.76
39:BD:30:GLU:CB	39:BD:35:LYS:HZ3	1.99	0.76
41:BF:132:VAL:HG13	41:BF:133:ASN:ND2	2.00	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:62:LEU:H	26:D0:62:LEU:HD23	1.48	0.76
38:DC:77:ILE:HB	38:DC:115:ALA:HB2	1.68	0.76
19:CS:29:ARG:HD2	19:CS:30:LEU:N	2.00	0.76
43:DH:16:SER:HB2	43:DH:27:LYS:HB2	1.67	0.76
2:CB:168:THR:OG1	2:CB:192:SER:HB2	1.85	0.76
51:BS:30:ARG:HH22	51:BS:62:LYS:CD	1.98	0.76
36:DA:760:G:H2'	36:DA:761:A:H5'	1.67	0.76
36:DA:2131:G:H1'	36:DA:2133:G:H21	1.49	0.76
51:BS:13:ARG:CG	51:BS:14:VAL:H	1.99	0.76
27:D1:8:SER:OG	27:D1:10:LYS:HG2	1.85	0.76
11:AK:27:ASN:HD22	11:AK:28:THR:H	1.33	0.76
36:BA:2875:C:H4'	52:BT:5:ALA:CB	2.15	0.76
36:DA:1803:A:O3'	39:DD:259:THR:HG21	1.85	0.76
57:DY:13:VAL:HG23	57:DY:73:ARG:O	1.85	0.76
37:BB:20:C:C2'	37:BB:21:G:H5"	2.16	0.76
22:CW:57:G:H2'	22:CW:58:A:H5'	1.65	0.76
40:BE:35:GLN:HB3	40:BE:48:GLN:HB3	1.68	0.76
36:DA:2875:C:H4'	52:DT:5:ALA:CB	2.15	0.76
36:BA:2853:C:H2'	36:BA:2854:G:H8	1.50	0.76
36:BA:2796:U:H3'	36:BA:2799:C:H5'	1.67	0.76
47:BO:76:ALA:HB3	52:BT:75:ILE:HD13	1.67	0.76
28:D2:40:SER:O	28:D2:41:ILE:HG23	1.85	0.76
51:DS:36:TYR:N	51:DS:36:TYR:CD1	2.50	0.76
34:B8:15:LYS:CD	48:BP:65:ARG:HH22	1.97	0.76
58:BZ:24:LEU:HD21	58:BZ:86:VAL:HG23	1.66	0.76
39:BD:44:ASN:HB3	39:BD:49:ILE:HA	1.65	0.76
36:DA:1434:A:H61	36:DA:1558:A:N6	1.84	0.76
1:AA:265:G:H2'	1:AA:266:G:H5"	1.67	0.76
46:BN:46:VAL:HG13	46:BN:48:MET:HG3	1.67	0.76
43:DH:158:HIS:O	43:DH:159:GLU:HB2	1.85	0.76
1:AA:1036:G:H5"	1:AA:1037:C:C5	2.21	0.76
1:CA:1036:G:H5"	1:CA:1037:C:C5	2.20	0.76
11:CK:79:SER:OG	11:CK:106:LYS:HD2	1.84	0.76
39:DD:34:VAL:HG23	39:DD:35:LYS:N	2.00	0.76
39:DD:43:ARG:NH1	39:DD:44:ASN:ND2	2.29	0.76
4:AD:28:SER:HB3	4:AD:29:PRO:CD	2.15	0.76
36:DA:760:G:C2'	36:DA:761:A:H5'	2.14	0.76
36:BA:650:C:H3'	36:BA:651:G:H5"	1.68	0.76
38:BC:77:ILE:HB	38:BC:115:ALA:HB2	1.68	0.76
38:BC:82:LYS:HE2	38:BC:82:LYS:HA	1.68	0.76
2:CB:75:LYS:HA	2:CB:78:GLN:NE2	2.00	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1152:A:H5"	10:AJ:13:HIS:CD2	2.21	0.76
52:BT:65:LYS:HE3	52:BT:67:SER:HB2	1.68	0.76
22:AW:4:C:H2'	22:AW:5:G:C8	2.21	0.76
31:B5:29:THR:HG21	36:BA:2814:C:O2'	1.86	0.76
39:BD:31:LYS:NZ	39:BD:33:LEU:HG	2.00	0.76
30:B4:12:ALA:HB1	30:B4:29:PRO:O	1.86	0.76
28:B2:40:SER:HB3	56:BX:13:LEU:HD11	1.68	0.76
40:DE:35:GLN:HB3	40:DE:48:GLN:HB3	1.67	0.76
40:BE:101:ARG:CZ	40:BE:171:GLU:HB2	2.16	0.76
36:DA:2160:G:H5'	36:DA:2160:G:C8	2.19	0.76
39:DD:226:MET:CE	39:DD:231:HIS:HB2	2.15	0.76
2:AB:15:VAL:H	2:AB:16:HIS:CE1	2.04	0.76
24:AY:9:A:H2	24:AY:44:G:HO2'	1.33	0.76
36:BA:2875:C:H4'	52:BT:5:ALA:HB3	1.65	0.76
43:BH:28:GLY:HA3	43:BH:79:VAL:HB	1.68	0.76
36:DA:1720:U:H3'	36:DA:1721:G:H5"	1.68	0.76
58:BZ:114:GLY:O	58:BZ:146:ILE:HB	1.85	0.76
57:DY:7:VAL:HG21	57:DY:8:LYS:NZ	2.01	0.76
43:BH:158:HIS:O	43:BH:159:GLU:HB2	1.85	0.76
36:BA:330:A:O2'	36:BA:331:A:H8	1.69	0.76
36:BA:1542:A:H5'	36:BA:1543:C:OP2	1.86	0.76
36:DA:1061:U:H4'	36:DA:1070:A:H1'	1.68	0.76
48:BP:47:ASP:HB3	48:BP:48:PRO:HA	1.68	0.76
25:AZ:19:HIS:ND1	25:AZ:113:MET:HB3	1.99	0.76
25:CZ:164:PRO:HB2	25:CZ:167:GLU:OE2	1.85	0.76
50:BR:103:ARG:HG3	55:BW:40:ASN:OD1	1.85	0.76
16:AP:20:VAL:HG23	16:AP:34:GLU:O	1.85	0.76
25:AZ:64:ASN:H	25:AZ:64:ASN:HD22	1.30	0.76
25:AZ:137:LYS:HA	60:AZ:501:GDP:N1	2.00	0.76
8:AH:86:ILE:HD11	8:AH:136:GLU:HG2	1.68	0.76
33:D7:22:MET:HE2	33:D7:28:ARG:HG2	1.68	0.76
29:B3:15:TYR:HD2	29:B3:19:GLN:HE22	1.34	0.76
28:D2:29:LYS:O	28:D2:33:MET:HG3	1.86	0.75
32:D6:15:GLU:OE1	32:D6:18:ARG:NE	2.19	0.75
38:DC:175:VAL:CG1	38:DC:188:ASN:HB3	2.14	0.75
36:DA:910:A:H62	49:DQ:12:GLN:HA	1.50	0.75
1:CA:1321:C:H5"	1:CA:1322:C:H5"	1.66	0.75
36:BA:1059:G:H5'	36:BA:1060:U:H2'	1.67	0.75
36:BA:1434:A:H61	36:BA:1558:A:N6	1.84	0.75
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.68	0.75
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.33	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:39:ARG:HD2	52:BT:39:ARG:H	1.51	0.75
41:DF:46:ARG:HH11	41:DF:46:ARG:HG2	1.51	0.75
53:BU:85:LYS:HD3	53:BU:117:GLN:HE22	1.51	0.75
39:BD:25:THR:HG22	39:BD:26:LYS:HE2	1.68	0.75
42:BG:83:ARG:HB2	42:BG:84:LYS:HD2	1.68	0.75
58:DZ:96:VAL:HG22	58:DZ:97:GLU:H	1.51	0.75
38:DC:119:VAL:HG23	38:DC:120:MET:CE	2.16	0.75
36:DA:672:C:C2'	36:DA:673:C:H5"	2.15	0.75
36:DA:444:C:OP2	53:DU:2:PRO:HD3	1.86	0.75
46:BN:129:PRO:O	46:BN:130:HIS:HB3	1.86	0.75
34:B8:54:GLU:O	34:B8:58:ILE:HG12	1.86	0.75
58:DZ:155:LEU:HD23	58:DZ:155:LEU:H	1.51	0.75
36:DA:1599:C:H2'	36:DA:1600:C:H6	1.51	0.75
32:D6:15:GLU:HG2	32:D6:18:ARG:NH1	2.01	0.75
32:D6:18:ARG:NH1	32:D6:18:ARG:HG2	1.88	0.75
36:DA:2307:G:N2	36:DA:2308:G:H5"	2.02	0.75
14:CN:22:THR:CB	14:CN:33:VAL:HG21	2.15	0.75
36:DA:1542:A:H5'	36:DA:1543:C:OP2	1.85	0.75
37:BB:40:U:H3'	37:BB:41:U:H5"	1.68	0.75
36:BA:760:G:C2'	36:BA:761:A:H5'	2.16	0.75
36:BA:1040:C:H2'	36:BA:1041:G:C8	2.21	0.75
1:CA:1117:G:H5'	1:CA:1117:G:H8	1.50	0.75
36:BA:2523:G:C2'	36:BA:2524:G:H5"	2.15	0.75
4:CD:120:LEU:HB3	4:CD:126:ILE:HD11	1.67	0.75
36:DA:2464:C:HO2'	36:DA:2465:C:H6	1.31	0.75
1:AA:1504:G:OP1	1:AA:1507:A:H4'	1.85	0.75
52:BT:58:ASN:HD22	52:BT:58:ASN:H	1.33	0.75
24:CY:25:C:H5'	24:CY:25:C:H6	1.49	0.75
34:D8:32:LEU:HD13	36:DA:2391:G:H3'	1.68	0.75
41:BF:3:GLU:CA	41:BF:24:LEU:HG	2.17	0.75
34:B8:33:ASN:HB3	34:B8:36:LYS:HD2	1.69	0.75
36:BA:2160:G:C8	36:BA:2160:G:H5'	2.21	0.75
51:BS:56:LEU:O	51:BS:56:LEU:HD23	1.86	0.75
50:BR:14:SER:HA	50:BR:17:ARG:HH12	1.50	0.75
39:BD:43:ARG:HE	39:BD:44:ASN:ND2	1.82	0.75
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.21	0.75
22:CW:35:A:H2'	22:CW:36:A:H8	1.49	0.75
57:BY:36:ALA:HB1	57:BY:67:LEU:O	1.86	0.75
55:DW:29:LEU:HG	55:DW:33:ARG:HD2	1.69	0.75
36:BA:1899:G:O2'	36:BA:1900:A:H5"	1.86	0.75
58:DZ:72:ARG:HG3	58:DZ:89:PHE:HB2	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:85:LYS:HZ3	52:BT:85:LYS:HB3	1.49	0.75
1:CA:963:G:N3	10:CJ:55:LYS:NZ	2.33	0.75
38:BC:119:VAL:HG23	38:BC:120:MET:CE	2.17	0.75
36:DA:658:C:H2'	36:DA:659:C:H6	1.50	0.75
58:DZ:166:SER:HB2	58:DZ:168:GLU:N	2.01	0.75
1:CA:265:G:H2'	1:CA:266:G:H5"	1.68	0.75
36:DA:1403:C:H5"	36:DA:1471:A:H1'	1.67	0.75
19:CS:13:ASP:O	19:CS:14:HIS:HB3	1.85	0.75
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.85	0.75
42:DG:77:ILE:O	42:DG:83:ARG:HG2	1.87	0.75
43:DH:118:PRO:HG2	43:DH:121:ILE:HD12	1.67	0.75
36:BA:1061:U:H4'	36:BA:1070:A:H1'	1.69	0.75
54:BV:15:GLU:HB3	54:BV:16:PRO:CD	2.16	0.75
32:B6:53:LYS:HG2	32:B6:54:ILE:N	2.01	0.75
17:CQ:10:VAL:HG21	17:CQ:52:LYS:O	1.87	0.75
1:CA:1016:A:H2'	1:CA:1017:G:O4'	1.86	0.75
36:BA:272(D):G:H1	36:BA:364:C:H42	1.35	0.75
1:AA:186:C:H2'	1:AA:187:C:H6	1.51	0.75
1:CA:1129:C:O5'	1:CA:1130:A:H5'	1.86	0.75
24:AY:10:G:H1	24:AY:25:C:H42	1.34	0.75
56:DX:12:VAL:HB	56:DX:17:ALA:CB	2.14	0.75
52:DT:83:ILE:HG13	52:DT:84:GLN:N	2.01	0.75
36:BA:760:G:H2'	36:BA:761:A:H5'	1.68	0.75
16:AP:25:ARG:HH11	16:AP:25:ARG:HB2	1.50	0.75
58:DZ:78:LYS:O	58:DZ:79:ARG:HB3	1.86	0.75
1:CA:1423:G:H5'	47:DO:49:ARG:HH22	1.51	0.75
36:BA:2036:C:H5'	36:BA:2036:C:H6	1.51	0.75
11:AK:67:ASP:OD1	11:AK:71:LYS:HE3	1.87	0.75
36:DA:2853:C:H2'	36:DA:2854:G:H8	1.50	0.75
53:BU:3:ARG:HH12	53:BU:5:LYS:HB3	1.51	0.75
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.69	0.75
39:BD:34:VAL:HG23	39:BD:35:LYS:N	2.00	0.75
36:BA:2645:G:C3'	36:BA:2646:C:H5'	2.12	0.75
56:BX:55:ASN:HB2	56:BX:80:ILE:HG12	1.68	0.75
34:B8:34:TRP:HB2	36:BA:2420:C:OP1	1.87	0.75
42:DG:60:LEU:O	42:DG:63:ILE:HG12	1.87	0.75
22:AV:41:C:H2'	22:AV:42:C:C5'	2.15	0.75
43:BH:118:PRO:HG2	43:BH:121:ILE:HD12	1.68	0.75
36:DA:1960:A:H8	36:DA:1960:A:H5'	1.51	0.75
1:AA:367:U:C4'	25:AZ:291:ARG:HE	1.99	0.75
38:BC:10:LEU:HD12	38:BC:32:LEU:HA	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:92:GLY:N	50:DR:94:TYR:HE1	1.85	0.75
4:AD:3:ARG:NH1	4:AD:118:ARG:HD3	2.01	0.75
27:B1:29:GLY:O	27:B1:30:VAL:HG22	1.87	0.75
39:BD:226:MET:CE	39:BD:231:HIS:HB2	2.16	0.75
49:DQ:63:LYS:HD2	58:DZ:175:VAL:HG21	1.67	0.75
36:BA:1880:C:C3'	36:BA:1881:C:H5"	2.17	0.75
57:DY:28:LYS:HD2	57:DY:39:VAL:HG22	1.67	0.75
36:DA:2159:G:H2'	36:DA:2160:G:H5"	1.69	0.75
38:DC:53:ARG:NH1	38:DC:53:ARG:HB3	2.01	0.75
25:CZ:191:GLY:HA2	25:CZ:197:ASP:CG	2.07	0.75
25:CZ:271:GLU:HG2	25:CZ:276:THR:HA	1.69	0.75
40:DE:101:ARG:CZ	40:DE:171:GLU:HB2	2.16	0.75
1:AA:1493:A:H5"	1:AA:1494:G:OP2	1.87	0.75
52:BT:29:ARG:HB3	52:BT:85:LYS:HA	1.69	0.74
43:DH:85:LYS:NZ	43:DH:133:VAL:H	1.83	0.74
25:CZ:7:ARG:NH1	25:CZ:7:ARG:HG2	2.02	0.74
58:BZ:37:VAL:HG23	58:BZ:38:TYR:N	2.00	0.74
1:CA:1392:G:H21	1:CA:1502:A:H8	1.34	0.74
40:BE:128:SER:OG	40:BE:129:HIS:N	2.19	0.74
3:AC:34:LEU:HD22	3:AC:38:ARG:HE	1.49	0.74
36:DA:272(D):G:H1	36:DA:364:C:H42	1.35	0.74
37:DB:40:U:H3'	37:DB:41:U:H5"	1.67	0.74
41:DF:3:GLU:CA	41:DF:24:LEU:HG	2.16	0.74
52:BT:27:THR:HG23	52:BT:28:VAL:H	1.52	0.74
48:DP:64:LYS:O	48:DP:66:GLY:N	2.20	0.74
25:AZ:93:ILE:HD11	61:AZ:502:KIR:H371	1.69	0.74
4:AD:25:ARG:O	4:AD:27:TYR:N	2.20	0.74
36:DA:1040:C:H2'	36:DA:1041:G:C8	2.22	0.74
48:BP:38:GLN:HG3	48:BP:39:LYS:H	1.51	0.74
16:CP:74:LEU:HB3	16:CP:79:VAL:HG21	1.69	0.74
13:AM:88:ARG:HG3	13:AM:98:VAL:CG1	2.17	0.74
54:BV:35:LEU:HD23	54:BV:57:VAL:HG13	1.69	0.74
36:DA:1494:A:C2'	36:DA:1495:A:H5"	2.17	0.74
56:DX:55:ASN:HB2	56:DX:80:ILE:HG12	1.69	0.74
36:BA:271(L):U:H4'	36:BA:271(M):G:C8	2.22	0.74
50:DR:103:ARG:HG3	55:DW:40:ASN:OD1	1.86	0.74
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	1.87	0.74
10:CJ:33:GLN:O	10:CJ:75:ILE:HG12	1.87	0.74
1:AA:723:U:N3	1:AA:1537:U:H2'	2.02	0.74
31:D5:29:THR:HG21	36:DA:2814:C:O2'	1.87	0.74
36:DA:614(A):U:H4'	36:DA:614(B):G:H5"	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.34	0.74
1:AA:1129:C:O5'	1:AA:1130:A:H5'	1.87	0.74
4:CD:8:VAL:HB	4:CD:21:LEU:HD12	1.70	0.74
48:DP:62:LEU:H	48:DP:62:LEU:CD2	1.98	0.74
26:D0:14:ARG:HG3	26:D0:14:ARG:HH11	1.52	0.74
58:BZ:126:VAL:HA	58:BZ:163:LEU:HA	1.68	0.74
25:AZ:121:LEU:HD13	61:AZ:502:KIR:O4	1.88	0.74
36:BA:2523:G:H2'	36:BA:2524:G:H5"	1.68	0.74
1:AA:1152:A:O2'	1:AA:1153:C:H5'	1.86	0.74
36:BA:2668:G:O2'	36:BA:2669:G:H5'	1.87	0.74
17:CQ:26:GLN:HB3	17:CQ:37:LYS:HA	1.68	0.74
27:D1:81:LYS:HZ3	36:DA:156:U:H5'	1.53	0.74
36:DA:1264:G:H3'	36:DA:1265:A:H5"	1.67	0.74
24:CY:72:U:H2'	24:CY:73:G:H5"	1.70	0.74
57:DY:36:ALA:HB1	57:DY:67:LEU:O	1.87	0.74
36:BA:1221(A):C:H2'	36:BA:1222:C:C6	2.22	0.74
52:BT:82:LEU:N	52:BT:82:LEU:HD12	2.01	0.74
2:CB:165:VAL:HG23	2:CB:166:ASP:N	1.98	0.74
31:B5:40:LYS:HE2	31:B5:46:CYS:HB3	1.67	0.74
48:BP:16:ARG:HD3	48:BP:16:ARG:O	1.86	0.74
53:BU:90:VAL:O	53:BU:92:ARG:N	2.20	0.74
10:AJ:78:ASN:HB2	10:AJ:81:THR:HG22	1.69	0.74
25:CZ:139:ASP:O	25:CZ:140:MET:HG2	1.86	0.74
1:AA:1321:C:H5"	1:AA:1322:C:H5"	1.69	0.74
36:DA:2523:G:C2'	36:DA:2524:G:H5"	2.18	0.74
41:BF:57:VAL:HG21	41:BF:87:GLY:HA2	1.69	0.74
36:DA:1880:C:C3'	36:DA:1881:C:H5"	2.17	0.74
36:DA:1880:C:H3'	36:DA:1881:C:H5"	1.70	0.74
38:DC:132:GLY:N	38:DC:133:PRO:HD2	2.02	0.74
25:CZ:263:ARG:HD2	25:CZ:297:GLU:OE2	1.87	0.74
36:BA:500:G:N2	36:BA:502:A:H3'	2.01	0.74
1:CA:664:G:H22	1:CA:741:G:H1	1.34	0.74
36:DA:650:C:H3'	36:DA:651:G:H5"	1.68	0.74
58:DZ:130:PRO:HA	58:DZ:133:ILE:HD11	1.69	0.74
11:CK:67:ASP:OD1	11:CK:71:LYS:HE3	1.86	0.74
52:DT:65:LYS:HE3	52:DT:67:SER:HB2	1.70	0.74
28:D2:29:LYS:CA	28:D2:32:LEU:HB3	2.15	0.74
36:DA:271(L):U:H4'	36:DA:271(M):G:C8	2.22	0.74
47:BO:87:ILE:CG2	47:BO:91:LEU:HA	2.17	0.74
40:BE:33:VAL:HG13	40:BE:69:LYS:HE3	1.69	0.74
48:DP:16:ARG:O	48:DP:16:ARG:HD3	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:17:C:H2'	37:DB:18:G:O4'	1.87	0.74
24:CY:45:U:H3'	24:CY:46:7MG:H5"	1.68	0.74
36:BA:2179:C:H5"	36:BA:2180:U:OP1	1.87	0.74
1:CA:1442(B):A:H5'	52:DT:122:ASP:OD1	1.86	0.74
37:BB:17:C:H2'	37:BB:18:G:O4'	1.87	0.74
36:DA:2378:A:N1	51:DS:19:LYS:HE3	2.03	0.74
20:AT:82:SER:O	20:AT:86:ARG:HB2	1.88	0.74
36:DA:2689:U:H5"	36:DA:2690:C:H5'	1.69	0.74
43:BH:156:ALA:C	43:BH:158:HIS:H	1.89	0.74
36:DA:1543:C:H3'	36:DA:1544:A:C5'	2.18	0.74
32:D6:53:LYS:HG2	32:D6:54:ILE:N	2.02	0.74
3:CC:16:ARG:NH1	3:CC:16:ARG:HB2	2.03	0.74
50:DR:27:SER:O	50:DR:30:THR:HG23	1.87	0.74
1:AA:963:G:H21	10:AJ:55:LYS:CE	1.99	0.74
25:CZ:274:ARG:HH11	25:CZ:274:ARG:CG	2.00	0.74
36:BA:1683:C:H2'	36:BA:1684:C:C6	2.22	0.74
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.88	0.74
40:DE:9:VAL:CG1	40:DE:25:VAL:HB	2.18	0.74
15:CO:71:GLN:O	15:CO:71:GLN:HG2	1.87	0.74
57:BY:90:LEU:HD23	57:BY:90:LEU:H	1.53	0.74
51:BS:101:LEU:O	51:BS:101:LEU:HD12	1.87	0.74
36:BA:970:C:H2'	36:BA:971:C:H6	1.50	0.74
28:D2:25:VAL:C	28:D2:27:GLU:H	1.91	0.74
36:DA:2188:C:H2'	36:DA:2189:U:C6	2.22	0.74
58:DZ:96:VAL:HG13	58:DZ:97:GLU:N	2.02	0.74
1:CA:722:A:N3	1:CA:722:A:H2'	2.01	0.74
48:DP:148:LEU:O	48:DP:149:GLU:HB2	1.86	0.74
36:DA:1826:G:H4'	39:DD:242:ARG:NH2	2.03	0.74
25:AZ:326:GLU:O	61:AZ:502:KIR:H101	1.87	0.74
27:B1:13:ILE:CD1	36:BA:396:G:H5'	2.18	0.74
36:DA:1170:G:H1	36:DA:1179:C:H42	1.36	0.74
48:DP:112:LEU:H	48:DP:128:HIS:HD2	1.33	0.74
36:BA:1494:A:C2'	36:BA:1495:A:H5"	2.17	0.74
22:AV:61:C:H5'	22:AV:62:C:OP2	1.88	0.74
22:CV:20:U:H3'	22:CV:21:A:H5'	1.68	0.74
34:D8:54:GLU:O	34:D8:58:ILE:HG12	1.87	0.74
1:CA:59:A:H3'	1:CA:331:G:H22	1.51	0.74
25:CZ:219:LYS:HB3	25:CZ:244:ARG:HD2	1.68	0.74
25:CZ:16:THR:HG23	25:CZ:79:HIS:NE2	2.02	0.74
42:BG:34:LEU:HA	42:BG:161:THR:HA	1.68	0.74
15:CO:17:ARG:HG3	15:CO:17:ARG:HH11	1.50	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1003:G:N2	1:CA:1039:C:H42	1.85	0.74
1:AA:192:U:H1'	20:AT:103:GLY:HA2	1.70	0.74
30:D4:12:ALA:HB1	30:D4:29:PRO:O	1.86	0.74
42:DG:61:ALA:HA	42:DG:64:THR:HG22	1.68	0.74
42:DG:67:LYS:N	42:DG:67:LYS:HD3	1.98	0.74
48:BP:62:LEU:CD2	48:BP:62:LEU:H	1.99	0.74
41:BF:177:ALA:HB1	41:BF:178:PRO:HD2	1.70	0.74
36:BA:1543:C:H3'	36:BA:1544:A:C5'	2.17	0.74
24:AY:76:A:C6	25:AZ:271:GLU:HG3	2.23	0.74
52:BT:23:ARG:HG2	52:BT:120:ARG:NH1	2.02	0.74
36:BA:1880:C:H3'	36:BA:1881:C:H5"	1.70	0.74
44:DJ:85:UNK:HG3	44:DJ:86:UNK:H	1.52	0.74
1:CA:358:U:H2'	1:CA:359:U:C6	2.23	0.74
1:CA:1492:A:OP1	12:CL:47:LYS:HG2	1.88	0.74
56:BX:29:TRP:CZ3	56:BX:78:LYS:HB3	2.23	0.74
15:AO:87:ILE:CG2	15:AO:88:ARG:H	1.93	0.74
58:BZ:69:THR:CG2	58:BZ:90:VAL:HA	2.10	0.74
28:D2:6:VAL:HG11	28:D2:59:ARG:NE	2.03	0.74
36:DA:330:A:O2'	36:DA:331:A:H8	1.70	0.74
48:DP:47:ASP:HB3	48:DP:48:PRO:HA	1.68	0.74
31:D5:50:GLY:HA3	31:D5:56:LYS:CD	2.18	0.74
9:AI:4:TYR:CD2	9:AI:87:GLN:HB3	2.23	0.74
53:DU:90:VAL:O	53:DU:92:ARG:N	2.21	0.74
4:CD:25:ARG:O	4:CD:27:TYR:N	2.21	0.74
38:DC:10:LEU:HD12	38:DC:32:LEU:HA	1.68	0.74
1:CA:186:C:H2'	1:CA:187:C:H6	1.53	0.74
50:BR:27:SER:O	50:BR:30:THR:HG23	1.88	0.74
41:DF:57:VAL:HG21	41:DF:87:GLY:HA2	1.69	0.74
25:AZ:263:ARG:HD2	25:AZ:297:GLU:OE2	1.87	0.74
56:DX:29:TRP:CZ3	56:DX:78:LYS:HB3	2.23	0.74
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.69	0.74
40:DE:128:SER:OG	40:DE:129:HIS:N	2.21	0.74
51:BS:83:LYS:HG2	51:BS:105:ALA:HB3	1.69	0.74
36:BA:614(A):U:H4'	36:BA:614(B):G:H5"	1.69	0.74
40:BE:116:VAL:O	40:BE:117:MET:HB2	1.88	0.74
36:BA:1899:G:H21	36:BA:1902:C:N4	1.81	0.73
28:D2:6:VAL:HG11	28:D2:59:ARG:HE	1.53	0.73
1:CA:1281:U:H4'	1:CA:1282:C:OP2	1.87	0.73
41:BF:7:TYR:HB3	41:BF:16:GLY:O	1.88	0.73
50:DR:2:ARG:HD2	50:DR:2:ARG:C	2.08	0.73
51:DS:56:LEU:O	51:DS:56:LEU:HD23	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:117:PRO:HB3	43:BH:123:PHE:CE1	2.22	0.73
1:AA:1116:C:O2'	9:AI:108:VAL:HG21	1.88	0.73
4:CD:187:ARG:NH1	4:CD:187:ARG:HB3	2.03	0.73
54:DV:35:LEU:HD23	54:DV:57:VAL:HG13	1.69	0.73
29:D3:6:VAL:HG12	29:D3:56:VAL:HG22	1.69	0.73
27:B1:37:ILE:HD13	27:B1:37:ILE:H	1.52	0.73
46:BN:107:LEU:HB3	46:BN:108:PRO:HD2	1.70	0.73
36:BA:1599:C:H2'	36:BA:1600:C:H6	1.54	0.73
36:BA:2604:U:C6	36:BA:2604:U:H5'	2.22	0.73
36:BA:1301:A:O2'	36:BA:1302:A:C2'	2.35	0.73
38:BC:175:VAL:CG1	38:BC:188:ASN:HB3	2.15	0.73
41:DF:177:ALA:HB1	41:DF:178:PRO:HD2	1.71	0.73
36:DA:1019:U:H3	36:DA:1142(A):A:H62	1.37	0.73
9:CI:4:TYR:CD2	9:CI:87:GLN:HB3	2.23	0.73
53:DU:92:ARG:NH2	54:DV:11:GLN:H	1.86	0.73
25:CZ:121:LEU:HD13	61:CZ:502:KIR:O4	1.87	0.73
38:BC:53:ARG:HB3	38:BC:53:ARG:NH1	2.01	0.73
27:D1:42:GLN:NE2	36:DA:379:G:H21	1.86	0.73
58:BZ:114:GLY:H	58:BZ:146:ILE:HG21	1.53	0.73
54:DV:35:LEU:O	54:DV:37:VAL:N	2.19	0.73
51:DS:83:LYS:HG2	51:DS:105:ALA:HB3	1.68	0.73
22:CW:4:C:H2'	22:CW:5:G:C8	2.23	0.73
42:BG:73:ALA:H	42:BG:87:PRO:CG	2.01	0.73
42:BG:46:ALA:HB2	42:BG:88:ILE:HG13	1.70	0.73
2:CB:204:ASN:ND2	2:CB:206:ASP:H	1.85	0.73
36:BA:2100:G:H2'	36:BA:2101:G:C8	2.24	0.73
48:DP:16:ARG:HB2	48:DP:16:ARG:HH11	1.52	0.73
16:CP:20:VAL:HG21	16:CP:32:TYR:CB	2.18	0.73
38:BC:127:LEU:O	38:BC:129:ARG:N	2.22	0.73
10:CJ:78:ASN:HB2	10:CJ:81:THR:HG22	1.70	0.73
36:BA:442:G:C4'	41:BF:46:ARG:HD3	2.18	0.73
25:AZ:191:GLY:HA2	25:AZ:197:ASP:CG	2.08	0.73
32:B6:42:TRP:CE3	32:B6:42:TRP:HA	2.22	0.73
40:DE:116:VAL:O	40:DE:117:MET:HB2	1.87	0.73
36:DA:2572:A:C8	40:DE:144:ARG:HD2	2.23	0.73
25:CZ:70:TYR:O	25:CZ:77:TYR:HB2	1.87	0.73
36:BA:2378:A:N1	51:BS:19:LYS:HE3	2.03	0.73
51:DS:30:ARG:HH22	51:DS:62:LYS:CD	1.95	0.73
32:D6:11:LEU:HD22	32:D6:12:GLU:H	1.53	0.73
1:AA:1003:G:N2	1:AA:1039:C:H42	1.86	0.73
25:CZ:301:GLY:HA3	25:CZ:347:THR:HG23	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:22:ARG:HG2	21:AU:22:ARG:HH11	1.53	0.73
1:AA:585:G:H4'	12:AL:8:ASN:HD21	1.53	0.73
57:DY:90:LEU:HD23	57:DY:90:LEU:H	1.52	0.73
13:CM:65:LYS:HD3	13:CM:65:LYS:H	1.52	0.73
13:CM:22:ILE:HG21	13:CM:66:LEU:HD23	1.69	0.73
31:B5:50:GLY:HA3	31:B5:56:LYS:CD	2.18	0.73
41:DF:7:TYR:HB3	41:DF:16:GLY:O	1.88	0.73
40:DE:33:VAL:HG13	40:DE:69:LYS:HE3	1.71	0.73
47:DO:87:ILE:CG2	47:DO:91:LEU:HA	2.18	0.73
12:CL:110:VAL:H	12:CL:122:THR:HG22	1.52	0.73
43:DH:88:LEU:HD23	43:DH:164:TYR:O	1.88	0.73
34:B8:49:VAL:HG12	34:B8:53:PRO:HD3	1.69	0.73
4:AD:187:ARG:NH1	4:AD:187:ARG:HB3	2.02	0.73
12:CL:24:VAL:HG11	12:CL:27:LEU:HD22	1.69	0.73
12:CL:6:THR:H	12:CL:9:GLN:HE21	1.33	0.73
51:DS:12:PHE:CD1	51:DS:12:PHE:C	2.61	0.73
54:BV:29:PRO:HB3	54:BV:63:GLY:HA2	1.70	0.73
53:BU:24:TYR:HB2	53:BU:29:SER:HB3	1.69	0.73
13:AM:108:ARG:HH11	13:AM:108:ARG:HG3	1.52	0.73
52:BT:92:GLY:O	52:BT:94:ALA:N	2.22	0.73
20:AT:16:HIS:O	20:AT:19:SER:HB3	1.89	0.73
39:BD:35:LYS:HD2	39:BD:36:PRO:CD	2.18	0.73
29:B3:35:ARG:CB	29:B3:35:ARG:HH11	1.96	0.73
52:DT:27:THR:HG23	52:DT:28:VAL:H	1.52	0.73
25:CZ:281:ILE:HD12	25:CZ:284:ASP:OD1	1.88	0.73
10:CJ:54:PHE:CD2	10:CJ:55:LYS:HD3	2.23	0.73
1:AA:1320:C:H5'	1:AA:1320:C:H6	1.53	0.73
52:DT:23:ARG:HG2	52:DT:120:ARG:NH1	2.04	0.73
25:AZ:139:ASP:O	25:AZ:140:MET:HG2	1.86	0.73
53:BU:3:ARG:HH11	53:BU:3:ARG:HG2	1.54	0.73
24:AY:72:U:H2'	24:AY:73:G:H5"	1.71	0.73
36:BA:2591:C:H2'	36:BA:2592:G:C8	2.23	0.73
1:AA:677:U:H3	1:AA:713:G:H22	1.34	0.73
51:BS:49:VAL:HG12	51:BS:50:SER:N	2.01	0.73
40:DE:57:LYS:HA	40:DE:57:LYS:CE	2.18	0.73
36:BA:1960:A:H8	36:BA:1960:A:H5'	1.52	0.73
52:BT:83:ILE:HG13	52:BT:84:GLN:N	2.02	0.73
38:DC:127:LEU:O	38:DC:129:ARG:N	2.22	0.73
50:BR:117:VAL:HG22	50:BR:118:GLU:H	1.52	0.73
13:CM:88:ARG:HG3	13:CM:98:VAL:CG1	2.19	0.73
27:D1:47:GLN:HA	27:D1:47:GLN:OE1	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2853:C:H2'	36:BA:2854:G:C8	2.23	0.73
8:AH:9:MET:SD	8:AH:32:LYS:HG2	2.28	0.73
1:CA:677:U:H3	1:CA:713:G:H22	1.34	0.73
1:CA:627:G:O2'	1:CA:628:G:H5'	1.88	0.73
36:BA:2408:U:H2'	36:BA:2409:G:C8	2.23	0.73
36:BA:2360:A:C2	36:BA:2361:A:H1'	2.24	0.73
25:CZ:2:LYS:O	25:CZ:275:LYS:CE	2.32	0.73
34:B8:6:THR:HB	34:B8:11:LYS:HZ1	1.52	0.73
42:DG:99:MET:HG3	42:DG:100:TRP:H	1.54	0.73
50:DR:14:SER:HA	50:DR:17:ARG:HH12	1.51	0.73
17:CQ:52:LYS:H	17:CQ:52:LYS:HD3	1.53	0.73
3:AC:5:ILE:HD13	3:AC:5:ILE:H	1.53	0.73
34:D8:49:VAL:HG12	34:D8:53:PRO:HD3	1.69	0.73
51:DS:13:ARG:CG	51:DS:14:VAL:H	2.00	0.73
25:AZ:16:THR:HG23	25:AZ:79:HIS:NE2	2.03	0.73
43:DH:28:GLY:HA3	43:DH:79:VAL:HB	1.70	0.73
42:BG:138:GLN:OE1	42:BG:153:ARG:HG2	1.88	0.73
47:DO:76:ALA:HB3	52:DT:75:ILE:HD13	1.69	0.73
36:DA:2298:A:H62	36:DA:2318:G:H8	1.34	0.73
36:BA:1190:G:H5'	48:BP:35:HIS:N	2.02	0.73
25:AZ:301:GLY:HA3	25:AZ:347:THR:HG23	1.71	0.73
40:DE:28:ALA:HB3	40:DE:93:VAL:HG22	1.71	0.73
54:BV:13:ARG:HG3	54:BV:13:ARG:HH11	1.53	0.73
3:CC:26:LYS:CE	3:CC:26:LYS:H	2.01	0.73
16:CP:25:ARG:HB2	16:CP:25:ARG:HH11	1.52	0.73
34:D8:33:ASN:HB3	34:D8:36:LYS:HD2	1.71	0.73
28:D2:51:ARG:HD3	36:DA:95:G:H1'	1.69	0.73
28:D2:67:LYS:O	28:D2:70:GLN:HG2	1.88	0.73
57:DY:75:ILE:HG23	57:DY:76:CYS:N	2.03	0.73
36:DA:2108:C:O2	36:DA:2108:C:H2'	1.88	0.73
48:BP:148:LEU:O	48:BP:149:GLU:HB2	1.87	0.73
58:BZ:72:ARG:CG	58:BZ:89:PHE:HB2	2.19	0.73
38:DC:78:ALA:HA	38:DC:116:THR:H	1.52	0.73
1:CA:1152:A:O2'	1:CA:1153:C:H5'	1.88	0.73
36:DA:1683:C:H2'	36:DA:1684:C:C6	2.23	0.73
5:CE:50:GLU:HG3	5:CE:52:PRO:HD2	1.71	0.73
56:BX:49:VAL:HG12	56:BX:87:GLN:HE21	1.54	0.73
36:DA:991:C:H5'	36:DA:991:C:H6	1.54	0.73
1:CA:633:G:H5'	1:CA:634:C:OP2	1.89	0.73
7:AG:45:ASP:O	7:AG:49:ILE:HG12	1.89	0.73
1:AA:192:U:C1'	20:AT:103:GLY:HA2	2.19	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:83:TYR:CB	43:BH:135:GLY:H	2.02	0.72
4:AD:18:LYS:HE3	4:AD:31:CYS:CB	2.19	0.72
40:BE:36:ARG:NH2	40:BE:88:GLY:HA2	2.04	0.72
51:DS:106:ARG:NH1	51:DS:108:GLY:H	1.86	0.72
4:CD:18:LYS:HE3	4:CD:31:CYS:CB	2.18	0.72
20:CT:45:GLN:HE22	20:CT:46:GLU:HG3	1.54	0.72
25:CZ:93:ILE:HD11	61:CZ:502:KIR:H371	1.70	0.72
38:BC:132:GLY:N	38:BC:133:PRO:HD2	2.03	0.72
25:CZ:64:ASN:N	25:CZ:64:ASN:ND2	2.37	0.72
39:DD:186:HIS:CD2	39:DD:188:GLU:H	2.07	0.72
24:AY:45:U:H3'	24:AY:46:7MG:C5'	2.18	0.72
29:D3:43:ILE:O	29:D3:47:VAL:HG23	1.89	0.72
36:DA:914:C:H2'	36:DA:915:C:H5'	1.71	0.72
55:BW:29:LEU:HG	55:BW:33:ARG:HD2	1.69	0.72
36:DA:676:A:H8	36:DA:2069:G:H21	1.37	0.72
39:DD:35:LYS:HD2	39:DD:36:PRO:CD	2.19	0.72
24:CY:10:G:H1	24:CY:25:C:H42	1.35	0.72
32:B6:15:GLU:HG2	32:B6:18:ARG:NH1	2.04	0.72
31:B5:41:PRO:HG2	31:B5:44:THR:OG1	1.89	0.72
31:D5:41:PRO:HG2	31:D5:44:THR:OG1	1.89	0.72
40:BE:171:GLU:HB3	40:BE:185:LYS:HG2	1.71	0.72
20:CT:72:LEU:O	20:CT:73:HIS:O	2.07	0.72
40:BE:132:HIS:HA	40:BE:135:HIS:HE1	1.54	0.72
36:DA:2523:G:H2'	36:DA:2524:G:H5"	1.71	0.72
19:CS:49:ILE:HD12	19:CS:49:ILE:H	1.54	0.72
48:BP:101:VAL:HA	48:BP:105:LEU:O	1.88	0.72
52:BT:58:ASN:N	52:BT:58:ASN:HD22	1.87	0.72
57:BY:87:LYS:HG3	57:BY:88:LYS:H	1.55	0.72
36:BA:676:A:H8	36:BA:2069:G:H21	1.37	0.72
32:D6:42:TRP:HA	32:D6:42:TRP:CE3	2.22	0.72
56:BX:40:LYS:HG2	56:BX:51:VAL:HB	1.70	0.72
7:CG:22:LEU:HD23	7:CG:22:LEU:O	1.89	0.72
17:AQ:26:GLN:HB3	17:AQ:37:LYS:HA	1.71	0.72
28:D2:23:LYS:CA	28:D2:26:ARG:HB3	2.17	0.72
41:DF:25:PRO:HB3	41:DF:119:ARG:HB2	1.71	0.72
2:AB:28:PHE:CD2	2:AB:190:THR:HA	2.25	0.72
2:AB:200:ILE:HD12	2:AB:200:ILE:N	2.03	0.72
1:CA:858:G:C5'	1:CA:858:G:H8	2.03	0.72
48:DP:41:ARG:HH11	48:DP:41:ARG:HA	1.55	0.72
25:CZ:191:GLY:CA	25:CZ:197:ASP:OD1	2.37	0.72
11:CK:27:ASN:HD22	11:CK:28:THR:N	1.87	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:3:ARG:HH11	53:DU:3:ARG:HG2	1.55	0.72
27:B1:18:ILE:HG23	27:B1:37:ILE:HG22	1.70	0.72
47:BO:63:VAL:HG23	47:BO:64:ARG:HG3	1.70	0.72
36:BA:2781:A:C5'	36:BA:2782:G:H5'	2.19	0.72
1:CA:274:A:O2'	1:CA:275:G:H8	1.71	0.72
36:BA:1019:U:H3	36:BA:1142(A):A:H62	1.37	0.72
5:AE:34:VAL:HG12	5:AE:62:ALA:HB1	1.71	0.72
25:CZ:349:VAL:HG23	25:CZ:374:LEU:HD22	1.70	0.72
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.24	0.72
42:DG:60:LEU:HD12	42:DG:68:PRO:HG3	1.71	0.72
36:DA:1293:C:C2'	36:DA:1294:U:H5"	2.19	0.72
12:AL:110:VAL:H	12:AL:122:THR:HG22	1.54	0.72
22:CW:38:A:C2'	22:CW:39:U:H5"	2.19	0.72
36:DA:1341:U:H4'	56:DX:57:LEU:HB3	1.71	0.72
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.53	0.72
36:DA:500:G:N2	36:DA:502:A:H3'	2.04	0.72
52:DT:92:GLY:O	52:DT:94:ALA:N	2.22	0.72
53:DU:24:TYR:HB2	53:DU:29:SER:HB3	1.70	0.72
46:DN:129:PRO:O	46:DN:130:HIS:HB3	1.87	0.72
2:CB:124:SER:OG	2:CB:125:PRO:HD2	1.89	0.72
24:AY:51:G:O2'	25:AZ:338:TYR:CD1	2.41	0.72
28:D2:10:LEU:HD22	28:D2:63:VAL:HG21	1.70	0.72
36:BA:2307:G:N2	36:BA:2308:G:H5"	2.02	0.72
42:DG:71:THR:HB	42:DG:89:GLY:O	1.90	0.72
27:B1:45:ASN:ND2	36:BA:2090:G:H21	1.86	0.72
4:CD:3:ARG:HE	4:CD:5:ILE:HG13	1.53	0.72
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.71	0.72
36:DA:2591:C:H2'	36:DA:2592:G:C8	2.24	0.72
43:BH:20:ALA:HB1	43:BH:21:PRO:CD	2.20	0.72
1:AA:358:U:H4'	25:AZ:234:ARG:CA	2.19	0.72
46:BN:23:LEU:HD23	46:BN:24:GLY:H	1.50	0.72
1:CA:1320:C:H6	1:CA:1320:C:H5'	1.53	0.72
36:DA:1540:U:H3'	36:DA:1541:G:H3'	1.71	0.72
51:BS:36:TYR:N	51:BS:36:TYR:CD1	2.50	0.72
14:CN:57:ARG:CB	14:CN:57:ARG:HH11	2.01	0.72
38:DC:77:ILE:HD13	38:DC:95:GLY:HA3	1.71	0.72
36:DA:1053:C:H2'	36:DA:1054:A:C8	2.25	0.72
43:BH:42:ARG:HG2	43:BH:43:VAL:H	1.55	0.72
4:CD:3:ARG:NH1	4:CD:118:ARG:HD3	2.03	0.72
25:CZ:191:GLY:N	25:CZ:197:ASP:OD1	2.22	0.72
4:CD:200:GLU:HG2	4:CD:201:GLN:H	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:45:U:H2'	1:AA:46:G:C8	2.25	0.72
30:D4:40:HIS:HA	30:D4:42:PHE:HD1	1.54	0.72
52:DT:82:LEU:N	52:DT:82:LEU:HD12	2.00	0.72
42:DG:77:ILE:H	42:DG:77:ILE:CD1	2.03	0.72
36:DA:1539:G:C2'	36:DA:1540:U:H5'	2.20	0.72
41:BF:196:LEU:O	41:BF:200:GLU:HB2	1.89	0.72
36:DA:2159:G:O2'	36:DA:2160:G:H5"	1.90	0.72
1:AA:59:A:H3'	1:AA:331:G:H22	1.54	0.72
48:BP:41:ARG:HA	48:BP:41:ARG:HH11	1.55	0.72
58:BZ:81:ARG:O	58:BZ:82:ARG:HB2	1.89	0.72
17:AQ:67:LYS:O	17:AQ:68:ARG:HB2	1.89	0.72
12:CL:24:VAL:HG12	12:CL:24:VAL:O	1.87	0.72
11:CK:121:PRO:HG2	11:CK:126:ARG:HB2	1.72	0.72
43:DH:156:ALA:C	43:DH:158:HIS:H	1.92	0.72
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.69	0.72
20:AT:47:GLY:O	20:AT:49:ALA:N	2.20	0.72
32:D6:19:ARG:CG	32:D6:20:ASN:N	2.52	0.72
34:B8:59:LYS:HB2	34:B8:59:LYS:HZ2	1.53	0.72
53:BU:92:ARG:NH2	54:BV:11:GLN:H	1.86	0.72
17:AQ:52:LYS:H	17:AQ:52:LYS:HD3	1.53	0.72
38:BC:78:ALA:HA	38:BC:116:THR:H	1.54	0.72
36:BA:672:C:H2'	36:BA:673:C:C5'	2.20	0.72
40:DE:171:GLU:HB3	40:DE:185:LYS:HG2	1.72	0.72
22:CV:61:C:H5'	22:CV:62:C:OP2	1.89	0.72
28:B2:38:GLN:HB3	28:B2:44:LEU:HB2	1.71	0.72
36:DA:2408:U:H2'	36:DA:2409:G:C8	2.24	0.72
32:D6:15:GLU:OE2	32:D6:18:ARG:NH2	2.23	0.72
36:BA:2291:U:H2'	36:BA:2292:C:C6	2.23	0.72
54:BV:18:LEU:HD23	54:BV:19:LYS:N	2.05	0.72
50:DR:117:VAL:HG22	50:DR:118:GLU:H	1.53	0.72
36:BA:1053:C:H2'	36:BA:1054:A:C8	2.25	0.72
16:AP:21:VAL:O	16:AP:33:ILE:HB	1.90	0.72
21:CU:22:ARG:HH11	21:CU:22:ARG:HG2	1.55	0.72
56:DX:40:LYS:HG2	56:DX:51:VAL:HB	1.70	0.72
2:AB:124:SER:OG	2:AB:125:PRO:HD2	1.90	0.72
13:AM:65:LYS:HD3	13:AM:65:LYS:H	1.52	0.72
33:B7:22:MET:HE2	33:B7:28:ARG:HG2	1.70	0.72
41:BF:25:PRO:HB3	41:BF:119:ARG:HB2	1.72	0.72
48:BP:58:THR:O	48:BP:61:ARG:NE	2.23	0.72
1:CA:1534:A:N6	23:CX:12:A:C2	2.58	0.72
41:DF:157:VAL:HG22	41:DF:194:MET:HA	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:76:A:C4	25:AZ:271:GLU:HB2	2.25	0.72
36:DA:1068:G:H1'	36:DA:1069:A:OP2	1.90	0.72
51:BS:106:ARG:NH1	51:BS:108:GLY:H	1.87	0.72
13:CM:101:GLN:HE21	13:CM:101:GLN:N	1.87	0.72
10:AJ:61:GLU:OE1	14:AN:45:ARG:HD2	1.90	0.72
2:CB:118:LEU:HB3	2:CB:142:LEU:HD12	1.71	0.72
30:B4:40:HIS:HA	30:B4:42:PHE:HD1	1.55	0.72
57:DY:87:LYS:HG3	57:DY:88:LYS:H	1.55	0.72
39:BD:37:LEU:HD12	39:BD:64:ILE:HD11	1.71	0.72
39:DD:124:PRO:HG2	39:DD:129:ASN:ND2	2.05	0.72
1:AA:274:A:O2'	1:AA:275:G:H8	1.73	0.72
25:AZ:349:VAL:HG23	25:AZ:374:LEU:HD22	1.72	0.72
42:BG:47:LYS:HE3	42:BG:81:LYS:HB2	1.72	0.71
52:DT:55:ASN:H	52:DT:59:THR:HG22	1.53	0.71
58:BZ:168:GLU:O	58:BZ:168:GLU:HG3	1.88	0.71
48:DP:30:THR:HG22	48:DP:31:ALA:N	2.05	0.71
17:AQ:10:VAL:HG21	17:AQ:52:LYS:O	1.89	0.71
50:BR:92:GLY:N	50:BR:94:TYR:HE1	1.86	0.71
38:BC:77:ILE:HD13	38:BC:95:GLY:HA3	1.71	0.71
10:CJ:32:ALA:H	10:CJ:78:ASN:HD21	1.37	0.71
4:AD:3:ARG:HE	4:AD:5:ILE:HG13	1.55	0.71
43:DH:42:ARG:HG2	43:DH:43:VAL:H	1.55	0.71
56:BX:57:LEU:HD22	56:BX:57:LEU:O	1.89	0.71
25:AZ:281:ILE:HD12	25:AZ:284:ASP:OD1	1.89	0.71
28:B2:32:LEU:O	28:B2:35:LEU:HB3	1.90	0.71
40:BE:57:LYS:HA	40:BE:57:LYS:CE	2.18	0.71
51:BS:30:ARG:NH2	51:BS:62:LYS:HD3	1.97	0.71
43:DH:83:TYR:CB	43:DH:135:GLY:H	2.02	0.71
55:BW:6:ILE:HG12	55:BW:104:THR:CG2	2.19	0.71
48:BP:64:LYS:C	48:BP:66:GLY:H	1.94	0.71
31:D5:50:GLY:HA3	31:D5:56:LYS:CE	2.20	0.71
10:AJ:32:ALA:H	10:AJ:78:ASN:HD21	1.36	0.71
1:AA:963:G:N3	10:AJ:55:LYS:NZ	2.33	0.71
16:AP:74:LEU:HB3	16:AP:79:VAL:HG21	1.71	0.71
43:DH:54:ARG:HB2	43:DH:55:PRO:HD2	1.70	0.71
58:DZ:165:VAL:HG12	58:DZ:166:SER:N	2.05	0.71
51:BS:12:PHE:HD1	51:BS:13:ARG:N	1.88	0.71
7:AG:16:LEU:HD13	9:AI:42:ARG:HA	1.72	0.71
36:DA:1409:C:H2'	36:DA:1410:G:C8	2.25	0.71
29:B3:43:ILE:O	29:B3:47:VAL:HG23	1.89	0.71
1:CA:1134:G:H2'	1:CA:1135:U:H5'	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1341:U:H4'	56:BX:57:LEU:HB3	1.71	0.71
47:DO:63:VAL:HG23	47:DO:64:ARG:HG3	1.71	0.71
58:DZ:156:LYS:O	58:DZ:158:PRO:HD3	1.89	0.71
7:AG:113:GLU:HG3	7:AG:119:ARG:HB3	1.71	0.71
1:CA:1499:A:O2'	1:CA:1500:A:H5'	1.90	0.71
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.38	0.71
36:DA:2472:G:H5'	36:DA:2473:U:H5"	1.71	0.71
43:BH:12:PRO:N	43:BH:48:GLY:HA2	2.04	0.71
40:BE:9:VAL:CG1	40:BE:25:VAL:HB	2.20	0.71
8:CH:86:ILE:HD11	8:CH:136:GLU:HG2	1.72	0.71
1:CA:192:U:C1'	20:CT:103:GLY:HA2	2.20	0.71
13:CM:4:ILE:N	13:CM:4:ILE:HD12	2.04	0.71
42:BG:76:SER:OG	42:BG:84:LYS:N	2.23	0.71
4:AD:26:CYS:HG	59:AD:301:ZN:ZN	1.00	0.71
48:DP:30:THR:CG2	48:DP:31:ALA:N	2.52	0.71
13:CM:97:PRO:HA	13:CM:110:ARG:HD3	1.72	0.71
50:BR:55:ALA:HB2	50:BR:79:LEU:HD11	1.73	0.71
24:CY:45:U:H3'	24:CY:46:7MG:C5'	2.20	0.71
2:CB:111:ARG:HG2	2:CB:111:ARG:HH11	1.55	0.71
34:D8:50:LEU:HD12	34:D8:51:ALA:N	2.05	0.71
39:BD:186:HIS:CD2	39:BD:188:GLU:H	2.07	0.71
58:DZ:70:LEU:CD2	58:DZ:91:LEU:HD21	2.19	0.71
1:CA:585:G:H4'	12:CL:8:ASN:HD21	1.55	0.71
4:AD:8:VAL:HB	4:AD:21:LEU:HD12	1.70	0.71
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.73	0.71
36:BA:1652:A:H2'	36:BA:1653:G:H5'	1.72	0.71
36:BA:2401:U:H2'	36:BA:2402:C:H5"	1.72	0.71
4:CD:43:HIS:O	4:CD:45:GLN:N	2.23	0.71
25:CZ:88:TYR:HD1	25:CZ:88:TYR:N	1.89	0.71
36:DA:1301:A:O2'	36:DA:1302:A:C2'	2.38	0.71
2:AB:165:VAL:HG23	2:AB:166:ASP:N	2.00	0.71
36:BA:2298:A:H62	36:BA:2318:G:H8	1.35	0.71
50:BR:2:ARG:HD2	50:BR:2:ARG:C	2.10	0.71
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.70	0.71
50:DR:29:LEU:HD11	50:DR:52:ILE:HD11	1.72	0.71
9:AI:20:ARG:HG3	9:AI:20:ARG:HH11	1.55	0.71
40:DE:132:HIS:HA	40:DE:135:HIS:HE1	1.55	0.71
1:CA:1116:C:O2'	9:CI:108:VAL:HG21	1.88	0.71
39:BD:43:ARG:HH21	39:BD:44:ASN:HD21	1.39	0.71
58:BZ:113:ALA:HB1	58:BZ:146:ILE:HD13	1.72	0.71
36:BA:1409:C:H2'	36:BA:1410:G:C8	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:45:LEU:H	6:CF:59:TYR:HA	1.56	0.71
36:DA:1221(A):C:H2'	36:DA:1222:C:C6	2.25	0.71
36:BA:1170:G:H1	36:BA:1179:C:H42	1.36	0.71
39:DD:37:LEU:HD12	39:DD:64:ILE:HD11	1.72	0.71
36:DA:481:G:OP2	57:DY:47:LYS:HD3	1.90	0.71
5:CE:148:VAL:HG21	8:CH:107:LEU:HD13	1.72	0.71
42:BG:34:LEU:HD12	42:BG:34:LEU:O	1.90	0.71
1:CA:192:U:H1'	20:CT:103:GLY:HA2	1.70	0.71
48:DP:64:LYS:C	48:DP:66:GLY:H	1.93	0.71
25:AZ:117:ARG:HD3	25:AZ:157:LEU:HD11	1.71	0.71
20:AT:45:GLN:HE22	20:AT:46:GLU:HG3	1.55	0.71
10:AJ:54:PHE:CD2	10:AJ:55:LYS:HD3	2.25	0.71
43:BH:51:ARG:HG3	43:BH:52:VAL:H	1.56	0.71
1:CA:265:G:H5'	17:CQ:64:PRO:O	1.90	0.71
10:AJ:6:ILE:HD11	10:AJ:23:ILE:HG21	1.72	0.71
42:BG:139:LEU:CA	42:BG:144:ILE:HG12	2.16	0.71
28:D2:3:LEU:HB3	36:DA:98:G:OP1	1.91	0.71
28:B2:25:VAL:O	28:B2:28:LYS:HB2	1.91	0.71
36:BA:1539:G:C2'	36:BA:1540:U:H5'	2.20	0.71
36:DA:298:G:H5'	36:DA:299:A:OP1	1.90	0.71
9:CI:20:ARG:HH11	9:CI:20:ARG:HG3	1.53	0.71
16:CP:20:VAL:HG23	16:CP:34:GLU:O	1.90	0.71
26:B0:42:GLY:HA3	36:BA:2331:G:O4'	1.89	0.71
50:BR:117:VAL:HG22	50:BR:118:GLU:N	2.05	0.71
25:CZ:25:THR:HB	60:CZ:501:GDP:O2B	1.91	0.71
43:DH:46:GLU:OE1	43:DH:50:VAL:HG13	1.90	0.71
34:B8:50:LEU:HD12	34:B8:51:ALA:N	2.05	0.71
16:CP:70:ALA:O	16:CP:74:LEU:HD12	1.90	0.71
36:DA:2853:C:H2'	36:DA:2854:G:C8	2.23	0.71
4:AD:163:GLU:O	4:AD:166:LYS:HG2	1.90	0.71
22:AV:20:U:H3'	22:AV:21:A:H5'	1.73	0.71
29:D3:15:TYR:HD2	29:D3:19:GLN:HE22	1.39	0.71
40:BE:79:ARG:HH11	40:BE:79:ARG:HG2	1.55	0.71
40:DE:79:ARG:HH11	40:DE:79:ARG:HG2	1.56	0.71
58:DZ:94:GLU:HB3	58:DZ:95:PRO:HD2	1.73	0.71
36:BA:984:A:H5"	36:BA:985:C:H5	1.56	0.71
39:DD:28:GLU:H	39:DD:29:PRO:CD	2.03	0.71
36:DA:2645:G:C3'	36:DA:2646:C:H5'	2.14	0.71
13:AM:4:ILE:HD12	13:AM:4:ILE:N	2.05	0.71
57:DY:9:LYS:HG2	57:DY:10:GLY:H	1.56	0.71
25:AZ:272:MET:HE3	25:AZ:284:ASP:HB2	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:723:U:H3	1:CA:1537:U:H2'	1.55	0.71
36:BA:661:C:O3'	48:BP:18:ARG:HD2	1.90	0.71
10:CJ:54:PHE:CG	10:CJ:55:LYS:HD3	2.25	0.71
25:AZ:19:HIS:HD2	25:AZ:20:VAL:O	1.73	0.71
25:CZ:397:ALA:HB2	61:CZ:502:KIR:H252	1.71	0.71
43:DH:51:ARG:HG3	43:DH:52:VAL:H	1.56	0.71
43:DH:70:THR:HG22	43:DH:74:ASN:ND2	2.05	0.71
36:BA:1803:A:O3'	39:BD:259:THR:CG2	2.38	0.71
12:AL:24:VAL:O	12:AL:24:VAL:HG12	1.91	0.71
54:DV:61:VAL:O	54:DV:61:VAL:HG23	1.90	0.71
3:CC:94:LEU:O	3:CC:95:THR:HB	1.90	0.71
48:DP:101:VAL:HA	48:DP:105:LEU:O	1.90	0.71
36:BA:991:C:H6	36:BA:991:C:H5'	1.55	0.71
28:B2:51:ARG:HB2	28:B2:55:ARG:HH12	1.54	0.71
7:AG:65:ALA:HB1	7:AG:127:ALA:HB3	1.70	0.71
1:AA:660:G:OP2	15:AO:5:LYS:HE2	1.91	0.71
43:DH:20:ALA:HB1	43:DH:21:PRO:CD	2.21	0.71
48:BP:75:ILE:HD13	48:BP:77:ARG:NH2	2.06	0.71
39:BD:158:ALA:HB3	39:BD:161:THR:HG21	1.73	0.71
41:DF:196:LEU:O	41:DF:200:GLU:HB2	1.89	0.71
43:DH:12:PRO:N	43:DH:48:GLY:HA2	2.06	0.71
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	1.73	0.71
1:CA:45:U:H2'	1:CA:46:G:C8	2.26	0.71
42:BG:99:MET:O	42:BG:103:LEU:HB2	1.91	0.71
32:D6:7:ILE:HB	32:D6:27:LYS:HZ2	1.53	0.71
28:D2:25:VAL:HG21	28:D2:61:LEU:CG	2.20	0.71
36:DA:1301:A:H4'	36:DA:1302:A:OP1	1.91	0.71
1:CA:975:A:H5"	1:CA:976:G:H5"	1.70	0.71
22:CV:41:C:H2'	22:CV:42:C:C5'	2.18	0.71
25:AZ:274:ARG:CG	25:AZ:274:ARG:HH11	2.03	0.71
54:DV:13:ARG:HG3	54:DV:13:ARG:HH11	1.54	0.71
9:CI:92:TYR:O	9:CI:96:LEU:HB2	1.90	0.71
1:AA:8:A:N6	4:AD:208:SER:HB2	2.05	0.71
43:BH:46:GLU:OE1	43:BH:50:VAL:HG13	1.90	0.71
43:BH:88:LEU:HD23	43:BH:164:TYR:O	1.90	0.71
36:BA:2801(A):A:C4'	36:BA:2802:G:H5'	2.20	0.71
1:AA:731:G:OP1	1:AA:766:A:H1'	1.90	0.71
36:BA:2657:A:H5"	36:BA:2658:C:H5	1.55	0.71
4:CD:78:LEU:HD22	4:CD:96:LEU:HB3	1.72	0.71
20:CT:16:HIS:O	20:CT:19:SER:HB3	1.90	0.71
39:BD:28:GLU:H	39:BD:29:PRO:CD	2.03	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:67:LEU:H	58:DZ:67:LEU:HD12	1.55	0.71
27:D1:52:ARG:HH11	27:D1:52:ARG:HA	1.56	0.71
24:AY:76:A:C5	25:AZ:271:GLU:CD	2.64	0.71
5:AE:7:GLU:O	5:AE:8:GLU:HB3	1.90	0.71
40:BE:28:ALA:HB3	40:BE:93:VAL:HG22	1.72	0.71
4:CD:189:PRO:HB2	4:CD:194:LEU:HD21	1.71	0.71
43:DH:66:GLY:HA2	43:DH:69:ARG:HB3	1.72	0.71
43:BH:66:GLY:HA2	43:BH:69:ARG:HB3	1.73	0.71
27:D1:45:ASN:HD21	36:DA:2090:G:H21	1.37	0.71
36:DA:442:G:C4'	41:DF:46:ARG:HD3	2.21	0.71
36:BA:2455:G:H2'	36:BA:2456:C:C6	2.26	0.71
36:BA:2866:U:C6	36:BA:2868:A:H1'	2.26	0.71
25:AZ:355:LEU:CB	25:AZ:356:PRO:CD	2.60	0.71
32:B6:8:LYS:HE3	32:B6:25:LYS:HD3	1.73	0.71
42:DG:48:GLU:HG3	42:DG:81:LYS:HE3	1.72	0.71
53:BU:90:VAL:HG12	53:BU:91:ASP:N	2.06	0.71
25:CZ:324:LYS:HB2	25:CZ:326:GLU:HG2	1.72	0.71
36:BA:2134:A:N6	36:BA:2157:G:H1'	2.06	0.71
10:AJ:54:PHE:CG	10:AJ:55:LYS:HD3	2.26	0.71
36:DA:2801(A):A:C4'	36:DA:2802:G:H5'	2.21	0.71
36:BA:444:C:OP2	53:BU:2:PRO:HD3	1.89	0.71
53:DU:85:LYS:HD3	53:DU:117:GLN:HE22	1.54	0.71
46:DN:107:LEU:HB3	46:DN:108:PRO:HD2	1.72	0.71
35:B9:15:LYS:HB3	35:B9:15:LYS:NZ	2.06	0.71
24:CY:8:4SU:H6	24:CY:8:4SU:H5"	1.71	0.71
6:AF:62:TRP:C	6:AF:63:TYR:HD1	1.94	0.71
20:CT:82:SER:O	20:CT:86:ARG:HB2	1.91	0.71
36:BA:197:A:H5'	36:BA:197:A:H8	1.54	0.71
42:DG:96:ARG:HA	42:DG:99:MET:SD	2.31	0.70
46:BN:58:ASP:C	46:BN:60:ILE:H	1.93	0.70
42:BG:5:VAL:HB	42:BG:8:LYS:CB	2.20	0.70
54:DV:18:LEU:HD23	54:DV:19:LYS:N	2.04	0.70
36:BA:633:A:H2'	36:BA:634:C:H5'	1.73	0.70
36:BA:1293:C:C2'	36:BA:1294:U:H5"	2.20	0.70
50:DR:116:LEU:O	50:DR:117:VAL:HG12	1.91	0.70
40:BE:132:HIS:CA	40:BE:135:HIS:HE1	2.03	0.70
43:BH:70:THR:HG22	43:BH:74:ASN:ND2	2.06	0.70
12:CL:24:VAL:HG13	12:CL:98:TYR:HE2	1.56	0.70
54:DV:29:PRO:HB3	54:DV:63:GLY:HA2	1.70	0.70
25:AZ:323:LEU:H	25:AZ:323:LEU:HD12	1.56	0.70
1:AA:194:C:H2'	1:AA:195:A:H5"	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:984:A:H5"	36:DA:985:C:H5	1.56	0.70
36:BA:2136:C:H2'	36:BA:2137:C:H6	1.54	0.70
1:CA:194:C:H2'	1:CA:195:A:H5"	1.73	0.70
34:D8:34:TRP:HB2	36:DA:2420:C:OP1	1.90	0.70
49:BQ:43:THR:HG22	49:BQ:94:VAL:HG12	1.72	0.70
24:AY:8:4SU:H5"	24:AY:8:4SU:H6	1.73	0.70
27:B1:90:ILE:O	27:B1:94:LEU:HD13	1.91	0.70
39:BD:30:GLU:HB3	39:BD:35:LYS:NZ	2.04	0.70
51:DS:49:VAL:HG12	51:DS:50:SER:N	2.01	0.70
36:BA:2103:C:H2'	36:BA:2186:G:N2	2.06	0.70
47:DO:104:ARG:HH21	52:DT:33:LYS:CE	2.04	0.70
46:DN:58:ASP:C	46:DN:60:ILE:H	1.94	0.70
36:DA:1190:G:H5'	48:DP:35:HIS:N	2.05	0.70
48:BP:16:ARG:HH11	48:BP:16:ARG:HB2	1.52	0.70
48:DP:126:VAL:HA	48:DP:145:PRO:CG	2.20	0.70
36:DA:2134:A:N6	36:DA:2157:G:H1'	2.06	0.70
1:CA:1392:G:N2	1:CA:1502:A:H8	1.89	0.70
9:AI:92:TYR:O	9:AI:96:LEU:HB2	1.91	0.70
49:BQ:134:ARG:NE	58:BZ:122:ARG:HH21	1.89	0.70
32:D6:42:TRP:HA	32:D6:42:TRP:HE3	1.55	0.70
15:AO:71:GLN:O	15:AO:71:GLN:HG2	1.89	0.70
36:BA:1709:U:H2'	36:BA:1710:C:C6	2.26	0.70
36:BA:271(C):C:H2'	36:BA:271(D):G:H8	1.56	0.70
36:DA:1709:U:H2'	36:DA:1710:C:C6	2.25	0.70
36:DA:1005:C:H2'	36:DA:1006:C:H6	1.55	0.70
47:BO:8:LEU:HD23	47:BO:8:LEU:N	2.06	0.70
42:BG:101:ILE:O	42:BG:105:LYS:HG2	1.91	0.70
51:DS:30:ARG:NH2	51:DS:62:LYS:HB3	2.06	0.70
42:DG:90:LEU:C	42:DG:90:LEU:HD12	2.11	0.70
52:DT:55:ASN:N	52:DT:59:THR:HG22	2.06	0.70
24:AY:76:A:N7	25:AZ:271:GLU:OE1	2.25	0.70
48:BP:30:THR:CG2	48:BP:31:ALA:N	2.53	0.70
58:BZ:153:SER:HB2	58:BZ:167:PRO:CB	2.21	0.70
9:CI:19:LEU:HD11	9:CI:59:PHE:CD2	2.26	0.70
14:CN:57:ARG:NH1	14:CN:57:ARG:CB	2.54	0.70
26:D0:42:GLY:HA3	36:DA:2331:G:O4'	1.92	0.70
49:BQ:134:ARG:HD2	58:BZ:122:ARG:NH2	2.06	0.70
51:BS:12:PHE:CD1	51:BS:12:PHE:C	2.60	0.70
54:BV:35:LEU:O	54:BV:37:VAL:N	2.17	0.70
7:CG:38:LEU:HD12	7:CG:38:LEU:O	1.91	0.70
58:DZ:9:TYR:OH	58:DZ:35:ARG:HG3	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:70:TRP:CH2	39:DD:150:LYS:HA	2.25	0.70
54:DV:72:VAL:HG23	54:DV:85:LYS:HB3	1.74	0.70
42:BG:145:THR:HB	42:BG:148:MET:HB3	1.72	0.70
1:CA:382:A:H2'	1:CA:383:A:H8	1.57	0.70
13:CM:108:ARG:HG3	13:CM:108:ARG:HH11	1.55	0.70
39:DD:33:LEU:O	39:DD:36:PRO:HD2	1.91	0.70
52:BT:30:VAL:HG12	52:BT:44:ASP:CG	2.11	0.70
42:BG:177:GLY:O	42:BG:179:PRO:HD3	1.91	0.70
53:DU:90:VAL:HG12	53:DU:91:ASP:N	2.06	0.70
54:BV:47:VAL:HG12	54:BV:52:VAL:HB	1.73	0.70
16:AP:20:VAL:HG21	16:AP:32:TYR:CB	2.22	0.70
50:DR:51:LEU:HD23	50:DR:70:LEU:HD11	1.73	0.70
1:CA:731:G:OP1	1:CA:766:A:H1'	1.92	0.70
19:CS:42:PRO:O	19:CS:44:MET:SD	2.49	0.70
37:BB:30:C:H1'	37:BB:57:A:H61	1.55	0.70
27:D1:11:ARG:HB2	27:D1:12:PRO:HD2	1.73	0.70
36:BA:1400:G:H2'	36:BA:1401:G:C8	2.26	0.70
4:AD:78:LEU:HD22	4:AD:96:LEU:HB3	1.73	0.70
39:DD:28:GLU:N	39:DD:29:PRO:CD	2.54	0.70
36:DA:2092:U:H4'	36:DA:2093:G:C5'	2.12	0.70
36:BA:747:U:O2	36:BA:2014:A:H1'	1.91	0.70
36:BA:2392:A:H2	36:BA:2424:C:H42	1.38	0.70
31:D5:4:HIS:C	36:DA:2056:G:H22	1.94	0.70
42:BG:42:GLY:O	42:BG:89:GLY:HA2	1.90	0.70
43:BH:85:LYS:NZ	43:BH:132:ARG:HA	2.07	0.70
1:CA:975:A:H4'	1:CA:976:G:C5'	2.17	0.70
51:DS:28:VAL:HG12	51:DS:29:PHE:N	2.06	0.70
9:CI:53:VAL:HG13	9:CI:95:LYS:HZ1	1.53	0.70
1:AA:1347:G:H2'	9:AI:108:VAL:O	1.91	0.70
43:BH:54:ARG:HB2	43:BH:55:PRO:HD2	1.72	0.70
14:AN:57:ARG:HH11	14:AN:57:ARG:CB	2.04	0.70
36:DA:2179:C:H5"	36:DA:2180:U:OP1	1.91	0.70
13:CM:3:ARG:NH2	13:CM:7:VAL:HG13	2.06	0.70
3:AC:25:GLY:C	3:AC:27:LYS:H	1.94	0.70
36:BA:549:G:O2'	36:BA:551:G:H5'	1.91	0.70
25:AZ:88:TYR:N	25:AZ:88:TYR:HD1	1.89	0.70
48:DP:75:ILE:HD13	48:DP:77:ARG:NH2	2.07	0.70
36:DA:2103:C:H2'	36:DA:2186:G:N2	2.05	0.70
55:DW:6:ILE:HG12	55:DW:104:THR:CG2	2.22	0.70
53:BU:92:ARG:HH21	54:BV:10:LYS:HB3	1.54	0.70
48:BP:126:VAL:HA	48:BP:145:PRO:CG	2.20	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:193:ASN:C	25:CZ:195:TRP:N	2.45	0.70
31:B5:25:LEU:HD12	55:BW:19:LEU:HG	1.73	0.70
36:BA:2796:U:H3'	36:BA:2799:C:C5'	2.22	0.70
43:DH:158:HIS:ND1	43:DH:168:PRO:HB2	2.06	0.70
22:AV:20:U:H3'	22:AV:21:A:C5'	2.21	0.70
39:BD:28:GLU:N	39:BD:29:PRO:CD	2.54	0.70
36:DA:2781:A:C5'	36:DA:2782:G:H5'	2.21	0.70
19:AS:62:ILE:HD12	19:AS:66:MET:HG3	1.73	0.70
4:AD:43:HIS:O	4:AD:45:GLN:N	2.24	0.70
3:CC:25:GLY:C	3:CC:27:LYS:H	1.94	0.70
52:BT:12:SER:O	52:BT:15:VAL:HG12	1.91	0.70
39:DD:162:SER:O	39:DD:178:PRO:HG3	1.90	0.70
31:D5:39:MET:HG3	55:DW:34:ASN:OD1	1.91	0.70
36:BA:1348:G:C2'	36:BA:1349:A:H5"	2.22	0.70
47:BO:104:ARG:HH21	52:BT:33:LYS:CE	2.03	0.70
41:BF:103:LYS:HG3	41:BF:106:ARG:NH2	2.07	0.70
36:BA:1540:U:H3'	36:BA:1541:G:H3'	1.71	0.70
25:CZ:117:ARG:HD3	25:CZ:157:LEU:HD11	1.72	0.70
2:AB:118:LEU:HB3	2:AB:142:LEU:HD12	1.71	0.70
36:BA:1105:U:H2'	36:BA:1106:G:C8	2.26	0.70
36:DA:672:C:H2'	36:DA:673:C:C5'	2.21	0.70
36:DA:674:G:H1'	41:DF:74:ARG:HD2	1.73	0.70
46:DN:119:ARG:CB	46:DN:119:ARG:HH11	2.04	0.70
51:DS:12:PHE:HD1	51:DS:13:ARG:N	1.90	0.70
28:B2:41:ILE:HD11	28:B2:44:LEU:HD12	1.72	0.70
7:AG:22:LEU:HD23	7:AG:22:LEU:O	1.91	0.70
36:BA:2472:G:H5'	36:BA:2473:U:H5"	1.72	0.70
36:BA:581:C:H2'	36:BA:582:G:H8	1.57	0.70
36:DA:2657:A:H5"	36:DA:2658:C:H5	1.57	0.70
55:DW:82:LEU:HB3	55:DW:84:ARG:NH1	2.06	0.70
46:BN:3:THR:HG22	46:BN:4:TYR:H	1.57	0.70
39:DD:158:ALA:HB3	39:DD:161:THR:HG21	1.74	0.70
36:DA:1652:A:H2'	36:DA:1653:G:H5'	1.74	0.70
8:CH:112:LEU:HD23	8:CH:112:LEU:N	2.06	0.70
50:BR:12:ARG:HD3	50:BR:16:HIS:ND1	2.06	0.70
57:DY:28:LYS:HG2	57:DY:39:VAL:HA	1.74	0.70
24:AY:77:TRP:HB2	25:AZ:285:ASN:HB3	1.73	0.70
42:BG:83:ARG:HD2	42:BG:84:LYS:NZ	2.07	0.70
36:BA:2108:C:O2	36:BA:2108:C:H2'	1.90	0.70
46:DN:23:LEU:HD23	46:DN:24:GLY:H	1.52	0.70
56:BX:8:ILE:H	56:BX:8:ILE:CD1	2.05	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:674:G:H1'	41:BF:74:ARG:HD2	1.72	0.70
25:CZ:176:LEU:HD22	60:CZ:501:GDP:N3	2.07	0.70
25:AZ:164:PRO:O	25:AZ:167:GLU:HG3	1.91	0.70
3:CC:5:ILE:CD1	3:CC:5:ILE:N	2.54	0.70
43:BH:50:VAL:HG12	43:BH:52:VAL:HG23	1.73	0.70
1:AA:265:G:H5'	17:AQ:64:PRO:O	1.91	0.70
25:AZ:195:TRP:C	25:AZ:197:ASP:H	1.94	0.70
58:BZ:9:TYR:OH	58:BZ:35:ARG:HG3	1.91	0.70
41:DF:41:LEU:HD23	41:DF:44:ARG:HD3	1.74	0.70
1:AA:382:A:H2'	1:AA:383:A:H8	1.56	0.70
17:CQ:67:LYS:O	17:CQ:68:ARG:HB2	1.91	0.70
11:CK:57:THR:HG23	11:CK:60:ALA:H	1.57	0.70
6:CF:87:ARG:HG2	6:CF:87:ARG:HH11	1.55	0.70
29:B3:8:LEU:HD22	29:B3:31:LEU:HD23	1.72	0.70
39:BD:70:TRP:CH2	39:BD:150:LYS:HA	2.26	0.70
1:AA:176:C:H2'	1:AA:177:C:H6	1.57	0.70
42:BG:39:ILE:HD12	42:BG:60:LEU:HD11	1.74	0.70
32:B6:25:LYS:HD2	36:BA:2285:C:H41	1.57	0.70
42:DG:96:ARG:CA	42:DG:99:MET:SD	2.80	0.70
36:BA:2761:G:H2'	36:BA:2762:G:C5'	2.18	0.70
53:DU:61:TRP:O	53:DU:65:ILE:HD13	1.91	0.70
48:BP:95:VAL:HG23	48:BP:125:VAL:HA	1.72	0.70
25:AZ:64:ASN:N	25:AZ:64:ASN:ND2	2.36	0.70
19:AS:29:ARG:HD2	19:AS:30:LEU:H	1.57	0.70
25:CZ:195:TRP:C	25:CZ:197:ASP:H	1.94	0.70
40:DE:116:VAL:O	40:DE:117:MET:CB	2.40	0.70
19:AS:45:VAL:HA	19:AS:62:ILE:HG13	1.73	0.70
36:BA:1817:G:H2'	36:BA:1818:U:H5'	1.73	0.70
48:BP:122:PRO:HA	48:BP:141:ALA:O	1.92	0.70
36:DA:549:G:O2'	36:DA:551:G:H5'	1.92	0.70
15:AO:27:VAL:O	15:AO:31:LEU:HD13	1.92	0.70
37:DB:30:C:H1'	37:DB:57:A:H61	1.57	0.70
36:DA:863:A:O2'	36:DA:864:G:H5'	1.92	0.70
1:CA:1368:G:OP2	9:CI:112:LYS:HD3	1.91	0.70
58:BZ:144:LEU:HD12	58:BZ:174:VAL:HG23	1.74	0.70
52:DT:58:ASN:HD22	52:DT:58:ASN:H	1.39	0.70
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.71	0.70
36:DA:2291:U:H2'	36:DA:2292:C:C6	2.27	0.70
51:DS:49:VAL:CG1	51:DS:50:SER:H	2.03	0.70
57:BY:28:LYS:HG2	57:BY:39:VAL:HA	1.74	0.70
42:DG:71:THR:HG22	42:DG:72:ARG:N	2.07	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:85:GLY:C	42:DG:87:PRO:HD3	2.11	0.70
52:DT:56:GLY:O	52:DT:59:THR:HG23	1.91	0.70
51:BS:99:LYS:O	51:BS:99:LYS:HG2	1.92	0.70
40:DE:132:HIS:CA	40:DE:135:HIS:HE1	2.04	0.70
3:AC:26:LYS:CE	3:AC:26:LYS:H	2.03	0.70
36:DA:1409:C:H2'	36:DA:1410:G:H8	1.57	0.70
27:B1:13:ILE:HD11	36:BA:396:G:H5'	1.73	0.70
36:BA:1141:U:H2'	46:BN:63:THR:CG2	2.22	0.70
7:AG:78:ARG:HG3	7:AG:79:ARG:N	2.07	0.70
40:DE:63:LEU:HD23	40:DE:63:LEU:O	1.92	0.70
36:DA:519:U:H2'	36:DA:520:G:H8	1.56	0.70
24:CY:61:C:C2'	24:CY:62:U:H5"	2.22	0.70
5:AE:63:ARG:O	5:AE:64:ARG:HB2	1.91	0.70
4:CD:163:GLU:O	4:CD:166:LYS:HG2	1.92	0.70
36:DA:2502:G:H5"	36:DA:2503:A:H5"	1.74	0.70
25:CZ:187:LYS:HD2	25:CZ:187:LYS:N	2.07	0.70
29:D3:8:LEU:HD22	29:D3:31:LEU:HD23	1.73	0.70
3:AC:150:LYS:HG3	3:AC:169:ALA:HB2	1.74	0.70
24:CY:24:G:O2'	24:CY:25:C:H5"	1.92	0.69
28:D2:2:LYS:HB2	36:DA:97:C:H5"	1.74	0.69
34:B8:32:LEU:HB3	34:B8:36:LYS:NZ	2.07	0.69
34:D8:6:THR:HB	34:D8:11:LYS:HZ1	1.57	0.69
51:BS:30:ARG:NH2	51:BS:62:LYS:HB3	2.07	0.69
40:DE:38:THR:HB	40:DE:41:LYS:HE2	1.72	0.69
52:BT:56:GLY:O	52:BT:59:THR:HG23	1.92	0.69
1:AA:858:G:C5'	1:AA:858:G:H8	2.05	0.69
34:B8:8:LYS:O	34:B8:12:LYS:HG3	1.91	0.69
47:BO:94:ARG:HG2	47:BO:94:ARG:HH11	1.57	0.69
33:D7:34:ARG:HG3	33:D7:34:ARG:HH11	1.57	0.69
39:DD:241:PRO:O	39:DD:242:ARG:HB2	1.92	0.69
25:CZ:19:HIS:ND1	25:CZ:113:MET:HB3	2.07	0.69
36:BA:1779:U:C5	36:BA:1784:A:N7	2.59	0.69
48:BP:85:LEU:HA	48:BP:88:LEU:CB	2.21	0.69
49:DQ:56:ARG:CG	49:DQ:56:ARG:HH11	2.04	0.69
50:DR:117:VAL:HG22	50:DR:118:GLU:N	2.07	0.69
36:BA:1107:G:H4'	44:BJ:81:UNK:CB	2.22	0.69
22:CW:38:A:H3'	22:CW:39:U:H5"	1.74	0.69
43:BH:98:LEU:HD12	43:BH:102:ALA:O	1.92	0.69
57:DY:2:ARG:CD	57:DY:3:VAL:HG23	2.22	0.69
41:DF:127:GLU:HB2	41:DF:196:LEU:HD12	1.73	0.69
8:AH:112:LEU:N	8:AH:112:LEU:HD23	2.06	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:914:C:H2'	36:BA:915:C:H5'	1.72	0.69
42:BG:73:ALA:O	42:BG:85:GLY:HA2	1.92	0.69
42:BG:73:ALA:HB3	42:BG:87:PRO:HG3	1.74	0.69
36:DA:1666:G:H2'	36:DA:1667:G:H5'	1.73	0.69
43:BH:158:HIS:ND1	43:BH:168:PRO:HB2	2.06	0.69
40:DE:38:THR:CB	40:DE:41:LYS:HE2	2.22	0.69
36:BA:298:G:H5'	36:BA:299:A:OP1	1.91	0.69
40:BE:48:GLN:HB2	40:BE:80:GLU:HG2	1.74	0.69
36:DA:106:C:H2'	36:DA:107:C:H6	1.57	0.69
52:BT:58:ASN:ND2	52:BT:58:ASN:H	1.89	0.69
48:DP:81:GLN:NE2	48:DP:106:LEU:HA	2.08	0.69
12:CL:45:PRO:HG3	12:CL:53:ARG:HD3	1.74	0.69
50:BR:44:LEU:O	50:BR:44:LEU:HD13	1.92	0.69
24:CY:6:C:O2'	24:CY:7:G:H5'	1.92	0.69
19:CS:62:ILE:HD12	19:CS:66:MET:HG3	1.74	0.69
36:DA:244:A:H4'	48:DP:74:GLU:CG	2.22	0.69
3:AC:95:THR:HG22	3:AC:95:THR:O	1.90	0.69
6:CF:25:ILE:HD13	6:CF:25:ILE:O	1.91	0.69
36:DA:852:G:O2'	36:DA:853:G:H5'	1.92	0.69
15:CO:17:ARG:NH1	15:CO:77:ARG:NH1	2.40	0.69
15:CO:87:ILE:CG2	15:CO:88:ARG:H	1.91	0.69
28:D2:51:ARG:HB3	28:D2:51:ARG:NH1	2.06	0.69
57:BY:75:ILE:HG23	57:BY:76:CYS:N	2.05	0.69
42:DG:76:SER:HA	42:DG:84:LYS:H	1.56	0.69
36:BA:1068:G:H1'	36:BA:1069:A:OP2	1.92	0.69
36:BA:1188:U:O2'	36:BA:1189:A:H5'	1.91	0.69
36:DA:259:G:N2	36:DA:621:A:H8	1.87	0.69
10:CJ:61:GLU:OE1	14:CN:45:ARG:HD2	1.92	0.69
48:DP:95:VAL:HG23	48:DP:125:VAL:HA	1.72	0.69
9:AI:19:LEU:HD21	9:AI:59:PHE:CD2	2.28	0.69
43:DH:50:VAL:HG12	43:DH:52:VAL:HG23	1.75	0.69
22:AW:38:A:C2'	22:AW:39:U:H5"	2.22	0.69
11:CK:126:ARG:HB3	11:CK:126:ARG:NH1	2.06	0.69
25:AZ:193:ASN:C	25:AZ:195:TRP:N	2.45	0.69
48:BP:112:LEU:H	48:BP:128:HIS:CD2	2.09	0.69
48:BP:81:GLN:NE2	48:BP:106:LEU:HA	2.07	0.69
32:B6:42:TRP:HA	32:B6:42:TRP:HE3	1.56	0.69
52:DT:96:ARG:HB2	52:DT:96:ARG:NH1	2.06	0.69
32:D6:5:VAL:HG11	36:DA:2283:C:H5'	1.74	0.69
19:AS:42:PRO:O	19:AS:44:MET:SD	2.50	0.69
40:DE:181:LEU:HD21	52:DT:7:ILE:CG2	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:559:A:P	5:AE:126:ARG:HH22	2.16	0.69
36:DA:127:A:H5"	36:DA:128:C:O4'	1.92	0.69
57:DY:27:VAL:HG12	57:DY:29:GLU:H	1.56	0.69
36:DA:1141:U:H2'	46:DN:63:THR:CG2	2.22	0.69
54:BV:49:THR:HB	54:BV:50:PRO:HD2	1.75	0.69
1:CA:1502:A:H2	1:CA:1505:G:N1	1.90	0.69
22:CW:38:A:H2'	22:CW:39:U:C5'	2.22	0.69
36:DA:633:A:H2'	36:DA:634:C:H5'	1.74	0.69
1:CA:1048:G:OP1	14:CN:4:LYS:HB2	1.91	0.69
36:DA:2136:C:H2'	36:DA:2137:C:H6	1.56	0.69
36:BA:479:A:O2'	36:BA:481:G:H5'	1.92	0.69
36:DA:1105:U:H2'	36:DA:1106:G:C8	2.27	0.69
25:CZ:323:LEU:HD12	25:CZ:323:LEU:H	1.57	0.69
42:BG:20:ILE:O	42:BG:24:GLY:HA2	1.92	0.69
36:DA:2866:U:C6	36:DA:2868:A:H1'	2.27	0.69
6:AF:43:LEU:HD22	6:AF:43:LEU:H	1.57	0.69
6:AF:45:LEU:H	6:AF:59:TYR:HA	1.56	0.69
6:AF:87:ARG:HH11	6:AF:87:ARG:HG2	1.56	0.69
39:BD:26:LYS:O	39:BD:27:THR:HG22	1.92	0.69
34:D8:11:LYS:NZ	34:D8:63:PRO:HG3	2.08	0.69
41:BF:157:VAL:HG22	41:BF:194:MET:HA	1.73	0.69
2:AB:30:ARG:HH21	2:AB:194:PRO:HG2	1.57	0.69
48:BP:30:THR:HG22	48:BP:31:ALA:N	2.06	0.69
37:BB:3:C:N4	37:BB:118:G:H1	1.90	0.69
50:DR:2:ARG:HH11	50:DR:2:ARG:N	1.90	0.69
3:AC:16:ARG:NH1	3:AC:16:ARG:HB2	2.05	0.69
3:CC:16:ARG:HH11	3:CC:16:ARG:CB	2.05	0.69
21:AU:8:THR:O	21:AU:12:LYS:HB2	1.92	0.69
19:AS:49:ILE:HD12	19:AS:49:ILE:H	1.58	0.69
36:DA:1494:A:H2'	36:DA:1495:A:H5"	1.74	0.69
1:AA:1134:G:H2'	1:AA:1135:U:H5'	1.73	0.69
52:BT:96:ARG:HB2	52:BT:96:ARG:NH1	2.06	0.69
15:AO:17:ARG:NH1	15:AO:77:ARG:NH1	2.40	0.69
36:BA:1005:C:H2'	36:BA:1006:C:H6	1.56	0.69
36:BA:2050:C:H1'	40:BE:156:MET:CE	2.21	0.69
40:DE:203:LYS:HD2	40:DE:203:LYS:O	1.92	0.69
42:DG:133:LEU:HD12	42:DG:157:ILE:HB	1.73	0.69
4:CD:59:ARG:HH21	4:CD:62:GLN:HG3	1.55	0.69
40:BE:38:THR:HB	40:BE:41:LYS:HE2	1.74	0.69
5:CE:7:GLU:O	5:CE:8:GLU:HB3	1.91	0.69
46:DN:46:VAL:O	46:DN:47:ALA:HB3	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:50:LEU:HD12	34:D8:51:ALA:H	1.58	0.69
25:AZ:191:GLY:N	25:AZ:197:ASP:OD1	2.26	0.69
41:BF:113:ALA:HB1	41:BF:186:ILE:HG21	1.73	0.69
52:BT:3:ARG:O	52:BT:6:LEU:HD12	1.93	0.69
48:DP:122:PRO:HA	48:DP:141:ALA:O	1.92	0.69
47:DO:8:LEU:HD23	47:DO:8:LEU:N	2.08	0.69
54:BV:72:VAL:HG23	54:BV:85:LYS:HB3	1.72	0.69
39:DD:25:THR:HG22	39:DD:26:LYS:CE	2.21	0.69
39:BD:33:LEU:O	39:BD:36:PRO:HD2	1.92	0.69
13:AM:22:ILE:HG21	13:AM:66:LEU:HD23	1.74	0.69
28:D2:26:ARG:O	28:D2:27:GLU:HB2	1.91	0.69
52:DT:82:LEU:H	52:DT:82:LEU:CD1	2.01	0.69
52:DT:27:THR:O	52:DT:28:VAL:CB	2.40	0.69
1:AA:149:A:H2'	1:AA:150:C:C6	2.28	0.69
41:BF:127:GLU:HB2	41:BF:196:LEU:HD12	1.74	0.69
51:BS:89:ARG:O	51:BS:92:TYR:HB3	1.92	0.69
25:AZ:324:LYS:HB2	25:AZ:326:GLU:HG2	1.73	0.69
25:CZ:19:HIS:HD2	25:CZ:20:VAL:O	1.75	0.69
43:DH:98:LEU:HD12	43:DH:102:ALA:O	1.92	0.69
34:B8:50:LEU:HD12	34:B8:51:ALA:H	1.58	0.69
51:DS:15:ARG:HD2	51:DS:15:ARG:O	1.92	0.69
58:BZ:29:TYR:HB3	58:BZ:34:ASN:HB2	1.75	0.69
48:DP:101:VAL:HG12	48:DP:106:LEU:HB2	1.75	0.69
1:AA:633:G:H5'	1:AA:634:C:OP2	1.93	0.69
24:AY:61:C:C2'	24:AY:62:U:H5"	2.22	0.69
36:DA:1400:G:H2'	36:DA:1401:G:C8	2.26	0.69
36:DA:2557:G:H2'	36:DA:2558:C:C6	2.28	0.69
49:DQ:43:THR:HG22	49:DQ:94:VAL:HG12	1.72	0.69
7:CG:78:ARG:HG3	7:CG:79:ARG:N	2.06	0.69
36:BA:2502:G:H5"	36:BA:2503:A:H5"	1.74	0.69
56:DX:49:VAL:HG12	56:DX:87:GLN:HE21	1.56	0.69
36:BA:127:A:H5"	36:BA:128:C:O4'	1.92	0.69
36:BA:519:U:H2'	36:BA:520:G:H8	1.56	0.69
36:BA:244:A:H4'	48:BP:74:GLU:CG	2.23	0.69
39:DD:43:ARG:NH1	39:DD:44:ASN:HD21	1.89	0.69
28:D2:7:ARG:HB3	28:D2:11:GLU:OE2	1.93	0.69
36:DA:2100:G:H2'	36:DA:2101:G:C8	2.28	0.69
57:BY:27:VAL:HG12	57:BY:29:GLU:H	1.57	0.69
28:B2:68:ARG:CB	28:B2:68:ARG:HH11	1.98	0.69
51:BS:28:VAL:HG12	51:BS:29:PHE:N	2.08	0.69
31:B5:50:GLY:HA3	31:B5:56:LYS:CE	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:322:A:H5'	36:DA:340:A:H1'	1.75	0.69
24:AY:76:A:OP2	25:AZ:274:ARG:HG2	1.92	0.69
31:D5:55:ARG:C	31:D5:56:LYS:HG3	2.13	0.69
54:DV:51:VAL:HG12	54:DV:52:VAL:H	1.58	0.69
54:DV:47:VAL:HG12	54:DV:52:VAL:HB	1.73	0.69
54:BV:21:ARG:HG2	54:BV:91:TYR:HD2	1.58	0.69
55:DW:107:LEU:N	55:DW:107:LEU:HD12	2.08	0.69
58:DZ:104:PHE:HD1	58:DZ:139:VAL:HG21	1.58	0.69
48:DP:41:ARG:HA	48:DP:41:ARG:NH1	2.08	0.69
22:CW:38:A:C3'	22:CW:39:U:H5"	2.23	0.69
9:AI:43:ALA:HA	9:AI:74:ILE:HD13	1.72	0.69
38:DC:40:THR:HG22	38:DC:177:LYS:HD2	1.75	0.69
36:BA:1223:G:H5'	36:BA:1223:G:H8	1.56	0.69
48:DP:112:LEU:H	48:DP:128:HIS:CD2	2.10	0.69
56:DX:57:LEU:HD22	56:DX:57:LEU:O	1.91	0.69
40:BE:181:LEU:HD21	52:BT:7:ILE:CG2	2.23	0.69
36:BA:581:C:H2'	36:BA:582:G:C8	2.27	0.69
36:BA:2396:G:O2'	36:BA:2397:G:H5'	1.92	0.69
10:CJ:6:ILE:HD11	10:CJ:23:ILE:HG21	1.75	0.69
1:AA:1486:G:H2'	1:AA:1487:G:O4'	1.93	0.69
26:B0:7:LEU:HD13	49:BQ:85:LYS:HD2	1.73	0.69
25:CZ:72:THR:HG22	25:CZ:203:LEU:HD21	1.74	0.69
40:BE:30:PRO:HD3	40:BE:180:ASN:ND2	2.08	0.69
36:DA:197:A:H8	36:DA:197:A:H5'	1.56	0.69
3:AC:79:ARG:HB2	3:AC:79:ARG:HH11	1.58	0.69
52:DT:78:LEU:O	52:DT:79:HIS:HD2	1.76	0.69
41:BF:41:LEU:HD23	41:BF:44:ARG:HD3	1.73	0.69
7:CG:45:ASP:O	7:CG:49:ILE:HG12	1.92	0.69
14:AN:6:LEU:HB3	14:AN:23:ARG:NH2	2.08	0.69
1:CA:559:A:P	5:CE:126:ARG:HH22	2.15	0.69
35:D9:15:LYS:HB3	35:D9:15:LYS:NZ	2.08	0.69
42:DG:83:ARG:O	42:DG:84:LYS:HB2	1.91	0.69
52:DT:29:ARG:HB3	52:DT:85:LYS:HA	1.73	0.69
27:D1:75:GLU:C	27:D1:77:ALA:H	1.96	0.69
20:AT:72:LEU:O	20:AT:73:HIS:O	2.10	0.69
3:CC:26:LYS:N	3:CC:26:LYS:HE3	2.08	0.69
1:CA:176:C:H2'	1:CA:177:C:H6	1.57	0.69
21:AU:3:LYS:HD3	21:AU:14:TRP:CD1	2.28	0.69
6:AF:25:ILE:O	6:AF:25:ILE:HD13	1.91	0.69
36:DA:2145:C:H5"	36:DA:2146:C:OP2	1.93	0.69
2:AB:157:ARG:NH1	2:AB:157:ARG:HB3	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:47:GLY:O	20:CT:49:ALA:N	2.22	0.69
32:D6:26:ASN:ND2	32:D6:32:ASN:HD21	1.91	0.69
34:B8:11:LYS:NZ	34:B8:63:PRO:HG3	2.08	0.69
40:BE:38:THR:CB	40:BE:41:LYS:HE2	2.23	0.69
48:BP:64:LYS:O	48:BP:66:GLY:N	2.22	0.69
25:AZ:326:GLU:H	25:AZ:326:GLU:CD	1.96	0.69
58:BZ:23:LYS:HD3	58:BZ:38:TYR:CE1	2.28	0.69
58:DZ:119:GLU:HA	58:DZ:172:ALA:HA	1.74	0.69
4:CD:107:ARG:HH21	4:CD:194:LEU:HD12	1.58	0.69
43:DH:41:MET:HG3	43:DH:42:ARG:N	2.08	0.69
3:AC:5:ILE:CD1	3:AC:5:ILE:N	2.54	0.69
7:CG:16:LEU:HD13	9:CI:42:ARG:HA	1.74	0.69
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.57	0.69
51:BS:17:ARG:O	51:BS:20:ARG:HG2	1.93	0.69
13:AM:3:ARG:NH2	13:AM:7:VAL:HG13	2.06	0.69
36:BA:425:G:H2'	36:BA:426:C:H6	1.57	0.69
47:BO:4:PRO:O	47:BO:5:GLN:HB2	1.93	0.69
39:DD:30:GLU:CB	39:DD:35:LYS:NZ	2.56	0.68
39:BD:30:GLU:CB	39:BD:35:LYS:NZ	2.56	0.68
34:D8:32:LEU:HB3	34:D8:36:LYS:NZ	2.08	0.68
33:B7:34:ARG:HG3	33:B7:34:ARG:HH11	1.58	0.68
36:BA:811:U:O2'	36:BA:812:C:H5"	1.92	0.68
48:DP:24:GLY:CA	48:DP:33:ARG:NH1	2.55	0.68
25:AZ:126:VAL:O	25:AZ:126:VAL:HG12	1.93	0.68
10:CJ:54:PHE:HZ	10:CJ:55:LYS:HZ2	1.33	0.68
9:AI:53:VAL:HG13	9:AI:95:LYS:HZ1	1.57	0.68
25:AZ:176:LEU:HD13	60:AZ:501:GDP:O2'	1.93	0.68
1:CA:255:G:OP1	17:CQ:69:LYS:HE2	1.93	0.68
1:AA:255:G:OP1	17:AQ:69:LYS:HE2	1.93	0.68
25:AZ:191:GLY:CA	25:AZ:197:ASP:OD1	2.40	0.68
36:BA:1115:G:H2'	36:BA:1116:C:C6	2.28	0.68
40:DE:117:MET:HA	40:DE:122:PHE:H	1.58	0.68
36:BA:1409:C:H2'	36:BA:1410:G:H8	1.58	0.68
25:AZ:63:ILE:HA	25:AZ:88:TYR:HE2	1.58	0.68
34:B8:16:ILE:HD12	34:B8:57:ARG:HG2	1.75	0.68
9:AI:114:TYR:HE2	10:AJ:59:SER:HA	1.57	0.68
3:AC:30:ARG:HH21	3:AC:31:HIS:CE1	2.11	0.68
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.74	0.68
36:BA:2145:C:H5"	36:BA:2146:C:OP2	1.92	0.68
24:AY:6:C:O2'	24:AY:7:G:H5'	1.93	0.68
39:BD:124:PRO:HG2	39:BD:129:ASN:ND2	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:73:ARG:HA	57:DY:73:ARG:HE	1.58	0.68
36:DA:747:U:O2	36:DA:2014:A:H1'	1.93	0.68
43:DH:85:LYS:NZ	43:DH:132:ARG:HA	2.06	0.68
48:DP:85:LEU:HA	48:DP:88:LEU:CB	2.23	0.68
36:DA:2401:U:H2'	36:DA:2402:C:H5"	1.73	0.68
16:CP:53:VAL:HG23	16:CP:54:GLU:N	2.06	0.68
16:AP:53:VAL:HG23	16:AP:54:GLU:N	2.07	0.68
38:DC:120:MET:HA	38:DC:123:VAL:HG12	1.75	0.68
36:BA:672:C:H2'	36:BA:673:C:H5"	1.75	0.68
25:AZ:151:GLU:HG2	25:AZ:155:ARG:HE	1.58	0.68
14:AN:57:ARG:CB	14:AN:57:ARG:NH1	2.57	0.68
1:CA:954:G:H4'	13:CM:120:LYS:HD2	1.76	0.68
46:BN:46:VAL:O	46:BN:47:ALA:HB3	1.93	0.68
36:BA:2125:G:OP1	38:BC:40:THR:HG21	1.93	0.68
36:DA:140:G:H1'	36:DA:141:A:C2	2.27	0.68
36:DA:2443:C:O2'	36:DA:2444:G:H5'	1.94	0.68
1:CA:382:A:H2'	1:CA:383:A:C8	2.29	0.68
36:BA:583:G:OP2	53:BU:10:ARG:HD2	1.93	0.68
19:CS:45:VAL:HA	19:CS:62:ILE:HG13	1.76	0.68
5:CE:63:ARG:O	5:CE:64:ARG:HB2	1.92	0.68
48:BP:80:TYR:HD1	48:BP:111:ARG:HB3	1.58	0.68
36:BA:2811:G:OP1	40:BE:60:ASN:HB2	1.94	0.68
36:BA:852:G:O2'	36:BA:853:G:H5'	1.92	0.68
39:BD:45:ASN:CG	39:BD:46:GLN:H	1.95	0.68
36:BA:2557:G:H2'	36:BA:2558:C:C6	2.28	0.68
32:D6:30:THR:O	32:D6:31:PRO:C	2.32	0.68
1:CA:975:A:C5'	1:CA:976:G:H5"	2.22	0.68
51:BS:28:VAL:HG12	51:BS:29:PHE:H	1.58	0.68
37:DB:3:C:N4	37:DB:118:G:H1	1.89	0.68
10:CJ:9:ARG:HG3	10:CJ:69:ASN:OD1	1.94	0.68
36:DA:2110:G:N1	36:DA:2178:C:H5	1.91	0.68
11:AK:126:ARG:NH1	11:AK:126:ARG:HB3	2.08	0.68
39:BD:226:MET:HE2	39:BD:231:HIS:HB2	1.75	0.68
1:AA:1129:C:N4	1:AA:1135:U:H3	1.91	0.68
36:BA:139:G:C6	36:BA:140:G:H2'	2.28	0.68
52:DT:12:SER:O	52:DT:15:VAL:HG12	1.93	0.68
1:AA:1368:G:OP2	9:AI:112:LYS:HD3	1.93	0.68
1:AA:1468:A:H2'	1:AA:1469:G:O4'	1.93	0.68
36:DA:585:G:H2'	36:DA:1251:C:H42	1.59	0.68
50:DR:45:ARG:HG3	50:DR:46:GLY:H	1.58	0.68
1:CA:1524:C:H6	1:CA:1524:C:H5'	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:94:LEU:HB2	39:BD:104:TYR:HE1	1.56	0.68
24:AY:24:G:O2'	24:AY:25:C:H5"	1.93	0.68
31:B5:3:LYS:HA	31:B5:3:LYS:HE3	1.75	0.68
42:DG:114:ILE:HG21	42:DG:117:PHE:HB2	1.73	0.68
51:DS:89:ARG:O	51:DS:92:TYR:HB3	1.93	0.68
57:BY:9:LYS:HG2	57:BY:10:GLY:H	1.58	0.68
52:DT:48:ILE:HD12	52:DT:49:VAL:N	2.08	0.68
37:BB:8:U:H5'	37:BB:8:U:C6	2.21	0.68
5:AE:12:LEU:HD23	5:AE:13:ILE:N	2.09	0.68
36:BA:2689:U:H5"	36:BA:2690:C:H5'	1.74	0.68
16:CP:21:VAL:O	16:CP:33:ILE:HB	1.93	0.68
25:CZ:151:GLU:HG2	25:CZ:155:ARG:HE	1.58	0.68
25:CZ:164:PRO:O	25:CZ:167:GLU:HG3	1.94	0.68
1:AA:954:G:H4'	13:AM:120:LYS:HD2	1.76	0.68
46:BN:119:ARG:HH11	46:BN:119:ARG:CB	2.05	0.68
1:AA:41:G:H2'	1:AA:42:G:C8	2.28	0.68
1:CA:660:G:OP2	15:CO:5:LYS:HE2	1.93	0.68
8:AH:18:ARG:CA	8:AH:18:ARG:HH11	2.05	0.68
13:AM:83:ASP:CG	13:AM:84:ILE:H	1.97	0.68
39:BD:25:THR:HG22	39:BD:26:LYS:CE	2.23	0.68
36:DA:1348:G:C2'	36:DA:1349:A:H5"	2.22	0.68
28:D2:2:LYS:HB2	36:DA:97:C:C5'	2.24	0.68
32:D6:18:ARG:CG	32:D6:18:ARG:HH11	2.02	0.68
51:DS:28:VAL:HG12	51:DS:29:PHE:H	1.58	0.68
58:BZ:126:VAL:HG12	58:BZ:163:LEU:HB3	1.74	0.68
36:DA:654(C):G:C2'	36:DA:654(D):G:H5'	2.24	0.68
49:BQ:56:ARG:CG	49:BQ:56:ARG:HH11	2.05	0.68
25:CZ:152:MET:HE2	25:CZ:156:ASP:HB2	1.75	0.68
22:AW:38:A:H3'	22:AW:39:U:H5"	1.75	0.68
1:CA:266:G:H5"	1:CA:267:C:H5	1.57	0.68
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.57	0.68
48:BP:101:VAL:HG12	48:BP:106:LEU:HB2	1.74	0.68
22:CV:20:U:H3'	22:CV:21:A:C5'	2.23	0.68
32:D6:25:LYS:HD2	36:DA:2285:C:H41	1.58	0.68
3:CC:79:ARG:HB2	3:CC:79:ARG:HH11	1.57	0.68
6:CF:62:TRP:C	6:CF:63:TYR:HD1	1.97	0.68
43:DH:68:THR:O	43:DH:72:ILE:HG12	1.93	0.68
34:D8:16:ILE:HD12	34:D8:57:ARG:HG2	1.76	0.68
18:CR:58:LEU:HD22	18:CR:62:GLU:HB3	1.76	0.68
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	1.94	0.68
1:AA:1442(B):A:C8	52:BT:118:ARG:HD3	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:D9:10:ILE:O	35:D9:14:CYS:SG	2.52	0.68
52:DT:3:ARG:O	52:DT:6:LEU:HD12	1.93	0.68
1:AA:17:U:H2'	1:AA:18:C:C6	2.29	0.68
40:DE:30:PRO:HD3	40:DE:180:ASN:ND2	2.09	0.68
4:AD:129:ASN:ND2	4:AD:145:GLU:H	1.91	0.68
42:BG:60:LEU:O	42:BG:63:ILE:HG12	1.93	0.68
37:DB:48:A:H4'	51:DS:95:HIS:CD2	2.28	0.68
1:CA:149:A:H2'	1:CA:150:C:C6	2.28	0.68
50:DR:55:ALA:HB2	50:DR:79:LEU:HD11	1.74	0.68
36:BA:2110:G:N1	36:BA:2178:C:H5	1.91	0.68
36:DA:140:G:H1'	36:DA:141:A:H2	1.59	0.68
36:BA:528:A:H2	36:BA:2043:C:O5'	1.76	0.68
1:AA:382:A:H2'	1:AA:383:A:C8	2.28	0.68
47:BO:107:ARG:NH1	52:BT:36:GLU:HG2	2.09	0.68
1:AA:961:U:HO2'	1:AA:962:C:H6	1.40	0.68
25:AZ:187:LYS:HD2	25:AZ:187:LYS:N	2.08	0.68
36:BA:2312:U:H2'	36:BA:2313:C:C5'	2.24	0.68
49:DQ:141:GLN:CG	58:DZ:72:ARG:HD3	2.24	0.68
2:CB:30:ARG:HH21	2:CB:194:PRO:HG2	1.59	0.68
26:B0:62:LEU:HD23	26:B0:62:LEU:N	2.09	0.68
48:BP:66:GLY:O	48:BP:67:MET:HB2	1.92	0.68
42:BG:120:LEU:HD21	42:BG:133:LEU:HD22	1.74	0.68
31:D5:33:CYS:HB3	31:D5:36:CYS:O	1.94	0.68
36:BA:674:G:H1'	41:BF:74:ARG:CD	2.23	0.68
22:AW:38:A:H2'	22:AW:39:U:C5'	2.24	0.68
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.59	0.68
30:B4:40:HIS:HA	30:B4:42:PHE:H	1.57	0.68
33:D7:22:MET:HA	33:D7:22:MET:CE	2.24	0.68
36:BA:1494:A:H2'	36:BA:1495:A:H5"	1.73	0.68
36:DA:1223:G:H5'	36:DA:1223:G:H8	1.57	0.68
40:BE:63:LEU:HD23	40:BE:63:LEU:O	1.93	0.68
1:CA:250:A:H4'	1:CA:251:G:O5'	1.94	0.68
50:BR:45:ARG:HG3	50:BR:46:GLY:H	1.57	0.68
36:DA:2455:G:H2'	36:DA:2456:C:C6	2.28	0.68
52:BT:50:ILE:HD11	52:BT:102:ILE:HD11	1.75	0.68
36:BA:143:G:H2'	36:BA:143(A):C:C6	2.29	0.68
48:BP:135:LEU:O	48:BP:135:LEU:HD13	1.94	0.68
36:DA:59:U:H3	36:DA:68:G:H1	1.41	0.68
27:D1:53:VAL:O	27:D1:53:VAL:HG12	1.93	0.68
56:BX:12:VAL:CB	56:BX:17:ALA:HB1	2.20	0.68
36:DA:1600:C:O2'	36:DA:1601:G:H5'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:7:VAL:HG21	57:DY:8:LYS:HZ2	1.58	0.68
20:AT:57:ARG:HH11	20:AT:102:GLY:CA	2.00	0.68
51:DS:99:LYS:HG2	51:DS:99:LYS:O	1.94	0.68
42:DG:87:PRO:O	42:DG:88:ILE:HG12	1.94	0.68
48:BP:147:LEU:HG	48:BP:148:LEU:N	2.08	0.68
25:AZ:251:ASP:O	25:AZ:267:VAL:HG12	1.94	0.68
40:BE:101:ARG:NH1	40:BE:171:GLU:HB2	2.09	0.68
36:DA:661:C:O3'	48:DP:18:ARG:HD2	1.94	0.68
25:CZ:126:VAL:O	25:CZ:126:VAL:HG12	1.92	0.68
22:AW:75:C:OP1	27:B1:30:VAL:HG21	1.93	0.68
57:BY:2:ARG:CD	57:BY:3:VAL:HG23	2.23	0.68
48:BP:105:LEU:HD12	48:BP:105:LEU:N	2.09	0.68
52:BT:90:GLN:O	52:BT:92:GLY:N	2.26	0.68
13:AM:97:PRO:HA	13:AM:110:ARG:HD3	1.74	0.68
36:DA:402:A:O2'	36:DA:403:U:H5'	1.93	0.68
36:DA:1331:A:O2'	36:DA:1332:G:H8	1.77	0.68
51:BS:40:ILE:HG13	51:BS:41:ASP:N	2.08	0.68
36:BA:863:A:O2'	36:BA:864:G:H5'	1.94	0.68
1:AA:1525:G:O2'	1:AA:1526:G:H5'	1.94	0.68
38:BC:83:ILE:HD11	38:BC:97:GLU:OE2	1.94	0.68
1:AA:358:U:H2'	1:AA:359:U:H6	1.56	0.68
31:B5:48:GLU:O	31:B5:49:CYS:SG	2.52	0.68
39:BD:241:PRO:O	39:BD:242:ARG:HB2	1.93	0.68
58:BZ:99:TYR:HD2	58:BZ:123:ASP:HB3	1.58	0.68
54:BV:49:THR:HB	54:BV:50:PRO:CD	2.24	0.68
10:CJ:61:GLU:OE2	14:CN:58:LYS:HE2	1.93	0.68
25:CZ:326:GLU:O	61:CZ:502:KIR:H101	1.94	0.68
1:AA:1439:C:N4	1:AA:1462:G:N1	2.38	0.68
16:AP:70:ALA:O	16:AP:74:LEU:HD12	1.94	0.68
48:BP:41:ARG:HA	48:BP:41:ARG:NH1	2.09	0.68
1:CA:1129:C:N4	1:CA:1135:U:H3	1.91	0.68
36:BA:2472:G:C5'	36:BA:2473:U:H5"	2.24	0.68
36:DA:2811:G:OP1	40:DE:60:ASN:HB2	1.94	0.68
49:BQ:6:ARG:O	49:BQ:7:MET:HG3	1.94	0.68
36:DA:2360:A:C2	36:DA:2361:A:H1'	2.29	0.68
1:AA:1216:G:OP1	14:AN:2:ALA:HB3	1.94	0.68
36:BA:302:C:H2'	36:BA:303:U:C6	2.28	0.68
6:CF:11:ASN:HB3	6:CF:14:LEU:HD23	1.76	0.68
36:BA:1600:C:O2'	36:BA:1601:G:H5'	1.94	0.68
13:AM:5:ALA:HB2	13:AM:66:LEU:HD23	1.76	0.68
30:D4:12:ALA:CB	30:D4:29:PRO:HA	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1301:A:H4'	36:BA:1302:A:OP1	1.93	0.68
1:AA:1282:C:O2'	1:AA:1283:G:H5'	1.93	0.68
42:BG:91:ARG:HD2	42:BG:92:VAL:N	2.09	0.68
40:DE:36:ARG:NH2	40:DE:88:GLY:HA2	2.08	0.68
58:BZ:18:LEU:CD1	58:BZ:18:LEU:H	2.06	0.68
36:DA:1517:G:C8	36:DA:1517:G:H5'	2.28	0.68
38:BC:94:VAL:HG12	38:BC:95:GLY:N	2.09	0.68
52:DT:98:LYS:HB3	52:DT:100:TYR:CE1	2.28	0.68
36:DA:2334:G:H21	51:DS:18:ILE:HG23	1.59	0.68
36:DA:2463:C:O2'	36:DA:2464:C:H5'	1.93	0.68
36:DA:329:G:H22	57:DY:19:LYS:HE3	1.59	0.68
25:CZ:309:SER:O	25:CZ:310:ILE:HG22	1.94	0.68
1:AA:250:A:H4'	1:AA:251:G:O5'	1.94	0.68
15:CO:27:VAL:O	15:CO:31:LEU:HD13	1.93	0.68
25:AZ:7:ARG:O	25:AZ:8:THR:HG22	1.95	0.67
51:DS:36:TYR:HD1	51:DS:36:TYR:H	1.41	0.67
43:BH:144:VAL:O	43:BH:148:ILE:HG12	1.94	0.67
50:BR:100:LEU:N	50:BR:100:LEU:HD13	2.09	0.67
25:CZ:324:LYS:HD3	25:CZ:365:GLY:HA3	1.76	0.67
50:DR:44:LEU:HD13	50:DR:44:LEU:O	1.94	0.67
41:DF:154:VAL:HG22	41:DF:191:ARG:HB3	1.76	0.67
3:CC:5:ILE:HG12	3:CC:10:PHE:HB2	1.76	0.67
36:BA:657:U:H2'	36:BA:658:C:C6	2.29	0.67
36:DA:1803:A:O3'	39:DD:259:THR:CG2	2.42	0.67
12:AL:45:PRO:HG3	12:AL:53:ARG:HD3	1.75	0.67
40:BE:117:MET:HA	40:BE:122:PHE:H	1.58	0.67
36:DA:2472:G:C5'	36:DA:2473:U:H5"	2.23	0.67
54:BV:72:VAL:CG2	54:BV:85:LYS:HB3	2.24	0.67
52:DT:129:ARG:CZ	52:DT:131:ALA:HB3	2.24	0.67
9:CI:43:ALA:HA	9:CI:74:ILE:HD13	1.76	0.67
36:BA:1503:U:O2'	36:BA:1504:C:H5'	1.94	0.67
55:BW:22:ASP:HA	55:BW:25:ARG:HH12	1.58	0.67
3:CC:34:LEU:HD22	3:CC:38:ARG:HE	1.59	0.67
39:DD:43:ARG:HH11	39:DD:44:ASN:HD22	1.37	0.67
28:D2:18:PRO:O	28:D2:21:LEU:HB2	1.94	0.67
1:CA:979:C:H3'	1:CA:980:C:C5'	2.20	0.67
1:CA:1537:U:C5'	18:CR:54:ARG:HH22	2.05	0.67
36:BA:322:A:H5'	36:BA:340:A:H1'	1.74	0.67
31:B5:46:CYS:SG	31:B5:47:PRO:HD2	2.34	0.67
37:BB:106:G:H5"	58:BZ:31:ARG:HG2	1.76	0.67
36:BA:2159:G:O2'	36:BA:2160:G:H5"	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:29:ARG:HD2	19:CS:30:LEU:H	1.57	0.67
1:AA:1492:A:OP1	12:AL:47:LYS:HG2	1.95	0.67
29:B3:8:LEU:HD22	29:B3:31:LEU:CD2	2.24	0.67
25:AZ:72:THR:HG22	25:AZ:203:LEU:HD21	1.76	0.67
41:BF:185:ASP:HA	41:BF:188:ARG:CD	2.25	0.67
36:DA:709:U:H2'	36:DA:710:G:C8	2.29	0.67
49:DQ:101:ARG:HD2	49:DQ:102:VAL:H	1.60	0.67
51:DS:42:ASP:O	51:DS:43:GLU:HB3	1.94	0.67
36:BA:402:A:O2'	36:BA:403:U:H5'	1.94	0.67
5:CE:34:VAL:HG12	5:CE:62:ALA:HB1	1.74	0.67
1:CA:80:G:N1	1:CA:90:U:H5'	2.10	0.67
36:DA:581:C:H2'	36:DA:582:G:H8	1.59	0.67
38:DC:107:TRP:CZ2	38:DC:109:ASP:HA	2.29	0.67
39:DD:94:LEU:HB2	39:DD:104:TYR:HE1	1.58	0.67
32:B6:7:ILE:HB	32:B6:27:LYS:NZ	2.09	0.67
31:D5:3:LYS:HA	31:D5:3:LYS:HE3	1.76	0.67
36:BA:2604:U:C5'	36:BA:2604:U:H6	2.07	0.67
31:B5:55:ARG:C	31:B5:56:LYS:HG3	2.13	0.67
41:BF:101:LEU:HD12	41:BF:102:PRO:CD	2.24	0.67
40:BE:16:ARG:CD	40:BE:21:VAL:HG11	2.24	0.67
48:DP:23:PRO:O	48:DP:33:ARG:HD2	1.93	0.67
43:BH:41:MET:HG3	43:BH:42:ARG:N	2.09	0.67
36:DA:2852:G:H2'	36:DA:2853:C:C6	2.29	0.67
1:AA:176:C:H2'	1:AA:177:C:C6	2.30	0.67
36:BA:1536:C:H2'	36:BA:1537:G:H4'	1.75	0.67
50:DR:12:ARG:HD3	50:DR:16:HIS:ND1	2.08	0.67
43:DH:136:ILE:HD12	43:DH:136:ILE:N	2.10	0.67
36:DA:2192:G:H2'	36:DA:2193:G:H5"	1.77	0.67
36:BA:59:U:H3	36:BA:68:G:H1	1.42	0.67
36:DA:271(C):C:H2'	36:DA:271(D):G:H8	1.58	0.67
1:AA:1131:G:H1	1:AA:1143:G:H21	1.42	0.67
36:BA:1208:C:O2	36:BA:1208:C:H2'	1.94	0.67
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.09	0.67
42:BG:60:LEU:O	42:BG:64:THR:HG22	1.94	0.67
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.17	0.67
2:AB:42:ILE:HD12	2:AB:202:PRO:HB2	1.77	0.67
43:BH:83:TYR:HB2	43:BH:134:SER:HA	1.76	0.67
2:CB:42:ILE:HD12	2:CB:202:PRO:HB2	1.75	0.67
39:DD:267:SER:HA	39:DD:270:ILE:HG13	1.77	0.67
36:DA:811:U:O2'	36:DA:812:C:H5"	1.93	0.67
1:CA:8:A:N6	4:CD:208:SER:HB2	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:134:PHE:CD1	25:CZ:202:LEU:HD22	2.29	0.67
36:BA:2334:G:H5'	51:BS:13:ARG:HD3	1.75	0.67
36:DA:139:G:C6	36:DA:140:G:H2'	2.29	0.67
22:CW:1:G:N3	22:CW:1:G:H2'	2.10	0.67
52:DT:90:GLN:O	52:DT:92:GLY:N	2.27	0.67
58:BZ:141:VAL:HG13	58:BZ:144:LEU:HB2	1.76	0.67
1:AA:865:A:H2	1:AA:918:A:H4'	1.58	0.67
46:DN:10:GLU:OE2	46:DN:11:PRO:HD2	1.95	0.67
1:CA:356:A:H2'	1:CA:357:G:H8	1.58	0.67
49:BQ:79:LEU:HD23	49:BQ:80:GLU:H	1.58	0.67
36:DA:1536:C:H2'	36:DA:1537:G:H4'	1.75	0.67
11:AK:84:VAL:HG23	11:AK:110:ASP:HA	1.76	0.67
37:BB:82:G:O2'	37:BB:83:G:H5'	1.95	0.67
13:CM:5:ALA:HB2	13:CM:66:LEU:HD23	1.75	0.67
36:DA:2312:U:H2'	36:DA:2313:C:C5'	2.25	0.67
25:AZ:271:GLU:HG2	25:AZ:276:THR:HA	1.76	0.67
48:DP:33:ARG:O	48:DP:34:GLY:C	2.33	0.67
13:CM:12:ASN:H	13:CM:12:ASN:HD22	1.42	0.67
53:DU:92:ARG:HH21	54:DV:10:LYS:HB3	1.57	0.67
4:AD:107:ARG:HH21	4:AD:194:LEU:HD12	1.58	0.67
12:CL:110:VAL:H	12:CL:122:THR:CG2	2.07	0.67
38:DC:94:VAL:HG12	38:DC:95:GLY:N	2.09	0.67
50:BR:116:LEU:O	50:BR:117:VAL:HG12	1.93	0.67
10:CJ:33:GLN:HB2	10:CJ:75:ILE:CD1	2.24	0.67
10:AJ:61:GLU:OE2	14:AN:58:LYS:HE2	1.95	0.67
25:AZ:195:TRP:O	25:AZ:197:ASP:N	2.28	0.67
46:BN:47:ALA:HB2	46:BN:112:LEU:CD1	2.25	0.67
24:CY:72:U:C3'	24:CY:73:G:H5"	2.25	0.67
36:BA:2557:G:O2'	36:BA:2558:C:H5'	1.95	0.67
1:CA:1523:G:H2'	1:CA:1524:C:H5'	1.75	0.67
52:BT:107:ASP:H	52:BT:110:ILE:HG12	1.60	0.67
36:DA:1314:C:H6	36:DA:1314:C:H5'	1.59	0.67
39:DD:261:LYS:HZ1	39:DD:263:ARG:NH2	1.92	0.67
27:D1:89:GLU:O	27:D1:93:GLU:HG2	1.93	0.67
38:DC:83:ILE:HD11	38:DC:97:GLU:OE2	1.95	0.67
1:AA:80:G:N1	1:AA:90:U:H5'	2.10	0.67
36:DA:2050:C:H1'	40:DE:156:MET:CE	2.25	0.67
36:DA:1543:C:C3'	36:DA:1544:A:H5"	2.24	0.67
13:CM:83:ASP:CG	13:CM:84:ILE:H	1.98	0.67
50:BR:29:LEU:HD11	50:BR:52:ILE:HD11	1.75	0.67
36:BA:2524:G:C8	36:BA:2524:G:H5'	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:106:C:H2'	36:BA:107:C:H6	1.59	0.67
36:DA:2796:U:H3'	36:DA:2799:C:C5'	2.22	0.67
27:D1:8:SER:HB3	27:D1:66:HIS:CG	2.29	0.67
22:AV:52:G:H1	22:AV:62:C:H42	1.39	0.67
40:BE:116:VAL:O	40:BE:117:MET:CB	2.42	0.67
36:DA:2781:A:H5'	36:DA:2782:G:H5'	1.77	0.67
58:BZ:141:VAL:HG13	58:BZ:144:LEU:CB	2.25	0.67
24:CY:66:C:H2'	24:CY:67:G:C8	2.29	0.67
36:BA:267:C:H2'	36:BA:268:C:H6	1.58	0.67
47:DO:4:PRO:O	47:DO:5:GLN:HB2	1.93	0.67
51:DS:17:ARG:O	51:DS:20:ARG:HG2	1.94	0.67
11:CK:84:VAL:HG23	11:CK:110:ASP:HA	1.76	0.67
36:BA:130:C:O3'	36:BA:1349:A:H1'	1.94	0.67
36:DA:1301:A:HO2'	36:DA:1302:A:H2'	1.57	0.67
42:BG:67:LYS:H	42:BG:67:LYS:CD	2.01	0.67
10:AJ:9:ARG:HG3	10:AJ:69:ASN:OD1	1.95	0.67
54:DV:49:THR:HB	54:DV:50:PRO:CD	2.25	0.67
40:DE:4:ILE:HG21	40:DE:96:PHE:HE2	1.60	0.67
17:AQ:53:LEU:HD23	17:AQ:54:GLY:N	2.10	0.67
38:DC:78:ALA:HA	38:DC:116:THR:N	2.09	0.67
36:DA:1050:A:C2'	36:DA:1051:G:H5'	2.24	0.67
36:BA:860:U:C5	36:BA:917:A:N7	2.62	0.67
25:CZ:195:TRP:O	25:CZ:197:ASP:N	2.28	0.67
34:D8:52:LYS:N	34:D8:53:PRO:CD	2.58	0.67
36:BA:6:A:O2'	46:BN:130:HIS:HB2	1.95	0.67
1:CA:713:G:H2'	1:CA:714:G:C8	2.29	0.67
30:D4:40:HIS:HA	30:D4:42:PHE:H	1.58	0.67
2:CB:131:PRO:HG2	2:CB:134:GLU:HG2	1.77	0.67
1:AA:1124:G:H5'	10:AJ:35:SER:HB2	1.76	0.67
36:BA:34:C:H41	36:BA:447:A:H61	1.43	0.67
36:BA:484:C:H2'	36:BA:485:C:C6	2.30	0.67
36:DA:2023:G:H5'	36:DA:2617:C:H4'	1.77	0.67
39:BD:34:VAL:CG2	39:BD:35:LYS:H	2.06	0.67
52:BT:27:THR:O	52:BT:28:VAL:CB	2.42	0.67
48:BP:84:ASN:CG	48:BP:116:GLY:HA2	2.15	0.67
36:DA:2756:U:H1'	36:DA:2757:A:C5'	2.25	0.67
10:CJ:75:ILE:HG13	10:CJ:76:ASN:H	1.60	0.67
51:BS:15:ARG:O	51:BS:15:ARG:HD2	1.94	0.67
40:DE:101:ARG:CB	40:DE:201:THR:HG21	2.25	0.67
46:BN:10:GLU:OE2	46:BN:11:PRO:HD2	1.94	0.67
29:D3:8:LEU:HD22	29:D3:31:LEU:CD2	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:581:C:H2'	36:DA:582:G:C8	2.30	0.67
36:DA:234:C:H2'	36:DA:235:U:H6	1.60	0.67
36:BA:1810:A:H2'	36:BA:1811:G:O4'	1.95	0.67
7:CG:113:GLU:HG3	7:CG:119:ARG:HB3	1.76	0.67
39:BD:261:LYS:HZ1	39:BD:263:ARG:NH2	1.92	0.67
36:DA:1810:A:H2'	36:DA:1811:G:O4'	1.94	0.67
27:B1:67:ILE:N	27:B1:68:PRO:HD2	2.10	0.67
25:AZ:313:HIS:HB2	25:AZ:380:LEU:HD12	1.77	0.67
28:D2:25:VAL:HG13	28:D2:29:LYS:CG	2.25	0.67
36:DA:2185:C:H2'	36:DA:2186:G:C5'	2.24	0.67
1:AA:1280:A:O2'	1:AA:1281:U:OP1	2.12	0.67
43:BH:83:TYR:HB3	43:BH:135:GLY:H	1.60	0.67
36:BA:1465:G:H5'	36:BA:1528:A:H1'	1.76	0.67
41:DF:132:VAL:HG22	41:DF:133:ASN:N	2.07	0.67
48:BP:23:PRO:O	48:BP:33:ARG:HD2	1.95	0.67
9:CI:4:TYR:CE2	9:CI:88:TYR:HB2	2.29	0.67
41:BF:154:VAL:HG22	41:BF:191:ARG:HB3	1.77	0.67
1:AA:706:A:C4'	11:AK:29:ILE:HD11	2.24	0.67
36:BA:1050:A:C2'	36:BA:1051:G:H5'	2.25	0.67
1:AA:266:G:H5"	1:AA:267:C:H5	1.58	0.67
58:BZ:10:ARG:HH21	58:BZ:26:GLY:H	1.40	0.67
4:AD:124:GLY:O	4:AD:126:ILE:N	2.28	0.67
57:BY:88:LYS:NZ	57:BY:93:GLY:HA3	2.10	0.67
1:CA:1314:C:OP2	19:CS:6:LYS:HG3	1.95	0.67
12:CL:39:VAL:HG12	12:CL:57:LYS:HB3	1.75	0.67
36:BA:1331:A:O2'	36:BA:1332:G:H8	1.78	0.67
36:BA:1242:A:H5'	36:BA:1243:G:OP2	1.94	0.67
1:AA:356:A:H2'	1:AA:357:G:H8	1.60	0.67
28:D2:47:ASN:HB3	28:D2:51:ARG:HG3	1.77	0.67
36:DA:2762:G:H5'	36:DA:2762:G:C8	2.28	0.67
36:BA:2185:C:H2'	36:BA:2186:G:C5'	2.24	0.67
48:BP:146:VAL:HG22	48:BP:147:LEU:N	2.06	0.67
46:BN:58:ASP:O	46:BN:60:ILE:N	2.28	0.67
36:BA:654(C):G:C2'	36:BA:654(D):G:H5'	2.24	0.67
36:BA:2756:U:H1'	36:BA:2757:A:C5'	2.24	0.67
54:DV:99:ILE:HD13	54:DV:99:ILE:N	2.10	0.67
12:AL:110:VAL:H	12:AL:122:THR:CG2	2.08	0.67
38:BC:120:MET:HA	38:BC:123:VAL:HG12	1.75	0.67
25:CZ:267:VAL:HG23	25:CZ:288:VAL:HG13	1.77	0.67
36:DA:1332:G:N2	36:DA:1610:A:C8	2.62	0.67
7:AG:57:GLU:O	7:AG:60:LYS:HB3	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1216:G:OP1	14:CN:2:ALA:HB3	1.94	0.67
6:CF:43:LEU:H	6:CF:43:LEU:HD22	1.60	0.67
36:BA:64:A:C4	56:BX:66:LEU:HD12	2.30	0.67
46:BN:76:SER:HB3	46:BN:81:GLY:HA3	1.77	0.67
52:BT:129:ARG:CZ	52:BT:131:ALA:HB3	2.25	0.67
36:DA:425:G:H2'	36:DA:426:C:H6	1.58	0.67
1:AA:1534:A:H62	23:AX:12:A:H2	1.42	0.67
36:DA:1817:G:H2'	36:DA:1818:U:H5'	1.77	0.67
3:CC:30:ARG:HH21	3:CC:31:HIS:CE1	2.13	0.67
36:BA:325:G:H2'	36:BA:326:G:H8	1.59	0.67
2:AB:131:PRO:HG2	2:AB:134:GLU:HG2	1.77	0.67
52:BT:78:LEU:O	52:BT:79:HIS:HD2	1.77	0.67
36:DA:2138:C:H2'	36:DA:2139:C:H6	1.60	0.67
1:CA:1131:G:H1	1:CA:1143:G:H21	1.42	0.67
39:DD:35:LYS:CG	39:DD:104:TYR:CE2	2.67	0.66
34:D8:6:THR:HB	34:D8:11:LYS:HZ3	1.58	0.66
57:BY:73:ARG:HE	57:BY:73:ARG:HA	1.59	0.66
34:D8:8:LYS:O	34:D8:12:LYS:HG3	1.95	0.66
48:DP:66:GLY:O	48:DP:67:MET:HB2	1.94	0.66
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HB3	1.76	0.66
10:AJ:75:ILE:HG13	10:AJ:76:ASN:H	1.59	0.66
55:BW:107:LEU:HD12	55:BW:107:LEU:N	2.09	0.66
36:BA:612:C:H2'	36:BA:613:G:H5"	1.76	0.66
43:BH:41:MET:CG	43:BH:42:ARG:H	2.07	0.66
52:DT:50:ILE:HD11	52:DT:102:ILE:HD11	1.77	0.66
34:B8:52:LYS:N	34:B8:53:PRO:CD	2.57	0.66
20:CT:86:ARG:O	20:CT:90:GLN:HG3	1.95	0.66
36:BA:1332:G:N2	36:BA:1610:A:C8	2.62	0.66
38:BC:72:VAL:HG23	38:BC:111:ASP:HB3	1.77	0.66
36:DA:267:C:H2'	36:DA:268:C:H6	1.59	0.66
11:AK:85:ARG:HG2	11:AK:111:ASP:O	1.95	0.66
36:BA:234:C:H2'	36:BA:235:U:C6	2.30	0.66
36:DA:944:G:H5'	36:DA:945:A:O5'	1.95	0.66
36:BA:2463:C:O2'	36:BA:2464:C:H5'	1.94	0.66
31:B5:3:LYS:HG3	36:BA:2611:U:O2'	1.95	0.66
42:DG:68:PRO:HB2	42:DG:90:LEU:HD13	1.77	0.66
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.18	0.66
31:B5:33:CYS:HB3	31:B5:36:CYS:O	1.95	0.66
36:BA:259:G:N2	36:BA:621:A:H8	1.87	0.66
9:AI:88:TYR:O	9:AI:89:ASN:HB2	1.96	0.66
25:CZ:163:PHE:CD1	25:CZ:164:PRO:HD2	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:41:MET:CG	43:DH:42:ARG:H	2.07	0.66
25:AZ:149:LEU:O	25:AZ:152:MET:HB3	1.96	0.66
38:BC:40:THR:HG22	38:BC:177:LYS:HD2	1.77	0.66
5:AE:53:LEU:H	5:AE:53:LEU:HD12	1.60	0.66
36:DA:2377:A:H4'	51:DS:107:GLU:O	1.95	0.66
48:BP:46:LYS:HB2	48:BP:52:GLU:HG2	1.78	0.66
54:DV:72:VAL:CG2	54:DV:85:LYS:HB3	2.25	0.66
36:DA:2138:C:H2'	36:DA:2139:C:C6	2.31	0.66
43:BH:68:THR:O	43:BH:72:ILE:HG12	1.95	0.66
1:CA:1452:C:H4'	1:CA:1456:G:N2	2.10	0.66
40:DE:51:PHE:O	40:DE:74:PRO:HB2	1.96	0.66
6:AF:11:ASN:HB3	6:AF:14:LEU:HD23	1.77	0.66
36:DA:176:G:O2'	36:DA:177:G:H5'	1.95	0.66
35:D9:17:ILE:HG22	35:D9:18:ARG:N	2.10	0.66
1:AA:1314:C:OP2	19:AS:6:LYS:HG3	1.96	0.66
50:DR:62:ALA:O	50:DR:66:VAL:HG23	1.95	0.66
39:DD:273:ARG:HG2	39:DD:273:ARG:HH11	1.60	0.66
1:CA:1149:C:H2'	1:CA:1150:U:C6	2.30	0.66
30:B4:12:ALA:CB	30:B4:29:PRO:HA	2.25	0.66
36:DA:2604:U:C5'	36:DA:2604:U:H6	2.08	0.66
27:B1:65:SER:O	27:B1:66:HIS:CB	2.40	0.66
40:DE:2:LYS:HD3	40:DE:95:ILE:HG22	1.77	0.66
40:BE:4:ILE:HG21	40:BE:96:PHE:HE2	1.60	0.66
36:BA:2491:U:H4'	36:BA:2570:G:OP1	1.96	0.66
25:CZ:326:GLU:CD	25:CZ:326:GLU:H	1.97	0.66
1:CA:1347:G:H2'	9:CI:108:VAL:O	1.95	0.66
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.10	0.66
4:AD:200:GLU:HG2	4:AD:201:GLN:H	1.60	0.66
4:CD:124:GLY:O	4:CD:126:ILE:N	2.28	0.66
36:DA:2852:G:H2'	36:DA:2853:C:H6	1.60	0.66
36:DA:6:A:O2'	46:DN:130:HIS:HB2	1.95	0.66
36:BA:1353:A:H2'	36:BA:1354:A:C8	2.30	0.66
36:DA:244:A:H4'	48:DP:74:GLU:HG3	1.76	0.66
46:DN:3:THR:HG22	46:DN:4:TYR:H	1.59	0.66
55:BW:82:LEU:HB3	55:BW:84:ARG:NH1	2.10	0.66
11:CK:59:TYR:CZ	11:CK:63:LEU:HD11	2.31	0.66
1:CA:1124:G:H5'	10:CJ:35:SER:HB2	1.77	0.66
1:CA:1285:A:H4'	1:CA:1286:A:O5'	1.95	0.66
52:BT:60:THR:HG22	52:BT:77:PRO:HA	1.77	0.66
1:CA:673:G:H2'	1:CA:674:G:C8	2.31	0.66
31:B5:39:MET:HG3	55:BW:34:ASN:OD1	1.93	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:44:LEU:HD12	2:AB:44:LEU:H	1.61	0.66
31:B5:44:THR:HG23	50:BR:101:ALA:N	2.11	0.66
24:AY:76:A:C8	25:AZ:271:GLU:OE1	2.48	0.66
36:BA:1294:U:H5'	36:BA:1294:U:H6	1.60	0.66
41:DF:160:ASN:OD1	41:DF:163:VAL:HG23	1.94	0.66
35:B9:17:ILE:HG22	35:B9:18:ARG:N	2.09	0.66
39:BD:162:SER:O	39:BD:178:PRO:HG3	1.96	0.66
36:BA:585:G:H2'	36:BA:1251:C:H42	1.61	0.66
7:AG:38:LEU:O	7:AG:38:LEU:HD12	1.95	0.66
13:AM:87:TYR:HD1	19:AS:81:ARG:HH22	1.43	0.66
36:DA:130:C:O3'	36:DA:1349:A:H1'	1.96	0.66
36:BA:2312:U:H2'	36:BA:2313:C:H5"	1.78	0.66
43:DH:83:TYR:HB2	43:DH:134:SER:HA	1.76	0.66
36:BA:1543:C:C3'	36:BA:1544:A:H5"	2.23	0.66
54:DV:21:ARG:HG2	54:DV:91:TYR:HD2	1.58	0.66
54:DV:39:LEU:HA	54:DV:47:VAL:CG1	2.26	0.66
25:AZ:163:PHE:CD1	25:AZ:164:PRO:HD2	2.29	0.66
52:DT:106:SER:C	52:DT:107:ASP:OD1	2.34	0.66
25:CZ:149:LEU:O	25:CZ:152:MET:HB3	1.95	0.66
36:BA:2852:G:H2'	36:BA:2853:C:C6	2.31	0.66
25:CZ:251:ASP:O	25:CZ:267:VAL:HG12	1.95	0.66
55:DW:82:LEU:HB3	55:DW:84:ARG:HH12	1.59	0.66
36:DA:2557:G:O2'	36:DA:2558:C:H5'	1.94	0.66
25:AZ:309:SER:O	25:AZ:310:ILE:HG22	1.95	0.66
43:DH:18:GLU:HB2	43:DH:25:LYS:HB2	1.77	0.66
36:DA:528:A:H2	36:DA:2043:C:O5'	1.78	0.66
27:B1:50:ARG:HG2	27:B1:59:THR:HG22	1.76	0.66
36:DA:1337:G:H2'	36:DA:1338:G:H8	1.59	0.66
8:CH:9:MET:SD	8:CH:32:LYS:HG2	2.35	0.66
47:DO:107:ARG:NH1	52:DT:36:GLU:HG2	2.10	0.66
4:CD:129:ASN:ND2	4:CD:145:GLU:H	1.93	0.66
36:DA:302:C:H2'	36:DA:303:U:C6	2.29	0.66
36:BA:2192:G:H2'	36:BA:2193:G:H5"	1.78	0.66
42:BG:106:LEU:HD12	42:BG:110:ALA:HB3	1.78	0.66
42:DG:138:GLN:O	42:DG:144:ILE:HD13	1.96	0.66
52:BT:82:LEU:CD1	52:BT:82:LEU:H	2.02	0.66
1:CA:1282:C:O2'	1:CA:1283:G:H5'	1.95	0.66
42:DG:47:LYS:HZ1	42:DG:82:LEU:HB2	1.59	0.66
47:DO:104:ARG:HE	52:DT:33:LYS:HE3	1.60	0.66
52:DT:80:SER:HB3	52:DT:81:PRO:CD	2.24	0.66
36:DA:1465:G:H5'	36:DA:1528:A:H1'	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:160:ASN:OD1	41:BF:163:VAL:HG23	1.94	0.66
37:DB:8:U:H5'	37:DB:8:U:C6	2.22	0.66
36:DA:654(P):C:H2'	36:DA:654(Q):C:O4'	1.96	0.66
36:DA:1658:C:OP1	40:DE:132:HIS:O	2.13	0.66
22:AW:38:A:C3'	22:AW:39:U:H5"	2.26	0.66
46:BN:43:THR:O	46:BN:46:VAL:HG12	1.95	0.66
54:BV:61:VAL:HG23	54:BV:61:VAL:O	1.94	0.66
40:DE:101:ARG:NH1	40:DE:171:GLU:HB2	2.10	0.66
57:DY:88:LYS:NZ	57:DY:93:GLY:HA3	2.11	0.66
27:B1:82:LEU:HD21	27:B1:90:ILE:HG23	1.77	0.66
58:DZ:10:ARG:HH11	58:DZ:10:ARG:HG2	1.59	0.66
36:BA:582:G:H2'	36:BA:583:G:C8	2.31	0.66
1:CA:176:C:H2'	1:CA:177:C:C6	2.30	0.66
48:BP:80:TYR:CD1	48:BP:111:ARG:HB3	2.30	0.66
4:AD:129:ASN:HD21	4:AD:145:GLU:H	1.42	0.66
38:BC:107:TRP:CZ2	38:BC:109:ASP:HA	2.31	0.66
11:AK:59:TYR:CZ	11:AK:63:LEU:HD11	2.30	0.66
16:AP:8:ARG:HB3	16:AP:28:ARG:NH1	2.11	0.66
55:DW:22:ASP:HA	55:DW:25:ARG:HH12	1.61	0.66
32:B6:26:ASN:ND2	32:B6:32:ASN:HD21	1.94	0.66
30:D4:31:ILE:HG21	42:DG:142:PRO:HB2	1.77	0.66
58:DZ:128:VAL:HG22	58:DZ:129:SER:N	2.11	0.66
27:B1:7:ILE:HD11	27:B1:70:VAL:HG22	1.78	0.66
32:B6:22:ALA:HB2	32:B6:39:TYR:CE2	2.31	0.66
52:BT:28:VAL:O	52:BT:29:ARG:HB2	1.95	0.66
43:DH:85:LYS:HZ1	43:DH:132:ARG:HA	1.59	0.66
32:D6:14:THR:O	32:D6:49:HIS:HA	1.96	0.66
41:DF:103:LYS:HG3	41:DF:106:ARG:NH2	2.10	0.66
58:BZ:24:LEU:HD21	58:BZ:86:VAL:CG2	2.25	0.66
50:BR:94:TYR:CD1	50:BR:94:TYR:N	2.62	0.66
1:CA:961:U:O2'	1:CA:962:C:P	2.53	0.66
1:AA:1318:A:H1'	19:AS:37:ARG:HH21	1.61	0.66
25:AZ:134:PHE:CD1	25:AZ:202:LEU:HD22	2.30	0.66
36:DA:2334:G:H5'	51:DS:13:ARG:HD3	1.77	0.66
24:AY:72:U:C3'	24:AY:73:G:H5"	2.25	0.66
36:BA:481:G:OP2	57:BY:47:LYS:HD3	1.95	0.66
24:AY:66:C:H2'	24:AY:67:G:C8	2.30	0.66
52:BT:106:SER:C	52:BT:107:ASP:OD1	2.34	0.66
36:BA:234:C:H2'	36:BA:235:U:H6	1.61	0.66
36:DA:1813:G:H1'	39:DD:50:THR:OG1	1.95	0.66
36:DA:143:G:H2'	36:DA:143(A):C:C6	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:83:G:N2	36:BA:102:G:H2'	2.10	0.66
36:BA:2023:G:H5'	36:BA:2617:C:H4'	1.76	0.66
36:BA:2022:U:O2'	36:BA:2617:C:H5'	1.96	0.66
32:B6:5:VAL:N	32:B6:9:LEU:H	1.94	0.66
32:D6:22:ALA:HB2	32:D6:39:TYR:CE2	2.31	0.66
37:DB:42:C:N3	42:DG:93:THR:HG23	2.11	0.66
2:CB:18:GLY:H	2:CB:42:ILE:HG23	1.60	0.66
55:BW:73:ALA:HB3	55:BW:106:ILE:HD11	1.76	0.66
41:BF:39:TRP:CD1	41:BF:101:LEU:HB2	2.31	0.66
55:DW:4:LYS:HG2	55:DW:5:ALA:N	2.11	0.66
48:BP:24:GLY:CA	48:BP:33:ARG:NH1	2.59	0.66
41:DF:32:LEU:HD21	41:DF:105:VAL:HG13	1.77	0.66
40:BE:101:ARG:CB	40:BE:201:THR:HG21	2.26	0.66
38:BC:78:ALA:HA	38:BC:116:THR:N	2.10	0.66
36:DA:657:U:H2'	36:DA:658:C:C6	2.31	0.66
12:AL:33:ARG:HD3	12:AL:62:SER:HB3	1.78	0.66
1:AA:186:C:H2'	1:AA:187:C:C6	2.29	0.66
53:BU:3:ARG:HG2	53:BU:3:ARG:NH1	2.11	0.66
50:BR:51:LEU:HD23	50:BR:70:LEU:HD11	1.77	0.66
36:DA:325:G:H2'	36:DA:326:G:H8	1.60	0.66
10:CJ:29:ARG:O	10:CJ:30:SER:HB3	1.96	0.66
36:DA:1453:U:H5'	50:DR:63:ARG:NE	2.11	0.66
36:DA:2790:A:H2'	36:DA:2791:C:H5"	1.78	0.66
57:DY:6:HIS:HE1	57:DY:30:VAL:HG11	1.60	0.66
1:CA:1280:A:O2'	1:CA:1281:U:OP1	2.13	0.66
42:BG:87:PRO:O	42:BG:88:ILE:HG12	1.95	0.66
2:AB:18:GLY:H	2:AB:42:ILE:HG23	1.60	0.66
2:CB:44:LEU:HA	2:CB:47:THR:HB	1.77	0.66
41:DF:101:LEU:HD12	41:DF:102:PRO:CD	2.26	0.66
1:CA:963:G:H21	10:CJ:55:LYS:NZ	1.93	0.66
54:DV:49:THR:HB	54:DV:50:PRO:HD2	1.75	0.66
9:AI:95:LYS:HZ2	9:AI:96:LEU:HD13	1.61	0.66
52:BT:23:ARG:O	52:BT:25:GLY:N	2.28	0.66
25:CZ:68:VAL:HG22	25:CZ:69:GLU:N	2.09	0.66
1:AA:713:G:H2'	1:AA:714:G:C8	2.30	0.66
36:DA:479:A:O2'	36:DA:481:G:H5'	1.96	0.66
52:DT:58:ASN:ND2	52:DT:58:ASN:H	1.93	0.66
5:CE:101:ILE:O	5:CE:120:THR:HB	1.95	0.66
36:DA:145:G:H2'	36:DA:146:G:H5"	1.76	0.66
48:DP:45:LEU:HD13	48:DP:46:LYS:H	1.59	0.66
51:BS:42:ASP:O	51:BS:43:GLU:HB3	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2467:C:H4'	49:BQ:123:HIS:ND1	2.11	0.66
1:AA:953:G:C5'	1:AA:965:A:H61	2.09	0.66
36:DA:2845:G:O2'	36:DA:2846:G:H5'	1.96	0.66
43:BH:136:ILE:HD12	43:BH:136:ILE:N	2.11	0.66
32:B6:30:THR:O	32:B6:31:PRO:C	2.34	0.66
2:AB:44:LEU:HA	2:AB:47:THR:HB	1.76	0.66
2:CB:28:PHE:CD2	2:CB:190:THR:HA	2.30	0.66
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.11	0.66
1:CA:1321:C:H5"	1:CA:1322:C:C5'	2.25	0.66
31:B5:49:CYS:O	31:B5:56:LYS:HD3	1.96	0.66
6:CF:97:PHE:O	18:CR:31:LEU:HD23	1.96	0.66
40:DE:16:ARG:CD	40:DE:21:VAL:HG11	2.24	0.66
42:BG:121:ASN:HB3	42:BG:124:SER:HB2	1.78	0.66
27:D1:75:GLU:O	27:D1:77:ALA:N	2.26	0.66
36:BA:996:A:H4'	53:BU:92:ARG:NE	2.11	0.66
13:CM:80:ARG:O	13:CM:83:ASP:HB3	1.96	0.66
36:DA:1058:G:C2'	36:DA:1059:G:H5"	2.27	0.66
36:DA:672:C:H2'	36:DA:673:C:H5"	1.75	0.66
48:BP:40:SER:O	48:BP:41:ARG:NH1	2.28	0.66
25:AZ:26:THR:HG23	60:AZ:501:GDP:O2A	1.95	0.66
52:BT:62:THR:HG22	52:BT:75:ILE:HG13	1.77	0.66
40:BE:9:VAL:HG12	40:BE:25:VAL:O	1.96	0.66
1:AA:1125:U:H5"	1:AA:1126:U:H5	1.61	0.66
10:AJ:38:ILE:CG1	10:AJ:71:LEU:HB3	2.26	0.66
36:BA:1453:U:H5'	50:BR:63:ARG:NE	2.11	0.66
11:CK:38:ASN:N	11:CK:38:ASN:HD22	1.94	0.66
43:DH:105:LEU:H	43:DH:105:LEU:HD23	1.61	0.66
12:CL:79:GLU:O	12:CL:80:HIS:HB2	1.95	0.66
39:DD:48:ARG:HG3	39:DD:48:ARG:HH11	1.60	0.65
34:D8:32:LEU:CD2	34:D8:36:LYS:HZ1	2.09	0.65
24:AY:77:TRP:N	25:AZ:273:HIS:H	1.93	0.65
42:DG:137:GLU:O	42:DG:138:GLN:HB3	1.96	0.65
36:BA:1947:C:C2'	36:BA:1948:G:H5"	2.26	0.65
41:BF:32:LEU:HD21	41:BF:105:VAL:HG13	1.78	0.65
39:BD:183:ARG:HD2	39:BD:269:PHE:O	1.95	0.65
39:DD:267:SER:HB3	39:DD:270:ILE:HD11	1.76	0.65
55:DW:73:ALA:HB3	55:DW:106:ILE:HD11	1.78	0.65
36:BA:654(P):C:H2'	36:BA:654(Q):C:O4'	1.96	0.65
17:AQ:5:VAL:HG22	17:AQ:60:ILE:HD12	1.77	0.65
38:DC:114:VAL:HG12	38:DC:144:THR:HB	1.77	0.65
58:BZ:151:HIS:HB2	58:BZ:169:GLU:O	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:45:U:H2'	1:AA:46:G:H8	1.62	0.65
19:AS:43:GLU:C	19:AS:45:VAL:H	2.00	0.65
13:AM:80:ARG:O	13:AM:83:ASP:HB3	1.96	0.65
41:BF:185:ASP:HA	41:BF:188:ARG:HG2	1.78	0.65
36:DA:907:U:OP1	49:DQ:24:GLY:N	2.24	0.65
41:DF:113:ALA:HB1	41:DF:186:ILE:HG21	1.78	0.65
47:DO:69:ILE:HG13	47:DO:77:ILE:HG23	1.77	0.65
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.96	0.65
47:BO:35:VAL:HG21	47:BO:69:ILE:HD13	1.78	0.65
1:CA:1277:C:HO2'	1:CA:1279:A:H8	1.44	0.65
50:BR:62:ALA:O	50:BR:66:VAL:HG23	1.96	0.65
36:DA:484:C:H2'	36:DA:485:C:C6	2.30	0.65
36:DA:1963:U:O2	36:DA:1963:U:H2'	1.96	0.65
36:BA:145:G:H2'	36:BA:146:G:H5"	1.78	0.65
10:CJ:46:ARG:HH11	10:CJ:46:ARG:HG2	1.61	0.65
36:BA:2720:U:H2'	36:BA:2720:U:O2	1.95	0.65
39:DD:35:LYS:HG3	39:DD:104:TYR:CD2	2.29	0.65
36:DA:2392:A:H2	36:DA:2424:C:H42	1.41	0.65
40:DE:57:LYS:HE3	40:DE:57:LYS:CA	2.20	0.65
36:DA:1019:U:O2'	36:DA:1021:A:H2	1.80	0.65
54:DV:40:LEU:H	54:DV:47:VAL:HG13	1.60	0.65
13:AM:12:ASN:HD22	13:AM:12:ASN:H	1.44	0.65
54:BV:51:VAL:HG12	54:BV:52:VAL:H	1.62	0.65
36:DA:674:G:H1'	41:DF:74:ARG:CD	2.25	0.65
24:CY:40:C:C2'	24:CY:41:C:H5"	2.26	0.65
36:BA:2334:G:H21	51:BS:18:ILE:HG23	1.61	0.65
36:BA:1720:U:C3'	36:BA:1721:G:H5"	2.25	0.65
53:BU:85:LYS:CD	53:BU:117:GLN:HE22	2.08	0.65
48:DP:105:LEU:HD12	48:DP:105:LEU:N	2.10	0.65
36:BA:2408:U:H2'	36:BA:2409:G:H8	1.61	0.65
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.78	0.65
36:BA:140:G:H1'	36:BA:141:A:C2	2.30	0.65
11:AK:57:THR:HG23	11:AK:60:ALA:H	1.59	0.65
36:BA:1473:G:H2'	36:BA:1474:C:O4'	1.96	0.65
28:B2:2:LYS:HB2	36:BA:97:C:H5"	1.76	0.65
1:AA:1104:G:O5'	2:AB:111:ARG:HD2	1.97	0.65
12:AL:39:VAL:HG12	12:AL:57:LYS:HB3	1.77	0.65
9:CI:126:SER:O	9:CI:127:LYS:HB3	1.96	0.65
40:BE:203:LYS:O	40:BE:203:LYS:HD2	1.95	0.65
14:CN:23:ARG:HD2	14:CN:28:GLY:O	1.97	0.65
28:D2:23:LYS:HG3	28:D2:26:ARG:HD3	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:39:ALA:HA	28:B2:45:SER:HB3	1.77	0.65
57:BY:6:HIS:HE1	57:BY:30:VAL:HG11	1.61	0.65
2:CB:17:PHE:O	2:CB:18:GLY:O	2.15	0.65
39:BD:267:SER:HA	39:BD:270:ILE:HG13	1.77	0.65
36:DA:833:U:H5"	48:DP:48:PRO:HB2	1.77	0.65
9:AI:4:TYR:CE2	9:AI:88:TYR:HB2	2.31	0.65
36:BA:612:C:C2'	36:BA:613:G:H5"	2.26	0.65
1:CA:961:U:O2'	1:CA:962:C:O5'	2.13	0.65
12:AL:33:ARG:HG2	12:AL:60:LEU:HD12	1.78	0.65
11:AK:27:ASN:HD22	11:AK:28:THR:N	1.92	0.65
27:B1:13:ILE:HD12	27:B1:13:ILE:N	2.11	0.65
36:BA:2781:A:H5'	36:BA:2782:G:H5'	1.77	0.65
57:DY:46:LYS:HG2	57:DY:47:LYS:N	2.11	0.65
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.60	0.65
51:DS:11:LYS:N	51:DS:11:LYS:HD2	2.11	0.65
26:D0:27:GLU:N	26:D0:27:GLU:OE1	2.25	0.65
26:D0:27:GLU:OE1	36:DA:856:C:H1'	1.97	0.65
36:BA:1337:G:H2'	36:BA:1338:G:H8	1.61	0.65
25:AZ:27:LEU:HD12	25:AZ:31:LEU:HG	1.76	0.65
20:CT:57:ARG:HH11	20:CT:102:GLY:CA	2.00	0.65
28:D2:62:THR:HG21	36:DA:76:C:C4'	2.26	0.65
36:DA:1503:U:O2'	36:DA:1504:C:H5'	1.97	0.65
57:BY:74:PRO:O	57:BY:75:ILE:HB	1.97	0.65
43:BH:121:ILE:HD13	43:BH:144:VAL:HG21	1.79	0.65
52:DT:28:VAL:O	52:DT:29:ARG:HB2	1.95	0.65
41:BF:132:VAL:HG22	41:BF:133:ASN:N	2.07	0.65
51:BS:89:ARG:HG2	51:BS:92:TYR:HA	1.78	0.65
58:BZ:123:ASP:O	58:BZ:124:ILE:HG23	1.95	0.65
36:DA:2635:C:OP1	40:DE:77:ILE:HG21	1.96	0.65
58:DZ:178:GLU:OE1	58:DZ:178:GLU:N	2.29	0.65
12:AL:110:VAL:CG2	12:AL:120:TYR:HB3	2.26	0.65
3:AC:5:ILE:HG12	3:AC:10:PHE:HB2	1.77	0.65
52:BT:98:LYS:HB3	52:BT:100:TYR:CE1	2.31	0.65
22:AW:30:G:H2'	22:AW:31:A:H8	1.61	0.65
3:AC:26:LYS:N	3:AC:26:LYS:HE3	2.10	0.65
46:DN:47:ALA:HB2	46:DN:112:LEU:CD1	2.26	0.65
46:DN:43:THR:O	46:DN:46:VAL:HG12	1.97	0.65
36:BA:106:C:H1'	57:BY:2:ARG:NH2	2.11	0.65
25:CZ:270:VAL:HG13	25:CZ:286:VAL:HG21	1.77	0.65
40:DE:9:VAL:HG12	40:DE:25:VAL:O	1.96	0.65
36:BA:2443:C:O2'	36:BA:2444:G:H5'	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:140:G:H1'	36:BA:141:A:H2	1.62	0.65
27:B1:84:GLY:O	27:B1:90:ILE:HD11	1.97	0.65
24:AY:61:C:H2'	24:AY:62:U:H5"	1.79	0.65
36:DA:234:C:H2'	36:DA:235:U:C6	2.30	0.65
36:BA:83:G:HO2'	36:BA:84:A:H8	1.41	0.65
14:CN:6:LEU:HB3	14:CN:23:ARG:NH2	2.11	0.65
1:AA:1157:A:H4'	1:AA:1158:C:O5'	1.96	0.65
36:BA:813:U:H2'	36:BA:814:C:C6	2.32	0.65
25:CZ:27:LEU:HD12	25:CZ:31:LEU:HG	1.77	0.65
36:DA:108:U:H2'	36:DA:109:G:H8	1.61	0.65
10:CJ:38:ILE:CG1	10:CJ:71:LEU:HB3	2.26	0.65
36:DA:286:C:H2'	36:DA:287:C:C6	2.30	0.65
36:BA:89:G:H3'	36:BA:90:U:C5'	2.27	0.65
42:DG:152:LEU:H	42:DG:152:LEU:HD23	1.62	0.65
13:AM:2:ALA:O	13:AM:9:ILE:HA	1.97	0.65
13:CM:2:ALA:O	13:CM:9:ILE:HA	1.96	0.65
57:DY:74:PRO:O	57:DY:75:ILE:HB	1.94	0.65
32:B6:5:VAL:HG11	36:BA:2283:C:H5'	1.78	0.65
28:B2:35:LEU:CD1	28:B2:50:ILE:HG13	2.20	0.65
32:B6:17:LYS:HB3	32:B6:18:ARG:NH1	2.11	0.65
9:CI:19:LEU:HD21	9:CI:59:PHE:CD2	2.31	0.65
13:AM:10:PRO:HB3	13:AM:18:ALA:HB1	1.79	0.65
17:CQ:53:LEU:HD23	17:CQ:54:GLY:N	2.12	0.65
50:DR:96:ARG:NH1	50:DR:117:VAL:HG23	2.12	0.65
16:CP:20:VAL:CG2	16:CP:32:TYR:HB2	2.26	0.65
36:BA:744:G:OP1	40:BE:132:HIS:HB3	1.96	0.65
1:AA:1321:C:H5"	1:AA:1322:C:C5'	2.26	0.65
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.77	0.65
19:CS:43:GLU:C	19:CS:45:VAL:H	2.00	0.65
36:DA:2467:C:H4'	49:DQ:123:HIS:ND1	2.10	0.65
12:AL:79:GLU:O	12:AL:80:HIS:HB2	1.95	0.65
9:AI:28:VAL:HG22	9:AI:63:ILE:HB	1.79	0.65
19:CS:24:ALA:O	19:CS:25:LYS:HB2	1.97	0.65
49:DQ:79:LEU:HD23	49:DQ:80:GLU:H	1.61	0.65
1:AA:673:G:H2'	1:AA:674:G:C8	2.30	0.65
36:DA:64:A:C4	56:DX:66:LEU:HD12	2.30	0.65
36:BA:2138:C:H2'	36:BA:2139:C:C6	2.31	0.65
2:AB:119:GLU:O	2:AB:122:PHE:HB3	1.96	0.65
36:BA:108:U:H2'	36:BA:109:G:H8	1.61	0.65
43:BH:18:GLU:HB2	43:BH:25:LYS:HB2	1.79	0.65
2:CB:119:GLU:O	2:CB:122:PHE:HB3	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.32	0.65
36:DA:2629:A:N3	36:DA:2629:A:H2'	2.11	0.65
32:D6:7:ILE:HB	32:D6:27:LYS:NZ	2.11	0.65
36:BA:2760:C:C2'	36:BA:2761:G:H5"	2.27	0.65
52:DT:27:THR:H	52:DT:49:VAL:HG12	1.62	0.65
42:BG:173:LEU:O	42:BG:178:PHE:HB2	1.96	0.65
50:BR:2:ARG:N	50:BR:2:ARG:HH11	1.95	0.65
3:AC:16:ARG:HH11	3:AC:16:ARG:CB	2.09	0.65
36:BA:2712:U:H1'	36:BA:2712(A):A:C8	2.31	0.65
54:BV:40:LEU:H	54:BV:47:VAL:HG13	1.60	0.65
16:CP:21:VAL:HG22	16:CP:21:VAL:O	1.96	0.65
1:CA:1104:G:O5'	2:CB:111:ARG:HD2	1.97	0.65
25:AZ:107:SER:OG	25:AZ:137:LYS:HD2	1.97	0.65
36:DA:2125:G:OP1	38:DC:40:THR:HG21	1.96	0.65
22:CW:6:G:N2	22:CW:67:C:N3	2.44	0.65
22:CV:52:G:H1	22:CV:62:C:H42	1.44	0.65
25:CZ:88:TYR:N	25:CZ:88:TYR:CD1	2.61	0.65
36:DA:1353:A:H2'	36:DA:1354:A:C8	2.32	0.65
25:AZ:88:TYR:N	25:AZ:88:TYR:CD1	2.61	0.65
3:AC:94:LEU:O	3:AC:95:THR:HB	1.96	0.65
1:AA:1432:G:OP1	52:BT:107:ASP:HB2	1.96	0.65
16:CP:8:ARG:HB3	16:CP:28:ARG:NH1	2.12	0.65
36:DA:34:C:H41	36:DA:447:A:H61	1.43	0.65
36:BA:2790:A:H2'	36:BA:2791:C:H5"	1.77	0.65
48:DP:135:LEU:HD13	48:DP:135:LEU:O	1.96	0.65
47:DO:94:ARG:HG2	47:DO:94:ARG:HH11	1.61	0.65
55:BW:59:VAL:HG21	55:BW:66:GLU:N	2.12	0.65
28:D2:2:LYS:HG3	28:D2:59:ARG:NH2	2.12	0.65
41:DF:192:LEU:C	41:DF:192:LEU:HD23	2.16	0.65
42:DG:47:LYS:NZ	42:DG:82:LEU:HB2	2.11	0.65
47:BO:104:ARG:HE	52:BT:33:LYS:HE3	1.61	0.65
52:DT:62:THR:HG22	52:DT:75:ILE:HG13	1.77	0.65
46:DN:58:ASP:O	46:DN:60:ILE:N	2.30	0.65
32:B6:14:THR:O	32:B6:49:HIS:HA	1.96	0.65
25:AZ:270:VAL:HG13	25:AZ:286:VAL:HG21	1.78	0.65
9:CI:88:TYR:O	9:CI:89:ASN:HB2	1.95	0.65
25:AZ:324:LYS:HD3	25:AZ:365:GLY:HA3	1.77	0.65
36:DA:2712:U:H1'	36:DA:2712(A):A:C8	2.31	0.65
50:DR:117:VAL:O	50:DR:118:GLU:HB2	1.97	0.65
1:AA:1065:U:H6	1:AA:1190:G:H21	1.44	0.65
40:BE:11:MET:HB2	40:BE:23:VAL:O	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:85:LYS:CD	53:DU:117:GLN:HE22	2.10	0.65
36:BA:244:A:H4'	48:BP:74:GLU:HG3	1.78	0.65
36:BA:448:U:H1'	41:BF:84:VAL:HG13	1.78	0.65
36:BA:944:G:H5'	36:BA:945:A:O5'	1.96	0.65
26:B0:27:GLU:OE1	36:BA:856:C:H1'	1.96	0.65
10:AJ:46:ARG:HG2	10:AJ:46:ARG:HH11	1.62	0.65
39:DD:26:LYS:O	39:DD:27:THR:HG22	1.96	0.65
42:BG:139:LEU:HD11	42:BG:149:VAL:HG11	1.78	0.65
58:BZ:30:ASN:C	58:BZ:30:ASN:HD22	2.00	0.65
36:DA:83:G:N2	36:DA:102:G:H2'	2.12	0.65
1:AA:358:U:C4'	25:AZ:234:ARG:C	2.61	0.65
58:BZ:123:ASP:O	58:BZ:124:ILE:HG12	1.97	0.65
49:BQ:141:GLN:HG2	58:BZ:72:ARG:HD3	1.78	0.65
13:CM:11:ARG:HG2	13:CM:12:ASN:ND2	2.12	0.65
25:AZ:114:PRO:HB2	36:BA:2660:A:O2'	1.96	0.65
36:DA:1516:C:C2'	36:DA:1517:G:H5"	2.26	0.65
25:AZ:131:ILE:O	25:AZ:168:VAL:HG13	1.96	0.65
43:BH:52:VAL:HG21	43:BH:69:ARG:CG	2.27	0.65
24:CY:72:U:C2'	24:CY:73:G:H5"	2.27	0.65
32:D6:5:VAL:N	32:D6:9:LEU:H	1.95	0.65
11:CK:57:THR:CG2	11:CK:60:ALA:H	2.09	0.65
24:CY:61:C:H2'	24:CY:62:U:C5'	2.27	0.65
24:CY:62:U:H6	24:CY:62:U:H5'	1.62	0.65
57:BY:46:LYS:HG2	57:BY:47:LYS:N	2.12	0.65
36:DA:89:G:H3'	36:DA:90:U:C5'	2.27	0.65
11:AK:38:ASN:HD22	11:AK:38:ASN:N	1.95	0.65
55:DW:69:LEU:HA	55:DW:108:GLY:O	1.96	0.65
58:BZ:133:ILE:N	58:BZ:134:PRO:HD3	2.11	0.65
36:DA:1473:G:H2'	36:DA:1474:C:O4'	1.96	0.65
42:BG:2:PRO:O	42:BG:3:LEU:HB2	1.97	0.65
57:DY:75:ILE:HG13	57:DY:76:CYS:H	1.61	0.65
48:BP:58:THR:C	48:BP:60:MET:N	2.50	0.65
49:DQ:140:ALA:HB1	58:DZ:99:TYR:CZ	2.31	0.65
27:B1:8:SER:HB3	27:B1:66:HIS:NE2	2.12	0.65
52:BT:27:THR:H	52:BT:49:VAL:HG12	1.62	0.65
48:DP:146:VAL:HG22	48:DP:147:LEU:N	2.06	0.65
4:AD:59:ARG:HH21	4:AD:62:GLN:HG3	1.62	0.65
42:BG:12:TYR:HA	42:BG:16:ARG:HG2	1.78	0.65
10:CJ:40:LEU:HD23	10:CJ:40:LEU:N	2.09	0.65
1:CA:186:C:H2'	1:CA:187:C:C6	2.31	0.65
12:CL:33:ARG:HD3	12:CL:62:SER:HB3	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.32	0.65
36:BA:2777:G:H5"	36:BA:2778:A:C5'	2.26	0.65
1:CA:1065:U:H6	1:CA:1190:G:H21	1.44	0.65
1:AA:1325:C:P	21:AU:15:ARG:NH2	2.70	0.65
41:DF:185:ASP:HA	41:DF:188:ARG:CD	2.27	0.65
39:BD:148:GLU:HB2	39:BD:151:LYS:HD2	1.79	0.65
55:DW:14:PRO:HG2	55:DW:78:GLU:HG3	1.78	0.65
36:BA:1499:C:O2'	36:BA:1500:G:H5'	1.97	0.65
1:CA:108:G:H5'	1:CA:109:A:H5"	1.78	0.65
51:DS:40:ILE:HG13	51:DS:41:ASP:N	2.10	0.65
6:CF:19:LEU:HD23	6:CF:19:LEU:O	1.97	0.65
37:BB:25:A:H2'	37:BB:25:A:N3	2.12	0.65
2:AB:96:ARG:HD3	2:AB:148:TYR:HE1	1.62	0.65
36:BA:774:A:H2	36:BA:787:U:HO2'	1.44	0.65
48:BP:58:THR:O	48:BP:60:MET:N	2.29	0.65
40:BE:57:LYS:HE3	40:BE:57:LYS:CA	2.21	0.65
22:AV:42:C:C5'	22:AV:42:C:H6	2.05	0.65
43:BH:85:LYS:O	43:BH:85:LYS:HE2	1.96	0.65
1:AA:359:U:P	25:AZ:235:GLY:HA2	2.37	0.65
55:BW:4:LYS:HG2	55:BW:5:ALA:N	2.11	0.65
36:DA:1887:C:C3'	36:DA:1888:G:H5"	2.27	0.65
41:BF:201:VAL:HA	41:BF:204:ASN:HD22	1.62	0.65
5:CE:12:LEU:HD23	5:CE:13:ILE:N	2.12	0.65
40:BE:51:PHE:O	40:BE:74:PRO:HB2	1.96	0.65
48:DP:84:ASN:CG	48:DP:116:GLY:HA2	2.17	0.65
31:D5:48:GLU:O	31:D5:49:CYS:SG	2.55	0.65
58:DZ:151:HIS:HB2	58:DZ:169:GLU:O	1.97	0.65
50:DR:28:LEU:O	50:DR:30:THR:N	2.29	0.65
12:CL:33:ARG:HG2	12:CL:60:LEU:HD12	1.77	0.65
5:AE:144:THR:O	5:AE:148:VAL:HG23	1.96	0.65
36:BA:1658:C:OP1	40:BE:132:HIS:ND1	2.30	0.65
25:AZ:152:MET:HE2	25:AZ:156:ASP:HB2	1.79	0.65
36:DA:2524:G:C8	36:DA:2524:G:H5'	2.31	0.65
16:CP:25:ARG:HG3	16:CP:25:ARG:HH11	1.61	0.65
36:BA:197:A:C8	36:BA:197:A:H5'	2.32	0.65
48:BP:45:LEU:HD13	48:BP:46:LYS:H	1.62	0.65
36:DA:197:A:H5'	36:DA:197:A:C8	2.31	0.65
18:AR:58:LEU:HD22	18:AR:62:GLU:HB3	1.79	0.65
1:CA:260:G:H2'	1:CA:261:U:C6	2.32	0.65
36:BA:191:A:H2'	36:BA:192:C:C6	2.32	0.65
1:AA:405:U:H3'	1:AA:406:G:H5'	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:10:G:H1	24:AY:25:C:N4	1.95	0.64
13:AM:9:ILE:HD12	13:AM:9:ILE:N	2.12	0.64
32:D6:17:LYS:HB3	32:D6:18:ARG:NH1	2.11	0.64
36:BA:1666:G:H2'	36:BA:1667:G:H5'	1.78	0.64
32:B6:11:LEU:HB3	32:B6:24:GLU:O	1.97	0.64
52:BT:32:TYR:O	52:BT:33:LYS:HB2	1.96	0.64
52:BT:48:ILE:HD12	52:BT:49:VAL:N	2.12	0.64
40:DE:38:THR:HB	40:DE:41:LYS:HG2	1.78	0.64
26:D0:62:LEU:HD23	26:D0:62:LEU:N	2.12	0.64
25:CZ:90:LYS:HE3	25:CZ:348:ASP:OD2	1.96	0.64
36:DA:970:C:H2'	36:DA:971:C:C6	2.30	0.64
39:BD:186:HIS:CD2	39:BD:188:GLU:HB2	2.32	0.64
24:AY:61:C:H2'	24:AY:62:U:C5'	2.27	0.64
36:BA:176:G:O2'	36:BA:177:G:H5'	1.98	0.64
3:AC:23:TYR:CD1	3:AC:24:ALA:N	2.65	0.64
2:CB:157:ARG:NH1	2:CB:157:ARG:HB3	2.12	0.64
49:BQ:101:ARG:HD2	49:BQ:102:VAL:H	1.62	0.64
1:CA:1157:A:H4'	1:CA:1158:C:O5'	1.97	0.64
1:CA:41:G:H2'	1:CA:42:G:C8	2.32	0.64
43:DH:89:ILE:O	43:DH:89:ILE:HG13	1.97	0.64
1:CA:1250:A:H4'	9:CI:68:GLY:H	1.62	0.64
13:AM:54:VAL:O	13:AM:58:GLU:HG2	1.98	0.64
1:AA:950:U:H2'	1:AA:951:G:C8	2.31	0.64
1:AA:882:C:O2'	1:AA:883:C:H5'	1.97	0.64
36:DA:958:U:H5"	49:DQ:14:ARG:CD	2.27	0.64
42:DG:144:ILE:HG23	42:DG:144:ILE:O	1.98	0.64
38:BC:43:VAL:HG23	38:BC:175:VAL:HG21	1.80	0.64
57:BY:75:ILE:HG13	57:BY:76:CYS:H	1.62	0.64
2:AB:200:ILE:CD1	2:AB:200:ILE:H	1.99	0.64
36:BA:1858:G:H2'	36:BA:1883:G:H22	1.62	0.64
43:DH:85:LYS:O	43:DH:85:LYS:HE2	1.97	0.64
48:BP:23:PRO:HB2	48:BP:33:ARG:CD	2.27	0.64
58:BZ:89:PHE:CE2	58:BZ:96:VAL:HG21	2.29	0.64
25:CZ:7:ARG:O	25:CZ:8:THR:HG22	1.98	0.64
58:DZ:151:HIS:HB2	58:DZ:170:THR:HA	1.80	0.64
53:BU:61:TRP:O	53:BU:65:ILE:HD13	1.96	0.64
36:BA:1516:C:C2'	36:BA:1517:G:H5"	2.27	0.64
3:CC:16:ARG:HD3	3:CC:17:ASP:H	1.62	0.64
22:CW:38:A:H2'	22:CW:39:U:C4'	2.27	0.64
25:CZ:191:GLY:CA	25:CZ:197:ASP:CG	2.65	0.64
1:AA:977:A:H2'	1:AA:977:A:N3	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:40:C:C2'	24:AY:41:C:H5"	2.26	0.64
21:CU:8:THR:O	21:CU:12:LYS:HB2	1.97	0.64
1:AA:723:U:H2'	1:AA:723:U:O2	1.96	0.64
22:AW:1:G:H2'	22:AW:1:G:N3	2.11	0.64
36:BA:2801(A):A:H5'	36:BA:2802:G:C8	2.32	0.64
51:DS:15:ARG:O	51:DS:18:ILE:HD11	1.97	0.64
36:BA:1221(A):C:H2'	36:BA:1222:C:H6	1.60	0.64
14:AN:23:ARG:HD2	14:AN:28:GLY:O	1.98	0.64
36:DA:2022:U:O2'	36:DA:2617:C:H5'	1.97	0.64
1:AA:953:G:H5'	1:AA:965:A:H61	1.61	0.64
56:DX:64:LYS:NZ	56:DX:73:ARG:HH21	1.94	0.64
36:DA:2720:U:O2	36:DA:2720:U:H2'	1.97	0.64
38:BC:214:VAL:CG2	38:BC:224:ILE:HD13	2.26	0.64
43:BH:89:ILE:O	43:BH:89:ILE:HG13	1.97	0.64
36:BA:208:C:H2'	36:BA:209:C:C6	2.33	0.64
36:DA:448:U:H1'	41:DF:84:VAL:HG13	1.79	0.64
48:DP:80:TYR:HD1	48:DP:111:ARG:HB3	1.61	0.64
43:BH:105:LEU:HD23	43:BH:105:LEU:H	1.62	0.64
8:AH:19:VAL:HG23	8:AH:21:LYS:HG3	1.80	0.64
36:BA:1813:G:H1'	39:BD:50:THR:OG1	1.97	0.64
36:DA:2760:C:C2'	36:DA:2761:G:H5"	2.27	0.64
32:B6:15:GLU:OE1	32:B6:18:ARG:NE	2.30	0.64
52:BT:27:THR:HG23	52:BT:28:VAL:N	2.12	0.64
52:DT:30:VAL:HG12	52:DT:44:ASP:CG	2.17	0.64
43:DH:121:ILE:HD13	43:DH:144:VAL:HG21	1.79	0.64
2:CB:172:ILE:CD1	2:CB:172:ILE:H	2.10	0.64
48:BP:23:PRO:CD	48:BP:33:ARG:HE	2.11	0.64
36:BA:2635:C:OP1	40:BE:77:ILE:HG21	1.97	0.64
40:BE:33:VAL:HG12	40:BE:90:THR:HA	1.78	0.64
54:DV:18:LEU:CD2	54:DV:19:LYS:H	2.10	0.64
36:BA:2580:U:H4'	40:BE:130:GLY:HA3	1.80	0.64
12:CL:77:LEU:HD21	12:CL:107:ALA:HA	1.78	0.64
13:CM:83:ASP:OD1	13:CM:84:ILE:N	2.30	0.64
50:DR:96:ARG:HH12	50:DR:117:VAL:HG23	1.61	0.64
36:BA:1278:A:H5"	50:BR:36:THR:HG22	1.80	0.64
50:BR:28:LEU:O	50:BR:30:THR:N	2.29	0.64
10:AJ:33:GLN:HB2	10:AJ:75:ILE:CD1	2.27	0.64
48:DP:40:SER:O	48:DP:41:ARG:HD2	1.98	0.64
4:AD:3:ARG:HH11	4:AD:118:ARG:HD3	1.61	0.64
21:AU:6:ARG:CD	21:AU:15:ARG:NH1	2.60	0.64
42:BG:114:ILE:HG23	42:BG:116:ASP:O	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:6:G:N2	22:AW:67:C:N3	2.44	0.64
36:BA:2377:A:O2'	36:BA:2378:A:H5'	1.97	0.64
24:CY:61:C:H2'	24:CY:62:U:H5"	1.79	0.64
56:BX:64:LYS:NZ	56:BX:73:ARG:HH21	1.95	0.64
1:AA:950:U:H2'	1:AA:951:G:H8	1.63	0.64
36:BA:902:C:H2'	36:BA:903:C:C6	2.32	0.64
36:BA:708:C:H42	36:BA:723:G:H1	1.45	0.64
1:CA:636:U:H2'	1:CA:637:G:C8	2.33	0.64
36:BA:1290:C:H2'	36:BA:1291:C:C6	2.32	0.64
36:BA:2870:C:H5"	50:BR:65:LEU:HD21	1.79	0.64
3:AC:134:ILE:O	3:AC:138:VAL:HG12	1.96	0.64
38:BC:190:ARG:O	38:BC:194:ARG:HG3	1.97	0.64
9:CI:28:VAL:HG22	9:CI:63:ILE:HB	1.77	0.64
36:DA:1208:C:O2	36:DA:1208:C:H2'	1.97	0.64
13:CM:22:ILE:HB	13:CM:25:ILE:HD12	1.80	0.64
34:B8:6:THR:HG23	34:B8:62:LEU:HD12	1.78	0.64
36:BA:2308:G:N7	36:BA:2310:A:H5'	2.12	0.64
42:DG:72:ARG:HD3	42:DG:86:MET:HA	1.78	0.64
43:BH:169:VAL:HG22	43:BH:170:ARG:N	2.08	0.64
36:BA:1542:A:C8	36:BA:1544:A:H5'	2.32	0.64
48:BP:33:ARG:O	48:BP:34:GLY:C	2.35	0.64
10:AJ:40:LEU:N	10:AJ:40:LEU:HD23	2.11	0.64
36:DA:1188:U:O2'	36:DA:1189:A:H5'	1.97	0.64
5:AE:33:VAL:HG12	5:AE:112:LEU:HD12	1.78	0.64
31:D5:49:CYS:O	31:D5:56:LYS:HD3	1.97	0.64
38:BC:34:THR:HG22	38:BC:34:THR:O	1.97	0.64
4:CD:98:GLU:HG2	4:CD:189:PRO:HG3	1.80	0.64
52:DT:100:TYR:HD2	52:DT:103:ARG:NH2	1.96	0.64
17:AQ:18:THR:HG23	17:AQ:69:LYS:NZ	2.12	0.64
36:BA:105:C:O2'	57:BY:2:ARG:HG3	1.97	0.64
36:BA:969:U:H2'	36:BA:970:C:C6	2.33	0.64
36:BA:970:C:H2'	36:BA:971:C:C6	2.32	0.64
36:DA:2472:G:H5'	36:DA:2473:U:C5'	2.27	0.64
32:D6:8:LYS:HE3	32:D6:25:LYS:HD3	1.79	0.64
52:DT:58:ASN:N	52:DT:58:ASN:HD22	1.92	0.64
40:BE:61:ARG:HB3	40:BE:62:PRO:HD3	1.78	0.64
52:BT:78:LEU:C	52:BT:79:HIS:HD2	2.00	0.64
1:CA:1250:A:H4'	9:CI:68:GLY:N	2.13	0.64
36:DA:2688:U:H1'	36:DA:2721:A:N6	2.12	0.64
36:BA:709:U:H2'	36:BA:710:G:C8	2.32	0.64
36:BA:1639:U:C2'	36:BA:1640:C:H5"	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:108:G:H5'	1:AA:109:A:H5"	1.80	0.64
36:BA:286:C:H2'	36:BA:287:C:C6	2.32	0.64
36:BA:2208:A:H1'	36:BA:2219:G:C5	2.33	0.64
46:DN:76:SER:HB3	46:DN:81:GLY:HA3	1.78	0.64
1:CA:299:G:H2'	1:CA:300:A:C8	2.33	0.64
36:DA:645:C:H5'	36:DA:646:A:OP2	1.98	0.64
48:DP:58:THR:C	48:DP:60:MET:N	2.51	0.64
36:DA:2189:U:H2'	36:DA:2190:G:C4'	2.28	0.64
57:BY:84:ARG:CZ	57:BY:97:ARG:HB3	2.28	0.64
1:AA:358:U:C5'	25:AZ:234:ARG:O	2.45	0.64
36:BA:26:G:OP1	55:BW:80:PRO:HB3	1.98	0.64
43:DH:144:VAL:O	43:DH:148:ILE:HG12	1.96	0.64
58:BZ:72:ARG:HG3	58:BZ:89:PHE:HB2	1.79	0.64
54:DV:52:VAL:HG13	54:DV:55:ALA:HB3	1.79	0.64
48:BP:96:THR:HG22	48:BP:126:VAL:HB	1.79	0.64
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.33	0.64
46:BN:73:THR:HG22	46:BN:82:LEU:HD11	1.80	0.64
1:CA:1030(D):A:H62	1:CA:1031:G:H21	1.46	0.64
36:DA:105:C:O2'	57:DY:2:ARG:HG3	1.97	0.64
51:DS:66:ALA:HA	51:DS:69:VAL:CG1	2.27	0.64
24:AY:72:U:C2'	24:AY:73:G:H5"	2.28	0.64
36:BA:907:U:OP1	49:BQ:24:GLY:N	2.24	0.64
36:BA:2219:G:O2'	36:BA:2220:G:H5'	1.97	0.64
1:CA:1525:G:O2'	1:CA:1526:G:H5'	1.98	0.64
36:BA:958:U:H5"	49:BQ:14:ARG:CD	2.27	0.64
54:BV:68:LYS:HA	54:BV:68:LYS:HE2	1.78	0.64
39:BD:26:LYS:N	39:BD:26:LYS:HE2	2.12	0.64
39:BD:30:GLU:CD	39:BD:63:ARG:HH21	2.01	0.64
28:D2:9:GLN:O	28:D2:10:LEU:HD23	1.96	0.64
28:D2:29:LYS:CD	28:D2:32:LEU:HD13	2.21	0.64
31:D5:3:LYS:O	31:D5:4:HIS:C	2.36	0.64
10:AJ:49:VAL:HG22	14:AN:41:ARG:HB2	1.79	0.64
42:DG:114:ILE:HG22	42:DG:117:PHE:HB2	1.80	0.64
42:DG:96:ARG:O	42:DG:98:ARG:HG2	1.98	0.64
36:BA:2309:A:H2'	36:BA:2310:A:H5"	1.79	0.64
1:CA:1537:U:C5'	18:CR:54:ARG:NH2	2.59	0.64
43:DH:83:TYR:HB3	43:DH:135:GLY:H	1.61	0.64
5:AE:7:GLU:HG2	5:AE:112:LEU:HD21	1.79	0.64
5:CE:33:VAL:HG12	5:CE:112:LEU:HD12	1.78	0.64
1:CA:353:A:H5'	1:CA:353:A:C8	2.29	0.64
25:CZ:202:LEU:O	25:CZ:206:ILE:HB	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:260:G:H2'	1:AA:261:U:C6	2.33	0.64
36:BA:2377:A:H4'	51:BS:107:GLU:O	1.97	0.64
39:DD:37:LEU:HD23	39:DD:38:LYS:N	2.13	0.64
40:DE:61:ARG:HB3	40:DE:62:PRO:HD3	1.80	0.64
27:B1:88:LYS:O	27:B1:91:LYS:HB3	1.97	0.64
28:B2:3:LEU:HB3	36:BA:98:G:OP1	1.98	0.64
36:DA:597:U:O2'	48:DP:15:ARG:HG2	1.97	0.64
53:DU:110:VAL:O	53:DU:113:ALA:HB3	1.98	0.64
34:B8:30:ARG:HA	34:B8:30:ARG:HE	1.62	0.64
36:BA:645:C:H5'	36:BA:646:A:OP2	1.97	0.64
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.80	0.64
1:AA:1239:A:H4'	1:AA:1240:U:O5'	1.98	0.64
1:CA:405:U:H3'	1:CA:406:G:H5'	1.78	0.64
55:BW:69:LEU:HA	55:BW:108:GLY:O	1.98	0.64
39:BD:31:LYS:HZ1	39:BD:33:LEU:HG	1.62	0.64
13:CM:9:ILE:N	13:CM:9:ILE:HD12	2.12	0.64
31:B5:3:LYS:O	31:B5:4:HIS:C	2.35	0.64
41:BF:25:PRO:HB3	41:BF:119:ARG:HD3	1.79	0.64
36:DA:2761:G:H2'	36:DA:2762:G:C5'	2.20	0.64
51:DS:89:ARG:HG2	51:DS:92:TYR:HA	1.79	0.64
52:BT:33:LYS:NZ	52:BT:43:GLN:HE21	1.95	0.64
52:BT:84:GLN:O	52:BT:85:LYS:HG3	1.97	0.64
48:DP:147:LEU:HG	48:DP:148:LEU:N	2.08	0.64
40:DE:48:GLN:HB2	40:DE:80:GLU:HG2	1.80	0.64
1:CA:963:G:N2	10:CJ:55:LYS:HE2	2.12	0.64
53:DU:91:ASP:O	53:DU:95:LEU:HB2	1.97	0.64
41:BF:125:LEU:HD23	41:BF:125:LEU:N	2.13	0.64
4:AD:98:GLU:HG2	4:AD:189:PRO:HG3	1.80	0.64
12:CL:75:HIS:HA	12:CL:102:ARG:NH2	2.13	0.64
50:DR:28:LEU:HD13	50:DR:114:VAL:HG23	1.79	0.64
50:BR:117:VAL:O	50:BR:118:GLU:HB2	1.97	0.64
20:CT:30:LYS:HD3	20:CT:72:LEU:HD21	1.80	0.64
58:BZ:60:GLU:HA	58:BZ:60:GLU:OE1	1.97	0.64
38:BC:78:ALA:O	38:BC:79:LYS:HB2	1.98	0.64
36:BA:943:U:OP2	48:BP:38:GLN:CD	2.36	0.64
31:D5:25:LEU:HD12	55:DW:19:LEU:HG	1.79	0.64
53:BU:3:ARG:HH12	53:BU:5:LYS:HE2	1.62	0.64
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.80	0.64
50:BR:12:ARG:HD3	50:BR:16:HIS:CE1	2.32	0.64
18:AR:53:ARG:HH11	18:AR:60:ALA:HA	1.62	0.64
55:DW:59:VAL:HG21	55:DW:66:GLU:N	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:950:U:H2'	1:CA:951:G:C8	2.32	0.64
4:CD:148:VAL:HG12	4:CD:152:SER:HB2	1.79	0.64
13:CM:17:VAL:O	13:CM:20:THR:HB	1.97	0.64
36:BA:329:G:H22	57:BY:19:LYS:HE3	1.62	0.64
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.33	0.64
36:DA:2870:C:H5"	50:DR:65:LEU:HD21	1.80	0.64
39:DD:45:ASN:CG	39:DD:46:GLN:H	1.97	0.64
25:CZ:355:LEU:CB	25:CZ:356:PRO:HD3	2.22	0.64
39:BD:63:ARG:NH1	39:BD:63:ARG:HG3	2.13	0.64
24:AY:24:G:H2'	24:AY:25:C:H5'	1.80	0.64
36:DA:2186:G:H2'	36:DA:2187:G:N9	2.13	0.64
51:DS:88:ASP:OD2	51:DS:89:ARG:N	2.29	0.64
36:BA:2189:U:H2'	36:BA:2190:G:C4'	2.27	0.64
36:BA:259:G:H1'	36:BA:621:A:O2'	1.98	0.64
33:B7:34:ARG:NH1	33:B7:34:ARG:HG3	2.12	0.64
24:AY:64:U:H4'	25:AZ:392:GLY:H	1.61	0.64
36:BA:1294:U:C5'	36:BA:1294:U:H6	2.10	0.64
40:BE:2:LYS:HD3	40:BE:95:ILE:HG22	1.80	0.64
53:BU:91:ASP:OD1	53:BU:96:ALA:HB2	1.98	0.64
50:BR:96:ARG:HH12	50:BR:117:VAL:HG23	1.63	0.64
3:CC:5:ILE:H	3:CC:5:ILE:HD13	1.56	0.64
25:CZ:152:MET:CE	25:CZ:156:ASP:HB2	2.28	0.64
2:CB:114:ARG:HD3	2:CB:114:ARG:O	1.97	0.64
36:DA:2777:G:H5"	36:DA:2778:A:C5'	2.26	0.64
7:AG:6:ARG:HH21	7:AG:94:ARG:HH12	1.43	0.64
12:CL:25:PRO:C	12:CL:27:LEU:H	2.01	0.64
36:BA:1019:U:O2'	36:BA:1021:A:H2	1.79	0.64
36:BA:2657:A:H5"	36:BA:2658:C:C5	2.33	0.64
48:BP:121:LYS:O	48:BP:123:LEU:HD23	1.96	0.64
19:CS:45:VAL:HG23	19:CS:46:GLY:N	2.12	0.64
26:B0:27:GLU:OE1	26:B0:27:GLU:N	2.25	0.64
1:CA:636:U:H2'	1:CA:637:G:H8	1.63	0.64
1:AA:473:G:H5"	16:AP:81:ARG:NE	2.13	0.64
46:DN:19:GLU:HA	46:DN:59:LYS:HB2	1.80	0.64
1:CA:977:A:N3	1:CA:977:A:H2'	2.11	0.64
48:BP:49:ARG:HG3	48:BP:49:ARG:HH11	1.61	0.64
36:DA:2101:G:C3'	36:DA:2102:U:H5"	2.28	0.64
42:DG:64:THR:HG23	42:DG:66:GLN:N	2.13	0.64
36:BA:1301:A:HO2'	36:BA:1302:A:H2'	1.58	0.64
1:CA:979:C:C3'	1:CA:980:C:H5"	2.20	0.64
58:DZ:51:ALA:HB1	58:DZ:57:ILE:HD11	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:63:VAL:HA	28:B2:66:GLU:HG2	1.80	0.64
2:CB:200:ILE:CD1	2:CB:200:ILE:H	1.98	0.64
26:B0:51:VAL:HG21	26:B0:79:VAL:O	1.96	0.64
31:B5:44:THR:CG2	50:BR:101:ALA:N	2.61	0.64
39:BD:267:SER:HB3	39:BD:270:ILE:HD11	1.80	0.64
31:D5:44:THR:HG23	50:DR:101:ALA:N	2.12	0.64
36:BA:2101:G:C3'	36:BA:2102:U:H5"	2.28	0.64
40:DE:33:VAL:HG12	40:DE:90:THR:HA	1.79	0.64
39:DD:176:ARG:NH1	39:DD:176:ARG:HG2	2.13	0.64
38:DC:119:VAL:O	38:DC:123:VAL:HG12	1.98	0.64
54:BV:99:ILE:N	54:BV:99:ILE:HD13	2.13	0.64
22:CW:30:G:H2'	22:CW:31:A:H8	1.63	0.64
12:AL:43:VAL:CG2	12:AL:93:LEU:HD22	2.28	0.64
48:DP:105:LEU:O	48:DP:106:LEU:HB2	1.96	0.64
25:CZ:63:ILE:HA	25:CZ:88:TYR:HE2	1.61	0.64
28:B2:52:ASP:HA	28:B2:55:ARG:HB2	1.80	0.64
2:AB:155:LEU:HD21	2:AB:159:PRO:HG3	1.80	0.64
36:BA:2688:U:H1'	36:BA:2721:A:N6	2.12	0.64
38:BC:30:LYS:HE2	38:BC:180:PHE:O	1.97	0.64
36:BA:848:G:C4	36:BA:933:A:H8	2.16	0.64
36:BA:2629:A:N3	36:BA:2629:A:H2'	2.11	0.64
8:CH:18:ARG:HH11	8:CH:18:ARG:CA	2.10	0.64
6:AF:19:LEU:HD23	6:AF:19:LEU:O	1.98	0.64
13:CM:87:TYR:HD1	19:CS:81:ARG:HH22	1.44	0.64
31:B5:4:HIS:C	36:BA:2056:G:H22	2.00	0.64
36:BA:833:U:H5"	48:BP:48:PRO:HB2	1.78	0.64
25:CZ:272:MET:HE3	25:CZ:284:ASP:HB2	1.78	0.64
25:AZ:90:LYS:HE3	25:AZ:348:ASP:OD2	1.97	0.64
13:CM:10:PRO:HB3	13:CM:18:ALA:HB1	1.79	0.64
5:CE:7:GLU:HG2	5:CE:112:LEU:HD21	1.79	0.64
1:CA:189(H):G:O2'	1:CA:189(I):G:H8	1.81	0.64
36:DA:745:G:H2'	36:DA:746:A:H5'	1.78	0.64
20:AT:30:LYS:HD3	20:AT:72:LEU:HD21	1.80	0.64
43:DH:127:GLU:HB2	43:DH:130:ARG:HB2	1.80	0.64
21:AU:6:ARG:CZ	21:AU:15:ARG:CZ	2.76	0.64
25:AZ:145:GLU:OE2	25:AZ:149:LEU:HD22	1.98	0.64
36:DA:612:C:C2'	36:DA:613:G:H5"	2.28	0.64
22:AW:38:A:H2'	22:AW:39:U:C4'	2.27	0.64
36:DA:2801(A):A:H5'	36:DA:2802:G:C8	2.32	0.64
36:DA:106:C:H1'	57:DY:2:ARG:NH2	2.12	0.64
3:CC:91:LEU:HB2	3:CC:99:VAL:HG21	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1217:C:OP1	14:AN:9:LYS:HE3	1.98	0.64
55:BW:14:PRO:HG2	55:BW:78:GLU:HG3	1.78	0.64
1:CA:346:G:H2'	1:CA:346:G:N3	2.13	0.64
1:AA:1310:G:O2'	1:AA:1311:G:H5'	1.97	0.64
24:CY:16:H2U:H5'	24:CY:17:H2U:C5'	2.28	0.64
39:DD:26:LYS:N	39:DD:26:LYS:HE2	2.12	0.63
24:CY:24:G:H2'	24:CY:25:C:H5'	1.80	0.63
36:DA:1599:C:H2'	36:DA:1600:C:C6	2.33	0.63
42:BG:86:MET:N	42:BG:87:PRO:HD3	2.13	0.63
36:DA:1858:G:H2'	36:DA:1883:G:H22	1.63	0.63
36:BA:2186:G:H2'	36:BA:2187:G:N9	2.13	0.63
52:DT:80:SER:CB	52:DT:81:PRO:HD3	2.22	0.63
36:BA:1887:C:C3'	36:BA:1888:G:H5"	2.28	0.63
36:DA:259:G:H1'	36:DA:621:A:O2'	1.98	0.63
41:DF:39:TRP:CD1	41:DF:101:LEU:HB2	2.32	0.63
3:AC:16:ARG:HD3	3:AC:17:ASP:H	1.63	0.63
1:AA:963:G:H21	10:AJ:55:LYS:NZ	1.95	0.63
36:DA:744:G:OP1	40:DE:132:HIS:HB3	1.97	0.63
36:DA:612:C:H2'	36:DA:613:G:H5"	1.79	0.63
11:AK:121:PRO:HG2	11:AK:126:ARG:CB	2.28	0.63
52:DT:23:ARG:O	52:DT:25:GLY:N	2.31	0.63
54:DV:34:GLU:HG3	54:DV:58:VAL:HG22	1.81	0.63
36:DA:1569:A:O2'	39:DD:38:LYS:HG3	1.97	0.63
1:CA:45:U:H2'	1:CA:46:G:H8	1.63	0.63
13:CM:108:ARG:HG3	13:CM:108:ARG:NH1	2.11	0.63
35:D9:10:ILE:N	35:D9:10:ILE:HD12	2.13	0.63
46:DN:6:PRO:HB2	46:DN:9:VAL:CG2	2.29	0.63
36:BA:2138:C:H2'	36:BA:2139:C:H6	1.61	0.63
41:BF:104:LYS:O	41:BF:108:LYS:HG2	1.98	0.63
1:AA:189(H):G:O2'	1:AA:189(I):G:H8	1.81	0.63
44:DJ:128:UNK:C	44:DJ:130:UNK:H	2.11	0.63
4:AD:148:VAL:HG12	4:AD:152:SER:HB2	1.79	0.63
36:DA:2630:G:H21	36:DA:2892:A:H1'	1.63	0.63
36:DA:1242:A:H5'	36:DA:1243:G:OP2	1.97	0.63
24:CY:57:G:H2'	24:CY:58:A:H5'	1.80	0.63
1:AA:487:A:H2'	1:AA:488:C:O4'	1.97	0.63
36:DA:191:A:H2'	36:DA:192:C:C6	2.33	0.63
39:DD:109:ASP:HB2	39:DD:197:GLY:HA2	1.79	0.63
2:CB:215:LEU:O	2:CB:219:VAL:HG23	1.98	0.63
42:BG:64:THR:HG23	42:BG:66:GLN:H	1.62	0.63
22:AV:47:U:H3'	22:AV:48:C:H5'	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:27:VAL:HG12	57:DY:29:GLU:OE1	1.98	0.63
42:BG:136:ARG:O	42:BG:154:GLY:HA2	1.99	0.63
57:BY:7:VAL:HG12	57:BY:83:THR:HG21	1.80	0.63
26:D0:14:ARG:HD2	36:DA:2279:G:O6	1.98	0.63
42:BG:8:LYS:O	42:BG:11:TYR:HB3	1.98	0.63
48:DP:85:LEU:HA	48:DP:88:LEU:HB3	1.80	0.63
54:BV:52:VAL:HG13	54:BV:55:ALA:HB3	1.80	0.63
2:AB:114:ARG:HD3	2:AB:114:ARG:O	1.99	0.63
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.78	0.63
1:CA:706:A:C4'	11:CK:29:ILE:HD11	2.27	0.63
40:DE:11:MET:HB2	40:DE:23:VAL:O	1.97	0.63
36:DA:860:U:C5	36:DA:917:A:N7	2.63	0.63
4:CD:3:ARG:HH11	4:CD:118:ARG:HD3	1.61	0.63
25:CZ:193:ASN:HB2	25:CZ:196:VAL:HB	1.80	0.63
51:BS:15:ARG:O	51:BS:18:ILE:HD11	1.99	0.63
52:BT:115:ARG:HG3	52:BT:115:ARG:NH1	2.13	0.63
36:DA:1720:U:C3'	36:DA:1721:G:H5"	2.28	0.63
54:BV:34:GLU:HG3	54:BV:58:VAL:HG22	1.80	0.63
35:B9:7:VAL:HG22	35:B9:34:GLN:HG2	1.81	0.63
5:AE:101:ILE:O	5:AE:120:THR:HB	1.99	0.63
36:DA:2396:G:O2'	36:DA:2397:G:H5'	1.96	0.63
1:AA:346:G:N3	1:AA:346:G:H2'	2.13	0.63
36:DA:208:C:H2'	36:DA:209:C:C6	2.34	0.63
1:AA:624:C:H2'	1:AA:625:G:H8	1.64	0.63
39:DD:34:VAL:CG2	39:DD:35:LYS:H	2.07	0.63
36:DA:83:G:HO2'	36:DA:84:A:H8	1.44	0.63
32:D6:11:LEU:HB3	32:D6:24:GLU:O	1.98	0.63
20:AT:50:GLU:H	20:AT:99:LEU:HD12	1.64	0.63
30:D4:12:ALA:HB2	30:D4:29:PRO:HA	1.81	0.63
42:DG:11:TYR:HA	42:DG:15:VAL:CG2	2.27	0.63
36:BA:2313:C:H5'	36:BA:2313:C:H6	1.62	0.63
36:BA:110:G:O2'	36:BA:111:A:H5'	1.99	0.63
42:BG:16:ARG:N	42:BG:17:PRO:HD2	2.14	0.63
36:BA:2303:G:H4'	42:BG:124:SER:O	1.97	0.63
36:DA:2469:A:O2'	49:DQ:56:ARG:HD2	1.97	0.63
54:BV:19:LYS:NZ	54:BV:20:LEU:H	1.96	0.63
54:BV:39:LEU:HA	54:BV:47:VAL:CG1	2.27	0.63
50:DR:103:ARG:NE	55:DW:40:ASN:HD21	1.96	0.63
36:DA:1057:A:H2'	36:DA:1058:G:H8	1.63	0.63
49:BQ:135:ASP:H	49:BQ:137:TYR:HD2	1.44	0.63
36:DA:1222:C:H2'	36:DA:1223:G:H5"	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:84:LEU:C	20:CT:86:ARG:H	2.02	0.63
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.12	0.63
49:DQ:101:ARG:HD2	49:DQ:102:VAL:N	2.13	0.63
1:CA:1142:G:H2'	1:CA:1143:G:O4'	1.99	0.63
13:AM:87:TYR:HD1	19:AS:81:ARG:NH2	1.96	0.63
36:BA:2201:C:O2'	36:BA:2202:C:H5'	1.99	0.63
16:AP:18:ARG:HD3	16:AP:35:LYS:HD2	1.80	0.63
13:CM:116:THR:O	13:CM:116:THR:HG22	1.98	0.63
36:BA:2389:G:H5"	36:BA:2390:U:O4'	1.99	0.63
48:DP:20:GLY:O	48:DP:21:ARG:HB2	1.98	0.63
38:DC:72:VAL:HG23	38:DC:111:ASP:HB3	1.79	0.63
58:DZ:18:LEU:H	58:DZ:18:LEU:HD22	1.62	0.63
16:CP:64:ALA:O	16:CP:66:PRO:HD3	1.98	0.63
48:BP:20:GLY:O	48:BP:21:ARG:HB2	1.97	0.63
36:DA:813:U:H2'	36:DA:814:C:C6	2.32	0.63
36:DA:2219:G:O2'	36:DA:2220:G:H5'	1.99	0.63
1:CA:487:A:H2'	1:CA:488:C:O4'	1.98	0.63
36:DA:2744:G:N2	43:DH:143:GLN:OE1	2.31	0.63
24:AY:57:G:H2'	24:AY:58:A:H5'	1.80	0.63
28:D2:10:LEU:HD13	28:D2:63:VAL:HG21	1.79	0.63
36:DA:666:G:H4'	48:DP:49:ARG:NH1	2.14	0.63
30:D4:7:PRO:O	30:D4:8:LYS:HB3	1.99	0.63
58:DZ:128:VAL:HG22	58:DZ:129:SER:H	1.63	0.63
52:DT:32:TYR:O	52:DT:33:LYS:HB2	1.97	0.63
2:CB:44:LEU:H	2:CB:44:LEU:HD12	1.62	0.63
39:DD:183:ARG:HD2	39:DD:269:PHE:O	1.98	0.63
36:DA:1542:A:C8	36:DA:1544:A:H5'	2.34	0.63
42:BG:13:GLU:HG3	42:BG:14:GLU:HG3	1.81	0.63
48:DP:23:PRO:C	48:DP:33:ARG:CZ	2.67	0.63
4:CD:18:LYS:HE3	4:CD:31:CYS:HB2	1.78	0.63
6:AF:97:PHE:O	18:AR:31:LEU:HD23	1.98	0.63
25:AZ:19:HIS:NE2	36:BA:2661:G:OP1	2.32	0.63
40:BE:4:ILE:HD11	40:BE:28:ALA:CB	2.27	0.63
48:BP:97:PRO:O	48:BP:98:GLU:HB3	1.98	0.63
36:DA:1278:A:H5"	50:DR:36:THR:HG22	1.80	0.63
12:AL:110:VAL:HG23	12:AL:120:TYR:HB3	1.81	0.63
35:B9:14:CYS:SG	35:B9:27:CYS:HB2	2.38	0.63
58:DZ:122:ARG:HB3	58:DZ:122:ARG:HH11	1.63	0.63
1:CA:1325:C:P	21:CU:15:ARG:NH2	2.72	0.63
27:D1:66:HIS:O	27:D1:67:ILE:HG13	1.98	0.63
25:CZ:187:LYS:HD2	25:CZ:187:LYS:H	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:12:ARG:HD3	50:DR:16:HIS:CE1	2.33	0.63
19:CS:5:LEU:C	19:CS:6:LYS:HD3	2.19	0.63
36:DA:268:C:H2'	36:DA:268:C:O2	1.98	0.63
48:DP:46:LYS:HB2	48:DP:52:GLU:HG2	1.80	0.63
25:AZ:34:VAL:HG21	25:AZ:199:ILE:HG21	1.79	0.63
48:DP:80:TYR:CD1	48:DP:111:ARG:HB3	2.33	0.63
1:CA:532:A:N6	1:CA:1206:G:O2'	2.31	0.63
39:DD:131:LEU:HB2	39:DD:136:ILE:HD11	1.80	0.63
24:CY:75:C:C5	25:CZ:232:THR:OG1	2.52	0.63
10:AJ:29:ARG:O	10:AJ:30:SER:HB3	1.99	0.63
9:CI:114:TYR:HE2	10:CJ:59:SER:HA	1.62	0.63
25:CZ:355:LEU:CB	25:CZ:356:PRO:CD	2.60	0.63
42:DG:91:ARG:HD3	42:DG:93:THR:HG22	1.81	0.63
42:BG:86:MET:O	42:BG:86:MET:HG2	1.99	0.63
57:BY:13:VAL:O	57:BY:24:VAL:HG13	1.98	0.63
1:CA:723:U:O2	1:CA:723:U:H2'	1.98	0.63
42:DG:102:PHE:O	42:DG:103:LEU:HB2	1.98	0.63
41:BF:135:LYS:HB3	41:BF:138:GLU:CD	2.19	0.63
36:DA:1068:G:N3	36:DA:1068:G:H2'	2.13	0.63
51:BS:89:ARG:HB3	51:BS:92:TYR:CB	2.28	0.63
48:DP:115:LEU:HA	48:DP:131:SER:OG	1.98	0.63
20:AT:91:LEU:O	20:AT:94:ALA:HB3	1.99	0.63
36:DA:1294:U:H6	36:DA:1294:U:H5'	1.62	0.63
54:BV:2:PHE:CB	54:BV:42:GLY:HA2	2.27	0.63
38:BC:119:VAL:O	38:BC:123:VAL:HG12	1.98	0.63
25:CZ:196:VAL:O	25:CZ:196:VAL:HG13	1.98	0.63
36:DA:611:C:H2'	36:DA:612:C:C6	2.34	0.63
16:CP:25:ARG:HB2	16:CP:25:ARG:NH1	2.12	0.63
41:BF:89:VAL:HG12	41:BF:90:PHE:N	2.14	0.63
36:DA:2842:G:O2'	36:DA:2843:G:H5'	1.97	0.63
12:CL:8:ASN:HD22	17:CQ:34:LYS:NZ	1.96	0.63
36:DA:1221(A):C:H2'	36:DA:1222:C:H6	1.62	0.63
52:DT:78:LEU:C	52:DT:79:HIS:HD2	2.01	0.63
2:CB:134:GLU:C	2:CB:136:VAL:H	2.02	0.63
1:CA:950:U:H2'	1:CA:951:G:H8	1.64	0.63
1:AA:1228:C:OP1	13:AM:115:LYS:HE3	1.99	0.63
36:BA:2672:G:C3'	36:BA:2673:G:H5"	2.29	0.63
9:AI:118:LYS:O	9:AI:119:ALA:HB3	1.99	0.63
39:BD:108:PRO:HD2	39:BD:111:LEU:HD12	1.81	0.63
1:CA:865:A:H2	1:CA:918:A:H4'	1.64	0.63
39:BD:273:ARG:HH11	39:BD:273:ARG:HG2	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:16:H2U:H5'	24:AY:17:H2U:C5'	2.28	0.63
49:DQ:68:ILE:HG23	49:DQ:103:MET:HA	1.81	0.63
36:BA:693:C:O2'	36:BA:694:U:H5'	1.98	0.63
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.14	0.63
36:BA:2314:C:O2'	36:BA:2315:G:H5'	1.98	0.63
36:DA:2309:A:H2'	36:DA:2310:A:H5"	1.80	0.63
25:AZ:234:ARG:O	25:AZ:289:LEU:HD11	1.98	0.63
41:BF:103:LYS:HG3	41:BF:106:ARG:HH21	1.64	0.63
26:D0:51:VAL:HG21	26:D0:79:VAL:O	1.99	0.63
36:BA:1058:G:C2'	36:BA:1059:G:H5"	2.27	0.63
9:CI:95:LYS:HZ2	9:CI:96:LEU:HD13	1.62	0.63
50:BR:52:ILE:HB	50:BR:94:TYR:HD2	1.63	0.63
12:AL:77:LEU:HD21	12:AL:107:ALA:HA	1.81	0.63
48:DP:40:SER:O	48:DP:41:ARG:NH1	2.31	0.63
58:BZ:9:TYR:CE1	58:BZ:35:ARG:CZ	2.82	0.63
53:DU:3:ARG:HG2	53:DU:3:ARG:NH1	2.12	0.63
53:DU:3:ARG:HH12	53:DU:5:LYS:HE2	1.63	0.63
3:CC:32:LEU:HD22	3:CC:59:ARG:NH1	2.13	0.63
57:DY:67:LEU:HD21	57:DY:71:LYS:HE2	1.81	0.63
39:BD:37:LEU:HD23	39:BD:38:LYS:N	2.14	0.63
24:AY:62:U:H5'	24:AY:62:U:H6	1.62	0.63
35:D9:14:CYS:SG	35:D9:27:CYS:HB2	2.38	0.63
25:AZ:187:LYS:H	25:AZ:187:LYS:HD2	1.64	0.63
36:BA:2199:A:H5'	36:BA:2200:C:OP2	1.98	0.63
36:DA:2176:A:H8	36:DA:2176:A:O5'	1.82	0.63
36:DA:1970:A:H5"	36:DA:1971:A:OP1	1.99	0.63
36:DA:708:C:H42	36:DA:723:G:H1	1.46	0.63
36:DA:1639:U:C2'	36:DA:1640:C:H5"	2.29	0.63
49:DQ:6:ARG:O	49:DQ:7:MET:HG3	1.98	0.63
38:BC:81:GLU:O	38:BC:84:LYS:HD3	1.98	0.63
48:DP:58:THR:O	48:DP:60:MET:N	2.32	0.63
25:AZ:9:LYS:HZ3	25:AZ:73:ALA:C	2.01	0.63
42:BG:72:ARG:HB2	42:BG:87:PRO:CD	2.22	0.63
49:DQ:140:ALA:O	49:DQ:141:GLN:HB2	1.98	0.63
42:DG:86:MET:N	42:DG:87:PRO:HD3	2.14	0.63
32:B6:12:GLU:HG3	32:B6:23:THR:HG22	1.80	0.63
1:AA:452:A:O2'	1:AA:453:A:H8	1.80	0.63
25:AZ:267:VAL:HG23	25:AZ:288:VAL:HG13	1.80	0.63
51:BS:52:SER:CB	51:BS:55:ALA:HB3	2.27	0.63
36:DA:2636:U:H4'	40:DE:80:GLU:OE1	1.98	0.63
36:BA:2636:U:H4'	40:BE:80:GLU:OE1	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:23:PRO:HB2	48:DP:33:ARG:CD	2.29	0.63
36:DA:1658:C:OP1	40:DE:132:HIS:ND1	2.31	0.63
16:AP:25:ARG:HH11	16:AP:25:ARG:HG3	1.62	0.63
52:DT:107:ASP:H	52:DT:110:ILE:HG12	1.63	0.63
25:CZ:145:GLU:OE2	25:CZ:149:LEU:HD22	1.98	0.63
58:BZ:81:ARG:NH1	58:BZ:81:ARG:HB3	2.13	0.63
1:CA:452:A:O2'	1:CA:453:A:H8	1.82	0.63
39:DD:186:HIS:CD2	39:DD:188:GLU:HB2	2.34	0.63
7:AG:23:VAL:HG13	7:AG:43:PHE:CE2	2.33	0.63
21:CU:6:ARG:CD	21:CU:15:ARG:NH1	2.61	0.63
7:CG:23:VAL:O	7:CG:27:ILE:HG13	1.99	0.63
38:DC:40:THR:HG22	38:DC:177:LYS:CD	2.29	0.63
52:BT:90:GLN:C	52:BT:92:GLY:H	2.02	0.63
39:DD:108:PRO:HD2	39:DD:111:LEU:HD12	1.80	0.63
36:DA:583:G:OP2	53:DU:10:ARG:HD2	1.98	0.63
36:BA:1314:C:H5'	36:BA:1314:C:H6	1.62	0.63
11:AK:57:THR:CG2	11:AK:60:ALA:H	2.11	0.63
11:AK:33:THR:HG22	11:AK:39:PRO:HA	1.79	0.63
2:CB:96:ARG:HD3	2:CB:148:TYR:HE1	1.63	0.63
24:AY:70:C:C2'	24:AY:71:C:H5'	2.29	0.63
21:CU:3:LYS:HD3	21:CU:14:TRP:CD1	2.34	0.63
22:CV:44:G:C3'	22:CV:45:U:H5'	2.29	0.63
7:AG:7:ALA:O	7:AG:8:GLU:HB2	1.99	0.63
24:CY:24:G:C2'	24:CY:25:C:C5'	2.66	0.63
28:D2:33:MET:O	28:D2:37:PHE:HD1	1.81	0.63
28:D2:46:GLN:HB3	28:D2:48:HIS:ND1	2.14	0.63
34:B8:32:LEU:HD22	36:BA:2392:A:OP1	1.99	0.63
36:DA:2308:G:N7	36:DA:2310:A:H5'	2.14	0.63
31:B5:44:THR:HG21	50:BR:101:ALA:CB	2.28	0.63
24:AY:3:G:H5'	24:AY:3:G:H8	1.64	0.63
36:DA:902:C:H2'	36:DA:903:C:C6	2.34	0.63
36:BA:1057:A:H2'	36:BA:1058:G:H8	1.63	0.63
50:BR:14:SER:HA	50:BR:17:ARG:NH1	2.14	0.63
58:BZ:79:ARG:NH1	58:BZ:79:ARG:HB3	2.13	0.63
50:DR:94:TYR:CD1	50:DR:94:TYR:N	2.64	0.63
50:BR:28:LEU:HD13	50:BR:114:VAL:HG23	1.80	0.63
16:AP:67:THR:HB	16:AP:70:ALA:HB2	1.80	0.63
43:DH:52:VAL:HG21	43:DH:69:ARG:CG	2.28	0.63
17:CQ:5:VAL:HG22	17:CQ:60:ILE:HD12	1.80	0.63
36:DA:1779:U:C5	36:DA:1784:A:N7	2.65	0.63
25:AZ:196:VAL:HG13	25:AZ:196:VAL:O	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:105:LEU:O	48:BP:106:LEU:HB2	1.97	0.63
22:CW:71:G:OP1	36:DA:1893:C:H4'	1.98	0.63
51:BS:66:ALA:HA	51:BS:69:VAL:CG1	2.28	0.63
3:AC:34:LEU:O	3:AC:38:ARG:HG2	1.98	0.63
12:AL:55:VAL:HG23	12:AL:68:ALA:O	1.99	0.63
13:AM:108:ARG:HG3	13:AM:108:ARG:NH1	2.08	0.63
36:BA:2050:C:H1'	40:BE:156:MET:HE1	1.78	0.63
36:DA:958:U:H5"	49:DQ:14:ARG:HD3	1.80	0.63
36:DA:2199:A:H5'	36:DA:2200:C:OP2	1.98	0.63
49:BQ:66:ILE:HA	49:BQ:104:PHE:HB3	1.81	0.63
31:B5:52:TYR:HE2	36:BA:2884:U:H1'	1.63	0.63
36:BA:597:U:O2'	48:BP:15:ARG:HG2	1.98	0.63
30:B4:12:ALA:HB2	30:B4:29:PRO:HA	1.81	0.63
57:DY:84:ARG:CZ	57:DY:97:ARG:HB3	2.29	0.63
32:B6:32:ASN:O	32:B6:33:LYS:HG2	1.99	0.63
42:BG:82:LEU:HD13	42:BG:87:PRO:CA	2.28	0.63
36:BA:1068:G:N3	36:BA:1068:G:H2'	2.14	0.63
48:DP:34:GLY:O	48:DP:35:HIS:HB2	1.98	0.63
48:BP:115:LEU:HA	48:BP:131:SER:OG	1.99	0.63
48:DP:96:THR:HG22	48:DP:126:VAL:HB	1.79	0.63
10:AJ:32:ALA:HB1	10:AJ:75:ILE:HG13	1.80	0.63
36:DA:943:U:OP2	48:DP:38:GLN:CD	2.36	0.63
39:BD:48:ARG:HH11	39:BD:48:ARG:HG3	1.64	0.63
1:CA:1442(B):A:H2'	1:CA:1442(B):A:N3	2.14	0.63
22:AW:31:A:N1	22:AW:39:U:O4	2.31	0.63
49:BQ:134:ARG:CD	58:BZ:122:ARG:HH21	2.12	0.63
11:CK:27:ASN:ND2	11:CK:28:THR:N	2.47	0.63
46:BN:31:ALA:O	46:BN:34:LEU:HB3	1.99	0.63
36:BA:2852:G:H2'	36:BA:2853:C:H6	1.64	0.63
36:BA:2512:C:H2'	36:BA:2513:G:O4'	1.98	0.63
36:BA:1569:A:O2'	39:BD:38:LYS:HG3	1.98	0.63
46:DN:108:PRO:HG2	46:DN:113:GLY:CA	2.29	0.63
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.14	0.63
41:BF:185:ASP:HA	41:BF:188:ARG:HD3	1.81	0.63
4:CD:129:ASN:HD21	4:CD:145:GLU:H	1.45	0.63
41:DF:104:LYS:O	41:DF:108:LYS:HG2	1.99	0.63
40:DE:107:THR:O	40:DE:190:GLY:HA2	1.98	0.63
25:CZ:107:SER:OG	25:CZ:137:LYS:HD2	1.99	0.63
37:DB:25:A:N3	37:DB:25:A:H2'	2.13	0.63
36:DA:110:G:O2'	36:DA:111:A:H5'	1.98	0.63
41:BF:5:ALA:HB3	41:BF:18:ARG:O	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:31:LYS:O	39:DD:35:LYS:HE3	1.99	0.62
39:BD:65:ILE:HG22	39:BD:104:TYR:HB3	1.81	0.62
28:D2:25:VAL:HG21	28:D2:61:LEU:HD11	1.81	0.62
36:DA:83:G:O2'	36:DA:84:A:H8	1.82	0.62
57:DY:7:VAL:HG12	57:DY:83:THR:HG21	1.80	0.62
40:DE:33:VAL:HG11	40:DE:89:ASP:O	1.99	0.62
40:BE:33:VAL:HG13	40:BE:69:LYS:CE	2.27	0.62
48:DP:23:PRO:HD2	48:DP:33:ARG:NE	2.11	0.62
36:DA:1290:C:H2'	36:DA:1291:C:C6	2.34	0.62
36:DA:1294:U:H6	36:DA:1294:U:C5'	2.12	0.62
48:DP:97:PRO:O	48:DP:98:GLU:HB3	1.99	0.62
1:AA:1438:G:C8	1:AA:1464:G:N2	2.67	0.62
50:DR:52:ILE:HB	50:DR:94:TYR:HD2	1.63	0.62
16:AP:25:ARG:NH1	16:AP:25:ARG:HB2	2.13	0.62
36:BA:613:G:H5'	36:BA:613:G:H8	1.64	0.62
7:CG:7:ALA:O	7:CG:8:GLU:HB2	1.99	0.62
36:BA:310:A:OP1	57:BY:18:GLY:HA2	1.99	0.62
11:CK:33:THR:HG22	11:CK:39:PRO:HA	1.81	0.62
36:BA:2206:G:N3	36:BA:2206:G:H3'	2.14	0.62
36:BA:958:U:H5"	49:BQ:14:ARG:HD3	1.79	0.62
38:DC:81:GLU:O	38:DC:84:LYS:HD3	1.98	0.62
17:CQ:48:GLU:O	17:CQ:49:GLU:C	2.37	0.62
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	1.79	0.62
24:CY:70:C:C2'	24:CY:71:C:H5'	2.29	0.62
36:BA:845:G:H8	36:BA:845:G:OP2	1.82	0.62
36:DA:1362:C:O2'	36:DA:1363:C:H5'	1.99	0.62
36:BA:2262:U:H2'	36:BA:2263:C:H6	1.64	0.62
1:CA:369:C:H5'	1:CA:369:C:H6	1.64	0.62
39:DD:30:GLU:CD	39:DD:63:ARG:HH21	2.01	0.62
57:DY:13:VAL:HA	57:DY:74:PRO:O	1.99	0.62
36:DA:2101:G:H2'	36:DA:2102:U:C5'	2.28	0.62
42:DG:114:ILE:CD1	42:DG:115:ARG:H	2.12	0.62
51:DS:34:HIS:HB3	51:DS:53:SER:HB3	1.81	0.62
57:BY:13:VAL:HA	57:BY:74:PRO:O	1.99	0.62
57:BY:27:VAL:HG12	57:BY:29:GLU:OE1	1.99	0.62
36:DA:1024:G:C3'	36:DA:1025:G:H5"	2.22	0.62
52:DT:33:LYS:NZ	52:DT:43:GLN:HE21	1.96	0.62
46:DN:61:ARG:HH11	46:DN:61:ARG:HG3	1.64	0.62
36:DA:1210:A:H5'	36:DA:1210:A:H8	1.64	0.62
55:DW:4:LYS:HG2	55:DW:5:ALA:H	1.62	0.62
4:CD:12:CYS:HA	4:CD:19:LEU:CD1	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:45:GLN:HE22	20:AT:46:GLU:CG	2.12	0.62
40:BE:3:GLY:H	40:BE:81:ILE:HG21	1.64	0.62
51:DS:59:LYS:HG2	51:DS:60:GLY:N	2.13	0.62
36:BA:1131:G:H21	46:BN:73:THR:HG21	1.64	0.62
49:DQ:135:ASP:H	49:DQ:137:TYR:HD2	1.47	0.62
7:AG:15:ASP:HB3	7:AG:20:ASP:H	1.64	0.62
7:AG:23:VAL:O	7:AG:27:ILE:HG13	1.99	0.62
12:AL:25:PRO:C	12:AL:27:LEU:H	2.02	0.62
53:BU:85:LYS:HD3	53:BU:117:GLN:NE2	2.14	0.62
36:BA:141:A:H8	36:BA:1408:C:HO2'	1.46	0.62
36:DA:2408:U:H2'	36:DA:2409:G:H8	1.63	0.62
39:BD:130:ALA:C	39:BD:131:LEU:HD12	2.19	0.62
13:AM:17:VAL:O	13:AM:20:THR:HB	1.99	0.62
36:DA:848:G:C4	36:DA:933:A:H8	2.18	0.62
36:BA:745:G:H2'	36:BA:746:A:H5'	1.81	0.62
39:BD:109:ASP:HB2	39:BD:197:GLY:HA2	1.79	0.62
53:BU:56:ASP:O	53:BU:59:ARG:HB2	1.98	0.62
16:AP:49:LEU:HD12	16:AP:50:LYS:N	2.14	0.62
36:BA:2092:U:H4'	36:BA:2093:G:C5'	2.11	0.62
52:BT:85:LYS:NZ	52:BT:85:LYS:CB	2.60	0.62
52:DT:27:THR:HG23	52:DT:28:VAL:N	2.13	0.62
36:DA:1947:C:C2'	36:DA:1948:G:H5"	2.29	0.62
4:CD:59:ARG:CA	4:CD:59:ARG:HE	2.04	0.62
41:DF:135:LYS:HB3	41:DF:138:GLU:CD	2.19	0.62
49:BQ:140:ALA:O	49:BQ:141:GLN:HB2	1.99	0.62
40:BE:33:VAL:HG11	40:BE:89:ASP:O	1.98	0.62
54:DV:19:LYS:NZ	54:DV:20:LEU:H	1.96	0.62
13:AM:15:VAL:HG11	13:AM:48:LEU:HD11	1.81	0.62
12:CL:110:VAL:CG2	12:CL:120:TYR:HB3	2.28	0.62
50:DR:36:THR:O	50:DR:111:LEU:HB3	1.99	0.62
12:AL:75:HIS:HA	12:AL:102:ARG:NH2	2.13	0.62
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.29	0.62
58:BZ:122:ARG:HG2	58:BZ:122:ARG:NH1	2.14	0.62
41:DF:89:VAL:HG12	41:DF:90:PHE:N	2.13	0.62
47:DO:47:ILE:CG2	47:DO:48:PRO:HD2	2.28	0.62
25:AZ:193:ASN:HB2	25:AZ:196:VAL:HB	1.80	0.62
51:DS:15:ARG:CD	51:DS:15:ARG:O	2.47	0.62
52:DT:34:VAL:HG22	52:DT:39:ARG:HA	1.82	0.62
36:DA:2512:C:H2'	36:DA:2513:G:O4'	2.00	0.62
29:D3:31:LEU:HD12	36:DA:1157:G:O2'	1.99	0.62
1:CA:657:G:O2'	1:CA:658:G:H5'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.98	0.62
13:CM:87:TYR:HD1	19:CS:81:ARG:NH2	1.96	0.62
36:BA:598:G:H5'	48:BP:15:ARG:HB3	1.79	0.62
53:DU:108:GLU:OE2	54:DV:44:LYS:HB3	1.99	0.62
7:CG:48:LYS:O	7:CG:52:GLU:HG2	1.99	0.62
1:CA:624:C:H2'	1:CA:625:G:H8	1.64	0.62
18:CR:26:LEU:CD2	18:CR:39:VAL:HG13	2.30	0.62
41:DF:5:ALA:HB3	41:DF:18:ARG:O	1.99	0.62
1:AA:946:A:H2'	1:AA:947:G:C8	2.34	0.62
18:CR:53:ARG:HH11	18:CR:60:ALA:HA	1.63	0.62
49:BQ:136:ALA:O	49:BQ:138:ASP:N	2.32	0.62
36:BA:203:C:H3'	36:BA:204:A:H5"	1.81	0.62
39:DD:148:GLU:HB2	39:DD:151:LYS:HD2	1.81	0.62
53:DU:34:LYS:HE2	53:DU:34:LYS:HA	1.81	0.62
56:DX:35:THR:HB	56:DX:38:GLU:CB	2.29	0.62
48:DP:49:ARG:HH11	48:DP:49:ARG:HG3	1.65	0.62
1:AA:979:C:H3'	1:AA:980:C:C5'	2.23	0.62
52:BT:80:SER:CB	52:BT:81:PRO:HD3	2.25	0.62
46:DN:23:LEU:CD1	46:DN:98:VAL:HG12	2.29	0.62
48:BP:34:GLY:O	48:BP:35:HIS:HB2	1.99	0.62
39:DD:224:ALA:O	39:DD:225:ALA:HB3	1.98	0.62
36:BA:611:C:H2'	36:BA:612:C:C6	2.35	0.62
43:BH:127:GLU:HB2	43:BH:130:ARG:HB2	1.80	0.62
1:AA:1319:A:H5'	1:AA:1320:C:OP1	1.99	0.62
1:AA:977:A:C2'	1:AA:977:A:N3	2.62	0.62
3:AC:26:LYS:CD	3:AC:26:LYS:H	2.13	0.62
25:AZ:191:GLY:CA	25:AZ:197:ASP:CG	2.67	0.62
22:AW:68:C:H2'	22:AW:69:G:C8	2.34	0.62
46:BN:6:PRO:HB2	46:BN:9:VAL:CG2	2.28	0.62
16:AP:8:ARG:O	16:AP:9:PHE:HD1	1.83	0.62
36:BA:1290:C:H2'	36:BA:1291:C:H6	1.65	0.62
13:CM:54:VAL:O	13:CM:58:GLU:HG2	2.00	0.62
36:BA:1075:C:H2'	36:BA:1076:C:C6	2.33	0.62
52:DT:60:THR:HG22	52:DT:77:PRO:HA	1.80	0.62
7:CG:102:ARG:O	7:CG:106:GLN:HG3	2.00	0.62
52:BT:38:ASN:ND2	52:BT:38:ASN:O	2.33	0.62
48:BP:6:LEU:H	48:BP:6:LEU:HD23	1.65	0.62
39:DD:125:ILE:HG22	39:DD:125:ILE:O	1.98	0.62
36:DA:2303:G:H4'	42:DG:124:SER:O	1.98	0.62
51:DS:89:ARG:HB3	51:DS:92:TYR:CB	2.30	0.62
36:DA:1960:A:C5'	36:DA:1960:A:H8	2.11	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:23:PRO:C	48:BP:33:ARG:CZ	2.67	0.62
40:DE:52:LEU:HB3	40:DE:75:VAL:HB	1.82	0.62
40:BE:77:ILE:HG22	40:BE:78:LEU:H	1.64	0.62
24:AY:2:G:OP1	25:AZ:90:LYS:HB3	1.99	0.62
36:DA:1075:C:H2'	36:DA:1076:C:C6	2.34	0.62
20:CT:91:LEU:O	20:CT:94:ALA:HB3	1.99	0.62
53:BU:95:LEU:O	53:BU:98:LEU:HG	2.00	0.62
38:BC:114:VAL:HG12	38:BC:144:THR:HB	1.79	0.62
36:DA:1131:G:H21	46:DN:73:THR:HG21	1.64	0.62
3:CC:50:ALA:O	3:CC:70:VAL:HG13	1.99	0.62
2:AB:14:GLY:O	2:AB:15:VAL:HG13	2.00	0.62
58:DZ:114:GLY:HA3	58:DZ:146:ILE:HG21	1.82	0.62
1:CA:1129:C:H41	1:CA:1135:U:H3	1.47	0.62
1:AA:1456:G:O2'	20:AT:39:LYS:NZ	2.32	0.62
39:BD:77:ALA:HB2	39:BD:97:TYR:CD2	2.35	0.62
36:DA:1203:G:H3'	36:DA:1204:A:H5"	1.81	0.62
49:BQ:68:ILE:HG23	49:BQ:103:MET:HA	1.81	0.62
37:BB:34:U:H5"	37:BB:35:U:OP1	1.99	0.62
36:BA:2630:G:H21	36:BA:2892:A:H1'	1.64	0.62
51:BS:11:LYS:N	51:BS:11:LYS:HD2	2.14	0.62
57:BY:33:LYS:C	57:BY:35:TYR:H	2.03	0.62
37:DB:61:G:O2'	37:DB:62:C:H5'	1.99	0.62
18:AR:25:THR:C	18:AR:26:LEU:HD12	2.20	0.62
57:DY:81:LYS:HE2	57:DY:97:ARG:NH2	2.14	0.62
32:D6:12:GLU:HG3	32:D6:23:THR:HG21	1.81	0.62
31:D5:3:LYS:N	31:D5:3:LYS:HD2	2.13	0.62
57:BY:81:LYS:HE2	57:BY:97:ARG:NH2	2.14	0.62
31:D5:44:THR:CG2	50:DR:101:ALA:N	2.63	0.62
58:BZ:23:LYS:O	58:BZ:39:VAL:O	2.18	0.62
50:DR:2:ARG:HG3	50:DR:2:ARG:NH1	2.14	0.62
36:DA:1678:G:N2	36:DA:1989:G:N2	2.46	0.62
1:AA:963:G:H21	10:AJ:55:LYS:HE2	1.64	0.62
36:DA:745:G:C2'	36:DA:746:A:H5'	2.28	0.62
1:AA:376:G:H5"	16:AP:5:ARG:HB2	1.81	0.62
57:BY:31:LEU:HB2	57:BY:32:PRO:HA	1.82	0.62
36:BA:2472:G:H5'	36:BA:2473:U:C5'	2.29	0.62
13:AM:83:ASP:OD1	13:AM:84:ILE:N	2.32	0.62
1:CA:1217:C:OP1	14:CN:9:LYS:HE3	1.99	0.62
39:BD:181:GLU:HA	39:BD:273:ARG:O	1.99	0.62
36:BA:2845:G:O2'	36:BA:2846:G:H5'	1.99	0.62
3:AC:52:LEU:HD21	3:AC:55:VAL:HG23	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:44:PRO:HG2	27:B1:46:LEU:CD1	2.29	0.62
37:BB:65:C:O2'	37:BB:66:A:H5'	1.99	0.62
36:BA:1592:C:H2'	36:BA:1593:G:C8	2.34	0.62
53:DU:16:LYS:O	53:DU:20:LEU:HD23	2.00	0.62
53:BU:108:GLU:OE2	54:BV:44:LYS:HB3	1.99	0.62
24:AY:24:G:C2'	24:AY:25:C:C5'	2.65	0.62
28:D2:25:VAL:HG21	28:D2:61:LEU:HG	1.82	0.62
42:DG:105:LYS:HD2	42:DG:142:PRO:HG3	1.81	0.62
42:DG:7:LEU:HD22	42:DG:100:TRP:CE3	2.35	0.62
41:DF:25:PRO:HB3	41:DF:119:ARG:HD3	1.80	0.62
50:DR:100:LEU:HD13	50:DR:100:LEU:N	2.14	0.62
36:BA:1516:C:H2'	36:BA:1517:G:C5'	2.30	0.62
12:CL:110:VAL:HG23	12:CL:120:TYR:HB3	1.81	0.62
4:AD:109:GLY:O	4:AD:111:ALA:N	2.32	0.62
38:DC:78:ALA:O	38:DC:79:LYS:HB2	1.98	0.62
41:DF:143:ALA:HB1	41:DF:148:LEU:HB2	1.82	0.62
1:AA:963:G:N2	10:AJ:55:LYS:HE2	2.14	0.62
40:DE:105:THR:HB	40:DE:197:ILE:CG2	2.30	0.62
7:AG:15:ASP:O	7:AG:19:GLY:HA2	2.00	0.62
1:AA:1030(D):A:H62	1:AA:1031:G:H21	1.48	0.62
46:DN:49:GLY:H	46:DN:119:ARG:HH22	1.48	0.62
1:AA:1277:C:O2'	1:AA:1279:A:H8	1.83	0.62
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.81	0.62
3:AC:34:LEU:HD22	3:AC:38:ARG:NE	2.13	0.62
20:AT:86:ARG:O	20:AT:90:GLN:HG3	1.99	0.62
40:DE:9:VAL:HG13	40:DE:25:VAL:HB	1.82	0.62
36:BA:1652:A:C2'	36:BA:1653:G:H5'	2.29	0.62
39:BD:70:TRP:O	39:BD:73:VAL:HG23	2.00	0.62
41:DF:185:ASP:HA	41:DF:188:ARG:HG2	1.79	0.62
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.02	0.62
25:CZ:266:VAL:HB	25:CZ:291:ARG:NH1	2.15	0.62
36:DA:2543:G:H2'	36:DA:2544:G:C8	2.35	0.62
25:CZ:368:VAL:HG12	25:CZ:369:THR:N	2.15	0.62
36:DA:1718:G:H2'	36:DA:1719:G:H8	1.63	0.62
49:DQ:1:MET:HE3	49:DQ:44:ALA:HB1	1.82	0.62
50:DR:33:ARG:HG2	50:DR:113:LEU:HD11	1.81	0.62
38:DC:34:THR:O	38:DC:34:THR:HG22	2.00	0.62
43:DH:149:ARG:HG3	43:DH:162:ILE:HG12	1.82	0.62
30:B4:28:LYS:HE3	30:B4:28:LYS:HA	1.82	0.62
34:D8:6:THR:HG23	34:D8:62:LEU:HD12	1.80	0.62
41:BF:192:LEU:HD23	41:BF:192:LEU:C	2.19	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:47:LYS:N	42:DG:47:LYS:HD2	2.14	0.62
40:BE:38:THR:HB	40:BE:41:LYS:HG2	1.79	0.62
41:BF:6:VAL:HG12	41:BF:7:TYR:N	2.11	0.62
36:BA:2415:G:H4'	48:BP:66:GLY:C	2.20	0.62
1:AA:942:G:H21	9:AI:124:GLN:HE22	1.44	0.62
24:AY:2:G:H2'	24:AY:3:G:C5'	2.29	0.62
36:DA:996:A:H4'	53:DU:92:ARG:NE	2.14	0.62
53:DU:95:LEU:O	53:DU:98:LEU:HG	2.00	0.62
25:CZ:131:ILE:O	25:CZ:168:VAL:HG13	1.99	0.62
1:CA:376:G:H5"	16:CP:5:ARG:HB2	1.80	0.62
36:DA:2840:C:H5"	50:DR:53:HIS:CD2	2.35	0.62
53:DU:56:ASP:O	53:DU:59:ARG:HB2	2.00	0.62
1:AA:1258:G:O2'	1:AA:1259:C:H5'	1.99	0.62
4:AD:121:VAL:O	4:AD:134:ASP:HA	1.99	0.62
36:BA:2842:G:O2'	36:BA:2843:G:H5'	2.00	0.62
36:BA:1248:G:OP1	53:BU:2:PRO:HD2	2.00	0.62
1:CA:358:U:H2'	1:CA:359:U:H6	1.65	0.62
29:B3:31:LEU:HD12	36:BA:1157:G:O2'	1.99	0.62
58:BZ:108:PRO:HB3	58:BZ:141:VAL:HG11	1.82	0.62
36:DA:2787:C:O2'	40:DE:61:ARG:HD3	2.00	0.62
3:AC:91:LEU:HB2	3:AC:99:VAL:HG21	1.82	0.62
1:AA:865:A:C2	1:AA:918:A:H4'	2.33	0.62
36:BA:83:G:O2'	36:BA:84:A:H8	1.81	0.62
2:CB:155:LEU:HD21	2:CB:159:PRO:HG3	1.82	0.62
13:CM:73:GLU:O	13:CM:76:ALA:HB3	2.00	0.62
21:AU:9:ARG:HH12	21:AU:23:PRO:HD2	1.65	0.62
53:BU:110:VAL:O	53:BU:113:ALA:HB3	1.99	0.62
52:BT:64:ARG:HD2	52:BT:73:GLU:OE1	2.00	0.62
30:D4:5:ILE:HG12	30:D4:5:ILE:O	1.99	0.62
48:DP:102:ARG:HH11	48:DP:102:ARG:HB2	1.64	0.62
1:AA:755:G:OP2	15:AO:65:ARG:HD2	1.99	0.62
1:CA:882:C:O2'	1:CA:883:C:H5'	2.00	0.62
28:D2:39:ALA:HA	28:D2:45:SER:CB	2.12	0.62
20:AT:50:GLU:OE2	20:AT:100:ILE:HD13	1.99	0.62
48:BP:85:LEU:HA	48:BP:88:LEU:HB3	1.78	0.62
20:CT:45:GLN:HE22	20:CT:46:GLU:CG	2.11	0.62
48:DP:125:VAL:O	48:DP:145:PRO:HD2	2.00	0.62
12:CL:102:ARG:HH11	12:CL:110:VAL:HG22	1.64	0.62
20:AT:70:SER:HA	20:AT:73:HIS:CD2	2.35	0.62
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HB3	1.82	0.62
22:CW:44:G:H3'	22:CW:45:U:C5	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:61:ARG:HG3	46:BN:61:ARG:HH11	1.63	0.62
58:DZ:145:GLU:HG3	58:DZ:146:ILE:H	1.63	0.62
3:CC:35:GLU:HG3	3:CC:95:THR:OG1	2.00	0.62
57:BY:36:ALA:HA	57:BY:69:ALA:N	2.15	0.62
41:DF:201:VAL:HA	41:DF:204:ASN:HD22	1.62	0.62
14:AN:27:CYS:HG	59:AN:101:ZN:ZN	1.11	0.62
36:BA:2787:C:O2'	40:BE:61:ARG:HD3	2.00	0.62
10:CJ:38:ILE:HG13	10:CJ:71:LEU:HB3	1.81	0.62
36:DA:2894:G:H2'	36:DA:2894:G:N3	2.14	0.62
15:CO:25:THR:O	15:CO:29:VAL:HG23	1.99	0.62
55:BW:11:ARG:HG2	55:BW:11:ARG:HH11	1.65	0.62
36:DA:2389:G:H5"	36:DA:2390:U:O4'	2.00	0.62
13:AM:116:THR:O	13:AM:118:ALA:N	2.33	0.62
5:CE:143:ARG:HH12	8:CH:77:GLU:CD	2.03	0.62
36:DA:1270:C:H5"	36:DA:1271:G:O5'	2.00	0.62
6:AF:30:LEU:HD23	6:AF:35:ALA:HB3	1.81	0.62
36:BA:2894:G:H2'	36:BA:2894:G:N3	2.14	0.62
2:AB:87:ARG:HH11	2:AB:87:ARG:HB3	1.64	0.62
36:DA:1567:A:H5'	39:DD:58:HIS:CD2	2.34	0.62
41:BF:164:ARG:HH11	41:BF:164:ARG:HG2	1.64	0.62
34:D8:32:LEU:HD22	36:DA:2392:A:OP1	1.99	0.62
28:D2:29:LYS:HA	28:D2:32:LEU:CB	2.24	0.62
28:D2:3:LEU:HD13	36:DA:98:G:C5'	2.30	0.62
42:DG:66:GLN:HE22	42:DG:67:LYS:HE2	1.64	0.62
58:DZ:72:ARG:CG	58:DZ:89:PHE:HB2	2.30	0.62
2:AB:204:ASN:HD22	2:AB:205:ASP:N	1.98	0.62
36:DA:1666:G:C2'	36:DA:1667:G:H5'	2.29	0.62
19:CS:10:PHE:CE1	19:CS:70:LYS:HE2	2.35	0.62
48:BP:50:ARG:HH11	48:BP:50:ARG:HG2	1.65	0.62
48:DP:23:PRO:CD	48:DP:33:ARG:HE	2.10	0.62
36:DA:2580:U:H4'	40:DE:130:GLY:HA3	1.80	0.62
36:BA:1517:G:C8	36:BA:1517:G:H5'	2.29	0.62
56:BX:28:PHE:N	56:BX:28:PHE:CD1	2.68	0.62
1:AA:353:A:H5'	1:AA:353:A:C8	2.30	0.62
22:AW:44:G:H3'	22:AW:45:U:C5	2.35	0.62
16:CP:71:ARG:HA	16:CP:74:LEU:HD13	1.82	0.62
21:CU:6:ARG:NH1	21:CU:15:ARG:NH2	2.48	0.62
25:AZ:202:LEU:O	25:AZ:206:ILE:HB	2.00	0.62
7:CG:23:VAL:HG13	7:CG:43:PHE:CE2	2.35	0.62
36:DA:533:G:H5'	53:DU:24:TYR:CE1	2.35	0.62
36:BA:268:C:O2	36:BA:268:C:H2'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:134:GLU:C	2:AB:136:VAL:H	2.01	0.62
46:BN:55:VAL:HG22	46:BN:126:PRO:HA	1.82	0.62
36:DA:824:A:H1'	36:DA:2358:G:N7	2.15	0.62
46:DN:55:VAL:HG22	46:DN:126:PRO:HA	1.81	0.62
9:CI:118:LYS:O	9:CI:119:ALA:HB3	1.99	0.62
37:DB:34:U:H5"	37:DB:35:U:OP1	1.99	0.62
41:DF:164:ARG:HG2	41:DF:164:ARG:HH11	1.64	0.62
53:BU:34:LYS:HA	53:BU:34:LYS:HE2	1.80	0.62
49:DQ:136:ALA:O	49:DQ:138:ASP:N	2.33	0.62
37:DB:65:C:O2'	37:DB:66:A:H5'	2.00	0.62
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.00	0.62
2:CB:87:ARG:HH11	2:CB:87:ARG:HB3	1.65	0.62
36:BA:2287:A:H2	36:BA:2346:A:N1	1.97	0.62
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.14	0.61
32:D6:32:ASN:O	32:D6:33:LYS:HG2	2.00	0.61
36:BA:2762:G:H5'	36:BA:2762:G:C8	2.29	0.61
57:BY:73:ARG:HH22	57:BY:82:PRO:HA	1.64	0.61
57:BY:86:ARG:HH21	57:BY:95:LYS:NZ	1.97	0.61
52:BT:28:VAL:CG1	52:BT:46:GLU:HA	2.28	0.61
36:BA:2098:U:H3	36:BA:2191:G:H1	1.46	0.61
55:BW:4:LYS:HG2	55:BW:5:ALA:H	1.64	0.61
55:DW:4:LYS:HA	55:DW:106:ILE:HG22	1.82	0.61
40:DE:77:ILE:HG22	40:DE:78:LEU:H	1.65	0.61
2:AB:172:ILE:H	2:AB:172:ILE:CD1	2.11	0.61
53:DU:90:VAL:HG12	53:DU:91:ASP:H	1.65	0.61
48:BP:126:VAL:CA	48:BP:145:PRO:HG2	2.30	0.61
1:AA:323:U:O3'	20:AT:22:ARG:HD3	1.99	0.61
46:DN:73:THR:HG22	46:DN:82:LEU:HD11	1.82	0.61
49:DQ:137:TYR:CE1	58:DZ:81:ARG:NH2	2.68	0.61
21:CU:6:ARG:CZ	21:CU:15:ARG:CZ	2.78	0.61
34:D8:14:VAL:HG21	34:D8:22:VAL:CG1	2.30	0.61
52:DT:39:ARG:N	52:DT:39:ARG:HD2	2.15	0.61
36:DA:310:A:OP1	57:DY:17:SER:O	2.18	0.61
57:DY:36:ALA:HA	57:DY:69:ALA:N	2.15	0.61
36:DA:1652:A:C2'	36:DA:1653:G:H5'	2.30	0.61
25:AZ:313:HIS:CB	25:AZ:380:LEU:HD12	2.30	0.61
36:DA:208:C:H2'	36:DA:209:C:H6	1.65	0.61
18:CR:25:THR:C	18:CR:26:LEU:HD12	2.20	0.61
36:BA:2741:A:H2'	36:BA:2742:C:O4'	2.00	0.61
49:DQ:66:ILE:HA	49:DQ:104:PHE:HB3	1.83	0.61
53:BU:79:PHE:O	53:BU:83:LEU:HD13	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:532:A:N6	1:AA:1206:G:O2'	2.32	0.61
25:AZ:68:VAL:HG22	25:AZ:69:GLU:N	2.15	0.61
58:DZ:69:THR:HB	58:DZ:89:PHE:O	2.00	0.61
40:DE:38:THR:HG22	40:DE:40:GLU:N	2.08	0.61
41:BF:160:ASN:ND2	41:BF:162:LEU:HB2	2.14	0.61
40:BE:52:LEU:HB3	40:BE:75:VAL:HB	1.82	0.61
1:CA:963:G:H21	10:CJ:55:LYS:HE2	1.64	0.61
48:BP:125:VAL:O	48:BP:145:PRO:HD2	2.00	0.61
36:DA:2491:U:H4'	36:DA:2570:G:OP1	2.00	0.61
50:BR:96:ARG:NH1	50:BR:117:VAL:HG23	2.14	0.61
50:BR:94:TYR:N	50:BR:94:TYR:HD1	1.98	0.61
16:AP:21:VAL:HG22	16:AP:21:VAL:O	2.00	0.61
36:BA:2523:G:H2'	36:BA:2524:G:C5'	2.30	0.61
36:BA:122:G:H1	36:BA:129:C:N4	1.98	0.61
46:BN:21:LYS:HD3	46:BN:22:THR:H	1.65	0.61
1:AA:1129:C:H41	1:AA:1135:U:H3	1.46	0.61
46:BN:108:PRO:HG2	46:BN:113:GLY:CA	2.29	0.61
36:DA:1105:U:H2'	36:DA:1106:G:H8	1.65	0.61
1:CA:260:G:H2'	1:CA:261:U:H6	1.65	0.61
36:DA:598:G:H5'	48:DP:15:ARG:HB3	1.81	0.61
36:BA:848:G:H8	36:BA:848:G:H5'	1.65	0.61
21:AU:5:ASP:O	21:AU:11:GLY:HA3	2.00	0.61
36:BA:2176:A:H8	36:BA:2176:A:O5'	1.83	0.61
36:BA:1328:G:H2'	36:BA:1330:C:C5	2.35	0.61
5:CE:45:PHE:CE2	5:CE:47:LYS:HD2	2.35	0.61
25:CZ:355:LEU:HD23	25:CZ:370:PHE:CG	2.35	0.61
13:AM:64:TRP:O	13:AM:66:LEU:HD13	2.00	0.61
36:DA:1899:G:H21	36:DA:1902:C:N4	1.82	0.61
51:DS:96:GLY:O	51:DS:98:VAL:N	2.33	0.61
32:B6:15:GLU:OE2	32:B6:18:ARG:NH2	2.33	0.61
49:DQ:141:GLN:HG2	58:DZ:72:ARG:HD3	1.81	0.61
46:BN:23:LEU:CD1	46:BN:98:VAL:HG12	2.31	0.61
30:B4:6:HIS:HB3	42:BG:67:LYS:NZ	2.16	0.61
36:BA:1854:A:H62	36:BA:1888:G:H8	1.48	0.61
24:AY:76:A:N1	25:AZ:271:GLU:HG3	2.15	0.61
49:BQ:140:ALA:HB1	58:BZ:99:TYR:CE2	2.35	0.61
40:DE:4:ILE:HD11	40:DE:28:ALA:CB	2.29	0.61
36:DA:1040:C:H2'	36:DA:1041:G:H8	1.65	0.61
36:BA:1658:C:OP1	40:BE:132:HIS:O	2.18	0.61
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	1.82	0.61
49:BQ:109:VAL:CG1	49:BQ:113:GLN:HB2	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:9:GLU:OE1	2:CB:9:GLU:N	2.33	0.61
7:CG:6:ARG:HH21	7:CG:94:ARG:HH12	1.46	0.61
36:DA:651:G:H2'	36:DA:652:C:H5'	1.82	0.61
22:CW:68:C:H2'	22:CW:69:G:H8	1.65	0.61
43:DH:136:ILE:HD12	43:DH:136:ILE:H	1.66	0.61
36:DA:2192:G:C3'	36:DA:2193:G:H5"	2.31	0.61
1:AA:473:G:H2'	1:AA:474:G:H8	1.65	0.61
24:CY:16:H2U:H5'	24:CY:17:H2U:O5'	2.00	0.61
36:DA:2208:A:H1'	36:DA:2219:G:C5	2.35	0.61
36:BA:745:G:C2'	36:BA:746:A:H5'	2.31	0.61
36:DA:953:A:OP2	49:DQ:16:ARG:HD2	2.00	0.61
36:BA:1270:C:H5"	36:BA:1271:G:O5'	2.00	0.61
1:AA:299:G:H2'	1:AA:300:A:C8	2.35	0.61
38:BC:68:LEU:HD11	38:BC:161:ILE:CG2	2.30	0.61
3:AC:7:PRO:O	3:AC:11:ARG:HG2	1.99	0.61
1:CA:562:C:H4'	1:CA:563:A:H5'	1.82	0.61
5:AE:45:PHE:CE2	5:AE:47:LYS:HD2	2.34	0.61
10:CJ:48:THR:HG23	10:CJ:62:HIS:CD2	2.35	0.61
7:AG:48:LYS:O	7:AG:52:GLU:HG2	1.99	0.61
26:B0:20:ARG:HG2	26:B0:20:ARG:HH11	1.64	0.61
42:DG:95:ARG:HH11	42:DG:95:ARG:HG2	1.64	0.61
32:B6:12:GLU:HG3	32:B6:23:THR:HG21	1.82	0.61
36:BA:2101:G:H2'	36:BA:2102:U:C5'	2.28	0.61
25:AZ:368:VAL:HG12	25:AZ:369:THR:N	2.15	0.61
36:BA:1053:C:H2'	36:BA:1054:A:H8	1.63	0.61
43:BH:52:VAL:HB	43:BH:69:ARG:HD3	1.82	0.61
36:DA:611:C:H2'	36:DA:612:C:H6	1.65	0.61
49:DQ:109:VAL:CG1	49:DQ:113:GLN:HB2	2.29	0.61
36:BA:2840:C:H5"	50:BR:53:HIS:CD2	2.35	0.61
36:DA:2377:A:O2'	36:DA:2378:A:H5'	2.01	0.61
22:CW:68:C:H2'	22:CW:69:G:C8	2.34	0.61
36:BA:1018:C:H2'	36:BA:1019:U:H6	1.65	0.61
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.33	0.61
13:AM:97:PRO:CA	13:AM:110:ARG:HD3	2.29	0.61
49:BQ:79:LEU:HD22	49:BQ:80:GLU:HG3	1.82	0.61
10:AJ:38:ILE:HG13	10:AJ:71:LEU:HB3	1.82	0.61
25:CZ:34:VAL:HG21	25:CZ:199:ILE:HG21	1.80	0.61
16:AP:64:ALA:O	16:AP:66:PRO:HD3	2.01	0.61
36:BA:1718:G:H2'	36:BA:1719:G:H8	1.64	0.61
36:DA:882:G:H2'	36:DA:883:G:H8	1.65	0.61
1:CA:344:A:H4'	1:CA:345:C:OP1	1.98	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:55:ALA:C	55:DW:57:ASN:H	2.04	0.61
58:BZ:105:VAL:O	58:BZ:140:ASP:HA	2.01	0.61
7:CG:57:GLU:O	7:CG:60:LYS:HB3	1.99	0.61
39:BD:125:ILE:O	39:BD:125:ILE:HG22	2.01	0.61
6:AF:77:ARG:HH11	6:AF:77:ARG:HG2	1.64	0.61
8:CH:56:LYS:HD2	8:CH:56:LYS:N	2.15	0.61
13:CM:39:ILE:HD12	13:CM:56:LEU:HD23	1.83	0.61
6:CF:30:LEU:HD23	6:CF:35:ALA:HB3	1.83	0.61
22:CV:47:U:H3'	22:CV:48:C:H5'	1.81	0.61
28:D2:43:GLN:O	28:D2:44:LEU:HB2	2.00	0.61
34:B8:32:LEU:CD2	34:B8:36:LYS:HZ1	2.11	0.61
31:D5:4:HIS:O	36:DA:2056:G:N2	2.32	0.61
30:D4:28:LYS:HA	30:D4:28:LYS:HE3	1.82	0.61
36:BA:1960:A:H8	36:BA:1960:A:C5'	2.13	0.61
36:BA:2107:C:C1'	36:BA:2182:G:H22	2.13	0.61
1:AA:358:U:C5'	25:AZ:234:ARG:C	2.68	0.61
22:CV:42:C:H6	22:CV:42:C:C5'	2.05	0.61
55:BW:4:LYS:HA	55:BW:106:ILE:HG22	1.83	0.61
25:CZ:8:THR:OG1	25:CZ:9:LYS:N	2.32	0.61
36:DA:1076:C:H42	36:DA:1088:A:H61	1.48	0.61
50:BR:3:HIS:O	50:BR:5:LYS:N	2.32	0.61
54:BV:18:LEU:CD2	54:BV:19:LYS:H	2.10	0.61
13:AM:11:ARG:HG2	13:AM:12:ASN:ND2	2.16	0.61
36:BA:1516:C:H2'	36:BA:1517:G:H5'	1.82	0.61
36:BA:1105:U:H2'	36:BA:1106:G:H8	1.64	0.61
19:AS:10:PHE:CE1	19:AS:70:LYS:HE2	2.35	0.61
36:DA:1248:G:OP1	53:DU:2:PRO:HD2	2.00	0.61
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.15	0.61
36:BA:310:A:OP1	57:BY:17:SER:O	2.18	0.61
57:BY:67:LEU:HD21	57:BY:71:LYS:HE2	1.81	0.61
28:B2:51:ARG:HB2	28:B2:55:ARG:NH1	2.16	0.61
36:DA:547:A:H2'	36:DA:548:A:C8	2.36	0.61
58:BZ:150:LEU:CD2	58:BZ:150:LEU:H	2.14	0.61
36:DA:582:G:H2'	36:DA:583:G:C8	2.35	0.61
13:AM:58:GLU:O	13:AM:62:ASN:HB2	2.00	0.61
36:BA:2262:U:O2'	36:BA:2263:C:H5'	2.00	0.61
1:CA:1228:C:OP1	13:CM:115:LYS:HE3	2.00	0.61
5:AE:81:GLU:HG2	5:AE:90:VAL:HG22	1.82	0.61
47:DO:24:VAL:HB	47:DO:33:ALA:HB2	1.83	0.61
15:CO:3:ILE:HG13	15:CO:3:ILE:O	2.00	0.61
53:BU:16:LYS:O	53:BU:20:LEU:HD23	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:222:LEU:HD11	25:AZ:303:VAL:HB	1.81	0.61
30:B4:13:ARG:C	30:B4:14:ILE:HD12	2.20	0.61
25:CZ:313:HIS:HB2	25:CZ:380:LEU:HD12	1.81	0.61
5:AE:18:ARG:HG3	5:AE:18:ARG:HH11	1.66	0.61
1:CA:1310:G:O2'	1:CA:1311:G:H5'	2.00	0.61
25:AZ:215:ARG:HD2	25:AZ:283:GLY:HA3	1.83	0.61
36:DA:1902:C:O2'	39:DD:244:ARG:HD3	2.01	0.61
25:AZ:8:THR:OG1	25:AZ:9:LYS:N	2.33	0.61
36:DA:2098:U:H3	36:DA:2191:G:H1	1.47	0.61
31:D5:3:LYS:HG3	36:DA:2611:U:O2'	1.99	0.61
14:CN:13:THR:N	14:CN:14:PRO:CD	2.62	0.61
58:BZ:23:LYS:HD3	58:BZ:38:TYR:CZ	2.36	0.61
53:BU:91:ASP:O	53:BU:95:LEU:HB2	2.00	0.61
1:CA:323:U:O3'	20:CT:22:ARG:HD3	1.99	0.61
20:AT:66:ALA:HB1	20:AT:71:THR:HB	1.82	0.61
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.16	0.61
36:BA:2854:G:H2'	36:BA:2855:C:C6	2.36	0.61
22:AW:68:C:H2'	22:AW:69:G:H8	1.65	0.61
36:BA:824:A:H1'	36:BA:2358:G:N7	2.15	0.61
12:CL:43:VAL:CG2	12:CL:93:LEU:HD22	2.31	0.61
5:CE:144:THR:O	5:CE:148:VAL:HG23	2.01	0.61
3:AC:35:GLU:HG3	3:AC:95:THR:OG1	1.99	0.61
36:BA:482:A:H4'	57:BY:47:LYS:HG2	1.82	0.61
3:CC:34:LEU:O	3:CC:38:ARG:HG2	1.99	0.61
16:CP:9:PHE:HE2	16:CP:18:ARG:CZ	2.12	0.61
36:BA:848:G:N3	36:BA:933:A:H1'	2.16	0.61
36:BA:2287:A:C2	36:BA:2346:A:N1	2.68	0.61
36:BA:2025:C:H2'	36:BA:2026:C:H6	1.66	0.61
36:DA:1389:G:H2'	36:DA:1390:U:C6	2.35	0.61
46:BN:13:TRP:O	46:BN:135:PRO:HD2	1.99	0.61
2:AB:215:LEU:O	2:AB:219:VAL:HG23	2.00	0.61
36:BA:1151:G:H5"	53:BU:81:HIS:CE1	2.35	0.61
38:DC:59:ARG:HG3	38:DC:164:ARG:HB3	1.81	0.61
39:DD:23:GLU:O	39:DD:25:THR:N	2.34	0.61
42:DG:19:LEU:CD2	42:DG:175:LEU:HD12	2.30	0.61
42:DG:82:LEU:HD13	42:DG:87:PRO:HB3	1.83	0.61
31:B5:36:CYS:C	31:B5:38:ALA:H	2.04	0.61
36:BA:2416:C:P	48:BP:66:GLY:HA3	2.41	0.61
40:BE:36:ARG:HH21	40:BE:88:GLY:HA2	1.64	0.61
42:BG:178:PHE:HB3	42:BG:180:PHE:HE1	1.65	0.61
53:DU:91:ASP:OD1	53:DU:96:ALA:HB2	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DO:86:ILE:N	47:DO:86:ILE:HD12	2.16	0.61
50:BR:103:ARG:NE	55:BW:40:ASN:HD21	1.97	0.61
38:BC:91:ALA:HB2	38:BC:153:ILE:HD13	1.83	0.61
43:DH:103:LEU:HB2	43:DH:123:PHE:CD2	2.31	0.61
21:AU:6:ARG:CZ	21:AU:15:ARG:NH2	2.63	0.61
52:BT:104:ASN:O	52:BT:105:LEU:HB2	2.00	0.61
2:CB:14:GLY:O	2:CB:15:VAL:HG13	2.01	0.61
24:AY:41:C:H5'	24:AY:41:C:C6	2.33	0.61
47:BO:69:ILE:HG13	47:BO:77:ILE:HG23	1.81	0.61
16:CP:18:ARG:HD3	16:CP:35:LYS:HD2	1.82	0.61
17:CQ:40:LYS:HD3	17:CQ:42:TYR:CZ	2.36	0.61
55:BW:36:LEU:HD11	55:BW:47:VAL:HG12	1.83	0.61
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.33	0.61
9:AI:126:SER:O	9:AI:128:ARG:HD2	2.01	0.61
3:CC:23:TYR:CD1	3:CC:24:ALA:N	2.69	0.61
28:D2:15:LYS:HG3	28:D2:16:LEU:N	2.15	0.61
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.35	0.61
47:BO:43:VAL:HG21	47:BO:52:VAL:HG11	1.82	0.61
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.00	0.61
20:CT:50:GLU:H	20:CT:99:LEU:HD12	1.65	0.61
57:DY:95:LYS:HG3	57:DY:100:ALA:HA	1.81	0.61
42:DG:94:LEU:HD13	42:DG:98:ARG:HB2	1.83	0.61
51:DS:88:ASP:CG	51:DS:89:ARG:H	1.98	0.61
1:CA:1532:U:C3'	1:CA:1533:C:H5"	2.30	0.61
2:AB:17:PHE:O	2:AB:18:GLY:O	2.17	0.61
51:BS:34:HIS:HB3	51:BS:53:SER:HB3	1.82	0.61
58:BZ:162:GLU:C	58:BZ:163:LEU:HD23	2.21	0.61
40:DE:33:VAL:HG13	40:DE:69:LYS:CE	2.30	0.61
42:BG:178:PHE:HB3	42:BG:180:PHE:CE1	2.36	0.61
20:CT:92:LEU:C	20:CT:94:ALA:H	2.02	0.61
54:DV:2:PHE:CB	54:DV:42:GLY:HA2	2.28	0.61
36:DA:1516:C:H2'	36:DA:1517:G:C5'	2.30	0.61
36:BA:612:C:C2'	36:BA:613:G:C5'	2.77	0.61
47:BO:47:ILE:CG2	47:BO:48:PRO:HD2	2.30	0.61
16:CP:67:THR:HG22	16:CP:68:ASP:N	2.15	0.61
46:BN:49:GLY:H	46:BN:119:ARG:HH22	1.48	0.61
36:BA:1827:C:C2'	36:BA:1828:G:H5'	2.30	0.61
36:BA:547:A:H2'	36:BA:548:A:C8	2.35	0.61
36:DA:2657:A:H5"	36:DA:2658:C:C5	2.35	0.61
58:BZ:144:LEU:HD12	58:BZ:174:VAL:CG2	2.31	0.61
36:DA:2206:G:N3	36:DA:2206:G:H3'	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:75:LEU:O	38:DC:113:VAL:HA	2.01	0.61
31:D5:52:TYR:HE2	36:DA:2884:U:H1'	1.64	0.61
47:DO:111:PHE:O	47:DO:115:VAL:HG23	2.01	0.61
36:DA:2262:U:H2'	36:DA:2263:C:H6	1.66	0.61
22:AV:44:G:C3'	22:AV:45:U:H5'	2.30	0.61
36:DA:2025:C:H2'	36:DA:2026:C:H6	1.66	0.61
15:AO:6:GLU:N	15:AO:6:GLU:OE1	2.33	0.61
36:BA:882:G:H2'	36:BA:883:G:H8	1.65	0.61
1:CA:96:U:H2'	1:CA:97:G:C8	2.35	0.61
39:DD:65:ILE:HG22	39:DD:104:TYR:HB3	1.82	0.61
39:DD:63:ARG:HG3	39:DD:63:ARG:NH1	2.13	0.61
39:DD:48:ARG:NH1	39:DD:48:ARG:HG3	2.16	0.61
56:BX:35:THR:HB	56:BX:38:GLU:CB	2.30	0.61
32:B6:33:LYS:HA	32:B6:33:LYS:CE	2.29	0.61
43:DH:118:PRO:CG	43:DH:121:ILE:HD12	2.31	0.61
36:BA:2159:G:H2'	36:BA:2160:G:C5'	2.30	0.61
36:DA:1827:C:C2'	36:DA:1828:G:H5'	2.31	0.61
13:CM:97:PRO:CA	13:CM:110:ARG:HD3	2.31	0.61
38:DC:87:GLU:HG2	38:DC:94:VAL:CG2	2.31	0.61
40:DE:23:VAL:HG12	40:DE:173:VAL:HG21	1.83	0.61
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.15	0.61
46:DN:31:ALA:O	46:DN:34:LEU:HB3	2.01	0.61
1:CA:255:G:H1'	17:CQ:16:GLN:NE2	2.15	0.61
1:AA:1256:A:H2	1:AA:1277:C:H2'	1.65	0.61
36:BA:2851:A:H2'	36:BA:2852:G:C8	2.35	0.61
39:BD:224:ALA:O	39:BD:225:ALA:HB3	2.00	0.61
12:CL:55:VAL:HG23	12:CL:68:ALA:O	2.01	0.61
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.33	0.61
16:AP:9:PHE:HE2	16:AP:18:ARG:CZ	2.14	0.61
46:BN:126:PRO:O	46:BN:127:ASP:HB2	2.01	0.61
40:DE:108:SER:HB3	40:DE:165:VAL:HG21	1.83	0.61
25:CZ:234:ARG:O	25:CZ:289:LEU:HD11	2.00	0.61
1:CA:1239:A:H4'	1:CA:1240:U:O5'	2.01	0.61
6:AF:12:PRO:HG3	6:AF:55:ASP:HB3	1.82	0.61
58:DZ:62:PRO:C	58:DZ:64:GLY:H	2.03	0.61
1:AA:96:U:H2'	1:AA:97:G:C8	2.35	0.61
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.83	0.61
36:DA:203:C:H3'	36:DA:204:A:H5"	1.81	0.61
36:DA:2314:C:O2'	36:DA:2315:G:H5'	2.01	0.61
39:DD:27:THR:HG23	39:DD:83:GLU:HG2	1.83	0.61
39:BD:35:LYS:HG3	39:BD:104:TYR:CD2	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:6:THR:HB	34:B8:11:LYS:HZ3	1.64	0.61
42:DG:99:MET:CG	42:DG:100:TRP:H	2.14	0.61
2:CB:44:LEU:HA	2:CB:47:THR:CB	2.31	0.61
2:CB:17:PHE:HD2	2:CB:44:LEU:HD11	1.66	0.61
36:DA:28:A:H61	36:DA:512:G:H1'	1.66	0.61
36:DA:1018:C:H2'	36:DA:1019:U:H6	1.65	0.61
4:AD:12:CYS:HA	4:AD:19:LEU:CD1	2.29	0.61
36:DA:2400:G:C4	36:DA:2401:U:O2	2.54	0.61
36:DA:2712:U:O2'	36:DA:2713:A:H5'	2.00	0.61
43:BH:103:LEU:HB2	43:BH:123:PHE:CD2	2.30	0.61
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.82	0.61
21:AU:6:ARG:NH1	21:AU:15:ARG:NH2	2.48	0.61
24:CY:40:C:H2'	24:CY:41:C:H5"	1.83	0.61
51:BS:15:ARG:O	51:BS:15:ARG:CD	2.49	0.61
36:DA:650:C:C3'	36:DA:651:G:H5"	2.31	0.61
57:DY:87:LYS:O	57:DY:88:LYS:HB2	2.01	0.61
53:DU:85:LYS:HD3	53:DU:117:GLN:NE2	2.16	0.61
56:DX:50:LYS:H	56:DX:87:GLN:HE22	1.49	0.61
38:DC:30:LYS:HE2	38:DC:180:PHE:O	2.01	0.61
36:DA:1842:G:H2'	36:DA:1843:C:C6	2.36	0.61
36:DA:2287:A:C2	36:DA:2346:A:N1	2.69	0.61
36:DA:2287:A:H2	36:DA:2346:A:N1	1.97	0.61
36:DA:2741:A:H2'	36:DA:2742:C:O4'	2.00	0.61
1:CA:946:A:H2'	1:CA:947:G:C8	2.36	0.61
36:DA:181:A:H5'	36:DA:181:A:H8	1.65	0.61
53:BU:101:ARG:HH11	53:BU:101:ARG:HG3	1.66	0.61
3:AC:139:GLN:NE2	3:AC:170:GLN:HE22	1.99	0.61
54:DV:41:GLY:HA3	54:DV:45:THR:OG1	2.01	0.61
39:DD:28:GLU:N	39:DD:29:PRO:HD2	2.15	0.60
28:D2:29:LYS:HB3	28:D2:32:LEU:HD22	1.82	0.60
28:D2:3:LEU:H	28:D2:6:VAL:H	1.48	0.60
28:D2:70:GLN:O	28:D2:71:ASN:HB2	1.99	0.60
36:DA:2184:G:H2'	36:DA:2185:C:C1'	2.31	0.60
42:DG:97:ASP:N	42:DG:99:MET:CE	2.60	0.60
36:BA:2309:A:C2'	36:BA:2310:A:H5"	2.31	0.60
57:BY:95:LYS:HG3	57:BY:100:ALA:HA	1.82	0.60
58:DZ:96:VAL:HG22	58:DZ:97:GLU:N	2.15	0.60
52:DT:28:VAL:O	52:DT:28:VAL:HG12	2.00	0.60
48:DP:50:ARG:HG2	48:DP:50:ARG:HH11	1.65	0.60
33:D7:37:LYS:HD2	33:D7:39:ARG:CD	2.28	0.60
58:BZ:152:ALA:HB3	58:BZ:167:PRO:O	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:72:ARG:HG2	58:BZ:89:PHE:HB2	1.83	0.60
31:B5:16:ARG:HH11	31:B5:20:ARG:NH1	1.98	0.60
36:BA:2840:C:H2'	36:BA:2841:C:C6	2.36	0.60
43:DH:76:VAL:O	43:DH:79:VAL:HG22	2.01	0.60
1:AA:657:G:O2'	1:AA:658:G:H5'	2.01	0.60
39:BD:28:GLU:N	39:BD:29:PRO:HD2	2.15	0.60
49:DQ:79:LEU:HD22	49:DQ:80:GLU:HG3	1.83	0.60
41:DF:185:ASP:HA	41:DF:188:ARG:HD3	1.83	0.60
1:AA:636:U:H2'	1:AA:637:G:H8	1.66	0.60
40:BE:152:LYS:HG2	46:BN:78:TYR:CE1	2.36	0.60
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.03	0.60
36:DA:877:U:O2'	36:DA:878:A:H5"	2.01	0.60
39:DD:77:ALA:HB2	39:DD:97:TYR:CD2	2.36	0.60
36:BA:201:C:O2'	36:BA:202:U:H5'	2.01	0.60
46:BN:19:GLU:HA	46:BN:59:LYS:HB2	1.81	0.60
48:DP:121:LYS:O	48:DP:123:LEU:HD23	2.01	0.60
36:BA:1963:U:H2'	36:BA:1963:U:O2	1.99	0.60
25:CZ:170:VAL:O	25:CZ:170:VAL:HG12	2.01	0.60
34:D8:30:ARG:HE	34:D8:30:ARG:HA	1.65	0.60
30:B4:7:PRO:O	30:B4:8:LYS:HB3	1.99	0.60
39:DD:44:ASN:HB2	39:DD:48:ARG:O	2.01	0.60
58:BZ:57:ILE:N	58:BZ:57:ILE:HD12	2.15	0.60
31:B5:3:LYS:N	31:B5:3:LYS:HD2	2.15	0.60
51:DS:92:TYR:CG	51:DS:93:LYS:N	2.67	0.60
41:DF:123:LEU:HD12	41:DF:124:LEU:H	1.67	0.60
57:BY:86:ARG:HH21	57:BY:95:LYS:HZ3	1.48	0.60
36:BA:1665:A:C3'	36:BA:1666:G:H5"	2.31	0.60
41:BF:39:TRP:CH2	41:BF:106:ARG:HD3	2.37	0.60
56:BX:8:ILE:HD12	56:BX:8:ILE:N	2.08	0.60
33:D7:34:ARG:HG3	33:D7:34:ARG:NH1	2.12	0.60
1:AA:1438:G:N7	1:AA:1464:G:N2	2.48	0.60
1:CA:187:C:C2	20:CT:105:SER:HB3	2.36	0.60
38:BC:123:VAL:O	38:BC:127:LEU:HB3	2.01	0.60
36:BA:672:C:O2'	36:BA:673:C:H5"	2.01	0.60
43:BH:44:VAL:HG12	43:BH:45:VAL:N	2.16	0.60
3:CC:26:LYS:H	3:CC:26:LYS:CD	2.12	0.60
25:AZ:143:ASP:OD2	25:AZ:146:LEU:HB2	2.01	0.60
1:AA:1086:U:H2'	1:AA:1087:G:C5'	2.31	0.60
46:BN:22:THR:CA	46:BN:61:ARG:HB2	2.30	0.60
17:CQ:18:THR:HG23	17:CQ:69:LYS:NZ	2.16	0.60
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:42:VAL:CG2	57:BY:67:LEU:HD12	2.31	0.60
57:DY:46:LYS:HG2	57:DY:47:LYS:H	1.66	0.60
36:DA:2822:G:H2'	36:DA:2823:A:H5"	1.82	0.60
1:AA:41:G:H2'	1:AA:42:G:H8	1.64	0.60
36:BA:2192:G:C3'	36:BA:2193:G:H5"	2.31	0.60
1:AA:738:C:H5"	6:AF:69:GLU:HB2	1.82	0.60
16:CP:49:LEU:HD12	16:CP:50:LYS:N	2.16	0.60
36:BA:654(L):G:H2'	36:BA:654(M):C:H4'	1.83	0.60
1:AA:202:U:H4'	1:AA:203:U:OP2	2.01	0.60
36:BA:573:G:O2'	36:BA:574:C:H3'	2.02	0.60
47:DO:80:ASP:OD2	52:DT:71:GLY:HA3	2.01	0.60
37:BB:61:G:O2'	37:BB:62:C:H5'	2.01	0.60
36:BA:2341:G:H2'	36:BA:2342:C:C6	2.37	0.60
2:AB:80:ILE:H	2:AB:80:ILE:HD12	1.66	0.60
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.17	0.60
57:DY:13:VAL:O	57:DY:24:VAL:HG13	2.00	0.60
57:DY:73:ARG:HH22	57:DY:82:PRO:HA	1.65	0.60
30:D4:30:GLU:C	30:D4:31:ILE:HD12	2.22	0.60
32:D6:15:GLU:HG3	32:D6:47:THR:OG1	2.01	0.60
1:AA:1282:C:C2'	1:AA:1283:G:H5'	2.31	0.60
41:DF:157:VAL:HG23	41:DF:198:ALA:HB1	1.84	0.60
2:AB:44:LEU:HA	2:AB:47:THR:CB	2.30	0.60
33:B7:37:LYS:HD2	33:B7:39:ARG:CD	2.27	0.60
41:DF:39:TRP:CH2	41:DF:106:ARG:HD3	2.36	0.60
36:DA:761:A:O5'	36:DA:761:A:C8	2.44	0.60
48:BP:90:ARG:O	48:BP:90:ARG:HD2	2.01	0.60
54:DV:39:LEU:HD22	54:DV:39:LEU:N	2.17	0.60
20:AT:92:LEU:C	20:AT:94:ALA:H	2.03	0.60
32:B6:52:VAL:HG22	32:B6:53:LYS:HD3	1.82	0.60
9:AI:19:LEU:HD11	9:AI:59:PHE:CD2	2.29	0.60
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB2	2.31	0.60
8:AH:44:PHE:CE2	8:AH:109:ILE:HG21	2.37	0.60
52:DT:50:ILE:O	52:DT:99:LEU:HD12	2.01	0.60
1:CA:266:G:C5'	1:CA:267:C:C5	2.84	0.60
9:AI:40:LEU:C	9:AI:42:ARG:H	2.04	0.60
38:BC:40:THR:HG22	38:BC:177:LYS:CD	2.31	0.60
52:BT:34:VAL:HG22	52:BT:39:ARG:HA	1.82	0.60
29:B3:17:LYS:HG2	36:BA:969:U:OP1	2.02	0.60
39:DD:70:TRP:O	39:DD:73:VAL:HG23	2.01	0.60
37:DB:29:A:H2'	37:DB:30:C:C6	2.36	0.60
40:DE:59:VAL:HG21	40:DE:63:LEU:HA	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2192:G:C2'	36:DA:2193:G:H5"	2.31	0.60
55:BW:82:LEU:HB3	55:BW:84:ARG:HH12	1.66	0.60
36:BA:207:A:H2'	36:BA:208:C:O4'	2.00	0.60
36:DA:207:A:H2'	36:DA:208:C:O4'	2.00	0.60
39:BD:131:LEU:HB2	39:BD:136:ILE:HD11	1.83	0.60
36:DA:848:G:H8	36:DA:848:G:H5'	1.65	0.60
17:AQ:48:GLU:O	17:AQ:49:GLU:C	2.39	0.60
30:B4:5:ILE:O	30:B4:5:ILE:HG12	2.01	0.60
49:BQ:21:THR:HG22	49:BQ:23:GLY:O	2.01	0.60
30:D4:20:ASN:HD22	30:D4:21:VAL:N	1.99	0.60
25:AZ:355:LEU:HD23	25:AZ:370:PHE:CG	2.36	0.60
25:AZ:355:LEU:CB	25:AZ:356:PRO:HD3	2.20	0.60
24:CY:10:G:H1	24:CY:25:C:N4	1.97	0.60
28:D2:24:LEU:HD21	28:D2:60:LEU:HD22	1.83	0.60
36:DA:2107:C:C1'	36:DA:2182:G:H22	2.13	0.60
32:D6:12:GLU:HG3	32:D6:23:THR:HG22	1.81	0.60
34:D8:4:MET:CE	36:DA:666:G:H1'	2.31	0.60
51:DS:98:VAL:HG12	51:DS:100:ALA:H	1.66	0.60
41:BF:157:VAL:HG23	41:BF:198:ALA:HB1	1.83	0.60
1:CA:1418:A:H2	36:DA:1948:G:N3	1.98	0.60
46:DN:22:THR:CA	46:DN:61:ARG:HB2	2.31	0.60
48:BP:30:THR:CG2	48:BP:31:ALA:H	2.15	0.60
58:BZ:161:VAL:HG12	58:BZ:162:GLU:N	2.17	0.60
40:DE:75:VAL:O	40:DE:77:ILE:N	2.35	0.60
36:DA:2415:G:H4'	48:DP:66:GLY:C	2.21	0.60
41:BF:143:ALA:HB1	41:BF:148:LEU:HB2	1.82	0.60
27:D1:73:LEU:HB3	27:D1:94:LEU:HD12	1.83	0.60
36:BA:2469:A:O2'	49:BQ:56:ARG:HD2	2.02	0.60
36:BA:803:U:O2'	36:BA:804:A:H5'	2.01	0.60
37:BB:16:G:O2'	37:BB:17:C:H6	1.84	0.60
35:B9:10:ILE:N	35:B9:10:ILE:HD12	2.16	0.60
52:BT:25:GLY:O	52:BT:26:ASP:HB2	2.00	0.60
3:AC:50:ALA:O	3:AC:70:VAL:HG13	2.01	0.60
36:DA:139(A):G:H22	56:DX:44:GLU:CD	2.04	0.60
57:BY:42:VAL:HG21	57:BY:67:LEU:HD12	1.83	0.60
57:BY:87:LYS:O	57:BY:88:LYS:HB2	2.02	0.60
56:BX:50:LYS:H	56:BX:87:GLN:HE22	1.49	0.60
43:DH:20:ALA:HB3	43:DH:23:ARG:HB2	1.84	0.60
19:AS:45:VAL:HG23	19:AS:46:GLY:N	2.16	0.60
13:CM:116:THR:O	13:CM:118:ALA:N	2.34	0.60
13:AM:116:THR:O	13:AM:116:THR:HG22	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1375:C:H2'	36:BA:1376:C:H6	1.66	0.60
42:DG:4:ASP:CG	42:DG:9:ARG:HH21	2.05	0.60
36:DA:361:G:H2'	36:DA:362:U:H4'	1.83	0.60
36:DA:1090:U:OP2	36:DA:1090:U:H3'	2.01	0.60
54:DV:68:LYS:HA	54:DV:68:LYS:HE2	1.83	0.60
38:BC:122:ALA:O	38:BC:126:LYS:HB2	2.01	0.60
36:BA:1510:G:O2'	36:BA:1511:C:H5'	2.01	0.60
17:AQ:40:LYS:HD3	17:AQ:42:TYR:CZ	2.36	0.60
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.01	0.60
20:CT:50:GLU:OE2	20:CT:100:ILE:HD13	2.01	0.60
32:D6:26:ASN:ND2	32:D6:32:ASN:ND2	2.50	0.60
28:B2:48:HIS:CE1	28:B2:49:LYS:HG2	2.36	0.60
42:DG:39:ILE:CG2	42:DG:157:ILE:HG12	2.27	0.60
36:DA:1665:A:C3'	36:DA:1666:G:H5"	2.29	0.60
52:BT:88:ILE:O	52:BT:89:VAL:C	2.40	0.60
48:DP:30:THR:CG2	48:DP:31:ALA:H	2.14	0.60
48:BP:85:LEU:HB3	48:BP:114:ILE:HD11	1.83	0.60
4:AD:100:ARG:O	4:AD:104:VAL:HG23	2.01	0.60
52:DT:106:SER:O	52:DT:107:ASP:CB	2.49	0.60
1:AA:255:G:H1'	17:AQ:16:GLN:NE2	2.16	0.60
25:AZ:139:ASP:CG	25:AZ:177:LEU:HD11	2.21	0.60
1:AA:1256:A:C2	1:AA:1277:C:H2'	2.37	0.60
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.02	0.60
53:BU:3:ARG:NH1	53:BU:5:LYS:HB3	2.17	0.60
36:BA:1222:C:H2'	36:BA:1223:G:H5"	1.82	0.60
52:DT:90:GLN:C	52:DT:92:GLY:H	2.04	0.60
33:B7:22:MET:CE	33:B7:22:MET:HA	2.32	0.60
37:BB:29:A:H2'	37:BB:30:C:C6	2.37	0.60
1:CA:1125:U:H5"	1:CA:1126:U:H5	1.64	0.60
36:DA:848:G:N3	36:DA:933:A:H1'	2.17	0.60
18:AR:36:ASN:OD1	18:AR:38:GLU:HG2	2.01	0.60
1:AA:636:U:H2'	1:AA:637:G:C8	2.36	0.60
11:CK:85:ARG:HG2	11:CK:111:ASP:O	2.02	0.60
36:DA:729:G:C5	39:DD:208:LYS:HB2	2.36	0.60
1:AA:955:U:O2'	1:AA:956:U:H5'	2.02	0.60
43:DH:94:TYR:HB3	43:DH:107:VAL:HG12	1.84	0.60
41:BF:167:ALA:O	41:BF:170:LEU:HB2	2.01	0.60
43:BH:149:ARG:HG3	43:BH:162:ILE:HG12	1.83	0.60
38:BC:59:ARG:HG3	38:BC:164:ARG:HB3	1.83	0.60
48:BP:102:ARG:HH11	48:BP:102:ARG:HB2	1.65	0.60
42:DG:146:TYR:O	42:DG:149:VAL:HG22	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:333:GLY:CA	25:CZ:363:MET:HA	2.31	0.60
36:BA:521:G:H2'	36:BA:522:G:H8	1.66	0.60
39:BD:31:LYS:O	39:BD:35:LYS:HE3	2.01	0.60
56:DX:12:VAL:CB	56:DX:17:ALA:HB1	2.22	0.60
57:BY:7:VAL:HB	57:BY:8:LYS:HD2	1.84	0.60
52:BT:28:VAL:CG1	52:BT:46:GLU:HG3	2.29	0.60
39:DD:267:SER:C	39:DD:269:PHE:N	2.51	0.60
41:BF:160:ASN:HD21	41:BF:162:LEU:CB	2.13	0.60
40:BE:75:VAL:O	40:BE:77:ILE:N	2.34	0.60
36:BA:651:G:H2'	36:BA:652:C:H5'	1.83	0.60
42:BG:77:ILE:N	42:BG:77:ILE:HD13	2.14	0.60
40:DE:3:GLY:H	40:DE:81:ILE:HG21	1.66	0.60
13:CM:82:MET:SD	13:CM:83:ASP:N	2.74	0.60
46:BN:22:THR:HG22	46:BN:61:ARG:HB2	1.83	0.60
1:CA:266:G:H5"	1:CA:267:C:C5	2.36	0.60
58:DZ:81:ARG:HB2	58:DZ:81:ARG:CZ	2.28	0.60
1:AA:266:G:C5'	1:AA:267:C:C5	2.84	0.60
1:AA:723:U:H3	1:AA:1537:U:C2'	2.15	0.60
36:DA:969:U:H2'	36:DA:970:C:C6	2.36	0.60
27:D1:45:ASN:HB2	36:DA:2230:G:H1'	1.82	0.60
56:BX:49:VAL:HG12	56:BX:87:GLN:NE2	2.17	0.60
36:BA:2400:G:C4	36:BA:2401:U:O2	2.54	0.60
36:BA:1907:G:O2'	36:BA:1908:C:H5'	2.02	0.60
36:BA:1192:G:O2'	36:BA:1193:G:H5'	2.01	0.60
36:DA:11:G:H2'	36:DA:12:U:C6	2.36	0.60
21:CU:5:ASP:O	21:CU:11:GLY:HA3	2.00	0.60
26:D0:7:LEU:HD13	49:DQ:85:LYS:HD2	1.82	0.60
1:CA:473:G:H2'	1:CA:474:G:H8	1.65	0.60
1:CA:473:G:H5"	16:CP:81:ARG:NE	2.15	0.60
48:DP:6:LEU:H	48:DP:6:LEU:HD23	1.65	0.60
1:AA:1423:G:H5'	47:BO:49:ARG:HH22	1.66	0.60
36:DA:1592:C:H2'	36:DA:1593:G:C8	2.35	0.60
42:BG:102:PHE:CZ	42:BG:106:LEU:HD22	2.37	0.60
28:D2:19:VAL:O	28:D2:22:GLU:HG3	2.01	0.60
28:D2:29:LYS:O	28:D2:33:MET:N	2.35	0.60
28:D2:51:ARG:CB	28:D2:51:ARG:HH11	2.10	0.60
54:DV:62:LEU:HD21	54:DV:95:LEU:CB	2.22	0.60
37:DB:73:A:C2	58:DZ:34:ASN:ND2	2.70	0.60
40:DE:34:VAL:O	40:DE:35:GLN:HB2	2.01	0.60
36:DA:2159:G:H2'	36:DA:2160:G:C5'	2.31	0.60
42:BG:120:LEU:HB2	42:BG:179:PRO:O	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:2:ARG:HG3	50:BR:2:ARG:NH1	2.15	0.60
13:CM:82:MET:HB2	13:CM:93:ARG:NH1	2.17	0.60
2:CB:8:LYS:HB2	2:CB:9:GLU:OE1	2.02	0.60
16:CP:67:THR:HB	16:CP:70:ALA:HB2	1.82	0.60
36:BA:1038:C:C2'	36:BA:1039:G:H5"	2.32	0.60
58:BZ:9:TYR:CE1	58:BZ:35:ARG:NH1	2.69	0.60
39:BD:226:MET:HE3	39:BD:231:HIS:HB2	1.82	0.60
22:CW:5:G:N2	22:CW:68:C:O2	2.35	0.60
39:DD:124:PRO:HG2	39:DD:129:ASN:HD21	1.67	0.60
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.02	0.60
36:DA:2121:G:O4'	38:DC:167:LYS:HE2	2.02	0.60
27:D1:50:ARG:HD3	36:DA:2200:C:OP1	2.02	0.60
25:CZ:363:MET:HB3	25:CZ:364:PRO:HD2	1.83	0.60
55:DW:36:LEU:HD11	55:DW:47:VAL:HG12	1.84	0.60
36:BA:11:G:H2'	36:BA:12:U:C6	2.37	0.60
52:DT:61:PHE:CE1	52:DT:76:PHE:HB2	2.37	0.60
9:CI:47:LEU:H	9:CI:47:LEU:HD12	1.66	0.60
50:BR:33:ARG:HG2	50:BR:113:LEU:HD11	1.83	0.60
46:DN:13:TRP:O	46:DN:135:PRO:HD2	2.02	0.60
36:BA:118:A:N3	36:BA:178:G:H1'	2.16	0.60
38:DC:68:LEU:HD11	38:DC:161:ILE:CG2	2.30	0.60
58:DZ:108:PRO:HB3	58:DZ:141:VAL:CG1	2.31	0.60
36:BA:2744:G:N2	43:BH:143:GLN:OE1	2.35	0.60
53:DU:101:ARG:HH11	53:DU:101:ARG:HG3	1.67	0.60
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.82	0.60
41:DF:10:PRO:HD2	41:DF:13:SER:O	2.02	0.60
36:BA:2822:G:H2'	36:BA:2823:A:H5"	1.83	0.60
42:BG:141:PHE:HB3	42:BG:142:PRO:HD2	1.84	0.60
42:DG:32:PRO:HB2	42:DG:172:LEU:HD12	1.84	0.60
42:DG:39:ILE:HD13	42:DG:39:ILE:H	1.66	0.60
57:BY:7:VAL:HG21	57:BY:8:LYS:HZ2	1.66	0.60
58:DZ:96:VAL:HG13	58:DZ:97:GLU:H	1.65	0.60
43:BH:118:PRO:CG	43:BH:121:ILE:HD12	2.32	0.60
34:D8:59:LYS:HZ2	34:D8:59:LYS:HB2	1.65	0.60
36:BA:761:A:O5'	36:BA:761:A:C8	2.45	0.60
36:BA:2303:G:O2'	42:BG:132:ASN:HB2	2.02	0.60
40:DE:92:THR:O	40:DE:95:ILE:HG12	2.02	0.60
25:AZ:117:ARG:CD	25:AZ:157:LEU:HD11	2.31	0.60
50:DR:3:HIS:O	50:DR:5:LYS:N	2.33	0.60
54:BV:39:LEU:HD22	54:BV:39:LEU:N	2.17	0.60
54:BV:39:LEU:CD1	54:BV:51:VAL:HA	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:160:ASN:ND2	41:DF:162:LEU:HB2	2.14	0.60
40:DE:14:ILE:HD11	40:DE:173:VAL:CG1	2.31	0.60
25:CZ:139:ASP:CG	25:CZ:177:LEU:HD11	2.22	0.60
25:CZ:193:ASN:HB3	25:CZ:196:VAL:H	1.67	0.60
41:DF:53:THR:HG23	41:DF:55:GLY:N	2.17	0.60
9:CI:40:LEU:C	9:CI:42:ARG:H	2.04	0.60
22:AW:5:G:N2	22:AW:68:C:O2	2.34	0.60
36:DA:2854:G:H2'	36:DA:2855:C:C6	2.37	0.60
12:AL:46:LYS:HG3	12:AL:47:LYS:H	1.67	0.60
57:DY:42:VAL:HG12	57:DY:65:ALA:HB3	1.84	0.60
47:DO:64:ARG:CZ	52:DT:70:VAL:HG21	2.32	0.60
47:DO:35:VAL:HG21	47:DO:69:ILE:HD13	1.84	0.60
1:CA:977:A:N3	1:CA:977:A:C2'	2.64	0.60
30:B4:14:ILE:N	30:B4:14:ILE:HD12	2.17	0.60
1:AA:737:A:H2'	1:AA:738:C:C6	2.36	0.60
38:DC:214:VAL:CG2	38:DC:224:ILE:HD13	2.30	0.60
27:D1:80:LEU:HB3	27:D1:82:LEU:HD13	1.84	0.60
1:AA:62:U:H2'	1:AA:63:C:H5'	1.83	0.60
10:AJ:48:THR:HG23	10:AJ:62:HIS:CD2	2.36	0.60
40:BE:107:THR:O	40:BE:190:GLY:HA2	2.00	0.60
36:DA:1328:G:H2'	36:DA:1330:C:C5	2.36	0.60
1:CA:793:U:H3'	1:CA:794:A:H5"	1.84	0.60
39:DD:43:ARG:HD2	39:DD:44:ASN:ND2	2.17	0.60
36:BA:1599:C:H2'	36:BA:1600:C:C6	2.35	0.60
36:DA:1598:C:H5'	56:DX:36:LYS:CG	2.32	0.60
28:D2:46:GLN:N	28:D2:50:ILE:HD13	2.17	0.60
32:B6:9:LEU:O	32:B6:9:LEU:HD13	2.01	0.60
57:BY:7:VAL:HG21	57:BY:8:LYS:HZ3	1.66	0.60
2:AB:187:LEU:HD23	2:AB:201:ILE:HG22	1.82	0.60
36:BA:1960:A:C8	36:BA:1960:A:H5'	2.36	0.60
36:BA:2184:G:H2'	36:BA:2185:C:C1'	2.31	0.60
46:DN:21:LYS:HD3	46:DN:22:THR:H	1.67	0.60
51:BS:88:ASP:OD2	51:BS:89:ARG:N	2.31	0.60
36:DA:833:U:H5"	48:DP:48:PRO:CB	2.31	0.60
47:BO:86:ILE:N	47:BO:86:ILE:HD12	2.16	0.60
32:D6:52:VAL:HG22	32:D6:53:LYS:HD3	1.82	0.60
54:BV:38:LEU:HD23	54:BV:39:LEU:N	2.16	0.60
36:BA:1516:C:O2'	36:BA:1517:G:H5"	2.02	0.60
38:DC:87:GLU:HG2	38:DC:94:VAL:HG23	1.82	0.60
38:BC:118:ASP:C	38:BC:120:MET:H	2.05	0.60
43:DH:44:VAL:HG12	43:DH:45:VAL:N	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:45:U:C3'	24:CY:46:7MG:H5"	2.31	0.60
25:AZ:152:MET:CE	25:AZ:156:ASP:HB2	2.31	0.60
34:B8:17:THR:HG21	34:B8:21:LYS:HB2	1.82	0.60
17:AQ:67:LYS:O	17:AQ:68:ARG:CB	2.49	0.60
21:CU:6:ARG:CZ	21:CU:15:ARG:NH2	2.65	0.60
7:CG:15:ASP:HB3	7:CG:20:ASP:H	1.67	0.60
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.17	0.60
57:DY:31:LEU:HB2	57:DY:32:PRO:HA	1.83	0.60
20:AT:84:LEU:C	20:AT:86:ARG:H	2.03	0.60
1:CA:274:A:O2'	1:CA:275:G:C8	2.54	0.60
36:DA:1005:C:H2'	36:DA:1006:C:C6	2.37	0.60
1:AA:1442(B):A:C5	52:BT:118:ARG:CZ	2.84	0.60
49:BQ:101:ARG:HD2	49:BQ:102:VAL:N	2.17	0.60
24:AY:16:H2U:H5'	24:AY:17:H2U:O5'	2.01	0.60
3:AC:7:PRO:HG2	3:AC:184:TYR:HB2	1.84	0.60
9:AI:126:SER:O	9:AI:127:LYS:HB3	2.02	0.60
36:BA:559:G:H22	53:BU:49:HIS:CD2	2.19	0.60
36:DA:1510:G:O2'	36:DA:1511:C:H5'	2.01	0.60
39:DD:4:LYS:NZ	39:DD:20:ASP:HA	2.17	0.60
39:BD:248:SER:HB2	39:BD:249:PRO:HD2	1.82	0.60
20:AT:74:LYS:HG3	20:AT:75:ASN:ND2	2.17	0.60
36:DA:2672:G:C3'	36:DA:2673:G:H5"	2.30	0.60
1:CA:202:U:H4'	1:CA:203:U:OP2	2.01	0.60
1:AA:369:C:H6	1:AA:369:C:H5'	1.67	0.60
25:AZ:333:GLY:CA	25:AZ:363:MET:HA	2.32	0.60
52:DT:64:ARG:HD2	52:DT:73:GLU:OE1	2.02	0.60
39:BD:35:LYS:CG	39:BD:104:TYR:CE2	2.71	0.60
42:BG:138:GLN:HB3	42:BG:153:ARG:O	2.02	0.60
28:D2:49:LYS:O	28:D2:53:LEU:HB2	2.02	0.60
36:BA:666:G:H4'	48:BP:49:ARG:NH1	2.17	0.60
25:AZ:241:ARG:HB2	25:AZ:285:ASN:ND2	2.17	0.60
42:DG:124:SER:HB2	42:DG:131:TYR:CE1	2.36	0.60
51:DS:52:SER:CB	51:DS:55:ALA:HB3	2.29	0.60
42:BG:47:LYS:CD	42:BG:81:LYS:HG3	2.32	0.60
42:DG:88:ILE:CG2	42:DG:89:GLY:N	2.65	0.60
52:BT:85:LYS:HB3	52:BT:85:LYS:HZ2	1.62	0.60
13:CM:15:VAL:HG12	13:CM:45:VAL:HG22	1.83	0.60
12:AL:102:ARG:NH1	12:AL:102:ARG:HG2	2.15	0.60
36:BA:1040:C:H2'	36:BA:1041:G:H8	1.66	0.60
38:BC:76:ALA:HB1	38:BC:149:ILE:HD11	1.84	0.60
1:AA:1325:C:OP1	21:AU:15:ARG:NH2	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:612:C:C2'	36:DA:613:G:C5'	2.79	0.60
36:DA:613:G:H8	36:DA:613:G:H5'	1.67	0.60
34:B8:14:VAL:HG21	34:B8:22:VAL:CG1	2.31	0.60
24:AY:40:C:H2'	24:AY:41:C:H5"	1.82	0.60
36:DA:2851:A:H2'	36:DA:2852:G:C8	2.37	0.60
36:BA:1362:C:O2'	36:BA:1363:C:H5'	2.01	0.60
48:DP:83:VAL:HG11	48:DP:112:LEU:HD21	1.83	0.60
22:AV:62:C:H2'	22:AV:62:C:O2	2.00	0.60
39:BD:158:ALA:HB3	39:BD:161:THR:CG2	2.31	0.60
14:AN:23:ARG:HH11	14:AN:30:ALA:HB2	1.67	0.60
11:AK:59:TYR:CE1	11:AK:63:LEU:HD11	2.36	0.60
33:B7:26:GLY:O	33:B7:30:VAL:HG23	2.02	0.60
36:DA:1151:G:H5"	53:DU:81:HIS:CE1	2.37	0.60
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.37	0.60
36:DA:803:U:O2'	36:DA:804:A:H5'	2.02	0.60
36:BA:1842:G:H2'	36:BA:1843:C:C6	2.36	0.60
36:DA:26:G:OP1	55:DW:80:PRO:HB3	2.02	0.60
36:BA:1231:G:H2'	36:BA:1232:G:C8	2.37	0.60
10:AJ:8:LEU:HD22	10:AJ:96:ILE:HG22	1.84	0.60
2:AB:82:ARG:O	2:AB:86:GLU:HG3	2.01	0.60
28:B2:7:ARG:N	28:B2:7:ARG:HD3	2.17	0.60
36:DA:1499:C:O2'	36:DA:1500:G:H5'	2.02	0.60
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.84	0.60
58:DZ:96:VAL:HG12	58:DZ:128:VAL:O	2.02	0.59
36:DA:2312:U:H2'	36:DA:2313:C:H5"	1.84	0.59
42:DG:82:LEU:HD13	42:DG:87:PRO:CB	2.31	0.59
52:DT:28:VAL:O	52:DT:29:ARG:CB	2.50	0.59
36:BA:1024:G:C3'	36:BA:1025:G:H5"	2.23	0.59
4:AD:30:LYS:C	4:AD:32:ALA:H	2.05	0.59
51:BS:92:TYR:CG	51:BS:93:LYS:N	2.69	0.59
36:BA:1311:G:H21	36:BA:1603:A:H62	1.49	0.59
54:BV:21:ARG:HG2	54:BV:91:TYR:CD2	2.37	0.59
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.17	0.59
10:CJ:32:ALA:HB1	10:CJ:75:ILE:HG13	1.83	0.59
36:BA:611:C:H2'	36:BA:612:C:H6	1.65	0.59
36:DA:1784:A:H4'	36:DA:1785:A:O5'	2.02	0.59
43:BH:52:VAL:HG21	43:BH:69:ARG:HG3	1.83	0.59
24:AY:40:C:H2'	24:AY:41:C:C5'	2.32	0.59
52:BT:24:PRO:HD3	52:BT:52:ILE:CD1	2.32	0.59
42:BG:51:ARG:HD3	42:BG:53:LEU:CD2	2.32	0.59
46:DN:48:MET:CE	46:DN:48:MET:H	2.14	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:442:G:H4'	41:BF:46:ARG:HD3	1.83	0.59
7:CG:20:ASP:HB3	7:CG:23:VAL:HG23	1.84	0.59
53:DU:3:ARG:NH1	53:DU:5:LYS:HB3	2.15	0.59
22:CW:59:U:C2'	22:CW:60:U:H5'	2.32	0.59
29:B3:44:ARG:O	29:B3:48:GLU:HG2	2.02	0.59
40:BE:9:VAL:HG13	40:BE:25:VAL:HB	1.84	0.59
1:AA:542:G:H2'	1:AA:543:C:H6	1.65	0.59
46:BN:6:PRO:HB2	46:BN:9:VAL:HG21	1.84	0.59
39:DD:158:ALA:HB3	39:DD:161:THR:CG2	2.31	0.59
50:BR:21:TYR:OH	50:BR:43:GLU:HG2	2.02	0.59
1:AA:865:A:H5'	1:AA:1078:U:O4	2.02	0.59
1:CA:41:G:H2'	1:CA:42:G:H8	1.67	0.59
16:CP:60:LEU:HD21	16:CP:66:PRO:CG	2.32	0.59
36:DA:2206:G:N2	36:DA:2207:G:H5'	2.16	0.59
27:D1:50:ARG:HG3	27:D1:59:THR:HG22	1.83	0.59
36:BA:93:G:H2'	36:BA:94:C:C6	2.37	0.59
1:AA:853:G:O2'	1:AA:854:G:H5'	2.01	0.59
11:CK:105:VAL:HG23	11:CK:105:VAL:O	2.01	0.59
1:CA:838:G:C6	1:CA:840:C:H1'	2.37	0.59
1:AA:793:U:H3'	1:AA:794:A:H5"	1.84	0.59
42:BG:102:PHE:CE2	42:BG:106:LEU:HD22	2.37	0.59
36:DA:1598:C:H5'	56:DX:36:LYS:HG2	1.84	0.59
42:DG:52:ILE:HG12	42:DG:53:LEU:N	2.12	0.59
52:DT:84:GLN:O	52:DT:85:LYS:HG3	2.02	0.59
51:BS:36:TYR:HD1	51:BS:36:TYR:H	1.43	0.59
5:CE:10:MET:HB3	5:CE:32:VAL:HG22	1.85	0.59
36:DA:1290:C:H2'	36:DA:1291:C:H6	1.66	0.59
38:DC:123:VAL:O	38:DC:127:LEU:HB3	2.01	0.59
1:AA:1117:G:C8	1:AA:1117:G:H5'	2.34	0.59
43:BH:50:VAL:CG1	43:BH:52:VAL:HG23	2.32	0.59
2:CB:109:SER:C	2:CB:111:ARG:H	2.05	0.59
36:DA:2777:G:C5'	36:DA:2778:A:H5'	2.32	0.59
22:AW:39:U:C5'	22:AW:39:U:O2	2.50	0.59
52:DT:25:GLY:O	52:DT:26:ASP:HB2	2.02	0.59
2:AB:8:LYS:HB2	2:AB:9:GLU:OE1	2.02	0.59
42:BG:52:ILE:HB	42:BG:54:GLU:HG3	1.83	0.59
13:CM:57:ARG:HH12	30:D4:34:GLU:HG3	1.67	0.59
48:BP:83:VAL:HG11	48:BP:112:LEU:HD21	1.83	0.59
57:DY:63:LYS:HG2	57:DY:64:GLU:H	1.66	0.59
36:BA:141:A:H1'	36:BA:1408:C:O2'	2.02	0.59
1:AA:961:U:O2'	1:AA:962:C:P	2.60	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2228:G:OP2	39:DD:261:LYS:HE3	2.02	0.59
19:AS:5:LEU:C	19:AS:6:LYS:HD3	2.21	0.59
1:CA:1277:C:O2'	1:CA:1279:A:H8	1.84	0.59
5:CE:143:ARG:NH1	8:CH:77:GLU:OE1	2.35	0.59
7:AG:115:ARG:O	7:AG:118:VAL:HG22	2.02	0.59
40:BE:199:ARG:HB3	40:BE:199:ARG:HH11	1.66	0.59
21:AU:13:ILE:O	21:AU:16:GLY:N	2.35	0.59
1:CA:17:U:H2'	1:CA:18:C:C6	2.37	0.59
1:AA:1296:C:H4'	1:AA:1302:U:C5	2.37	0.59
36:DA:898:C:H2'	36:DA:899:A:O4'	2.02	0.59
36:BA:1567:A:H5'	39:BD:58:HIS:CD2	2.37	0.59
2:CB:178:ARG:NH1	8:CH:71:GLY:O	2.35	0.59
8:AH:56:LYS:N	8:AH:56:LYS:HD2	2.16	0.59
55:BW:55:ALA:C	55:BW:57:ASN:H	2.05	0.59
2:CB:82:ARG:O	2:CB:86:GLU:HG3	2.02	0.59
48:DP:58:THR:CB	48:DP:61:ARG:HH21	2.15	0.59
34:B8:4:MET:CE	36:BA:666:G:H1'	2.32	0.59
14:AN:32:SER:O	14:AN:40:CYS:HA	2.02	0.59
1:AA:1039:C:C6	1:AA:1040:U:H5	2.20	0.59
41:BF:123:LEU:HD12	41:BF:124:LEU:H	1.66	0.59
52:BT:28:VAL:HG12	52:BT:29:ARG:HD2	1.85	0.59
36:BA:1210:A:H5"	36:BA:1212:G:O4'	2.02	0.59
2:CB:47:THR:HA	2:CB:202:PRO:HG2	1.83	0.59
48:BP:23:PRO:HD2	48:BP:33:ARG:NE	2.14	0.59
25:CZ:9:LYS:HZ3	25:CZ:73:ALA:C	2.06	0.59
38:DC:116:THR:HG22	38:DC:146:GLY:O	2.01	0.59
36:DA:1053:C:H2'	36:DA:1054:A:H8	1.63	0.59
22:CW:31:A:N1	22:CW:39:U:O4	2.34	0.59
21:AU:6:ARG:NH1	21:AU:15:ARG:HH22	2.00	0.59
36:BA:1677:A:H2'	36:BA:1678:G:C8	2.37	0.59
25:AZ:137:LYS:HA	60:AZ:501:GDP:HN1	1.67	0.59
48:BP:101:VAL:HG12	48:BP:106:LEU:CB	2.31	0.59
29:D3:40:THR:OG1	29:D3:43:ILE:HG12	2.03	0.59
56:BX:49:VAL:HG12	56:BX:87:GLN:HB3	1.83	0.59
37:BB:30:C:H2'	37:BB:31:C:O4'	2.02	0.59
25:AZ:85:HIS:C	25:AZ:87:ASP:H	2.04	0.59
24:CY:61:C:O2'	24:CY:62:U:H5"	2.03	0.59
57:BY:46:LYS:HG2	57:BY:47:LYS:H	1.67	0.59
6:CF:61:LEU:O	6:CF:62:TRP:HB3	2.02	0.59
24:CY:75:C:H5	25:CZ:232:THR:OG1	1.85	0.59
13:AM:57:ARG:NH1	30:B4:34:GLU:HG3	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:100:VAL:HG12	5:CE:118:ILE:HG22	1.85	0.59
38:DC:122:ALA:O	38:DC:126:LYS:HB2	2.02	0.59
57:DY:33:LYS:C	57:DY:35:TYR:H	2.03	0.59
36:DA:703:U:C2'	36:DA:704:G:H5'	2.32	0.59
36:BA:729:G:C5	39:BD:208:LYS:HB2	2.37	0.59
37:DB:13:A:O2'	37:DB:14:U:H3'	2.02	0.59
35:D9:22:ARG:HB2	35:D9:24:TYR:HE1	1.67	0.59
36:BA:214:G:H1'	36:BA:216:A:O2'	2.03	0.59
42:DG:110:ALA:HA	42:DG:140:ILE:O	2.02	0.59
25:CZ:222:LEU:HD11	25:CZ:303:VAL:HB	1.83	0.59
33:D7:19:ARG:HG2	33:D7:19:ARG:HH11	1.68	0.59
36:DA:559:G:H22	53:DU:49:HIS:CD2	2.20	0.59
39:DD:35:LYS:CG	39:DD:104:TYR:HE2	2.11	0.59
28:D2:11:GLU:O	28:D2:14:ARG:HG3	2.02	0.59
52:DT:28:VAL:HG12	52:DT:29:ARG:HD2	1.84	0.59
4:AD:18:LYS:HE3	4:AD:31:CYS:HB2	1.84	0.59
36:DA:1061:U:H4'	36:DA:1070:A:C1'	2.32	0.59
2:AB:172:ILE:HD12	2:AB:172:ILE:N	2.14	0.59
48:DP:16:ARG:CB	48:DP:16:ARG:HH11	2.16	0.59
31:D5:46:CYS:SG	31:D5:47:PRO:HD2	2.42	0.59
38:DC:118:ASP:C	38:DC:120:MET:H	2.06	0.59
16:AP:67:THR:HG22	16:AP:68:ASP:N	2.17	0.59
43:DH:52:VAL:HB	43:DH:69:ARG:HD3	1.83	0.59
40:BE:14:ILE:HD11	40:BE:173:VAL:CG1	2.33	0.59
36:DA:2523:G:H2'	36:DA:2524:G:C5'	2.32	0.59
34:D8:14:VAL:HG23	34:D8:24:ALA:HB2	1.85	0.59
36:DA:141:A:H1'	36:DA:1408:C:O2'	2.01	0.59
1:AA:585:G:H4'	12:AL:8:ASN:ND2	2.18	0.59
40:BE:59:VAL:HG21	40:BE:63:LEU:HA	1.84	0.59
9:CI:46:ALA:HB2	9:CI:74:ILE:HG23	1.85	0.59
36:BA:208:C:H2'	36:BA:209:C:H6	1.65	0.59
53:DU:111:GLU:C	53:DU:113:ALA:H	2.05	0.59
24:AY:16:H2U:H5'	24:AY:17:H2U:H5'	1.84	0.59
16:AP:60:LEU:HD21	16:AP:66:PRO:CG	2.31	0.59
39:DD:10:THR:HG23	39:DD:13:ARG:HB2	1.84	0.59
37:BB:13:A:O2'	37:BB:14:U:H3'	2.01	0.59
36:DA:845:G:OP2	36:DA:845:G:H8	1.85	0.59
1:CA:953:G:C5'	1:CA:965:A:H61	2.14	0.59
36:BA:1590:U:H2'	36:BA:1591:G:C8	2.38	0.59
38:BC:75:LEU:O	38:BC:113:VAL:HA	2.02	0.59
35:D9:7:VAL:HG22	35:D9:34:GLN:HG2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:103:ARG:HD2	58:DZ:136:PHE:CG	2.37	0.59
36:DA:1378:A:O2'	36:DA:1379:A:C5'	2.35	0.59
1:CA:1330:U:H5'	1:CA:1331:G:OP2	2.03	0.59
28:D2:23:LYS:HE3	28:D2:26:ARG:NH1	2.17	0.59
36:DA:2108:C:C2'	36:DA:2108:C:O2	2.51	0.59
10:CJ:49:VAL:HG22	14:CN:41:ARG:HB2	1.85	0.59
36:BA:2393:A:H5'	48:BP:62:LEU:HB3	1.84	0.59
48:BP:65:ARG:HB3	48:BP:68:GLN:NE2	2.13	0.59
51:BS:96:GLY:O	51:BS:98:VAL:N	2.31	0.59
58:BZ:152:ALA:O	58:BZ:154:ASP:N	2.36	0.59
25:AZ:266:VAL:HB	25:AZ:291:ARG:NH1	2.17	0.59
24:AY:1:A:H5'	25:AZ:300:ARG:NH1	2.17	0.59
50:DR:14:SER:HA	50:DR:17:ARG:NH1	2.16	0.59
49:BQ:52:VAL:O	49:BQ:56:ARG:HB2	2.02	0.59
38:DC:116:THR:HG22	38:DC:147:PHE:HA	1.85	0.59
38:DC:91:ALA:HB2	38:DC:153:ILE:HD13	1.85	0.59
36:BA:1278:A:O2'	36:BA:1279:G:H5'	2.01	0.59
50:BR:36:THR:O	50:BR:111:LEU:HB3	2.02	0.59
1:AA:1064:G:N2	1:AA:1190:G:H2'	2.18	0.59
25:CZ:143:ASP:OD2	25:CZ:146:LEU:HB2	2.02	0.59
25:AZ:137:LYS:HE2	60:AZ:501:GDP:N3	2.17	0.59
1:AA:260:G:H2'	1:AA:261:U:H6	1.67	0.59
21:CU:6:ARG:NH1	21:CU:15:ARG:HH22	2.00	0.59
34:D8:50:LEU:C	34:D8:53:PRO:HD2	2.23	0.59
43:BH:76:VAL:O	43:BH:79:VAL:HG22	2.03	0.59
57:BY:42:VAL:HG12	57:BY:65:ALA:HB3	1.84	0.59
12:AL:50:SER:O	12:AL:51:ALA:HB2	2.03	0.59
43:BH:20:ALA:HB1	43:BH:21:PRO:HD2	1.83	0.59
22:CV:62:C:O2	22:CV:62:C:H2'	2.00	0.59
36:DA:1222:C:C2'	36:DA:1223:G:H5"	2.31	0.59
32:D6:9:LEU:HD13	32:D6:9:LEU:O	2.02	0.59
46:BN:6:PRO:HB3	46:BN:41:ASP:OD2	2.03	0.59
2:AB:111:ARG:HG2	2:AB:111:ARG:HH11	1.67	0.59
16:CP:8:ARG:O	16:CP:9:PHE:HD1	1.84	0.59
36:DA:956:G:OP2	49:DQ:14:ARG:NH2	2.34	0.59
1:CA:862:C:O2'	1:CA:863:U:H5'	2.02	0.59
1:CA:865:A:C2	1:CA:918:A:H4'	2.37	0.59
31:B5:52:TYR:CE2	36:BA:2884:U:H1'	2.38	0.59
5:CE:142:LEU:O	5:CE:143:ARG:HD3	2.02	0.59
25:AZ:363:MET:HB3	25:AZ:364:PRO:HD2	1.83	0.59
6:CF:12:PRO:HG3	6:CF:55:ASP:HB3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:36:LEU:HD12	20:AT:59:ALA:HB2	1.84	0.59
36:BA:2406:U:N3	48:BP:72:PRO:HB2	2.17	0.59
36:BA:280:C:H3'	36:BA:281:G:H8	1.67	0.59
20:CT:36:LEU:HD12	20:CT:59:ALA:HB2	1.84	0.59
36:BA:1582:C:H2'	36:BA:1583:A:H8	1.66	0.59
30:B4:20:ASN:HD22	30:B4:21:VAL:N	2.00	0.59
20:CT:74:LYS:HG3	20:CT:75:ASN:ND2	2.17	0.59
36:BA:1203:G:H3'	36:BA:1204:A:H5"	1.83	0.59
42:DG:133:LEU:CD1	42:DG:157:ILE:HB	2.33	0.59
42:DG:72:ARG:HB3	42:DG:87:PRO:HD2	1.83	0.59
2:AB:47:THR:HA	2:AB:202:PRO:HG2	1.84	0.59
36:BA:1210:A:H8	36:BA:1210:A:H5'	1.65	0.59
50:BR:100:LEU:H	50:BR:100:LEU:HD13	1.67	0.59
37:BB:40:U:O2	37:BB:43:C:H5"	2.03	0.59
48:DP:65:ARG:HB3	48:DP:68:GLN:NE2	2.11	0.59
36:BA:1784:A:H4'	36:BA:1785:A:O5'	2.02	0.59
48:DP:16:ARG:CZ	48:DP:18:ARG:HG2	2.32	0.59
51:BS:59:LYS:HG2	51:BS:60:GLY:N	2.13	0.59
36:BA:2712:U:O2'	36:BA:2713:A:H5'	2.01	0.59
53:BU:92:ARG:NH1	53:BU:94:ASN:HD22	1.99	0.59
36:BA:1049:C:H2'	36:BA:1050:A:H8	1.68	0.59
4:CD:100:ARG:O	4:CD:104:VAL:HG23	2.02	0.59
19:AS:10:PHE:HE1	19:AS:70:LYS:HE2	1.67	0.59
1:AA:266:G:H5"	1:AA:267:C:C5	2.36	0.59
48:DP:101:VAL:HG12	48:DP:106:LEU:CB	2.32	0.59
7:AG:46:ALA:O	7:AG:50:ILE:HG12	2.02	0.59
36:DA:482:A:H4'	57:DY:47:LYS:HG2	1.83	0.59
36:BA:1817:G:C2'	36:BA:1818:U:H5'	2.32	0.59
46:DN:6:PRO:HB3	46:DN:41:ASP:OD2	2.02	0.59
25:AZ:222:LEU:CD1	25:AZ:303:VAL:HB	2.33	0.59
2:AB:80:ILE:N	2:AB:80:ILE:HD12	2.17	0.59
25:CZ:333:GLY:HA3	25:CZ:363:MET:HA	1.84	0.59
38:DC:68:LEU:HD11	38:DC:161:ILE:HG23	1.84	0.59
58:BZ:40:ASP:OD2	58:BZ:43:GLU:HG2	2.01	0.59
39:BD:233:HIS:CE1	39:BD:247:ALA:H	2.21	0.59
43:BH:94:TYR:HB3	43:BH:107:VAL:HG12	1.84	0.59
36:BA:877:U:O2'	36:BA:878:A:H5"	2.02	0.59
10:CJ:96:ILE:H	10:CJ:96:ILE:HD13	1.68	0.59
47:BO:24:VAL:HB	47:BO:33:ALA:HB2	1.85	0.59
1:AA:1330:U:H5'	1:AA:1331:G:OP2	2.03	0.59
28:D2:32:LEU:HA	28:D2:53:LEU:HD13	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:120:LEU:HD23	42:DG:131:TYR:OH	2.02	0.59
52:BT:28:VAL:O	52:BT:29:ARG:CB	2.50	0.59
51:BS:97:ARG:NH2	51:BS:98:VAL:CA	2.64	0.59
36:DA:607:U:H3	36:DA:621:A:H2	1.51	0.59
48:DP:23:PRO:HG2	48:DP:33:ARG:HG3	1.84	0.59
36:BA:2248:C:H2'	36:BA:2249:U:C5'	2.29	0.59
25:CZ:19:HIS:CG	25:CZ:115:GLN:HB2	2.37	0.59
48:BP:16:ARG:NE	48:BP:18:ARG:HG2	2.18	0.59
31:D5:50:GLY:CA	31:D5:56:LYS:HD3	2.32	0.59
36:BA:997:G:OP1	53:BU:93:LYS:HD3	2.02	0.59
1:CA:187:C:O2	20:CT:105:SER:HB3	2.02	0.59
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.17	0.59
48:BP:40:SER:O	48:BP:41:ARG:HD2	2.01	0.59
21:CU:22:ARG:HG2	21:CU:22:ARG:NH1	2.16	0.59
36:BA:1222:C:C2'	36:BA:1223:G:H5"	2.33	0.59
43:DH:20:ALA:HB1	43:DH:21:PRO:HD2	1.84	0.59
6:CF:87:ARG:CG	6:CF:87:ARG:HH11	2.15	0.59
9:CI:111:ARG:HG2	9:CI:112:LYS:N	2.18	0.59
52:BT:106:SER:O	52:BT:107:ASP:CB	2.50	0.59
11:CK:59:TYR:CE1	11:CK:63:LEU:HD11	2.38	0.59
36:DA:2201:C:O2'	36:DA:2202:C:H5'	2.03	0.59
1:CA:542:G:H2'	1:CA:543:C:H6	1.65	0.59
36:DA:2287:A:H62	36:DA:2344:U:H3	1.50	0.59
4:CD:109:GLY:O	4:CD:111:ALA:N	2.33	0.59
36:DA:236:C:H2'	36:DA:237:C:C6	2.38	0.59
36:DA:118:A:N3	36:DA:178:G:H1'	2.18	0.59
1:AA:784:C:H4'	36:BA:1837:C:OP1	2.03	0.59
3:CC:7:PRO:O	3:CC:11:ARG:HG2	2.02	0.59
36:BA:1773:A:C2'	36:BA:1774:C:H5'	2.32	0.59
36:DA:654(L):G:H2'	36:DA:654(M):C:H4'	1.83	0.59
1:AA:614:A:O2'	1:AA:615:C:H5'	2.03	0.59
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.18	0.59
39:DD:35:LYS:HD2	39:DD:36:PRO:HD3	1.85	0.59
13:AM:22:ILE:HB	13:AM:25:ILE:HD12	1.85	0.59
57:DY:7:VAL:HB	57:DY:8:LYS:HD2	1.83	0.59
32:B6:27:LYS:HE3	32:B6:27:LYS:C	2.23	0.59
36:DA:2312:U:H2'	36:DA:2313:C:H5'	1.85	0.59
42:DG:47:LYS:CG	42:DG:81:LYS:HG3	2.31	0.59
25:AZ:271:GLU:O	25:AZ:286:VAL:HG23	2.02	0.59
40:BE:170:LEU:HB3	40:BE:184:VAL:CG1	2.32	0.59
12:AL:20:LYS:N	12:AL:20:LYS:HD3	2.14	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.84	0.59
53:BU:90:VAL:HG12	53:BU:91:ASP:H	1.65	0.59
36:DA:2128:C:O2'	36:DA:2129:C:P	2.61	0.59
50:DR:94:TYR:HD1	50:DR:94:TYR:N	1.99	0.59
37:DB:16:G:O2'	37:DB:17:C:H6	1.85	0.59
12:CL:25:PRO:O	12:CL:27:LEU:N	2.36	0.59
31:D5:16:ARG:HH11	31:D5:20:ARG:NH1	2.01	0.59
51:DS:66:ALA:CA	51:DS:69:VAL:HG12	2.33	0.59
27:B1:3:LYS:HG3	36:BA:1364:G:OP2	2.02	0.59
56:BX:29:TRP:CE3	56:BX:78:LYS:HB3	2.38	0.59
36:BA:2781:A:H5"	36:BA:2782:G:H5'	1.85	0.59
36:BA:302:C:H2'	36:BA:303:U:H6	1.68	0.59
38:DC:106:GLY:O	38:DC:107:TRP:HB3	2.02	0.59
39:DD:181:GLU:HA	39:DD:273:ARG:O	2.02	0.59
36:DA:1335:U:H2'	36:DA:1336:A:H8	1.67	0.59
49:DQ:66:ILE:O	49:DQ:66:ILE:HD12	2.02	0.59
1:CA:953:G:H5'	1:CA:965:A:H61	1.68	0.59
8:CH:19:VAL:HG23	8:CH:21:LYS:HG3	1.84	0.59
12:AL:83:VAL:HG11	12:AL:100:ILE:HD13	1.85	0.59
36:BA:1090:U:OP2	36:BA:1090:U:H3'	2.02	0.59
25:CZ:215:ARG:HD2	25:CZ:283:GLY:HA3	1.84	0.59
1:AA:838:G:C6	1:AA:840:C:H1'	2.38	0.59
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.84	0.59
27:B1:75:GLU:O	27:B1:78:LYS:HG2	2.02	0.59
55:DW:11:ARG:HG2	55:DW:11:ARG:HH11	1.67	0.59
36:DA:1274:A:N3	36:DA:1297:C:H1'	2.17	0.59
33:B7:19:ARG:HH11	33:B7:19:ARG:HG2	1.68	0.59
36:DA:1582:C:H2'	36:DA:1583:A:H8	1.67	0.59
39:DD:30:GLU:HG3	39:DD:63:ARG:HH21	1.67	0.59
30:B4:9:LEU:HD13	30:B4:26:SER:O	2.03	0.59
56:BX:80:ILE:HG13	56:BX:80:ILE:O	2.02	0.59
36:DA:1902:C:H4'	39:DD:244:ARG:CB	2.33	0.59
1:CA:1039:C:C6	1:CA:1040:U:H5	2.20	0.59
51:DS:35:ILE:H	51:DS:53:SER:HB2	1.68	0.59
42:BG:71:THR:O	42:BG:71:THR:HG23	2.02	0.59
57:BY:86:ARG:NH2	57:BY:95:LYS:NZ	2.50	0.59
43:BH:85:LYS:CE	43:BH:133:VAL:H	2.15	0.59
52:DT:85:LYS:NZ	52:DT:85:LYS:CB	2.60	0.59
30:B4:6:HIS:HB3	42:BG:67:LYS:HZ1	1.68	0.59
36:BA:1947:C:C3'	36:BA:1948:G:H5"	2.32	0.59
49:BQ:141:GLN:HG3	58:BZ:72:ARG:CZ	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:188:VAL:HG23	40:BE:189:PRO:HD2	1.85	0.59
40:BE:101:ARG:HB2	40:BE:201:THR:HG21	1.84	0.59
48:BP:84:ASN:ND2	48:BP:116:GLY:HA2	2.18	0.59
58:BZ:18:LEU:N	58:BZ:18:LEU:HD12	2.14	0.59
24:CY:3:G:H5'	24:CY:3:G:H8	1.65	0.59
36:DA:2128:C:O2'	36:DA:2129:C:O5'	2.20	0.59
38:BC:116:THR:HG22	38:BC:147:PHE:HA	1.85	0.59
38:BC:123:VAL:CG2	38:BC:127:LEU:HD13	2.32	0.59
48:DP:41:ARG:CA	48:DP:41:ARG:NH1	2.66	0.59
43:DH:98:LEU:H	43:DH:125:VAL:HG21	1.67	0.59
1:AA:1190:G:OP1	3:AC:5:ILE:HD12	2.02	0.59
52:BT:100:TYR:HD2	52:BT:103:ARG:NH2	1.97	0.59
3:CC:43:LEU:HD22	3:CC:47:LEU:HD22	1.85	0.59
40:BE:116:VAL:HG22	40:BE:122:PHE:CG	2.38	0.59
6:AF:87:ARG:CG	6:AF:87:ARG:HH11	2.15	0.59
39:BD:45:ASN:CG	39:BD:46:GLN:N	2.56	0.59
36:DA:1817:G:C2'	36:DA:1818:U:H5'	2.33	0.59
43:BH:136:ILE:HD12	43:BH:136:ILE:H	1.67	0.59
36:DA:1582:C:H2'	36:DA:1583:A:C8	2.38	0.59
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.38	0.59
36:DA:1192:G:O2'	36:DA:1193:G:H5'	2.03	0.59
1:CA:614:A:O2'	1:CA:615:C:H5'	2.03	0.59
53:DU:79:PHE:O	53:DU:83:LEU:HD13	2.03	0.59
36:DA:280:C:H3'	36:DA:281:G:H8	1.67	0.59
58:BZ:30:ASN:HD22	58:BZ:32:HIS:N	1.97	0.59
1:CA:1283:G:O2'	1:CA:1284:C:P	2.60	0.59
36:BA:2305:A:C4	42:BG:154:GLY:HA3	2.37	0.59
51:DS:50:SER:O	51:DS:51:ALA:HB2	2.02	0.59
43:BH:157:TYR:O	43:BH:158:HIS:CD2	2.56	0.59
1:AA:56:U:H2'	1:AA:57:G:C8	2.37	0.59
1:CA:1319:A:H5'	1:CA:1320:C:OP1	2.02	0.59
34:D8:59:LYS:HZ3	34:D8:59:LYS:HB2	1.66	0.59
51:DS:85:VAL:O	51:DS:106:ARG:HG2	2.03	0.59
47:DO:88:ASN:HD21	47:DO:92:GLU:HB2	1.67	0.59
48:BP:97:PRO:HD3	48:BP:126:VAL:O	2.02	0.59
13:CM:49:THR:HB	13:CM:52:GLU:HG3	1.85	0.59
52:DT:104:ASN:O	52:DT:105:LEU:HB2	2.01	0.59
22:CW:39:U:C5'	22:CW:39:U:O2	2.50	0.59
36:BA:1678:G:N2	36:BA:1989:G:N2	2.51	0.59
24:CY:40:C:H2'	24:CY:41:C:C5'	2.32	0.59
17:AQ:18:THR:HG23	17:AQ:69:LYS:HZ3	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:14:ARG:HD2	36:BA:2279:G:O6	2.03	0.59
40:DE:170:LEU:HB3	40:DE:184:VAL:CG1	2.32	0.59
58:BZ:9:TYR:HE1	58:BZ:35:ARG:NH1	2.00	0.59
52:BT:39:ARG:N	52:BT:39:ARG:HD2	2.18	0.59
36:BA:363(E):U:H2'	36:BA:363(F):A:C1'	2.33	0.59
36:DA:310:A:OP1	57:DY:18:GLY:HA2	2.03	0.59
56:DX:29:TRP:CE3	56:DX:78:LYS:HB3	2.38	0.59
36:BA:2360:A:O2'	36:BA:2361:A:O4'	2.21	0.59
36:BA:139(A):G:H22	56:BX:44:GLU:CD	2.05	0.59
36:DA:2591:C:H2'	36:DA:2592:G:H8	1.66	0.59
37:DB:30:C:H2'	37:DB:31:C:O4'	2.03	0.59
36:DA:1331:A:HO2'	36:DA:1332:G:H8	1.51	0.59
46:DN:126:PRO:O	46:DN:127:ASP:HB2	2.03	0.59
36:BA:1582:C:H2'	36:BA:1583:A:C8	2.38	0.59
7:AG:70:LYS:HB3	7:AG:96:GLN:HG2	1.85	0.59
36:DA:1523:U:H2'	36:DA:1524:G:H8	1.68	0.59
36:DA:523:C:C2'	36:DA:524:U:H5'	2.33	0.59
36:DA:556:G:H2'	36:DA:557:U:C6	2.38	0.59
6:CF:77:ARG:HG2	6:CF:77:ARG:HH11	1.67	0.59
52:DT:38:ASN:ND2	52:DT:38:ASN:O	2.35	0.59
38:DC:45:ALA:O	38:DC:171:ILE:HG22	2.03	0.59
28:D2:18:PRO:HA	28:D2:21:LEU:CD1	2.33	0.58
28:D2:69:ARG:H	28:D2:69:ARG:HD2	1.68	0.58
54:DV:59:ALA:HB1	54:DV:95:LEU:O	2.03	0.58
1:AA:192:U:O2'	20:AT:57:ARG:HG3	2.03	0.58
36:BA:512:G:O2'	36:BA:513:A:H8	1.86	0.58
58:BZ:18:LEU:HB3	58:BZ:23:LYS:HB2	1.85	0.58
53:DU:92:ARG:NH1	53:DU:94:ASN:HD22	2.00	0.58
54:DV:38:LEU:HD23	54:DV:39:LEU:N	2.18	0.58
25:CZ:126:VAL:HG13	61:CZ:502:KIR:C47	2.33	0.58
36:DA:1516:C:O2'	36:DA:1517:G:H5"	2.03	0.58
1:AA:924:C:H5'	1:AA:1399:C:OP2	2.03	0.58
38:DC:76:ALA:HB1	38:DC:149:ILE:HD11	1.84	0.58
50:BR:55:ALA:CB	50:BR:79:LEU:HD11	2.33	0.58
38:BC:87:GLU:HG2	38:BC:94:VAL:CG2	2.33	0.58
10:CJ:81:THR:HG23	10:CJ:82:ILE:H	1.67	0.58
48:DP:41:ARG:HB3	48:DP:41:ARG:NH1	2.18	0.58
43:DH:52:VAL:HG21	43:DH:69:ARG:HG3	1.85	0.58
39:BD:48:ARG:NH1	39:BD:48:ARG:HG3	2.18	0.58
1:AA:1325:C:P	21:AU:15:ARG:HH21	2.25	0.58
43:BH:74:ASN:HB3	43:BH:138:LYS:HD3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:14:VAL:HG23	34:B8:24:ALA:HB2	1.85	0.58
34:B8:52:LYS:O	34:B8:55:ALA:HB3	2.03	0.58
34:B8:50:LEU:C	34:B8:53:PRO:HD2	2.24	0.58
46:BN:22:THR:HG22	46:BN:61:ARG:CB	2.32	0.58
37:BB:75:G:O2'	58:BZ:27:VAL:HG23	2.03	0.58
36:DA:363(E):U:H2'	36:DA:363(F):A:C1'	2.33	0.58
32:D6:25:LYS:HD2	36:DA:2285:C:N4	2.18	0.58
17:CQ:67:LYS:O	17:CQ:68:ARG:CB	2.50	0.58
56:DX:49:VAL:HG12	56:DX:87:GLN:HB3	1.85	0.58
52:BT:50:ILE:O	52:BT:99:LEU:HD12	2.03	0.58
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.03	0.58
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.18	0.58
36:BA:2140:C:H2'	36:BA:2141:G:H8	1.68	0.58
36:BA:2121:G:O4'	38:BC:167:LYS:HE2	2.02	0.58
36:DA:654(N):G:H2'	36:DA:654(O):G:O4'	2.03	0.58
36:BA:361:G:H2'	36:BA:362:U:H4'	1.84	0.58
1:CA:755:G:OP2	15:CO:65:ARG:HD2	2.03	0.58
1:AA:1490:C:O2'	1:AA:1491:G:H5'	2.03	0.58
36:DA:573:G:O2'	36:DA:574:C:H3'	2.02	0.58
36:BA:523:C:C2'	36:BA:524:U:H5'	2.33	0.58
28:D2:27:GLU:O	28:D2:30:ARG:N	2.36	0.58
28:D2:36:ARG:HD3	56:DX:9:LEU:O	2.03	0.58
32:B6:25:LYS:HD2	36:BA:2285:C:N4	2.17	0.58
42:DG:174:GLU:C	42:DG:176:LEU:H	2.06	0.58
57:BY:28:LYS:CB	57:BY:37:VAL:HB	2.33	0.58
36:DA:2309:A:C2'	36:DA:2310:A:H5"	2.33	0.58
52:DT:33:LYS:HE2	52:DT:43:GLN:NE2	2.19	0.58
48:DP:9:ASN:N	48:DP:10:PRO:HD2	2.14	0.58
40:BE:34:VAL:O	40:BE:35:GLN:HB2	2.02	0.58
6:CF:97:PHE:CD1	18:CR:31:LEU:HD21	2.28	0.58
54:DV:39:LEU:CD1	54:DV:51:VAL:HA	2.33	0.58
47:DO:86:ILE:H	47:DO:86:ILE:HD12	1.67	0.58
54:BV:91:TYR:HD1	54:BV:91:TYR:H	1.49	0.58
12:CL:102:ARG:HG2	12:CL:102:ARG:NH1	2.18	0.58
36:DA:1516:C:H2'	36:DA:1517:G:H5'	1.85	0.58
1:AA:1278:U:H5"	1:AA:1279:A:O4'	2.02	0.58
1:AA:187:C:O2	20:AT:105:SER:HB3	2.04	0.58
50:DR:21:TYR:OH	50:DR:43:GLU:HG2	2.03	0.58
36:BA:654(M):C:H2'	36:BA:654(N):G:N7	2.18	0.58
11:AK:105:VAL:HG23	11:AK:105:VAL:O	2.02	0.58
36:DA:2406:U:N3	48:DP:72:PRO:HB2	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:344:A:H4'	1:AA:345:C:OP1	2.03	0.58
30:D4:13:ARG:C	30:D4:14:ILE:HD12	2.23	0.58
28:D2:26:ARG:HG2	28:D2:26:ARG:O	2.03	0.58
28:D2:29:LYS:HD2	28:D2:32:LEU:CD1	2.27	0.58
57:DY:28:LYS:CB	57:DY:37:VAL:HB	2.33	0.58
48:BP:59:LEU:HA	48:BP:61:ARG:NH1	2.18	0.58
36:BA:2183:C:H2'	36:BA:2184:G:H8	1.68	0.58
43:BH:156:ALA:C	43:BH:158:HIS:N	2.56	0.58
36:DA:1960:A:C8	36:DA:1960:A:H5'	2.36	0.58
36:BA:1061:U:H4'	36:BA:1070:A:C1'	2.32	0.58
4:AD:16:GLY:O	4:AD:33:MET:HE3	2.03	0.58
50:BR:99:LYS:N	50:BR:99:LYS:HD2	2.15	0.58
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.85	0.58
30:D4:34:GLU:HG2	42:DG:113:ARG:NH2	2.18	0.58
1:AA:187:C:C2	20:AT:105:SER:HB3	2.38	0.58
33:B7:22:MET:CE	33:B7:31:LEU:HD12	2.34	0.58
55:DW:82:LEU:HD23	55:DW:84:ARG:NH2	2.19	0.58
1:AA:80:G:C2'	1:AA:81:U:H5'	2.34	0.58
16:CP:28:ARG:HG2	16:CP:29:ASP:OD1	2.04	0.58
1:AA:1240:U:OP1	7:AG:116:ALA:HB2	2.03	0.58
24:CY:16:H2U:H5'	24:CY:17:H2U:H5'	1.86	0.58
38:DC:73:ARG:O	38:DC:111:ASP:HB2	2.03	0.58
35:B9:22:ARG:HB2	35:B9:24:TYR:HE1	1.68	0.58
15:AO:3:ILE:O	15:AO:3:ILE:HG13	2.03	0.58
54:BV:41:GLY:HA3	54:BV:45:THR:OG1	2.04	0.58
36:BA:236:C:H2'	36:BA:237:C:C6	2.38	0.58
56:DX:33:LYS:HE2	56:DX:33:LYS:HA	1.84	0.58
28:D2:62:THR:HG21	36:DA:76:C:C1'	2.33	0.58
34:B8:62:LEU:N	34:B8:63:PRO:HD2	2.19	0.58
2:AB:47:THR:HG23	2:AB:202:PRO:O	2.04	0.58
52:BT:28:VAL:O	52:BT:28:VAL:HG12	2.03	0.58
36:DA:1959:G:C3'	36:DA:1960:A:H5"	2.33	0.58
1:CA:1318:A:H1'	19:CS:37:ARG:HH21	1.68	0.58
36:BA:2317:C:H2'	36:BA:2318:G:C5'	2.27	0.58
36:BA:1446:C:H42	36:BA:1465:G:H1	1.51	0.58
25:CZ:117:ARG:CD	25:CZ:157:LEU:HD11	2.33	0.58
36:DA:2820:A:H4'	50:DR:5:LYS:HE2	1.85	0.58
40:BE:92:THR:O	40:BE:95:ILE:HG12	2.03	0.58
38:DC:114:VAL:HG12	38:DC:144:THR:CB	2.33	0.58
36:DA:1049:C:H2'	36:DA:1050:A:H8	1.68	0.58
12:CL:18:VAL:HG23	12:CL:19:ARG:N	2.16	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:23:VAL:HG12	40:BE:173:VAL:HG21	1.85	0.58
7:AG:20:ASP:HB3	7:AG:23:VAL:HG23	1.86	0.58
25:CZ:85:HIS:C	25:CZ:87:ASP:H	2.05	0.58
1:AA:961:U:O2'	1:AA:962:C:O5'	2.20	0.58
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HB3	1.85	0.58
36:BA:2228:G:OP2	39:BD:261:LYS:HE3	2.04	0.58
36:BA:218:A:C2	36:BA:235:U:H4'	2.39	0.58
28:B2:2:LYS:O	28:B2:6:VAL:HG23	2.02	0.58
27:D1:30:VAL:H	36:DA:2396:G:H4'	1.68	0.58
25:CZ:363:MET:HB3	25:CZ:364:PRO:CD	2.33	0.58
26:D0:7:LEU:HD21	49:DQ:81:VAL:CG1	2.33	0.58
25:AZ:333:GLY:HA3	25:AZ:363:MET:HA	1.85	0.58
1:AA:242:C:H2'	1:AA:243:A:H5'	1.86	0.58
36:DA:93:G:H2'	36:DA:94:C:C6	2.38	0.58
37:DB:82:G:O2'	37:DB:83:G:H5'	2.02	0.58
11:AK:30:VAL:HG11	11:AK:65:ALA:HA	1.85	0.58
27:D1:56:GLN:HB3	27:D1:87:PRO:HB3	1.84	0.58
52:BT:61:PHE:CE1	52:BT:76:PHE:HB2	2.37	0.58
34:B8:42:ARG:O	34:B8:44:LYS:N	2.33	0.58
36:BA:898:C:H2'	36:BA:899:A:O4'	2.03	0.58
36:DA:1590:U:H2'	36:DA:1591:G:C8	2.37	0.58
39:DD:44:ASN:OD1	39:DD:44:ASN:N	2.35	0.58
34:B8:61:LEU:HD12	34:B8:61:LEU:N	2.13	0.58
55:DW:92:ARG:O	55:DW:93:ALA:HB3	2.03	0.58
51:DS:97:ARG:NH2	51:DS:98:VAL:CA	2.64	0.58
36:DA:2313:C:H5'	36:DA:2313:C:H6	1.68	0.58
52:DT:83:ILE:HG13	52:DT:84:GLN:H	1.69	0.58
1:AA:358:U:H5"	25:AZ:234:ARG:O	2.04	0.58
36:DA:1209:G:H21	36:DA:1210:A:H62	1.49	0.58
41:DF:167:ALA:O	41:DF:170:LEU:HB2	2.04	0.58
51:BS:98:VAL:HG12	51:BS:100:ALA:H	1.68	0.58
25:AZ:19:HIS:CG	25:AZ:115:GLN:HB2	2.37	0.58
41:DF:125:LEU:HD23	41:DF:125:LEU:N	2.13	0.58
48:DP:126:VAL:CA	48:DP:145:PRO:HG2	2.30	0.58
36:DA:1677:A:H2'	36:DA:1678:G:C8	2.38	0.58
25:CZ:164:PRO:O	25:CZ:168:VAL:HG23	2.04	0.58
26:D0:43:THR:O	26:D0:43:THR:HG23	2.03	0.58
22:CW:39:U:H2'	22:CW:40:C:H5'	1.85	0.58
4:CD:170:VAL:HG12	4:CD:171:GLY:N	2.18	0.58
1:AA:1321:C:C3'	1:AA:1322:C:H5"	2.33	0.58
40:BE:105:THR:HB	40:BE:197:ILE:CG2	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:17:THR:HG21	34:D8:21:LYS:HB2	1.85	0.58
25:AZ:101:GLY:HA3	25:AZ:210:ILE:HD12	1.86	0.58
3:AC:70:VAL:HG12	3:AC:72:LYS:N	2.19	0.58
57:DY:42:VAL:HG21	57:DY:67:LEU:HD12	1.85	0.58
47:BO:64:ARG:CZ	52:BT:70:VAL:HG21	2.34	0.58
6:AF:61:LEU:O	6:AF:62:TRP:HB3	2.03	0.58
49:DQ:45:GLN:H	49:DQ:45:GLN:NE2	2.01	0.58
27:D1:53:VAL:O	27:D1:54:ALA:HB3	2.02	0.58
13:CM:58:GLU:O	13:CM:62:ASN:HB2	2.02	0.58
46:DN:125:GLY:HA2	46:DN:126:PRO:O	2.02	0.58
28:D2:15:LYS:HG3	28:D2:16:LEU:H	1.68	0.58
1:AA:1275:A:O2'	1:AA:1276:G:H5'	2.04	0.58
36:DA:521:G:H2'	36:DA:522:G:H8	1.69	0.58
36:BA:1001:A:H2'	36:BA:1002:G:O4'	2.03	0.58
41:BF:10:PRO:HD2	41:BF:13:SER:O	2.04	0.58
36:BA:953:A:OP2	49:BQ:16:ARG:HD2	2.03	0.58
36:BA:1146:C:O2'	36:BA:1147:C:H5'	2.04	0.58
2:CB:144:ARG:HB2	2:CB:144:ARG:HH11	1.68	0.58
15:CO:6:GLU:N	15:CO:6:GLU:OE1	2.35	0.58
55:BW:1:MET:HB3	55:BW:64:MET:HE3	1.85	0.58
39:DD:30:GLU:CG	39:DD:63:ARG:HH21	2.17	0.58
30:B4:28:LYS:O	30:B4:31:ILE:HD11	2.03	0.58
30:B4:30:GLU:C	30:B4:31:ILE:HD12	2.24	0.58
36:BA:1902:C:H4'	39:BD:244:ARG:CB	2.33	0.58
52:DT:75:ILE:HD12	52:DT:75:ILE:N	2.19	0.58
40:DE:38:THR:OG1	40:DE:41:LYS:HE2	2.03	0.58
36:BA:2415:G:H2'	36:BA:2416:C:C6	2.38	0.58
41:DF:103:LYS:HG3	41:DF:106:ARG:HH21	1.67	0.58
10:CJ:40:LEU:HB2	10:CJ:41:PRO:HD2	1.85	0.58
31:D5:36:CYS:C	31:D5:38:ALA:H	2.06	0.58
27:D1:44:PRO:O	27:D1:46:LEU:N	2.35	0.58
58:DZ:4:ARG:HG2	58:DZ:58:VAL:CB	2.32	0.58
36:BA:1049:C:O2	36:BA:1113:U:H4'	2.04	0.58
40:DE:132:HIS:C	40:DE:135:HIS:HE1	2.06	0.58
20:AT:26:ASN:ND2	20:AT:26:ASN:H	2.00	0.58
16:AP:67:THR:HB	16:AP:70:ALA:CB	2.33	0.58
39:BD:44:ASN:HB2	39:BD:48:ARG:O	2.04	0.58
46:DN:46:VAL:HG11	46:DN:48:MET:HG3	1.86	0.58
21:CU:17:THR:O	21:CU:22:ARG:NH1	2.37	0.58
40:DE:101:ARG:HB2	40:DE:201:THR:HG21	1.85	0.58
40:BE:181:LEU:HD21	52:BT:7:ILE:HG23	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:46:ALA:O	7:CG:50:ILE:HG12	2.03	0.58
13:AM:82:MET:SD	13:AM:83:ASP:N	2.76	0.58
1:CA:80:G:C2'	1:CA:81:U:H5'	2.34	0.58
38:BC:73:ARG:O	38:BC:111:ASP:HB2	2.04	0.58
36:BA:2192:G:C2'	36:BA:2193:G:H5"	2.33	0.58
36:BA:1076:C:H42	36:BA:1088:A:H61	1.50	0.58
18:AR:26:LEU:CD2	18:AR:39:VAL:HG13	2.34	0.58
37:BB:65:C:H41	37:BB:109:C:H2'	1.66	0.58
36:BA:1592:C:H2'	36:BA:1593:G:H8	1.69	0.58
49:DQ:1:MET:HE2	49:DQ:44:ALA:O	2.03	0.58
53:BU:111:GLU:C	53:BU:113:ALA:H	2.07	0.58
37:DB:65:C:H41	37:DB:109:C:H2'	1.68	0.58
1:AA:1489:G:O2'	1:AA:1490:C:H5'	2.04	0.58
50:BR:7:GLY:O	50:BR:8:ARG:CZ	2.51	0.58
50:BR:59:ASP:O	50:BR:60:LEU:HB3	2.03	0.58
36:BA:8:A:H2'	36:BA:9:U:C5	2.39	0.58
41:DF:139:PHE:HB2	41:DF:166:ALA:HB1	1.85	0.58
46:BN:62:VAL:HG22	46:BN:66:LYS:HB2	1.85	0.58
39:DD:27:THR:HG23	39:DD:83:GLU:CG	2.33	0.58
32:D6:11:LEU:HD21	32:D6:51:GLU:HG3	1.86	0.58
32:B6:15:GLU:HG3	32:B6:47:THR:OG1	2.04	0.58
36:BA:2309:A:H2'	36:BA:2310:A:C5'	2.34	0.58
42:DG:83:ARG:O	42:DG:84:LYS:CB	2.51	0.58
36:BA:2189:U:H3'	36:BA:2190:G:H4'	1.86	0.58
46:DN:22:THR:HG22	46:DN:61:ARG:HB2	1.85	0.58
27:D1:46:LEU:HB3	27:D1:63:ALA:HA	1.84	0.58
36:BA:672:C:H2'	36:BA:673:C:H5'	1.85	0.58
21:AU:22:ARG:NH1	21:AU:22:ARG:HG2	2.14	0.58
24:CY:9:A:H2	24:CY:44:G:O2'	1.86	0.58
25:AZ:156:ASP:O	25:AZ:160:GLN:HB3	2.04	0.58
52:DT:23:ARG:HB2	52:DT:24:PRO:HD2	1.85	0.58
52:DT:24:PRO:HD3	52:DT:52:ILE:CD1	2.33	0.58
16:CP:67:THR:HB	16:CP:70:ALA:CB	2.34	0.58
42:BG:53:LEU:HD22	42:BG:53:LEU:N	2.18	0.58
25:AZ:193:ASN:HB3	25:AZ:196:VAL:H	1.68	0.58
9:AI:111:ARG:HG2	9:AI:112:LYS:N	2.17	0.58
5:CE:38:GLN:HA	5:CE:38:GLN:OE1	2.04	0.58
36:DA:2023:G:H4'	36:DA:2617:C:O3'	2.03	0.58
41:DF:110:LEU:HD12	41:DF:206:ILE:HD11	1.86	0.58
1:CA:1256:A:H2	1:CA:1277:C:H2'	1.68	0.58
36:BA:1639:U:O2'	36:BA:1640:C:H5"	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:285:C:H2'	36:BA:286:C:C6	2.39	0.58
24:AY:70:C:H2'	24:AY:71:C:H5'	1.85	0.58
53:BU:70:ARG:HA	53:BU:74:LEU:O	2.04	0.58
31:D5:52:TYR:CE2	36:DA:2884:U:H1'	2.39	0.58
3:CC:139:GLN:NE2	3:CC:170:GLN:HE22	2.01	0.58
1:CA:711:G:O2'	1:CA:712:A:H5'	2.02	0.58
27:D1:76:ARG:HH22	27:D1:95:LEU:HA	1.67	0.58
33:D7:26:GLY:O	33:D7:30:VAL:HG23	2.04	0.58
58:BZ:73:GLN:HE21	58:BZ:75:ASN:HD21	1.51	0.58
13:AM:39:ILE:HD12	13:AM:56:LEU:HD23	1.85	0.58
39:BD:275:LYS:C	39:BD:275:LYS:HD2	2.24	0.58
1:AA:434:U:H2'	1:AA:435:C:C6	2.39	0.58
15:AO:74:ASP:OD1	15:AO:76:GLU:HB3	2.04	0.58
32:D6:26:ASN:HD22	32:D6:32:ASN:ND2	2.01	0.58
57:DY:6:HIS:CE1	57:DY:30:VAL:HG11	2.38	0.58
57:DY:86:ARG:HH21	57:DY:95:LYS:NZ	2.01	0.58
54:BV:62:LEU:HD21	54:BV:95:LEU:CB	2.21	0.58
41:DF:157:VAL:HG23	41:DF:198:ALA:CB	2.33	0.58
57:BY:30:VAL:HA	57:BY:37:VAL:HG12	1.86	0.58
37:DB:105:A:OP1	58:DZ:72:ARG:NH1	2.37	0.58
36:BA:28:A:H61	36:BA:512:G:H1'	1.68	0.58
1:CA:858:G:C8	1:CA:858:G:C5'	2.86	0.58
36:DA:1854:A:H62	36:DA:1888:G:H8	1.51	0.58
36:BA:833:U:H5"	48:BP:48:PRO:CB	2.33	0.58
48:BP:16:ARG:CZ	48:BP:18:ARG:HG2	2.34	0.58
54:DV:91:TYR:H	54:DV:91:TYR:HD1	1.50	0.58
54:BV:21:ARG:CG	54:BV:91:TYR:HD2	2.16	0.58
58:DZ:4:ARG:CG	58:DZ:58:VAL:HB	2.33	0.58
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB2	2.30	0.58
36:DA:672:C:C2'	36:DA:673:C:C5'	2.82	0.58
4:AD:174:LEU:HD23	4:AD:185:PHE:HA	1.86	0.58
7:AG:16:LEU:CD1	9:AI:42:ARG:HA	2.33	0.58
11:AK:27:ASN:ND2	11:AK:28:THR:N	2.51	0.58
57:BY:63:LYS:HG2	57:BY:64:GLU:H	1.68	0.58
41:BF:110:LEU:HD12	41:BF:206:ILE:HD11	1.86	0.58
1:CA:768:A:H5'	1:CA:1524:C:H1'	1.86	0.58
1:AA:1047:G:H5"	14:AN:4:LYS:HG2	1.86	0.58
50:BR:47:PHE:O	50:BR:51:LEU:HD13	2.03	0.58
46:DN:6:PRO:HB2	46:DN:9:VAL:HG21	1.84	0.58
53:DU:70:ARG:HA	53:DU:74:LEU:O	2.04	0.58
36:DA:2341:G:H2'	36:DA:2342:C:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:199:ARG:HH11	40:DE:199:ARG:HB3	1.69	0.58
36:BA:363:G:H2'	36:BA:363(A):A:H8	1.69	0.58
1:AA:1006:C:H2'	1:AA:1007:C:C6	2.39	0.58
15:CO:74:ASP:OD1	15:CO:76:GLU:HB3	2.04	0.58
36:BA:1274:A:N3	36:BA:1297:C:H1'	2.18	0.58
36:BA:1932:A:H2'	36:BA:1933:G:O4'	2.04	0.58
39:BD:4:LYS:NZ	39:BD:20:ASP:HA	2.19	0.58
36:BA:1389:G:H2'	36:BA:1390:U:C6	2.38	0.58
36:DA:1375:C:H2'	36:DA:1376:C:H6	1.68	0.58
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.38	0.58
39:BD:32:SER:O	39:BD:33:LEU:O	2.21	0.58
57:DY:98:VAL:O	57:DY:99:CYS:SG	2.62	0.58
32:B6:30:THR:CG2	32:B6:31:PRO:HD2	2.20	0.58
32:B6:26:ASN:ND2	32:B6:32:ASN:ND2	2.52	0.58
30:D4:28:LYS:O	30:D4:31:ILE:HD11	2.04	0.58
42:DG:142:PRO:HG2	42:DG:143:GLU:OE2	2.04	0.58
42:DG:39:ILE:HD11	42:DG:92:VAL:HG13	1.85	0.58
32:B6:13:CYS:O	32:B6:21:TYR:HA	2.04	0.58
32:B6:45:LYS:O	32:B6:46:HIS:HB3	2.04	0.58
42:DG:72:ARG:CB	42:DG:87:PRO:HD2	2.34	0.58
2:AB:17:PHE:HD2	2:AB:44:LEU:HD11	1.68	0.58
52:DT:28:VAL:CG1	52:DT:46:GLU:HA	2.31	0.58
22:CW:18:G:H22	22:CW:55:U:H6	1.52	0.58
36:DA:833:U:H2'	36:DA:834:C:H6	1.68	0.58
48:DP:16:ARG:NE	48:DP:18:ARG:HG2	2.18	0.58
36:BA:650:C:C3'	36:BA:651:G:H5"	2.32	0.58
6:AF:97:PHE:CD1	18:AR:31:LEU:HD21	2.29	0.58
36:BA:2580:U:C5'	40:BE:131:ALA:HB2	2.31	0.58
50:DR:75:LEU:HD13	50:DR:75:LEU:O	2.04	0.58
10:AJ:81:THR:HG23	10:AJ:82:ILE:H	1.67	0.58
16:AP:71:ARG:HA	16:AP:74:LEU:HD13	1.85	0.58
48:BP:41:ARG:CA	48:BP:41:ARG:NH1	2.67	0.58
40:BE:132:HIS:C	40:BE:135:HIS:HE1	2.07	0.58
13:CM:120:LYS:HE3	13:CM:121:LYS:H	1.69	0.58
22:CW:43:C:H2'	22:CW:44:G:C1'	2.33	0.58
52:BT:23:ARG:HB2	52:BT:24:PRO:HD2	1.86	0.58
1:CA:1325:C:P	21:CU:15:ARG:HH21	2.26	0.58
49:BQ:45:GLN:H	49:BQ:45:GLN:NE2	2.01	0.58
36:BA:325:G:H2'	36:BA:326:G:C8	2.38	0.58
36:DA:302:C:H2'	36:DA:303:U:H6	1.67	0.58
38:BC:106:GLY:O	38:BC:107:TRP:HB3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:108:U:H2'	36:BA:109:G:C8	2.39	0.58
24:CY:75:C:H5	25:CZ:232:THR:CB	2.16	0.58
2:CB:229:VAL:HG12	2:CB:230:VAL:N	2.18	0.58
13:AM:73:GLU:O	13:AM:76:ALA:HB3	2.04	0.58
22:AW:19:G:N7	36:BA:2169:A:C2	2.72	0.58
38:DC:190:ARG:O	38:DC:194:ARG:HG3	2.04	0.58
25:AZ:362:VAL:HG12	25:AZ:362:VAL:O	2.03	0.58
39:DD:30:GLU:HG3	39:DD:63:ARG:NH2	2.18	0.58
39:BD:27:THR:HG23	39:BD:27:THR:O	2.03	0.58
28:B2:47:ASN:O	28:B2:49:LYS:N	2.37	0.58
42:DG:170:ARG:O	42:DG:174:GLU:HG2	2.04	0.58
52:DT:28:VAL:CG1	52:DT:46:GLU:HG3	2.31	0.58
43:DH:85:LYS:CE	43:DH:133:VAL:H	2.16	0.58
48:DP:147:LEU:CG	48:DP:148:LEU:H	2.04	0.58
31:D5:44:THR:HG21	50:DR:101:ALA:CB	2.27	0.58
34:D8:7:HIS:CD2	48:DP:50:ARG:HD3	2.39	0.58
40:DE:34:VAL:HG22	40:DE:34:VAL:O	2.02	0.58
25:CZ:277:LEU:HD11	25:CZ:280:GLY:H	1.68	0.58
25:CZ:20:VAL:HG12	25:CZ:115:GLN:HG3	1.86	0.58
36:BA:2820:A:H4'	50:BR:5:LYS:HE2	1.86	0.58
40:DE:98:PRO:HD3	40:DE:175:VAL:HG12	1.85	0.58
54:BV:19:LYS:CE	54:BV:20:LEU:H	2.17	0.58
12:CL:20:LYS:N	12:CL:20:LYS:HD3	2.12	0.58
1:AA:1347:G:C6	9:AI:107:ARG:NH2	2.72	0.58
43:DH:41:MET:SD	43:DH:53:GLU:O	2.62	0.58
9:AI:95:LYS:NZ	9:AI:96:LEU:HD13	2.18	0.58
43:BH:41:MET:SD	43:BH:53:GLU:O	2.62	0.58
2:CB:109:SER:O	2:CB:111:ARG:N	2.37	0.58
27:D1:42:GLN:HA	36:DA:2231:C:OP1	2.03	0.58
12:AL:25:PRO:O	12:AL:27:LEU:N	2.36	0.58
3:AC:71:ALA:HA	3:AC:106:VAL:HG22	1.86	0.58
49:DQ:21:THR:HG22	49:DQ:23:GLY:O	2.02	0.58
12:CL:46:LYS:HG3	12:CL:47:LYS:H	1.69	0.58
22:CV:50:U:O2'	22:CV:51:U:H5'	2.03	0.58
36:BA:2402:C:H2'	36:BA:2403:C:H5'	1.85	0.58
40:DE:181:LEU:HD21	52:DT:7:ILE:HG23	1.85	0.58
2:AB:155:LEU:HD22	2:AB:157:ARG:O	2.04	0.58
1:AA:961:U:O2'	1:AA:962:C:H6	1.85	0.58
36:BA:862:G:H2'	36:BA:863:A:O4'	2.04	0.58
1:AA:624:C:H2'	1:AA:625:G:C8	2.39	0.58
36:BA:20:C:O2'	36:BA:21:A:H5'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:33:ALA:HA	38:DC:39:GLU:OE2	2.03	0.58
46:DN:1:MET:C	46:DN:2:LYS:HD2	2.25	0.58
18:CR:73:ALA:HB3	18:CR:79:LEU:HD12	1.86	0.58
56:BX:31:HIS:ND1	56:BX:32:PRO:HD2	2.18	0.58
53:DU:8:VAL:O	53:DU:12:ARG:HG3	2.04	0.58
36:DA:1771:C:H1'	36:DA:1786:A:C8	2.39	0.58
39:BD:30:GLU:HG3	39:BD:63:ARG:HH21	1.68	0.57
36:BA:1666:G:C2'	36:BA:1667:G:H5'	2.34	0.57
27:B1:7:ILE:HG22	27:B1:8:SER:N	2.19	0.57
2:AB:92:TYR:HE2	2:AB:94:ASN:ND2	2.02	0.57
36:DA:1446:C:H42	36:DA:1465:G:H1	1.49	0.57
47:BO:94:ARG:HG2	47:BO:94:ARG:NH1	2.19	0.57
48:BP:85:LEU:HA	48:BP:88:LEU:HB2	1.84	0.57
13:CM:12:ASN:N	13:CM:12:ASN:HD22	1.99	0.57
47:DO:87:ILE:HG22	47:DO:88:ASN:O	2.04	0.57
5:CE:11:ILE:HD12	5:CE:31:LEU:CD1	2.34	0.57
25:CZ:324:LYS:HB2	25:CZ:326:GLU:CG	2.34	0.57
36:DA:1278:A:O2'	36:DA:1279:G:H5'	2.03	0.57
50:DR:55:ALA:CB	50:DR:79:LEU:HD11	2.34	0.57
38:DC:123:VAL:CG2	38:DC:127:LEU:HD13	2.33	0.57
50:BR:29:LEU:O	50:BR:75:LEU:HD21	2.04	0.57
12:AL:102:ARG:HH11	12:AL:110:VAL:HG22	1.67	0.57
13:AM:49:THR:HB	13:AM:52:GLU:HG3	1.85	0.57
20:CT:26:ASN:O	20:CT:30:LYS:HB2	2.05	0.57
20:CT:70:SER:HA	20:CT:73:HIS:CD2	2.38	0.57
38:BC:78:ALA:H	38:BC:115:ALA:HA	1.69	0.57
52:DT:115:ARG:HG3	52:DT:115:ARG:NH1	2.14	0.57
52:BT:75:ILE:N	52:BT:75:ILE:HD12	2.19	0.57
8:AH:86:ILE:HG21	8:AH:133:LEU:HD23	1.86	0.57
29:D3:44:ARG:O	29:D3:48:GLU:HG2	2.04	0.57
25:AZ:339:ARG:HE	25:AZ:352:VAL:HG22	1.67	0.57
19:CS:67:VAL:HG12	19:CS:68:GLY:N	2.19	0.57
6:CF:61:LEU:O	6:CF:62:TRP:CB	2.50	0.57
1:AA:80:G:C3'	1:AA:81:U:H5'	2.34	0.57
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	2.03	0.57
36:BA:2023:G:H4'	36:BA:2617:C:O3'	2.04	0.57
2:AB:109:SER:C	2:AB:111:ARG:H	2.06	0.57
41:BF:108:LYS:N	41:BF:108:LYS:HD3	2.18	0.57
1:CA:624:C:H2'	1:CA:625:G:C8	2.38	0.57
35:D9:25:VAL:HB	35:D9:34:GLN:HB2	1.86	0.57
47:BO:2:ILE:HD12	47:BO:6:THR:HG21	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:774:A:H2	36:DA:787:U:HO2'	1.51	0.57
25:CZ:38:GLU:H	25:CZ:38:GLU:CD	2.07	0.57
19:CS:22:LEU:HD13	19:CS:22:LEU:O	2.04	0.57
1:CA:737:A:H2'	1:CA:738:C:C6	2.39	0.57
36:DA:363:G:H2'	36:DA:363(A):A:H8	1.69	0.57
58:DZ:19:ARG:NH1	58:DZ:84:GLU:O	2.37	0.57
39:DD:275:LYS:HD2	39:DD:275:LYS:C	2.24	0.57
40:BE:108:SER:HB3	40:BE:165:VAL:HG21	1.86	0.57
36:BA:1771:C:H1'	36:BA:1786:A:C8	2.39	0.57
28:D2:21:LEU:HB3	28:D2:64:LEU:CG	2.23	0.57
28:D2:18:PRO:HA	28:D2:21:LEU:HG	1.85	0.57
1:CA:1039:C:H2'	1:CA:1040:U:C5	2.39	0.57
42:DG:62:LEU:HD12	42:DG:62:LEU:N	2.16	0.57
42:DG:64:THR:HG23	42:DG:66:GLN:H	1.68	0.57
57:BY:6:HIS:CE1	57:BY:30:VAL:HG11	2.38	0.57
38:DC:43:VAL:HG23	38:DC:175:VAL:HG21	1.86	0.57
52:BT:33:LYS:HE2	52:BT:43:GLN:NE2	2.19	0.57
36:BA:2108:C:O2	36:BA:2108:C:C2'	2.52	0.57
36:DA:512:G:O2'	36:DA:513:A:H8	1.87	0.57
40:BE:38:THR:OG1	40:BE:41:LYS:HE2	2.04	0.57
36:DA:297:C:H2'	36:DA:298:G:O4'	2.04	0.57
36:DA:2402:C:H2'	36:DA:2403:C:H5'	1.85	0.57
48:BP:16:ARG:CB	48:BP:16:ARG:HH11	2.15	0.57
49:DQ:52:VAL:O	49:DQ:56:ARG:HB2	2.04	0.57
13:CM:15:VAL:HG11	13:CM:48:LEU:HD11	1.85	0.57
36:BA:2469:A:H2'	36:BA:2470:G:H5'	1.86	0.57
9:CI:95:LYS:NZ	9:CI:96:LEU:HD13	2.20	0.57
20:CT:66:ALA:HB1	20:CT:71:THR:HB	1.87	0.57
22:AW:56:C:O4'	38:BC:132:GLY:HA3	2.03	0.57
36:DA:1049:C:O2	36:DA:1113:U:H4'	2.04	0.57
39:BD:176:ARG:HG2	39:BD:176:ARG:NH1	2.15	0.57
43:BH:43:VAL:HG12	43:BH:46:GLU:OE2	2.03	0.57
53:DU:6:THR:O	53:DU:9:VAL:HG22	2.03	0.57
17:CQ:70:ARG:HD2	17:CQ:70:ARG:N	2.19	0.57
36:DA:1038:C:C2'	36:DA:1039:G:H5"	2.32	0.57
36:BA:782:A:C2	39:BD:226:MET:SD	2.98	0.57
57:BY:88:LYS:HZ2	57:BY:93:GLY:HA3	1.69	0.57
36:BA:139(A):G:H3'	36:BA:140:G:H8	1.69	0.57
26:B0:7:LEU:HD21	49:BQ:81:VAL:CG1	2.33	0.57
36:BA:143:G:H2'	36:BA:143(A):C:H6	1.69	0.57
1:CA:1256:A:C2	1:CA:1277:C:H2'	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.35	0.57
47:DO:28:SER:O	47:DO:29:ASN:HB3	2.04	0.57
36:DA:1788:C:O2'	36:DA:1789:A:H5'	2.04	0.57
9:AI:56:LEU:HD23	9:AI:56:LEU:H	1.69	0.57
47:BO:98:VAL:HG12	47:BO:117:LEU:HB3	1.86	0.57
21:CU:13:ILE:O	21:CU:16:GLY:N	2.35	0.57
3:AC:116:VAL:HG21	3:AC:202:ILE:HD11	1.86	0.57
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.03	0.57
4:CD:32:ALA:C	4:CD:34:GLU:H	2.08	0.57
20:AT:25:ARG:HG3	20:AT:25:ARG:HH11	1.68	0.57
25:AZ:38:GLU:H	25:AZ:38:GLU:CD	2.08	0.57
36:DA:201:C:O2'	36:DA:202:U:H5'	2.03	0.57
39:DD:27:THR:HG23	39:DD:27:THR:O	2.03	0.57
42:BG:63:ILE:CA	42:BG:143:GLU:HG3	2.29	0.57
28:D2:18:PRO:HG3	28:D2:71:ASN:O	2.04	0.57
36:DA:99:U:H4'	36:DA:102:G:H1'	1.86	0.57
57:DY:29:GLU:N	57:DY:29:GLU:OE1	2.37	0.57
41:BF:24:LEU:O	41:BF:26:ALA:N	2.37	0.57
34:D8:6:THR:HG21	34:D8:63:PRO:HD3	1.85	0.57
52:BT:29:ARG:CB	52:BT:85:LYS:HA	2.33	0.57
1:AA:55:A:N1	25:AZ:234:ARG:HD3	2.20	0.57
43:DH:169:VAL:HG22	43:DH:170:ARG:N	2.10	0.57
50:DR:101:ALA:O	50:DR:102:GLU:HB2	2.04	0.57
25:AZ:301:GLY:HA2	25:AZ:347:THR:OG1	2.03	0.57
27:B1:45:ASN:HD21	36:BA:2090:G:N2	1.95	0.57
54:DV:21:ARG:HG2	54:DV:91:TYR:CD2	2.38	0.57
31:D5:57:VAL:C	31:D5:58:LEU:HD12	2.24	0.57
53:DU:88:ILE:C	53:DU:90:VAL:H	2.07	0.57
54:DV:47:VAL:HB	54:DV:51:VAL:O	2.04	0.57
40:DE:81:ILE:O	40:DE:81:ILE:HG22	2.03	0.57
50:DR:5:LYS:O	50:DR:6:SER:HB2	2.04	0.57
50:BR:52:ILE:HB	50:BR:94:TYR:CD2	2.40	0.57
38:BC:87:GLU:HG2	38:BC:94:VAL:HG23	1.84	0.57
48:BP:41:ARG:NH1	48:BP:41:ARG:HB3	2.19	0.57
43:BH:98:LEU:H	43:BH:125:VAL:HG21	1.69	0.57
11:CK:18:ARG:HH21	11:CK:36:ASP:C	2.08	0.57
17:CQ:66:SER:OG	17:CQ:69:LYS:HB2	2.05	0.57
51:BS:12:PHE:CD1	51:BS:13:ARG:N	2.70	0.57
51:BS:13:ARG:HG3	51:BS:14:VAL:N	2.18	0.57
17:AQ:70:ARG:N	17:AQ:70:ARG:HD2	2.19	0.57
57:DY:42:VAL:CG2	57:DY:67:LEU:HD12	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:527:C:H4'	36:BA:528:A:O4'	2.05	0.57
36:BA:1019:U:HO2'	36:BA:1021:A:H2	1.42	0.57
46:BN:3:THR:HG22	46:BN:4:TYR:N	2.18	0.57
24:AY:61:C:O2'	24:AY:62:U:H5"	2.04	0.57
56:DX:49:VAL:HG12	56:DX:87:GLN:NE2	2.19	0.57
36:DA:218:A:C2	36:DA:235:U:H4'	2.39	0.57
36:BA:2139:C:O2'	36:BA:2140:C:H5'	2.03	0.57
36:BA:2206:G:N2	36:BA:2207:G:H5'	2.19	0.57
46:BN:125:GLY:HA2	46:BN:126:PRO:O	2.04	0.57
25:AZ:363:MET:HB3	25:AZ:364:PRO:CD	2.33	0.57
10:AJ:96:ILE:HD13	10:AJ:96:ILE:H	1.68	0.57
1:CA:309:G:H1'	1:CA:608:A:C2	2.39	0.57
36:DA:1231:G:H2'	36:DA:1232:G:C8	2.39	0.57
4:AD:70:ILE:HG22	4:AD:71:SER:N	2.19	0.57
36:BA:1101:U:H2'	36:BA:1102:C:H6	1.69	0.57
1:AA:226:G:O2'	1:AA:227:G:H5'	2.04	0.57
38:DC:99:ILE:O	38:DC:99:ILE:HG22	2.05	0.57
25:CZ:5:PHE:CD1	25:CZ:5:PHE:C	2.77	0.57
36:DA:214:G:H1'	36:DA:216:A:O2'	2.05	0.57
39:DD:32:SER:O	39:DD:33:LEU:O	2.23	0.57
39:BD:27:THR:HG23	39:BD:83:GLU:HG2	1.86	0.57
56:DX:27:THR:HG22	56:DX:80:ILE:HB	1.86	0.57
28:D2:18:PRO:HA	28:D2:21:LEU:HD12	1.85	0.57
57:DY:30:VAL:HA	57:DY:37:VAL:HG12	1.85	0.57
34:B8:6:THR:HG21	34:B8:63:PRO:HD3	1.85	0.57
25:AZ:69:GLU:HG2	25:AZ:70:TYR:N	2.18	0.57
51:DS:88:ASP:CG	51:DS:89:ARG:N	2.57	0.57
36:BA:1959:G:C3'	36:BA:1960:A:H5"	2.33	0.57
52:DT:88:ILE:O	52:DT:89:VAL:C	2.41	0.57
2:CB:204:ASN:HD22	2:CB:205:ASP:N	2.02	0.57
36:DA:1210:A:H5"	36:DA:1212:G:O4'	2.04	0.57
48:DP:85:LEU:HB3	48:DP:114:ILE:HD11	1.84	0.57
54:DV:19:LYS:CE	54:DV:20:LEU:H	2.17	0.57
25:AZ:20:VAL:HG12	25:AZ:115:GLN:HG3	1.85	0.57
53:BU:65:ILE:HD11	53:BU:96:ALA:CB	2.31	0.57
9:CI:56:LEU:H	9:CI:56:LEU:HD23	1.69	0.57
48:DP:38:GLN:HG3	48:DP:39:LYS:N	2.19	0.57
25:CZ:143:ASP:O	25:CZ:147:LEU:HD23	2.03	0.57
1:CA:1444:C:O2'	1:CA:1445:C:H5'	2.04	0.57
12:AL:18:VAL:HG23	12:AL:19:ARG:N	2.17	0.57
46:DN:32:THR:C	46:DN:34:LEU:H	2.07	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:181:GLN:NE2	25:CZ:193:ASN:ND2	2.53	0.57
22:AW:59:U:C2'	22:AW:60:U:H5'	2.33	0.57
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.50	0.57
57:BY:17:SER:OG	57:BY:18:GLY:N	2.38	0.57
25:CZ:270:VAL:CG1	25:CZ:286:VAL:HG21	2.33	0.57
36:DA:363(E):U:H2'	36:DA:363(F):A:H1'	1.87	0.57
22:AV:50:U:O2'	22:AV:51:U:H5'	2.04	0.57
25:CZ:63:ILE:HA	25:CZ:88:TYR:CE2	2.39	0.57
36:DA:2360:A:O2'	36:DA:2361:A:O4'	2.21	0.57
35:B9:25:VAL:HB	35:B9:34:GLN:HB2	1.85	0.57
36:DA:1567:A:C5'	39:DD:58:HIS:CD2	2.87	0.57
36:BA:1260:G:H2'	36:BA:1261:C:C6	2.38	0.57
3:CC:134:ILE:O	3:CC:138:VAL:HG12	2.03	0.57
1:CA:1211:U:H5'	1:CA:1212:U:OP1	2.05	0.57
41:BF:139:PHE:HB2	41:BF:166:ALA:HB1	1.86	0.57
36:DA:564:C:O2'	36:DA:565:C:H5'	2.05	0.57
1:CA:1275:A:O2'	1:CA:1276:G:H5'	2.05	0.57
52:DT:16:ARG:HD2	52:DT:18:ASP:OD1	2.04	0.57
50:DR:7:GLY:O	50:DR:8:ARG:CZ	2.53	0.57
2:AB:221:LEU:O	2:AB:221:LEU:HD13	2.04	0.57
47:BO:80:ASP:OD2	52:BT:71:GLY:HA3	2.03	0.57
26:D0:20:ARG:HG2	26:D0:20:ARG:HH11	1.70	0.57
44:DJ:56:UNK:HA	44:DJ:83:UNK:HA	1.85	0.57
34:D8:11:LYS:HZ2	34:D8:60:LEU:HD22	1.70	0.57
1:CA:1282:C:C2'	1:CA:1283:G:H5'	2.34	0.57
36:BA:2312:U:C2'	36:BA:2313:C:H5"	2.34	0.57
51:BS:49:VAL:CG1	51:BS:50:SER:H	2.03	0.57
36:BA:2107:C:H1'	36:BA:2182:G:N2	2.19	0.57
46:DN:22:THR:HG22	46:DN:61:ARG:CB	2.35	0.57
49:BQ:141:GLN:CG	58:BZ:72:ARG:HD3	2.35	0.57
36:BA:1311:G:N2	36:BA:1603:A:H62	2.03	0.57
48:DP:90:ARG:O	48:DP:90:ARG:HD2	2.03	0.57
14:CN:57:ARG:NH1	14:CN:57:ARG:HB3	2.19	0.57
24:CY:41:C:C6	24:CY:41:C:H5'	2.34	0.57
25:AZ:195:TRP:CE3	25:AZ:195:TRP:HA	2.39	0.57
30:B4:18:CYS:HG	30:B4:39:CYS:HG	1.49	0.57
46:BN:32:THR:C	46:BN:34:LEU:H	2.08	0.57
29:D3:17:LYS:HG2	36:DA:969:U:OP1	2.04	0.57
57:DY:2:ARG:N	57:DY:4:LYS:HG2	2.20	0.57
29:B3:40:THR:OG1	29:B3:43:ILE:HG12	2.04	0.57
1:CA:1134:G:C2'	1:CA:1135:U:H5'	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:41:ILE:HD11	28:B2:44:LEU:CD1	2.34	0.57
36:BA:1005:C:H2'	36:BA:1006:C:C6	2.38	0.57
1:CA:80:G:C3'	1:CA:81:U:H5'	2.35	0.57
1:CA:356:A:H2'	1:CA:357:G:C8	2.37	0.57
36:DA:2139:C:O2'	36:DA:2140:C:H5'	2.03	0.57
36:BA:99:U:H4'	36:BA:102:G:H1'	1.85	0.57
36:DA:325:G:H2'	36:DA:326:G:C8	2.38	0.57
55:DW:14:PRO:HG2	55:DW:78:GLU:CG	2.34	0.57
1:AA:1170:A:H2'	1:AA:1171:G:O4'	2.05	0.57
25:CZ:361:MET:HG3	25:CZ:363:MET:HG3	1.86	0.57
30:D4:14:ILE:N	30:D4:14:ILE:HD12	2.19	0.57
2:AB:101:MET:HA	2:AB:108:ILE:HG13	1.86	0.57
36:BA:756:C:O2'	36:BA:757:U:H5'	2.05	0.57
51:BS:73:LEU:HD23	51:BS:73:LEU:C	2.25	0.57
42:BG:30:GLU:O	42:BG:30:GLU:HG2	2.05	0.57
3:AC:92:ALA:O	3:AC:96:GLY:HA2	2.03	0.57
9:AI:47:LEU:H	9:AI:47:LEU:HD12	1.68	0.57
36:DA:1773:A:C2'	36:DA:1774:C:H5'	2.34	0.57
25:CZ:362:VAL:HG12	25:CZ:362:VAL:O	2.04	0.57
56:BX:27:THR:HG22	56:BX:80:ILE:HB	1.85	0.57
48:DP:58:THR:HB	48:DP:61:ARG:NH2	2.16	0.57
25:AZ:277:LEU:CD1	25:AZ:278:GLN:N	2.65	0.57
36:BA:1209:G:H21	36:BA:1210:A:H62	1.50	0.57
36:BA:297:C:H2'	36:BA:298:G:O4'	2.05	0.57
36:BA:1070:A:H2'	36:BA:1097:U:OP1	2.05	0.57
31:B5:48:GLU:C	31:B5:49:CYS:SG	2.83	0.57
31:D5:40:LYS:HE2	31:D5:46:CYS:CB	2.31	0.57
1:AA:1148:U:O3'	9:AI:14:VAL:HG11	2.05	0.57
1:CA:1392:G:N2	1:CA:1502:A:C8	2.72	0.57
4:CD:174:LEU:HD23	4:CD:185:PHE:HA	1.87	0.57
49:BQ:134:ARG:HA	49:BQ:137:TYR:CD2	2.39	0.57
36:BA:1248:G:C2	53:BU:3:ARG:HD2	2.40	0.57
36:BA:141:A:H8	36:BA:1408:C:O2'	1.87	0.57
6:AF:61:LEU:O	6:AF:62:TRP:CB	2.53	0.57
32:D6:25:LYS:HE2	34:D8:34:TRP:HZ2	1.69	0.57
50:DR:47:PHE:O	50:DR:51:LEU:HD13	2.03	0.57
25:AZ:63:ILE:HA	25:AZ:88:TYR:CE2	2.37	0.57
36:DA:862:G:H2'	36:DA:863:A:O4'	2.03	0.57
58:BZ:149:SER:CB	58:BZ:173:ALA:HA	2.34	0.57
13:AM:83:ASP:CG	13:AM:84:ILE:N	2.57	0.57
19:CS:6:LYS:O	19:CS:7:LYS:HD3	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2140:C:H2'	36:BA:2141:G:C8	2.39	0.57
4:CD:70:ILE:HG22	4:CD:71:SER:N	2.18	0.57
36:DA:2538:C:H2'	36:DA:2539:C:H6	1.70	0.57
26:B0:36:ILE:HD11	36:BA:2355:C:H4'	1.86	0.57
36:DA:1344:G:H4'	36:DA:1384:A:C5	2.39	0.57
36:BA:2240:C:O2'	36:BA:2241:A:H5'	2.04	0.57
34:D8:42:ARG:O	34:D8:44:LYS:N	2.32	0.57
1:CA:62:U:H2'	1:CA:63:C:H5'	1.84	0.57
56:BX:33:LYS:HA	56:BX:33:LYS:HE2	1.85	0.57
36:DA:1305:C:O2'	36:DA:1306:C:H5'	2.05	0.57
30:B4:28:LYS:HE2	30:B4:29:PRO:HD2	1.85	0.57
42:BG:34:LEU:HD11	42:BG:99:MET:HE3	1.87	0.57
28:D2:5:GLU:HA	28:D2:8:LYS:HD2	1.86	0.57
28:D2:3:LEU:HD13	36:DA:98:G:H5'	1.86	0.57
42:DG:39:ILE:N	42:DG:39:ILE:HD13	2.19	0.57
36:BA:1947:C:H2'	36:BA:1948:G:H5"	1.87	0.57
31:B5:57:VAL:C	31:B5:58:LEU:HD12	2.24	0.57
40:DE:77:ILE:HG22	40:DE:78:LEU:N	2.20	0.57
42:BG:107:LEU:HD22	42:BG:177:GLY:O	2.04	0.57
51:BS:85:VAL:O	51:BS:106:ARG:HG2	2.05	0.57
51:BS:24:LEU:O	51:BS:85:VAL:HB	2.05	0.57
41:DF:160:ASN:HD21	41:DF:162:LEU:CB	2.15	0.57
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.19	0.57
20:CT:26:ASN:ND2	20:CT:26:ASN:H	2.00	0.57
58:BZ:6:LYS:HG3	58:BZ:60:GLU:CB	2.34	0.57
43:DH:50:VAL:CG1	43:DH:52:VAL:HG23	2.34	0.57
1:AA:1064:G:H21	1:AA:1190:G:H2'	1.69	0.57
19:AS:37:ARG:O	19:AS:70:LYS:HD2	2.05	0.57
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.85	0.57
36:DA:106:C:H2'	36:DA:107:C:C6	2.39	0.57
48:BP:81:GLN:HE22	48:BP:106:LEU:HA	1.70	0.57
36:BA:1495:A:H8	36:BA:1495:A:OP2	1.88	0.57
36:BA:1018:C:H2'	36:BA:1019:U:C6	2.39	0.57
25:CZ:314:THR:HG23	25:CZ:374:LEU:O	2.05	0.57
39:BD:24:ILE:HD11	39:BD:28:GLU:HB3	1.87	0.57
4:CD:159:ARG:HH11	4:CD:159:ARG:HG3	1.70	0.57
36:DA:2140:C:H2'	36:DA:2141:G:H8	1.69	0.57
1:CA:1278:U:H5"	1:CA:1279:A:O4'	2.03	0.57
49:BQ:35:VAL:HG12	49:BQ:130:LYS:O	2.04	0.57
24:CY:70:C:H2'	24:CY:71:C:H5'	1.85	0.57
38:BC:74:VAL:HG12	38:BC:75:LEU:N	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:693:C:O2'	36:DA:694:U:H5'	2.05	0.57
36:DA:1638:C:H5"	36:DA:2710:C:O2'	2.04	0.57
38:BC:42:GLU:HG3	38:BC:215:THR:HG23	1.86	0.57
40:DE:152:LYS:HG2	46:DN:78:TYR:CE1	2.39	0.57
25:AZ:170:VAL:O	25:AZ:170:VAL:HG12	2.03	0.57
1:AA:436:C:H2'	1:AA:437:U:C6	2.39	0.57
39:BD:23:GLU:O	39:BD:25:THR:N	2.37	0.57
39:BD:27:THR:HG23	39:BD:83:GLU:CG	2.35	0.57
39:BD:30:GLU:HG3	39:BD:63:ARG:NH2	2.20	0.57
30:B4:11:PRO:HB3	30:B4:25:TYR:CE2	2.40	0.57
28:D2:51:ARG:HE	36:DA:94(A):G:H21	1.52	0.57
31:B5:4:HIS:O	36:BA:2056:G:N2	2.38	0.57
1:CA:1004:A:H2'	1:CA:1005:A:H5'	1.86	0.57
25:AZ:68:VAL:HG13	25:AZ:69:GLU:H	1.69	0.57
30:D4:28:LYS:HE2	30:D4:29:PRO:HD2	1.85	0.57
42:DG:91:ARG:HD2	42:DG:92:VAL:N	2.20	0.57
2:CB:92:TYR:CE1	2:CB:94:ASN:ND2	2.72	0.57
40:BE:56:PRO:O	40:BE:57:LYS:HD2	2.04	0.57
58:DZ:98:MET:O	58:DZ:125:LEU:HD12	2.05	0.57
28:B2:25:VAL:HG13	28:B2:57:ILE:HG23	1.86	0.57
36:BA:2103:C:H2'	36:BA:2186:G:H22	1.69	0.57
2:AB:72:GLY:O	2:AB:94:ASN:HA	2.05	0.57
36:DA:1018:C:H2'	36:DA:1019:U:C6	2.40	0.57
39:DD:270:ILE:H	39:DD:270:ILE:HD12	1.69	0.57
41:DF:6:VAL:HG12	41:DF:7:TYR:N	2.10	0.57
56:DX:8:ILE:H	56:DX:8:ILE:CD1	2.08	0.57
36:BA:833:U:H2'	36:BA:834:C:H6	1.69	0.57
9:AI:2:GLU:N	9:AI:88:TYR:HH	2.01	0.57
36:DA:2712(A):A:H5'	36:DA:2713:A:OP2	2.05	0.57
47:DO:86:ILE:O	47:DO:87:ILE:HD13	2.05	0.57
36:DA:2580:U:C5'	40:DE:131:ALA:HB2	2.32	0.57
54:BV:2:PHE:CZ	54:BV:13:ARG:NH1	2.73	0.57
26:B0:43:THR:O	26:B0:43:THR:HG23	2.05	0.57
50:BR:52:ILE:CG2	50:BR:94:TYR:HD2	2.17	0.57
22:AW:56:C:O2'	38:BC:129:ARG:HA	2.05	0.57
36:DA:672:C:H2'	36:DA:673:C:H5'	1.87	0.57
14:AN:57:ARG:NH1	14:AN:57:ARG:HB3	2.19	0.57
46:DN:34:LEU:O	46:DN:34:LEU:HD13	2.05	0.57
7:AG:37:ASN:HD21	9:AI:40:LEU:HA	1.70	0.57
46:BN:34:LEU:O	46:BN:34:LEU:HD13	2.05	0.57
46:BN:48:MET:H	46:BN:48:MET:CE	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:66:ALA:CA	51:BS:69:VAL:HG12	2.35	0.57
40:DE:101:ARG:HB3	40:DE:201:THR:HG21	1.86	0.57
36:DA:1495:A:H2'	36:DA:1496:A:C2	2.40	0.57
58:DZ:130:PRO:CA	58:DZ:133:ILE:HD11	2.34	0.57
36:BA:614(A):U:H4'	36:BA:614(B):G:C5'	2.35	0.57
58:DZ:67:LEU:N	58:DZ:67:LEU:HD12	2.20	0.57
58:DZ:10:ARG:HD3	58:DZ:38:TYR:HB3	1.86	0.57
18:CR:58:LEU:CD1	18:CR:66:LEU:HD22	2.34	0.57
36:BA:2200:C:H5'	36:BA:2201:C:OP2	2.05	0.57
55:BW:14:PRO:HG2	55:BW:78:GLU:CG	2.35	0.57
41:DF:108:LYS:N	41:DF:108:LYS:HD3	2.18	0.57
25:AZ:361:MET:HG3	25:AZ:363:MET:HG3	1.86	0.57
49:BQ:1:MET:HE3	49:BQ:44:ALA:HB1	1.85	0.57
1:AA:562:C:H4'	1:AA:563:A:H5'	1.85	0.57
36:BA:2027:G:H2'	36:BA:2028:U:H6	1.70	0.57
54:DV:82:ARG:HH11	54:DV:82:ARG:HG2	1.70	0.57
37:BB:49:C:H2'	37:BB:50:G:C8	2.40	0.57
36:DA:45:C:H2'	36:DA:47:C:C6	2.40	0.57
2:CB:80:ILE:HD12	2:CB:80:ILE:N	2.20	0.57
3:CC:58:GLU:H	3:CC:65:ALA:HB3	1.69	0.57
36:BA:1607:C:H4'	36:BA:1608:A:O5'	2.05	0.57
36:DA:8:A:H2'	36:DA:9:U:C5	2.40	0.57
34:D8:4:MET:HE1	36:DA:666:G:H1'	1.87	0.57
36:DA:1614:A:C2	55:DW:93:ALA:HB2	2.39	0.57
42:DG:16:ARG:O	42:DG:20:ILE:HG13	2.05	0.57
2:CB:92:TYR:HE1	2:CB:94:ASN:ND2	2.02	0.57
57:BY:13:VAL:HG22	57:BY:14:LEU:N	2.20	0.57
43:BH:153:LYS:N	43:BH:153:LYS:HD3	2.08	0.57
1:CA:858:G:C6	1:CA:869:G:C8	2.93	0.57
57:BY:50:ARG:HB3	57:BY:53:PRO:HG3	1.86	0.57
36:BA:321:G:O4'	41:BF:165:ARG:HD3	2.05	0.57
36:BA:1448:G:H5'	36:BA:1449:A:OP1	2.05	0.57
2:CB:172:ILE:HD12	2:CB:172:ILE:N	2.12	0.57
4:CD:16:GLY:O	4:CD:33:MET:HE3	2.05	0.57
54:DV:19:LYS:HD2	54:DV:96:ILE:HD11	1.86	0.57
9:AI:4:TYR:HD2	9:AI:87:GLN:HB3	1.70	0.57
53:DU:65:ILE:HD11	53:DU:96:ALA:CB	2.35	0.57
50:BR:30:THR:HG23	50:BR:31:HIS:H	1.69	0.57
38:BC:114:VAL:HG12	38:BC:144:THR:CB	2.34	0.57
16:AP:5:ARG:HB3	16:AP:67:THR:OG1	2.05	0.57
43:DH:44:VAL:HG12	43:DH:45:VAL:HG23	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:41:ARG:CZ	48:BP:41:ARG:HB3	2.35	0.57
43:BH:51:ARG:HG3	43:BH:52:VAL:N	2.19	0.57
25:AZ:143:ASP:HB3	25:AZ:146:LEU:CB	2.35	0.57
36:DA:1479:G:H5'	36:DA:1558:A:H2	1.70	0.57
58:DZ:81:ARG:HG3	58:DZ:81:ARG:O	2.05	0.57
7:CG:15:ASP:O	7:CG:19:GLY:HA2	2.04	0.57
33:D7:22:MET:CE	33:D7:31:LEU:HD12	2.35	0.57
36:BA:2591:C:H2'	36:BA:2592:G:H8	1.67	0.57
36:BA:1019:U:H3	36:BA:1142(A):A:N6	2.03	0.57
43:BH:20:ALA:HB3	43:BH:23:ARG:HB2	1.86	0.57
46:BN:9:VAL:HG12	46:BN:10:GLU:N	2.19	0.57
19:CS:45:VAL:HA	19:CS:62:ILE:CG1	2.35	0.57
13:AM:82:MET:HB2	13:AM:93:ARG:NH1	2.18	0.57
16:CP:8:ARG:HB3	16:CP:28:ARG:HH12	1.70	0.57
46:DN:133:GLN:C	46:DN:135:PRO:HD3	2.25	0.57
1:AA:719:C:O2	18:AR:50:ILE:HG12	2.05	0.57
36:BA:2009:G:O2'	36:BA:2010:G:H5'	2.04	0.57
52:BT:16:ARG:HD2	52:BT:18:ASP:OD1	2.04	0.57
36:DA:438:G:O2'	36:DA:440:G:H5'	2.05	0.57
27:B1:52:ARG:NH1	27:B1:57:GLU:HB2	2.19	0.57
36:DA:1001:A:H2'	36:DA:1002:G:O4'	2.04	0.57
8:CH:97:VAL:HG21	8:CH:128:GLY:HA2	1.87	0.57
37:DB:111:G:C2'	37:DB:112:U:H5'	2.34	0.57
36:BA:703:U:C2'	36:BA:704:G:H5'	2.35	0.57
36:BA:1902:C:O2'	39:BD:244:ARG:HD3	2.05	0.57
32:D6:33:LYS:HA	32:D6:33:LYS:CE	2.30	0.57
57:DY:28:LYS:HB2	57:DY:37:VAL:HB	1.87	0.57
32:B6:25:LYS:HE2	34:B8:34:TRP:HZ2	1.69	0.57
34:D8:62:LEU:N	34:D8:63:PRO:HD2	2.19	0.57
42:DG:114:ILE:HD13	42:DG:115:ARG:H	1.70	0.57
42:DG:51:ARG:NE	42:DG:51:ARG:HA	2.20	0.57
25:CZ:241:ARG:HB2	25:CZ:285:ASN:ND2	2.20	0.57
36:DA:2393:A:H5'	48:DP:62:LEU:HB3	1.87	0.57
46:BN:23:LEU:HB2	46:BN:60:ILE:HG21	1.85	0.57
19:CS:16:LEU:O	19:CS:19:VAL:N	2.37	0.57
1:AA:1418:A:H2	36:BA:1948:G:N3	2.03	0.57
32:D6:14:THR:HG23	32:D6:16:CYS:H	1.70	0.57
26:D0:49:LYS:H	26:D0:80:HIS:HD1	0.78	0.57
36:DA:2416:C:P	48:DP:66:GLY:HA3	2.44	0.57
50:DR:29:LEU:O	50:DR:75:LEU:HD21	2.03	0.57
25:AZ:166:ASP:C	25:AZ:167:GLU:HG2	2.25	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:44:VAL:HG12	43:BH:45:VAL:HG23	1.86	0.57
52:DT:106:SER:O	52:DT:107:ASP:OD1	2.23	0.57
16:CP:74:LEU:O	16:CP:79:VAL:HG23	2.04	0.57
12:AL:24:VAL:CG1	12:AL:27:LEU:HD22	2.34	0.57
24:AY:9:A:H2	24:AY:44:G:O2'	1.87	0.57
36:DA:2036:C:C6	36:DA:2036:C:H5'	2.34	0.57
7:AG:113:GLU:CG	7:AG:119:ARG:HB3	2.35	0.57
19:AS:45:VAL:HA	19:AS:62:ILE:CG1	2.34	0.57
36:DA:11:G:H2'	36:DA:12:U:H6	1.69	0.57
1:CA:475:G:O2'	1:CA:476:G:H5'	2.05	0.57
36:BA:1567:A:C5'	39:BD:58:HIS:CD2	2.88	0.57
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.85	0.57
1:CA:333:G:O2'	1:CA:334:C:H5'	2.05	0.57
36:DA:1010:A:H1'	36:DA:1153:C:H1'	1.87	0.57
54:BV:82:ARG:HG2	54:BV:82:ARG:HH11	1.68	0.57
30:B4:16:CYS:SG	30:B4:17:GLY:N	2.78	0.57
45:BK:32:UNK:HA	45:BK:63:UNK:CB	2.35	0.57
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.19	0.57
21:CU:9:ARG:HH12	21:CU:23:PRO:HD2	1.69	0.57
1:CA:1006:C:H2'	1:CA:1007:C:C6	2.39	0.57
18:AR:29:PHE:CD1	18:AR:29:PHE:N	2.72	0.57
38:DC:210:ARG:HG2	38:DC:210:ARG:NH1	2.19	0.57
36:DA:2240:C:O2'	36:DA:2241:A:H5'	2.04	0.57
39:DD:30:GLU:O	39:DD:32:SER:N	2.37	0.56
56:DX:80:ILE:HG13	56:DX:80:ILE:O	2.05	0.56
42:DG:120:LEU:O	42:DG:180:PHE:HD1	1.87	0.56
42:DG:91:ARG:C	42:DG:91:ARG:HD2	2.26	0.56
36:DA:2309:A:H2'	36:DA:2310:A:C5'	2.35	0.56
36:DA:1665:A:H2'	36:DA:1666:G:C5'	2.25	0.56
2:AB:92:TYR:CE2	2:AB:94:ASN:ND2	2.73	0.56
46:BN:58:ASP:O	46:BN:60:ILE:HG13	2.05	0.56
13:AM:101:GLN:N	13:AM:101:GLN:NE2	2.53	0.56
24:AY:65:C:H4'	25:AZ:341:GLN:CD	2.25	0.56
25:CZ:301:GLY:HA2	25:CZ:347:THR:OG1	2.04	0.56
25:CZ:158:LEU:O	25:CZ:163:PHE:HB2	2.05	0.56
50:BR:52:ILE:CB	50:BR:94:TYR:HD2	2.18	0.56
25:CZ:176:LEU:HD13	60:CZ:501:GDP:O2'	2.05	0.56
39:BD:44:ASN:N	39:BD:44:ASN:OD1	2.38	0.56
1:CA:1190:G:OP1	3:CC:5:ILE:HD12	2.05	0.56
25:AZ:143:ASP:O	25:AZ:147:LEU:HD23	2.04	0.56
36:DA:122:G:H1	36:DA:129:C:N4	1.99	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:24:LYS:HZ3	60:AZ:501:GDP:PB	2.28	0.56
2:AB:9:GLU:N	2:AB:9:GLU:OE1	2.34	0.56
12:AL:45:PRO:HD3	12:AL:51:ALA:O	2.05	0.56
1:AA:1134:G:C2'	1:AA:1135:U:H5'	2.33	0.56
13:AM:108:ARG:HH11	13:AM:108:ARG:CG	2.18	0.56
39:BD:124:PRO:HG2	39:BD:129:ASN:HD21	1.70	0.56
1:CA:1286:A:O2'	1:CA:1287:A:H5"	2.04	0.56
16:AP:28:ARG:HG2	16:AP:29:ASP:OD1	2.05	0.56
36:DA:654(M):C:H2'	36:DA:654(N):G:N7	2.19	0.56
1:CA:738:C:H5"	6:CF:69:GLU:HB2	1.87	0.56
36:BA:438:G:O2'	36:BA:440:G:H5'	2.04	0.56
1:AA:457:C:H2'	1:AA:458:C:C6	2.40	0.56
6:AF:15:ASP:OD2	6:AF:17:SER:HB2	2.05	0.56
1:AA:1211:U:H5'	1:AA:1212:U:OP1	2.04	0.56
28:D2:46:GLN:HB3	28:D2:48:HIS:CE1	2.40	0.56
28:D2:25:VAL:HG21	28:D2:61:LEU:CD1	2.34	0.56
28:D2:25:VAL:CB	28:D2:61:LEU:HD21	2.35	0.56
28:D2:8:LYS:C	28:D2:10:LEU:H	2.08	0.56
41:BF:157:VAL:HG23	41:BF:198:ALA:CB	2.34	0.56
51:BS:50:SER:O	51:BS:51:ALA:HB2	2.05	0.56
57:BY:96:ILE:HG13	57:BY:99:CYS:HB2	1.87	0.56
40:DE:56:PRO:O	40:DE:57:LYS:HD2	2.05	0.56
2:CB:47:THR:HG23	2:CB:202:PRO:O	2.05	0.56
26:B0:50:ASN:C	26:B0:62:LEU:HD21	2.26	0.56
1:AA:148:G:H2'	1:AA:149:A:H8	1.70	0.56
49:BQ:141:GLN:C	58:BZ:53:ILE:HD12	2.26	0.56
54:BV:19:LYS:HD2	54:BV:96:ILE:HD11	1.87	0.56
50:DR:30:THR:HG23	50:DR:31:HIS:H	1.69	0.56
4:CD:100:ARG:HH21	4:CD:118:ARG:NH1	2.00	0.56
36:DA:614(A):U:H4'	36:DA:614(B):G:C5'	2.34	0.56
39:BD:70:TRP:CZ3	39:BD:150:LYS:HA	2.39	0.56
8:AH:18:ARG:HA	8:AH:18:ARG:HH11	1.68	0.56
41:BF:185:ASP:HA	41:BF:188:ARG:CG	2.34	0.56
41:DF:107:LYS:O	41:DF:110:LEU:N	2.38	0.56
39:DD:45:ASN:CG	39:DD:46:GLN:N	2.59	0.56
1:AA:189(J):G:O2'	1:AA:189(K):U:H5'	2.06	0.56
18:CR:36:ASN:OD1	18:CR:38:GLU:HG2	2.05	0.56
36:BA:2287:A:H62	36:BA:2344:U:H3	1.51	0.56
28:D2:15:LYS:CG	28:D2:16:LEU:H	2.17	0.56
4:CD:30:LYS:C	4:CD:32:ALA:H	2.07	0.56
49:BQ:17:LEU:HD13	49:BQ:39:PRO:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B4:36:CYS:SG	30:B4:37:SER:O	2.63	0.56
22:AW:11:C:O2'	22:AW:12:U:H5'	2.05	0.56
22:AW:66:U:H5'	32:B6:28:ARG:HH22	1.71	0.56
36:BA:1405:U:H2'	36:BA:1406:U:C6	2.40	0.56
25:AZ:231:ILE:HG22	25:AZ:231:ILE:O	2.05	0.56
36:BA:1010:A:H1'	36:BA:1153:C:H1'	1.86	0.56
39:BD:35:LYS:HD2	39:BD:36:PRO:HD3	1.85	0.56
36:BA:1598:C:H5'	56:BX:36:LYS:HG2	1.86	0.56
36:BA:1598:C:H5'	56:BX:36:LYS:CG	2.34	0.56
54:BV:59:ALA:HB1	54:BV:95:LEU:O	2.05	0.56
36:DA:2103:C:H2'	36:DA:2186:G:H22	1.69	0.56
30:D4:11:PRO:HB3	30:D4:25:TYR:CE2	2.41	0.56
42:DG:137:GLU:O	42:DG:138:GLN:CB	2.53	0.56
42:DG:180:PHE:O	42:DG:182:LYS:HG3	2.05	0.56
1:AA:1004:A:H2'	1:AA:1005:A:H5'	1.86	0.56
32:D6:13:CYS:O	32:D6:21:TYR:HA	2.04	0.56
49:DQ:141:GLN:CD	58:DZ:72:ARG:NE	2.59	0.56
32:B6:11:LEU:HD21	32:B6:51:GLU:HG3	1.87	0.56
36:DA:1947:C:C3'	36:DA:1948:G:H5"	2.34	0.56
48:DP:147:LEU:O	48:DP:148:LEU:HB2	2.05	0.56
40:BE:38:THR:HG23	40:BE:39:PRO:HD2	1.87	0.56
25:AZ:270:VAL:CG1	25:AZ:286:VAL:HG21	2.34	0.56
37:BB:44:G:H1'	37:BB:47:C:N4	2.20	0.56
48:DP:50:ARG:NH1	48:DP:50:ARG:HG2	2.20	0.56
48:BP:23:PRO:HG2	48:BP:33:ARG:HG3	1.87	0.56
47:BO:86:ILE:H	47:BO:86:ILE:HD12	1.69	0.56
10:AJ:40:LEU:HB2	10:AJ:41:PRO:HD2	1.87	0.56
25:AZ:126:VAL:HG13	61:AZ:502:KIR:C47	2.35	0.56
54:DV:21:ARG:CG	54:DV:91:TYR:HD2	2.17	0.56
48:BP:114:ILE:HD12	48:BP:115:LEU:N	2.20	0.56
53:DU:88:ILE:O	53:DU:88:ILE:HG22	2.05	0.56
40:BE:111:ARG:HG2	40:BE:160:TYR:O	2.05	0.56
40:DE:111:ARG:HG2	40:DE:160:TYR:O	2.06	0.56
20:AT:45:GLN:NE2	20:AT:46:GLU:HG3	2.20	0.56
13:CM:83:ASP:CG	13:CM:84:ILE:N	2.57	0.56
41:DF:160:ASN:ND2	41:DF:162:LEU:H	2.03	0.56
1:AA:59:A:H5'	1:AA:60:A:H5"	1.87	0.56
48:DP:41:ARG:HB3	48:DP:41:ARG:CZ	2.36	0.56
36:DA:672:C:O2'	36:DA:673:C:H5"	2.05	0.56
1:CA:1347:G:C6	9:CI:107:ARG:NH2	2.73	0.56
43:BH:54:ARG:HH11	43:BH:54:ARG:HG2	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:170:VAL:HG12	4:AD:171:GLY:N	2.19	0.56
4:CD:170:VAL:HG12	4:CD:171:GLY:H	1.70	0.56
22:AW:39:U:H2'	22:AW:40:C:H5'	1.87	0.56
49:BQ:134:ARG:HD2	58:BZ:122:ARG:HH21	1.67	0.56
22:AW:30:G:H2'	22:AW:31:A:C8	2.40	0.56
1:AA:1086:U:C2'	1:AA:1087:G:H5'	2.32	0.56
11:CK:27:ASN:ND2	11:CK:28:THR:H	2.01	0.56
3:CC:70:VAL:HG12	3:CC:72:LYS:N	2.20	0.56
42:BG:51:ARG:HH11	42:BG:53:LEU:HD13	1.71	0.56
36:DA:2840:C:H2'	36:DA:2841:C:C6	2.40	0.56
46:BN:46:VAL:HG11	46:BN:48:MET:HG3	1.85	0.56
30:D4:16:CYS:SG	30:D4:17:GLY:N	2.78	0.56
22:CW:72:C:H2'	22:CW:73:A:O4'	2.04	0.56
43:DH:156:ALA:C	43:DH:158:HIS:N	2.57	0.56
36:DA:442:G:H4'	41:DF:46:ARG:HD3	1.85	0.56
4:CD:126:ILE:HD12	4:CD:126:ILE:N	2.21	0.56
1:CA:1127:G:O2'	1:CA:1128:C:H5'	2.05	0.56
1:CA:1128:C:O2'	1:CA:1129:C:H5"	2.05	0.56
27:D1:81:LYS:NZ	36:DA:156:U:H5'	2.19	0.56
57:DY:17:SER:OG	57:DY:18:GLY:N	2.38	0.56
52:BT:91:ARG:O	52:BT:92:GLY:C	2.44	0.56
50:DR:51:LEU:CD2	50:DR:70:LEU:HD11	2.35	0.56
3:CC:25:GLY:O	3:CC:27:LYS:N	2.38	0.56
39:BD:70:TRP:HZ3	39:BD:146:GLU:OE2	1.87	0.56
39:BD:73:VAL:HG13	39:BD:120:GLY:CA	2.36	0.56
36:DA:1400:G:H2'	36:DA:1401:G:H8	1.70	0.56
1:CA:1524:C:H5'	1:CA:1524:C:C6	2.40	0.56
1:AA:1125:U:C6	1:AA:1125:U:H3'	2.41	0.56
36:BA:1331:A:HO2'	36:BA:1332:G:H8	1.51	0.56
36:DA:1335:U:H2'	36:DA:1336:A:C8	2.41	0.56
36:BA:848:G:N9	36:BA:933:A:H8	2.02	0.56
3:AC:52:LEU:HD21	3:AC:55:VAL:CG2	2.35	0.56
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.88	0.56
3:CC:7:PRO:HG2	3:CC:184:TYR:HB2	1.86	0.56
34:B8:43:GLN:C	34:B8:44:LYS:HD2	2.26	0.56
36:BA:2679:A:H4'	40:BE:165:VAL:HG11	1.87	0.56
46:BN:89:LYS:O	46:BN:93:THR:HG22	2.05	0.56
47:DO:43:VAL:HG21	47:DO:52:VAL:HG11	1.86	0.56
39:BD:72:LYS:HE2	39:BD:101:GLU:OE1	2.05	0.56
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.05	0.56
36:DA:2027:G:O2'	36:DA:2028:U:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:848:C:O2'	1:CA:849:C:H5'	2.05	0.56
47:BO:114:ILE:HD12	47:BO:114:ILE:N	2.21	0.56
54:BV:12:TYR:N	54:BV:12:TYR:CD1	2.73	0.56
36:BA:893:C:H2'	36:BA:894:C:C6	2.40	0.56
3:CC:92:ALA:O	3:CC:96:GLY:HA2	2.06	0.56
1:CA:1296:C:H4'	1:CA:1302:U:C5	2.40	0.56
25:AZ:311:THR:HB	25:AZ:312:PRO:HD2	1.87	0.56
1:AA:490:G:H2'	1:AA:491:G:H8	1.70	0.56
36:DA:1268:A:H2'	36:DA:1269:A:O4'	2.05	0.56
36:BA:669:G:H2'	36:BA:669:G:N3	2.21	0.56
39:BD:30:GLU:CG	39:BD:63:ARG:HH21	2.18	0.56
34:D8:61:LEU:HD12	34:D8:61:LEU:N	2.15	0.56
55:BW:73:ALA:O	55:BW:106:ILE:HG12	2.05	0.56
40:BE:101:ARG:HB3	40:BE:201:THR:HG21	1.87	0.56
14:AN:13:THR:N	14:AN:14:PRO:CD	2.66	0.56
58:BZ:60:GLU:O	58:BZ:61:LEU:HB2	2.05	0.56
25:CZ:176:LEU:HB2	60:CZ:501:GDP:C5	2.40	0.56
10:AJ:4:ILE:HB	10:AJ:74:ILE:CD1	2.34	0.56
43:DH:74:ASN:HB3	43:DH:138:LYS:HD3	1.87	0.56
52:DT:50:ILE:HA	52:DT:99:LEU:CD1	2.35	0.56
1:CA:1423:G:H5'	47:DO:49:ARG:NH2	2.19	0.56
36:DA:1495:A:OP2	36:DA:1495:A:H8	1.89	0.56
1:AA:274:A:O2'	1:AA:275:G:C8	2.54	0.56
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.06	0.56
46:DN:108:PRO:HG2	46:DN:113:GLY:HA3	1.87	0.56
36:DA:285:C:H2'	36:DA:286:C:C6	2.41	0.56
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.87	0.56
37:BB:65:C:N4	37:BB:109:C:H2'	2.21	0.56
55:BW:11:ARG:NH1	55:BW:98:LYS:HB3	2.20	0.56
25:CZ:313:HIS:CB	25:CZ:380:LEU:HD12	2.36	0.56
36:DA:2025:C:H2'	36:DA:2026:C:C6	2.40	0.56
36:BA:654(N):G:H2'	36:BA:654(O):G:O4'	2.05	0.56
25:CZ:350:THR:HG22	25:CZ:351:GLY:H	1.71	0.56
36:BA:1268:A:H2'	36:BA:1269:A:O4'	2.05	0.56
36:DA:20:C:O2'	36:DA:21:A:H5'	2.05	0.56
36:DA:1907:G:O2'	36:DA:1908:C:H5'	2.04	0.56
3:AC:165:THR:O	3:AC:165:THR:HG23	2.05	0.56
36:BA:181:A:H5'	36:BA:181:A:H8	1.70	0.56
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.40	0.56
36:BA:2543:G:H2'	36:BA:2544:G:C8	2.40	0.56
39:DD:31:LYS:HE3	39:DD:33:LEU:HD12	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B4:31:ILE:HD12	30:B4:31:ILE:N	2.21	0.56
15:CO:26:GLU:OE2	15:CO:77:ARG:NH1	2.38	0.56
13:CM:4:ILE:H	13:CM:4:ILE:HD12	1.71	0.56
13:CM:64:TRP:O	13:CM:66:LEU:HD13	2.05	0.56
25:AZ:279:GLU:O	25:AZ:279:GLU:HG2	2.05	0.56
36:DA:2189:U:H3'	36:DA:2190:G:H4'	1.85	0.56
22:AW:57:G:H2'	22:AW:58:A:C5'	2.35	0.56
36:DA:1142(A):A:H8	36:DA:1142(A):A:H5'	1.70	0.56
48:BP:50:ARG:HG2	48:BP:50:ARG:NH1	2.21	0.56
40:BE:77:ILE:HG22	40:BE:78:LEU:N	2.19	0.56
36:DA:2401:U:C2'	36:DA:2402:C:H5"	2.35	0.56
48:DP:97:PRO:HD3	48:DP:126:VAL:O	2.06	0.56
36:DA:671:C:H2'	36:DA:672:C:H6	1.70	0.56
16:AP:74:LEU:O	16:AP:79:VAL:HG23	2.04	0.56
43:DH:54:ARG:HG2	43:DH:54:ARG:HH11	1.71	0.56
1:CA:1086:U:C2'	1:CA:1087:G:H5'	2.34	0.56
51:DS:74:ALA:HB2	51:DS:101:LEU:HD22	1.85	0.56
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.05	0.56
1:AA:1128:C:O2'	1:AA:1129:C:H5"	2.05	0.56
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	1.88	0.56
28:B2:51:ARG:HD3	28:B2:55:ARG:NH1	2.19	0.56
27:B1:82:LEU:HD11	27:B1:90:ILE:CD1	2.35	0.56
19:AS:67:VAL:HG12	19:AS:68:GLY:N	2.21	0.56
36:DA:2140:C:H2'	36:DA:2141:G:C8	2.41	0.56
35:B9:17:ILE:CG2	35:B9:18:ARG:N	2.68	0.56
36:DA:1805:U:O2	39:DD:50:THR:HB	2.06	0.56
36:BA:11:G:H2'	36:BA:12:U:H6	1.69	0.56
36:DA:116:C:H2'	36:DA:117:G:O4'	2.06	0.56
36:BA:1187:G:H5"	54:BV:81:TYR:CE2	2.40	0.56
38:BC:139:ASN:OD1	38:BC:140:PRO:HD2	2.04	0.56
1:CA:242:C:H2'	1:CA:243:A:H5'	1.86	0.56
36:DA:2807:G:H2'	36:DA:2808:U:H5"	1.87	0.56
1:CA:280:C:O2	17:CQ:38:ARG:HG3	2.06	0.56
8:AH:20:TYR:CE1	8:AH:78:GLN:NE2	2.74	0.56
46:DN:62:VAL:HG22	46:DN:66:LYS:HB2	1.86	0.56
3:AC:65:ALA:O	3:AC:100:ALA:O	2.24	0.56
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.69	0.56
36:DA:1642:G:O2'	36:DA:1643:G:H5'	2.04	0.56
26:D0:36:ILE:HD11	36:DA:2355:C:H4'	1.87	0.56
39:DD:257:LEU:C	39:DD:257:LEU:HD23	2.26	0.56
36:BA:222:A:H5"	36:BA:421:U:OP1	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:30:THR:CG2	32:D6:31:PRO:HD2	2.20	0.56
28:D2:27:GLU:O	28:D2:30:ARG:CB	2.54	0.56
34:D8:11:LYS:CE	34:D8:63:PRO:HG3	2.35	0.56
30:D4:31:ILE:HD12	30:D4:31:ILE:N	2.20	0.56
1:AA:1039:C:H2'	1:AA:1040:U:C5	2.39	0.56
36:BA:2316:C:H1'	42:BG:128:ARG:CZ	2.36	0.56
49:DQ:141:GLN:HB3	58:DZ:99:TYR:HE2	1.70	0.56
52:BT:54:ARG:HA	52:BT:59:THR:HB	1.87	0.56
36:BA:654(H):G:C3'	36:BA:654(I):C:H5'	2.36	0.56
48:BP:147:LEU:O	48:BP:148:LEU:HB2	2.06	0.56
26:D0:50:ASN:C	26:D0:62:LEU:HD21	2.26	0.56
24:AY:76:A:C2	25:AZ:271:GLU:HG3	2.40	0.56
56:DX:8:ILE:N	56:DX:8:ILE:HD12	2.11	0.56
47:BO:87:ILE:HG22	47:BO:88:ASN:O	2.05	0.56
48:BP:100:LEU:O	48:BP:103:ALA:HB3	2.06	0.56
9:CI:78:LYS:HZ1	9:CI:101:PHE:HE1	1.54	0.56
2:AB:141:GLU:O	2:AB:145:LEU:HD23	2.05	0.56
20:AT:18:GLN:HG2	20:AT:22:ARG:NH1	2.21	0.56
25:AZ:164:PRO:CB	25:AZ:167:GLU:OE2	2.53	0.56
1:CA:1086:U:H2'	1:CA:1087:G:C5'	2.32	0.56
36:DA:654(V):A:H8	36:DA:655:A:H2'	1.71	0.56
11:CK:121:PRO:HG2	11:CK:126:ARG:CB	2.35	0.56
38:DC:132:GLY:N	38:DC:133:PRO:CD	2.68	0.56
1:CA:59:A:H5'	1:CA:60:A:H5"	1.87	0.56
22:CW:4:C:C4	22:CW:5:G:O6	2.58	0.56
36:BA:2029:G:H2'	36:BA:2031:A:OP2	2.06	0.56
36:DA:309:G:N3	36:DA:329:G:O2'	2.39	0.56
46:DN:41:ASP:C	53:DU:64:ARG:HH12	2.09	0.56
2:AB:109:SER:O	2:AB:111:ARG:N	2.39	0.56
36:DA:287:C:H2'	36:DA:288:C:C6	2.41	0.56
46:BN:1:MET:C	46:BN:2:LYS:HD2	2.26	0.56
9:CI:11:LYS:O	9:CI:12:GLU:HB2	2.06	0.56
39:DD:23:GLU:C	39:DD:25:THR:N	2.58	0.56
25:AZ:75:ARG:HD2	25:AZ:77:TYR:OH	2.05	0.56
34:B8:32:LEU:HB3	34:B8:36:LYS:HZ2	1.71	0.56
36:DA:2183:C:H2'	36:DA:2184:G:H8	1.69	0.56
42:DG:97:ASP:N	42:DG:99:MET:SD	2.79	0.56
57:BY:29:GLU:N	57:BY:29:GLU:OE1	2.38	0.56
36:DA:2603:G:H2'	36:DA:2604:U:C5'	2.25	0.56
32:B6:11:LEU:HD11	32:B6:51:GLU:HG3	1.88	0.56
2:CB:187:LEU:HD23	2:CB:201:ILE:HG22	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:49:LYS:H	26:B0:80:HIS:HD1	0.79	0.56
31:B5:50:GLY:CA	31:B5:56:LYS:HD3	2.33	0.56
41:BF:160:ASN:ND2	41:BF:162:LEU:H	2.02	0.56
37:DB:7:G:H2'	37:DB:8:U:H5"	1.88	0.56
49:BQ:141:GLN:NE2	58:BZ:72:ARG:HA	2.16	0.56
25:CZ:277:LEU:CD1	25:CZ:278:GLN:N	2.66	0.56
40:BE:4:ILE:HG21	40:BE:96:PHE:CE2	2.40	0.56
36:BA:2127:G:O2'	36:BA:2128:C:H5'	2.06	0.56
33:B7:10:ARG:HG2	33:B7:10:ARG:NH1	2.20	0.56
12:AL:75:HIS:CB	12:AL:102:ARG:HH21	2.18	0.56
1:AA:1116:C:C2'	1:AA:1117:G:H5"	2.36	0.56
4:AD:3:ARG:HG2	4:AD:118:ARG:NE	2.21	0.56
51:BS:15:ARG:HG2	51:BS:15:ARG:HH11	1.69	0.56
46:DN:43:THR:HG22	46:DN:45:ASN:ND2	2.21	0.56
51:DS:12:PHE:CD1	51:DS:13:ARG:N	2.71	0.56
51:DS:13:ARG:HG3	51:DS:14:VAL:N	2.19	0.56
46:BN:43:THR:HB	46:BN:46:VAL:HG12	1.87	0.56
58:BZ:10:ARG:O	58:BZ:35:ARG:NH2	2.39	0.56
25:CZ:267:VAL:HG23	25:CZ:288:VAL:CG1	2.35	0.56
57:BY:90:LEU:HG	57:BY:91:GLU:H	1.71	0.56
25:AZ:14:VAL:O	25:AZ:79:HIS:HA	2.05	0.56
10:AJ:6:ILE:CD1	10:AJ:23:ILE:HG21	2.36	0.56
50:DR:12:ARG:HH11	50:DR:12:ARG:HG3	1.70	0.56
1:AA:862:C:O2'	1:AA:863:U:H5'	2.06	0.56
55:BW:82:LEU:HD23	55:BW:84:ARG:NH2	2.21	0.56
38:DC:74:VAL:HG12	38:DC:75:LEU:N	2.19	0.56
46:BN:62:VAL:CG2	46:BN:66:LYS:HB2	2.36	0.56
36:BA:993:G:OP1	53:BU:50:ARG:NH1	2.39	0.56
36:BA:1165:U:H2'	36:BA:1166:C:C6	2.41	0.56
25:CZ:339:ARG:HE	25:CZ:352:VAL:HG22	1.70	0.56
1:CA:992:U:H4'	1:CA:993:G:O5'	2.05	0.56
36:DA:894:C:O2'	36:DA:895:U:H5'	2.06	0.56
50:BR:87:TYR:O	50:BR:89:ASP:N	2.39	0.56
20:CT:25:ARG:HG3	20:CT:25:ARG:HH11	1.70	0.56
1:AA:167:G:O2'	1:AA:168:G:H5'	2.04	0.56
25:AZ:358:GLY:C	25:AZ:360:GLU:N	2.59	0.56
39:BD:23:GLU:C	39:BD:25:THR:N	2.59	0.56
39:BD:30:GLU:O	39:BD:32:SER:N	2.39	0.56
15:CO:26:GLU:HB3	15:CO:81:LEU:HD23	1.87	0.56
28:D2:7:ARG:O	28:D2:11:GLU:HG3	2.06	0.56
36:DA:2107:C:H1'	36:DA:2182:G:N2	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:59:GLU:HG3	42:DG:60:LEU:N	2.19	0.56
42:DG:62:LEU:CD1	42:DG:62:LEU:H	2.16	0.56
28:B2:18:PRO:HD3	28:B2:67:LYS:HD3	1.87	0.56
43:BH:85:LYS:HZ1	43:BH:132:ARG:HA	1.70	0.56
52:DT:28:VAL:O	52:DT:29:ARG:CD	2.48	0.56
40:DE:38:THR:HG23	40:DE:39:PRO:HD2	1.88	0.56
55:DW:73:ALA:O	55:DW:106:ILE:HG12	2.06	0.56
10:AJ:40:LEU:H	10:AJ:40:LEU:CD2	2.14	0.56
48:DP:115:LEU:HG	48:DP:116:GLY:H	1.71	0.56
54:DV:38:LEU:O	54:DV:39:LEU:HD13	2.06	0.56
40:DE:4:ILE:HG21	40:DE:96:PHE:CE2	2.40	0.56
24:CY:2:G:H2'	24:CY:3:G:C5'	2.29	0.56
54:BV:38:LEU:O	54:BV:39:LEU:HD13	2.06	0.56
48:DP:39:LYS:HD2	48:DP:40:SER:H	1.69	0.56
1:CA:1442(B):A:O2'	1:CA:1443:G:C8	2.58	0.56
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.06	0.56
7:CG:16:LEU:CD1	9:CI:42:ARG:HA	2.35	0.56
43:DH:157:TYR:O	43:DH:158:HIS:CD2	2.59	0.56
29:D3:1:MET:HE1	29:D3:40:THR:HA	1.87	0.56
46:BN:108:PRO:HG2	46:BN:113:GLY:HA3	1.87	0.56
43:BH:19:VAL:HG12	43:BH:20:ALA:N	2.20	0.56
30:D4:39:CYS:O	30:D4:40:HIS:HB2	2.06	0.56
58:BZ:150:LEU:H	58:BZ:150:LEU:HD23	1.70	0.56
46:DN:9:VAL:HG12	46:DN:10:GLU:N	2.21	0.56
1:AA:1158:C:C4	1:AA:1160:G:H1'	2.40	0.56
41:DF:185:ASP:HA	41:DF:188:ARG:CG	2.36	0.56
36:BA:1805:U:O2	39:BD:50:THR:HB	2.06	0.56
36:BA:287:C:H2'	36:BA:288:C:C6	2.41	0.56
1:AA:475:G:O2'	1:AA:476:G:H5'	2.06	0.56
58:BZ:40:ASP:OD2	58:BZ:42:VAL:HG12	2.05	0.56
58:DZ:126:VAL:HA	58:DZ:163:LEU:HA	1.88	0.56
36:DA:1101:U:H2'	36:DA:1102:C:H6	1.70	0.56
29:B3:26:LEU:O	29:B3:27:GLY:C	2.43	0.56
4:AD:132:ARG:HD2	4:AD:132:ARG:O	2.06	0.56
36:BA:2647:U:H2'	36:BA:2648:C:C6	2.40	0.56
50:DR:59:ASP:O	50:DR:60:LEU:HB3	2.06	0.56
56:BX:12:VAL:HG12	56:BX:27:THR:O	2.06	0.56
56:BX:53:LYS:HB3	56:BX:82:GLN:HB3	1.88	0.56
13:AM:6:GLY:HA3	13:AM:67:GLU:OE2	2.05	0.56
34:D8:32:LEU:HD13	36:DA:2392:A:OP1	2.06	0.56
57:DY:85:VAL:HG12	57:DY:86:ARG:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:11:LYS:CE	34:B8:63:PRO:HG3	2.36	0.56
25:AZ:272:MET:CG	25:AZ:277:LEU:HD23	2.36	0.56
42:BG:76:SER:HA	42:BG:83:ARG:HA	1.88	0.56
37:BB:7:G:H4'	51:BS:29:PHE:CD2	2.41	0.56
36:DA:1448:G:H5'	36:DA:1449:A:OP1	2.06	0.56
20:CT:45:GLN:CB	20:CT:91:LEU:HD13	2.34	0.56
51:DS:58:LEU:HG	51:DS:59:LYS:H	1.71	0.56
1:AA:973:G:H1'	10:AJ:55:LYS:HE3	1.88	0.56
1:AA:323:U:H5'	20:AT:23:ARG:HB2	1.86	0.56
43:DH:43:VAL:HG12	43:DH:46:GLU:OE2	2.06	0.56
25:AZ:158:LEU:O	25:AZ:163:PHE:HB2	2.06	0.56
51:BS:15:ARG:HG2	51:BS:15:ARG:NH1	2.21	0.56
46:DN:46:VAL:O	46:DN:47:ALA:CB	2.54	0.56
51:DS:13:ARG:CG	51:DS:14:VAL:N	2.69	0.56
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.20	0.56
56:DX:57:LEU:HD13	56:DX:78:LYS:O	2.06	0.56
1:CA:585:G:H4'	12:CL:8:ASN:ND2	2.20	0.56
41:BF:107:LYS:O	41:BF:110:LEU:N	2.39	0.56
1:CA:1125:U:H3'	1:CA:1125:U:C6	2.41	0.56
36:BA:1335:U:H2'	36:BA:1336:A:H8	1.71	0.56
36:DA:89:G:H3'	36:DA:90:U:H5'	1.87	0.56
36:BA:956:G:OP2	49:BQ:14:ARG:NH2	2.39	0.56
22:CV:44:G:H2'	22:CV:45:U:H5'	1.88	0.56
6:CF:30:LEU:O	6:CF:30:LEU:HD23	2.04	0.56
1:AA:735:C:H2'	1:AA:736:C:H6	1.71	0.56
36:DA:2672:G:H3'	36:DA:2673:G:H5"	1.88	0.56
42:DG:111:LEU:N	42:DG:112:PRO:HD2	2.20	0.56
38:BC:113:VAL:HG12	38:BC:138:PRO:HG3	1.87	0.56
36:BA:2027:G:O2'	36:BA:2028:U:H5'	2.06	0.56
8:AH:17:THR:HB	8:AH:78:GLN:OE1	2.06	0.56
36:DA:1146:C:O2'	36:DA:1147:C:H5'	2.06	0.56
38:DC:42:GLU:HG3	38:DC:215:THR:HG23	1.86	0.56
36:DA:1607:C:H4'	36:DA:1608:A:O5'	2.06	0.56
58:BZ:128:VAL:HG23	58:BZ:160:GLY:O	2.06	0.56
25:CZ:311:THR:HB	25:CZ:312:PRO:HD2	1.88	0.56
1:CA:853:G:O2'	1:CA:854:G:H5'	2.06	0.56
4:CD:132:ARG:HD2	4:CD:132:ARG:O	2.05	0.56
1:AA:1445:C:O2'	1:AA:1446:U:H5'	2.06	0.56
39:DD:24:ILE:HD11	39:DD:28:GLU:HB3	1.88	0.56
32:D6:27:LYS:HE3	32:D6:27:LYS:C	2.25	0.56
34:B8:4:MET:HE1	36:BA:666:G:H1'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:157:VAL:CG2	41:DF:194:MET:HG2	2.35	0.56
57:BY:75:ILE:HG23	57:BY:76:CYS:H	1.70	0.56
57:BY:85:VAL:HG12	57:BY:86:ARG:N	2.21	0.56
58:DZ:98:MET:O	58:DZ:125:LEU:HA	2.06	0.56
22:AW:18:G:H22	22:AW:55:U:H6	1.52	0.56
31:B5:40:LYS:HE2	31:B5:46:CYS:CB	2.34	0.56
41:DF:165:ARG:HA	41:DF:168:ARG:HD3	1.89	0.56
58:BZ:166:SER:H	58:BZ:167:PRO:HA	1.69	0.56
25:CZ:113:MET:CG	25:CZ:114:PRO:HD2	2.32	0.56
50:DR:52:ILE:HB	50:DR:94:TYR:CD2	2.40	0.56
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.06	0.56
36:BA:672:C:C2'	36:BA:673:C:C5'	2.81	0.56
36:BA:2777:G:C5'	36:BA:2778:A:H5'	2.32	0.56
43:BH:66:GLY:CA	43:BH:69:ARG:HB3	2.36	0.56
36:DA:1558:A:O2'	36:DA:1559:G:OP2	2.23	0.56
57:BY:43:ASN:C	57:BY:44:ILE:HD12	2.26	0.56
25:CZ:68:VAL:HG13	25:CZ:69:GLU:H	1.71	0.56
35:D9:1:MET:HG3	36:DA:2478:A:OP2	2.06	0.56
36:DA:108:U:H2'	36:DA:109:G:C8	2.39	0.56
25:CZ:222:LEU:CD1	25:CZ:303:VAL:HB	2.35	0.56
55:DW:11:ARG:NH1	55:DW:98:LYS:HB3	2.21	0.56
1:CA:337:C:H2'	1:CA:338:A:C8	2.41	0.56
38:DC:151:GLU:HA	38:DC:154:ARG:HH11	1.69	0.56
1:CA:490:G:H2'	1:CA:491:G:H8	1.71	0.56
45:DK:32:UNK:HA	45:DK:63:UNK:CB	2.36	0.56
25:AZ:356:PRO:HB2	25:AZ:359:VAL:CG2	2.36	0.55
36:BA:1614:A:C2	55:BW:93:ALA:HB2	2.41	0.55
36:BA:2282:G:OP1	36:BA:2283:C:H1'	2.05	0.55
32:D6:11:LEU:HD11	32:D6:51:GLU:HG3	1.88	0.55
42:DG:60:LEU:HD13	42:DG:60:LEU:O	2.05	0.55
1:AA:1283:G:O2'	1:AA:1284:C:P	2.64	0.55
28:B2:25:VAL:HG22	28:B2:60:LEU:CD1	2.33	0.55
5:AE:10:MET:HB3	5:AE:32:VAL:HG22	1.87	0.55
1:CA:148:G:H2'	1:CA:149:A:H8	1.71	0.55
51:BS:35:ILE:H	51:BS:53:SER:HB2	1.71	0.55
36:DA:2415:G:H2'	36:DA:2416:C:C6	2.40	0.55
25:AZ:324:LYS:HB2	25:AZ:326:GLU:CG	2.36	0.55
53:DU:95:LEU:HD12	54:DV:11:GLN:HG3	1.88	0.55
50:BR:2:ARG:HG3	50:BR:2:ARG:HH11	1.71	0.55
56:DX:28:PHE:CD1	56:DX:28:PHE:N	2.68	0.55
53:BU:88:ILE:C	53:BU:90:VAL:H	2.10	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1015:A:H2'	1:CA:1016:A:H8	1.71	0.55
9:AI:40:LEU:HD11	9:AI:70:LYS:CG	2.33	0.55
40:DE:186:GLY:O	40:DE:187:ALA:HB3	2.06	0.55
51:BS:74:ALA:HB2	51:BS:101:LEU:HD22	1.88	0.55
40:DE:116:VAL:HG22	40:DE:122:PHE:CG	2.41	0.55
46:DN:3:THR:HG22	46:DN:4:TYR:N	2.21	0.55
25:AZ:313:HIS:CD2	25:AZ:403:ILE:HD13	2.41	0.55
36:BA:89:G:H3'	36:BA:90:U:H5'	1.87	0.55
53:DU:101:ARG:HG3	53:DU:101:ARG:NH1	2.22	0.55
1:CA:719:C:O2	18:CR:50:ILE:HG12	2.06	0.55
36:DA:786:C:C2'	36:DA:787:U:H5'	2.37	0.55
2:CB:80:ILE:H	2:CB:80:ILE:HD12	1.70	0.55
47:BO:111:PHE:O	47:BO:115:VAL:HG23	2.06	0.55
1:AA:291:C:O2'	1:AA:292:G:H5'	2.06	0.55
58:BZ:68:PRO:O	58:BZ:91:LEU:HB2	2.06	0.55
36:DA:993:G:OP1	53:DU:50:ARG:NH1	2.39	0.55
36:DA:756:C:O2'	36:DA:757:U:H5'	2.05	0.55
36:BA:16:G:O2'	36:BA:17:G:H5'	2.05	0.55
11:CK:20:TYR:CE2	11:CK:83:ILE:HD12	2.41	0.55
36:DA:492:A:H2'	36:DA:493:G:O4'	2.06	0.55
1:CA:192:U:O2'	20:CT:57:ARG:HG3	2.06	0.55
28:D2:30:ARG:CA	28:D2:33:MET:HB2	2.28	0.55
28:D2:56:GLN:HG2	28:D2:59:ARG:NH2	2.21	0.55
28:D2:39:ALA:CB	28:D2:45:SER:HB3	2.36	0.55
57:DY:84:ARG:HG2	57:DY:85:VAL:H	1.71	0.55
1:AA:1004:A:H5"	1:AA:1025:U:C2	2.40	0.55
52:DT:29:ARG:HG2	52:DT:86:ILE:HG22	1.88	0.55
13:AM:101:GLN:H	13:AM:101:GLN:NE2	1.96	0.55
50:DR:100:LEU:HD13	50:DR:100:LEU:H	1.72	0.55
37:BB:40:U:C2	37:BB:43:C:H5"	2.42	0.55
34:D8:59:LYS:CE	48:DP:50:ARG:HB3	2.33	0.55
42:BG:31:VAL:HG23	42:BG:32:PRO:HD2	1.87	0.55
40:BE:34:VAL:O	40:BE:34:VAL:HG22	2.06	0.55
41:BF:28:ILE:H	41:BF:28:ILE:CD1	2.13	0.55
48:BP:16:ARG:HD3	48:BP:16:ARG:C	2.26	0.55
58:BZ:24:LEU:HD12	58:BZ:41:LEU:HD23	1.88	0.55
38:BC:76:ALA:H	38:BC:94:VAL:HA	1.71	0.55
17:AQ:66:SER:OG	17:AQ:69:LYS:HB2	2.07	0.55
13:AM:120:LYS:HE3	13:AM:121:LYS:H	1.70	0.55
25:AZ:181:GLN:NE2	25:AZ:193:ASN:ND2	2.54	0.55
57:BY:2:ARG:N	57:BY:4:LYS:HG2	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B3:1:MET:HE1	29:B3:40:THR:HA	1.87	0.55
27:B1:20:ARG:HB3	27:B1:32:LYS:HB3	1.87	0.55
52:DT:91:ARG:O	52:DT:92:GLY:C	2.44	0.55
27:B1:84:GLY:C	27:B1:86:SER:H	2.10	0.55
36:DA:2839:G:H5'	50:DR:46:GLY:HA2	1.88	0.55
56:BX:64:LYS:HE2	56:BX:73:ARG:HE	1.71	0.55
36:BA:2199:A:H3'	36:BA:2200:C:H6	1.71	0.55
1:AA:1286:A:O2'	1:AA:1287:A:H5"	2.06	0.55
1:CA:1158:C:C4	1:CA:1160:G:H1'	2.42	0.55
39:DD:130:ALA:C	39:DD:131:LEU:HD12	2.27	0.55
36:BA:2672:G:H3'	36:BA:2673:G:H5"	1.88	0.55
34:D8:41:ILE:HD12	36:DA:2419:U:OP1	2.06	0.55
36:BA:521:G:H2'	36:BA:522:G:C8	2.41	0.55
42:DG:167:GLU:CD	42:DG:167:GLU:H	2.10	0.55
35:D9:30:PRO:HB2	36:DA:2527:C:H5'	1.89	0.55
44:BJ:25:UNK:O	44:BJ:84:UNK:HA	2.05	0.55
36:DA:142:A:H8	36:DA:1595:G:H21	1.55	0.55
1:CA:434:U:H2'	1:CA:435:C:C6	2.41	0.55
1:CA:436:C:H2'	1:CA:437:U:C6	2.41	0.55
49:DQ:27:VAL:HG12	49:DQ:28:ALA:N	2.21	0.55
40:BE:202:LYS:HD2	40:BE:202:LYS:N	2.21	0.55
7:AG:102:ARG:O	7:AG:106:GLN:HG3	2.05	0.55
1:AA:429:U:H1'	1:AA:430:A:H5"	1.88	0.55
36:BA:1344:G:H4'	36:BA:1384:A:C5	2.41	0.55
13:AM:2:ALA:HB1	13:AM:4:ILE:HD11	1.89	0.55
57:DY:86:ARG:NH2	57:DY:95:LYS:NZ	2.53	0.55
30:D4:9:LEU:HD13	30:D4:26:SER:O	2.06	0.55
42:DG:91:ARG:C	42:DG:91:ARG:CD	2.75	0.55
32:B6:15:GLU:OE2	32:B6:41:PRO:HG3	2.06	0.55
1:AA:858:G:C5'	1:AA:858:G:C8	2.88	0.55
34:B8:26:LYS:NZ	34:B8:47:LYS:HD3	2.21	0.55
34:B8:7:HIS:CD2	48:BP:50:ARG:HD3	2.41	0.55
47:BO:86:ILE:O	47:BO:87:ILE:HD13	2.06	0.55
5:AE:11:ILE:CG2	5:AE:105:VAL:HG22	2.36	0.55
54:BV:52:VAL:HG22	54:BV:52:VAL:O	2.05	0.55
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.06	0.55
1:CA:323:U:H5'	20:CT:23:ARG:HB2	1.88	0.55
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.06	0.55
43:DH:124:GLU:HB3	43:DH:126:PRO:HD3	1.88	0.55
43:BH:41:MET:SD	43:BH:54:ARG:HA	2.46	0.55
30:B4:40:HIS:HD2	30:B4:42:PHE:CE1	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:73:A:H2'	22:AW:74:C:H5"	1.88	0.55
36:DA:139(A):G:H3'	36:DA:140:G:H8	1.70	0.55
36:DA:141:A:H8	36:DA:1408:C:O2'	1.90	0.55
4:AD:121:VAL:HA	4:AD:126:ILE:HD13	1.89	0.55
29:B3:7:LYS:O	29:B3:54:VAL:HG13	2.05	0.55
22:AW:4:C:C4	22:AW:5:G:O6	2.59	0.55
32:D6:8:LYS:O	32:D6:9:LEU:HB3	2.06	0.55
52:BT:50:ILE:HA	52:BT:99:LEU:CD1	2.36	0.55
3:CC:34:LEU:HD22	3:CC:38:ARG:NE	2.20	0.55
1:AA:80:G:H3'	1:AA:81:U:H5'	1.88	0.55
1:AA:356:A:H2'	1:AA:357:G:C8	2.40	0.55
1:CA:625:G:H2'	1:CA:626:U:C6	2.41	0.55
56:BX:31:HIS:HB3	56:BX:34:ALA:HB2	1.88	0.55
27:D1:71:TYR:O	27:D1:74:VAL:HG23	2.06	0.55
36:BA:2584:U:H2'	36:BA:2585:U:H5'	1.88	0.55
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.06	0.55
20:CT:64:ASP:OD1	20:CT:81:LYS:HD2	2.06	0.55
49:DQ:3:MET:HB2	49:DQ:4:PRO:HD2	1.89	0.55
1:AA:399:G:H2'	1:AA:400:C:C6	2.42	0.55
1:CA:56:U:H2'	1:CA:57:G:C8	2.41	0.55
36:BA:414:C:O2'	36:BA:415:A:H5'	2.07	0.55
47:BO:28:SER:O	47:BO:29:ASN:HB3	2.06	0.55
1:AA:447:G:H2'	1:AA:485:G:N2	2.22	0.55
39:DD:35:LYS:HE2	39:DD:104:TYR:OH	2.06	0.55
28:D2:65:ASN:O	28:D2:67:LYS:N	2.39	0.55
34:D8:11:LYS:HE3	34:D8:63:PRO:HG3	1.87	0.55
32:D6:15:GLU:OE2	32:D6:18:ARG:CZ	2.54	0.55
41:BF:157:VAL:CG2	41:BF:194:MET:HG2	2.36	0.55
52:BT:55:ASN:H	52:BT:59:THR:CG2	2.18	0.55
19:CS:16:LEU:C	19:CS:18:LYS:N	2.59	0.55
57:DY:50:ARG:HB3	57:DY:53:PRO:HG3	1.87	0.55
4:AD:59:ARG:CA	4:AD:59:ARG:HE	2.06	0.55
48:DP:24:GLY:HA3	48:DP:33:ARG:NH1	2.22	0.55
48:DP:84:ASN:C	48:DP:86:LYS:N	2.60	0.55
36:DA:2469:A:H2'	36:DA:2470:G:H5'	1.87	0.55
9:CI:19:LEU:HD23	9:CI:19:LEU:C	2.27	0.55
38:DC:76:ALA:H	38:DC:94:VAL:HA	1.72	0.55
41:DF:152:GLU:O	41:DF:154:VAL:HG23	2.06	0.55
7:AG:28:ASN:OD1	7:AG:36:LYS:HE2	2.05	0.55
27:D1:37:ILE:HD12	27:D1:37:ILE:O	2.06	0.55
52:DT:102:ILE:O	52:DT:106:SER:HB3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:143:ASP:HB3	25:CZ:146:LEU:CB	2.36	0.55
25:CZ:65:THR:HG23	25:CZ:80:VAL:HG13	1.88	0.55
22:AW:72:C:H2'	22:AW:73:A:O4'	2.07	0.55
36:BA:1722:A:O2'	36:BA:1739:U:H5'	2.07	0.55
46:BN:43:THR:HB	46:BN:46:VAL:CG1	2.36	0.55
30:D4:34:GLU:HG2	42:DG:113:ARG:HH21	1.71	0.55
36:BA:363(E):U:H2'	36:BA:363(F):A:H1'	1.88	0.55
54:DV:35:LEU:HD23	54:DV:57:VAL:CG1	2.37	0.55
36:BA:533:G:H5'	53:BU:24:TYR:CE1	2.41	0.55
36:BA:1019:U:H2'	36:BA:1021:A:C2	2.42	0.55
36:DA:2557:G:H2'	36:DA:2558:C:H6	1.71	0.55
40:BE:176:ILE:HG23	40:BE:178:GLU:HB3	1.88	0.55
9:AI:11:LYS:HG2	9:AI:11:LYS:O	2.05	0.55
52:BT:78:LEU:C	52:BT:79:HIS:CD2	2.79	0.55
8:CH:18:ARG:HH11	8:CH:18:ARG:HA	1.71	0.55
36:BA:2823:A:OP1	40:BE:113:PHE:HB2	2.06	0.55
1:CA:67:C:H2'	1:CA:68:G:C8	2.41	0.55
36:DA:495:G:H21	55:DW:61:ASN:HD21	1.54	0.55
36:BA:45:C:H2'	36:BA:47:C:C6	2.42	0.55
38:DC:98:GLU:O	38:DC:98:GLU:HG3	2.06	0.55
1:CA:457:C:H2'	1:CA:458:C:C6	2.41	0.55
38:BC:33:ALA:HA	38:BC:39:GLU:OE2	2.06	0.55
45:BK:3:UNK:O	45:BK:4:UNK:C	2.54	0.55
11:AK:20:TYR:CE2	11:AK:83:ILE:HD12	2.42	0.55
47:DO:98:VAL:HG12	47:DO:117:LEU:HB3	1.87	0.55
38:BC:99:ILE:HG22	38:BC:99:ILE:O	2.07	0.55
49:BQ:27:VAL:O	49:BQ:28:ALA:HB3	2.06	0.55
56:BX:35:THR:HG22	56:BX:36:LYS:N	2.22	0.55
28:D2:47:ASN:C	36:DA:95:G:H4'	2.27	0.55
48:BP:58:THR:CB	48:BP:61:ARG:HH21	2.17	0.55
32:B6:26:ASN:HD22	32:B6:32:ASN:ND2	2.04	0.55
26:B0:10:THR:HG21	36:BA:2277:G:OP2	2.06	0.55
41:BF:123:LEU:CD1	41:BF:192:LEU:HD22	2.37	0.55
22:CV:5:G:H8	22:CV:5:G:H5'	1.72	0.55
42:DG:77:ILE:N	42:DG:77:ILE:HD13	2.14	0.55
48:DP:114:ILE:HD12	48:DP:115:LEU:N	2.21	0.55
48:DP:85:LEU:HA	48:DP:88:LEU:HB2	1.86	0.55
41:DF:28:ILE:O	41:DF:30:PRO:HD3	2.05	0.55
25:AZ:114:PRO:O	25:AZ:117:ARG:HB2	2.07	0.55
53:BU:88:ILE:HG22	53:BU:88:ILE:O	2.06	0.55
50:DR:24:GLN:HE22	50:DR:36:THR:HG21	1.68	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:116:THR:HG22	38:BC:146:GLY:O	2.05	0.55
10:AJ:4:ILE:HD12	10:AJ:4:ILE:N	2.21	0.55
43:BH:52:VAL:CB	43:BH:69:ARG:HD3	2.37	0.55
19:AS:29:ARG:HH11	19:AS:30:LEU:HB2	1.71	0.55
1:CA:1431:C:C2'	1:CA:1432:G:H5'	2.37	0.55
35:B9:29:ASN:N	35:B9:29:ASN:HD22	2.04	0.55
36:DA:1762:A:H8	36:DA:1762:A:O5'	1.90	0.55
22:CW:73:A:H2'	22:CW:74:C:H5"	1.89	0.55
36:BA:1754:C:OP1	52:BT:96:ARG:NH1	2.33	0.55
39:DD:129:ASN:O	39:DD:193:VAL:HG12	2.07	0.55
36:BA:1400:G:H2'	36:BA:1401:G:H8	1.71	0.55
36:BA:2811:G:H1	36:BA:2889:C:H42	1.54	0.55
55:BW:22:ASP:HA	55:BW:25:ARG:NH1	2.22	0.55
13:AM:90:LEU:HD12	19:AS:81:ARG:HH21	1.71	0.55
36:DA:143:G:H2'	36:DA:143(A):C:H6	1.71	0.55
36:BA:83:G:H5"	36:BA:84:A:OP2	2.05	0.55
47:DO:35:VAL:HG13	47:DO:65:THR:HG23	1.89	0.55
49:DQ:14:ARG:HG2	49:DQ:41:TRP:HH2	1.72	0.55
39:BD:77:ALA:HA	39:BD:97:TYR:HA	1.87	0.55
34:D8:43:GLN:C	34:D8:44:LYS:HD2	2.27	0.55
36:DA:1782:C:H1'	36:DA:2609:U:H5"	1.89	0.55
56:DX:31:HIS:ND1	56:DX:32:PRO:HD2	2.21	0.55
36:DA:1477:A:C2	36:DA:1515:G:C2	2.94	0.55
36:BA:1257:C:H4'	41:BF:83:PHE:CD1	2.42	0.55
36:DA:1165:U:H2'	36:DA:1166:C:C6	2.41	0.55
36:DA:2295:C:O2'	36:DA:2296:U:H5'	2.07	0.55
7:CG:70:LYS:HB3	7:CG:96:GLN:HG2	1.87	0.55
36:DA:32:C:H5'	36:DA:33:U:OP2	2.06	0.55
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.42	0.55
18:CR:29:PHE:CD1	18:CR:29:PHE:N	2.73	0.55
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.41	0.55
25:CZ:300:ARG:O	25:CZ:302:GLN:N	2.40	0.55
36:BA:1523:U:H2'	36:BA:1524:G:H8	1.72	0.55
1:AA:1306:A:H61	1:AA:1331:G:H1'	1.70	0.55
13:AM:4:ILE:HD12	13:AM:4:ILE:H	1.71	0.55
28:D2:18:PRO:HA	28:D2:21:LEU:CG	2.37	0.55
28:D2:21:LEU:CB	28:D2:64:LEU:HG	2.23	0.55
36:BA:2603:G:C3'	36:BA:2604:U:H5"	2.35	0.55
42:BG:128:ARG:O	42:BG:130:ASN:N	2.40	0.55
2:AB:30:ARG:HG3	2:AB:31:TYR:CD1	2.42	0.55
36:DA:654(H):G:C3'	36:DA:654(I):C:H5'	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1946:U:H2'	36:DA:1947:C:C6	2.42	0.55
36:BA:271(L):U:C5'	36:BA:271(M):G:H5'	2.30	0.55
46:DN:23:LEU:HB2	46:DN:60:ILE:HG21	1.88	0.55
36:BA:607:U:H3	36:BA:621:A:H2	1.54	0.55
51:BS:88:ASP:CG	51:BS:89:ARG:N	2.59	0.55
58:BZ:126:VAL:HA	58:BZ:163:LEU:CA	2.37	0.55
1:AA:367:U:H4'	25:AZ:291:ARG:CZ	2.36	0.55
36:DA:997:G:OP1	53:DU:93:LYS:HD3	2.06	0.55
50:DR:52:ILE:CB	50:DR:94:TYR:HD2	2.19	0.55
25:CZ:166:ASP:C	25:CZ:167:GLU:HG2	2.26	0.55
38:DC:53:ARG:CB	38:DC:53:ARG:HH11	2.18	0.55
43:DH:41:MET:SD	43:DH:54:ARG:HA	2.47	0.55
11:AK:18:ARG:HH21	11:AK:36:ASP:C	2.08	0.55
36:DA:659:C:H4'	41:DF:100:THR:O	2.06	0.55
16:CP:5:ARG:HE	16:CP:22:THR:CG2	2.20	0.55
25:AZ:314:THR:HG23	25:AZ:374:LEU:O	2.07	0.55
36:DA:481:G:H1'	36:DA:506:G:H21	1.71	0.55
36:BA:195:A:H5"	36:BA:196:A:OP2	2.06	0.55
57:BY:47:LYS:HG3	57:BY:60:PHE:CE1	2.41	0.55
52:BT:102:ILE:O	52:BT:106:SER:HB3	2.07	0.55
36:BA:786:C:C2'	36:BA:787:U:H5'	2.36	0.55
38:BC:25:ALA:O	38:BC:29:VAL:HG22	2.07	0.55
22:AV:44:G:H3'	22:AV:45:U:H5'	1.88	0.55
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.07	0.55
1:CA:1007:C:O2'	1:CA:1008:C:H5'	2.07	0.55
36:DA:893:C:H2'	36:DA:894:C:C6	2.41	0.55
29:B3:26:LEU:O	29:B3:28:LEU:N	2.40	0.55
38:BC:210:ARG:HG2	38:BC:210:ARG:NH1	2.22	0.55
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.40	0.55
36:DA:17:G:H4'	53:DU:25:TRP:CH2	2.42	0.55
20:AT:62:LEU:O	20:AT:65:LYS:HB2	2.06	0.55
39:DD:233:HIS:CE1	39:DD:247:ALA:H	2.24	0.55
36:DA:2584:U:H2'	36:DA:2585:U:H5'	1.88	0.55
37:BB:111:G:C2'	37:BB:112:U:H5'	2.36	0.55
22:AW:7:A:H5"	22:AW:8:U:OP2	2.06	0.55
6:AF:21:LEU:C	6:AF:21:LEU:HD13	2.27	0.55
15:CO:17:ARG:O	15:CO:18:PHE:HB3	2.07	0.55
1:AA:1330:U:H3'	1:AA:1331:G:O4'	2.06	0.55
28:D2:62:THR:HG21	36:DA:76:C:H4'	1.88	0.55
57:DY:28:LYS:HB3	57:DY:39:VAL:N	2.14	0.55
25:AZ:5:PHE:C	25:AZ:5:PHE:CD1	2.80	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:2:ALA:N	36:DA:747:U:C4	2.75	0.55
37:DB:42:C:H4'	42:DG:67:LYS:HG2	1.86	0.55
57:BY:8:LYS:HE2	57:BY:72:VAL:HG23	1.88	0.55
14:CN:27:CYS:HG	59:CN:101:ZN:ZN	1.13	0.55
19:CS:10:PHE:HE1	19:CS:70:LYS:HE2	1.69	0.55
42:DG:102:PHE:O	42:DG:102:PHE:CD1	2.60	0.55
36:DA:1070:A:H2'	36:DA:1097:U:OP1	2.06	0.55
48:DP:84:ASN:ND2	48:DP:116:GLY:HA2	2.21	0.55
42:BG:77:ILE:CD1	42:BG:77:ILE:H	2.16	0.55
9:CI:95:LYS:HD3	9:CI:96:LEU:N	2.22	0.55
50:DR:52:ILE:CG2	50:DR:94:TYR:HD2	2.20	0.55
43:DH:51:ARG:HG3	43:DH:52:VAL:N	2.20	0.55
25:AZ:168:VAL:O	25:AZ:169:PRO:C	2.44	0.55
52:BT:23:ARG:HA	52:BT:52:ILE:CD1	2.36	0.55
36:DA:885:C:H2'	36:DA:886:C:C6	2.42	0.55
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.53	0.55
25:AZ:177:LEU:O	25:AZ:181:GLN:HG3	2.06	0.55
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	2.07	0.55
36:DA:139(A):G:N2	56:DX:44:GLU:OE1	2.37	0.55
40:DE:202:LYS:HD2	40:DE:202:LYS:N	2.22	0.55
57:DY:43:ASN:C	57:DY:44:ILE:HD12	2.27	0.55
25:CZ:14:VAL:O	25:CZ:79:HIS:HA	2.06	0.55
36:BA:1141:U:H2'	46:BN:63:THR:HG21	1.89	0.55
36:BA:2401:U:C2'	36:BA:2402:C:H5"	2.35	0.55
58:DZ:10:ARG:HD3	58:DZ:37:VAL:O	2.06	0.55
1:AA:1442(B):A:H5'	52:BT:122:ASP:OD1	2.07	0.55
1:AA:919:A:O2'	1:AA:920:U:H5'	2.07	0.55
35:D9:17:ILE:CG2	35:D9:18:ARG:N	2.69	0.55
48:DP:45:LEU:CD1	48:DP:46:LYS:H	2.19	0.55
1:AA:950:U:OP2	13:AM:102:ARG:HD2	2.06	0.55
36:BA:642:G:H21	36:BA:646:A:H2	1.55	0.55
1:AA:1007:C:O2'	1:AA:1008:C:H5'	2.06	0.55
37:DB:111:G:O2'	37:DB:112:U:H5'	2.07	0.55
36:DA:2027:G:H2'	36:DA:2028:U:H6	1.71	0.55
36:BA:894:C:O2'	36:BA:895:U:H5'	2.06	0.55
36:BA:2584:U:C2'	36:BA:2585:U:H5'	2.37	0.55
56:DX:31:HIS:HB3	56:DX:34:ALA:HB2	1.88	0.55
10:AJ:43:ARG:HB2	10:AJ:67:THR:HG23	1.89	0.55
36:BA:1638:C:H5"	36:BA:2710:C:O2'	2.06	0.55
9:CI:6:GLY:N	9:CI:84:ALA:HB2	2.22	0.55
26:B0:37:LEU:N	26:B0:59:LEU:O	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1801:G:OP2	39:DD:154:LYS:HE3	2.07	0.55
28:D2:11:GLU:HG2	28:D2:14:ARG:HH21	1.72	0.55
28:D2:3:LEU:CA	28:D2:7:ARG:HG3	2.34	0.55
34:B8:32:LEU:HD13	36:BA:2392:A:OP1	2.07	0.55
28:B2:35:LEU:HD13	28:B2:36:ARG:N	2.22	0.55
30:D4:9:LEU:HD13	30:D4:10:VAL:N	2.19	0.55
37:DB:49:C:H2'	37:DB:50:G:C8	2.42	0.55
49:DQ:141:GLN:O	58:DZ:53:ILE:HB	2.06	0.55
1:CA:1321:C:C3'	1:CA:1322:C:H5"	2.35	0.55
4:AD:59:ARG:HA	4:AD:59:ARG:NE	2.11	0.55
5:AE:12:LEU:HD21	5:AE:14:ARG:HB3	1.89	0.55
36:DA:494:G:O2'	55:DW:5:ALA:O	2.25	0.55
9:CI:2:GLU:N	9:CI:88:TYR:HH	2.04	0.55
25:CZ:7:ARG:NH2	25:CZ:281:ILE:CD1	2.68	0.55
41:BF:152:GLU:O	41:BF:154:VAL:HG23	2.06	0.55
5:CE:11:ILE:HD11	5:CE:33:VAL:HG21	1.89	0.55
36:BA:2128:C:O2'	36:BA:2129:C:P	2.64	0.55
25:CZ:126:VAL:HG13	61:CZ:502:KIR:H471	1.89	0.55
50:DR:76:VAL:O	50:DR:79:LEU:HB3	2.07	0.55
13:CM:120:LYS:HA	13:CM:120:LYS:CE	2.37	0.55
25:CZ:160:GLN:O	25:CZ:160:GLN:HG3	2.06	0.55
34:D8:50:LEU:N	34:D8:53:PRO:HD3	2.22	0.55
51:DS:16:ASN:C	51:DS:18:ILE:HD12	2.27	0.55
39:DD:69:ARG:HH22	39:DD:117:VAL:CG2	2.19	0.55
43:DH:158:HIS:O	43:DH:159:GLU:CB	2.53	0.55
56:BX:57:LEU:HD13	56:BX:78:LYS:O	2.07	0.55
36:BA:2657:A:H2	36:BA:2664:G:H21	1.54	0.55
46:BN:41:ASP:C	53:BU:64:ARG:HH12	2.10	0.55
50:BR:12:ARG:HG3	50:BR:12:ARG:HH11	1.71	0.55
36:BA:481:G:H1'	36:BA:506:G:H21	1.72	0.55
36:DA:220:G:H2'	36:DA:427:U:O4	2.07	0.55
36:DA:527:C:H4'	36:DA:528:A:O4'	2.07	0.55
25:AZ:30:ALA:O	25:AZ:34:VAL:HG23	2.06	0.55
36:BA:309:G:N3	36:BA:329:G:O2'	2.39	0.55
36:DA:1639:U:O2'	36:DA:1640:C:H5"	2.07	0.55
36:BA:2262:U:H4'	36:BA:2328:A:H2	1.72	0.55
48:BP:102:ARG:CB	48:BP:102:ARG:HH11	2.19	0.55
36:DA:1592:C:H2'	36:DA:1593:G:H8	1.70	0.55
36:BA:116:C:H2'	36:BA:117:G:O4'	2.06	0.55
10:CJ:8:LEU:HD22	10:CJ:96:ILE:HG22	1.88	0.55
38:BC:210:ARG:HH11	38:BC:210:ARG:CG	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2348:U:O2'	36:DA:2349:G:H5'	2.07	0.55
36:DA:1411:C:H2'	36:DA:1412:A:C8	2.42	0.55
33:B7:43:THR:HG23	33:B7:44:PRO:HD2	1.88	0.55
36:DA:2681:C:H5	36:DA:2725:A:H62	1.54	0.55
36:BA:556:G:H2'	36:BA:557:U:C6	2.42	0.55
36:DA:320:A:C8	41:DF:136:THR:HG21	2.42	0.55
58:DZ:60:GLU:O	58:DZ:61:LEU:O	2.25	0.55
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.06	0.55
36:DA:669:G:N3	36:DA:669:G:H2'	2.22	0.55
39:BD:257:LEU:C	39:BD:257:LEU:HD23	2.27	0.55
5:CE:18:ARG:HH11	5:CE:18:ARG:HG3	1.72	0.55
6:CF:15:ASP:OD2	6:CF:17:SER:HB2	2.07	0.55
32:D6:27:LYS:HG3	32:D6:30:THR:CB	2.37	0.55
57:DY:75:ILE:HG23	57:DY:76:CYS:H	1.68	0.55
55:BW:92:ARG:O	55:BW:93:ALA:HB3	2.05	0.55
32:D6:45:LYS:O	32:D6:46:HIS:HB3	2.06	0.55
22:AV:56:C:O4'	42:BG:76:SER:HB2	2.07	0.55
2:AB:42:ILE:HD13	2:AB:203:GLY:HA2	1.89	0.55
36:BA:1858:G:O2'	36:BA:1884:A:N6	2.40	0.55
43:BH:158:HIS:O	43:BH:159:GLU:CB	2.53	0.55
36:BA:1209:G:N2	36:BA:1210:A:H62	2.05	0.55
36:BA:494:G:O2'	55:BW:5:ALA:O	2.23	0.55
42:BG:25:TYR:CE2	42:BG:31:VAL:HA	2.42	0.55
41:BF:28:ILE:O	41:BF:30:PRO:HD3	2.07	0.55
25:CZ:19:HIS:HA	25:CZ:115:GLN:HB2	1.89	0.55
36:DA:1246:A:OP1	48:DP:16:ARG:NH2	2.40	0.55
10:CJ:54:PHE:CD1	10:CJ:55:LYS:HD3	2.42	0.55
40:DE:111:ARG:HD2	50:DR:2:ARG:NH2	2.22	0.55
12:CL:75:HIS:CB	12:CL:102:ARG:HH21	2.20	0.55
50:DR:37:THR:HA	50:DR:111:LEU:HA	1.89	0.55
20:CT:18:GLN:HG2	20:CT:22:ARG:NH1	2.21	0.55
21:AU:17:THR:O	21:AU:22:ARG:NH1	2.39	0.55
25:AZ:219:LYS:HB3	25:AZ:244:ARG:CD	2.35	0.55
28:B2:10:LEU:HD23	28:B2:10:LEU:C	2.26	0.55
26:B0:14:ARG:NH1	26:B0:14:ARG:HG3	2.20	0.55
13:CM:3:ARG:HB2	42:DG:113:ARG:HH22	1.72	0.55
58:DZ:78:LYS:O	58:DZ:79:ARG:CB	2.55	0.55
36:BA:1019:U:C2'	36:BA:1021:A:H2	2.20	0.55
30:D4:40:HIS:HD2	30:D4:42:PHE:CE1	2.25	0.55
57:DY:47:LYS:HG3	57:DY:60:PHE:CE1	2.41	0.55
55:DW:82:LEU:HD23	55:DW:84:ARG:HH22	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:31:LEU:O	15:AO:35:ARG:HG3	2.07	0.55
29:D3:31:LEU:C	29:D3:33:GLN:H	2.11	0.55
37:BB:96:U:H2'	37:BB:97:G:H8	1.72	0.55
36:DA:1337:G:H2'	36:DA:1338:G:C8	2.40	0.55
9:CI:126:SER:O	9:CI:128:ARG:HD2	2.06	0.55
36:BA:2790:A:H2'	36:BA:2791:C:C5'	2.37	0.55
22:CV:44:G:H3'	22:CV:45:U:H5'	1.89	0.55
28:D2:12:GLU:O	28:D2:15:LYS:HG2	2.06	0.55
36:BA:200:U:H2'	36:BA:201:C:H5'	1.89	0.55
49:DQ:27:VAL:O	49:DQ:28:ALA:HB3	2.06	0.55
36:DA:1405:U:H2'	36:DA:1406:U:C6	2.41	0.55
38:BC:151:GLU:HA	38:BC:154:ARG:HH11	1.70	0.55
39:DD:72:LYS:HE2	39:DD:101:GLU:OE1	2.07	0.55
2:AB:107:THR:O	2:AB:110:GLN:HG2	2.07	0.55
3:CC:12:LEU:O	3:CC:13:GLY:C	2.45	0.55
36:DA:2386:C:H2'	36:DA:2387:U:C6	2.42	0.55
53:BU:6:THR:O	53:BU:9:VAL:HG22	2.06	0.55
2:AB:229:VAL:HG12	2:AB:230:VAL:N	2.21	0.55
35:B9:30:PRO:HB2	36:BA:2527:C:H5'	1.89	0.55
47:DO:114:ILE:HD12	47:DO:114:ILE:N	2.22	0.55
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.42	0.55
36:DA:2152:G:O2'	36:DA:2153:G:H5'	2.07	0.55
41:BF:4:VAL:HG22	41:BF:19:GLU:OE1	2.07	0.55
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.71	0.55
36:DA:83:G:H5"	36:DA:84:A:OP2	2.06	0.55
36:DA:926:A:H8	36:DA:926:A:H5'	1.71	0.55
57:BY:28:LYS:HB2	57:BY:37:VAL:HB	1.88	0.55
57:BY:85:VAL:O	57:BY:86:ARG:HB2	2.07	0.55
58:DZ:97:GLU:HA	58:DZ:127:LYS:HA	1.89	0.55
42:DG:87:PRO:HG2	42:DG:88:ILE:N	2.22	0.55
52:DT:30:VAL:HG22	52:DT:84:GLN:HG3	1.89	0.55
36:DA:910:A:H2'	36:DA:911:A:C8	2.42	0.55
42:BG:40:ASN:HD22	42:BG:91:ARG:HB2	1.72	0.55
36:DA:2317:C:H2'	36:DA:2318:G:C5'	2.29	0.55
40:DE:36:ARG:HH21	40:DE:88:GLY:HA2	1.70	0.55
36:DA:1047:G:H2'	36:DA:1110:G:N2	2.14	0.55
48:DP:34:GLY:O	48:DP:35:HIS:CB	2.55	0.55
10:CJ:40:LEU:H	10:CJ:40:LEU:CD2	2.14	0.55
42:BG:119:GLY:O	42:BG:120:LEU:O	2.25	0.55
10:CJ:54:PHE:CE2	10:CJ:55:LYS:HD3	2.42	0.55
58:DZ:120:ILE:HG22	58:DZ:121:HIS:N	2.18	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:76:VAL:O	50:BR:79:LEU:HB3	2.07	0.55
22:CW:38:A:H2'	22:CW:39:U:O4'	2.07	0.55
7:CG:59:LEU:O	7:CG:59:LEU:HG	2.07	0.55
1:CA:1064:G:N2	1:CA:1190:G:H2'	2.22	0.55
35:B9:31:LYS:HE2	36:BA:2478:A:H5'	1.89	0.55
1:CA:961:U:O2'	1:CA:962:C:H6	1.86	0.55
7:CG:7:ALA:O	7:CG:8:GLU:CB	2.55	0.55
36:BA:654(V):A:H8	36:BA:655:A:H2'	1.71	0.55
36:BA:885:C:H2'	36:BA:886:C:C6	2.41	0.55
36:DA:1248:G:C2	53:DU:3:ARG:HD2	2.42	0.55
39:BD:69:ARG:HH22	39:BD:117:VAL:CG2	2.20	0.55
54:BV:35:LEU:HD23	54:BV:57:VAL:CG1	2.36	0.55
36:BA:500:G:H22	36:BA:502:A:H3'	1.72	0.55
25:CZ:69:GLU:HG2	25:CZ:70:TYR:N	2.22	0.55
5:AE:38:GLN:OE1	5:AE:38:GLN:HA	2.07	0.55
1:AA:542:G:P	4:AD:10:ARG:HH22	2.30	0.55
3:AC:25:GLY:O	3:AC:27:LYS:N	2.40	0.55
4:CD:157:LEU:HD12	4:CD:157:LEU:N	2.21	0.55
36:BA:479:A:HO2'	36:BA:481:G:H8	1.55	0.55
36:BA:2557:G:H2'	36:BA:2558:C:H6	1.70	0.55
1:CA:80:G:C6	1:CA:90:U:H5'	2.42	0.55
1:CA:80:G:H3'	1:CA:81:U:C5'	2.37	0.55
36:BA:1536:C:H2'	36:BA:1537:G:C4'	2.37	0.55
7:AG:58:PRO:C	7:AG:60:LYS:H	2.11	0.55
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HB3	1.88	0.55
53:BU:101:ARG:HG3	53:BU:101:ARG:NH1	2.22	0.55
46:BN:19:GLU:HG3	46:BN:20:GLY:N	2.22	0.55
36:BA:2195:C:O2'	36:BA:2196:C:H5'	2.07	0.55
36:DA:2562:U:H4'	47:DO:25:LEU:HD21	1.88	0.55
36:DA:1932:A:H2'	36:DA:1933:G:O4'	2.06	0.55
2:AB:238:LEU:HG	2:AB:239:VAL:N	2.22	0.55
36:BA:373:U:H2'	36:BA:374:A:H8	1.72	0.55
36:BA:654(R):C:H2'	36:BA:654(S):G:C8	2.42	0.55
20:CT:65:LYS:O	20:CT:68:LYS:HB2	2.06	0.55
2:AB:144:ARG:HB2	2:AB:144:ARG:HH11	1.72	0.55
25:AZ:185:ASN:HD22	25:AZ:185:ASN:H	1.55	0.55
5:CE:40:ARG:HH11	5:CE:40:ARG:HG2	1.73	0.55
36:DA:1839:G:H8	36:DA:1839:G:H5'	1.70	0.55
44:DJ:67:UNK:C	44:DJ:69:UNK:H	2.19	0.55
1:CA:222:U:H2'	1:CA:223:U:C6	2.42	0.55
22:CW:7:A:N6	22:CW:49:C:H41	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:589:C:H2'	36:DA:590:A:C8	2.42	0.55
13:AM:6:GLY:O	13:AM:8:GLU:N	2.40	0.54
1:CA:1330:U:H3'	1:CA:1331:G:O4'	2.07	0.54
25:AZ:277:LEU:HD11	25:AZ:280:GLY:H	1.72	0.54
30:D4:6:HIS:HB3	42:DG:67:LYS:HZ1	1.71	0.54
32:B6:36:LEU:HD12	32:B6:50:ARG:CZ	2.38	0.54
36:DA:2308:G:O6	36:DA:2310:A:H2'	2.07	0.54
47:DO:104:ARG:HE	52:DT:33:LYS:CE	2.21	0.54
48:BP:9:ASN:H	48:BP:10:PRO:CD	2.13	0.54
19:AS:16:LEU:O	19:AS:19:VAL:N	2.40	0.54
37:BB:7:G:H2'	37:BB:8:U:H5"	1.89	0.54
48:DP:84:ASN:C	48:DP:86:LYS:H	2.09	0.54
50:BR:5:LYS:O	50:BR:6:SER:HB2	2.07	0.54
50:DR:2:ARG:HG3	50:DR:2:ARG:HH11	1.71	0.54
33:D7:10:ARG:NH1	33:D7:10:ARG:HG2	2.18	0.54
48:BP:91:PHE:CE2	48:BP:95:VAL:HG12	2.42	0.54
50:DR:72:ASP:HB3	50:DR:75:LEU:CB	2.36	0.54
36:DA:2133:G:N1	36:DA:2157:G:O6	2.40	0.54
25:CZ:168:VAL:O	25:CZ:169:PRO:C	2.45	0.54
38:DC:78:ALA:H	38:DC:115:ALA:HA	1.71	0.54
50:BR:75:LEU:O	50:BR:75:LEU:HD13	2.07	0.54
22:AW:9:A:C2	22:AW:45:U:O4	2.55	0.54
19:AS:31:ILE:CG2	19:AS:49:ILE:HA	2.34	0.54
42:BG:51:ARG:NH1	42:BG:53:LEU:HD13	2.21	0.54
1:CA:1145:C:O2'	1:CA:1146:A:O5'	2.25	0.54
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.07	0.54
1:AA:194:C:C2'	1:AA:195:A:H5"	2.37	0.54
58:BZ:149:SER:OG	58:BZ:173:ALA:HA	2.07	0.54
58:BZ:172:ALA:O	58:BZ:173:ALA:HB2	2.06	0.54
26:B0:7:LEU:HB3	49:BQ:85:LYS:HD2	1.89	0.54
1:AA:80:G:H3'	1:AA:81:U:C5'	2.37	0.54
4:CD:129:ASN:HD21	4:CD:144:ASP:HA	1.73	0.54
16:AP:8:ARG:HB3	16:AP:28:ARG:HH12	1.69	0.54
2:CB:126:GLU:O	2:CB:129:GLU:HB2	2.07	0.54
1:AA:625:G:H2'	1:AA:626:U:C6	2.42	0.54
53:DU:105:VAL:O	53:DU:108:GLU:HB2	2.06	0.54
6:AF:30:LEU:O	6:AF:30:LEU:HD23	2.06	0.54
47:DO:2:ILE:HD12	47:DO:6:THR:HG21	1.88	0.54
1:AA:736:C:H2'	1:AA:737:A:C8	2.42	0.54
36:DA:201:C:C2'	36:DA:202:U:H5'	2.38	0.54
1:AA:848:C:O2'	1:AA:849:C:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:564:C:O2'	36:BA:565:C:H5'	2.05	0.54
36:BA:675:A:OP1	41:BF:63:LYS:HE2	2.07	0.54
18:CR:67:ALA:O	18:CR:71:LYS:HG3	2.08	0.54
43:BH:163:TYR:CD1	43:BH:163:TYR:N	2.75	0.54
2:CB:213:LEU:C	2:CB:213:LEU:HD23	2.28	0.54
3:CC:165:THR:O	3:CC:165:THR:HG23	2.05	0.54
27:D1:21:ARG:HH11	27:D1:21:ARG:CB	2.20	0.54
1:AA:992:U:H4'	1:AA:993:G:O5'	2.06	0.54
29:D3:26:LEU:O	29:D3:27:GLY:C	2.45	0.54
39:DD:81:ALA:HA	39:DD:113:VAL:CG2	2.38	0.54
39:BD:81:ALA:HA	39:BD:113:VAL:CG2	2.36	0.54
48:DP:59:LEU:HA	48:DP:61:ARG:NH1	2.22	0.54
28:D2:25:VAL:HG22	28:D2:29:LYS:CD	2.37	0.54
1:CA:1004:A:H5"	1:CA:1025:U:C2	2.41	0.54
32:D6:44:ARG:C	32:D6:45:LYS:HD2	2.28	0.54
32:D6:45:LYS:O	32:D6:46:HIS:ND1	2.41	0.54
41:DF:123:LEU:CD1	41:DF:192:LEU:HD22	2.38	0.54
52:BT:83:ILE:HG13	52:BT:84:GLN:H	1.70	0.54
36:DA:1464:C:HO2'	36:DA:1528:A:H8	1.54	0.54
58:BZ:166:SER:HB2	58:BZ:167:PRO:C	2.28	0.54
58:BZ:18:LEU:HA	58:BZ:21:ALA:HB3	1.89	0.54
54:BV:19:LYS:HE2	54:BV:19:LYS:HA	1.89	0.54
36:BA:2001:A:H4'	36:BA:2689:U:H2'	1.90	0.54
54:BV:47:VAL:HB	54:BV:51:VAL:O	2.06	0.54
1:CA:189(J):G:O2'	1:CA:189(K):U:H5'	2.07	0.54
38:DC:53:ARG:HH12	38:DC:55:ASP:CG	2.11	0.54
25:CZ:195:TRP:CE3	25:CZ:195:TRP:HA	2.41	0.54
36:DA:2485:G:H5"	49:DQ:46:GLN:NE2	2.19	0.54
41:BF:53:THR:HG23	41:BF:55:GLY:N	2.18	0.54
36:BA:2485:G:H5"	49:BQ:46:GLN:NE2	2.21	0.54
27:D1:67:ILE:N	27:D1:68:PRO:CD	2.70	0.54
39:BD:132:PRO:HG3	39:BD:190:TYR:CE1	2.41	0.54
58:BZ:149:SER:HB3	58:BZ:173:ALA:HA	1.89	0.54
36:BA:2839:G:H5'	50:BR:46:GLY:HA2	1.88	0.54
1:CA:80:G:H3'	1:CA:81:U:H5'	1.88	0.54
18:AR:58:LEU:CD1	18:AR:66:LEU:HD22	2.38	0.54
36:DA:848:G:N9	36:DA:933:A:H8	2.05	0.54
26:B0:20:ARG:CG	26:B0:20:ARG:HH11	2.21	0.54
36:DA:2262:U:O2'	36:DA:2263:C:H5'	2.07	0.54
2:AB:207:ALA:O	2:AB:211:ILE:HG13	2.07	0.54
1:AA:792:A:H4'	1:AA:793:U:O5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:18:C:O3'	53:BU:23:GLY:HA2	2.07	0.54
4:AD:159:ARG:HH11	4:AD:159:ARG:HG3	1.71	0.54
36:DA:419:C:H2'	36:DA:420:C:H6	1.72	0.54
2:AB:39:ILE:HG22	2:AB:40:HIS:N	2.22	0.54
49:BQ:64:ILE:HG22	49:BQ:65:PHE:N	2.21	0.54
44:BJ:45:UNK:C	44:BJ:47:UNK:H	2.20	0.54
13:AM:40:ASN:HD22	13:AM:43:THR:HG23	1.72	0.54
36:BA:2538:C:H2'	36:BA:2539:C:H6	1.72	0.54
36:BA:589:C:H2'	36:BA:590:A:C8	2.42	0.54
36:BA:2619:C:O2'	36:BA:2620:C:H5'	2.07	0.54
5:AE:100:VAL:HG12	5:AE:118:ILE:HG22	1.88	0.54
36:DA:1029:A:H2'	36:DA:1030:G:O4'	2.07	0.54
51:DS:73:LEU:C	51:DS:73:LEU:HD23	2.28	0.54
37:DB:42:C:H1'	42:DG:66:GLN:OE1	2.08	0.54
42:DG:15:VAL:O	42:DG:19:LEU:HG	2.08	0.54
49:DQ:141:GLN:HB3	58:DZ:99:TYR:CE2	2.42	0.54
37:BB:21:G:H2'	37:BB:22:U:H5'	1.89	0.54
43:BH:121:ILE:CD1	43:BH:144:VAL:HG21	2.36	0.54
36:BA:2185:C:C2'	36:BA:2186:G:H5'	2.35	0.54
1:CA:858:G:N1	1:CA:869:G:C8	2.76	0.54
55:BW:4:LYS:HD3	55:BW:6:ILE:CD1	2.38	0.54
36:DA:1209:G:N2	36:DA:1210:A:H62	2.06	0.54
54:BV:21:ARG:HD3	54:BV:21:ARG:H	1.72	0.54
36:BA:2712(A):A:H5'	36:BA:2713:A:OP2	2.06	0.54
53:BU:90:VAL:HG21	54:BV:47:VAL:CG2	2.38	0.54
16:AP:53:VAL:CG2	16:AP:54:GLU:H	2.17	0.54
54:DV:2:PHE:CZ	54:DV:13:ARG:NH1	2.75	0.54
55:DW:40:ASN:O	55:DW:41:LYS:HG2	2.06	0.54
38:BC:114:VAL:HG23	38:BC:149:ILE:HD11	1.88	0.54
38:BC:53:ARG:HH12	38:BC:55:ASP:CG	2.11	0.54
1:AA:1116:C:H2'	1:AA:1117:G:H5"	1.88	0.54
48:BP:39:LYS:HD2	48:BP:40:SER:H	1.72	0.54
25:CZ:156:ASP:O	25:CZ:160:GLN:HB3	2.07	0.54
1:CA:1443:G:H5'	1:CA:1444:C:OP2	2.07	0.54
4:CD:108:LEU:HB3	4:CD:110:PHE:HE1	1.72	0.54
49:DQ:134:ARG:HA	49:DQ:137:TYR:CD2	2.43	0.54
36:DA:2840:C:H5"	50:DR:53:HIS:HD2	1.72	0.54
58:DZ:70:LEU:HD23	58:DZ:70:LEU:H	1.73	0.54
39:BD:223:GLY:C	39:BD:224:ALA:O	2.39	0.54
36:BA:271(E):U:H2'	36:BA:271(F):C:C6	2.42	0.54
10:AJ:38:ILE:CD1	10:AJ:71:LEU:HB3	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:310:ILE:HG13	25:AZ:381:GLU:HB2	1.90	0.54
36:BA:1472:A:C2'	36:BA:1473:G:H5'	2.38	0.54
25:AZ:27:LEU:O	25:AZ:27:LEU:HD12	2.07	0.54
36:DA:2200:C:H5'	36:DA:2201:C:OP2	2.07	0.54
37:DB:65:C:N4	37:DB:109:C:H2'	2.22	0.54
38:BC:68:LEU:HD11	38:BC:161:ILE:HG23	1.87	0.54
25:AZ:215:ARG:HG3	25:AZ:215:ARG:HH11	1.73	0.54
22:AV:44:G:H2'	22:AV:45:U:H5'	1.89	0.54
58:DZ:108:PRO:O	58:DZ:111:VAL:HG23	2.07	0.54
40:DE:198:VAL:HG12	40:DE:199:ARG:N	2.22	0.54
51:BS:73:LEU:O	51:BS:73:LEU:HD23	2.07	0.54
1:AA:841:U:H3'	1:AA:848:C:O4'	2.07	0.54
3:CC:83:ARG:O	3:CC:86:VAL:HG22	2.08	0.54
1:CA:167:G:O2'	1:CA:168:G:H5'	2.07	0.54
38:BC:98:GLU:HG3	38:BC:98:GLU:O	2.07	0.54
4:AD:157:LEU:N	4:AD:157:LEU:HD12	2.22	0.54
1:CA:226:G:O2'	1:CA:227:G:H5'	2.06	0.54
25:AZ:356:PRO:HB2	25:AZ:359:VAL:HG21	1.90	0.54
25:AZ:359:VAL:HG12	25:AZ:362:VAL:CG2	2.37	0.54
28:D2:29:LYS:O	28:D2:33:MET:CG	2.55	0.54
42:DG:7:LEU:CD2	42:DG:176:LEU:HD21	2.32	0.54
32:D6:15:GLU:OE1	32:D6:18:ARG:CD	2.55	0.54
36:BA:910:A:H2'	36:BA:911:A:C8	2.42	0.54
52:BT:28:VAL:O	52:BT:29:ARG:CD	2.46	0.54
43:BH:85:LYS:C	43:BH:85:LYS:HE2	2.28	0.54
43:DH:121:ILE:CD1	43:DH:144:VAL:HG21	2.37	0.54
52:DT:54:ARG:HA	52:DT:59:THR:HB	1.88	0.54
33:B7:34:ARG:CG	33:B7:34:ARG:HH11	2.19	0.54
48:DP:24:GLY:HA3	48:DP:33:ARG:HH12	1.72	0.54
34:D8:26:LYS:NZ	34:D8:47:LYS:HD3	2.22	0.54
25:CZ:279:GLU:HG2	25:CZ:279:GLU:O	2.08	0.54
58:BZ:24:LEU:C	58:BZ:24:LEU:HD23	2.27	0.54
50:BR:103:ARG:O	50:BR:111:LEU:HD11	2.07	0.54
25:CZ:25:THR:CB	60:CZ:501:GDP:O2B	2.54	0.54
34:B8:17:THR:HG22	34:B8:21:LYS:O	2.07	0.54
36:DA:1681:G:O2'	36:DA:1762:A:C2'	2.54	0.54
46:BN:43:THR:HG22	46:BN:45:ASN:ND2	2.22	0.54
48:BP:112:LEU:HD22	48:BP:113:LYS:N	2.22	0.54
36:DA:2647:U:H2'	36:DA:2648:C:C6	2.43	0.54
36:BA:1762:A:H8	36:BA:1762:A:O5'	1.90	0.54
54:DV:35:LEU:HD22	54:DV:35:LEU:N	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:70:TRP:CZ3	39:DD:150:LYS:HA	2.42	0.54
1:AA:384:G:H2'	1:AA:385:C:C6	2.42	0.54
36:DA:2631:G:N2	40:DE:61:ARG:NH1	2.55	0.54
36:BA:992:C:O3'	54:BV:72:VAL:HG11	2.07	0.54
35:D9:1:MET:HB3	35:D9:31:LYS:O	2.08	0.54
12:CL:39:VAL:CG1	12:CL:57:LYS:HB3	2.37	0.54
56:DX:64:LYS:HE2	56:DX:73:ARG:HE	1.73	0.54
1:CA:950:U:OP2	13:CM:102:ARG:HD2	2.08	0.54
39:DD:131:LEU:HB2	39:DD:136:ILE:CD1	2.37	0.54
36:DA:1240:U:O2'	36:DA:1241:A:H5'	2.08	0.54
46:BN:133:GLN:C	46:BN:135:PRO:HD3	2.27	0.54
36:DA:2679:A:H4'	40:DE:165:VAL:HG11	1.88	0.54
36:BA:1786:A:C2	36:BA:2606:C:H1'	2.43	0.54
25:CZ:226:GLU:O	25:CZ:300:ARG:HG2	2.07	0.54
22:AW:7:A:N6	22:AW:49:C:H41	2.06	0.54
36:BA:32:C:H5'	36:BA:33:U:OP2	2.08	0.54
1:AA:337:C:H2'	1:AA:338:A:C8	2.42	0.54
36:DA:2009:G:O2'	36:DA:2010:G:H5'	2.07	0.54
11:CK:30:VAL:HG11	11:CK:65:ALA:HA	1.88	0.54
39:DD:248:SER:HB2	39:DD:249:PRO:HD2	1.88	0.54
39:BD:6:PHE:CD1	39:BD:6:PHE:N	2.75	0.54
4:CD:58:LEU:O	4:CD:58:LEU:HD22	2.07	0.54
39:DD:196:VAL:HG12	39:DD:196:VAL:O	2.06	0.54
19:AS:22:LEU:HD13	19:AS:22:LEU:O	2.07	0.54
39:DD:96:HIS:CE1	39:DD:102:LYS:HE2	2.42	0.54
34:D8:32:LEU:HD11	36:DA:2391:G:O5'	2.08	0.54
28:D2:47:ASN:HB3	28:D2:51:ARG:CG	2.37	0.54
51:DS:35:ILE:HD11	51:DS:99:LYS:NZ	2.23	0.54
57:BY:13:VAL:HG21	57:BY:72:VAL:HB	1.90	0.54
36:DA:2603:G:C3'	36:DA:2604:U:H5"	2.37	0.54
36:DA:2312:U:C2'	36:DA:2313:C:H5"	2.37	0.54
2:CB:30:ARG:HG3	2:CB:31:TYR:CD1	2.43	0.54
48:DP:9:ASN:H	48:DP:10:PRO:CD	2.13	0.54
36:BA:621:A:H2'	36:BA:622:G:C5'	2.37	0.54
51:BS:53:SER:C	51:BS:55:ALA:H	2.10	0.54
36:BA:654(E):G:H22	36:BA:654(Q):C:C1'	2.16	0.54
58:BZ:123:ASP:C	58:BZ:124:ILE:HG12	2.27	0.54
14:CN:12:ARG:NH1	14:CN:14:PRO:HG2	2.23	0.54
9:CI:19:LEU:HD23	9:CI:20:ARG:N	2.22	0.54
36:BA:2134:A:H62	36:BA:2157:G:H1'	1.73	0.54
3:CC:5:ILE:H	3:CC:5:ILE:HD12	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.08	0.54
49:DQ:109:VAL:HG13	49:DQ:113:GLN:OE1	2.07	0.54
4:AD:95:GLY:HA3	4:AD:188:LEU:HD21	1.90	0.54
36:DA:1722:A:O2'	36:DA:1739:U:H5'	2.07	0.54
49:DQ:21:THR:O	49:DQ:22:LYS:HB3	2.08	0.54
24:CY:72:U:H3'	24:CY:73:G:H5"	1.88	0.54
25:CZ:87:ASP:HB2	25:CZ:88:TYR:CD1	2.42	0.54
58:DZ:28:MET:HG2	58:DZ:37:VAL:CG1	2.38	0.54
43:DH:37:VAL:HG11	43:DH:68:THR:HG21	1.89	0.54
36:DA:271(E):U:H2'	36:DA:271(F):C:C6	2.42	0.54
36:BA:2223:G:C2'	36:BA:2224:G:H5'	2.38	0.54
1:CA:1123:A:O2'	10:CJ:38:ILE:HG22	2.08	0.54
1:AA:1402:C:O2	1:AA:1500:A:N1	2.41	0.54
38:DC:210:ARG:CG	38:DC:210:ARG:HH11	2.20	0.54
1:CA:841:U:H3'	1:CA:848:C:O4'	2.07	0.54
3:AC:83:ARG:O	3:AC:86:VAL:HG22	2.07	0.54
25:CZ:358:GLY:C	25:CZ:360:GLU:N	2.58	0.54
2:CB:238:LEU:HG	2:CB:239:VAL:N	2.22	0.54
1:CA:443:C:H2'	1:CA:444:C:C6	2.43	0.54
8:AH:119:LEU:HD12	8:AH:124:ALA:CA	2.38	0.54
36:BA:1921:G:O2'	36:BA:1922:G:H5'	2.08	0.54
36:BA:1013:C:H2'	36:BA:1014:U:H6	1.72	0.54
36:BA:752:A:O2'	36:BA:753:C:OP2	2.24	0.54
13:CM:40:ASN:HD22	13:CM:43:THR:HG23	1.72	0.54
36:BA:1305:C:O2'	36:BA:1306:C:H5'	2.07	0.54
25:CZ:185:ASN:H	25:CZ:185:ASN:HD22	1.56	0.54
1:AA:443:C:H2'	1:AA:444:C:C6	2.43	0.54
1:AA:269:C:H2'	1:AA:270:A:H8	1.72	0.54
36:DA:779:U:OP1	39:DD:49:ILE:HG13	2.07	0.54
56:BX:53:LYS:HD2	56:BX:55:ASN:HD21	1.73	0.54
34:B8:11:LYS:HE3	34:B8:63:PRO:HG3	1.89	0.54
25:AZ:7:ARG:CG	25:AZ:7:ARG:NH1	2.65	0.54
32:D6:15:GLU:OE2	32:D6:41:PRO:HG3	2.08	0.54
42:DG:87:PRO:HG2	42:DG:88:ILE:H	1.73	0.54
36:BA:2183:C:H2'	36:BA:2184:G:C8	2.43	0.54
36:DA:1141:U:H2'	46:DN:63:THR:HG21	1.87	0.54
36:DA:1019:U:H3	36:DA:1142(A):A:N6	2.02	0.54
46:DN:91:LEU:HD23	46:DN:98:VAL:HG21	1.89	0.54
55:BW:8:ARG:HG2	55:BW:8:ARG:HH11	1.73	0.54
39:BD:270:ILE:HD12	39:BD:270:ILE:H	1.71	0.54
41:DF:133:ASN:HB2	41:DF:138:GLU:OE2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:39:TRP:CG	41:DF:101:LEU:HB2	2.43	0.54
40:BE:33:VAL:CG1	40:BE:69:LYS:HE3	2.36	0.54
25:AZ:397:ALA:HB1	61:AZ:502:KIR:O27	2.08	0.54
25:AZ:19:HIS:HA	25:AZ:115:GLN:HB2	1.90	0.54
48:DP:91:PHE:CE2	48:DP:95:VAL:HG12	2.42	0.54
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.08	0.54
25:CZ:176:LEU:HB2	60:CZ:501:GDP:C4	2.42	0.54
43:DH:42:ARG:HG2	43:DH:43:VAL:N	2.22	0.54
36:BA:657:U:C2	36:BA:658:C:C5	2.96	0.54
35:B9:1:MET:HG3	36:BA:2478:A:OP2	2.08	0.54
1:AA:723:U:H3	1:AA:1537:U:H2'	1.70	0.54
22:AW:74:C:H5'	22:AW:74:C:C6	2.37	0.54
36:BA:1880:C:C2'	36:BA:1881:C:H5"	2.38	0.54
25:CZ:271:GLU:O	25:CZ:286:VAL:HG23	2.07	0.54
36:BA:1495:A:H2'	36:BA:1496:A:C2	2.43	0.54
12:AL:8:ASN:HD22	17:AQ:34:LYS:NZ	2.04	0.54
1:CA:274:A:HO2'	1:CA:275:G:H8	1.53	0.54
24:AY:51:G:O2'	25:AZ:338:TYR:HD1	1.89	0.54
39:DD:239:ARG:O	39:DD:239:ARG:HG3	2.08	0.54
36:DA:2781:A:H5"	36:DA:2782:G:H5'	1.89	0.54
1:AA:80:G:C6	1:AA:90:U:H5'	2.42	0.54
1:AA:1314:C:O2'	1:AA:1315:U:H5'	2.06	0.54
1:AA:1158:C:H2'	1:AA:1181:G:H22	1.73	0.54
36:DA:2223:G:C2'	36:DA:2224:G:H5'	2.38	0.54
18:CR:53:ARG:HG3	18:CR:63:GLN:HE21	1.73	0.54
41:BF:170:LEU:CB	41:BF:173:VAL:HB	2.37	0.54
58:DZ:108:PRO:HB3	58:DZ:141:VAL:HG12	1.88	0.54
39:DD:4:LYS:HZ1	39:DD:20:ASP:HA	1.73	0.54
54:DV:12:TYR:N	54:DV:12:TYR:CD1	2.75	0.54
36:DA:315:G:H2'	36:DA:316:C:C6	2.43	0.54
12:CL:83:VAL:HG11	12:CL:100:ILE:HD13	1.88	0.54
36:DA:2174:C:H1'	38:DC:217:THR:O	2.08	0.54
36:BA:272(J):C:H2'	36:BA:274:G:H5"	1.90	0.54
7:CG:115:ARG:O	7:CG:118:VAL:HG22	2.07	0.54
36:BA:1029:A:H2'	36:BA:1030:G:O4'	2.08	0.54
2:CB:107:THR:O	2:CB:110:GLN:HG2	2.08	0.54
2:CB:221:LEU:HD13	2:CB:221:LEU:O	2.08	0.54
48:DP:58:THR:O	48:DP:58:THR:HG22	2.06	0.54
56:DX:12:VAL:HG12	56:DX:27:THR:O	2.07	0.54
56:DX:54:VAL:C	56:DX:55:ASN:HD22	2.11	0.54
28:D2:32:LEU:HD13	28:D2:57:ILE:HG21	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:13:VAL:HG22	57:DY:14:LEU:N	2.22	0.54
57:BY:84:ARG:HG2	57:BY:85:VAL:H	1.71	0.54
36:DA:2307:G:N3	36:DA:2307:G:H3'	2.23	0.54
42:DG:47:LYS:HG3	42:DG:81:LYS:CG	2.33	0.54
52:BT:80:SER:HB3	52:BT:81:PRO:CD	2.27	0.54
43:BH:83:TYR:HB3	43:BH:135:GLY:O	2.08	0.54
52:DT:62:THR:CG2	52:DT:75:ILE:HG13	2.38	0.54
52:DT:53:ARG:HH11	52:DT:53:ARG:CB	2.12	0.54
36:BA:1541:G:O3'	36:BA:1541:G:OP2	2.26	0.54
48:DP:16:ARG:HD3	48:DP:16:ARG:C	2.28	0.54
54:DV:38:LEU:HD22	54:DV:52:VAL:HG11	1.89	0.54
5:CE:11:ILE:CG2	5:CE:105:VAL:HG22	2.38	0.54
53:BU:95:LEU:HD12	54:BV:11:GLN:HG3	1.90	0.54
25:CZ:347:THR:HG22	25:CZ:348:ASP:H	1.72	0.54
1:AA:1116:C:H2'	1:AA:1117:G:C5'	2.37	0.54
36:DA:673:C:O2'	36:DA:674:G:H5'	2.07	0.54
43:DH:66:GLY:CA	43:DH:69:ARG:HB3	2.35	0.54
19:AS:31:ILE:HG23	19:AS:49:ILE:HG23	1.90	0.54
46:BN:73:THR:HG23	46:BN:82:LEU:HD11	1.88	0.54
4:CD:95:GLY:HA3	4:CD:188:LEU:HD21	1.90	0.54
30:B4:39:CYS:O	30:B4:40:HIS:HB2	2.08	0.54
24:AY:72:U:H3'	24:AY:73:G:H5"	1.89	0.54
43:DH:19:VAL:HG12	43:DH:20:ALA:N	2.22	0.54
1:CA:384:G:H2'	1:CA:385:C:C6	2.42	0.54
52:DT:78:LEU:C	52:DT:79:HIS:CD2	2.80	0.54
39:BD:129:ASN:O	39:BD:193:VAL:HG12	2.08	0.54
52:BT:106:SER:O	52:BT:107:ASP:OD1	2.24	0.54
3:CC:34:LEU:HG	14:CN:25:VAL:HG11	1.90	0.54
36:DA:2790:A:H2'	36:DA:2791:C:C5'	2.37	0.54
41:DF:183:VAL:O	41:DF:187:VAL:HG23	2.08	0.54
36:BA:2720:U:H5'	36:BA:2721:A:OP2	2.07	0.54
36:BA:1335:U:H2'	36:BA:1336:A:C8	2.43	0.54
18:AR:53:ARG:HG3	18:AR:63:GLN:HE21	1.71	0.54
40:BE:198:VAL:HG12	40:BE:199:ARG:N	2.22	0.54
25:CZ:215:ARG:HH11	25:CZ:215:ARG:HG3	1.73	0.54
5:AE:110:LEU:HD13	5:AE:118:ILE:HD13	1.90	0.54
1:AA:67:C:H2'	1:AA:68:G:C8	2.42	0.54
3:AC:175:LEU:H	3:AC:175:LEU:HD12	1.72	0.54
1:AA:1382:C:H2'	1:AA:1383:C:H6	1.73	0.54
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	2.22	0.54
9:AI:10:ARG:HG3	9:AI:75:ASP:HB3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1260:G:H2'	36:DA:1261:C:C6	2.43	0.54
2:CB:39:ILE:HG22	2:CB:40:HIS:N	2.22	0.54
36:DA:272(J):C:H2'	36:DA:274:G:H5"	1.89	0.54
36:BA:1970:A:H5"	36:BA:1971:A:OP1	2.08	0.54
7:CG:141:VAL:O	7:CG:144:MET:HB2	2.07	0.54
26:B0:73:GLY:O	26:B0:75:LEU:N	2.40	0.54
36:BA:2348:U:O2'	36:BA:2349:G:H5'	2.07	0.54
57:DY:8:LYS:HE2	57:DY:72:VAL:HG23	1.88	0.54
57:DY:81:LYS:O	57:DY:82:PRO:O	2.26	0.54
25:AZ:7:ARG:NH2	25:AZ:281:ILE:CD1	2.67	0.54
51:DS:53:SER:C	51:DS:55:ALA:H	2.11	0.54
42:BG:46:ALA:HB2	42:BG:88:ILE:CG1	2.37	0.54
41:BF:156:LEU:HD12	41:BF:193:VAL:O	2.08	0.54
46:DN:58:ASP:O	46:DN:60:ILE:HG13	2.06	0.54
36:DA:321:G:O4'	41:DF:165:ARG:HD3	2.08	0.54
41:BF:160:ASN:HD22	41:BF:160:ASN:C	2.11	0.54
36:BA:2099:U:H2'	36:BA:2100:G:C8	2.43	0.54
47:BO:88:ASN:HD21	47:BO:92:GLU:HB2	1.73	0.54
49:BQ:141:GLN:HB3	58:BZ:99:TYR:CE1	2.43	0.54
25:AZ:226:GLU:O	25:AZ:300:ARG:HG2	2.06	0.54
39:DD:226:MET:HE2	39:DD:231:HIS:CB	2.32	0.54
26:B0:42:GLY:HA3	36:BA:2331:G:C4'	2.38	0.54
38:BC:132:GLY:N	38:BC:133:PRO:CD	2.69	0.54
36:BA:691:C:O2'	36:BA:692:C:H5'	2.07	0.54
2:CB:111:ARG:NH1	2:CB:111:ARG:HG2	2.21	0.54
58:BZ:151:HIS:HB2	58:BZ:170:THR:HA	1.90	0.54
22:AW:38:A:H2'	22:AW:39:U:O4'	2.07	0.54
46:BN:71:ILE:HD12	46:BN:71:ILE:N	2.23	0.54
58:DZ:122:ARG:CG	58:DZ:122:ARG:HH11	2.21	0.54
36:DA:2485:G:C5'	49:DQ:46:GLN:HE21	2.19	0.54
16:CP:5:ARG:HB3	16:CP:67:THR:OG1	2.08	0.54
1:CA:1152:A:H2'	1:CA:1153:C:C6	2.43	0.54
25:AZ:198:LYS:HA	25:AZ:201:GLU:HB2	1.88	0.54
3:AC:43:LEU:HD22	3:AC:47:LEU:HD22	1.90	0.54
27:D1:47:GLN:HG2	36:DA:2091:U:O2'	2.07	0.54
22:CW:74:C:C6	22:CW:74:C:H5'	2.38	0.54
25:CZ:263:ARG:HE	25:CZ:293:VAL:HG22	1.72	0.54
22:AV:51:U:H2'	22:AV:52:G:H8	1.72	0.54
36:BA:141:A:C8	36:BA:1408:C:O2'	2.59	0.54
57:BY:62:GLU:OE1	57:BY:62:GLU:N	2.41	0.54
13:AM:3:ARG:HH21	13:AM:7:VAL:HG13	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2631:G:N2	40:BE:61:ARG:NH1	2.55	0.54
40:BE:61:ARG:CB	40:BE:62:PRO:HD3	2.37	0.54
43:BH:37:VAL:HG11	43:BH:68:THR:HG21	1.90	0.54
19:AS:6:LYS:O	19:AS:7:LYS:HD3	2.08	0.54
47:DO:107:ARG:HD3	52:DT:36:GLU:H	1.73	0.54
7:AG:7:ALA:O	7:AG:8:GLU:CB	2.56	0.54
48:DP:102:ARG:HH11	48:DP:102:ARG:CB	2.20	0.54
25:CZ:313:HIS:CD2	25:CZ:403:ILE:HD13	2.43	0.54
36:BA:2025:C:H2'	36:BA:2026:C:C6	2.41	0.54
36:DA:2262:U:H4'	36:DA:2328:A:H2	1.72	0.54
36:DA:1272:A:OP2	36:DA:1647:G:OP1	2.26	0.54
36:DA:1523:U:H2'	36:DA:1524:G:C8	2.42	0.54
13:AM:56:LEU:HD13	13:AM:56:LEU:C	2.29	0.54
41:DF:4:VAL:HG22	41:DF:19:GLU:OE1	2.07	0.54
36:BA:320:A:C8	41:BF:136:THR:HG21	2.42	0.54
31:B5:22:HIS:CE1	36:BA:2624:G:H1'	2.43	0.54
36:DA:623:G:H2'	36:DA:624:C:C6	2.43	0.54
39:BD:133:LEU:HB3	39:BD:173:VAL:HG11	1.88	0.54
2:CB:180:LEU:O	2:CB:181:PHE:HB2	2.07	0.54
1:AA:1221:G:O2'	1:AA:1222:G:H5'	2.08	0.54
15:AO:25:THR:O	15:AO:29:VAL:HG23	2.06	0.54
36:DA:2514:U:H2'	36:DA:2515:C:C6	2.43	0.54
50:DR:87:TYR:O	50:DR:89:ASP:N	2.41	0.54
4:CD:61:LYS:HB2	4:CD:203:VAL:HG13	1.90	0.54
42:BG:33:ARG:O	42:BG:34:LEU:HG	2.07	0.54
24:AY:25:C:H6	24:AY:25:C:C5'	2.19	0.54
28:D2:23:LYS:C	28:D2:25:VAL:H	2.11	0.54
28:D2:26:ARG:HG2	56:DX:5:TYR:CE1	2.43	0.54
28:D2:32:LEU:HB2	28:D2:53:LEU:HD22	1.89	0.54
34:B8:11:LYS:HZ2	34:B8:60:LEU:HD22	1.72	0.54
34:B8:32:LEU:CD1	36:BA:2391:G:H3'	2.36	0.54
36:DA:2183:C:H2'	36:DA:2184:G:C8	2.43	0.54
52:BT:29:ARG:HG2	52:BT:86:ILE:HG22	1.88	0.54
41:DF:175:THR:OG1	41:DF:176:LEU:N	2.40	0.54
19:AS:16:LEU:C	19:AS:18:LYS:N	2.60	0.54
42:BG:40:ASN:ND2	42:BG:91:ARG:HB2	2.23	0.54
48:BP:64:LYS:C	48:BP:66:GLY:N	2.59	0.54
41:DF:28:ILE:CD1	41:DF:28:ILE:H	2.13	0.54
25:AZ:347:THR:HG22	25:AZ:348:ASP:H	1.73	0.54
40:BE:81:ILE:O	40:BE:81:ILE:HG22	2.07	0.54
43:BH:41:MET:CG	43:BH:42:ARG:N	2.70	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:170:VAL:HG12	4:AD:171:GLY:H	1.73	0.54
4:CD:108:LEU:HB3	4:CD:110:PHE:CE1	2.43	0.54
25:AZ:21:ASP:N	60:AZ:501:GDP:O1B	2.40	0.54
52:DT:23:ARG:HA	52:DT:52:ILE:CD1	2.37	0.54
10:CJ:4:ILE:N	10:CJ:4:ILE:HD12	2.23	0.54
40:DE:188:VAL:HG23	40:DE:189:PRO:HD2	1.89	0.54
27:D1:67:ILE:HB	27:D1:68:PRO:HD3	1.90	0.54
54:BV:35:LEU:N	54:BV:35:LEU:HD22	2.22	0.54
1:CA:194:C:C2'	1:CA:195:A:H5"	2.38	0.54
13:AM:82:MET:CB	13:AM:93:ARG:NH1	2.71	0.54
39:DD:273:ARG:HG2	39:DD:273:ARG:NH1	2.23	0.54
14:CN:23:ARG:HH11	14:CN:30:ALA:HB2	1.73	0.54
55:BW:59:VAL:HG12	55:BW:59:VAL:O	2.08	0.54
46:BN:55:VAL:HG22	46:BN:56:ASN:N	2.23	0.54
41:BF:170:LEU:HB3	41:BF:173:VAL:HB	1.90	0.54
9:AI:6:GLY:N	9:AI:84:ALA:HB2	2.22	0.54
38:DC:139:ASN:OD1	38:DC:140:PRO:HD2	2.08	0.54
36:BA:1411:C:H2'	36:BA:1412:A:C8	2.42	0.54
36:DA:1952:A:C6	47:DO:22:ILE:HD12	2.43	0.54
42:BG:139:LEU:O	42:BG:144:ILE:HG21	2.08	0.54
36:BA:926:A:H5'	36:BA:926:A:H8	1.73	0.54
32:B6:8:LYS:O	32:B6:9:LEU:HB3	2.06	0.54
28:B2:35:LEU:HD13	28:B2:35:LEU:C	2.28	0.54
42:DG:7:LEU:C	42:DG:7:LEU:HD23	2.28	0.54
58:DZ:99:TYR:CZ	58:DZ:125:LEU:HD13	2.43	0.54
2:AB:30:ARG:HG3	2:AB:31:TYR:CE1	2.43	0.54
22:CW:57:G:H2'	22:CW:58:A:C5'	2.35	0.54
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.08	0.54
36:DA:1019:U:C2'	36:DA:1021:A:H2	2.21	0.54
57:DY:51:VAL:O	57:DY:53:PRO:HD3	2.08	0.54
4:AD:61:LYS:HB2	4:AD:203:VAL:HG13	1.90	0.54
57:BY:51:VAL:O	57:BY:53:PRO:HD3	2.08	0.54
26:D0:50:ASN:HD22	26:D0:63:VAL:CG2	2.14	0.54
4:AD:12:CYS:O	4:AD:33:MET:HE2	2.08	0.54
40:BE:111:ARG:HD2	50:BR:2:ARG:NH2	2.23	0.54
11:AK:44:SER:O	11:AK:47:VAL:HG23	2.08	0.54
13:CM:82:MET:CB	13:CM:93:ARG:NH1	2.71	0.54
36:BA:2133:G:N1	36:BA:2157:G:O6	2.41	0.54
52:DT:103:ARG:O	52:DT:105:LEU:N	2.41	0.54
58:BZ:29:TYR:HB3	58:BZ:34:ASN:CB	2.38	0.54
36:BA:2856:C:C2	36:BA:2862:G:N2	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:155:SER:O	43:DH:157:TYR:N	2.35	0.54
58:BZ:113:ALA:CB	58:BZ:146:ILE:HD13	2.38	0.54
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	1.89	0.54
57:BY:43:ASN:CB	57:BY:64:GLU:HA	2.38	0.54
1:CA:59:A:H3'	1:CA:331:G:N2	2.22	0.54
1:AA:659:U:O2'	1:AA:660:G:H5'	2.08	0.54
58:DZ:37:VAL:HG23	58:DZ:38:TYR:N	2.22	0.54
3:CC:25:GLY:C	3:CC:27:LYS:N	2.61	0.54
36:DA:2823:A:OP1	40:DE:113:PHE:HB2	2.08	0.54
36:BA:480:A:H3'	36:BA:481:G:H5"	1.90	0.54
40:DE:176:ILE:HG23	40:DE:178:GLU:HB3	1.89	0.54
36:DA:271(R):G:O2'	36:DA:271(S):G:H5'	2.08	0.54
1:AA:1125:U:H5"	1:AA:1126:U:C5	2.41	0.54
58:BZ:133:ILE:N	58:BZ:134:PRO:CD	2.70	0.54
36:DA:2262:U:H4'	36:DA:2328:A:C2	2.44	0.54
39:BD:10:THR:HG23	39:BD:13:ARG:HB2	1.90	0.54
9:AI:56:LEU:HG	9:AI:57:GLY:H	1.73	0.54
38:BC:166:ASP:O	38:BC:168:THR:N	2.41	0.54
37:BB:111:G:O2'	37:BB:112:U:H5'	2.08	0.54
1:AA:992:U:H1'	1:AA:993:G:C2	2.43	0.54
36:BA:1013:C:H2'	36:BA:1014:U:C6	2.43	0.54
1:AA:538:G:O2'	1:AA:539:A:H5'	2.08	0.54
36:DA:304:G:C2	36:DA:314:A:C2	2.96	0.54
2:AB:25:ASN:HB2	2:AB:191:ASP:O	2.07	0.54
13:CM:77:ASN:O	13:CM:81:LEU:HD23	2.08	0.54
31:D5:22:HIS:CE1	36:DA:2624:G:H1'	2.43	0.54
36:BA:1103:A:H5'	36:BA:1104:C:OP2	2.08	0.54
33:D7:43:THR:HG23	33:D7:44:PRO:HD2	1.89	0.54
8:CH:89:PRO:HA	8:CH:92:ARG:NH1	2.23	0.54
39:DD:6:PHE:N	39:DD:6:PHE:CD1	2.76	0.54
36:BA:1790:C:H5"	36:BA:1791:A:OP1	2.08	0.54
36:BA:1839:G:H5'	36:BA:1839:G:H8	1.72	0.54
30:B4:9:LEU:HD13	30:B4:10:VAL:N	2.19	0.53
28:D2:46:GLN:HA	28:D2:46:GLN:OE1	2.08	0.53
28:D2:46:GLN:O	28:D2:50:ILE:HD13	2.08	0.53
22:AV:48:C:OP2	22:AV:48:C:H6	1.91	0.53
37:DB:44:G:H1'	37:DB:47:C:N4	2.23	0.53
36:DA:272(H):C:C3'	36:DA:272(I):U:H5"	2.38	0.53
49:DQ:141:GLN:OXT	58:DZ:53:ILE:HD12	2.08	0.53
22:AV:5:G:H1	22:AV:68:C:H42	1.54	0.53
41:BF:175:THR:OG1	41:BF:176:LEU:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:16:CYS:SG	32:D6:49:HIS:N	2.81	0.53
42:BG:8:LYS:HE3	42:BG:12:TYR:OH	2.08	0.53
36:BA:2635:C:H5"	40:BE:78:LEU:O	2.08	0.53
36:BA:661:C:H4'	48:BP:16:ARG:NH1	2.23	0.53
50:BR:24:GLN:HE22	50:BR:36:THR:HG21	1.68	0.53
1:CA:321:A:O2'	1:CA:322:C:H5'	2.08	0.53
22:CW:30:G:H2'	22:CW:31:A:C8	2.42	0.53
1:CA:1378:C:H4'	7:CG:94:ARG:NH2	2.20	0.53
51:BS:16:ASN:C	51:BS:18:ILE:HD12	2.28	0.53
9:CI:69:GLY:O	9:CI:73:GLN:HG3	2.08	0.53
19:CS:29:ARG:HH11	19:CS:30:LEU:HB2	1.73	0.53
3:AC:68:VAL:HG13	3:AC:70:VAL:HG23	1.90	0.53
52:BT:62:THR:CG2	52:BT:75:ILE:HG13	2.38	0.53
27:B1:12:PRO:C	27:B1:13:ILE:HD12	2.28	0.53
6:AF:82:ARG:HB2	6:AF:85:VAL:CG2	2.37	0.53
36:DA:2591:C:P	39:DD:239:ARG:HG2	2.48	0.53
36:DA:2282:G:OP1	36:DA:2283:C:H1'	2.08	0.53
36:DA:543:C:H42	36:DA:549:G:H1	1.56	0.53
36:DA:2811:G:H1	36:DA:2889:C:H42	1.56	0.53
55:BW:25:ARG:HB2	55:BW:25:ARG:NH1	2.23	0.53
36:DA:271(Q):G:H1'	36:DA:271(R):G:C8	2.43	0.53
27:D1:89:GLU:OE1	27:D1:92:LYS:HE2	2.08	0.53
6:CF:43:LEU:O	6:CF:44:GLY:O	2.26	0.53
36:BA:2464:C:O2'	36:BA:2465:C:H6	1.91	0.53
1:CA:977:A:O2'	1:CA:978:A:C5'	2.55	0.53
13:CM:118:ALA:HB3	22:CV:29:G:H5'	1.90	0.53
47:BO:43:VAL:HG23	47:BO:56:ASP:O	2.08	0.53
1:CA:1240:U:OP1	7:CG:116:ALA:HB2	2.07	0.53
27:D1:80:LEU:C	27:D1:82:LEU:H	2.11	0.53
36:DA:703:U:H2'	36:DA:704:G:H5'	1.89	0.53
38:DC:45:ALA:HB3	38:DC:171:ILE:CG2	2.38	0.53
36:DA:2808:U:O2'	36:DA:2809:A:H5'	2.08	0.53
36:DA:2584:U:C2'	36:DA:2585:U:H5'	2.38	0.53
25:AZ:185:ASN:ND2	25:AZ:185:ASN:O	2.40	0.53
3:AC:131:ARG:HH11	3:AC:166:GLU:HG3	1.73	0.53
36:DA:2619:C:O2'	36:DA:2620:C:H5'	2.08	0.53
1:CA:429:U:H1'	1:CA:430:A:H5"	1.89	0.53
36:DA:1257:C:H4'	41:DF:83:PHE:CD1	2.42	0.53
2:AB:126:GLU:O	2:AB:129:GLU:HB2	2.08	0.53
36:BA:142:A:H8	36:BA:1595:G:H21	1.56	0.53
45:DK:3:UNK:O	45:DK:4:UNK:C	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:145:GLY:O	3:AC:146:ALA:O	2.25	0.53
36:BA:315:G:H2'	36:BA:316:C:C6	2.43	0.53
39:DD:23:GLU:C	39:DD:25:THR:H	2.11	0.53
20:AT:53:LEU:O	20:AT:57:ARG:HB2	2.09	0.53
2:AB:28:PHE:O	2:AB:32:ILE:HG22	2.09	0.53
1:AA:56:U:H2'	1:AA:57:G:H8	1.73	0.53
19:CS:16:LEU:C	19:CS:18:LYS:H	2.11	0.53
25:CZ:114:PRO:O	25:CZ:117:ARG:HB2	2.09	0.53
54:BV:38:LEU:HD22	54:BV:52:VAL:HG11	1.90	0.53
36:BA:2128:C:HO2'	36:BA:2129:C:C5'	2.20	0.53
36:BA:2128:C:HO2'	36:BA:2129:C:P	2.31	0.53
41:DF:160:ASN:C	41:DF:160:ASN:HD22	2.11	0.53
25:AZ:143:ASP:HB3	25:AZ:146:LEU:HB3	1.89	0.53
1:AA:977:A:O2'	1:AA:978:A:C5'	2.57	0.53
36:BA:2572:A:H62	40:BE:145:LYS:CG	2.22	0.53
38:BC:40:THR:HA	38:BC:177:LYS:HA	1.89	0.53
24:AY:45:U:C3'	24:AY:46:7MG:H5"	2.33	0.53
36:BA:2840:C:H2'	36:BA:2841:C:H6	1.72	0.53
57:BY:36:ALA:HB1	57:BY:67:LEU:C	2.28	0.53
5:CE:53:LEU:HD12	5:CE:53:LEU:H	1.73	0.53
39:DD:142:VAL:HG22	39:DD:143:HIS:N	2.23	0.53
57:DY:62:GLU:OE1	57:DY:62:GLU:N	2.41	0.53
36:BA:2136:C:H2'	36:BA:2137:C:C6	2.40	0.53
36:DA:585:G:H2'	36:DA:1251:C:N4	2.23	0.53
4:AD:129:ASN:HD21	4:AD:144:ASP:HA	1.74	0.53
36:DA:1536:C:H2'	36:DA:1537:G:C4'	2.37	0.53
36:BA:1331:A:O2'	36:BA:1332:G:H5"	2.08	0.53
47:BO:35:VAL:HG13	47:BO:65:THR:HG23	1.90	0.53
1:AA:613:C:H2'	1:AA:614:A:H8	1.73	0.53
36:DA:1786:A:C2	36:DA:2606:C:H1'	2.43	0.53
47:DO:43:VAL:HG23	47:DO:56:ASP:O	2.08	0.53
46:DN:62:VAL:CG2	46:DN:66:LYS:HB2	2.37	0.53
3:AC:58:GLU:HB2	3:AC:65:ALA:HB2	1.90	0.53
36:BA:880:G:H1	36:BA:897:C:H42	1.56	0.53
36:BA:2807:G:H2'	36:BA:2808:U:H5"	1.89	0.53
22:CW:11:C:O2'	22:CW:12:U:H5'	2.07	0.53
36:BA:1320:C:C5	36:BA:1329:U:H5"	2.43	0.53
1:AA:309:G:H1'	1:AA:608:A:C2	2.43	0.53
36:BA:156:U:H2'	36:BA:157:U:O4'	2.08	0.53
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.43	0.53
25:CZ:359:VAL:HG12	25:CZ:362:VAL:CG2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:41:ILE:HG13	28:D2:42:GLY:H	1.73	0.53
31:B5:2:ALA:N	36:BA:747:U:C4	2.77	0.53
30:D4:10:VAL:HG23	30:D4:11:PRO:HD2	1.90	0.53
1:AA:1039:C:H2'	1:AA:1040:U:C6	2.43	0.53
57:BY:81:LYS:O	57:BY:82:PRO:O	2.26	0.53
36:BA:2107:C:H1'	36:BA:2182:G:H22	1.73	0.53
22:AV:68:C:C2'	22:AV:69:G:H5'	2.38	0.53
48:BP:34:GLY:O	48:BP:35:HIS:CB	2.56	0.53
33:D7:34:ARG:HH11	33:D7:34:ARG:CG	2.19	0.53
25:AZ:90:LYS:HB2	25:AZ:90:LYS:NZ	2.24	0.53
49:DQ:56:ARG:CG	49:DQ:56:ARG:NH1	2.65	0.53
31:D5:48:GLU:C	31:D5:49:CYS:SG	2.86	0.53
40:DE:98:PRO:HG3	40:DE:174:ASP:HA	1.90	0.53
53:BU:92:ARG:HH21	54:BV:10:LYS:CB	2.21	0.53
36:BA:2127:G:H4'	38:BC:37:PHE:CD1	2.43	0.53
26:B0:43:THR:HG21	36:BA:2336:A:H61	1.73	0.53
1:CA:1117:G:H5'	1:CA:1117:G:C8	2.37	0.53
22:CW:39:U:H5'	22:CW:39:U:O2	2.09	0.53
36:BA:659:C:H4'	41:BF:100:THR:O	2.09	0.53
25:CZ:198:LYS:HA	25:CZ:201:GLU:HB2	1.91	0.53
36:DA:2875:C:H4'	52:DT:5:ALA:HB2	1.91	0.53
34:D8:52:LYS:O	34:D8:55:ALA:HB3	2.07	0.53
42:BG:114:ILE:O	42:BG:114:ILE:HG23	2.08	0.53
13:AM:120:LYS:HA	13:AM:120:LYS:CE	2.38	0.53
11:AK:26:ASN:O	11:AK:27:ASN:HB2	2.08	0.53
36:BA:1827:C:O2'	36:BA:1828:G:H5'	2.09	0.53
36:DA:1495:A:N3	36:DA:1496:A:C2	2.76	0.53
36:DA:480:A:H3'	36:DA:481:G:H5"	1.89	0.53
36:BA:543:C:H42	36:BA:549:G:H1	1.57	0.53
24:CY:68:C:H2'	24:CY:69:C:C6	2.43	0.53
4:AD:145:GLU:HA	4:AD:183:GLY:O	2.09	0.53
36:DA:814:C:H2'	36:DA:815:C:C6	2.43	0.53
2:AB:103:THR:HG23	2:AB:176:GLU:HG2	1.90	0.53
36:BA:1272:A:OP2	36:BA:1647:G:OP1	2.24	0.53
1:CA:1170:A:H2'	1:CA:1171:G:O4'	2.08	0.53
1:CA:490:G:H2'	1:CA:491:G:C8	2.44	0.53
17:AQ:27:PHE:CE1	17:AQ:36:ILE:HD11	2.43	0.53
30:D4:45:GLY:O	30:D4:46:GLN:HB2	2.06	0.53
49:BQ:118:LEU:HD12	49:BQ:131:ILE:HG23	1.90	0.53
36:BA:1952:A:C5	47:BO:22:ILE:HD12	2.43	0.53
36:DA:654(R):C:H2'	36:DA:654(S):G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2174:C:H1'	38:BC:217:THR:O	2.07	0.53
39:DD:43:ARG:HD2	39:DD:44:ASN:CG	2.28	0.53
56:DX:53:LYS:HB3	56:DX:82:GLN:HB3	1.89	0.53
28:D2:41:ILE:HG13	28:D2:42:GLY:N	2.23	0.53
57:DY:13:VAL:HG21	57:DY:72:VAL:HB	1.90	0.53
37:DB:49:C:OP1	51:DS:96:GLY:HA3	2.07	0.53
42:DG:105:LYS:HE3	42:DG:143:GLU:OE2	2.08	0.53
42:DG:63:ILE:HG22	42:DG:143:GLU:HG3	1.90	0.53
1:AA:1038:C:O5'	1:AA:1038:C:H6	1.92	0.53
32:B6:19:ARG:O	32:B6:20:ASN:O	2.26	0.53
57:BY:28:LYS:HE3	57:BY:37:VAL:HG11	1.88	0.53
52:DT:29:ARG:CB	52:DT:85:LYS:HA	2.38	0.53
48:DP:147:LEU:O	48:DP:148:LEU:CB	2.56	0.53
41:BF:39:TRP:CG	41:BF:101:LEU:HB2	2.43	0.53
51:BS:34:HIS:HB2	51:BS:36:TYR:CE1	2.31	0.53
36:BA:940:G:H2'	36:BA:941:A:O4'	2.09	0.53
37:BB:105:A:H2'	37:BB:106:G:O4'	2.08	0.53
36:BA:634:C:H2'	36:BA:635:C:C6	2.43	0.53
36:BA:651:G:C2'	36:BA:652:C:H5'	2.38	0.53
9:CI:93:ARG:C	9:CI:95:LYS:H	2.12	0.53
25:AZ:166:ASP:O	25:AZ:167:GLU:HG2	2.08	0.53
49:DQ:51:ARG:NH1	49:DQ:51:ARG:HG3	2.22	0.53
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	2.08	0.53
25:AZ:193:ASN:CB	25:AZ:196:VAL:H	2.22	0.53
1:AA:1256:A:H1'	1:AA:1258:G:C6	2.42	0.53
48:BP:83:VAL:HG12	48:BP:113:LYS:O	2.08	0.53
1:CA:1127:G:H1	1:CA:1145:C:N4	2.06	0.53
36:DA:156:U:H2'	36:DA:157:U:O4'	2.07	0.53
56:BX:49:VAL:CG1	56:BX:87:GLN:HE21	2.21	0.53
15:AO:26:GLU:OE2	15:AO:77:ARG:NH1	2.41	0.53
36:BA:271(Q):G:H1'	36:BA:271(R):G:C8	2.43	0.53
1:CA:559:A:OP1	5:CE:126:ARG:NH2	2.39	0.53
24:AY:67:G:H2'	24:AY:68:C:C6	2.43	0.53
1:CA:1313:U:OP2	19:CS:6:LYS:HB3	2.07	0.53
36:DA:2720:U:H5'	36:DA:2721:A:OP2	2.07	0.53
46:DN:19:GLU:HG3	46:DN:20:GLY:N	2.22	0.53
18:CR:36:ASN:O	18:CR:36:ASN:CG	2.47	0.53
38:DC:113:VAL:HG12	38:DC:138:PRO:HG3	1.90	0.53
26:D0:7:LEU:HB3	49:DQ:85:LYS:HD2	1.89	0.53
10:AJ:48:THR:OG1	10:AJ:62:HIS:HD2	1.92	0.53
36:BA:438:G:H2'	36:BA:440:G:H8	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:29:LYS:O	20:CT:33:ILE:HG13	2.07	0.53
1:AA:171:A:H2'	1:AA:172:A:C8	2.44	0.53
3:AC:85:ARG:NH1	3:AC:88:ARG:HH12	2.04	0.53
1:CA:1148:U:O3'	9:CI:14:VAL:HG11	2.08	0.53
5:AE:143:ARG:HH12	8:AH:77:GLU:CD	2.10	0.53
36:DA:608:A:H2'	36:DA:609:A:C8	2.44	0.53
26:B0:40:GLN:OE1	26:B0:44:ARG:N	2.42	0.53
36:BA:1782:C:H1'	36:BA:2609:U:H5"	1.90	0.53
43:DH:163:TYR:N	43:DH:163:TYR:CD1	2.76	0.53
30:B4:45:GLY:O	30:B4:46:GLN:HB2	2.08	0.53
36:BA:608:A:H2'	36:BA:609:A:C8	2.43	0.53
25:CZ:356:PRO:HB2	25:CZ:359:VAL:CG2	2.39	0.53
39:BD:23:GLU:C	39:BD:25:THR:H	2.11	0.53
34:D8:32:LEU:HB3	34:D8:36:LYS:HZ2	1.72	0.53
57:DY:28:LYS:HE3	57:DY:37:VAL:HG11	1.90	0.53
57:DY:96:ILE:HG13	57:DY:99:CYS:HB2	1.90	0.53
34:B8:62:LEU:N	34:B8:63:PRO:CD	2.71	0.53
34:D8:61:LEU:N	34:D8:63:PRO:HD2	2.24	0.53
20:AT:50:GLU:N	20:AT:99:LEU:HD12	2.24	0.53
42:DG:96:ARG:N	42:DG:99:MET:SD	2.81	0.53
32:D6:20:ASN:C	32:D6:21:TYR:CG	2.81	0.53
42:DG:72:ARG:CA	42:DG:87:PRO:HD2	2.39	0.53
43:DH:85:LYS:HE2	43:DH:85:LYS:C	2.29	0.53
48:BP:147:LEU:O	48:BP:148:LEU:CB	2.57	0.53
24:AY:76:A:C5	25:AZ:271:GLU:OE1	2.62	0.53
58:BZ:16:SER:O	58:BZ:17:ALA:C	2.46	0.53
53:DU:90:VAL:HG21	54:DV:47:VAL:CG2	2.38	0.53
36:DA:2579:C:O2'	40:DE:131:ALA:HB3	2.09	0.53
36:BA:1516:C:C2'	36:BA:1517:G:C5'	2.85	0.53
50:DR:99:LYS:N	50:DR:99:LYS:HD2	2.18	0.53
17:AQ:58:GLU:HB3	17:AQ:74:LEU:HB3	1.90	0.53
38:DC:114:VAL:HG23	38:DC:149:ILE:HD11	1.89	0.53
36:BA:1112:G:O2'	36:BA:1113:U:H5'	2.09	0.53
20:AT:72:LEU:O	20:AT:76:ALA:HB3	2.08	0.53
22:AW:43:C:H2'	22:AW:44:G:C1'	2.33	0.53
1:CA:942:G:H21	9:CI:124:GLN:HE22	1.53	0.53
7:CG:28:ASN:OD1	7:CG:36:LYS:HE2	2.08	0.53
9:AI:49:PRO:O	9:AI:53:VAL:HG22	2.08	0.53
1:AA:1378:C:H4'	7:AG:94:ARG:NH2	2.19	0.53
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.90	0.53
30:D4:34:GLU:CG	42:DG:113:ARG:HH21	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:53:LEU:HD12	5:AE:53:LEU:N	2.23	0.53
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.43	0.53
36:DA:2856:C:C2	36:DA:2862:G:N2	2.76	0.53
52:DT:78:LEU:O	52:DT:79:HIS:CD2	2.61	0.53
9:CI:43:ALA:O	9:CI:45:ALA:N	2.42	0.53
36:DA:271(C):C:H2'	36:DA:271(D):G:C8	2.42	0.53
38:BC:72:VAL:CG1	38:BC:157:LYS:HA	2.39	0.53
36:BA:1337:G:H2'	36:BA:1338:G:C8	2.42	0.53
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.56	0.53
1:AA:473:G:H5"	16:AP:81:ARG:HE	1.74	0.53
13:CM:90:LEU:HD12	19:CS:81:ARG:HH21	1.73	0.53
39:DD:10:THR:HG23	39:DD:13:ARG:CB	2.38	0.53
25:CZ:332:THR:O	25:CZ:363:MET:HE2	2.08	0.53
36:BA:8:A:H2'	36:BA:9:U:C6	2.43	0.53
29:D3:26:LEU:O	29:D3:28:LEU:N	2.41	0.53
39:DD:133:LEU:HB3	39:DD:173:VAL:HG11	1.90	0.53
58:DZ:17:ALA:O	58:DZ:20:ARG:HG2	2.07	0.53
7:AG:143:ARG:CD	22:AW:41:C:O3'	2.57	0.53
7:AG:143:ARG:HD2	22:AW:41:C:O3'	2.09	0.53
36:DA:1999:C:H4'	36:DA:2723:C:O2	2.09	0.53
36:DA:675:A:OP1	41:DF:63:LYS:HE2	2.08	0.53
3:CC:173:VAL:O	3:CC:175:LEU:HD12	2.08	0.53
25:CZ:389:ARG:HH11	25:CZ:389:ARG:HG2	1.74	0.53
36:BA:184:C:H2'	36:BA:185:U:C6	2.44	0.53
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.89	0.53
39:BD:276:LYS:HE2	39:BD:276:LYS:HA	1.91	0.53
39:BD:96:HIS:CE1	39:BD:102:LYS:HE2	2.44	0.53
56:BX:12:VAL:HG12	56:BX:27:THR:OG1	2.08	0.53
20:CT:53:LEU:O	20:CT:57:ARG:HB2	2.07	0.53
24:CY:25:C:H6	24:CY:25:C:C5'	2.20	0.53
13:AM:66:LEU:O	13:AM:70:LEU:HB2	2.09	0.53
25:AZ:68:VAL:HG13	25:AZ:69:GLU:N	2.24	0.53
42:DG:115:ARG:HH12	42:DG:137:GLU:CD	2.12	0.53
42:DG:53:LEU:HD12	42:DG:153:ARG:NH2	2.24	0.53
32:B6:45:LYS:O	32:B6:46:HIS:ND1	2.42	0.53
36:BA:2307:G:H3'	36:BA:2307:G:N3	2.23	0.53
57:BY:6:HIS:CD2	57:BY:6:HIS:H	2.26	0.53
57:BY:98:VAL:O	57:BY:99:CYS:SG	2.67	0.53
49:DQ:140:ALA:HB1	58:DZ:99:TYR:CE1	2.43	0.53
2:AB:29:ALA:HA	2:AB:32:ILE:CG2	2.38	0.53
25:AZ:233:GLY:O	25:AZ:234:ARG:HD2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:16:LEU:N	19:CS:16:LEU:HD12	2.11	0.53
36:BA:1538:G:H2'	36:BA:1539:G:C8	2.44	0.53
36:DA:1541:G:O3'	36:DA:1541:G:OP2	2.25	0.53
55:DW:4:LYS:HD3	55:DW:6:ILE:HD11	1.90	0.53
36:DA:833:U:H2'	36:DA:834:C:C6	2.43	0.53
36:DA:1109:C:C2'	36:DA:1110:G:H5'	2.38	0.53
48:DP:24:GLY:HA2	48:DP:33:ARG:NH1	2.24	0.53
5:AE:11:ILE:HG21	5:AE:105:VAL:HG22	1.91	0.53
51:BS:58:LEU:HG	51:BS:59:LYS:H	1.74	0.53
36:DA:1311:G:H21	36:DA:1603:A:H62	1.55	0.53
38:BC:10:LEU:HA	38:BC:13:LYS:HE3	1.90	0.53
25:CZ:164:PRO:CB	25:CZ:167:GLU:OE2	2.55	0.53
43:BH:44:VAL:HG12	43:BH:45:VAL:H	1.74	0.53
4:CD:3:ARG:HG2	4:CD:118:ARG:NE	2.22	0.53
25:CZ:143:ASP:HB3	25:CZ:146:LEU:HB3	1.91	0.53
25:CZ:193:ASN:CB	25:CZ:196:VAL:H	2.21	0.53
36:BA:2178:C:O4'	36:BA:2178:C:O2	2.26	0.53
34:B8:50:LEU:N	34:B8:53:PRO:HD3	2.24	0.53
9:AI:69:GLY:O	9:AI:73:GLN:HG3	2.09	0.53
34:D8:14:VAL:HG21	34:D8:22:VAL:HG13	1.90	0.53
34:D8:51:ALA:N	34:D8:53:PRO:HD2	2.24	0.53
53:DU:52:ARG:HB3	53:DU:52:ARG:HH11	1.74	0.53
53:DU:52:ARG:HB3	53:DU:52:ARG:NH1	2.24	0.53
51:DS:15:ARG:HH11	51:DS:15:ARG:HG2	1.74	0.53
52:DT:39:ARG:CD	52:DT:39:ARG:H	2.11	0.53
10:AJ:16:LEU:CD1	10:AJ:70:ARG:HG3	2.38	0.53
48:DP:83:VAL:HG12	48:DP:113:LYS:O	2.08	0.53
54:DV:57:VAL:HG22	54:DV:58:VAL:N	2.24	0.53
25:CZ:75:ARG:HD2	25:CZ:77:TYR:OH	2.08	0.53
36:BA:1142(A):A:H8	36:BA:1142(A):A:H5'	1.73	0.53
36:BA:1354:A:H2'	36:BA:1355:G:O4'	2.09	0.53
1:AA:542:G:H2'	1:AA:543:C:C6	2.43	0.53
36:BA:271(C):C:H2'	36:BA:271(D):G:C8	2.40	0.53
53:BU:8:VAL:O	53:BU:12:ARG:HG3	2.09	0.53
10:CJ:6:ILE:CD1	10:CJ:23:ILE:HG21	2.39	0.53
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.24	0.53
25:CZ:27:LEU:O	25:CZ:27:LEU:HD12	2.09	0.53
1:AA:625:G:H2'	1:AA:626:U:H6	1.73	0.53
36:DA:1718:G:H2'	36:DA:1719:G:C8	2.41	0.53
43:BH:91:GLY:HA3	43:BH:94:TYR:CD2	2.44	0.53
58:DZ:75:ASN:O	58:DZ:84:GLU:HB3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:34:GLU:O	4:CD:35:ARG:HB2	2.08	0.53
36:DA:438:G:H2'	36:DA:440:G:C8	2.44	0.53
36:DA:1952:A:C5	47:DO:22:ILE:HD12	2.44	0.53
1:CA:245:C:O2'	1:CA:246:A:P	2.67	0.53
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.43	0.53
58:BZ:101:PRO:HG2	58:BZ:135:GLU:O	2.09	0.53
58:DZ:48:PHE:O	58:DZ:52:SER:N	2.37	0.53
1:CA:586:C:O2'	1:CA:587:G:H5'	2.08	0.53
36:BA:304:G:C2	36:BA:314:A:C2	2.97	0.53
34:D8:32:LEU:CD1	36:DA:2391:G:H3'	2.35	0.53
28:D2:38:GLN:OE1	28:D2:44:LEU:HD13	2.08	0.53
28:D2:69:ARG:N	28:D2:69:ARG:HD2	2.23	0.53
24:AY:77:TRP:HA	25:AZ:285:ASN:O	2.09	0.53
32:B6:27:LYS:HG3	32:B6:30:THR:CB	2.39	0.53
41:DF:3:GLU:CB	41:DF:24:LEU:HG	2.38	0.53
37:DB:21:G:H2'	37:DB:22:U:H5'	1.91	0.53
19:CS:37:ARG:O	19:CS:70:LYS:HD2	2.08	0.53
19:AS:16:LEU:O	19:AS:20:LEU:N	2.42	0.53
36:DA:1538:G:H2'	36:DA:1539:G:C8	2.43	0.53
51:BS:87:PHE:CG	51:BS:88:ASP:N	2.77	0.53
36:BA:833:U:H2'	36:BA:834:C:C6	2.44	0.53
36:BA:633:A:C2'	36:BA:634:C:H5'	2.38	0.53
48:BP:115:LEU:HG	48:BP:116:GLY:H	1.73	0.53
36:DA:2469:A:H2	36:DA:2481:G:H21	1.55	0.53
54:DV:52:VAL:O	54:DV:52:VAL:HG22	2.09	0.53
40:BE:98:PRO:HD3	40:BE:175:VAL:HG12	1.89	0.53
12:AL:75:HIS:HD2	12:AL:77:LEU:H	1.57	0.53
4:AD:100:ARG:HH21	4:AD:118:ARG:NH1	2.01	0.53
43:DH:44:VAL:HG12	43:DH:45:VAL:H	1.74	0.53
43:DH:52:VAL:CB	43:DH:69:ARG:HD3	2.38	0.53
25:AZ:166:ASP:C	25:AZ:167:GLU:CG	2.77	0.53
1:CA:1064:G:H21	1:CA:1190:G:H2'	1.73	0.53
24:CY:44:G:H4'	24:CY:45:U:OP2	2.08	0.53
1:CA:266:G:H5'	1:CA:268:C:H41	1.74	0.53
58:DZ:145:GLU:HA	58:DZ:145:GLU:OE1	2.09	0.53
36:BA:2875:C:H4'	52:BT:5:ALA:HB2	1.90	0.53
54:BV:57:VAL:HG22	54:BV:58:VAL:N	2.23	0.53
36:DA:2001:A:H4'	36:DA:2689:U:H2'	1.91	0.53
57:DY:90:LEU:HG	57:DY:91:GLU:H	1.72	0.53
39:BD:37:LEU:HD23	39:BD:38:LYS:H	1.74	0.53
36:BA:271(R):G:O2'	36:BA:271(S):G:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:68:C:H2'	24:CY:69:C:H6	1.74	0.53
3:AC:22:TRP:NE1	3:AC:36:ASP:OD2	2.40	0.53
1:AA:1442(B):A:H3'	1:AA:1442(B):A:OP1	2.09	0.53
50:BR:51:LEU:CD2	50:BR:70:LEU:HD11	2.39	0.53
2:CB:155:LEU:HD22	2:CB:157:ARG:O	2.08	0.53
1:CA:1158:C:H2'	1:CA:1181:G:H22	1.74	0.53
1:CA:625:G:H2'	1:CA:626:U:H6	1.72	0.53
39:DD:16:MET:HE1	39:DD:208:LYS:HG2	1.90	0.53
15:AO:2:PRO:O	15:AO:3:ILE:C	2.47	0.53
1:AA:490:G:H2'	1:AA:491:G:C8	2.43	0.53
25:CZ:350:THR:HG22	25:CZ:351:GLY:N	2.24	0.53
1:CA:67:C:OP1	1:CA:199:G:H5"	2.08	0.53
36:DA:16:G:O2'	36:DA:17:G:H5'	2.09	0.53
36:DA:782:A:H5'	36:DA:783:A:C2	2.44	0.53
1:AA:555:C:H2'	1:AA:556:C:C6	2.44	0.53
35:B9:19:ARG:O	35:B9:20:HIS:HB2	2.08	0.53
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.09	0.53
54:DV:79:VAL:O	54:DV:80:GLN:HB2	2.09	0.53
7:AG:141:VAL:O	7:AG:144:MET:HB2	2.08	0.53
1:CA:1193:G:OP2	3:CC:167:TRP:HZ3	1.91	0.53
36:DA:2029:G:H2'	36:DA:2031:A:OP2	2.09	0.53
1:AA:711:G:O2'	1:AA:712:A:H5'	2.09	0.53
1:CA:538:G:O2'	1:CA:539:A:H5'	2.09	0.53
25:AZ:317:GLU:HG3	25:AZ:404:LEU:HD21	1.91	0.53
30:B4:10:VAL:HG23	30:B4:11:PRO:HD2	1.90	0.53
36:DA:1598:C:H5'	56:DX:36:LYS:HD3	1.90	0.53
42:DG:94:LEU:HD13	42:DG:98:ARG:CB	2.39	0.53
42:BG:125:PHE:HD1	42:BG:126:ASP:N	1.94	0.53
57:BY:37:VAL:HG23	57:BY:39:VAL:HG23	1.91	0.53
37:DB:104:U:O2'	37:DB:105:A:H5'	2.09	0.53
32:B6:11:LEU:HD22	32:B6:12:GLU:N	2.21	0.53
47:BO:104:ARG:HE	52:BT:33:LYS:CE	2.22	0.53
19:CS:10:PHE:CZ	19:CS:37:ARG:O	2.62	0.53
24:AY:76:A:OP1	25:AZ:274:ARG:CD	2.57	0.53
55:DW:4:LYS:HD3	55:DW:6:ILE:CD1	2.38	0.53
55:DW:8:ARG:HH11	55:DW:8:ARG:HG2	1.74	0.53
25:AZ:300:ARG:O	25:AZ:302:GLN:N	2.41	0.53
53:DU:88:ILE:HG23	53:DU:90:VAL:CG2	2.38	0.53
51:DS:59:LYS:CG	51:DS:60:GLY:H	2.13	0.53
12:CL:102:ARG:HH12	12:CL:110:VAL:HG22	1.68	0.53
12:CL:110:VAL:N	12:CL:122:THR:HG22	2.20	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2469:A:H2	36:BA:2481:G:H21	1.55	0.53
49:BQ:51:ARG:HG3	49:BQ:51:ARG:NH1	2.24	0.53
10:AJ:54:PHE:CD1	10:AJ:55:LYS:HD3	2.44	0.53
10:CJ:33:GLN:HB2	10:CJ:75:ILE:HD13	1.90	0.53
52:BT:104:ASN:O	52:BT:105:LEU:CB	2.57	0.53
43:BH:124:GLU:HB3	43:BH:126:PRO:HD3	1.89	0.53
2:AB:7:VAL:HG13	2:AB:11:LEU:CD1	2.39	0.53
1:AA:266:G:H5'	1:AA:268:C:H41	1.74	0.53
46:DN:43:THR:HB	46:DN:46:VAL:HG12	1.91	0.53
25:AZ:101:GLY:HA3	25:AZ:210:ILE:CD1	2.39	0.53
46:BN:46:VAL:O	46:BN:47:ALA:CB	2.55	0.53
36:DA:328:U:H4'	57:DY:68:HIS:NE2	2.23	0.53
36:DA:651:G:C2'	36:DA:652:C:H5'	2.38	0.53
54:DV:5:VAL:HG22	54:DV:6:LYS:N	2.24	0.53
36:DA:2572:A:H62	40:DE:145:LYS:CG	2.22	0.53
5:AE:6:PHE:HB3	5:AE:35:GLY:O	2.09	0.53
25:CZ:310:ILE:HG13	25:CZ:381:GLU:HB2	1.91	0.53
5:CE:6:PHE:HB3	5:CE:35:GLY:O	2.09	0.53
5:CE:36:ASP:OD1	5:CE:38:GLN:N	2.42	0.53
52:BT:78:LEU:O	52:BT:79:HIS:CD2	2.61	0.53
12:AL:39:VAL:CG1	12:AL:57:LYS:HB3	2.39	0.53
18:AR:53:ARG:HG3	18:AR:63:GLN:NE2	2.24	0.53
55:DW:59:VAL:HG12	55:DW:59:VAL:O	2.08	0.53
39:DD:77:ALA:HA	39:DD:97:TYR:HA	1.91	0.53
51:BS:39:ILE:HD11	51:BS:73:LEU:HD21	1.90	0.53
36:DA:438:G:H2'	36:DA:440:G:H8	1.74	0.53
5:AE:142:LEU:O	5:AE:143:ARG:HD3	2.08	0.53
36:BA:212:G:O2'	36:BA:213:A:H5'	2.09	0.53
30:D4:37:SER:O	30:D4:38:LYS:HB3	2.09	0.53
5:CE:99:GLY:O	5:CE:117:ASP:HA	2.09	0.53
58:BZ:103:ARG:O	58:BZ:138:GLU:HA	2.09	0.53
36:BA:1417:C:H2'	36:BA:1418:G:O4'	2.09	0.53
25:AZ:340:PRO:HG2	25:AZ:342:PHE:CE1	2.43	0.53
36:BA:644:A:C2	36:BA:2369:A:H1'	2.44	0.53
42:BG:39:ILE:O	42:BG:39:ILE:HG13	2.09	0.53
25:AZ:7:ARG:O	25:AZ:8:THR:CG2	2.57	0.53
1:AA:1202:G:O2'	1:AA:1203:C:H5'	2.09	0.53
32:D6:19:ARG:CD	32:D6:20:ASN:H	2.22	0.53
32:D6:19:ARG:O	32:D6:20:ASN:O	2.27	0.53
36:BA:2312:U:H2'	36:BA:2313:C:H5'	1.89	0.53
42:BG:125:PHE:O	42:BG:126:ASP:O	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:86:MET:HG2	42:DG:86:MET:O	2.09	0.53
36:BA:272(H):C:C3'	36:BA:272(I):U:H5"	2.38	0.53
36:BA:1885:A:H5'	36:BA:1885:A:H8	1.72	0.53
26:B0:50:ASN:HD22	26:B0:63:VAL:CG2	2.14	0.53
50:BR:101:ALA:HB1	55:BW:38:TYR:HE1	1.73	0.53
51:BS:35:ILE:HD11	51:BS:99:LYS:NZ	2.23	0.53
36:BA:1109:C:C2'	36:BA:1110:G:H5'	2.39	0.53
5:AE:11:ILE:HD12	5:AE:31:LEU:CD1	2.38	0.53
42:BG:77:ILE:O	42:BG:77:ILE:HG12	2.09	0.53
11:AK:44:SER:H	11:AK:47:VAL:HG23	1.73	0.53
54:BV:13:ARG:HG3	54:BV:13:ARG:NH1	2.24	0.53
36:DA:1516:C:C2'	36:DA:1517:G:C5'	2.86	0.53
12:AL:110:VAL:N	12:AL:122:THR:HG22	2.23	0.53
4:AD:150:GLU:N	4:AD:150:GLU:OE1	2.42	0.53
36:BA:1479:G:H5'	36:BA:1558:A:H2	1.74	0.53
58:BZ:151:HIS:HA	58:BZ:171:ILE:HG12	1.91	0.53
1:CA:1152:A:OP1	10:CJ:68:HIS:CD2	2.62	0.53
7:CG:37:ASN:HD21	9:CI:40:LEU:HA	1.72	0.53
4:AD:126:ILE:HD12	4:AD:126:ILE:N	2.24	0.53
1:AA:1127:G:H1	1:AA:1145:C:N4	2.07	0.53
25:AZ:87:ASP:HB2	25:AZ:88:TYR:CD1	2.42	0.53
40:DE:61:ARG:CB	40:DE:62:PRO:HD3	2.39	0.53
36:DA:2360:A:O2'	36:DA:2361:A:P	2.67	0.53
36:DA:145:G:C2'	36:DA:146:G:H5"	2.39	0.53
55:BW:11:ARG:HH12	55:BW:98:LYS:HB3	1.74	0.53
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.44	0.53
26:B0:36:ILE:HG13	26:B0:36:ILE:O	2.09	0.53
39:DD:152:GLY:O	39:DD:154:LYS:HG3	2.09	0.53
36:BA:2808:U:O2'	36:BA:2809:A:H5'	2.08	0.53
26:D0:73:GLY:O	26:D0:75:LEU:N	2.41	0.53
57:BY:52:SER:O	57:BY:54:LYS:N	2.39	0.53
36:DA:414:C:O2'	36:DA:415:A:H5'	2.08	0.53
17:CQ:7:THR:O	17:CQ:23:VAL:HG13	2.09	0.53
36:BA:1756:G:H4'	36:BA:1758:G:O4'	2.09	0.53
28:B2:50:ILE:HD12	28:B2:50:ILE:N	2.23	0.53
34:D8:62:LEU:HB3	36:DA:242:G:H5'	1.91	0.53
37:DB:42:C:C6	42:DG:69:ALA:HB2	2.44	0.53
41:DF:24:LEU:O	41:DF:26:ALA:N	2.37	0.53
42:DG:81:LYS:O	42:DG:83:ARG:HG3	2.09	0.53
52:BT:30:VAL:HG22	52:BT:84:GLN:HG3	1.91	0.53
47:DO:104:ARG:NE	52:DT:33:LYS:HD2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:51:VAL:N	26:B0:62:LEU:HD21	2.24	0.53
40:DE:35:GLN:O	40:DE:36:ARG:O	2.28	0.53
40:BE:186:GLY:O	40:BE:187:ALA:HB3	2.09	0.53
51:DS:104:GLY:O	51:DS:106:ARG:N	2.40	0.53
14:CN:12:ARG:HB3	14:CN:12:ARG:HH11	1.73	0.53
5:AE:11:ILE:HD11	5:AE:33:VAL:HG21	1.91	0.53
9:CI:53:VAL:HG13	9:CI:95:LYS:HZ2	1.70	0.53
38:DC:118:ASP:OD2	38:DC:119:VAL:HG13	2.09	0.53
36:DA:671:C:H2'	36:DA:672:C:C6	2.44	0.53
1:CA:1116:C:H2'	1:CA:1117:G:C5'	2.38	0.53
4:AD:150:GLU:CG	4:AD:151:LYS:N	2.72	0.53
1:AA:1190:G:P	3:AC:5:ILE:HD12	2.49	0.53
4:CD:150:GLU:CG	4:CD:151:LYS:N	2.72	0.53
11:CK:26:ASN:O	11:CK:27:ASN:HB2	2.09	0.53
49:DQ:111:GLU:OE1	49:DQ:133:ARG:NH2	2.42	0.53
42:BG:52:ILE:HG12	42:BG:53:LEU:N	2.23	0.53
25:AZ:195:TRP:C	25:AZ:197:ASP:N	2.62	0.53
36:BA:106:C:H2'	36:BA:107:C:C6	2.42	0.53
36:BA:2840:C:H5"	50:BR:53:HIS:HD2	1.74	0.53
57:DY:43:ASN:CB	57:DY:64:GLU:HA	2.38	0.53
57:DY:36:ALA:HB1	57:DY:67:LEU:C	2.29	0.53
48:DP:112:LEU:HD22	48:DP:113:LYS:N	2.23	0.53
36:BA:1495:A:N3	36:BA:1496:A:C2	2.77	0.53
54:DV:72:VAL:HG23	54:DV:72:VAL:O	2.09	0.53
36:DA:2657:A:H2	36:DA:2664:G:H21	1.57	0.53
35:D9:29:ASN:N	35:D9:29:ASN:HD22	2.06	0.53
36:BA:67:U:H2'	36:BA:68:G:H8	1.74	0.53
9:AI:11:LYS:O	9:AI:12:GLU:HB2	2.09	0.53
41:DF:113:ALA:HB2	41:DF:183:VAL:HG12	1.90	0.53
36:DA:2175:C:H2'	36:DA:2176:A:C8	2.43	0.53
1:CA:542:G:H5'	4:CD:41:GLY:HA3	1.91	0.53
36:DA:877:U:C2'	36:DA:878:A:H5"	2.39	0.53
36:BA:201:C:C2'	36:BA:202:U:H5'	2.38	0.53
25:AZ:332:THR:O	25:AZ:363:MET:HE2	2.09	0.53
38:BC:75:LEU:HG	38:BC:112:ALA:O	2.09	0.53
55:DW:11:ARG:HH12	55:DW:98:LYS:HB3	1.74	0.53
26:B0:36:ILE:HD11	36:BA:2355:C:C4'	2.38	0.53
36:BA:438:G:H2'	36:BA:440:G:C8	2.43	0.53
36:DA:1417:C:H2'	36:DA:1418:G:O4'	2.09	0.53
5:CE:90:VAL:C	5:CE:91:LEU:HD12	2.29	0.53
48:DP:100:LEU:O	48:DP:103:ALA:HB3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:955:U:O2'	1:CA:956:U:H5'	2.09	0.53
20:AT:64:ASP:OD1	20:AT:81:LYS:HD2	2.09	0.53
1:AA:332:G:O2'	1:AA:333:G:H5'	2.08	0.53
25:CZ:340:PRO:HG2	25:CZ:342:PHE:CE1	2.43	0.53
57:DY:6:HIS:CD2	57:DY:6:HIS:H	2.26	0.52
25:AZ:272:MET:HB2	25:AZ:277:LEU:HD23	1.91	0.52
32:B6:27:LYS:O	32:B6:29:ASN:N	2.42	0.52
34:D8:11:LYS:HZ2	34:D8:63:PRO:HG3	1.74	0.52
42:DG:136:ARG:HH11	42:DG:136:ARG:HB3	1.73	0.52
52:BT:28:VAL:HG11	52:BT:46:GLU:CG	2.35	0.52
36:DA:1019:U:H2'	36:DA:1021:A:C2	2.43	0.52
40:BE:38:THR:HG22	40:BE:40:GLU:N	2.10	0.52
32:B6:14:THR:HG23	32:B6:16:CYS:H	1.74	0.52
41:BF:39:TRP:CB	41:BF:101:LEU:HD22	2.39	0.52
37:DB:7:G:H4'	51:DS:29:PHE:CD2	2.44	0.52
36:BA:1188:U:C2'	36:BA:1189:A:H5'	2.39	0.52
58:DZ:115:GLY:HA2	58:DZ:177:PRO:CD	2.34	0.52
58:BZ:17:ALA:O	58:BZ:20:ARG:HG2	2.09	0.52
25:CZ:301:GLY:HA3	25:CZ:347:THR:CG2	2.38	0.52
36:DA:2134:A:H62	36:DA:2157:G:H1'	1.73	0.52
38:BC:100:ILE:O	38:BC:104:LEU:HD23	2.09	0.52
36:BA:1558:A:O2'	36:BA:1559:G:OP2	2.25	0.52
38:DC:40:THR:HA	38:DC:177:LYS:HA	1.90	0.52
33:D7:22:MET:HA	33:D7:22:MET:HE2	1.90	0.52
36:BA:1880:C:H2'	36:BA:1881:C:H5"	1.89	0.52
12:CL:45:PRO:HD3	12:CL:51:ALA:O	2.09	0.52
11:CK:57:THR:HG22	11:CK:60:ALA:CB	2.38	0.52
58:BZ:139:VAL:HG11	58:BZ:150:LEU:HD11	1.92	0.52
16:CP:9:PHE:CE2	16:CP:18:ARG:CZ	2.92	0.52
39:BD:142:VAL:HG22	39:BD:143:HIS:N	2.24	0.52
36:BA:1718:G:H2'	36:BA:1719:G:C8	2.43	0.52
5:AE:90:VAL:C	5:AE:91:LEU:HD12	2.28	0.52
1:AA:737:A:H2'	1:AA:738:C:H6	1.73	0.52
6:AF:69:GLU:O	6:AF:72:VAL:HG12	2.08	0.52
43:DH:91:GLY:HA3	43:DH:94:TYR:CD2	2.43	0.52
36:BA:877:U:C2'	36:BA:878:A:H5"	2.38	0.52
3:AC:173:VAL:O	3:AC:175:LEU:HD12	2.09	0.52
8:AH:97:VAL:HG21	8:AH:128:GLY:HA2	1.91	0.52
12:AL:69:TYR:O	12:AL:71:PRO:HD3	2.10	0.52
20:AT:24:LEU:HD12	20:AT:24:LEU:O	2.09	0.52
24:AY:75:C:O2	24:AY:75:C:O4'	2.26	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:54:VAL:C	56:BX:55:ASN:HD22	2.12	0.52
13:CM:2:ALA:HB1	13:CM:4:ILE:HD11	1.90	0.52
13:CM:6:GLY:HA3	13:CM:67:GLU:OE2	2.09	0.52
57:DY:85:VAL:O	57:DY:86:ARG:HB2	2.08	0.52
31:B5:4:HIS:HB3	36:BA:2577:A:H1'	1.91	0.52
34:B8:11:LYS:HZ2	34:B8:63:PRO:HG3	1.71	0.52
22:CV:5:G:H1	22:CV:68:C:H42	1.57	0.52
52:BT:53:ARG:HH11	52:BT:53:ARG:CB	2.12	0.52
46:BN:58:ASP:C	46:BN:60:ILE:N	2.61	0.52
55:BW:6:ILE:HG12	55:BW:104:THR:HG22	1.90	0.52
58:DZ:124:ILE:HD11	58:DZ:137:ILE:HG13	1.91	0.52
48:DP:30:THR:HG23	48:DP:31:ALA:H	1.74	0.52
1:CA:963:G:N2	10:CJ:55:LYS:NZ	2.57	0.52
58:BZ:23:LYS:O	58:BZ:24:LEU:CB	2.53	0.52
20:AT:45:GLN:CB	20:AT:91:LEU:HD13	2.36	0.52
50:DR:103:ARG:O	50:DR:111:LEU:HD11	2.10	0.52
4:AD:108:LEU:HB3	4:AD:110:PHE:HE1	1.75	0.52
4:CD:150:GLU:N	4:CD:150:GLU:OE1	2.42	0.52
25:CZ:101:GLY:HA3	25:CZ:210:ILE:HD12	1.90	0.52
36:DA:1682:G:H2'	36:DA:1683:C:C6	2.44	0.52
9:CI:40:LEU:HD11	9:CI:70:LYS:CG	2.37	0.52
29:B3:54:VAL:HG12	29:B3:55:ARG:N	2.24	0.52
54:BV:5:VAL:HG22	54:BV:6:LYS:N	2.24	0.52
48:DP:81:GLN:HE22	48:DP:106:LEU:HA	1.73	0.52
25:CZ:219:LYS:HB3	25:CZ:244:ARG:CD	2.37	0.52
36:DA:1993:U:H4'	40:DE:128:SER:HB3	1.92	0.52
12:CL:8:ASN:HD22	17:CQ:34:LYS:HZ1	1.57	0.52
37:BB:55:U:H2'	37:BB:56:G:C8	2.44	0.52
3:AC:35:GLU:HG2	3:AC:59:ARG:HH22	1.75	0.52
36:BA:519:U:H2'	36:BA:520:G:C8	2.43	0.52
6:CF:43:LEU:HD22	6:CF:43:LEU:N	2.24	0.52
47:DO:94:ARG:HG2	47:DO:94:ARG:NH1	2.22	0.52
1:CA:261:U:O2	1:CA:263:A:C8	2.62	0.52
46:DN:55:VAL:HG22	46:DN:56:ASN:N	2.24	0.52
1:CA:542:G:P	4:CD:10:ARG:HH22	2.31	0.52
26:D0:7:LEU:HD21	49:DQ:81:VAL:HG13	1.91	0.52
36:DA:521:G:H2'	36:DA:522:G:C8	2.43	0.52
40:BE:108:SER:O	40:BE:162:ALA:HA	2.09	0.52
47:BO:98:VAL:HG13	47:BO:118:ALA:HA	1.91	0.52
30:B4:37:SER:O	30:B4:38:LYS:HB3	2.10	0.52
42:DG:34:LEU:HA	42:DG:161:THR:HA	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:994:C:OP2	53:BU:54:LYS:NZ	2.43	0.52
7:AG:132:GLY:O	7:AG:136:LYS:HG2	2.10	0.52
1:AA:757:U:H2'	1:AA:758:G:O4'	2.09	0.52
38:DC:166:ASP:O	38:DC:168:THR:N	2.42	0.52
49:DQ:35:VAL:HG12	49:DQ:130:LYS:O	2.09	0.52
25:CZ:317:GLU:HG3	25:CZ:404:LEU:HD21	1.91	0.52
28:D2:32:LEU:O	28:D2:35:LEU:HB3	2.09	0.52
48:BP:58:THR:HB	48:BP:61:ARG:NH2	2.20	0.52
2:CB:164:VAL:HG12	2:CB:165:VAL:N	2.25	0.52
32:B6:19:ARG:CD	32:B6:20:ASN:H	2.22	0.52
41:DF:192:LEU:HD23	41:DF:193:VAL:N	2.24	0.52
42:DG:72:ARG:HA	42:DG:87:PRO:HD2	1.90	0.52
32:B6:22:ALA:C	32:B6:23:THR:HG23	2.28	0.52
43:DH:83:TYR:HB3	43:DH:135:GLY:O	2.10	0.52
25:AZ:269:GLY:O	25:AZ:288:VAL:HA	2.10	0.52
48:DP:65:ARG:O	48:DP:67:MET:N	2.42	0.52
36:DA:1311:G:N2	36:DA:1603:A:H62	2.08	0.52
27:D1:75:GLU:C	27:D1:77:ALA:N	2.62	0.52
36:BA:2711:A:OP1	36:BA:2712(A):A:OP1	2.26	0.52
36:BA:996:A:O3'	53:BU:92:ARG:HG2	2.09	0.52
17:AQ:59:ILE:HG21	17:AQ:71:PHE:HB3	1.89	0.52
43:BH:42:ARG:HG2	43:BH:43:VAL:N	2.22	0.52
52:DT:106:SER:O	52:DT:107:ASP:HB3	2.09	0.52
38:BC:181:PRO:HB2	38:BC:183:GLU:OE2	2.09	0.52
51:BS:13:ARG:CG	51:BS:14:VAL:N	2.68	0.52
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.24	0.52
9:CI:40:LEU:O	9:CI:42:ARG:N	2.39	0.52
40:DE:24:THR:HG21	40:DE:188:VAL:HG12	1.90	0.52
1:CA:1036:G:H5"	1:CA:1037:C:H5	1.71	0.52
36:BA:328:U:H4'	57:BY:68:HIS:NE2	2.25	0.52
36:DA:479:A:HO2'	36:DA:481:G:H8	1.58	0.52
40:DE:79:ARG:HH11	40:DE:79:ARG:CG	2.22	0.52
39:DD:73:VAL:HG13	39:DD:120:GLY:CA	2.38	0.52
1:CA:1047:G:H5"	14:CN:4:LYS:HG2	1.91	0.52
52:DT:123:GLN:HA	52:DT:126:ALA:HB3	1.92	0.52
41:BF:185:ASP:O	41:BF:188:ARG:HG2	2.09	0.52
36:BA:267:C:H2'	36:BA:268:C:C6	2.43	0.52
1:AA:1158:C:C2'	1:AA:1158:C:O2	2.57	0.52
25:CZ:185:ASN:ND2	25:CZ:185:ASN:O	2.42	0.52
1:AA:333:G:O2'	1:AA:334:C:H5'	2.10	0.52
36:BA:1642:G:O2'	36:BA:1643:G:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1651:G:C2	36:DA:2007:C:C2	2.97	0.52
3:CC:131:ARG:HH11	3:CC:166:GLU:HG3	1.74	0.52
36:DA:2746:U:H2'	36:DA:2747:G:O4'	2.10	0.52
39:DD:276:LYS:HA	39:DD:276:LYS:HE2	1.91	0.52
36:DA:2239:G:H5'	39:DD:251:GLY:HA3	1.92	0.52
39:DD:81:ALA:HA	39:DD:113:VAL:HG22	1.92	0.52
39:BD:27:THR:HG21	39:BD:81:ALA:CB	2.40	0.52
28:D2:46:GLN:H	28:D2:50:ILE:HD13	1.75	0.52
28:D2:59:ARG:HG3	28:D2:60:LEU:H	1.73	0.52
28:D2:25:VAL:HB	28:D2:61:LEU:HD21	1.90	0.52
57:DY:77:PRO:O	57:DY:78:ALA:HB2	2.09	0.52
32:D6:22:ALA:C	32:D6:23:THR:HG23	2.28	0.52
32:B6:45:LYS:O	32:B6:46:HIS:CB	2.58	0.52
36:BA:2308:G:O6	36:BA:2310:A:H2'	2.08	0.52
36:BA:2312:U:O3'	42:BG:71:THR:OG1	2.28	0.52
42:BG:78:SER:C	42:BG:80:PHE:H	2.13	0.52
28:B2:63:VAL:O	28:B2:66:GLU:HG2	2.08	0.52
36:DA:1885:A:H5'	36:DA:1885:A:H8	1.75	0.52
2:CB:28:PHE:O	2:CB:32:ILE:HG22	2.09	0.52
1:AA:858:G:C6	1:AA:869:G:C8	2.96	0.52
34:B8:15:LYS:CB	34:B8:46:ARG:HH22	2.23	0.52
58:BZ:127:LYS:O	58:BZ:127:LYS:HG3	2.08	0.52
39:DD:241:PRO:O	39:DD:242:ARG:CB	2.57	0.52
36:BA:1246:A:OP1	48:BP:16:ARG:NH2	2.42	0.52
54:DV:19:LYS:HZ1	54:DV:20:LEU:H	1.57	0.52
54:DV:21:ARG:H	54:DV:21:ARG:HD3	1.74	0.52
10:AJ:33:GLN:HB2	10:AJ:75:ILE:HD13	1.91	0.52
25:AZ:164:PRO:O	25:AZ:168:VAL:HG23	2.10	0.52
10:AJ:61:GLU:OE2	14:AN:49:HIS:HE1	1.92	0.52
2:CB:114:ARG:HD2	2:CB:141:GLU:OE2	2.09	0.52
46:DN:89:LYS:O	46:DN:93:THR:HG22	2.09	0.52
46:BN:21:LYS:HD3	46:BN:22:THR:N	2.24	0.52
10:CJ:4:ILE:HB	10:CJ:74:ILE:CD1	2.36	0.52
53:BU:3:ARG:HH11	53:BU:3:ARG:CG	2.22	0.52
29:D3:54:VAL:HG12	29:D3:55:ARG:N	2.24	0.52
1:CA:714:G:H2'	1:CA:715:A:C8	2.45	0.52
40:BE:79:ARG:HH11	40:BE:79:ARG:CG	2.22	0.52
48:BP:46:LYS:CB	48:BP:52:GLU:HG2	2.38	0.52
36:BA:832:G:O2'	48:BP:52:GLU:HB3	2.09	0.52
58:DZ:10:ARG:HB3	58:DZ:36:LYS:HG3	1.91	0.52
47:BO:107:ARG:HD3	52:BT:36:GLU:H	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:106:SER:O	52:BT:107:ASP:HB3	2.10	0.52
1:AA:1125:U:C3'	1:AA:1125:U:C6	2.91	0.52
7:CG:113:GLU:CG	7:CG:119:ARG:HB3	2.38	0.52
55:DW:22:ASP:HA	55:DW:25:ARG:NH1	2.24	0.52
36:BA:2688:U:H3'	36:BA:2688:U:O2	2.10	0.52
36:BA:2869:G:H2'	36:BA:2870:C:C6	2.44	0.52
39:BD:111:LEU:HD23	39:BD:115:GLN:OE1	2.10	0.52
25:AZ:224:PRO:HA	25:AZ:303:VAL:HG12	1.91	0.52
1:CA:542:G:H2'	1:CA:543:C:C6	2.43	0.52
36:DA:1773:A:H2'	36:DA:1774:C:H5'	1.91	0.52
36:BA:1651:G:C2	36:BA:2007:C:C2	2.98	0.52
36:BA:2562:U:H4'	47:BO:25:LEU:HD21	1.91	0.52
2:AB:61:LEU:HD23	2:AB:68:ILE:HD11	1.92	0.52
1:CA:933:G:OP2	7:CG:3:ARG:HB3	2.10	0.52
45:BK:55:UNK:HA	45:BK:69:UNK:HA	1.92	0.52
27:B1:49:VAL:CG1	27:B1:60:PHE:HB2	2.40	0.52
25:AZ:124:ARG:HG3	25:AZ:124:ARG:HH11	1.74	0.52
3:AC:90:GLU:O	3:AC:93:LYS:HB3	2.10	0.52
14:CN:26:ARG:HH11	14:CN:47:LEU:HD21	1.73	0.52
36:DA:1688:U:H1'	36:DA:1701:A:C6	2.45	0.52
15:CO:17:ARG:HG3	15:CO:17:ARG:NH1	2.23	0.52
32:D6:27:LYS:HG3	32:D6:30:THR:HB	1.92	0.52
57:DY:37:VAL:HG23	57:DY:39:VAL:HG23	1.91	0.52
34:B8:61:LEU:N	34:B8:63:PRO:HD2	2.24	0.52
36:DA:2099:U:H2'	36:DA:2100:G:C8	2.44	0.52
36:DA:2184:G:H2'	36:DA:2185:C:O4'	2.08	0.52
37:DB:40:U:O2	37:DB:43:C:H5"	2.09	0.52
22:CV:68:C:C2'	22:CV:69:G:H5'	2.39	0.52
58:DZ:99:TYR:HB3	58:DZ:123:ASP:OD2	2.10	0.52
36:DA:2312:U:OP1	42:DG:73:ALA:HA	2.08	0.52
27:B1:70:VAL:O	27:B1:74:VAL:HG23	2.10	0.52
52:BT:31:SER:OG	52:BT:32:TYR:CE1	2.62	0.52
47:BO:104:ARG:NH2	52:BT:33:LYS:HE2	2.12	0.52
52:BT:88:ILE:O	52:BT:89:VAL:O	2.28	0.52
46:BN:91:LEU:CD2	46:BN:98:VAL:HG21	2.39	0.52
41:DF:138:GLU:O	41:DF:142:TRP:HB2	2.09	0.52
25:AZ:270:VAL:HG22	25:AZ:288:VAL:HG22	1.90	0.52
37:BB:48:A:H4'	51:BS:95:HIS:HD2	1.73	0.52
36:DA:1109:C:H2'	36:DA:1110:G:H5'	1.90	0.52
36:DA:940:G:H2'	36:DA:941:A:O4'	2.09	0.52
9:CI:85:LEU:C	9:CI:87:GLN:H	2.12	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:277:LEU:CD1	25:CZ:280:GLY:N	2.68	0.52
54:BV:19:LYS:HZ1	54:BV:20:LEU:H	1.56	0.52
13:AM:12:ASN:N	13:AM:12:ASN:HD22	2.02	0.52
36:DA:2127:G:O2'	36:DA:2128:C:H5'	2.09	0.52
38:DC:10:LEU:CD1	38:DC:32:LEU:HA	2.38	0.52
12:CL:75:HIS:HD2	12:CL:77:LEU:H	1.58	0.52
49:BQ:56:ARG:CG	49:BQ:56:ARG:NH1	2.67	0.52
48:DP:41:ARG:CB	48:DP:41:ARG:NH1	2.73	0.52
2:CB:141:GLU:O	2:CB:145:LEU:HD23	2.09	0.52
2:CB:7:VAL:HG13	2:CB:11:LEU:CD1	2.39	0.52
1:AA:261:U:O2	1:AA:263:A:C8	2.62	0.52
29:B3:7:LYS:O	29:B3:54:VAL:HA	2.10	0.52
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.92	0.52
22:AW:5:G:C6	22:AW:6:G:C5	2.97	0.52
52:BT:94:ALA:C	52:BT:96:ARG:H	2.13	0.52
36:BA:2358:G:H2'	36:BA:2359:C:H6	1.75	0.52
12:CL:51:ALA:C	12:CL:52:LEU:HD22	2.30	0.52
29:B3:31:LEU:C	29:B3:33:GLN:H	2.13	0.52
37:DB:56:G:O2'	37:DB:57:A:OP2	2.25	0.52
36:DA:709:U:H2'	36:DA:710:G:H8	1.73	0.52
1:CA:1141:C:O2'	1:CA:1142:G:H5'	2.10	0.52
36:BA:83:G:O2'	36:BA:84:A:C8	2.58	0.52
14:CN:21:TYR:N	14:CN:21:TYR:CD1	2.78	0.52
38:BC:214:VAL:HG23	38:BC:224:ILE:HD13	1.90	0.52
36:BA:2262:U:H4'	36:BA:2328:A:C2	2.44	0.52
1:AA:946:A:H2'	1:AA:947:G:H8	1.73	0.52
2:AB:87:ARG:HH12	2:AB:223:ILE:HD11	1.75	0.52
2:AB:80:ILE:CD1	2:AB:80:ILE:H	2.23	0.52
49:BQ:21:THR:O	49:BQ:22:LYS:HB3	2.07	0.52
36:BA:703:U:H2'	36:BA:704:G:H5'	1.92	0.52
42:DG:165:THR:HB	42:DG:167:GLU:OE1	2.10	0.52
35:B9:3:VAL:HG21	36:BA:2539:C:H4'	1.91	0.52
51:DS:39:ILE:HD11	51:DS:73:LEU:HD21	1.91	0.52
1:AA:66:G:H4'	1:AA:173:U:C5	2.44	0.52
36:BA:1411:C:H2'	36:BA:1412:A:H8	1.75	0.52
1:CA:269:C:H2'	1:CA:270:A:H8	1.74	0.52
41:BF:50:SER:HB2	41:BF:94:PRO:HD3	1.91	0.52
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.92	0.52
2:CB:33:TYR:HB2	2:CB:43:ASP:HB2	1.92	0.52
8:AH:6:ILE:N	8:AH:6:ILE:HD12	2.24	0.52
1:CA:521:G:H4'	12:CL:73:GLU:HG3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:27:LYS:O	32:D6:29:ASN:N	2.42	0.52
28:D2:35:LEU:HD23	28:D2:53:LEU:CD1	2.35	0.52
57:DY:86:ARG:HH21	57:DY:95:LYS:HZ3	1.56	0.52
54:DV:62:LEU:N	54:DV:62:LEU:HD22	2.24	0.52
36:DA:2185:C:C2'	36:DA:2186:G:H5'	2.36	0.52
31:D5:4:HIS:HB3	36:DA:2577:A:H1'	1.90	0.52
57:BY:10:GLY:C	57:BY:27:VAL:HG22	2.30	0.52
14:CN:32:SER:O	14:CN:40:CYS:HA	2.09	0.52
43:BH:155:SER:O	43:BH:157:TYR:N	2.35	0.52
26:D0:10:THR:HG22	26:D0:11:ARG:N	2.24	0.52
46:DN:91:LEU:CD2	46:DN:98:VAL:HG21	2.39	0.52
49:BQ:140:ALA:HB1	58:BZ:99:TYR:CZ	2.45	0.52
40:BE:50:GLY:HA2	40:BE:78:LEU:HB3	1.90	0.52
1:AA:367:U:C5'	25:AZ:291:ARG:NE	2.62	0.52
9:CI:4:TYR:HD2	9:CI:87:GLN:HB3	1.70	0.52
42:BG:133:LEU:CD1	42:BG:157:ILE:HD12	2.35	0.52
54:DV:19:LYS:HA	54:DV:19:LYS:HE2	1.89	0.52
48:BP:84:ASN:C	48:BP:86:LYS:N	2.61	0.52
18:AR:31:LEU:H	18:AR:31:LEU:HD23	1.74	0.52
20:CT:45:GLN:NE2	20:CT:46:GLU:HG3	2.21	0.52
11:CK:44:SER:O	11:CK:47:VAL:HG23	2.09	0.52
36:DA:1112:G:O2'	36:DA:1113:U:H5'	2.10	0.52
1:CA:1116:C:C2'	1:CA:1117:G:H5"	2.39	0.52
36:BA:779:U:OP1	39:BD:49:ILE:HG13	2.10	0.52
4:CD:150:GLU:CD	4:CD:151:LYS:N	2.59	0.52
34:B8:51:ALA:N	34:B8:53:PRO:HD2	2.25	0.52
1:CA:255:G:O6	1:CA:266:G:O6	2.28	0.52
9:AI:43:ALA:O	9:AI:45:ALA:N	2.43	0.52
34:D8:50:LEU:C	34:D8:52:LYS:H	2.11	0.52
41:DF:87:GLY:O	41:DF:88:VAL:HG12	2.10	0.52
27:B1:30:VAL:HG23	27:B1:31:GLY:N	2.25	0.52
1:CA:1434:A:H2'	1:CA:1435:G:O4'	2.08	0.52
38:DC:40:THR:HG22	38:DC:177:LYS:CE	2.40	0.52
58:DZ:155:LEU:CD2	58:DZ:155:LEU:H	2.19	0.52
36:DA:2464:C:O2'	36:DA:2465:C:H6	1.89	0.52
36:DA:652:C:HO2'	36:DA:653:A:P	2.32	0.52
39:BD:24:ILE:HD13	39:BD:24:ILE:C	2.29	0.52
58:DZ:27:VAL:HG22	58:DZ:28:MET:H	1.75	0.52
36:DA:992:C:O3'	54:DV:72:VAL:HG11	2.09	0.52
37:BB:56:G:H4'	37:BB:57:A:O5'	2.10	0.52
39:BD:132:PRO:HD2	39:BD:135:PHE:HD2	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:61:ILE:O	57:BY:62:GLU:HB2	2.10	0.52
36:DA:832:G:O2'	48:DP:52:GLU:HB3	2.10	0.52
18:CR:53:ARG:HG3	18:CR:63:GLN:NE2	2.25	0.52
36:DA:1771:C:C1'	36:DA:1786:A:C8	2.93	0.52
18:AR:29:PHE:HD1	18:AR:29:PHE:N	2.08	0.52
36:DA:2153:G:H2'	36:DA:2154:G:H8	1.75	0.52
36:DA:221:A:O2'	36:DA:222:A:OP2	2.27	0.52
36:BA:2386:C:H2'	36:BA:2387:U:C6	2.45	0.52
36:BA:2168:G:N2	36:BA:2170:A:H3'	2.25	0.52
36:DA:1103:A:H5'	36:DA:1104:C:OP2	2.10	0.52
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HG3	1.92	0.52
11:AK:61:ALA:HB2	11:AK:90:GLY:HA3	1.92	0.52
1:AA:402:G:O2'	1:AA:403:C:H5'	2.10	0.52
28:B2:24:LEU:HD23	28:B2:24:LEU:C	2.30	0.52
8:CH:17:THR:HB	8:CH:78:GLN:OE1	2.10	0.52
25:CZ:317:GLU:HA	25:CZ:370:PHE:O	2.10	0.52
28:D2:48:HIS:HA	36:DA:96:G:P	2.50	0.52
28:D2:51:ARG:CZ	36:DA:94(A):G:H21	2.23	0.52
1:CA:1039:C:H2'	1:CA:1040:U:C6	2.44	0.52
36:BA:2392:A:H8	48:BP:60:MET:HG2	1.74	0.52
31:D5:3:LYS:H	31:D5:3:LYS:CD	2.18	0.52
42:DG:97:ASP:O	42:DG:101:ILE:HG13	2.10	0.52
42:DG:171:ALA:O	42:DG:175:LEU:HG	2.10	0.52
36:BA:2315:G:N3	42:BG:128:ARG:HG3	2.25	0.52
22:CV:4:C:C3'	22:CV:5:G:H5"	2.40	0.52
37:DB:105:A:H2'	37:DB:106:G:O4'	2.09	0.52
52:BT:22:PHE:HE2	52:BT:85:LYS:HZ1	1.57	0.52
2:AB:164:VAL:HG12	2:AB:165:VAL:N	2.25	0.52
52:BT:53:ARG:O	52:BT:59:THR:HB	2.10	0.52
41:BF:133:ASN:HB2	41:BF:138:GLU:OE2	2.09	0.52
4:AD:9:CYS:SG	4:AD:26:CYS:SG	3.07	0.52
58:BZ:124:ILE:O	58:BZ:124:ILE:HG13	2.10	0.52
58:BZ:163:LEU:CG	58:BZ:165:VAL:HG13	2.40	0.52
10:AJ:40:LEU:HG	10:AJ:69:ASN:HB2	1.91	0.52
48:DP:23:PRO:HB2	48:DP:33:ARG:HD2	1.91	0.52
25:AZ:324:LYS:O	25:AZ:325:LYS:C	2.48	0.52
58:BZ:5:LEU:HD11	58:BZ:39:VAL:HB	1.91	0.52
36:DA:1827:C:O2'	36:DA:1828:G:H5'	2.10	0.52
9:CI:49:PRO:O	9:CI:53:VAL:HG22	2.10	0.52
11:CK:44:SER:H	11:CK:47:VAL:HG23	1.74	0.52
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:150:GLU:CD	4:AD:151:LYS:N	2.59	0.52
36:BA:1131:G:H21	46:BN:73:THR:CG2	2.22	0.52
8:CH:44:PHE:CE2	8:CH:109:ILE:HG21	2.44	0.52
36:BA:2110:G:H22	36:BA:2178:C:H5	1.55	0.52
51:BS:14:VAL:O	51:BS:15:ARG:HG3	2.10	0.52
46:DN:43:THR:HB	46:DN:46:VAL:CG1	2.40	0.52
13:CM:3:ARG:HH21	13:CM:7:VAL:HG13	1.71	0.52
36:BA:1403:C:H5"	36:BA:1471:A:C1'	2.39	0.52
11:AK:27:ASN:HD21	11:AK:45:GLY:H	1.57	0.52
36:DA:2464:C:O2'	36:DA:2465:C:O5'	2.28	0.52
12:AL:51:ALA:C	12:AL:52:LEU:HD22	2.30	0.52
25:CZ:68:VAL:O	25:CZ:69:GLU:HB3	2.09	0.52
5:AE:6:PHE:HD2	5:AE:36:ASP:HB3	1.74	0.52
16:CP:43:LYS:HA	16:CP:48:TRP:CB	2.40	0.52
27:B1:82:LEU:HD12	27:B1:83:GLU:H	1.74	0.52
48:BP:122:PRO:HB3	48:BP:141:ALA:HB3	1.91	0.52
36:DA:852:G:H2'	36:DA:853:G:H8	1.74	0.52
54:BV:72:VAL:HG23	54:BV:72:VAL:O	2.10	0.52
6:AF:22:GLU:O	6:AF:25:ILE:HG22	2.10	0.52
43:DH:105:LEU:N	43:DH:105:LEU:HD23	2.24	0.52
16:CP:8:ARG:C	16:CP:9:PHE:HD1	2.13	0.52
41:DF:185:ASP:O	41:DF:188:ARG:HG2	2.10	0.52
1:CA:369:C:H5'	1:CA:369:C:C6	2.45	0.52
41:BF:139:PHE:CB	41:BF:166:ALA:HB1	2.40	0.52
26:D0:36:ILE:HD11	36:DA:2355:C:C4'	2.40	0.52
3:AC:157:ILE:CD1	3:AC:166:GLU:HB2	2.40	0.52
9:CI:83:ARG:O	9:CI:86:VAL:HG12	2.09	0.52
10:AJ:45:ARG:NE	14:AN:36:PHE:CD2	2.78	0.52
36:DA:615:G:OP2	41:DF:40:GLN:HG2	2.10	0.52
36:DA:644:A:C2	36:DA:2369:A:H1'	2.44	0.52
2:AB:33:TYR:HB2	2:AB:43:ASP:HB2	1.90	0.52
17:AQ:82:MET:O	17:AQ:86:GLU:HG2	2.10	0.52
36:DA:2195:C:O2'	36:DA:2196:C:H5'	2.10	0.52
36:DA:1163:G:O2'	36:DA:1164:G:H5'	2.10	0.52
9:AI:83:ARG:O	9:AI:86:VAL:HG12	2.10	0.52
28:B2:16:LEU:O	28:B2:20:GLU:HB3	2.10	0.52
36:BA:1751:C:O2'	36:BA:1752:C:H5'	2.10	0.52
38:BC:199:HIS:O	38:BC:201:PRO:HD3	2.10	0.52
36:DA:373:U:H2'	36:DA:374:A:H8	1.74	0.52
1:CA:1327:C:O2'	1:CA:1328:C:H5'	2.10	0.52
9:CI:10:ARG:HD3	9:CI:10:ARG:C	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1315:C:H2'	36:BA:1316:U:H6	1.75	0.52
7:AG:69:VAL:HG21	7:AG:104:LEU:CD1	2.39	0.52
25:CZ:356:PRO:HB2	25:CZ:359:VAL:HG21	1.92	0.52
30:B4:7:PRO:HD2	42:BG:65:GLY:O	2.09	0.52
42:BG:93:THR:O	42:BG:94:LEU:HD23	2.09	0.52
34:B8:61:LEU:CD2	36:BA:593:G:H4'	2.40	0.52
32:B6:30:THR:HG22	32:B6:31:PRO:CD	2.21	0.52
32:B6:20:ASN:C	32:B6:21:TYR:CG	2.83	0.52
41:BF:192:LEU:CD2	41:BF:194:MET:HG3	2.27	0.52
58:DZ:55:HIS:O	58:DZ:57:ILE:HD12	2.10	0.52
40:DE:55:ASN:O	40:DE:56:PRO:C	2.48	0.52
28:B2:18:PRO:HG3	28:B2:72:ALA:HA	1.92	0.52
2:CB:42:ILE:HD13	2:CB:203:GLY:HA2	1.91	0.52
46:BN:91:LEU:HD23	46:BN:98:VAL:HG21	1.91	0.52
36:BA:623:G:H2'	36:BA:624:C:C6	2.45	0.52
26:D0:51:VAL:N	26:D0:62:LEU:HD21	2.25	0.52
55:DW:8:ARG:NH1	55:DW:8:ARG:HG2	2.25	0.52
48:BP:24:GLY:HA3	48:BP:33:ARG:NH1	2.24	0.52
36:DA:1047:G:C2	36:DA:1110:G:H2'	2.45	0.52
25:AZ:126:VAL:HG13	61:AZ:502:KIR:H471	1.91	0.52
40:BE:3:GLY:N	40:BE:81:ILE:HG21	2.25	0.52
12:CL:17:LYS:HD3	12:CL:18:VAL:H	1.75	0.52
36:BA:1478:G:HO2'	36:BA:1558:A:H2	1.58	0.52
13:AM:92:HIS:CE1	13:AM:98:VAL:HG21	2.44	0.52
53:DU:59:ARG:O	53:DU:60:LEU:C	2.48	0.52
1:AA:1036:G:H5"	1:AA:1037:C:H5	1.71	0.52
49:DQ:21:THR:OG1	49:DQ:99:PRO:O	2.27	0.52
15:AO:26:GLU:HB3	15:AO:81:LEU:HD23	1.91	0.52
58:DZ:27:VAL:HG22	58:DZ:28:MET:N	2.25	0.52
36:DA:195:A:H5"	36:DA:196:A:OP2	2.10	0.52
13:AM:97:PRO:N	13:AM:110:ARG:HD3	2.24	0.52
40:DE:179:GLU:O	40:DE:180:ASN:HB2	2.09	0.52
36:DA:1331:A:H2'	36:DA:1333:C:C5	2.45	0.52
36:BA:814:C:H2'	36:BA:815:C:C6	2.44	0.52
13:CM:116:THR:O	13:CM:117:VAL:C	2.49	0.52
38:DC:72:VAL:CG1	38:DC:157:LYS:HA	2.40	0.52
39:BD:109:ASP:HB2	39:BD:197:GLY:CA	2.40	0.52
53:BU:57:PHE:CD1	53:BU:60:LEU:HD12	2.45	0.52
50:BR:7:GLY:O	50:BR:8:ARG:NH2	2.43	0.52
46:BN:67:LEU:O	46:BN:68:GLU:HB2	2.10	0.52
36:DA:363(A):A:C2	36:DA:363(B):G:C8	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:2:LYS:HZ3	54:BV:12:TYR:HA	1.75	0.52
1:CA:57:G:H2'	1:CA:58:C:O4'	2.10	0.52
51:DS:73:LEU:HD23	51:DS:73:LEU:O	2.09	0.52
9:AI:10:ARG:C	9:AI:10:ARG:HD3	2.30	0.52
36:BA:184:C:H2'	36:BA:185:U:H6	1.74	0.52
20:AT:29:LYS:O	20:AT:33:ILE:HG13	2.10	0.52
44:BJ:12:UNK:C	44:BJ:14:UNK:N	2.72	0.52
36:DA:1320:C:C5	36:DA:1329:U:H5"	2.45	0.52
47:BO:26:LYS:HE3	47:BO:37:ASP:OD2	2.10	0.52
36:BA:1579:A:H2'	36:BA:1580:A:O4'	2.10	0.52
42:BG:37:VAL:HA	42:BG:158:ALA:O	2.10	0.52
36:BA:2153:G:H2'	36:BA:2154:G:H8	1.74	0.52
1:AA:521:G:H4'	12:AL:73:GLU:HG3	1.90	0.52
36:BA:469:G:C2'	36:BA:470:A:H5"	2.40	0.52
36:DA:773:U:H4'	39:DD:47:GLY:HA3	1.92	0.52
57:DY:10:GLY:C	57:DY:27:VAL:HG22	2.30	0.52
48:BP:58:THR:O	48:BP:58:THR:HG22	2.09	0.52
42:DG:16:ARG:N	42:DG:17:PRO:HD2	2.25	0.52
42:BG:86:MET:N	42:BG:87:PRO:CD	2.72	0.52
43:BH:83:TYR:HB3	43:BH:135:GLY:N	2.24	0.52
1:CA:858:G:C5	1:CA:869:G:N7	2.77	0.52
4:CD:62:GLN:NE2	4:CD:62:GLN:HA	2.22	0.52
48:DP:146:VAL:CG2	48:DP:147:LEU:H	2.05	0.52
36:DA:1142(A):A:C8	36:DA:1142(A):A:H5'	2.45	0.52
31:B5:45:VAL:HG22	31:B5:51:TYR:HB2	1.91	0.52
36:BA:250:G:H2'	36:BA:251:A:C8	2.45	0.52
25:CZ:277:LEU:CD1	25:CZ:279:GLU:H	2.22	0.52
24:AY:2:G:O2'	24:AY:3:G:H5"	2.10	0.52
36:DA:661:C:H4'	48:DP:16:ARG:NH1	2.24	0.52
36:DA:996:A:O3'	53:DU:92:ARG:HG2	2.09	0.52
54:BV:38:LEU:C	54:BV:38:LEU:HD23	2.31	0.52
36:BA:1278:A:OP1	50:BR:36:THR:HA	2.09	0.52
8:AH:44:PHE:HE2	8:AH:109:ILE:HG21	1.75	0.52
20:AT:26:ASN:O	20:AT:30:LYS:HB2	2.09	0.52
5:AE:145:LYS:O	5:AE:149:GLU:HG3	2.10	0.52
48:BP:38:GLN:HG3	48:BP:39:LYS:N	2.21	0.52
27:D1:45:ASN:CB	36:DA:2230:G:H1'	2.40	0.52
36:DA:2651:C:O2'	36:DA:2652:C:H5'	2.09	0.52
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.09	0.52
34:D8:58:ILE:HG22	34:D8:58:ILE:O	2.10	0.52
22:CW:5:G:C6	22:CW:6:G:C5	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:338:TYR:O	25:AZ:353:VAL:HG23	2.10	0.52
57:DY:61:ILE:O	57:DY:62:GLU:HB2	2.10	0.52
36:DA:1331:A:O2'	36:DA:1332:G:H5"	2.10	0.52
36:DA:426:C:O2'	36:DA:427:U:H5'	2.10	0.52
11:AK:57:THR:OG1	11:AK:58:PRO:HD2	2.09	0.52
10:CJ:38:ILE:CD1	10:CJ:71:LEU:HB3	2.40	0.52
53:BU:105:VAL:O	53:BU:108:GLU:HB2	2.10	0.52
38:DC:75:LEU:HG	38:DC:112:ALA:O	2.10	0.52
37:DB:81:G:O6	37:DB:96:U:O2	2.28	0.52
1:AA:434:U:H2'	1:AA:435:C:H6	1.73	0.52
36:DA:1187:G:H5"	54:DV:81:TYR:CE2	2.45	0.52
7:AG:143:ARG:HD3	22:AW:42:C:OP1	2.10	0.52
36:DA:1417:C:O2'	36:DA:1418:G:H5'	2.10	0.52
9:CI:10:ARG:HG3	9:CI:75:ASP:HB3	1.91	0.52
1:AA:188:C:O4'	20:AT:89:ARG:NH1	2.43	0.52
36:BA:1801:G:OP2	39:BD:154:LYS:HE3	2.09	0.52
36:DA:436:C:H2'	36:DA:437:G:H8	1.75	0.52
42:DG:6:ALA:HB3	42:DG:104:GLU:OE2	2.09	0.52
36:DA:460:A:H2'	36:DA:461:C:O4'	2.09	0.52
36:DA:740:U:H2'	36:DA:741:G:C8	2.45	0.52
5:AE:68:GLU:O	5:AE:68:GLU:HG3	2.10	0.52
9:CI:41:VAL:HG12	9:CI:41:VAL:O	2.10	0.52
36:BA:88:G:N3	36:BA:88:G:H2'	2.24	0.52
12:CL:69:TYR:O	12:CL:71:PRO:HD3	2.09	0.52
36:BA:1788:C:O2'	36:BA:1789:A:H5'	2.09	0.52
6:CF:38:GLU:O	6:CF:39:LYS:O	2.28	0.52
32:D6:11:LEU:HD13	32:D6:12:GLU:N	2.25	0.52
42:DG:66:GLN:NE2	42:DG:67:LYS:CE	2.73	0.52
32:B6:44:ARG:C	32:B6:45:LYS:HD2	2.30	0.52
42:BG:130:ASN:OD1	42:BG:160:VAL:HG13	2.09	0.52
41:DF:156:LEU:HD12	41:DF:193:VAL:O	2.10	0.52
36:DA:1858:G:O2'	36:DA:1884:A:N6	2.43	0.52
1:AA:57:G:H2'	1:AA:58:C:O4'	2.10	0.52
4:AD:55:ALA:O	4:AD:59:ARG:HG2	2.09	0.52
36:BA:1109:C:H2'	36:BA:1110:G:H5'	1.92	0.52
51:DS:24:LEU:O	51:DS:85:VAL:HB	2.10	0.52
25:AZ:325:LYS:O	25:AZ:328:GLY:N	2.43	0.52
36:DA:1076:C:C4'	58:DZ:112:ARG:HH21	2.15	0.52
48:BP:84:ASN:C	48:BP:86:LYS:H	2.11	0.52
9:CI:95:LYS:HD3	9:CI:95:LYS:C	2.31	0.52
36:BA:2155:G:H3'	36:BA:2156:G:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:4:ASP:OD2	8:AH:85:ARG:NE	2.38	0.52
20:CT:72:LEU:O	20:CT:73:HIS:C	2.47	0.52
52:BT:103:ARG:O	52:BT:105:LEU:N	2.43	0.52
35:B9:10:ILE:O	35:B9:14:CYS:SG	2.49	0.52
51:BS:16:ASN:O	51:BS:18:ILE:HD12	2.10	0.52
3:AC:34:LEU:HG	14:AN:25:VAL:HG11	1.92	0.52
57:DY:88:LYS:HZ2	57:DY:93:GLY:HA3	1.74	0.52
36:DA:67:U:H2'	36:DA:68:G:H8	1.75	0.52
5:CE:6:PHE:HD2	5:CE:36:ASP:HB3	1.75	0.52
2:CB:129:GLU:O	2:CB:130:ARG:O	2.28	0.52
1:CA:635:G:O2'	1:CA:636:U:H5'	2.10	0.52
39:BD:131:LEU:N	39:BD:131:LEU:HD12	2.25	0.52
9:CI:110:GLU:HG2	9:CI:119:ALA:HB1	1.92	0.52
36:DA:1090:U:H2'	36:DA:1091:G:O4'	2.10	0.52
28:B2:7:ARG:HD3	28:B2:7:ARG:H	1.75	0.52
36:BA:61:G:H1	36:BA:94:C:H42	1.58	0.52
1:CA:171:A:H2'	1:CA:172:A:C8	2.45	0.52
36:BA:1952:A:C6	47:BO:22:ILE:HD12	2.45	0.52
36:DA:1525:G:O2'	36:DA:1526:G:H5'	2.09	0.52
36:BA:492:A:H2'	36:BA:493:G:O4'	2.09	0.52
22:AV:63:G:H2'	22:AV:64:A:O4'	2.10	0.52
54:BV:67:GLY:O	54:BV:88:ARG:HD2	2.10	0.52
36:BA:1598:C:H5'	56:BX:36:LYS:HD3	1.90	0.51
32:D6:30:THR:HG22	32:D6:31:PRO:CD	2.21	0.51
28:D2:47:ASN:HB2	36:DA:94(A):G:O2'	2.10	0.51
36:DA:1502:C:H5'	36:DA:1503:U:OP2	2.10	0.51
34:D8:11:LYS:HZ2	34:D8:60:LEU:CD2	2.23	0.51
43:BH:85:LYS:C	43:BH:85:LYS:CE	2.79	0.51
1:CA:1202:G:O2'	1:CA:1203:C:H5'	2.10	0.51
34:D8:8:LYS:HE3	36:DA:245:G:O6	2.10	0.51
25:CZ:272:MET:CG	25:CZ:277:LEU:HD23	2.41	0.51
50:BR:2:ARG:HG2	50:BR:5:LYS:HD3	1.91	0.51
53:BU:88:ILE:HG23	53:BU:90:VAL:CG2	2.40	0.51
50:BR:37:THR:HA	50:BR:111:LEU:HA	1.90	0.51
20:CT:26:ASN:N	20:CT:26:ASN:HD22	2.08	0.51
58:BZ:7:ALA:HB3	58:BZ:61:LEU:CD2	2.35	0.51
20:AT:26:ASN:HB3	20:AT:71:THR:OG1	2.10	0.51
25:CZ:135:MET:O	25:CZ:138:VAL:HG23	2.10	0.51
25:CZ:139:ASP:OD2	25:CZ:177:LEU:HD11	2.10	0.51
34:B8:50:LEU:C	34:B8:52:LYS:H	2.13	0.51
19:AS:10:PHE:CZ	19:AS:37:ARG:O	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:61:ARG:HG3	46:BN:61:ARG:NH1	2.25	0.51
12:AL:43:VAL:HG21	12:AL:93:LEU:HD22	1.92	0.51
57:DY:17:SER:HB2	57:DY:71:LYS:CE	2.40	0.51
29:D3:7:LYS:O	29:D3:54:VAL:HG13	2.09	0.51
36:DA:1354:A:H2'	36:DA:1355:G:O4'	2.09	0.51
36:BA:2657:A:H3'	36:BA:2658:C:H6	1.75	0.51
46:BN:10:GLU:CD	46:BN:11:PRO:HD2	2.30	0.51
37:DB:56:G:H4'	37:DB:57:A:O5'	2.11	0.51
24:AY:68:C:H2'	24:AY:69:C:C6	2.45	0.51
36:BA:1331:A:H2'	36:BA:1333:C:C5	2.44	0.51
1:CA:1256:A:H1'	1:CA:1258:G:C6	2.44	0.51
43:DH:146:ALA:O	43:DH:149:ARG:N	2.43	0.51
8:CH:20:TYR:CE1	8:CH:78:GLN:NE2	2.78	0.51
36:BA:2152:G:O2'	36:BA:2153:G:H5'	2.09	0.51
25:AZ:389:ARG:HH11	25:AZ:389:ARG:HG2	1.75	0.51
36:DA:1013:C:H2'	36:DA:1014:U:C6	2.45	0.51
22:AW:20:U:O2'	22:AW:21:A:H4'	2.11	0.51
25:CZ:130:TYR:CE2	25:CZ:211:PRO:HD2	2.45	0.51
6:CF:42:GLU:HG2	6:CF:42:GLU:O	2.10	0.51
12:AL:41:ARG:CZ	12:AL:41:ARG:HB2	2.40	0.51
58:BZ:51:ALA:HB1	58:BZ:57:ILE:CD1	2.33	0.51
57:DY:75:ILE:HG13	57:DY:76:CYS:N	2.25	0.51
28:B2:35:LEU:CD1	28:B2:50:ILE:HG23	2.40	0.51
34:D8:62:LEU:N	34:D8:63:PRO:CD	2.72	0.51
42:BG:83:ARG:HD2	42:BG:84:LYS:HZ2	1.74	0.51
1:AA:979:C:C3'	1:AA:980:C:H5"	2.26	0.51
47:BO:104:ARG:NE	52:BT:33:LYS:HD2	2.25	0.51
36:BA:1948:G:C5'	36:BA:1948:G:C8	2.88	0.51
36:DA:271(L):U:C5'	36:DA:271(M):G:H5'	2.31	0.51
1:AA:544:G:OP1	4:AD:59:ARG:NH2	2.43	0.51
36:DA:322:A:C5'	36:DA:340:A:H1'	2.40	0.51
40:DE:33:VAL:CG1	40:DE:69:LYS:HE3	2.39	0.51
40:DE:50:GLY:HA2	40:DE:78:LEU:HB3	1.92	0.51
36:DA:2713:A:H3'	36:DA:2714:G:C5'	2.41	0.51
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.11	0.51
14:AN:12:ARG:HB3	14:AN:12:ARG:HH11	1.74	0.51
1:CA:1116:C:H2'	1:CA:1117:G:H5"	1.92	0.51
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.25	0.51
52:DT:50:ILE:HD11	52:DT:102:ILE:CD1	2.40	0.51
17:CQ:45:HIS:HA	17:CQ:69:LYS:HZ1	1.75	0.51
34:D8:17:THR:HG22	34:D8:21:LYS:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:57:PHE:CD1	53:DU:60:LEU:HD12	2.45	0.51
48:BP:106:LEU:HD21	48:BP:112:LEU:HB2	1.92	0.51
36:BA:1827:C:H2'	36:BA:1828:G:H5'	1.91	0.51
57:DY:43:ASN:HB2	57:DY:64:GLU:HA	1.91	0.51
36:DA:1880:C:H2'	36:DA:1881:C:H5"	1.92	0.51
36:DA:634:C:H2'	36:DA:635:C:C6	2.44	0.51
36:BA:2591:C:P	39:BD:239:ARG:HG2	2.51	0.51
36:DA:1754:C:OP1	52:DT:96:ARG:NH1	2.32	0.51
37:DB:55:U:H2'	37:DB:56:G:C8	2.45	0.51
50:BR:41:ALA:O	50:BR:44:LEU:N	2.42	0.51
36:DA:2136:C:H2'	36:DA:2137:C:C6	2.42	0.51
47:BO:107:ARG:HA	47:BO:112:MET:HE1	1.92	0.51
46:DN:10:GLU:CD	46:DN:11:PRO:HD2	2.30	0.51
52:BT:123:GLN:HA	52:BT:126:ALA:HB3	1.92	0.51
36:BA:2199:A:N3	36:BA:2199:A:H2'	2.25	0.51
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.44	0.51
34:B8:41:ILE:HD12	36:BA:2419:U:OP1	2.10	0.51
36:DA:2869:G:H2'	36:DA:2870:C:C6	2.45	0.51
36:BA:1773:A:H2'	36:BA:1774:C:H5'	1.92	0.51
37:DB:96:U:H2'	37:DB:97:G:H8	1.74	0.51
39:BD:4:LYS:HZ1	39:BD:20:ASP:HA	1.75	0.51
1:CA:332:G:O2'	1:CA:333:G:H5'	2.10	0.51
25:CZ:338:TYR:O	25:CZ:353:VAL:HG23	2.10	0.51
1:CA:57:G:H2'	1:CA:58:C:C6	2.45	0.51
1:CA:66:G:H4'	1:CA:173:U:C5	2.46	0.51
1:CA:197:A:H4'	1:CA:198:G:O5'	2.10	0.51
1:AA:197:A:H4'	1:AA:198:G:O5'	2.10	0.51
36:DA:1013:C:H2'	36:DA:1014:U:H6	1.75	0.51
1:CA:447:G:H2'	1:CA:485:G:N2	2.24	0.51
36:BA:2887:U:O2'	36:BA:2888:C:H5'	2.10	0.51
25:AZ:17:ILE:HG13	25:AZ:104:LEU:HA	1.92	0.51
36:BA:1889:A:O2'	36:BA:2087:G:H5'	2.11	0.51
36:DA:2682:U:H6	36:DA:2682:U:H5'	1.74	0.51
6:AF:42:GLU:HG2	6:AF:42:GLU:O	2.11	0.51
36:BA:796:C:H2'	36:BA:797:C:C6	2.45	0.51
36:DA:1124:C:H2'	36:DA:1125:G:O4'	2.10	0.51
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.45	0.51
56:BX:35:THR:O	56:BX:39:ILE:HG13	2.10	0.51
13:CM:6:GLY:O	13:CM:8:GLU:N	2.38	0.51
41:BF:3:GLU:CB	41:BF:24:LEU:HG	2.39	0.51
34:B8:62:LEU:CD1	36:BA:242:G:H5"	2.21	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:62:LEU:HB3	36:BA:242:G:H5'	1.92	0.51
36:DA:2107:C:C5	36:DA:2108:C:C5	2.98	0.51
2:AB:200:ILE:HG22	2:AB:201:ILE:H	1.76	0.51
1:CA:858:G:H5"	1:CA:858:G:H8	1.74	0.51
1:CA:544:G:OP1	4:CD:59:ARG:NH2	2.44	0.51
55:BW:4:LYS:HD3	55:BW:6:ILE:HD11	1.92	0.51
31:B5:36:CYS:O	31:B5:38:ALA:N	2.42	0.51
39:BD:267:SER:C	39:BD:269:PHE:N	2.52	0.51
42:BG:5:VAL:HG11	42:BG:100:TRP:HB3	1.91	0.51
49:BQ:141:GLN:OXT	58:BZ:53:ILE:HD12	2.10	0.51
41:DF:39:TRP:CB	41:DF:101:LEU:HD22	2.40	0.51
1:CA:973:G:H1'	10:CJ:55:LYS:HE3	1.92	0.51
36:DA:1827:C:H2'	36:DA:1828:G:H5'	1.92	0.51
50:DR:2:ARG:HG2	50:DR:5:LYS:HD3	1.93	0.51
36:DA:2127:G:H4'	38:DC:37:PHE:CD1	2.46	0.51
16:AP:53:VAL:HG23	16:AP:54:GLU:HG2	1.92	0.51
36:DA:1278:A:OP1	50:DR:36:THR:HA	2.10	0.51
25:CZ:166:ASP:O	25:CZ:167:GLU:HG2	2.10	0.51
26:D0:43:THR:HG21	36:DA:2336:A:H61	1.74	0.51
12:AL:102:ARG:HH12	12:AL:110:VAL:HG22	1.72	0.51
34:B8:49:VAL:CG1	34:B8:52:LYS:HB3	2.40	0.51
3:CC:71:ALA:HA	3:CC:106:VAL:HG22	1.91	0.51
21:CU:12:LYS:HG2	21:CU:22:ARG:HB3	1.91	0.51
34:D8:48:PHE:O	34:D8:49:VAL:HG23	2.11	0.51
19:CS:31:ILE:HG23	19:CS:49:ILE:HG23	1.91	0.51
51:DS:15:ARG:NH1	51:DS:15:ARG:HG2	2.24	0.51
31:B5:24:ALA:O	31:B5:25:LEU:CB	2.57	0.51
57:BY:17:SER:HB2	57:BY:71:LYS:CE	2.40	0.51
27:B1:4:VAL:HG23	27:B1:10:LYS:O	2.10	0.51
29:D3:7:LYS:O	29:D3:54:VAL:HA	2.11	0.51
36:BA:528:A:C2	36:BA:2043:C:O5'	2.61	0.51
22:CV:59:U:O2'	22:CV:60:U:O4'	2.27	0.51
58:BZ:141:VAL:HG13	58:BZ:144:LEU:HB3	1.92	0.51
6:AF:43:LEU:HD22	6:AF:43:LEU:N	2.23	0.51
36:DA:2050:C:H2'	36:DA:2051:A:O4'	2.11	0.51
39:DD:109:ASP:HB2	39:DD:197:GLY:CA	2.40	0.51
39:BD:131:LEU:HB2	39:BD:136:ILE:CD1	2.40	0.51
39:BD:9:TYR:CD1	39:BD:10:THR:HG22	2.45	0.51
1:AA:1498:U:H4'	1:AA:1519:A:C2	2.45	0.51
36:DA:8:A:H2'	36:DA:9:U:C6	2.45	0.51
1:AA:484:G:H4'	1:AA:485:G:O5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2074:U:H2'	36:DA:2075:U:C6	2.46	0.51
36:BA:2746:U:H2'	36:BA:2747:G:O4'	2.10	0.51
40:BE:44:TYR:O	40:BE:45:THR:CB	2.59	0.51
36:DA:2087:G:O2'	36:DA:2088:G:H5'	2.09	0.51
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.10	0.51
7:CG:41:ARG:HG2	7:CG:41:ARG:HH11	1.75	0.51
36:BA:1514:U:H2'	36:BA:1515:G:C8	2.46	0.51
36:BA:1477:A:C2	36:BA:1515:G:C2	2.98	0.51
1:CA:328:C:H4'	1:CA:329:A:H5'	1.92	0.51
39:DD:80:ALA:HB2	39:DD:96:HIS:CD2	2.46	0.51
42:BG:150:ASP:O	42:BG:151:ALA:HB2	2.10	0.51
57:DY:13:VAL:CG2	57:DY:72:VAL:HB	2.40	0.51
51:DS:87:PHE:CG	51:DS:88:ASP:N	2.78	0.51
36:DA:1023:U:H2'	36:DA:1024:G:H5'	1.92	0.51
26:D0:10:THR:HG21	36:DA:2277:G:OP2	2.11	0.51
36:DA:321:G:H5"	36:DA:322:A:OP2	2.10	0.51
48:BP:65:ARG:O	48:BP:67:MET:N	2.43	0.51
51:BS:97:ARG:NH1	51:BS:98:VAL:O	2.44	0.51
48:BP:30:THR:HG23	48:BP:31:ALA:H	1.75	0.51
48:BP:23:PRO:HB2	48:BP:33:ARG:HD2	1.92	0.51
58:BZ:53:ILE:HG22	58:BZ:71:VAL:O	2.10	0.51
51:DS:85:VAL:HG23	51:DS:106:ARG:CG	2.38	0.51
13:CM:11:ARG:H	13:CM:45:VAL:HG11	1.76	0.51
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.10	0.51
56:DX:10:ALA:O	56:DX:28:PHE:HB3	2.10	0.51
54:BV:39:LEU:O	54:BV:40:LEU:HB2	2.10	0.51
36:DA:1697:G:C3'	36:DA:1698:A:H5"	2.36	0.51
50:BR:117:VAL:CG2	50:BR:118:GLU:N	2.74	0.51
22:CW:39:U:H4'	22:CW:39:U:OP2	2.10	0.51
36:BA:657:U:H2'	36:BA:658:C:H6	1.75	0.51
35:B9:1:MET:HB3	35:B9:31:LYS:O	2.10	0.51
22:CW:26:A:H61	22:CW:44:G:H1	1.58	0.51
36:DA:1558:A:H4'	36:DA:1559:G:O5'	2.11	0.51
25:AZ:139:ASP:OD2	25:AZ:177:LEU:HD11	2.10	0.51
41:DF:46:ARG:HG2	41:DF:46:ARG:NH1	2.23	0.51
20:AT:86:ARG:HH11	20:AT:86:ARG:HG3	1.75	0.51
22:CW:3:C:H2'	22:CW:4:C:O4'	2.10	0.51
36:BA:1141:U:H6	46:BN:63:THR:CG2	2.23	0.51
36:DA:500:G:H22	36:DA:502:A:H3'	1.76	0.51
48:BP:77:ARG:HD3	48:BP:78:PRO:HD2	1.92	0.51
48:BP:45:LEU:CD1	48:BP:46:LYS:H	2.22	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:50:ILE:HD12	7:CG:125:MET:HG3	1.92	0.51
6:CF:82:ARG:HB2	6:CF:85:VAL:CG2	2.41	0.51
1:CA:1314:C:O2'	1:CA:1315:U:H5'	2.11	0.51
48:DP:46:LYS:CB	48:DP:52:GLU:HG2	2.40	0.51
36:DA:284:U:H2'	36:DA:285:C:C6	2.46	0.51
24:CY:75:C:O4'	24:CY:75:C:O2	2.26	0.51
47:BO:43:VAL:HG21	47:BO:52:VAL:CG1	2.39	0.51
39:BD:16:MET:HE1	39:BD:208:LYS:HG2	1.92	0.51
36:BA:1090:U:H2'	36:BA:1091:G:O4'	2.10	0.51
36:BA:363(A):A:C2	36:BA:363(B):G:C8	2.98	0.51
36:BA:1771:C:C1'	36:BA:1786:A:C8	2.94	0.51
36:DA:45:C:H2'	36:DA:47:C:H6	1.75	0.51
46:DN:62:VAL:HG22	46:DN:66:LYS:HD2	1.92	0.51
36:BA:15:G:O2'	36:BA:16:G:H5'	2.11	0.51
18:CR:29:PHE:HD1	18:CR:29:PHE:N	2.08	0.51
36:DA:2514:U:H2'	36:DA:2515:C:H6	1.75	0.51
36:DA:1751:C:O2'	36:DA:1752:C:H5'	2.10	0.51
13:AM:77:ASN:O	13:AM:81:LEU:HD23	2.09	0.51
1:CA:757:U:H2'	1:CA:758:G:O4'	2.10	0.51
1:CA:1221:G:O2'	1:CA:1222:G:H5'	2.09	0.51
25:CZ:254:GLU:CD	25:CZ:307:PRO:HA	2.31	0.51
30:D4:22:ILE:HD12	30:D4:22:ILE:N	2.25	0.51
42:BG:106:LEU:HA	42:BG:110:ALA:HB3	1.93	0.51
24:CY:26:A:H2'	24:CY:27:C:O4'	2.10	0.51
32:D6:27:LYS:HE2	32:D6:30:THR:H	1.75	0.51
28:D2:49:LYS:HB3	28:D2:49:LYS:NZ	2.25	0.51
28:D2:53:LEU:O	28:D2:57:ILE:HB	2.11	0.51
32:B6:27:LYS:HG3	32:B6:30:THR:HB	1.93	0.51
32:B6:18:ARG:HG3	32:B6:19:ARG:H	1.75	0.51
52:BT:83:ILE:CG1	52:BT:84:GLN:N	2.73	0.51
36:BA:1858:G:H2'	36:BA:1883:G:N2	2.25	0.51
22:AV:5:G:H8	22:AV:5:G:H5'	1.74	0.51
2:CB:30:ARG:HG3	2:CB:31:TYR:CE1	2.45	0.51
48:BP:62:LEU:HD23	48:BP:62:LEU:N	2.04	0.51
46:BN:23:LEU:HD21	46:BN:102:ALA:HB1	1.92	0.51
46:DN:21:LYS:HE3	46:DN:25:ARG:HB3	1.92	0.51
46:DN:61:ARG:NH1	46:DN:61:ARG:HG3	2.25	0.51
42:BG:32:PRO:HB3	42:BG:163:ALA:HB2	1.91	0.51
25:AZ:98:GLN:HG2	25:AZ:226:GLU:OE2	2.11	0.51
5:CE:11:ILE:HG21	5:CE:105:VAL:HG22	1.91	0.51
40:BE:93:VAL:C	40:BE:95:ILE:H	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:924:C:H2'	1:AA:925:G:C8	2.46	0.51
50:BR:115:GLU:HG2	50:BR:117:VAL:H	1.75	0.51
7:AG:59:LEU:HG	7:AG:59:LEU:O	2.10	0.51
56:BX:10:ALA:O	56:BX:28:PHE:HB3	2.10	0.51
36:BA:671:C:H2'	36:BA:672:C:H6	1.75	0.51
9:AI:95:LYS:HD3	9:AI:96:LEU:N	2.25	0.51
49:BQ:109:VAL:HG13	49:BQ:113:GLN:OE1	2.09	0.51
16:CP:25:ARG:HG3	16:CP:25:ARG:NH1	2.24	0.51
56:DX:40:LYS:O	56:DX:44:GLU:HB2	2.10	0.51
58:BZ:145:GLU:HG3	58:BZ:146:ILE:N	2.26	0.51
57:BY:43:ASN:HB2	57:BY:64:GLU:HA	1.92	0.51
36:DA:1880:C:C2'	36:DA:1881:C:H5"	2.40	0.51
15:AO:17:ARG:HH11	15:AO:77:ARG:NH1	2.08	0.51
39:DD:111:LEU:HD23	39:DD:115:GLN:OE1	2.09	0.51
12:CL:51:ALA:O	12:CL:52:LEU:HD22	2.10	0.51
1:AA:542:G:H5'	4:AD:41:GLY:HA3	1.93	0.51
36:BA:580:C:H2'	36:BA:581:C:H6	1.75	0.51
24:CY:67:G:H2'	24:CY:68:C:C6	2.45	0.51
3:AC:32:LEU:HD22	3:AC:59:ARG:HH11	1.73	0.51
47:BO:4:PRO:O	47:BO:5:GLN:CB	2.59	0.51
52:BT:50:ILE:HD11	52:BT:102:ILE:CD1	2.40	0.51
36:DA:580:C:H2'	36:DA:581:C:H6	1.75	0.51
43:DH:33:LEU:HD21	43:DH:136:ILE:HG22	1.92	0.51
46:DN:42:TRP:CH2	46:DN:44:PRO:HA	2.46	0.51
43:BH:33:LEU:HD21	43:BH:136:ILE:HG22	1.93	0.51
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.11	0.51
36:DA:2199:A:H3'	36:DA:2200:C:H6	1.73	0.51
43:DH:149:ARG:HA	43:DH:162:ILE:CD1	2.40	0.51
30:D4:5:ILE:CG1	30:D4:5:ILE:O	2.58	0.51
46:DN:55:VAL:HG22	46:DN:56:ASN:H	1.75	0.51
36:BA:1288:U:C2	36:BA:1327:C:O2	2.63	0.51
1:CA:1511:G:O2'	1:CA:1512:U:H5'	2.11	0.51
36:BA:359:A:H3'	36:BA:360:G:H8	1.75	0.51
36:BA:523:C:H2'	36:BA:524:U:H5'	1.93	0.51
41:DF:139:PHE:CB	41:DF:166:ALA:HB1	2.40	0.51
3:CC:65:ALA:O	3:CC:100:ALA:O	2.28	0.51
54:BV:82:ARG:NH1	54:BV:82:ARG:HG2	2.25	0.51
36:BA:1257:C:O2'	41:BF:83:PHE:HA	2.10	0.51
20:CT:62:LEU:O	20:CT:65:LYS:HB2	2.11	0.51
1:AA:269:C:H2'	1:AA:270:A:C8	2.46	0.51
30:D4:36:CYS:SG	30:D4:37:SER:O	2.69	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:295:ARG:NH1	25:AZ:295:ARG:HG2	2.25	0.51
12:CL:126:LYS:O	12:CL:128:ALA:N	2.43	0.51
36:BA:2295:C:O2'	36:BA:2296:U:H5'	2.10	0.51
40:BE:47:VAL:HG21	40:BE:86:PRO:CD	2.40	0.51
25:CZ:231:ILE:O	25:CZ:231:ILE:HG22	2.10	0.51
8:CH:119:LEU:HD12	8:CH:124:ALA:CA	2.40	0.51
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.92	0.51
36:BA:2726:U:H6	47:BO:67:LYS:HZ3	1.58	0.51
8:CH:83:ILE:HG13	8:CH:137:VAL:HG22	1.91	0.51
30:B4:27:THR:O	30:B4:28:LYS:HB3	2.10	0.51
28:D2:29:LYS:NZ	28:D2:32:LEU:HD11	2.25	0.51
57:DY:85:VAL:HG12	57:DY:86:ARG:H	1.75	0.51
54:DV:62:LEU:H	54:DV:62:LEU:HD22	1.75	0.51
34:D8:5:LYS:HG2	36:DA:242:G:C8	2.46	0.51
42:DG:57:ALA:C	42:DG:59:GLU:H	2.14	0.51
19:CS:16:LEU:O	19:CS:20:LEU:N	2.42	0.51
50:BR:101:ALA:O	50:BR:102:GLU:HB2	2.09	0.51
41:DF:170:LEU:CB	41:DF:173:VAL:HB	2.41	0.51
34:B8:12:LYS:O	48:BP:65:ARG:HB2	2.11	0.51
48:BP:24:GLY:HA3	48:BP:33:ARG:HH12	1.76	0.51
24:AY:1:A:H5'	25:AZ:300:ARG:CZ	2.40	0.51
54:DV:39:LEU:O	54:DV:40:LEU:HB2	2.09	0.51
32:B6:53:LYS:CG	32:B6:54:ILE:N	2.67	0.51
27:D1:72:GLU:O	27:D1:73:LEU:HD23	2.11	0.51
17:CQ:52:LYS:H	17:CQ:52:LYS:CD	2.23	0.51
13:CM:91:ARG:HD3	13:CM:97:PRO:O	2.11	0.51
1:CA:186:C:C2	1:CA:187:C:C5	2.99	0.51
9:AI:19:LEU:C	9:AI:19:LEU:HD23	2.31	0.51
50:DR:41:ALA:O	50:DR:44:LEU:N	2.43	0.51
9:AI:93:ARG:C	9:AI:95:LYS:H	2.14	0.51
52:BT:100:TYR:O	52:BT:103:ARG:HG3	2.11	0.51
25:AZ:205:ALA:HA	25:AZ:208:GLU:OE2	2.10	0.51
40:DE:167:VAL:HG12	40:DE:189:PRO:CD	2.38	0.51
3:CC:95:THR:CG2	3:CC:95:THR:O	2.56	0.51
1:AA:1152:A:OP1	10:AJ:68:HIS:CD2	2.64	0.51
10:AJ:16:LEU:HD11	10:AJ:70:ARG:HG2	1.93	0.51
39:DD:37:LEU:HD23	39:DD:38:LYS:H	1.75	0.51
3:AC:22:TRP:CE2	14:AN:54:PRO:HG2	2.45	0.51
41:BF:183:VAL:O	41:BF:187:VAL:HG23	2.10	0.51
36:BA:425:G:O2'	36:BA:426:C:H5'	2.10	0.51
8:CH:9:MET:O	8:CH:13:ILE:HG12	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:105:LEU:HD23	43:BH:105:LEU:N	2.24	0.51
3:AC:134:ILE:HD11	3:AC:153:VAL:HB	1.93	0.51
36:DA:2199:A:N3	36:DA:2199:A:H2'	2.25	0.51
55:BW:11:ARG:HG2	55:BW:11:ARG:NH1	2.24	0.51
1:AA:635:G:O2'	1:AA:636:U:H5'	2.10	0.51
43:BH:146:ALA:O	43:BH:149:ARG:N	2.43	0.51
48:DP:6:LEU:N	48:DP:6:LEU:HD23	2.26	0.51
36:DA:1288:U:C2	36:DA:1327:C:O2	2.64	0.51
1:CA:792:A:H4'	1:CA:793:U:O5'	2.10	0.51
36:BA:1231:G:H2'	36:BA:1232:G:H8	1.75	0.51
25:CZ:224:PRO:HA	25:CZ:303:VAL:HG12	1.93	0.51
33:D7:30:VAL:HA	33:D7:33:ARG:HH21	1.75	0.51
36:BA:1523:U:H2'	36:BA:1524:G:C8	2.45	0.51
22:CW:7:A:C6	22:CW:49:C:N4	2.77	0.51
2:AB:129:GLU:O	2:AB:130:ARG:O	2.28	0.51
30:D4:22:ILE:HG22	30:D4:24:THR:HG23	1.93	0.51
36:DA:1315:C:H2'	36:DA:1316:U:H6	1.75	0.51
36:DA:1796:U:H2'	36:DA:1797:C:C6	2.46	0.51
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.46	0.51
4:CD:133:VAL:HG11	4:CD:138:TYR:CD1	2.46	0.51
1:AA:668:G:O2'	15:AO:46:HIS:HD2	1.94	0.51
4:AD:36:ARG:C	4:AD:38:TYR:H	2.14	0.51
25:AZ:221:PHE:HE1	25:AZ:242:ILE:HD13	1.75	0.51
2:CB:25:ASN:HB2	2:CB:191:ASP:O	2.11	0.51
3:CC:107:GLN:N	3:CC:107:GLN:CD	2.64	0.51
36:DA:88:G:H2'	36:DA:88:G:N3	2.24	0.51
25:CZ:124:ARG:HH11	25:CZ:124:ARG:HG3	1.76	0.51
43:DH:97:ARG:NH2	43:DH:99:VAL:HG21	2.26	0.51
22:CW:20:U:O2'	22:CW:21:A:H4'	2.10	0.51
39:DD:31:LYS:HZ2	39:DD:33:LEU:HG	1.74	0.51
42:BG:149:VAL:O	42:BG:149:VAL:HG23	2.10	0.51
56:DX:35:THR:HG22	56:DX:36:LYS:N	2.25	0.51
28:D2:3:LEU:HD13	36:DA:98:G:H5"	1.92	0.51
1:CA:1038:C:H6	1:CA:1038:C:O5'	1.94	0.51
25:AZ:279:GLU:O	25:AZ:280:GLY:C	2.49	0.51
25:AZ:69:GLU:CG	25:AZ:70:TYR:N	2.73	0.51
28:B2:35:LEU:HD11	28:B2:50:ILE:HG23	1.92	0.51
42:DG:52:ILE:HB	42:DG:54:GLU:OE1	2.11	0.51
32:D6:18:ARG:HG3	32:D6:19:ARG:H	1.76	0.51
57:BY:85:VAL:HG12	57:BY:86:ARG:H	1.74	0.51
22:AV:4:C:C3'	22:AV:5:G:H5"	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:23:LEU:HD11	46:DN:98:VAL:HG12	1.91	0.51
41:BF:138:GLU:O	41:BF:142:TRP:HB2	2.11	0.51
1:AA:858:G:N1	1:AA:869:G:C8	2.78	0.51
36:DA:1069:A:C1'	36:DA:1070:A:OP1	2.51	0.51
10:AJ:40:LEU:HD23	10:AJ:69:ASN:O	2.11	0.51
58:DZ:115:GLY:CA	58:DZ:177:PRO:HD3	2.34	0.51
36:DA:733:G:C8	36:DA:761:A:N1	2.79	0.51
34:D8:15:LYS:CB	34:D8:46:ARG:HH22	2.23	0.51
25:AZ:324:LYS:HD3	25:AZ:365:GLY:CA	2.41	0.51
25:AZ:90:LYS:HZ2	25:AZ:90:LYS:HB2	1.76	0.51
36:BA:1517:G:O2'	36:BA:1518:U:H5'	2.11	0.51
36:BA:2133:G:C6	36:BA:2157:G:O6	2.64	0.51
9:CI:56:LEU:HG	9:CI:57:GLY:H	1.75	0.51
20:AT:72:LEU:O	20:AT:73:HIS:C	2.49	0.51
36:DA:657:U:C2	36:DA:658:C:C5	2.98	0.51
52:BT:98:LYS:HB3	52:BT:100:TYR:HE1	1.76	0.51
34:B8:14:VAL:HG21	34:B8:22:VAL:HG13	1.91	0.51
46:BN:21:LYS:HE3	46:BN:25:ARG:HB3	1.93	0.51
1:CA:1152:A:OP1	10:CJ:68:HIS:HD2	1.94	0.51
36:BA:1264:G:C3'	36:BA:1265:A:H5"	2.38	0.51
36:DA:2855:C:O2'	36:DA:2856:C:H5'	2.11	0.51
57:DY:46:LYS:HB3	57:DY:62:GLU:HG2	1.92	0.51
3:AC:35:GLU:CG	3:AC:59:ARG:HH22	2.24	0.51
36:BA:863:A:H61	36:BA:913:U:H3	1.59	0.51
36:DA:642:G:H21	36:DA:646:A:H2	1.55	0.51
36:DA:2121:G:N2	36:DA:2176:A:C2	2.78	0.51
30:B4:5:ILE:H	30:B4:5:ILE:HD13	1.76	0.51
39:DD:206:LEU:HD22	39:DD:211:ARG:HG2	1.93	0.51
36:DA:118:A:OP2	36:DA:119:A:H5"	2.11	0.51
36:BA:1101:U:H2'	36:BA:1102:C:C6	2.46	0.51
26:D0:20:ARG:CG	26:D0:20:ARG:HH11	2.23	0.51
3:CC:58:GLU:HB2	3:CC:65:ALA:HB2	1.93	0.51
9:CI:11:LYS:O	9:CI:11:LYS:HG2	2.10	0.51
36:BA:1162:G:H4'	54:BV:24:LYS:HB2	1.93	0.51
20:AT:65:LYS:O	20:AT:68:LYS:HB2	2.11	0.51
36:DA:880:G:H1	36:DA:897:C:H42	1.58	0.51
1:AA:1329:A:P	13:AM:28:ALA:HB3	2.51	0.51
36:DA:686:G:N2	36:DA:788:A:H61	2.08	0.51
1:AA:1193:G:OP2	3:AC:167:TRP:HZ3	1.94	0.51
36:BA:2074:U:H2'	36:BA:2075:U:C6	2.45	0.51
3:AC:40:ARG:O	3:AC:44:GLU:HG3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:828:A:H2'	1:CA:829:G:O4'	2.11	0.51
1:CA:264:U:H4'	17:CQ:63:ARG:HD3	1.92	0.51
35:D9:19:ARG:O	35:D9:20:HIS:HB2	2.09	0.51
1:CA:124:G:H2'	1:CA:125:U:O4'	2.11	0.51
1:AA:222:U:H2'	1:AA:223:U:C6	2.45	0.51
36:BA:773:U:H4'	39:BD:47:GLY:HA3	1.93	0.51
1:AA:707:C:H2'	1:AA:708:C:H6	1.76	0.51
55:BW:95:ILE:O	55:BW:95:ILE:HG13	2.11	0.51
1:CA:580:U:H2'	1:CA:581:G:O4'	2.11	0.51
56:BX:45:THR:OG1	56:BX:46:ALA:N	2.44	0.51
36:BA:1525:G:H2'	36:BA:1526:G:C8	2.46	0.51
25:AZ:317:GLU:HA	25:AZ:370:PHE:O	2.11	0.51
34:B8:32:LEU:HB3	34:B8:36:LYS:HZ1	1.76	0.51
36:DA:2056:G:H2'	36:DA:2056:G:N3	2.26	0.51
26:B0:10:THR:HG22	26:B0:11:ARG:N	2.26	0.51
36:BA:2308:G:N2	42:BG:79:ASN:CG	2.64	0.51
36:BA:2184:G:H2'	36:BA:2185:C:O4'	2.09	0.51
1:AA:55:A:H2'	1:AA:56:U:H5'	1.93	0.51
2:CB:200:ILE:HG22	2:CB:201:ILE:H	1.76	0.51
43:DH:85:LYS:HD3	43:DH:133:VAL:HB	1.93	0.51
19:AS:16:LEU:C	19:AS:18:LYS:H	2.13	0.51
24:AY:76:A:C6	25:AZ:271:GLU:CG	2.93	0.51
25:CZ:279:GLU:O	25:CZ:280:GLY:C	2.49	0.51
31:D5:50:GLY:HA3	31:D5:56:LYS:NZ	2.26	0.51
36:BA:2128:C:O2'	36:BA:2129:C:O5'	2.24	0.51
58:DZ:119:GLU:O	58:DZ:119:GLU:HG2	2.11	0.51
2:AB:114:ARG:HD2	2:AB:141:GLU:OE2	2.11	0.51
10:AJ:81:THR:C	10:AJ:83:GLU:H	2.14	0.51
20:CT:26:ASN:N	20:CT:26:ASN:ND2	2.57	0.51
40:DE:132:HIS:CD2	40:DE:135:HIS:HE2	2.29	0.51
36:DA:673:C:C2'	36:DA:674:G:H5'	2.40	0.51
52:DT:98:LYS:HB3	52:DT:100:TYR:HE1	1.73	0.51
52:DT:100:TYR:O	52:DT:103:ARG:HG3	2.10	0.51
22:AW:39:U:O2	22:AW:39:U:H5'	2.09	0.51
36:BA:1682:G:H2'	36:BA:1683:C:C6	2.46	0.51
58:DZ:122:ARG:HH11	58:DZ:122:ARG:CB	2.24	0.51
17:AQ:45:HIS:HA	17:AQ:69:LYS:HZ1	1.76	0.51
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.26	0.51
22:AW:3:C:H2'	22:AW:4:C:O4'	2.10	0.51
22:AV:59:U:O2'	22:AV:60:U:O4'	2.26	0.51
56:BX:57:LEU:HD13	56:BX:57:LEU:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:59:U:O2'	22:CV:60:U:O5'	2.28	0.51
30:D4:5:ILE:H	30:D4:5:ILE:HD13	1.76	0.51
7:CG:58:PRO:C	7:CG:60:LYS:H	2.13	0.51
36:BA:1151:G:H2'	36:BA:1152:C:C6	2.46	0.51
2:CB:103:THR:HG23	2:CB:176:GLU:HG2	1.92	0.51
2:CB:207:ALA:O	2:CB:211:ILE:HG13	2.11	0.51
39:DD:72:LYS:HE3	39:DD:101:GLU:HB3	1.92	0.51
36:BA:1999:C:H4'	36:BA:2723:C:O2	2.10	0.51
36:DA:1137:G:O2'	36:DA:1138:G:H5'	2.11	0.51
3:CC:85:ARG:NH1	3:CC:88:ARG:HH12	2.08	0.51
36:DA:1790:C:H5"	36:DA:1791:A:OP1	2.10	0.51
53:DU:62:ILE:HG23	53:DU:76:TYR:CE2	2.46	0.51
49:BQ:3:MET:HB2	49:BQ:4:PRO:HD2	1.93	0.51
36:DA:2170:A:OP1	38:DC:134:ARG:NH2	2.44	0.51
41:DF:50:SER:HB2	41:DF:94:PRO:HD3	1.92	0.51
36:BA:465:G:H2'	36:BA:466:A:C8	2.46	0.51
1:CA:631:G:H2'	1:CA:632:A:C8	2.45	0.51
36:DA:1579:A:H2'	36:DA:1580:A:O4'	2.11	0.51
36:BA:1508:A:H4'	36:BA:1509(A):A:C2	2.46	0.51
17:CQ:82:MET:O	17:CQ:86:GLU:HG2	2.10	0.51
36:BA:1688:U:H1'	36:BA:1701:A:C6	2.46	0.51
12:AL:126:LYS:O	12:AL:128:ALA:N	2.42	0.51
2:AB:74:LYS:NZ	2:AB:74:LYS:HB3	2.26	0.51
37:DB:5:C:O2'	37:DB:6:C:H5'	2.10	0.51
39:DD:31:LYS:HE3	39:DD:33:LEU:CD1	2.41	0.51
1:AA:1305:G:C5'	21:AU:4:GLY:HA3	2.40	0.51
56:DX:14:SER:O	56:DX:17:ALA:HB3	2.11	0.51
57:DY:6:HIS:N	57:DY:6:HIS:CD2	2.79	0.51
57:DY:8:LYS:HE2	57:DY:72:VAL:O	2.11	0.51
36:DA:1486:A:N6	36:DA:1504:C:H42	2.09	0.51
34:D8:61:LEU:CD2	36:DA:593:G:H4'	2.40	0.51
31:D5:4:HIS:C	36:DA:2056:G:N2	2.64	0.51
51:DS:98:VAL:O	51:DS:99:LYS:C	2.48	0.51
32:D6:45:LYS:HZ2	32:D6:45:LYS:HB3	1.74	0.51
57:BY:76:CYS:SG	57:BY:77:PRO:HD2	2.51	0.51
57:BY:77:PRO:O	57:BY:78:ALA:HB2	2.10	0.51
36:BA:1665:A:H2'	36:BA:1666:G:C5'	2.26	0.51
2:AB:31:TYR:CD2	2:AB:202:PRO:HG3	2.46	0.51
1:AA:358:U:H4'	25:AZ:234:ARG:N	2.26	0.51
41:DF:175:THR:O	41:DF:176:LEU:HB2	2.11	0.51
48:DP:146:VAL:O	48:DP:148:LEU:HG	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:8:ARG:HG2	55:BW:8:ARG:NH1	2.25	0.51
36:DA:1539:G:H2'	36:DA:1540:U:C5'	2.38	0.51
36:BA:1190:G:C5'	48:BP:35:HIS:H	2.15	0.51
36:BA:638:G:N2	36:BA:651:G:H1'	2.26	0.51
36:DA:2133:G:C6	36:DA:2157:G:O6	2.64	0.51
9:AI:19:LEU:HD23	9:AI:20:ARG:N	2.26	0.51
1:AA:973:G:OP1	10:AJ:57:LYS:NZ	2.37	0.51
36:BA:1041:G:H2'	36:BA:1042:G:H5'	1.93	0.51
37:BB:68:C:H2'	37:BB:69:G:O4'	2.10	0.51
3:CC:68:VAL:HG13	3:CC:70:VAL:HG23	1.93	0.51
9:AI:43:ALA:C	9:AI:45:ALA:H	2.15	0.51
36:BA:1681:G:O2'	36:BA:1762:A:C2'	2.56	0.51
34:B8:58:ILE:HG22	34:B8:58:ILE:O	2.11	0.51
57:DY:31:LEU:HD22	57:DY:31:LEU:N	2.26	0.51
4:AD:7:PRO:HB2	4:AD:10:ARG:HD2	1.91	0.51
53:DU:115:ALA:C	53:DU:117:GLN:H	2.14	0.51
50:BR:13:HIS:CE1	50:BR:16:HIS:HB2	2.46	0.51
36:DA:519:U:H2'	36:DA:520:G:C8	2.43	0.51
24:CY:61:C:C2'	24:CY:62:U:C5'	2.88	0.51
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.10	0.51
36:BA:220:G:H2'	36:BA:427:U:O4	2.10	0.51
1:AA:1141:C:O2'	1:AA:1142:G:H5'	2.11	0.51
39:DD:261:LYS:NZ	39:DD:263:ARG:NH2	2.59	0.51
16:AP:8:ARG:C	16:AP:9:PHE:HD1	2.13	0.51
25:CZ:30:ALA:O	25:CZ:34:VAL:HG23	2.11	0.51
36:DA:2358:G:H2'	36:DA:2359:C:H6	1.76	0.51
6:CF:69:GLU:O	6:CF:72:VAL:HG12	2.10	0.51
1:AA:137:C:H42	1:AA:226:G:H1	1.59	0.51
36:DA:1411:C:H2'	36:DA:1412:A:H8	1.76	0.51
5:AE:143:ARG:NH1	8:AH:77:GLU:OE1	2.43	0.51
36:BA:469:G:H2'	36:BA:470:A:H5"	1.93	0.51
56:BX:56:THR:HG22	56:BX:79:ALA:HB2	1.93	0.51
8:CH:103:VAL:HG12	8:CH:108:GLY:HA3	1.91	0.51
36:DA:2653:U:H5"	36:DA:2654:A:H2'	1.92	0.51
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.45	0.51
25:AZ:350:THR:HG22	25:AZ:351:GLY:H	1.75	0.51
1:AA:509:A:H5'	4:AD:54:TYR:HD2	1.76	0.51
36:BA:1796:U:H2'	36:BA:1797:C:C6	2.46	0.51
36:DA:300:A:H2'	36:DA:334:C:O2'	2.11	0.51
45:DK:55:UNK:HA	45:DK:69:UNK:HA	1.92	0.51
39:BD:27:THR:CG2	39:BD:81:ALA:HB1	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2832:U:C2	36:BA:2834:G:N2	2.79	0.51
34:D8:32:LEU:HB3	34:D8:36:LYS:HZ1	1.76	0.51
28:D2:2:LYS:O	28:D2:3:LEU:HB2	2.11	0.51
28:D2:35:LEU:HD11	28:D2:50:ILE:HG23	1.92	0.51
28:D2:28:LYS:HB3	28:D2:57:ILE:HD11	1.91	0.51
57:DY:76:CYS:SG	57:DY:77:PRO:HD2	2.50	0.51
42:DG:7:LEU:HD22	42:DG:100:TRP:HE3	1.76	0.51
51:DS:35:ILE:O	51:DS:35:ILE:HG12	2.11	0.51
32:D6:45:LYS:HD2	32:D6:45:LYS:N	2.25	0.51
32:B6:15:GLU:OE2	32:B6:41:PRO:CG	2.58	0.51
42:DG:88:ILE:HG23	42:DG:89:GLY:N	2.24	0.51
14:AN:21:TYR:N	14:AN:21:TYR:CD1	2.79	0.51
2:AB:44:LEU:HD12	2:AB:44:LEU:N	2.25	0.51
52:DT:32:TYR:CD1	52:DT:32:TYR:N	2.78	0.51
36:DA:1946:U:H2'	36:DA:1947:C:H6	1.75	0.51
43:DH:83:TYR:HB3	43:DH:135:GLY:N	2.25	0.51
36:DA:1142(A):A:OP1	36:DA:1142(A):A:H3'	2.11	0.51
4:AD:32:ALA:C	4:AD:34:GLU:H	2.12	0.51
50:DR:101:ALA:HB1	55:DW:38:TYR:HE1	1.75	0.51
39:BD:241:PRO:O	39:BD:242:ARG:CB	2.59	0.51
36:DA:654(E):G:H22	36:DA:654(Q):C:C1'	2.15	0.51
58:BZ:166:SER:HB2	58:BZ:168:GLU:H	1.69	0.51
36:DA:2635:C:H5"	40:DE:78:LEU:O	2.10	0.51
40:DE:65:GLY:HA2	40:DE:70:ALA:HB1	1.93	0.51
36:BA:2579:C:O2'	40:BE:131:ALA:HB3	2.11	0.51
48:BP:125:VAL:O	48:BP:125:VAL:HG13	2.11	0.51
38:BC:10:LEU:CD1	38:BC:32:LEU:HA	2.40	0.51
25:CZ:301:GLY:CA	25:CZ:347:THR:HG23	2.41	0.51
50:BR:117:VAL:CG2	50:BR:118:GLU:H	2.21	0.51
54:DV:99:ILE:CD1	54:DV:99:ILE:H	2.10	0.51
20:CT:22:ARG:O	20:CT:26:ASN:ND2	2.44	0.51
38:BC:76:ALA:HB2	38:BC:153:ILE:HD11	1.93	0.51
36:BA:673:C:C2'	36:BA:674:G:H5'	2.41	0.51
36:DA:2110:G:H22	36:DA:2178:C:H5	1.55	0.51
25:AZ:160:GLN:HG3	25:AZ:160:GLN:O	2.10	0.51
4:AD:187:ARG:CB	4:AD:187:ARG:HH11	2.22	0.51
1:AA:1030:C:N4	1:AA:1032:G:H21	2.04	0.51
1:AA:723:U:O4	1:AA:1537:U:H2'	2.11	0.51
41:BF:88:VAL:O	41:BF:88:VAL:CG1	2.59	0.51
3:CC:32:LEU:HD22	3:CC:59:ARG:HH11	1.76	0.51
25:CZ:270:VAL:HG22	25:CZ:288:VAL:HG22	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:68:VAL:HG13	25:CZ:69:GLU:N	2.25	0.51
56:BX:40:LYS:O	56:BX:44:GLU:HB2	2.11	0.51
41:BF:113:ALA:HB2	41:BF:183:VAL:HG12	1.93	0.51
50:BR:45:ARG:CG	50:BR:46:GLY:H	2.23	0.51
55:BW:82:LEU:HD23	55:BW:84:ARG:HH22	1.76	0.51
4:CD:145:GLU:HA	4:CD:183:GLY:O	2.10	0.51
18:AR:59:SER:H	18:AR:62:GLU:HB2	1.76	0.51
36:DA:2688:U:O2	36:DA:2688:U:H3'	2.10	0.51
41:DF:84:VAL:C	41:DF:86:GLY:N	2.65	0.51
1:CA:637:G:O2'	1:CA:638:G:H5'	2.10	0.51
49:BQ:14:ARG:HG2	49:BQ:41:TRP:HH2	1.75	0.51
22:CV:44:G:C2'	22:CV:45:U:H5'	2.41	0.51
18:CR:26:LEU:N	18:CR:26:LEU:HD12	2.26	0.51
1:CA:201:C:H42	1:CA:216:G:H1	1.59	0.51
36:DA:1151:G:H2'	36:DA:1152:C:C6	2.45	0.51
39:BD:206:LEU:HD22	39:BD:211:ARG:HG2	1.93	0.51
1:AA:782:A:H2'	1:AA:783:C:H5'	1.93	0.51
35:D9:3:VAL:HG21	36:DA:2539:C:H4'	1.92	0.51
36:DA:1525:G:H2'	36:DA:1526:G:C8	2.46	0.51
36:DA:405:U:H3'	36:DA:406:G:C5'	2.41	0.51
36:DA:2171:A:O2'	36:DA:2172:U:C5	2.64	0.51
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.46	0.51
2:CB:61:LEU:HD23	2:CB:68:ILE:HD11	1.92	0.51
36:DA:270:A:O2'	36:DA:271:A:H5'	2.11	0.51
36:BA:2682:U:H6	36:BA:2682:U:H5'	1.76	0.51
36:DA:1668:A:N3	36:DA:1670:C:C4	2.79	0.51
36:BA:2828:C:O2'	36:BA:2829:C:H5'	2.11	0.51
39:DD:31:LYS:C	39:DD:35:LYS:HE3	2.32	0.50
39:BD:81:ALA:HA	39:BD:113:VAL:HG22	1.93	0.50
24:AY:26:A:H2'	24:AY:27:C:O4'	2.11	0.50
36:DA:1598:C:H5'	56:DX:36:LYS:CD	2.40	0.50
31:D5:3:LYS:O	31:D5:5:PRO:HD2	2.11	0.50
52:BT:28:VAL:HG22	52:BT:46:GLU:HA	1.94	0.50
36:BA:2185:C:C2'	36:BA:2186:G:C5'	2.89	0.50
48:BP:146:VAL:O	48:BP:148:LEU:HG	2.12	0.50
1:CA:1319:A:OP1	19:CS:10:PHE:CE1	2.64	0.50
4:CD:55:ALA:O	4:CD:59:ARG:HG2	2.11	0.50
19:AS:11:VAL:CG1	19:AS:16:LEU:HD11	2.40	0.50
46:DN:21:LYS:HD3	46:DN:22:THR:N	2.26	0.50
36:BA:321:G:H5"	36:BA:322:A:OP2	2.11	0.50
25:AZ:368:VAL:HG12	25:AZ:369:THR:H	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:85:LEU:C	9:AI:87:GLN:H	2.14	0.50
54:DV:38:LEU:C	54:DV:39:LEU:HD13	2.32	0.50
39:DD:223:GLY:C	39:DD:224:ALA:O	2.44	0.50
5:CE:33:VAL:HG21	5:CE:109:ILE:HG12	1.93	0.50
25:CZ:324:LYS:O	25:CZ:325:LYS:C	2.49	0.50
38:DC:147:PHE:C	38:DC:149:ILE:H	2.14	0.50
1:AA:963:G:N2	10:AJ:55:LYS:NZ	2.59	0.50
1:AA:1363(A):A:C4'	1:AA:1364:U:H5"	2.38	0.50
36:BA:612:C:O2'	36:BA:613:G:H5"	2.11	0.50
1:AA:1325:C:H4'	21:AU:17:THR:HG21	1.92	0.50
36:DA:612:C:O2'	36:DA:613:G:H5"	2.11	0.50
36:DA:1131:G:H21	46:DN:73:THR:CG2	2.23	0.50
46:DN:71:ILE:HD12	46:DN:71:ILE:N	2.25	0.50
1:AA:723:U:O2'	1:AA:724:G:H5'	2.10	0.50
22:CW:60:U:O2	22:CW:60:U:C2'	2.60	0.50
25:CZ:69:GLU:CG	25:CZ:70:TYR:N	2.74	0.50
52:BT:94:ALA:O	52:BT:96:ARG:N	2.45	0.50
15:AO:17:ARG:O	15:AO:18:PHE:HB3	2.11	0.50
52:DT:94:ALA:C	52:DT:96:ARG:H	2.14	0.50
6:AF:63:TYR:N	6:AF:63:TYR:CD1	2.79	0.50
57:BY:46:LYS:HB3	57:BY:62:GLU:HG2	1.92	0.50
9:CI:43:ALA:C	9:CI:45:ALA:H	2.12	0.50
23:AX:11:U:H3'	23:AX:12:A:C8	2.47	0.50
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.44	0.50
1:CA:347:G:H21	1:CA:348:G:H1'	1.76	0.50
25:CZ:368:VAL:HG12	25:CZ:369:THR:H	1.75	0.50
13:CM:56:LEU:C	13:CM:56:LEU:HD13	2.31	0.50
38:DC:30:LYS:HB3	38:DC:30:LYS:NZ	2.26	0.50
39:BD:72:LYS:HE3	39:BD:101:GLU:HB3	1.92	0.50
1:AA:555:C:H2'	1:AA:556:C:H6	1.75	0.50
38:BC:163:PHE:O	38:BC:163:PHE:CD1	2.64	0.50
1:AA:828:A:H2'	1:AA:829:G:O4'	2.11	0.50
2:AB:180:LEU:O	2:AB:181:PHE:HB2	2.11	0.50
36:DA:153:C:H2'	36:DA:154:G:C8	2.46	0.50
36:DA:1756:G:H4'	36:DA:1758:G:O4'	2.11	0.50
51:DS:22:GLY:O	51:DS:23:ARG:O	2.28	0.50
37:BB:5:C:O2'	37:BB:6:C:H5'	2.10	0.50
36:BA:686:G:N2	36:BA:788:A:H61	2.09	0.50
30:B4:22:ILE:HG22	30:B4:24:THR:HG23	1.92	0.50
25:AZ:67:HIS:CD2	25:AZ:67:HIS:H	2.29	0.50
22:CV:53:G:H2'	22:CV:54:U:H6	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:359:VAL:HG12	25:AZ:362:VAL:HG22	1.92	0.50
39:DD:28:GLU:H	39:DD:29:PRO:HD3	1.77	0.50
34:B8:32:LEU:HD11	36:BA:2391:G:O5'	2.11	0.50
42:DG:11:TYR:HA	42:DG:15:VAL:HG21	1.92	0.50
23:CX:11:U:H3'	23:CX:12:A:C8	2.46	0.50
57:BY:13:VAL:CG2	57:BY:72:VAL:HB	2.41	0.50
36:DA:2304:G:H22	36:DA:2312:U:H3	1.58	0.50
42:DG:42:GLY:O	42:DG:89:GLY:HA2	2.11	0.50
48:BP:9:ASN:N	48:BP:10:PRO:HD2	2.15	0.50
4:AD:61:LYS:NZ	4:AD:62:GLN:NE2	2.59	0.50
54:DV:17:GLY:C	54:DV:18:LEU:HD13	2.31	0.50
31:D5:36:CYS:O	31:D5:38:ALA:N	2.44	0.50
58:BZ:16:SER:O	58:BZ:18:LEU:N	2.43	0.50
40:DE:93:VAL:C	40:DE:95:ILE:H	2.14	0.50
13:CM:96:LEU:HB3	13:CM:97:PRO:HD2	1.93	0.50
20:CT:26:ASN:HB3	20:CT:71:THR:OG1	2.11	0.50
17:CQ:58:GLU:HB3	17:CQ:74:LEU:HB3	1.93	0.50
48:BP:41:ARG:CB	48:BP:41:ARG:NH1	2.74	0.50
2:CB:109:SER:C	2:CB:111:ARG:N	2.65	0.50
1:CA:1442(B):A:C2	52:DT:118:ARG:NH2	2.80	0.50
34:B8:49:VAL:O	34:B8:50:LEU:HB3	2.12	0.50
36:BA:2853:C:O2'	36:BA:2854:G:H5'	2.11	0.50
36:BA:782:A:H5'	36:BA:783:A:C2	2.46	0.50
36:BA:2651:C:O2'	36:BA:2652:C:H5'	2.11	0.50
25:AZ:263:ARG:HE	25:AZ:293:VAL:HG22	1.75	0.50
36:BA:1754:C:OP2	52:BT:113:LYS:NZ	2.42	0.50
5:AE:6:PHE:HB3	5:AE:35:GLY:C	2.32	0.50
6:AF:63:TYR:HD1	6:AF:63:TYR:N	2.08	0.50
6:AF:43:LEU:CD2	6:AF:43:LEU:H	2.21	0.50
6:AF:43:LEU:O	6:AF:44:GLY:O	2.29	0.50
2:AB:157:ARG:HH11	2:AB:157:ARG:HB3	1.76	0.50
24:AY:68:C:H2'	24:AY:69:C:H6	1.76	0.50
50:BR:9:LYS:HD2	50:BR:43:GLU:OE1	2.12	0.50
52:DT:128:GLU:CD	52:DT:129:ARG:N	2.64	0.50
56:BX:61:GLY:HA3	56:BX:73:ARG:O	2.11	0.50
48:BP:6:LEU:N	48:BP:6:LEU:HD23	2.25	0.50
36:DA:1231:G:H2'	36:DA:1232:G:H8	1.77	0.50
47:DO:43:VAL:HG21	47:DO:52:VAL:CG1	2.41	0.50
1:CA:992:U:H1'	1:CA:993:G:C2	2.45	0.50
1:CA:137:C:H42	1:CA:226:G:H1	1.59	0.50
36:BA:1163:G:O2'	36:BA:1164:G:H5'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2653:U:H5"	36:BA:2654:A:H2'	1.92	0.50
40:DE:44:TYR:O	40:DE:45:THR:CB	2.60	0.50
3:CC:90:GLU:O	3:CC:93:LYS:HB3	2.11	0.50
25:AZ:130:TYR:CE2	25:AZ:211:PRO:HD2	2.46	0.50
36:DA:445:C:O2'	36:DA:446:G:H5'	2.11	0.50
14:CN:15:LYS:HB3	14:CN:16:PHE:CE2	2.47	0.50
38:DC:130:ILE:HG22	38:DC:130:ILE:O	2.11	0.50
36:BA:419:C:H2'	36:BA:420:C:H6	1.76	0.50
36:BA:247:G:H4'	36:BA:386:G:C5	2.46	0.50
36:BA:153:C:H2'	36:BA:154:G:C8	2.46	0.50
39:BD:31:LYS:C	39:BD:35:LYS:HE3	2.32	0.50
28:D2:31:GLU:O	28:D2:35:LEU:HB2	2.11	0.50
28:D2:62:THR:HG21	36:DA:76:C:O4'	2.11	0.50
42:DG:39:ILE:CD1	42:DG:92:VAL:HG13	2.41	0.50
28:B2:68:ARG:HB2	28:B2:68:ARG:NH1	2.03	0.50
43:BH:85:LYS:HD3	43:BH:133:VAL:HB	1.94	0.50
52:DT:88:ILE:O	52:DT:89:VAL:O	2.29	0.50
2:CB:44:LEU:HD12	2:CB:44:LEU:N	2.26	0.50
58:BZ:99:TYR:CE1	58:BZ:125:LEU:HD13	2.45	0.50
24:CY:1:A:H2'	24:CY:2:G:H8	1.77	0.50
13:AM:11:ARG:H	13:AM:45:VAL:HG11	1.75	0.50
41:BF:148:LEU:HD23	41:BF:191:ARG:HH11	1.76	0.50
25:CZ:325:LYS:O	25:CZ:328:GLY:N	2.44	0.50
13:CM:101:GLN:NE2	13:CM:101:GLN:H	2.00	0.50
50:DR:115:GLU:HG2	50:DR:117:VAL:H	1.75	0.50
1:AA:1392:G:N2	1:AA:1502:A:H8	2.09	0.50
38:BC:118:ASP:OD2	38:BC:119:VAL:HG13	2.11	0.50
20:AT:26:ASN:HD22	20:AT:26:ASN:N	2.08	0.50
4:AD:100:ARG:NH1	4:AD:137:SER:HA	2.26	0.50
5:AE:147:ASP:N	5:AE:147:ASP:OD1	2.45	0.50
42:BG:45:GLU:OE1	42:BG:45:GLU:HA	2.09	0.50
36:BA:1722:A:O2'	36:BA:1739:U:C5'	2.59	0.50
57:DY:2:ARG:HH11	57:DY:2:ARG:HG2	1.76	0.50
38:BC:40:THR:HG22	38:BC:177:LYS:CE	2.41	0.50
36:DA:2864:G:O2'	36:DA:2865:U:H5'	2.12	0.50
36:BA:1993:U:H4'	40:BE:128:SER:HB3	1.92	0.50
39:BD:239:ARG:HG3	39:BD:239:ARG:O	2.10	0.50
39:BD:24:ILE:HG13	39:BD:84:TYR:HB2	1.91	0.50
35:B9:15:LYS:HB3	35:B9:15:LYS:HZ3	1.75	0.50
48:DP:75:ILE:HD13	48:DP:77:ARG:HH22	1.74	0.50
8:AH:18:ARG:HB2	8:AH:18:ARG:NH1	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1486:A:N6	36:BA:1504:C:H42	2.09	0.50
36:DA:267:C:H2'	36:DA:268:C:C6	2.44	0.50
1:AA:390:C:H4'	16:AP:28:ARG:HH21	1.76	0.50
36:DA:78:A:H2'	36:DA:79:G:H8	1.76	0.50
1:AA:1411:C:H2'	1:AA:1412:C:C6	2.46	0.50
36:BA:2326:C:N4	36:BA:2389:G:H1	2.08	0.50
43:BH:143:GLN:NE2	43:BH:143:GLN:HA	2.26	0.50
1:CA:613:C:H2'	1:CA:614:A:H8	1.76	0.50
36:BA:17:G:H4'	53:BU:25:TRP:CH2	2.45	0.50
2:CB:236:TYR:C	2:CB:238:LEU:N	2.64	0.50
41:DF:82:ILE:O	41:DF:83:PHE:HB2	2.11	0.50
1:AA:1328:C:O2'	1:AA:1329:A:H5'	2.11	0.50
49:BQ:32:TYR:O	49:BQ:105:GLU:HB2	2.11	0.50
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.47	0.50
44:BJ:57:UNK:O	44:BJ:58:UNK:O	2.29	0.50
50:DR:88:ARG:HD2	50:DR:88:ARG:O	2.11	0.50
36:DA:57:C:H2'	36:DA:58:G:O4'	2.12	0.50
42:DG:150:ASP:O	42:DG:151:ALA:HB3	2.11	0.50
36:BA:495:G:H21	55:BW:61:ASN:HD21	1.58	0.50
25:CZ:359:VAL:HG12	25:CZ:362:VAL:HG22	1.94	0.50
39:DD:26:LYS:H	39:DD:26:LYS:HE2	1.76	0.50
28:D2:17:SER:HB3	28:D2:19:VAL:HG23	1.93	0.50
28:D2:34:GLU:O	28:D2:38:GLN:N	2.44	0.50
57:BY:14:LEU:HD12	57:BY:15:VAL:H	1.75	0.50
37:DB:73:A:N1	58:DZ:34:ASN:ND2	2.60	0.50
48:DP:62:LEU:N	48:DP:62:LEU:HD23	2.04	0.50
36:BA:322:A:C5'	36:BA:340:A:H1'	2.39	0.50
36:DA:321:G:H21	41:DF:165:ARG:NH2	2.02	0.50
25:AZ:267:VAL:CG2	25:AZ:288:VAL:HG13	2.42	0.50
40:BE:35:GLN:O	40:BE:36:ARG:O	2.30	0.50
25:CZ:277:LEU:HD11	25:CZ:280:GLY:N	2.27	0.50
25:AZ:90:LYS:O	25:AZ:93:ILE:HG23	2.12	0.50
10:CJ:54:PHE:CE1	10:CJ:55:LYS:CE	2.95	0.50
51:BS:85:VAL:C	51:BS:106:ARG:HG2	2.32	0.50
58:BZ:14:LYS:O	58:BZ:18:LEU:HD13	2.10	0.50
27:D1:46:LEU:HB2	27:D1:62:VAL:O	2.12	0.50
36:DA:1041:G:H2'	36:DA:1042:G:H5'	1.93	0.50
40:BE:132:HIS:CD2	40:BE:135:HIS:HE2	2.30	0.50
36:BA:1131:G:C4	46:BN:75:TYR:HB2	2.46	0.50
53:BU:11:ARG:O	53:BU:15:LYS:HG2	2.10	0.50
51:BS:15:ARG:O	51:BS:18:ILE:CD1	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:200:TRP:O	25:AZ:204:ASP:CB	2.60	0.50
30:D4:34:GLU:CB	42:DG:113:ARG:HH21	2.24	0.50
4:AD:202:LEU:HD13	4:AD:202:LEU:O	2.11	0.50
36:BA:363(F):A:O2'	36:BA:364:C:H5	1.94	0.50
36:BA:2036:C:H5'	36:BA:2036:C:C6	2.38	0.50
12:AL:53:ARG:HD2	12:AL:53:ARG:N	2.27	0.50
27:B1:3:LYS:HG3	36:BA:1364:G:H5"	1.93	0.50
27:B1:13:ILE:HD13	36:BA:396:G:H5'	1.91	0.50
25:CZ:28:THR:O	25:CZ:32:THR:HG23	2.11	0.50
52:DT:94:ALA:O	52:DT:96:ARG:N	2.44	0.50
39:BD:132:PRO:HG3	39:BD:190:TYR:CZ	2.46	0.50
25:CZ:323:LEU:HD12	25:CZ:323:LEU:N	2.26	0.50
40:BE:179:GLU:O	40:BE:180:ASN:HB2	2.11	0.50
50:DR:45:ARG:CG	50:DR:46:GLY:H	2.24	0.50
36:DA:1639:U:H2'	36:DA:1640:C:H5"	1.92	0.50
36:DA:2264:C:H2'	36:DA:2265:U:C6	2.45	0.50
36:DA:61:G:H1	36:DA:94:C:H42	1.59	0.50
47:DO:98:VAL:HG13	47:DO:118:ALA:HA	1.92	0.50
41:BF:65:TRP:CZ3	41:BF:75:HIS:HD2	2.29	0.50
36:BA:2166:G:H2'	36:BA:2167:U:C6	2.46	0.50
5:CE:20:GLN:NE2	5:CE:22:GLY:H	2.09	0.50
36:BA:827:U:H5'	36:BA:828:U:O5'	2.12	0.50
1:AA:662:G:H2'	1:AA:663:A:C8	2.46	0.50
38:BC:45:ALA:HB3	38:BC:171:ILE:CG2	2.41	0.50
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.47	0.50
7:CG:132:GLY:O	7:CG:136:LYS:HG2	2.11	0.50
58:DZ:150:LEU:CD2	58:DZ:150:LEU:N	2.74	0.50
20:CT:24:LEU:O	20:CT:24:LEU:HD12	2.11	0.50
1:CA:399:G:H2'	1:CA:400:C:C6	2.47	0.50
54:BV:79:VAL:O	54:BV:80:GLN:HB2	2.11	0.50
28:D2:27:GLU:C	28:D2:29:LYS:N	2.63	0.50
54:BV:62:LEU:N	54:BV:62:LEU:HD22	2.26	0.50
25:AZ:68:VAL:O	25:AZ:69:GLU:HB3	2.11	0.50
36:BA:2392:A:C8	48:BP:60:MET:HG2	2.46	0.50
36:DA:2107:C:C5	36:DA:2108:C:H5	2.29	0.50
34:D8:62:LEU:CD1	36:DA:242:G:H5"	2.21	0.50
1:AA:1532:U:C3'	1:AA:1533:C:H5"	2.41	0.50
42:BG:83:ARG:HD2	42:BG:84:LYS:HZ1	1.77	0.50
52:BT:30:VAL:HA	52:BT:43:GLN:O	2.11	0.50
1:AA:57:G:H2'	1:AA:58:C:C6	2.46	0.50
43:DH:85:LYS:CE	43:DH:85:LYS:C	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:59:ARG:HA	4:CD:59:ARG:NE	2.12	0.50
19:AS:16:LEU:HB3	19:AS:20:LEU:HG	1.94	0.50
36:DA:1022:G:H22	36:DA:1142(A):A:H2	1.59	0.50
57:DY:49:VAL:O	57:DY:50:ARG:CB	2.56	0.50
36:BA:1070:A:H3'	36:BA:1072:C:C5	2.46	0.50
4:AD:34:GLU:O	4:AD:35:ARG:HB2	2.10	0.50
41:DF:134:GLY:O	41:DF:135:LYS:HE3	2.11	0.50
25:AZ:267:VAL:HG23	25:AZ:288:VAL:CG1	2.42	0.50
36:DA:1072:C:H5"	36:DA:1073:A:OP1	2.11	0.50
40:DE:87:GLU:O	40:DE:89:ASP:N	2.44	0.50
58:BZ:13:GLU:HG2	58:BZ:14:LYS:HD3	1.92	0.50
1:AA:1437:C:N3	1:AA:1438:G:N7	2.60	0.50
1:AA:1439:C:N4	1:AA:1463:C:N3	2.59	0.50
38:DC:100:ILE:O	38:DC:104:LEU:HD23	2.11	0.50
38:DC:149:ILE:HG23	38:DC:150:GLY:N	2.27	0.50
50:BR:96:ARG:O	50:BR:114:VAL:HA	2.11	0.50
43:DH:40:GLU:O	43:DH:41:MET:HB2	2.11	0.50
1:CA:954:G:H21	1:CA:1227:A:H62	1.60	0.50
35:B9:29:ASN:HD22	35:B9:29:ASN:H	1.60	0.50
1:AA:255:G:O6	1:AA:266:G:O6	2.29	0.50
36:DA:2840:C:H2'	36:DA:2841:C:H6	1.76	0.50
22:AW:60:U:C2'	22:AW:60:U:O2	2.60	0.50
12:CL:24:VAL:CG1	12:CL:27:LEU:HD22	2.37	0.50
22:AW:73:A:C2'	22:AW:74:C:H5"	2.42	0.50
36:BA:1721:G:C6	36:BA:1739:U:H5'	2.47	0.50
57:BY:64:GLU:O	57:BY:65:ALA:HB2	2.11	0.50
25:CZ:323:LEU:CD1	25:CZ:323:LEU:H	2.22	0.50
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	1.92	0.50
36:DA:1314:C:C6	36:DA:1314:C:H5'	2.43	0.50
15:CO:31:LEU:O	15:CO:35:ARG:HG3	2.10	0.50
36:DA:271(D):G:O2'	36:DA:271(E):U:H5'	2.12	0.50
6:CF:43:LEU:H	6:CF:43:LEU:CD2	2.24	0.50
52:BT:128:GLU:CD	52:BT:129:ARG:N	2.64	0.50
25:AZ:178:ALA:HB1	25:AZ:199:ILE:HD12	1.94	0.50
41:BF:84:VAL:C	41:BF:86:GLY:N	2.65	0.50
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.79	0.50
36:BA:284:U:H2'	36:BA:285:C:C6	2.45	0.50
36:BA:2672:G:H2'	36:BA:2673:G:H5"	1.94	0.50
1:CA:625:G:O2'	1:CA:626:U:H5'	2.11	0.50
46:BN:12:ARG:CZ	46:BN:135:PRO:HG2	2.41	0.50
40:DE:108:SER:O	40:DE:162:ALA:HA	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:7:ARG:CD	28:B2:7:ARG:H	2.25	0.50
39:BD:16:MET:HG3	39:BD:206:LEU:O	2.12	0.50
54:DV:82:ARG:NH1	54:DV:82:ARG:HG2	2.27	0.50
1:CA:434:U:H2'	1:CA:435:C:H6	1.75	0.50
19:AS:21:GLU:HG3	19:AS:22:LEU:N	2.25	0.50
7:AG:69:VAL:HG12	7:AG:100:ALA:HA	1.93	0.50
36:DA:1525:G:H2'	36:DA:1526:G:H8	1.76	0.50
1:AA:454:C:H5"	1:AA:455:C:C5	2.46	0.50
6:CF:53:ALA:O	6:CF:54:LYS:HB2	2.11	0.50
36:DA:1508:A:H4'	36:DA:1509(A):A:C2	2.47	0.50
36:BA:2753:A:O2'	36:BA:2754:U:H5'	2.11	0.50
17:CQ:36:ILE:HG13	17:CQ:36:ILE:O	2.11	0.50
55:DW:1:MET:HB3	55:DW:64:MET:HE3	1.94	0.50
36:DA:2696:U:H2'	36:DA:2697:G:C8	2.46	0.50
11:CK:61:ALA:HB2	11:CK:90:GLY:HA3	1.92	0.50
40:DE:47:VAL:HG21	40:DE:86:PRO:CD	2.42	0.50
27:D1:26:ARG:HD3	27:D1:27:GLU:CD	2.32	0.50
3:AC:124:ILE:HG12	3:AC:130:VAL:HG22	1.93	0.50
36:DA:290:G:O2'	36:DA:291:C:H5'	2.11	0.50
9:AI:41:VAL:O	9:AI:41:VAL:HG12	2.11	0.50
1:AA:280:C:O2	17:AQ:38:ARG:HG3	2.11	0.50
9:AI:24:GLY:C	9:AI:25:LYS:HD2	2.31	0.50
36:DA:691:C:O2'	36:DA:692:C:H5'	2.11	0.50
58:BZ:30:ASN:ND2	58:BZ:32:HIS:N	2.56	0.50
28:D2:63:VAL:O	28:D2:66:GLU:HG3	2.11	0.50
41:BF:24:LEU:O	41:BF:115:ALA:HB1	2.12	0.50
36:DA:2185:C:C2'	36:DA:2186:G:C5'	2.90	0.50
42:DG:138:GLN:OE1	42:DG:153:ARG:N	2.38	0.50
51:DS:96:GLY:C	51:DS:98:VAL:H	2.15	0.50
32:D6:15:GLU:CD	32:D6:18:ARG:NE	2.61	0.50
32:D6:45:LYS:O	32:D6:46:HIS:CB	2.58	0.50
36:BA:2107:C:C5	36:BA:2108:C:C5	2.99	0.50
46:BN:23:LEU:HD11	46:BN:98:VAL:HG12	1.94	0.50
43:DH:153:LYS:HD3	43:DH:153:LYS:N	2.12	0.50
36:DA:1188:U:C2'	36:DA:1189:A:H5'	2.41	0.50
36:DA:811:U:OP2	48:DP:30:THR:HG23	2.12	0.50
18:CR:31:LEU:HD23	18:CR:31:LEU:H	1.75	0.50
14:CN:12:ARG:HH11	14:CN:14:PRO:HG2	1.76	0.50
25:AZ:301:GLY:HA3	25:AZ:347:THR:CG2	2.39	0.50
54:DV:55:ALA:O	54:DV:56:SER:HB3	2.12	0.50
54:BV:17:GLY:C	54:BV:18:LEU:HD13	2.31	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:19:LEU:CD1	9:CI:59:PHE:HD2	2.17	0.50
17:CQ:10:VAL:HG23	17:CQ:53:LEU:HA	1.93	0.50
17:AQ:52:LYS:CD	17:AQ:52:LYS:H	2.22	0.50
12:AL:102:ARG:NH1	12:AL:102:ARG:CG	2.73	0.50
36:DA:742:G:O2'	36:DA:743:G:H5'	2.12	0.50
37:DB:15:A:H1'	37:DB:110:G:C5	2.47	0.50
49:BQ:133:ARG:CB	49:BQ:133:ARG:HH11	2.25	0.50
7:AG:15:ASP:OD1	7:AG:16:LEU:N	2.45	0.50
51:DS:14:VAL:O	51:DS:15:ARG:HG3	2.12	0.50
31:D5:23:HIS:O	31:D5:24:ALA:C	2.50	0.50
10:AJ:16:LEU:HD11	10:AJ:70:ARG:CG	2.41	0.50
14:AN:15:LYS:HB3	14:AN:16:PHE:CE2	2.47	0.50
36:DA:363(F):A:HO2'	36:DA:364:C:H5	1.58	0.50
36:DA:328:U:H4'	57:DY:68:HIS:CD2	2.47	0.50
8:AH:9:MET:O	8:AH:13:ILE:HG12	2.12	0.50
46:BN:4:TYR:O	46:BN:5:VAL:HB	2.11	0.50
36:DA:863:A:H61	36:DA:913:U:H3	1.58	0.50
40:DE:5:LEU:HD12	40:DE:51:PHE:HB2	1.93	0.50
1:AA:1181:G:H2'	1:AA:1182:G:C4	2.47	0.50
36:DA:1472:A:C2'	36:DA:1473:G:H5'	2.41	0.50
2:AB:87:ARG:NH1	2:AB:87:ARG:HB3	2.26	0.50
36:BA:2526:G:H5'	36:BA:2742:C:O2'	2.12	0.50
1:AA:637:G:O2'	1:AA:638:G:H5'	2.12	0.50
42:DG:135:LEU:O	42:DG:154:GLY:HA3	2.12	0.50
36:BA:1240:U:O2'	36:BA:1241:A:H5'	2.11	0.50
46:BN:62:VAL:HG22	46:BN:66:LYS:HD2	1.92	0.50
19:CS:21:GLU:HG3	19:CS:22:LEU:N	2.26	0.50
8:AH:83:ILE:HG13	8:AH:137:VAL:HG22	1.93	0.50
1:AA:707:C:H2'	1:AA:708:C:C6	2.46	0.50
38:BC:45:ALA:O	38:BC:171:ILE:HG22	2.11	0.50
36:DA:1799:G:H5'	36:DA:1819:A:N6	2.27	0.50
36:BA:615:G:OP2	41:BF:40:GLN:HG2	2.12	0.50
1:AA:748:C:H4'	1:AA:749:C:O5'	2.11	0.50
3:CC:145:GLY:O	3:CC:146:ALA:O	2.30	0.50
1:AA:102:G:O2'	1:AA:103:C:H5'	2.11	0.50
36:DA:535:C:O2'	36:DA:536:A:H5'	2.11	0.50
3:CC:52:LEU:HD21	3:CC:55:VAL:HG23	1.94	0.50
54:DV:22:VAL:O	54:DV:23:GLU:HB2	2.12	0.50
54:BV:22:VAL:O	54:BV:23:GLU:HB2	2.11	0.50
1:AA:603:U:H2'	1:AA:604:G:H8	1.76	0.50
1:AA:695:A:H2'	1:AA:696:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2514:U:H2'	36:BA:2515:C:C6	2.46	0.50
36:BA:1214:A:H2'	36:BA:1215:G:O4'	2.12	0.50
1:AA:520:A:N1	1:AA:536:C:H1'	2.26	0.50
43:BH:13:LYS:HE2	43:BH:13:LYS:HA	1.94	0.50
36:BA:158:U:H3'	36:BA:158:U:O2	2.12	0.50
9:AI:58:HIS:O	9:AI:58:HIS:ND1	2.44	0.50
55:BW:10:VAL:O	55:BW:10:VAL:HG12	2.11	0.50
1:AA:620:C:H2'	1:AA:621:A:O4'	2.12	0.50
36:BA:2553:G:H3'	36:BA:2554:U:H5"	1.93	0.50
36:BA:1378:A:O2'	36:BA:1379:A:C5'	2.39	0.50
28:D2:55:ARG:O	28:D2:59:ARG:HG2	2.12	0.50
57:DY:15:VAL:HG22	57:DY:72:VAL:HG12	1.93	0.50
36:BA:2014:A:H4'	55:BW:92:ARG:HH22	1.76	0.50
36:BA:2304:G:H22	36:BA:2312:U:H3	1.59	0.50
32:B6:11:LEU:HD13	32:B6:12:GLU:N	2.27	0.50
1:AA:1270:C:H2'	1:AA:1271:G:H8	1.76	0.50
36:BA:27:G:N2	36:BA:512:G:C2'	2.69	0.50
42:BG:68:PRO:HB3	42:BG:91:ARG:O	2.12	0.50
41:DF:170:LEU:HB3	41:DF:173:VAL:HB	1.94	0.50
36:BA:2415:G:H2'	36:BA:2416:C:H6	1.76	0.50
36:DA:252:G:P	48:DP:50:ARG:HH21	2.34	0.50
36:DA:607:U:OP1	41:DF:102:PRO:HA	2.12	0.50
53:BU:92:ARG:HB2	54:BV:11:GLN:NE2	2.27	0.50
25:CZ:90:LYS:NZ	25:CZ:90:LYS:HB2	2.27	0.50
48:DP:125:VAL:O	48:DP:125:VAL:HG13	2.12	0.50
1:CA:501:C:OP1	12:CL:117:ARG:NH2	2.44	0.50
50:DR:32:GLY:O	50:DR:115:GLU:HA	2.12	0.50
50:DR:72:ASP:OD2	50:DR:75:LEU:HB2	2.11	0.50
50:BR:32:GLY:O	50:BR:115:GLU:HA	2.11	0.50
43:BH:40:GLU:O	43:BH:41:MET:HB2	2.12	0.50
36:BA:1558:A:H4'	36:BA:1559:G:O5'	2.12	0.50
12:AL:17:LYS:HD3	12:AL:18:VAL:H	1.77	0.50
22:CW:9:A:C2	22:CW:45:U:O4	2.55	0.50
49:DQ:26:TYR:HB2	49:DQ:137:TYR:HD1	1.77	0.50
1:CA:370:C:O2'	1:CA:371:G:H5'	2.12	0.50
5:AE:50:GLU:HB3	5:AE:53:LEU:HD13	1.94	0.50
31:B5:23:HIS:O	31:B5:24:ALA:C	2.50	0.50
57:BY:31:LEU:HD22	57:BY:31:LEU:N	2.26	0.50
36:BA:2512:C:H4'	40:BE:122:PHE:CE2	2.46	0.50
36:BA:1142(A):A:C8	36:BA:1142(A):A:H5'	2.47	0.50
48:BP:75:ILE:HD13	48:BP:77:ARG:HH22	1.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:132:PRO:HD2	39:DD:135:PHE:HD2	1.75	0.50
39:DD:70:TRP:HZ3	39:DD:146:GLU:OE2	1.94	0.50
15:AO:27:VAL:O	15:AO:31:LEU:CD1	2.59	0.50
36:BA:2050:C:H2'	36:BA:2051:A:O4'	2.12	0.50
47:DO:4:PRO:O	47:DO:5:GLN:CB	2.59	0.50
51:DS:20:ARG:HA	51:DS:20:ARG:NE	2.26	0.50
36:BA:1314:C:C6	36:BA:1314:C:H5'	2.47	0.50
36:BA:585:G:H2'	36:BA:1251:C:N4	2.25	0.50
51:BS:42:ASP:C	51:BS:44:LYS:H	2.15	0.50
36:BA:709:U:H2'	36:BA:710:G:H8	1.77	0.50
18:AR:36:ASN:HD21	18:AR:39:VAL:HB	1.77	0.50
37:BB:65:C:C2'	37:BB:66:A:H5'	2.42	0.50
37:DB:65:C:C2'	37:DB:66:A:H5'	2.42	0.50
36:DA:523:C:O2'	36:DA:524:U:H5'	2.10	0.50
25:AZ:35:ALA:HA	25:AZ:38:GLU:OE2	2.11	0.50
25:CZ:98:GLN:HG2	25:CZ:226:GLU:OE2	2.12	0.50
17:AQ:36:ILE:O	17:AQ:36:ILE:HG13	2.11	0.50
38:DC:46:LYS:NZ	38:DC:168:THR:O	2.45	0.50
36:BA:1525:G:O2'	36:BA:1526:G:H5'	2.11	0.50
36:BA:253:C:H2'	36:BA:254:G:O4'	2.11	0.50
46:BN:121:LYS:HB3	46:BN:123:TYR:CE1	2.47	0.50
49:DQ:32:TYR:O	49:DQ:105:GLU:HB2	2.11	0.50
36:BA:2681:C:H5	36:BA:2725:A:H62	1.57	0.50
25:CZ:200:TRP:O	25:CZ:204:ASP:CB	2.60	0.50
22:CV:14:A:C2'	22:CV:15:G:H5'	2.42	0.50
36:BA:2422:A:H4'	36:BA:2423:U:OP1	2.11	0.50
4:CD:36:ARG:C	4:CD:38:TYR:H	2.14	0.50
8:AH:30:ARG:CZ	8:AH:30:ARG:HB3	2.42	0.50
17:CQ:25:ARG:O	17:CQ:25:ARG:HG3	2.10	0.50
3:AC:107:GLN:N	3:AC:107:GLN:CD	2.64	0.50
36:BA:1799:G:H5'	36:BA:1819:A:N6	2.26	0.50
25:CZ:17:ILE:HG13	25:CZ:104:LEU:HA	1.92	0.50
39:BD:35:LYS:CG	39:BD:104:TYR:HE2	2.15	0.50
39:BD:30:GLU:C	39:BD:35:LYS:HZ1	2.15	0.50
39:BD:61:LEU:O	39:BD:63:ARG:NH1	2.44	0.50
58:BZ:56:VAL:HG13	58:BZ:69:THR:O	2.11	0.50
48:DP:56:SER:O	48:DP:57:THR:C	2.50	0.50
13:CM:22:ILE:CB	13:CM:25:ILE:HD12	2.42	0.50
28:D2:70:GLN:O	28:D2:71:ASN:CB	2.59	0.50
40:BE:55:ASN:O	40:BE:56:PRO:C	2.49	0.50
42:BG:125:PHE:CB	42:BG:130:ASN:O	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:192:LEU:HD23	41:BF:193:VAL:N	2.27	0.50
57:BY:83:THR:HA	57:BY:96:ILE:HG22	1.94	0.50
42:DG:86:MET:N	42:DG:87:PRO:CD	2.74	0.50
1:CA:1271:G:C3'	1:CA:1272:G:H5"	2.42	0.50
49:BQ:59:ARG:O	49:BQ:60:ARG:HB2	2.11	0.50
40:DE:76:ARG:O	40:DE:77:ILE:O	2.30	0.50
40:BE:52:LEU:O	40:BE:75:VAL:HG23	2.12	0.50
36:BA:1047:G:C2	36:BA:1110:G:H2'	2.46	0.50
36:BA:1047:G:H2'	36:BA:1110:G:N2	2.13	0.50
25:CZ:7:ARG:CG	25:CZ:7:ARG:NH1	2.68	0.50
36:BA:648:G:O2'	36:BA:649:G:H5'	2.12	0.50
58:DZ:151:HIS:HA	58:DZ:171:ILE:HG12	1.94	0.50
36:DA:2713:A:H3'	36:DA:2714:G:H5'	1.94	0.50
20:AT:87:LYS:O	20:AT:91:LEU:HG	2.11	0.50
32:B6:53:LYS:O	32:B6:54:ILE:OXT	2.29	0.50
36:BA:2713:A:H3'	36:BA:2714:G:C5'	2.42	0.50
36:DA:2579:C:O2'	40:DE:131:ALA:CB	2.60	0.50
14:CN:57:ARG:HB2	14:CN:57:ARG:NH1	2.14	0.50
25:CZ:166:ASP:C	25:CZ:167:GLU:CG	2.78	0.50
2:AB:112:VAL:O	2:AB:115:LEU:HB3	2.12	0.50
10:AJ:3:LYS:N	10:AJ:77:PRO:HD3	2.27	0.50
41:DF:148:LEU:HD23	41:DF:191:ARG:HH11	1.77	0.50
20:AT:26:ASN:ND2	20:AT:26:ASN:N	2.57	0.50
16:AP:23:ASP:OD1	16:AP:25:ARG:NH1	2.44	0.50
4:AD:108:LEU:HB3	4:AD:110:PHE:CE1	2.45	0.50
3:CC:50:ALA:O	3:CC:70:VAL:CG1	2.60	0.50
22:AW:75:C:H5"	27:B1:30:VAL:HG11	1.93	0.50
51:DS:15:ARG:O	51:DS:18:ILE:CD1	2.59	0.50
51:DS:16:ASN:O	51:DS:18:ILE:HD12	2.12	0.50
29:B3:15:TYR:HB3	29:B3:19:GLN:NE2	2.27	0.50
27:B1:3:LYS:HG2	36:BA:1365:A:OP2	2.12	0.50
39:DD:112:GLN:O	39:DD:115:GLN:HB2	2.11	0.50
50:DR:9:LYS:HD2	50:DR:43:GLU:OE1	2.12	0.50
27:D1:4:VAL:HG23	27:D1:11:ARG:HB3	1.94	0.50
3:AC:25:GLY:C	3:AC:27:LYS:N	2.61	0.50
36:BA:852:G:H2'	36:BA:853:G:H8	1.77	0.50
27:B1:67:ILE:H	27:B1:68:PRO:HD2	1.74	0.50
11:AK:57:THR:HG22	11:AK:60:ALA:CB	2.42	0.50
36:BA:1639:U:H2'	36:BA:1640:C:H5"	1.93	0.50
1:AA:347:G:H21	1:AA:348:G:H1'	1.76	0.50
36:DA:2206:G:C2	36:DA:2207:G:H5'	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:865:A:H5'	1:CA:1078:U:O4	2.11	0.50
39:BD:273:ARG:HG2	39:BD:273:ARG:NH1	2.25	0.50
49:DQ:17:LEU:HD13	49:DQ:39:PRO:HB2	1.92	0.50
47:DO:2:ILE:HB	47:DO:33:ALA:HB3	1.93	0.50
36:DA:359:A:H3'	36:DA:360:G:H8	1.77	0.50
42:DG:146:TYR:O	42:DG:148:MET:N	2.37	0.50
56:DX:33:LYS:CA	56:DX:33:LYS:HE2	2.42	0.50
38:BC:42:GLU:HG3	38:BC:215:THR:CG2	2.42	0.50
36:DA:1162:G:H4'	54:DV:24:LYS:HB2	1.93	0.50
10:AJ:42:THR:HG22	10:AJ:43:ARG:N	2.27	0.50
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.94	0.50
30:B4:22:ILE:N	30:B4:22:ILE:HD12	2.26	0.50
1:AA:158:G:O2'	1:AA:159:G:H5'	2.12	0.50
36:DA:2422:A:H4'	36:DA:2423:U:OP1	2.12	0.50
45:DK:92:UNK:C	45:DK:94:UNK:H	2.25	0.50
1:CA:748:C:H4'	1:CA:749:C:O5'	2.11	0.50
6:AF:38:GLU:O	6:AF:39:LYS:O	2.30	0.50
43:DH:13:LYS:HA	43:DH:13:LYS:HE2	1.94	0.50
39:BD:26:LYS:H	39:BD:26:LYS:HE2	1.76	0.50
13:CM:4:ILE:CD1	13:CM:4:ILE:N	2.73	0.50
56:DX:53:LYS:HD2	56:DX:55:ASN:HD21	1.76	0.50
32:B6:19:ARG:H	32:B6:19:ARG:HD2	1.77	0.50
36:BA:628:G:C3'	36:BA:629:G:H5"	2.42	0.50
57:BY:28:LYS:CD	57:BY:39:VAL:HG22	2.39	0.50
57:BY:6:HIS:N	57:BY:6:HIS:CD2	2.79	0.50
32:B6:35:GLU:HB3	32:B6:51:GLU:CB	2.25	0.50
52:BT:32:TYR:N	52:BT:32:TYR:CD1	2.77	0.50
52:BT:33:LYS:HG3	52:BT:43:GLN:HB2	1.94	0.50
43:DH:83:TYR:O	43:DH:84:SER:O	2.30	0.50
48:BP:146:VAL:CG2	48:BP:147:LEU:H	2.05	0.50
4:AD:58:LEU:O	4:AD:58:LEU:HD22	2.12	0.50
41:BF:134:GLY:O	41:BF:135:LYS:HE3	2.12	0.50
34:B8:23:VAL:HG13	34:B8:46:ARG:HB3	1.92	0.50
40:DE:68:ALA:O	40:DE:70:ALA:N	2.45	0.50
40:BE:5:LEU:HD12	40:BE:51:PHE:HB2	1.93	0.50
36:DA:2415:G:H2'	36:DA:2416:C:H6	1.77	0.50
24:AY:1:A:H2'	24:AY:2:G:H8	1.76	0.50
40:DE:2:LYS:HD3	40:DE:95:ILE:CG2	2.41	0.50
1:AA:1392:G:H21	1:AA:1502:A:H8	1.60	0.50
36:BA:2817:G:OP1	50:BR:42:LYS:NZ	2.45	0.50
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HD3	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1049:C:O2'	36:BA:1050:A:H5'	2.12	0.50
38:BC:149:ILE:HG23	38:BC:150:GLY:N	2.27	0.50
20:AT:14:LYS:O	20:AT:18:GLN:HB2	2.11	0.50
36:BA:2110:G:N2	36:BA:2178:C:H5	2.10	0.50
17:CQ:18:THR:HG23	17:CQ:69:LYS:HZ3	1.74	0.50
3:CC:106:VAL:HG23	3:CC:106:VAL:O	2.11	0.50
36:DA:2843:G:N2	36:DA:2875:C:C2	2.80	0.50
1:AA:664:G:P	18:AR:64:ARG:HH21	2.35	0.50
22:CW:73:A:C2'	22:CW:74:C:H5"	2.42	0.50
27:D1:5:CYS:CB	27:D1:8:SER:HG	2.24	0.50
1:CA:44:G:C2	1:CA:45:U:H1'	2.46	0.50
20:CT:86:ARG:HH11	20:CT:86:ARG:HG3	1.76	0.50
37:BB:56:G:O2'	37:BB:57:A:OP2	2.28	0.50
39:BD:73:VAL:HG13	39:BD:120:GLY:HA2	1.93	0.50
36:BA:2839:G:C5'	50:BR:46:GLY:HA2	2.42	0.50
36:BA:1502:C:H5'	36:BA:1503:U:OP2	2.11	0.50
36:DA:528:A:C2	36:DA:2043:C:O5'	2.63	0.50
48:DP:102:ARG:NH1	48:DP:102:ARG:CB	2.75	0.50
34:D8:41:ILE:HD12	36:DA:2419:U:P	2.52	0.50
1:CA:476:G:H2'	1:CA:477:A:H8	1.77	0.50
24:AY:52:A:C2'	24:AY:53:G:H5'	2.42	0.50
50:BR:59:ASP:O	50:BR:60:LEU:CB	2.60	0.50
38:DC:42:GLU:HG3	38:DC:215:THR:CG2	2.42	0.50
58:BZ:128:VAL:HG22	58:BZ:129:SER:N	2.27	0.50
25:AZ:342:PHE:N	25:AZ:342:PHE:CD1	2.79	0.50
42:DG:34:LEU:HB3	42:DG:161:THR:HG22	1.92	0.50
36:DA:2653:U:H3'	36:DA:2654:A:C8	2.46	0.50
51:BS:22:GLY:O	51:BS:23:ARG:O	2.30	0.50
44:BJ:33:UNK:O	44:BJ:34:UNK:C	2.59	0.50
8:AH:121:ASP:OD1	8:AH:122:ARG:N	2.45	0.50
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.93	0.50
55:BW:12:ILE:HB	55:BW:42:ARG:HH12	1.77	0.50
36:DA:247:G:H4'	36:DA:386:G:C5	2.46	0.50
36:DA:158:U:H3'	36:DA:158:U:O2	2.12	0.50
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.94	0.50
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.47	0.50
42:BG:61:ALA:O	42:BG:65:GLY:N	2.42	0.49
28:D2:25:VAL:C	28:D2:27:GLU:N	2.60	0.49
42:DG:125:PHE:O	42:DG:126:ASP:O	2.30	0.49
32:D6:19:ARG:H	32:D6:19:ARG:HD2	1.77	0.49
37:DB:22:U:H2'	37:DB:23:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:27:THR:CG2	52:BT:28:VAL:H	2.17	0.49
52:BT:33:LYS:HZ3	52:BT:43:GLN:HG2	1.77	0.49
2:CB:29:ALA:HA	2:CB:32:ILE:CG2	2.41	0.49
24:AY:76:A:OP1	25:AZ:274:ARG:NE	2.45	0.49
42:BG:7:LEU:O	42:BG:11:TYR:N	2.44	0.49
48:DP:66:GLY:O	48:DP:67:MET:CB	2.60	0.49
36:BA:733:G:C8	36:BA:761:A:N1	2.80	0.49
25:CZ:7:ARG:O	25:CZ:8:THR:CG2	2.60	0.49
31:D5:40:LYS:HZ1	31:D5:46:CYS:N	1.98	0.49
36:BA:2659:G:H2'	36:BA:2660:A:H5"	1.94	0.49
16:CP:21:VAL:HG21	16:CP:59:TRP:CD2	2.46	0.49
38:DC:127:LEU:HD23	38:DC:128:GLY:N	2.27	0.49
50:BR:72:ASP:OD2	50:BR:75:LEU:HB2	2.12	0.49
52:DT:104:ASN:O	52:DT:105:LEU:CB	2.60	0.49
39:BD:43:ARG:NH2	39:BD:44:ASN:HD21	2.07	0.49
36:BA:2485:G:C5'	49:BQ:46:GLN:HE21	2.21	0.49
36:BA:2855:C:O2'	36:BA:2856:C:H5'	2.11	0.49
7:AG:50:ILE:HD12	7:AG:125:MET:HG3	1.93	0.49
58:DZ:35:ARG:HH22	58:DZ:36:LYS:HG2	1.77	0.49
16:AP:43:LYS:HA	16:AP:48:TRP:CB	2.41	0.49
6:AF:45:LEU:HA	6:AF:58:GLY:O	2.12	0.49
1:CA:1157:A:H1'	1:CA:1181:G:N2	2.27	0.49
58:DZ:15:PRO:HA	58:DZ:18:LEU:HD23	1.93	0.49
53:BU:59:ARG:O	53:BU:60:LEU:C	2.50	0.49
25:CZ:266:VAL:HB	25:CZ:291:ARG:HH12	1.77	0.49
39:DD:9:TYR:CD1	39:DD:10:THR:HG22	2.47	0.49
39:BD:10:THR:HG23	39:BD:13:ARG:CB	2.42	0.49
37:BB:91:C:OP2	49:BQ:16:ARG:NH2	2.45	0.49
1:AA:458:C:H2'	1:AA:460:G:H8	1.77	0.49
36:BA:1404:C:O2'	36:BA:1405:U:H5'	2.12	0.49
36:DA:1514:U:H2'	36:DA:1515:G:C8	2.47	0.49
1:AA:339:C:OP2	47:BO:97:ARG:NH1	2.45	0.49
25:CZ:358:GLY:C	25:CZ:360:GLU:H	2.15	0.49
36:DA:222:A:H5"	36:DA:421:U:OP1	2.12	0.49
1:AA:631:G:H2'	1:AA:632:A:C8	2.47	0.49
36:BA:451:C:C2	36:BA:453:C:C5	2.99	0.49
36:DA:2659:G:H2'	36:DA:2660:A:H5"	1.94	0.49
36:DA:2394:C:OP1	48:DP:63:PRO:HD2	2.12	0.49
36:DA:827:U:H5'	36:DA:828:U:O5'	2.12	0.49
36:DA:465:G:H2'	36:DA:466:A:C8	2.46	0.49
1:AA:1508:G:O2'	1:AA:1509:C:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:21:LEU:HD13	6:CF:21:LEU:C	2.32	0.49
33:D7:21:ARG:HG2	33:D7:21:ARG:HH11	1.77	0.49
2:AB:213:LEU:C	2:AB:213:LEU:HD23	2.32	0.49
6:AF:99:ALA:O	6:AF:100:ASN:HB2	2.12	0.49
45:BK:92:UNK:C	45:BK:94:UNK:H	2.25	0.49
36:BA:300:A:H2'	36:BA:334:C:O2'	2.12	0.49
17:AQ:7:THR:O	17:AQ:23:VAL:HG13	2.11	0.49
27:B1:93:GLU:O	27:B1:95:LEU:N	2.40	0.49
57:BY:75:ILE:HG13	57:BY:76:CYS:N	2.26	0.49
41:DF:24:LEU:O	41:DF:115:ALA:HB1	2.12	0.49
36:BA:1464:C:HO2'	36:BA:1528:A:H8	1.56	0.49
24:AY:76:A:H2'	25:AZ:274:ARG:HA	1.94	0.49
55:DW:6:ILE:CG2	55:DW:8:ARG:HD2	2.42	0.49
51:BS:98:VAL:O	51:BS:99:LYS:C	2.49	0.49
40:BE:65:GLY:HA2	40:BE:70:ALA:HB1	1.94	0.49
36:DA:1189:A:H2'	36:DA:1190:G:O4'	2.12	0.49
54:DV:38:LEU:HD23	54:DV:38:LEU:C	2.33	0.49
25:AZ:113:MET:CG	25:AZ:114:PRO:HD2	2.34	0.49
40:BE:98:PRO:HG3	40:BE:174:ASP:HA	1.95	0.49
56:DX:10:ALA:O	56:DX:28:PHE:CB	2.60	0.49
26:D0:42:GLY:HA3	36:DA:2331:G:C4'	2.42	0.49
58:DZ:104:PHE:CD1	58:DZ:139:VAL:HG21	2.44	0.49
58:DZ:119:GLU:O	58:DZ:120:ILE:O	2.29	0.49
50:BR:52:ILE:O	50:BR:55:ALA:N	2.45	0.49
36:DA:2817:G:OP1	50:DR:42:LYS:NZ	2.45	0.49
36:BA:1697:G:C3'	36:BA:1698:A:H5"	2.36	0.49
1:AA:963:G:N2	10:AJ:55:LYS:HZ1	2.09	0.49
9:CI:16:ARG:NH1	9:CI:64:THR:HG21	2.27	0.49
25:CZ:145:GLU:O	25:CZ:146:LEU:C	2.50	0.49
13:CM:92:HIS:CE1	13:CM:98:VAL:HG21	2.47	0.49
36:DA:1479:G:H5'	36:DA:1558:A:C2	2.48	0.49
2:CB:8:LYS:O	2:CB:12:GLU:HG3	2.12	0.49
52:BT:26:ASP:OD1	52:BT:26:ASP:C	2.48	0.49
42:BG:45:GLU:CA	42:BG:45:GLU:OE1	2.60	0.49
36:BA:2851:A:H2'	36:BA:2852:G:H8	1.76	0.49
58:DZ:155:LEU:HD23	58:DZ:155:LEU:N	2.25	0.49
57:DY:64:GLU:O	57:DY:65:ALA:HB2	2.11	0.49
1:CA:664:G:P	18:CR:64:ARG:HH21	2.35	0.49
51:BS:74:ALA:O	51:BS:76:LYS:N	2.43	0.49
22:CV:62:C:OP1	22:CV:62:C:H4'	2.11	0.49
25:AZ:323:LEU:H	25:AZ:323:LEU:CD1	2.22	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2657:A:H3'	36:DA:2658:C:H6	1.77	0.49
48:BP:122:PRO:HB3	48:BP:141:ALA:CB	2.42	0.49
48:DP:122:PRO:HB3	48:DP:141:ALA:HB3	1.93	0.49
36:DA:2839:G:C5'	50:DR:46:GLY:HA2	2.43	0.49
1:CA:981:U:H5'	14:CN:21:TYR:CE1	2.47	0.49
2:AB:95:GLN:O	2:AB:96:ARG:HD2	2.13	0.49
36:BA:2326:C:H41	36:BA:2389:G:H1	1.60	0.49
1:CA:486:U:O2'	1:CA:487:A:H5'	2.11	0.49
18:AR:26:LEU:HD12	18:AR:26:LEU:N	2.26	0.49
25:CZ:318:ALA:HB1	25:CZ:399:VAL:O	2.13	0.49
36:BA:2893:G:H5'	36:BA:2894:G:H5'	1.94	0.49
36:BA:2175:C:H2'	36:BA:2176:A:C8	2.46	0.49
4:CD:7:PRO:HB2	4:CD:10:ARG:HD2	1.93	0.49
46:DN:12:ARG:CZ	46:DN:135:PRO:HG2	2.42	0.49
25:CZ:35:ALA:HA	25:CZ:38:GLU:OE2	2.12	0.49
36:DA:200:U:H2'	36:DA:201:C:H5'	1.93	0.49
46:BN:1:MET:C	46:BN:1:MET:SD	2.91	0.49
47:DO:11:ALA:HB1	47:DO:99:PHE:O	2.13	0.49
1:CA:56:U:H2'	1:CA:57:G:H8	1.77	0.49
36:DA:18:C:O3'	53:DU:23:GLY:HA2	2.12	0.49
36:DA:1839:G:C8	36:DA:1839:G:H5'	2.46	0.49
36:BA:590:A:H2'	36:BA:591:C:C6	2.47	0.49
3:CC:175:LEU:HD12	3:CC:175:LEU:H	1.76	0.49
8:AH:53:VAL:HB	8:AH:58:TYR:CD1	2.47	0.49
17:CQ:12:SER:HB3	17:CQ:20:THR:OG1	2.12	0.49
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.94	0.49
56:DX:45:THR:OG1	56:DX:46:ALA:N	2.45	0.49
36:BA:839:U:O2'	36:BA:1191:G:H1'	2.11	0.49
1:CA:272:C:O2'	1:CA:273:A:H5'	2.11	0.49
18:CR:40:LEU:O	18:CR:42:ARG:N	2.44	0.49
10:CJ:43:ARG:HB2	10:CJ:67:THR:HG23	1.94	0.49
1:CA:919:A:O2'	1:CA:920:U:H5'	2.12	0.49
22:AV:53:G:H2'	22:AV:54:U:H6	1.77	0.49
43:DH:65:HIS:O	43:DH:67:LEU:N	2.41	0.49
49:DQ:64:ILE:HG22	49:DQ:65:PHE:N	2.26	0.49
1:AA:124:G:H2'	1:AA:125:U:O4'	2.12	0.49
36:DA:660:G:H5'	41:DF:99:TYR:CD2	2.47	0.49
36:BA:2257:U:O2'	36:BA:2258:C:H5'	2.11	0.49
1:CA:1498:U:H4'	1:CA:1519:A:C2	2.47	0.49
1:AA:807:A:H2'	1:AA:808:C:C6	2.47	0.49
58:BZ:177:PRO:O	58:BZ:178:GLU:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1354:C:H2'	1:AA:1355:G:H8	1.77	0.49
19:AS:27:GLU:O	19:AS:28:LYS:O	2.30	0.49
3:AC:159:GLY:O	3:AC:160:ALA:C	2.51	0.49
37:DB:40:U:C2	37:DB:43:C:H5"	2.47	0.49
51:DS:93:LYS:O	51:DS:94:TYR:C	2.51	0.49
32:D6:36:LEU:HD12	32:D6:50:ARG:CZ	2.42	0.49
2:CB:72:GLY:O	2:CB:94:ASN:HA	2.12	0.49
42:BG:88:ILE:CG2	42:BG:89:GLY:N	2.75	0.49
57:BY:8:LYS:HE2	57:BY:72:VAL:O	2.12	0.49
52:DT:28:VAL:HG11	52:DT:46:GLU:CG	2.37	0.49
52:DT:83:ILE:CG1	52:DT:84:GLN:N	2.73	0.49
1:CA:1202:G:C2	14:CN:42:ILE:HG21	2.46	0.49
2:CB:42:ILE:CD1	2:CB:202:PRO:HB2	2.42	0.49
41:BF:175:THR:O	41:BF:176:LEU:HB2	2.11	0.49
51:BS:95:HIS:CG	51:BS:96:GLY:N	2.80	0.49
34:D8:12:LYS:O	48:DP:65:ARG:HB2	2.12	0.49
51:DS:85:VAL:C	51:DS:106:ARG:HG2	2.32	0.49
48:BP:132:LYS:N	48:BP:132:LYS:HD2	2.15	0.49
36:BA:1654:A:P	50:BR:3:HIS:HB3	2.53	0.49
25:CZ:92:MET:HG3	25:CZ:93:ILE:N	2.27	0.49
54:DV:13:ARG:HG3	54:DV:13:ARG:NH1	2.25	0.49
1:CA:191:G:C4	20:CT:105:SER:HB2	2.47	0.49
50:BR:72:ASP:HB3	50:BR:75:LEU:CB	2.38	0.49
55:BW:40:ASN:O	55:BW:41:LYS:HG2	2.11	0.49
12:AL:102:ARG:CG	12:AL:102:ARG:HH11	2.16	0.49
10:CJ:81:THR:C	10:CJ:83:GLU:H	2.16	0.49
37:DB:68:C:H2'	37:DB:69:G:O4'	2.12	0.49
25:AZ:135:MET:O	25:AZ:138:VAL:HG23	2.12	0.49
2:CB:7:VAL:CG1	2:CB:217:ARG:HH22	2.25	0.49
3:CC:73:PRO:HD3	3:CC:105:GLU:HG3	1.94	0.49
38:DC:181:PRO:HB2	38:DC:183:GLU:OE2	2.11	0.49
2:AB:7:VAL:CG1	2:AB:217:ARG:HH22	2.25	0.49
41:BF:46:ARG:NH1	41:BF:46:ARG:HG2	2.20	0.49
41:DF:88:VAL:O	41:DF:88:VAL:HG13	2.12	0.49
57:DY:2:ARG:N	57:DY:4:LYS:HE2	2.27	0.49
13:CM:3:ARG:HB2	42:DG:113:ARG:NH2	2.26	0.49
48:BP:112:LEU:HD13	48:BP:112:LEU:O	2.13	0.49
5:AE:53:LEU:H	5:AE:53:LEU:CD1	2.25	0.49
22:AW:5:G:O6	22:AW:6:G:C6	2.65	0.49
52:BT:39:ARG:CD	52:BT:39:ARG:H	2.14	0.49
40:DE:9:VAL:HG11	40:DE:25:VAL:HB	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:51:U:H2'	22:AV:52:G:C8	2.47	0.49
36:DA:1341:U:C4'	56:DX:57:LEU:HB3	2.42	0.49
36:DA:1754:C:OP2	52:DT:113:LYS:NZ	2.40	0.49
8:CH:86:ILE:HG21	8:CH:133:LEU:HD23	1.94	0.49
13:CM:108:ARG:CG	13:CM:108:ARG:HH11	2.20	0.49
24:CY:61:C:H2'	24:CY:62:U:H5'	1.94	0.49
57:BY:60:PHE:CG	57:BY:60:PHE:O	2.66	0.49
35:D9:29:ASN:O	35:D9:29:ASN:ND2	2.45	0.49
43:BH:37:VAL:HG11	43:BH:68:THR:CG2	2.42	0.49
6:AF:11:ASN:HB3	6:AF:14:LEU:CD2	2.42	0.49
2:AB:109:SER:C	2:AB:111:ARG:N	2.65	0.49
43:DH:89:ILE:HD11	43:DH:129:THR:HA	1.94	0.49
1:AA:476:G:H2'	1:AA:477:A:H8	1.78	0.49
15:CO:2:PRO:O	15:CO:3:ILE:C	2.49	0.49
36:BA:118:A:OP2	36:BA:119:A:H5"	2.12	0.49
50:DR:7:GLY:O	50:DR:8:ARG:NH2	2.45	0.49
49:BQ:39:PRO:O	49:BQ:40:ALA:HB2	2.12	0.49
36:BA:893:C:H2'	36:BA:894:C:H6	1.77	0.49
26:D0:36:ILE:O	26:D0:36:ILE:HG13	2.11	0.49
36:DA:1101:U:H2'	36:DA:1102:C:C6	2.47	0.49
1:CA:197:A:N6	1:CA:221:C:C5'	2.76	0.49
36:DA:1404:C:O2'	36:DA:1405:U:H5'	2.13	0.49
4:AD:159:ARG:NH1	4:AD:159:ARG:HG3	2.27	0.49
1:AA:198:G:O2'	1:AA:199:G:H8	1.95	0.49
1:CA:269:C:H2'	1:CA:270:A:C8	2.47	0.49
9:CI:86:VAL:O	9:CI:86:VAL:HG22	2.11	0.49
36:BA:1801:G:H3'	36:BA:1802:A:H5'	1.95	0.49
36:DA:2168:G:N2	36:DA:2170:A:H3'	2.27	0.49
7:AG:75:VAL:HG13	7:AG:145:ALA:HB2	1.93	0.49
46:BN:134:ARG:O	46:BN:136:GLU:N	2.45	0.49
36:BA:2115:G:N3	36:BA:2117:A:N7	2.61	0.49
53:BU:62:ILE:HG23	53:BU:76:TYR:CE2	2.47	0.49
1:CA:402:G:O2'	1:CA:403:C:H5'	2.12	0.49
1:AA:534:U:H5'	1:AA:534:U:H6	1.77	0.49
39:BD:65:ILE:CD1	39:BD:88:ARG:CZ	2.90	0.49
56:BX:14:SER:O	56:BX:17:ALA:HB3	2.13	0.49
36:BA:1598:C:H5'	56:BX:36:LYS:CD	2.43	0.49
57:DY:14:LEU:HD12	57:DY:15:VAL:H	1.76	0.49
41:BF:23:ASP:O	41:BF:115:ALA:HA	2.13	0.49
42:DG:137:GLU:HG3	42:DG:139:LEU:HD23	1.95	0.49
1:AA:980:C:H5'	1:AA:981:U:C5	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1272:G:H5'	1:CA:1272:G:H8	1.76	0.49
49:DQ:59:ARG:O	49:DQ:60:ARG:HB2	2.12	0.49
36:BA:2107:C:C2	36:BA:2182:G:N1	2.80	0.49
19:CS:11:VAL:CG1	19:CS:16:LEU:HD11	2.42	0.49
19:AS:11:VAL:HG13	19:AS:16:LEU:HD11	1.93	0.49
55:DW:4:LYS:CG	55:DW:5:ALA:H	2.26	0.49
34:B8:8:LYS:HE3	36:BA:245:G:O6	2.12	0.49
51:BS:93:LYS:O	51:BS:94:TYR:C	2.50	0.49
48:BP:47:ASP:HB3	48:BP:48:PRO:C	2.33	0.49
40:BE:87:GLU:O	40:BE:89:ASP:N	2.45	0.49
36:DA:627:A:N6	48:DP:115:LEU:HD12	2.27	0.49
4:CD:26:CYS:HG	59:CD:301:ZN:ZN	1.00	0.49
10:CJ:54:PHE:CZ	10:CJ:55:LYS:CE	2.95	0.49
53:BU:93:LYS:O	53:BU:96:ALA:HB3	2.12	0.49
54:BV:55:ALA:O	54:BV:56:SER:HB3	2.12	0.49
36:DA:1517:G:O2'	36:DA:1518:U:H5'	2.12	0.49
1:CA:1502:A:C2	1:CA:1504:G:C2	3.00	0.49
36:BA:671:C:H2'	36:BA:672:C:C6	2.47	0.49
36:DA:2178:C:O2	36:DA:2178:C:O4'	2.27	0.49
25:CZ:195:TRP:C	25:CZ:197:ASP:N	2.62	0.49
53:BU:52:ARG:HH11	53:BU:52:ARG:HB3	1.77	0.49
36:DA:633:A:C2'	36:DA:634:C:H5'	2.40	0.49
36:BA:1142(A):A:OP1	36:BA:1142(A):A:H3'	2.12	0.49
33:B7:22:MET:HE3	33:B7:31:LEU:HD12	1.93	0.49
1:CA:383:A:H2'	1:CA:384:G:H5'	1.94	0.49
1:AA:383:A:H2'	1:AA:384:G:H5'	1.94	0.49
56:DX:49:VAL:CG1	56:DX:87:GLN:HE21	2.23	0.49
26:B0:7:LEU:HD13	49:BQ:85:LYS:CD	2.41	0.49
51:DS:42:ASP:C	51:DS:44:LYS:H	2.15	0.49
10:CJ:48:THR:OG1	10:CJ:62:HIS:HD2	1.95	0.49
1:CA:161:A:H2'	1:CA:162:A:C8	2.47	0.49
33:D7:19:ARG:HG2	33:D7:19:ARG:NH1	2.28	0.49
1:AA:160:A:H1'	1:AA:344:A:C5	2.48	0.49
36:DA:1638:C:H4'	36:DA:2710:C:O2	2.13	0.49
20:CT:63:ILE:HG21	20:CT:81:LYS:HG3	1.95	0.49
36:DA:1412:A:O2'	36:DA:1413:G:H5'	2.12	0.49
1:CA:16:A:N1	1:CA:919:A:H2	2.09	0.49
41:BF:181:LEU:CD2	41:BF:202:PHE:HD2	2.25	0.49
36:BA:445:C:H2'	36:BA:446:G:C8	2.48	0.49
36:BA:473:G:H5"	36:BA:508:G:N2	2.28	0.49
7:AG:80:VAL:O	7:AG:83:ALA:HB3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:27:GLU:O	19:CS:28:LYS:O	2.31	0.49
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.48	0.49
22:AW:52:G:O6	22:AW:62:C:N4	2.45	0.49
58:BZ:85:HIS:HE1	58:BZ:87:ASP:OD1	1.95	0.49
27:B1:48:LYS:CE	27:B1:61:ARG:HD3	2.43	0.49
36:BA:949:C:H2'	36:BA:950:G:H8	1.78	0.49
36:DA:1910:G:O2'	36:DA:1911:U:H5'	2.13	0.49
40:DE:147:PRO:HB2	40:DE:149:ARG:HG2	1.93	0.49
45:BK:117:UNK:O	45:BK:118:UNK:CB	2.60	0.49
38:DC:25:ALA:O	38:DC:29:VAL:HG22	2.11	0.49
26:D0:37:LEU:N	26:D0:59:LEU:O	2.34	0.49
36:DA:1777:U:O2'	36:DA:1778:U:H5'	2.12	0.49
39:DD:65:ILE:CD1	39:DD:88:ARG:CZ	2.89	0.49
42:BG:93:THR:HG22	42:BG:94:LEU:H	1.76	0.49
36:BA:1349:A:N6	36:BA:1598:C:N4	2.61	0.49
13:CM:4:ILE:HG22	13:CM:5:ALA:N	2.28	0.49
28:D2:33:MET:O	28:D2:37:PHE:CD1	2.65	0.49
28:D2:24:LEU:CD2	28:D2:60:LEU:HD22	2.42	0.49
28:D2:6:VAL:C	28:D2:8:LYS:N	2.66	0.49
36:DA:335:C:H2'	36:DA:336:C:H6	1.78	0.49
57:DY:15:VAL:O	57:DY:21:LYS:HA	2.12	0.49
34:B8:5:LYS:HG2	36:BA:242:G:C8	2.47	0.49
32:B6:27:LYS:HE2	32:B6:30:THR:H	1.76	0.49
42:DG:117:PHE:HE1	42:DG:119:GLY:O	1.95	0.49
42:BG:131:TYR:CB	42:BG:159:VAL:HG13	2.37	0.49
22:CV:5:G:H8	22:CV:5:G:C5'	2.26	0.49
42:DG:80:PHE:O	42:DG:81:LYS:O	2.30	0.49
4:AD:62:GLN:HA	4:AD:62:GLN:NE2	2.25	0.49
31:B5:33:CYS:HG	31:B5:49:CYS:CB	2.24	0.49
32:B6:16:CYS:SG	32:B6:49:HIS:N	2.85	0.49
41:BF:160:ASN:ND2	41:BF:162:LEU:HD13	2.27	0.49
36:DA:1070:A:H3'	36:DA:1072:C:C5	2.47	0.49
55:DW:6:ILE:HG12	55:DW:104:THR:HG22	1.93	0.49
1:AA:367:U:H4'	25:AZ:291:ARG:NH2	2.26	0.49
48:DP:24:GLY:N	48:DP:33:ARG:CZ	2.75	0.49
31:D5:45:VAL:HG22	31:D5:51:TYR:HB2	1.94	0.49
51:BS:85:VAL:HG23	51:BS:106:ARG:CG	2.37	0.49
9:AI:16:ARG:NH1	9:AI:64:THR:HG21	2.27	0.49
32:D6:53:LYS:CG	32:D6:54:ILE:N	2.67	0.49
41:BF:154:VAL:HG13	41:BF:191:ARG:O	2.12	0.49
38:BC:127:LEU:HD23	38:BC:128:GLY:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:673:C:O2'	36:BA:674:G:H5'	2.12	0.49
9:AI:53:VAL:HG13	9:AI:95:LYS:HZ2	1.72	0.49
1:AA:1189:C:O3'	3:AC:5:ILE:HD12	2.11	0.49
2:CB:118:LEU:CB	2:CB:142:LEU:HD12	2.42	0.49
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.30	0.49
36:BA:2801(A):A:C3'	36:BA:2802:G:H5'	2.42	0.49
53:BU:115:ALA:C	53:BU:117:GLN:H	2.16	0.49
36:BA:328:U:H4'	57:BY:68:HIS:CD2	2.48	0.49
27:D1:81:LYS:O	27:D1:81:LYS:HG3	2.12	0.49
27:B1:13:ILE:CD1	27:B1:13:ILE:N	2.76	0.49
36:BA:2360:A:O2'	36:BA:2361:A:P	2.70	0.49
36:BA:1408:C:O2'	36:BA:1409:C:H5'	2.13	0.49
43:BH:23:ARG:O	43:BH:24:VAL:HG23	2.13	0.49
3:AC:91:LEU:O	3:AC:94:LEU:O	2.30	0.49
6:CF:22:GLU:O	6:CF:25:ILE:HG22	2.11	0.49
24:AY:61:C:H2'	24:AY:62:U:H5'	1.94	0.49
46:DN:7:LYS:O	46:DN:9:VAL:N	2.45	0.49
37:BB:81:G:O6	37:BB:96:U:O2	2.29	0.49
36:DA:483:A:C2	36:DA:484:C:H1'	2.48	0.49
13:AM:116:THR:O	13:AM:117:VAL:C	2.48	0.49
36:DA:2286:A:H4'	36:DA:2287:A:O4'	2.13	0.49
39:DD:95:LEU:HD12	39:DD:103:ARG:O	2.13	0.49
2:CB:77:ALA:CB	2:CB:211:ILE:HD13	2.42	0.49
57:DY:33:LYS:C	57:DY:35:TYR:N	2.66	0.49
47:BO:2:ILE:HB	47:BO:33:ALA:HB3	1.95	0.49
36:DA:30:G:O2'	36:DA:31:C:H5'	2.12	0.49
1:AA:1073:U:O2'	1:AA:1074:G:H5'	2.13	0.49
22:CW:7:A:H5"	22:CW:8:U:OP2	2.11	0.49
3:AC:173:VAL:HG12	3:AC:175:LEU:CD1	2.43	0.49
1:AA:1222:G:OP1	19:AS:77:THR:HG21	2.12	0.49
22:CV:14:A:H2'	22:CV:15:G:H5'	1.93	0.49
47:BO:105:GLU:O	47:BO:108:GLU:HG2	2.12	0.49
1:CA:156:G:O2'	1:CA:157:G:H5'	2.13	0.49
1:CA:158:G:O2'	1:CA:159:G:H5'	2.12	0.49
1:AA:1372:U:OP1	9:AI:71:SER:HB3	2.12	0.49
1:CA:555:C:H2'	1:CA:556:C:C6	2.48	0.49
1:CA:1468:A:H2'	1:CA:1469:G:O4'	2.13	0.49
8:CH:121:ASP:OD1	8:CH:122:ARG:N	2.45	0.49
1:CA:1382:C:H2'	1:CA:1383:C:H6	1.76	0.49
38:DC:163:PHE:CD1	38:DC:163:PHE:O	2.65	0.49
49:BQ:10:ARG:HH21	49:BQ:11:LYS:HE3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.95	0.49
1:CA:102:G:O2'	1:CA:103:C:H5'	2.12	0.49
25:AZ:254:GLU:CD	25:AZ:307:PRO:HA	2.33	0.49
36:DA:451:C:C2	36:DA:453:C:C5	3.01	0.49
39:BD:68:LYS:HG3	39:BD:68:LYS:O	2.12	0.49
24:AY:38:A:H5'	36:BA:1913:A:C6	2.47	0.49
1:CA:418:C:H2'	1:CA:419:C:C6	2.48	0.49
56:BX:12:VAL:CG1	56:BX:27:THR:H	2.25	0.49
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.95	0.49
36:DA:2014:A:H4'	55:DW:92:ARG:HH22	1.76	0.49
51:DS:97:ARG:NH1	51:DS:98:VAL:O	2.46	0.49
32:B6:45:LYS:N	32:B6:45:LYS:HD2	2.27	0.49
28:B2:69:ARG:HB2	28:B2:70:GLN:HE22	1.77	0.49
1:AA:1272:G:H5'	1:AA:1272:G:H8	1.77	0.49
2:CB:17:PHE:CD2	2:CB:44:LEU:HD11	2.46	0.49
1:CA:858:G:H5"	1:CA:858:G:C8	2.47	0.49
52:DT:53:ARG:O	52:DT:59:THR:HB	2.13	0.49
26:B0:49:LYS:O	26:B0:50:ASN:HB2	2.12	0.49
57:BY:50:ARG:O	57:BY:51:VAL:C	2.51	0.49
36:BA:607:U:OP1	41:BF:102:PRO:HA	2.13	0.49
26:D0:49:LYS:O	26:D0:50:ASN:HB2	2.12	0.49
37:BB:105:A:H4'	58:BZ:89:PHE:CE1	2.47	0.49
36:BA:2160:G:H8	36:BA:2160:G:C5'	2.17	0.49
48:DP:132:LYS:HD2	48:DP:132:LYS:N	2.15	0.49
58:BZ:24:LEU:HD23	58:BZ:25:PRO:O	2.11	0.49
36:DA:903:C:O2'	36:DA:904:C:H5'	2.13	0.49
54:DV:52:VAL:CG1	54:DV:55:ALA:HB3	2.43	0.49
16:CP:53:VAL:CG2	16:CP:54:GLU:H	2.16	0.49
54:BV:39:LEU:HD12	54:BV:50:PRO:O	2.12	0.49
1:AA:8:A:C2	4:AD:209:ARG:HB3	2.47	0.49
1:AA:1326:C:P	21:AU:12:LYS:HZ2	2.36	0.49
34:B8:48:PHE:O	34:B8:49:VAL:HG23	2.12	0.49
1:CA:266:G:C5'	1:CA:267:C:H5	2.20	0.49
28:B2:10:LEU:HD21	28:B2:14:ARG:NE	2.27	0.49
41:BF:87:GLY:O	41:BF:88:VAL:HG12	2.13	0.49
24:AY:44:G:H4'	24:AY:45:U:OP2	2.12	0.49
36:DA:1722:A:O2'	36:DA:1739:U:C5'	2.60	0.49
22:CW:5:G:O6	22:CW:6:G:C6	2.65	0.49
36:BA:139:G:H2'	36:BA:139(A):G:H5"	1.94	0.49
36:BA:1022:G:N2	36:BA:1142(A):A:C2	2.81	0.49
57:DY:60:PHE:O	57:DY:60:PHE:CG	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:8:LEU:N	47:BO:8:LEU:CD2	2.75	0.49
46:BN:42:TRP:CH2	46:BN:44:PRO:HA	2.47	0.49
46:BN:6:PRO:O	46:BN:7:LYS:HB2	2.12	0.49
26:B0:7:LEU:HD21	49:BQ:81:VAL:HG13	1.94	0.49
40:DE:13:ARG:O	52:DT:57:PHE:HE2	1.95	0.49
36:DA:271(E):U:H3	36:DA:271(S):G:H1	1.61	0.49
46:DN:4:TYR:O	46:DN:5:VAL:HB	2.13	0.49
55:DW:25:ARG:HB2	55:DW:25:ARG:NH1	2.28	0.49
41:DF:107:LYS:HE3	41:DF:205:ARG:CG	2.43	0.49
1:CA:1181:G:H2'	1:CA:1182:G:C4	2.47	0.49
34:B8:41:ILE:HD12	36:BA:2419:U:P	2.52	0.49
36:DA:2893:G:H5'	36:DA:2894:G:H5'	1.94	0.49
49:BQ:66:ILE:HD12	49:BQ:66:ILE:O	2.12	0.49
18:AR:36:ASN:O	18:AR:36:ASN:CG	2.51	0.49
53:BU:69:CYS:HG	53:BU:79:PHE:HD2	1.59	0.49
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.48	0.49
36:DA:523:C:H2'	36:DA:524:U:H5'	1.93	0.49
1:AA:161:A:H2'	1:AA:162:A:C8	2.47	0.49
36:DA:1257:C:O2'	41:DF:83:PHE:HA	2.12	0.49
36:BA:644:A:H2	36:BA:2369:A:H1'	1.77	0.49
36:DA:1526:G:O2'	36:DA:1527:G:H5'	2.13	0.49
36:DA:405:U:H3'	36:DA:406:G:H5'	1.93	0.49
22:CV:63:G:H2'	22:CV:64:A:O4'	2.13	0.49
6:CF:99:ALA:O	6:CF:100:ASN:HB2	2.12	0.49
42:BG:115:ARG:HG3	42:BG:137:GLU:OE2	2.11	0.49
36:BA:660:G:H5'	41:BF:99:TYR:CD2	2.47	0.49
36:BA:382:G:C2'	36:BA:383:U:H5'	2.42	0.49
1:AA:775:G:O2'	1:AA:776:G:H5'	2.13	0.49
56:DX:56:THR:HG22	56:DX:79:ALA:HB2	1.94	0.49
36:BA:1124:C:H2'	36:BA:1125:G:O4'	2.12	0.49
20:AT:56:MET:HG3	20:AT:88:VAL:HG21	1.95	0.49
44:BJ:89:UNK:C	44:BJ:91:UNK:H	2.25	0.49
36:BA:1137:G:O2'	36:BA:1138:G:H5'	2.12	0.49
25:AZ:316:PHE:CE1	25:AZ:372:VAL:HB	2.48	0.49
36:BA:2373:G:H2'	36:BA:2374:C:C6	2.48	0.49
39:BD:35:LYS:HE2	39:BD:104:TYR:OH	2.12	0.49
15:CO:16:ALA:C	15:CO:18:PHE:H	2.16	0.49
36:BA:2577:A:H5"	36:BA:2578:G:H5'	1.95	0.49
54:DV:62:LEU:H	54:DV:62:LEU:CD2	2.26	0.49
28:B2:32:LEU:HB2	28:B2:53:LEU:HD22	1.94	0.49
1:AA:1203:C:OP1	14:AN:3:ARG:HD3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:15:VAL:O	57:BY:21:LYS:HA	2.13	0.49
36:DA:27:G:N2	36:DA:512:G:C2'	2.68	0.49
36:DA:1947:C:H2'	36:DA:1948:G:H5"	1.93	0.49
39:DD:267:SER:HA	39:DD:270:ILE:CG1	2.41	0.49
37:DB:7:G:C2'	37:DB:8:U:H5"	2.42	0.49
40:DE:88:GLY:O	40:DE:89:ASP:HB2	2.11	0.49
40:BE:69:LYS:C	40:BE:71:GLY:N	2.64	0.49
42:BG:119:GLY:O	42:BG:181:ARG:HB2	2.13	0.49
53:DU:90:VAL:CG1	53:DU:91:ASP:N	2.72	0.49
53:DU:92:ARG:HH22	54:DV:10:LYS:HB3	1.76	0.49
40:BE:2:LYS:HD3	40:BE:95:ILE:CG2	2.43	0.49
16:CP:53:VAL:HG23	16:CP:54:GLU:HG2	1.93	0.49
54:BV:38:LEU:C	54:BV:39:LEU:HD13	2.32	0.49
36:DA:2128:C:HO2'	36:DA:2129:C:P	2.35	0.49
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.13	0.49
36:DA:2110:G:N2	36:DA:2178:C:C5	2.79	0.49
25:AZ:135:MET:HE3	25:AZ:150:VAL:CG1	2.40	0.49
25:AZ:219:LYS:CB	25:AZ:244:ARG:HD2	2.39	0.49
2:AB:8:LYS:O	2:AB:12:GLU:HG3	2.13	0.49
36:DA:1408:C:O2'	36:DA:1409:C:H5'	2.13	0.49
22:CV:51:U:H2'	22:CV:52:G:H8	1.77	0.49
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HD12	1.95	0.49
36:BA:990:A:OP2	36:BA:991:C:OP2	2.31	0.49
39:DD:132:PRO:HG3	39:DD:190:TYR:CE1	2.47	0.49
42:BG:145:THR:CB	42:BG:148:MET:HB3	2.41	0.49
7:CG:151:TYR:OH	11:CK:54:ARG:HD3	2.12	0.49
57:BY:60:PHE:HA	57:BY:62:GLU:OE2	2.13	0.49
40:BE:30:PRO:HD3	40:BE:180:ASN:CG	2.32	0.49
1:AA:1216:G:H2'	1:AA:1217:C:H6	1.77	0.49
36:DA:1337:G:C4	36:DA:1338:G:C8	3.01	0.49
1:CA:1256:A:H2	1:CA:1278:U:H5'	1.78	0.49
36:BA:848:G:H5'	36:BA:848:G:C8	2.46	0.49
36:BA:2389:G:H5"	36:BA:2390:U:H5'	1.93	0.49
46:BN:55:VAL:HG22	46:BN:56:ASN:H	1.76	0.49
37:DB:90:A:O2'	49:DQ:17:LEU:HD12	2.12	0.49
30:B4:5:ILE:O	30:B4:5:ILE:CG1	2.61	0.49
43:DH:94:TYR:CB	43:DH:107:VAL:HG12	2.43	0.49
36:DA:1286:A:N6	36:DA:1289:C:N3	2.61	0.49
36:BA:880:G:H22	36:BA:897:C:H42	1.59	0.49
36:DA:893:C:H2'	36:DA:894:C:H6	1.78	0.49
1:CA:458:C:H2'	1:CA:460:G:H8	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1638:C:H4'	36:BA:2710:C:O2	2.13	0.49
1:CA:1485:U:O2'	1:CA:1486:G:H5'	2.13	0.49
3:CC:157:ILE:CD1	3:CC:166:GLU:HB2	2.43	0.49
1:AA:272:C:O2'	1:AA:273:A:H5'	2.13	0.49
1:AA:826:C:H2'	1:AA:827:U:H6	1.78	0.49
1:AA:156:G:O2'	1:AA:157:G:H5'	2.13	0.49
25:CZ:366:ASP:C	25:CZ:367:ASN:HD22	2.16	0.49
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.47	0.49
52:DT:134:GLU:O	52:DT:135:ALA:HB3	2.12	0.49
33:B7:47:ARG:O	33:B7:48:LYS:HB3	2.12	0.49
36:BA:1910:G:O2'	36:BA:1911:U:H5'	2.13	0.49
1:CA:454:C:H5"	1:CA:455:C:C5	2.48	0.49
1:CA:662:G:H2'	1:CA:663:A:C8	2.48	0.49
1:CA:592:G:H2'	1:CA:593:G:H8	1.78	0.49
3:AC:121:ALA:O	3:AC:125:GLU:HG3	2.12	0.49
17:AQ:25:ARG:HG3	17:AQ:25:ARG:O	2.12	0.49
36:DA:353:G:H2'	36:DA:353:G:N3	2.28	0.49
23:CX:27:A:OP2	23:CX:27:A:H8	1.96	0.49
39:DD:27:THR:CG2	39:DD:27:THR:O	2.60	0.49
30:B4:28:LYS:CE	30:B4:29:PRO:HD2	2.42	0.49
13:AM:4:ILE:N	13:AM:4:ILE:CD1	2.74	0.49
57:DY:7:VAL:HG21	57:DY:8:LYS:HZ3	1.75	0.49
34:B8:33:ASN:HA	34:B8:36:LYS:HE3	1.94	0.49
36:DA:2188:C:H2'	36:DA:2189:U:C5	2.48	0.49
51:DS:95:HIS:CG	51:DS:96:GLY:N	2.80	0.49
57:BY:28:LYS:HB3	57:BY:39:VAL:N	2.14	0.49
42:DG:71:THR:CG2	42:DG:72:ARG:N	2.75	0.49
42:DG:71:THR:HG22	42:DG:72:ARG:H	1.75	0.49
36:DA:1960:A:C5'	36:DA:1960:A:C8	2.94	0.49
52:BT:54:ARG:O	52:BT:55:ASN:HB2	2.13	0.49
36:BA:252:G:P	48:BP:50:ARG:HH21	2.36	0.49
42:BG:15:VAL:O	42:BG:18:GLU:HB3	2.12	0.49
40:BE:76:ARG:O	40:BE:77:ILE:O	2.31	0.49
40:BE:88:GLY:O	40:BE:89:ASP:HB2	2.11	0.49
48:DP:64:LYS:C	48:DP:66:GLY:N	2.59	0.49
25:AZ:92:MET:HG3	25:AZ:93:ILE:N	2.26	0.49
40:DE:96:PHE:O	40:DE:175:VAL:HG11	2.12	0.49
24:CY:2:G:O2'	24:CY:3:G:H5"	2.12	0.49
50:DR:96:ARG:O	50:DR:114:VAL:HA	2.13	0.49
41:DF:152:GLU:OE1	41:DF:191:ARG:HD2	2.12	0.49
1:AA:59:A:H3'	1:AA:331:G:N2	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:15:VAL:N	2:CB:16:HIS:CE1	2.79	0.49
47:BO:47:ILE:O	47:BO:48:PRO:C	2.51	0.49
2:AB:7:VAL:N	2:AB:10:LEU:HD12	2.28	0.49
36:BA:2801(A):A:C5'	36:BA:2802:G:H8	2.26	0.49
3:AC:43:LEU:HD13	3:AC:68:VAL:HG23	1.95	0.49
57:BY:2:ARG:HG2	57:BY:2:ARG:HH11	1.78	0.49
36:DA:363(F):A:O2'	36:DA:364:C:H5	1.95	0.49
1:AA:714:G:H2'	1:AA:715:A:C8	2.47	0.49
14:AN:4:LYS:O	14:AN:7:ILE:HG12	2.13	0.49
40:DE:176:ILE:HG22	40:DE:179:GLU:H	1.78	0.49
36:BA:2223:G:O2'	36:BA:2224:G:H5'	2.13	0.49
25:CZ:178:ALA:HB1	25:CZ:199:ILE:HD12	1.94	0.49
36:BA:90:U:C2'	36:BA:90:U:O2	2.61	0.49
43:DH:143:GLN:HA	43:DH:143:GLN:NE2	2.28	0.49
36:DA:2264:C:H2'	36:DA:2265:U:H6	1.77	0.49
22:AV:44:G:C2'	22:AV:45:U:H5'	2.43	0.49
36:DA:181:A:C8	36:DA:181:A:H5'	2.45	0.49
36:BA:1906:G:O2'	36:BA:1907:G:H5'	2.12	0.49
36:BA:237:C:H2'	36:BA:238:C:H6	1.77	0.49
36:BA:2241:A:H2'	36:BA:2242:G:C8	2.48	0.49
56:BX:33:LYS:HE2	56:BX:33:LYS:CA	2.43	0.49
58:DZ:126:VAL:O	58:DZ:126:VAL:HG23	2.11	0.49
36:DA:1782:C:H1'	36:DA:2609:U:C5'	2.43	0.49
1:AA:67:C:O2'	1:AA:171:A:H1'	2.12	0.49
36:DA:272(J):C:C2'	36:DA:274:G:H5"	2.43	0.49
41:BF:40:GLN:HE22	41:BF:182:ASN:HB2	1.77	0.49
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.48	0.49
49:DQ:10:ARG:HH21	49:DQ:11:LYS:HE3	1.77	0.49
36:DA:858:U:O2	36:DA:2268:A:H2'	2.12	0.49
1:CA:141:A:H1'	1:CA:182:U:O2	2.11	0.49
41:DF:181:LEU:CD2	41:DF:202:PHE:HD2	2.26	0.49
36:BA:1092:C:H42	36:BA:1100:C:H42	1.59	0.49
12:CL:32:PHE:HB3	12:CL:84:LEU:HD11	1.95	0.49
33:D7:5:TRP:CD1	33:D7:7:PRO:HD3	2.47	0.49
36:BA:405:U:H3'	36:BA:406:G:C5'	2.42	0.49
15:CO:21:ASP:OD1	15:CO:21:ASP:C	2.51	0.49
42:DG:29:TRP:HA	42:DG:29:TRP:CE3	2.47	0.49
27:B1:35:THR:O	27:B1:35:THR:HG23	2.13	0.49
25:CZ:221:PHE:HE1	25:CZ:242:ILE:HD13	1.77	0.49
1:CA:313:A:H2'	1:CA:314:C:C6	2.48	0.49
1:CA:879:C:O2'	1:CA:880:C:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:27:THR:O	39:BD:27:THR:CG2	2.61	0.49
42:BG:95:ARG:O	42:BG:96:ARG:HG2	2.12	0.49
28:D2:10:LEU:HD21	28:D2:60:LEU:HG	1.95	0.49
36:DA:95:G:H2'	36:DA:96:G:O4'	2.13	0.49
36:BA:2428:G:H5"	36:BA:2429:G:O5'	2.13	0.49
20:AT:50:GLU:HB2	20:AT:99:LEU:CD1	2.43	0.49
30:D4:28:LYS:CE	30:D4:29:PRO:HD2	2.42	0.49
36:BA:335:C:H2'	36:BA:336:C:H6	1.77	0.49
14:AN:19:ARG:O	14:AN:20:ALA:O	2.31	0.49
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.94	0.49
37:BB:22:U:H2'	37:BB:23:G:C8	2.47	0.49
52:BT:33:LYS:CE	52:BT:43:GLN:HE21	2.26	0.49
52:DT:28:VAL:HG22	52:DT:46:GLU:HA	1.94	0.49
1:AA:358:U:O4'	25:AZ:233:GLY:C	2.51	0.49
36:DA:321:G:N2	41:DF:165:ARG:NH2	2.54	0.49
55:DW:6:ILE:HG22	55:DW:8:ARG:HD2	1.94	0.49
34:D8:23:VAL:HG13	34:D8:46:ARG:HB3	1.93	0.49
51:DS:106:ARG:HH11	51:DS:108:GLY:H	1.59	0.49
31:D5:33:CYS:HG	31:D5:49:CYS:CB	2.22	0.49
53:DU:95:LEU:CD1	54:DV:11:GLN:HG3	2.42	0.49
20:CT:72:LEU:O	20:CT:76:ALA:HB3	2.13	0.49
1:AA:972:C:O3'	10:AJ:57:LYS:HG2	2.13	0.49
16:AP:5:ARG:HE	16:AP:22:THR:CG2	2.26	0.49
36:BA:690:G:H2'	36:BA:691:C:C6	2.48	0.49
43:BH:45:VAL:O	43:BH:47:GLU:N	2.40	0.49
16:CP:23:ASP:OD1	16:CP:25:ARG:NH1	2.46	0.49
9:AI:40:LEU:O	9:AI:42:ARG:N	2.39	0.49
1:CA:1030:C:N4	1:CA:1032:G:H21	2.06	0.49
3:AC:73:PRO:HD3	3:AC:105:GLU:HG3	1.94	0.49
41:BF:88:VAL:O	41:BF:88:VAL:HG13	2.12	0.49
36:DA:139:G:H2'	36:DA:139(A):G:H5"	1.94	0.49
10:AJ:16:LEU:CD1	10:AJ:70:ARG:CG	2.91	0.49
49:DQ:25:ASP:OD2	58:DZ:78:LYS:HG2	2.13	0.49
36:DA:272(D):G:H1	36:DA:364:C:N4	2.06	0.49
3:CC:114:PRO:O	3:CC:118:GLN:HG3	2.13	0.49
28:B2:38:GLN:HB3	28:B2:44:LEU:CB	2.41	0.49
48:BP:80:TYR:CD1	48:BP:111:ARG:CB	2.96	0.49
36:BA:2632:A:O2'	40:BE:61:ARG:NH2	2.45	0.49
1:AA:1442(A):G:HO2'	1:AA:1442(B):A:P	2.34	0.49
6:CF:11:ASN:HB3	6:CF:14:LEU:CD2	2.41	0.49
10:AJ:5:ARG:HG3	10:AJ:73:ASP:OD2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DO:107:ARG:HA	47:DO:112:MET:HE1	1.95	0.49
47:DO:69:ILE:HG13	47:DO:77:ILE:O	2.13	0.49
36:BA:145:G:C2'	36:BA:146:G:H5"	2.41	0.49
36:BA:1337:G:C4	36:BA:1338:G:C8	3.01	0.49
36:BA:523:C:O2'	36:BA:524:U:H5'	2.13	0.49
36:BA:1140:C:OP2	46:BN:66:LYS:HE2	2.13	0.49
1:AA:67:C:OP1	1:AA:199:G:H5"	2.13	0.49
1:AA:603:U:H2'	1:AA:604:G:C8	2.48	0.49
2:AB:233:SER:O	2:AB:234:PRO:C	2.51	0.49
25:CZ:40:PRO:O	25:CZ:41:ASN:CB	2.61	0.49
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.12	0.49
55:DW:10:VAL:O	55:DW:10:VAL:HG12	2.11	0.49
7:AG:41:ARG:HH11	7:AG:41:ARG:HG2	1.78	0.49
2:CB:74:LYS:HB3	2:CB:74:LYS:NZ	2.28	0.49
1:CA:135:C:O2	16:CP:1:MET:HB3	2.13	0.49
36:BA:874:G:H5"	58:BZ:175:VAL:HG11	1.95	0.49
36:BA:2824:C:H2'	36:BA:2825:C:O4'	2.13	0.49
57:DY:83:THR:HA	57:DY:96:ILE:HG22	1.95	0.49
36:BA:2056:G:H2'	36:BA:2056:G:N3	2.27	0.49
34:D8:61:LEU:C	34:D8:63:PRO:HD2	2.34	0.49
31:D5:3:LYS:N	31:D5:3:LYS:CD	2.76	0.49
36:DA:2575:C:H2'	36:DA:2578:G:O6	2.12	0.49
36:DA:1614:A:N1	55:DW:93:ALA:HB2	2.28	0.49
30:D4:27:THR:O	30:D4:28:LYS:HB3	2.11	0.49
42:DG:66:GLN:HE22	42:DG:67:LYS:CE	2.23	0.49
36:DA:1747(A):G:C3'	36:DA:1748:G:H5"	2.43	0.49
42:DG:76:SER:HA	42:DG:84:LYS:N	2.27	0.49
22:CW:57:G:O2'	22:CW:58:A:H5'	2.13	0.49
2:AB:73:THR:HG22	2:AB:94:ASN:C	2.33	0.49
4:AD:18:LYS:HE3	4:AD:31:CYS:HB3	1.94	0.49
1:AA:858:G:H5"	1:AA:858:G:H8	1.77	0.49
40:DE:68:ALA:C	40:DE:70:ALA:H	2.16	0.49
54:DV:19:LYS:HE2	54:DV:20:LEU:H	1.78	0.49
36:BA:627:A:N6	48:BP:115:LEU:HD12	2.28	0.49
58:BZ:24:LEU:O	58:BZ:24:LEU:CD2	2.58	0.49
40:DE:81:ILE:O	40:DE:82:ARG:O	2.31	0.49
12:CL:20:LYS:H	12:CL:20:LYS:CD	2.12	0.49
20:AT:45:GLN:NE2	20:AT:46:GLU:CG	2.75	0.49
48:DP:96:THR:HG22	48:DP:126:VAL:CB	2.43	0.49
36:DA:2155:G:H3'	36:DA:2156:G:H8	1.78	0.49
38:DC:76:ALA:O	38:DC:94:VAL:O	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:118:LEU:CB	2:AB:142:LEU:HD12	2.41	0.49
36:DA:1051:G:C4	36:DA:1052:C:N4	2.80	0.49
36:DA:742:G:H2'	36:DA:743:G:H8	1.78	0.49
25:CZ:205:ALA:HA	25:CZ:208:GLU:OE2	2.13	0.49
17:CQ:45:HIS:HA	17:CQ:69:LYS:NZ	2.27	0.49
52:DT:26:ASP:C	52:DT:26:ASP:OD1	2.50	0.49
34:D8:49:VAL:CG1	34:D8:52:LYS:HB3	2.42	0.49
1:AA:954:G:H21	1:AA:1227:A:H62	1.59	0.49
3:AC:68:VAL:HG12	3:AC:68:VAL:O	2.13	0.49
53:BU:52:ARG:HB3	53:BU:52:ARG:NH1	2.26	0.49
39:BD:117:VAL:HG22	39:BD:118:VAL:N	2.28	0.49
36:BA:2843:G:N2	36:BA:2875:C:C2	2.81	0.49
36:BA:271(D):G:O2'	36:BA:271(E):U:H5'	2.13	0.49
36:BA:78:A:H2'	36:BA:79:G:H8	1.76	0.49
36:BA:191:A:H2'	36:BA:192:C:H6	1.75	0.49
36:DA:2200:C:H42	36:DA:2223:G:H1	1.60	0.49
53:BU:104:GLN:HB3	54:BV:44:LYS:NZ	2.28	0.49
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.81	0.49
4:AD:86:LYS:HA	4:AD:86:LYS:HE3	1.95	0.49
39:BD:17:THR:O	39:BD:211:ARG:NH2	2.46	0.49
42:DG:134:GLY:O	42:DG:135:LEU:HD12	2.13	0.49
58:DZ:103:ARG:HD3	58:DZ:138:GLU:CG	2.42	0.49
43:BH:94:TYR:CB	43:BH:107:VAL:HG12	2.43	0.49
36:DA:237:C:H2'	36:DA:238:C:H6	1.76	0.49
55:DW:11:ARG:HG2	55:DW:11:ARG:NH1	2.27	0.49
46:DN:2:LYS:HZ3	54:DV:12:TYR:HA	1.76	0.49
36:DA:1140:C:OP2	46:DN:66:LYS:HE2	2.13	0.49
46:DN:67:LEU:O	46:DN:68:GLU:HB2	2.12	0.49
1:CA:55:A:H2'	1:CA:56:U:H5'	1.95	0.49
20:CT:61:SER:O	20:CT:65:LYS:HG2	2.12	0.49
1:CA:1329:A:P	13:CM:28:ALA:HB3	2.53	0.49
55:DW:64:MET:O	55:DW:65:LEU:HB3	2.13	0.49
36:DA:752:A:H4'	36:DA:753:C:O5'	2.13	0.49
15:CO:69:TYR:CZ	15:CO:73:GLU:HG3	2.48	0.49
1:AA:939:G:H2'	1:AA:940:C:C6	2.48	0.49
1:AA:580:U:H2'	1:AA:581:G:O4'	2.12	0.49
14:AN:26:ARG:HH11	14:AN:47:LEU:HD21	1.78	0.49
36:BA:2696:U:H2'	36:BA:2697:G:C8	2.47	0.49
1:CA:106:C:O2	1:CA:379:C:H4'	2.13	0.49
36:DA:949:C:H2'	36:DA:950:G:H8	1.78	0.49
39:DD:24:ILE:HD13	39:DD:24:ILE:C	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:2:LYS:N	28:D2:5:GLU:HG2	2.27	0.48
28:B2:49:LYS:O	28:B2:53:LEU:HB2	2.13	0.48
30:D4:6:HIS:HB3	42:DG:67:LYS:NZ	2.28	0.48
32:D6:15:GLU:OE2	32:D6:41:PRO:CG	2.61	0.48
2:AB:189:ASP:HB2	2:AB:205:ASP:OD1	2.12	0.48
52:BT:28:VAL:HG21	52:BT:46:GLU:HG3	1.94	0.48
7:AG:54:THR:HG22	7:AG:56:GLN:N	2.07	0.48
4:CD:59:ARG:NH2	4:CD:62:GLN:HG3	2.26	0.48
36:BA:1069:A:C1'	36:BA:1070:A:OP1	2.51	0.48
4:AD:28:SER:CB	4:AD:29:PRO:CD	2.88	0.48
24:AY:76:A:C5	25:AZ:271:GLU:CG	2.96	0.48
51:BS:93:LYS:O	51:BS:95:HIS:N	2.46	0.48
36:BA:252:G:OP2	48:BP:50:ARG:NH2	2.42	0.48
36:DA:621:A:H2'	36:DA:622:G:C5'	2.37	0.48
40:DE:69:LYS:C	40:DE:71:GLY:N	2.65	0.48
1:CA:963:G:N2	10:CJ:55:LYS:CE	2.69	0.48
36:DA:2711:A:OP1	36:DA:2712(A):A:OP1	2.31	0.48
54:BV:19:LYS:HE2	54:BV:20:LEU:H	1.78	0.48
32:D6:53:LYS:O	32:D6:54:ILE:OXT	2.31	0.48
41:BF:152:GLU:OE1	41:BF:191:ARG:HD2	2.13	0.48
53:BU:95:LEU:CD1	54:BV:11:GLN:HG3	2.43	0.48
13:CM:89:GLY:O	13:CM:93:ARG:HD2	2.13	0.48
36:BA:1051:G:C4	36:BA:1052:C:N4	2.81	0.48
22:AW:26:A:H61	22:AW:44:G:H1	1.61	0.48
43:DH:45:VAL:O	43:DH:47:GLU:N	2.40	0.48
17:CQ:58:GLU:O	17:CQ:59:ILE:HD13	2.13	0.48
25:AZ:145:GLU:O	25:AZ:146:LEU:C	2.51	0.48
49:DQ:133:ARG:CB	49:DQ:133:ARG:HH11	2.26	0.48
25:AZ:65:THR:HG23	25:AZ:80:VAL:HG13	1.90	0.48
36:DA:2801(A):A:C3'	36:DA:2802:G:H5'	2.43	0.48
3:AC:43:LEU:HD13	3:AC:68:VAL:CG2	2.43	0.48
57:BY:2:ARG:N	57:BY:4:LYS:HE2	2.27	0.48
36:BA:1248:G:N1	53:BU:3:ARG:HD2	2.27	0.48
39:BD:222:ARG:O	39:BD:224:ALA:O	2.30	0.48
22:AV:62:C:OP1	22:AV:62:C:H4'	2.12	0.48
25:AZ:28:THR:O	25:AZ:32:THR:HG23	2.13	0.48
36:DA:2472:G:H5"	36:DA:2473:U:H5"	1.95	0.48
43:DH:23:ARG:O	43:DH:24:VAL:HG23	2.13	0.48
48:DP:77:ARG:HD3	48:DP:78:PRO:HD2	1.94	0.48
40:BE:176:ILE:HG22	40:BE:179:GLU:H	1.77	0.48
51:BS:20:ARG:HA	51:BS:20:ARG:NE	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:D9:29:ASN:HD21	35:D9:32:HIS:CE1	2.30	0.48
40:BE:13:ARG:O	52:BT:57:PHE:HE2	1.96	0.48
36:BA:1286:A:H2'	36:BA:1288:U:OP2	2.13	0.48
1:CA:946:A:H2'	1:CA:947:G:H8	1.77	0.48
49:BQ:21:THR:OG1	49:BQ:99:PRO:O	2.30	0.48
39:DD:17:THR:O	39:DD:211:ARG:NH2	2.46	0.48
48:BP:102:ARG:CB	48:BP:102:ARG:NH1	2.75	0.48
53:DU:69:CYS:O	53:DU:74:LEU:HD12	2.13	0.48
36:DA:2241:A:H2'	36:DA:2242:G:C8	2.47	0.48
36:BA:45:C:H2'	36:BA:47:C:H6	1.77	0.48
41:BF:78:ILE:HA	41:BF:83:PHE:CE2	2.48	0.48
58:BZ:137:ILE:O	58:BZ:138:GLU:HB2	2.13	0.48
12:CL:86:ARG:HG2	12:CL:87:GLY:N	2.26	0.48
36:DA:796:C:H2'	36:DA:797:C:C6	2.48	0.48
36:DA:253:C:H2'	36:DA:254:G:O4'	2.13	0.48
54:DV:67:GLY:O	54:DV:88:ARG:HD2	2.12	0.48
1:AA:592:G:H2'	1:AA:593:G:H8	1.77	0.48
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.28	0.48
1:AA:417:C:O2'	1:AA:418:C:H5'	2.12	0.48
36:DA:382:G:C2'	36:DA:383:U:H5'	2.43	0.48
1:AA:1523:G:OP1	11:AK:123:LYS:HD2	2.12	0.48
33:B7:21:ARG:HG2	33:B7:21:ARG:HH11	1.77	0.48
5:CE:68:GLU:O	5:CE:68:GLU:HG3	2.13	0.48
3:AC:103:VAL:HG12	3:AC:103:VAL:O	2.12	0.48
1:CA:1044:A:H2'	1:CA:1045:C:O5'	2.12	0.48
4:AD:133:VAL:HG11	4:AD:138:TYR:CD1	2.47	0.48
45:DK:117:UNK:O	45:DK:118:UNK:CB	2.61	0.48
20:CT:50:GLU:N	20:CT:99:LEU:HD12	2.27	0.48
56:DX:12:VAL:HA	56:DX:27:THR:O	2.13	0.48
28:D2:24:LEU:O	28:D2:25:VAL:HG23	2.13	0.48
28:B2:32:LEU:HA	28:B2:53:LEU:HD13	1.94	0.48
52:DT:33:LYS:CE	52:DT:43:GLN:HE21	2.26	0.48
52:DT:33:LYS:HG3	52:DT:43:GLN:HB2	1.95	0.48
19:CS:11:VAL:HG13	19:CS:16:LEU:HD11	1.95	0.48
36:DA:271(L):U:H5"	36:DA:271(M):G:C5'	2.32	0.48
4:AD:11:LEU:O	4:AD:12:CYS:C	2.52	0.48
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.71	0.48
36:DA:1538:G:H2'	36:DA:1539:G:H8	1.77	0.48
37:BB:43:C:H5'	37:BB:44:G:OP2	2.14	0.48
42:BG:16:ARG:HH11	42:BG:16:ARG:HG3	1.78	0.48
1:AA:1342:C:O2'	9:AI:124:GLN:HG3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:301:GLY:CA	25:AZ:347:THR:HG23	2.42	0.48
53:DU:92:ARG:CZ	54:DV:11:GLN:H	2.26	0.48
13:CM:101:GLN:NE2	13:CM:101:GLN:N	2.58	0.48
41:DF:160:ASN:ND2	41:DF:162:LEU:HD13	2.28	0.48
1:CA:1442(B):A:N1	52:DT:118:ARG:NH2	2.60	0.48
25:CZ:101:GLY:HA3	25:CZ:210:ILE:CD1	2.43	0.48
49:BQ:133:ARG:HB2	49:BQ:133:ARG:HH11	1.78	0.48
3:CC:68:VAL:O	3:CC:68:VAL:HG12	2.12	0.48
51:BS:18:ILE:HD12	51:BS:18:ILE:H	1.78	0.48
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.76	0.48
3:CC:22:TRP:CE2	14:CN:54:PRO:HG2	2.48	0.48
3:CC:35:GLU:HG2	3:CC:59:ARG:HH22	1.77	0.48
57:BY:44:ILE:N	57:BY:44:ILE:HD12	2.28	0.48
36:BA:363(F):A:HO2'	36:BA:364:C:H5	1.59	0.48
54:BV:35:LEU:H	54:BV:35:LEU:HD22	1.78	0.48
36:DA:1265:A:N1	36:DA:2013:A:H5"	2.28	0.48
51:DS:83:LYS:CG	51:DS:105:ALA:HB3	2.41	0.48
36:DA:2572:A:C4	40:DE:144:ARG:NH1	2.81	0.48
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.44	0.48
43:DH:37:VAL:HG11	43:DH:68:THR:CG2	2.42	0.48
53:DU:64:ARG:HG2	53:DU:64:ARG:HH11	1.77	0.48
39:BD:261:LYS:NZ	39:BD:263:ARG:NH2	2.61	0.48
1:CA:1125:U:H5"	1:CA:1126:U:C5	2.46	0.48
36:BA:2199:A:C5'	36:BA:2200:C:OP2	2.61	0.48
16:AP:9:PHE:CE2	16:AP:18:ARG:CZ	2.94	0.48
13:CM:118:ALA:HB3	22:CV:29:G:C5'	2.43	0.48
48:BP:6:LEU:CD2	48:BP:6:LEU:H	2.26	0.48
36:BA:2121:G:N1	36:BA:2176:A:C2	2.79	0.48
58:DZ:62:PRO:C	58:DZ:64:GLY:N	2.66	0.48
10:CJ:90:LEU:N	10:CJ:91:PRO:CD	2.76	0.48
38:DC:210:ARG:HG2	38:DC:210:ARG:HH11	1.76	0.48
1:CA:166:G:O2'	1:CA:167:G:H5'	2.13	0.48
36:DA:2087:G:C2'	36:DA:2088:G:H5'	2.43	0.48
54:BV:80:GLN:OE1	54:BV:80:GLN:HA	2.13	0.48
38:DC:61:THR:HG22	38:DC:162:GLU:HA	1.95	0.48
36:DA:1787:A:O4'	36:DA:2589:A:H4'	2.13	0.48
44:BJ:22:UNK:C	44:BJ:118:UNK:HA	2.44	0.48
36:BA:270:A:O2'	36:BA:271:A:H5'	2.13	0.48
1:CA:534:U:H6	1:CA:534:U:H5'	1.77	0.48
24:CY:52:A:C2'	24:CY:53:G:H5'	2.42	0.48
31:D5:42:PRO:HB2	36:DA:2815:C:O2'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:104:ARG:O	50:BR:106:GLY:N	2.47	0.48
7:AG:151:TYR:OH	11:AK:54:ARG:HD3	2.13	0.48
36:BA:664:C:O2'	36:BA:665:C:H5'	2.13	0.48
36:DA:2115:G:N3	36:DA:2117:A:N7	2.60	0.48
43:BH:97:ARG:NH2	43:BH:99:VAL:HG21	2.29	0.48
11:AK:127:LYS:O	11:AK:129:SER:N	2.46	0.48
36:DA:839:U:O2'	36:DA:1191:G:H1'	2.13	0.48
36:BA:865:C:H4'	36:BA:866:A:OP1	2.13	0.48
55:BW:37:ARG:HG3	55:BW:37:ARG:HH11	1.78	0.48
55:DW:95:ILE:O	55:DW:95:ILE:HG13	2.13	0.48
28:B2:30:ARG:HH11	56:BX:5:TYR:HE2	1.57	0.48
36:BA:436:C:H2'	36:BA:437:G:H8	1.77	0.48
58:BZ:30:ASN:C	58:BZ:30:ASN:ND2	2.66	0.48
1:AA:1202:G:C2	14:AN:42:ILE:HG21	2.48	0.48
28:B2:25:VAL:CG1	28:B2:57:ILE:HG23	2.43	0.48
36:BA:321:G:H21	41:BF:165:ARG:NH2	2.02	0.48
36:DA:2248:C:H2'	36:DA:2249:U:C5'	2.32	0.48
48:BP:24:GLY:N	48:BP:33:ARG:CZ	2.77	0.48
40:BE:68:ALA:O	40:BE:70:ALA:N	2.46	0.48
41:DF:31:HIS:ND1	48:DP:13:ASN:HB2	2.29	0.48
53:DU:92:ARG:HH21	54:DV:10:LYS:CB	2.23	0.48
41:BF:125:LEU:H	41:BF:125:LEU:CD2	2.20	0.48
48:BP:126:VAL:HG22	48:BP:145:PRO:HG2	1.94	0.48
48:BP:96:THR:HG22	48:BP:126:VAL:CB	2.42	0.48
10:AJ:55:LYS:CD	10:AJ:55:LYS:N	2.76	0.48
38:BC:125:SER:C	38:BC:127:LEU:H	2.17	0.48
25:AZ:155:ARG:O	25:AZ:159:ASN:ND2	2.44	0.48
9:AI:95:LYS:HD3	9:AI:95:LYS:C	2.34	0.48
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.48	0.48
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.48	0.48
13:AM:120:LYS:HE3	13:AM:120:LYS:HA	1.95	0.48
26:B0:14:ARG:CG	26:B0:14:ARG:HH11	2.23	0.48
31:D5:24:ALA:O	31:D5:25:LEU:CB	2.58	0.48
13:CM:57:ARG:O	13:CM:61:GLU:HB2	2.13	0.48
57:BY:41:GLY:O	57:BY:42:VAL:O	2.31	0.48
36:DA:2851:A:H2'	36:DA:2852:G:H8	1.79	0.48
29:D3:6:VAL:HB	29:D3:54:VAL:HG11	1.95	0.48
12:CL:93:LEU:HB2	12:CL:96:VAL:HB	1.94	0.48
19:AS:65:ASN:C	19:AS:67:VAL:H	2.17	0.48
6:AF:87:ARG:CG	6:AF:87:ARG:NH1	2.72	0.48
36:BA:2496:C:OP2	49:BQ:82:ARG:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:91:ARG:HD3	13:AM:97:PRO:O	2.12	0.48
6:CF:63:TYR:N	6:CF:63:TYR:HD1	2.11	0.48
40:DE:30:PRO:HD3	40:DE:180:ASN:CG	2.32	0.48
1:AA:918:A:H2'	1:AA:919:A:C8	2.48	0.48
46:DN:6:PRO:O	46:DN:7:LYS:HB2	2.13	0.48
36:DA:2050:C:H1'	40:DE:156:MET:HE1	1.94	0.48
36:BA:1332:G:H5'	36:BA:1333:C:H5	1.78	0.48
36:DA:90:U:O2	36:DA:90:U:C2'	2.61	0.48
36:DA:192:C:O2'	36:DA:802:A:N3	2.43	0.48
39:BD:108:PRO:HB3	39:BD:143:HIS:CE1	2.48	0.48
27:B1:44:PRO:HG2	27:B1:46:LEU:HD13	1.94	0.48
2:CB:87:ARG:NH1	2:CB:87:ARG:HB3	2.27	0.48
36:DA:880:G:H22	36:DA:897:C:H42	1.60	0.48
36:BA:752:A:H4'	36:BA:753:C:O5'	2.13	0.48
1:AA:539:A:H2'	1:AA:540:G:C8	2.49	0.48
5:CE:81:GLU:HG2	5:CE:90:VAL:HG22	1.95	0.48
36:BA:2087:G:O2'	36:BA:2088:G:H5'	2.12	0.48
25:AZ:350:THR:HG22	25:AZ:351:GLY:N	2.28	0.48
46:BN:120:LEU:C	46:BN:120:LEU:HD13	2.33	0.48
1:AA:505:G:H5'	1:AA:534:U:H2'	1.96	0.48
1:AA:418:C:H2'	1:AA:419:C:C6	2.48	0.48
3:CC:124:ILE:HG12	3:CC:130:VAL:HG22	1.95	0.48
3:AC:12:LEU:O	3:AC:13:GLY:C	2.49	0.48
25:CZ:295:ARG:HG2	25:CZ:295:ARG:NH1	2.26	0.48
36:DA:2735:G:H2'	36:DA:2736:G:H8	1.78	0.48
36:BA:858:U:O2	36:BA:2268:A:H2'	2.13	0.48
50:DR:105:ARG:H	50:DR:105:ARG:CD	2.26	0.48
36:DA:2887:U:O2'	36:DA:2888:C:H5'	2.13	0.48
36:DA:1214:A:H2'	36:DA:1215:G:O4'	2.13	0.48
13:CM:66:LEU:O	13:CM:70:LEU:HB2	2.13	0.48
56:DX:36:LYS:HE2	56:DX:54:VAL:O	2.13	0.48
28:D2:32:LEU:HB2	28:D2:53:LEU:CD2	2.43	0.48
28:D2:56:GLN:HA	28:D2:59:ARG:CZ	2.43	0.48
28:D2:59:ARG:HG3	28:D2:60:LEU:N	2.28	0.48
34:B8:11:LYS:HZ2	34:B8:60:LEU:CD2	2.26	0.48
48:BP:49:ARG:NH1	48:BP:49:ARG:HG3	2.27	0.48
36:DA:2107:C:H1'	36:DA:2182:G:H22	1.73	0.48
36:BA:1301:A:HO2'	36:BA:1302:A:P	2.37	0.48
57:BY:81:LYS:NZ	57:BY:99:CYS:SG	2.85	0.48
36:BA:2107:C:C5	36:BA:2108:C:H5	2.31	0.48
36:DA:1141:U:H6	46:DN:63:THR:CG2	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:8:U:C5'	37:BB:8:U:H6	2.14	0.48
55:BW:4:LYS:CG	55:BW:5:ALA:H	2.26	0.48
36:BA:1072:C:H5"	36:BA:1073:A:OP1	2.13	0.48
36:BA:1538:G:H2'	36:BA:1539:G:H8	1.78	0.48
36:DA:1448:G:H21	36:DA:1528(A):A:H2	1.62	0.48
36:BA:2293:C:H5"	51:BS:92:TYR:OH	2.13	0.48
48:BP:23:PRO:HB2	48:BP:33:ARG:HG3	1.96	0.48
40:BE:167:VAL:HG12	40:BE:189:PRO:CD	2.38	0.48
53:DU:88:ILE:HG23	53:DU:90:VAL:HG23	1.94	0.48
47:DO:86:ILE:C	47:DO:87:ILE:HD13	2.34	0.48
54:BV:19:LYS:HG2	54:BV:94:LEU:CB	2.40	0.48
36:BA:2713:A:H3'	36:BA:2714:G:H5'	1.95	0.48
50:DR:117:VAL:CG2	50:DR:118:GLU:N	2.76	0.48
50:DR:52:ILE:O	50:DR:55:ALA:N	2.46	0.48
26:B0:42:GLY:O	26:B0:57:PHE:CG	2.66	0.48
26:B0:43:THR:HG22	36:BA:2331:G:O2'	2.13	0.48
56:BX:28:PHE:CE2	56:BX:92:LEU:HD11	2.48	0.48
36:DA:1049:C:O2'	36:DA:1050:A:H5'	2.13	0.48
1:AA:323:U:H2'	1:AA:324:G:O4'	2.14	0.48
16:AP:21:VAL:HG21	16:AP:59:TRP:CD2	2.49	0.48
48:BP:38:GLN:CG	48:BP:39:LYS:H	2.17	0.48
36:DA:2485:G:O2'	36:DA:2486:G:H5'	2.12	0.48
1:CA:1325:C:H4'	21:CU:17:THR:HG21	1.94	0.48
21:CU:6:ARG:HD3	21:CU:15:ARG:HH12	1.75	0.48
25:AZ:249:VAL:HG13	25:AZ:268:THR:HA	1.94	0.48
46:BN:112:LEU:O	46:BN:115:ARG:HB3	2.13	0.48
39:DD:117:VAL:HG22	39:DD:118:VAL:N	2.27	0.48
30:D4:34:GLU:HB2	42:DG:113:ARG:HH21	1.79	0.48
36:BA:2864:G:O2'	36:BA:2865:U:H5'	2.13	0.48
36:BA:272(D):G:H1	36:BA:364:C:N4	2.06	0.48
48:DP:106:LEU:HD21	48:DP:112:LEU:HB2	1.94	0.48
36:BA:1352:U:O2'	36:BA:1353:A:H5'	2.13	0.48
36:DA:1353:A:H4'	39:DD:38:LYS:HE3	1.94	0.48
46:BN:6:PRO:HG2	46:BN:7:LYS:H	1.77	0.48
36:DA:2631:G:H21	40:DE:61:ARG:HH12	1.59	0.48
36:BA:402:A:C2'	36:BA:403:U:H5'	2.43	0.48
2:AB:134:GLU:C	2:AB:136:VAL:N	2.67	0.48
36:BA:2464:C:O2'	36:BA:2465:C:O5'	2.29	0.48
36:BA:2200:C:H42	36:BA:2223:G:H1	1.62	0.48
25:AZ:31:LEU:HD23	25:AZ:199:ILE:HG23	1.95	0.48
2:CB:87:ARG:HH12	2:CB:223:ILE:HD11	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:707:C:H2'	1:CA:708:C:C6	2.48	0.48
36:DA:2495:G:OP1	49:DQ:82:ARG:NH1	2.46	0.48
36:BA:953:A:O2'	36:BA:954:G:H5'	2.13	0.48
1:CA:736:C:H2'	1:CA:737:A:C8	2.48	0.48
1:AA:429:U:H4'	1:AA:430:A:O5'	2.12	0.48
2:AB:209:ARG:HH11	2:AB:239:VAL:HG11	1.79	0.48
25:CZ:342:PHE:CD1	25:CZ:342:PHE:N	2.81	0.48
1:CA:484:G:H4'	1:CA:485:G:O5'	2.13	0.48
1:CA:505:G:H5'	1:CA:534:U:H2'	1.95	0.48
1:AA:451:A:N6	1:AA:480:U:H2'	2.28	0.48
9:CI:24:GLY:C	9:CI:25:LYS:HD2	2.32	0.48
25:CZ:316:PHE:CE1	25:CZ:372:VAL:HB	2.48	0.48
36:DA:469:G:H2'	36:DA:470:A:H5"	1.95	0.48
36:DA:469:G:C2'	36:DA:470:A:H5"	2.43	0.48
31:B5:27:PRO:HA	55:BW:23:LEU:HD11	1.95	0.48
53:BU:99:ALA:HB2	53:BU:106:PHE:CE1	2.48	0.48
36:BA:95:G:H2'	36:BA:96:G:O4'	2.13	0.48
3:CC:40:ARG:O	3:CC:44:GLU:HG3	2.13	0.48
50:BR:105:ARG:CD	50:BR:105:ARG:H	2.26	0.48
50:BR:105:ARG:HD2	50:BR:105:ARG:H	1.78	0.48
25:CZ:67:HIS:CD2	25:CZ:67:HIS:H	2.31	0.48
46:BN:96:GLU:HB2	46:BN:100:GLU:OE2	2.13	0.48
1:AA:277:C:O2'	1:AA:278:G:H5'	2.14	0.48
36:BA:706:A:H2'	36:BA:707:G:O4'	2.14	0.48
36:DA:690:G:H2'	36:DA:691:C:C6	2.49	0.48
20:CT:53:LEU:HD12	20:CT:53:LEU:H	1.79	0.48
13:AM:67:GLU:O	13:AM:69:GLU:N	2.45	0.48
42:DG:138:GLN:HB3	42:DG:153:ARG:O	2.13	0.48
42:DG:95:ARG:NH1	42:DG:95:ARG:HG2	2.29	0.48
32:B6:18:ARG:HH11	32:B6:18:ARG:CG	2.04	0.48
36:BA:2312:U:OP1	42:BG:73:ALA:HA	2.13	0.48
57:BY:27:VAL:HG12	57:BY:28:LYS:N	2.28	0.48
22:CV:56:C:H1'	42:DG:76:SER:O	2.14	0.48
42:DG:79:ASN:O	42:DG:80:PHE:HB2	2.12	0.48
37:BB:22:U:H2'	37:BB:23:G:H8	1.79	0.48
19:CS:15:LEU:O	19:CS:19:VAL:HG23	2.13	0.48
57:DY:50:ARG:O	57:DY:51:VAL:C	2.52	0.48
31:B5:50:GLY:HA3	31:B5:56:LYS:NZ	2.28	0.48
41:DF:133:ASN:O	41:DF:135:LYS:N	2.47	0.48
24:AY:76:A:H2	25:AZ:270:VAL:CA	2.25	0.48
51:BS:96:GLY:C	51:BS:98:VAL:H	2.15	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:36:CYS:HB3	31:D5:49:CYS:SG	2.53	0.48
17:CQ:10:VAL:HG23	17:CQ:54:GLY:H	1.79	0.48
17:AQ:10:VAL:HG23	17:AQ:53:LEU:HA	1.95	0.48
9:AI:20:ARG:NH1	9:AI:20:ARG:HG3	2.27	0.48
38:BC:114:VAL:HG12	38:BC:144:THR:HA	1.96	0.48
38:BC:147:PHE:C	38:BC:149:ILE:H	2.15	0.48
18:CR:30:ASP:C	18:CR:32:ARG:H	2.16	0.48
5:AE:148:VAL:CG2	8:AH:107:LEU:HD13	2.36	0.48
21:AU:12:LYS:HG2	21:AU:22:ARG:HB3	1.94	0.48
36:DA:860:U:O2	36:DA:860:U:O4'	2.31	0.48
36:DA:2777:G:C4'	36:DA:2778:A:H5'	2.44	0.48
36:DA:1131:G:C4	46:DN:75:TYR:HB2	2.49	0.48
49:BQ:26:TYR:HB2	49:BQ:137:TYR:HD1	1.77	0.48
2:CB:8:LYS:O	2:CB:10:LEU:N	2.47	0.48
42:BG:51:ARG:HH11	42:BG:53:LEU:CD1	2.25	0.48
1:CA:1152:A:H2'	1:CA:1153:C:H6	1.78	0.48
1:AA:1030:C:H41	1:AA:1032:G:N2	2.06	0.48
36:DA:1248:G:N1	53:DU:3:ARG:HD2	2.29	0.48
36:DA:141:A:C8	36:DA:1408:C:O2'	2.61	0.48
3:CC:35:GLU:CG	3:CC:59:ARG:HH22	2.27	0.48
36:DA:1721:G:C6	36:DA:1739:U:H5'	2.49	0.48
36:BA:310:A:P	57:BY:18:GLY:HA2	2.53	0.48
1:AA:186:C:C2	1:AA:187:C:C5	3.01	0.48
48:DP:101:VAL:HB	48:DP:107:LYS:HA	1.95	0.48
36:BA:1341:U:C4'	56:BX:57:LEU:HB3	2.41	0.48
22:CV:60:U:H5"	22:CV:61:C:H5	1.77	0.48
4:CD:159:ARG:NH1	4:CD:159:ARG:HG3	2.27	0.48
55:BW:25:ARG:HH11	55:BW:25:ARG:CB	2.27	0.48
50:DR:13:HIS:CE1	50:DR:16:HIS:HB2	2.48	0.48
1:CA:1286:A:O2'	1:CA:1287:A:C5'	2.61	0.48
27:B1:50:ARG:HG3	36:BA:2200:C:OP1	2.13	0.48
36:DA:78:A:C2	36:DA:109:G:C6	3.02	0.48
34:B8:30:ARG:NH2	36:BA:2419:U:O4	2.46	0.48
1:CA:160:A:H1'	1:CA:344:A:C5	2.48	0.48
5:AE:18:ARG:HG3	5:AE:18:ARG:NH1	2.27	0.48
1:AA:201:C:H42	1:AA:216:G:H1	1.61	0.48
42:DG:110:ALA:C	42:DG:112:PRO:HD2	2.33	0.48
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.47	0.48
36:BA:1771:C:O2'	36:BA:1786:A:H8	1.96	0.48
54:DV:81:TYR:C	54:DV:82:ARG:HD2	2.34	0.48
41:DF:78:ILE:HA	41:DF:83:PHE:CE2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1436:G:H1'	36:BA:1477:A:O2'	2.12	0.48
10:CJ:42:THR:HG22	10:CJ:43:ARG:N	2.28	0.48
36:BA:405:U:H3'	36:BA:406:G:H5'	1.94	0.48
58:BZ:47:VAL:HG12	58:BZ:48:PHE:N	2.29	0.48
1:AA:370:C:O2'	1:AA:371:G:H5'	2.13	0.48
1:AA:471:G:H21	16:AP:82:GLN:NE2	2.11	0.48
36:DA:2828:C:O2'	36:DA:2829:C:H5'	2.14	0.48
36:DA:2554:U:H2'	36:DA:2555:U:C6	2.48	0.48
1:AA:1484:C:O2'	1:AA:1485:U:H5'	2.14	0.48
36:BA:740:U:H2'	36:BA:741:G:C8	2.48	0.48
36:BA:290:G:O2'	36:BA:291:C:H5'	2.12	0.48
46:DN:121:LYS:HB3	46:DN:123:TYR:CE1	2.49	0.48
41:DF:65:TRP:CZ3	41:DF:75:HIS:HD2	2.31	0.48
36:BA:2320:A:H2'	36:BA:2320:A:N3	2.29	0.48
1:CA:471:G:H21	16:CP:82:GLN:NE2	2.11	0.48
36:DA:39:C:O2'	36:DA:40:C:H5'	2.12	0.48
18:AR:28:GLU:HG3	18:AR:28:GLU:O	2.13	0.48
12:CL:41:ARG:CZ	12:CL:41:ARG:HB2	2.43	0.48
33:B7:12:ARG:O	33:B7:15:THR:O	2.31	0.48
13:CM:107:ALA:O	13:CM:111:LYS:HG3	2.13	0.48
39:DD:31:LYS:HZ1	39:DD:33:LEU:HG	1.74	0.48
42:BG:62:LEU:HD12	42:BG:63:ILE:HG23	1.94	0.48
15:CO:17:ARG:HH11	15:CO:77:ARG:NH1	2.10	0.48
34:D8:11:LYS:HG3	34:D8:60:LEU:CD2	2.43	0.48
22:CV:68:C:O2'	22:CV:69:G:H5'	2.12	0.48
42:DG:76:SER:HB2	42:DG:84:LYS:HA	1.95	0.48
37:BB:7:G:C2'	37:BB:8:U:H5"	2.44	0.48
51:BS:28:VAL:CG1	51:BS:29:PHE:N	2.76	0.48
55:BW:6:ILE:CG2	55:BW:8:ARG:HD2	2.44	0.48
41:BF:103:LYS:HA	41:BF:106:ARG:HE	1.78	0.48
36:DA:1888:G:H5'	36:DA:1888:G:N3	2.29	0.48
41:BF:160:ASN:ND2	41:BF:160:ASN:C	2.67	0.48
40:DE:65:GLY:O	40:DE:67:PHE:N	2.47	0.48
40:DE:46:ALA:HB1	40:DE:80:GLU:HB3	1.95	0.48
25:CZ:272:MET:HB2	25:CZ:277:LEU:HD23	1.94	0.48
20:CT:87:LYS:O	20:CT:91:LEU:HG	2.14	0.48
38:DC:10:LEU:HA	38:DC:13:LYS:HE3	1.95	0.48
39:DD:176:ARG:NH1	39:DD:176:ARG:CG	2.73	0.48
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.28	0.48
12:CL:17:LYS:HD3	12:CL:18:VAL:HG22	1.94	0.48
37:BB:15:A:H3'	37:BB:16:G:C5'	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:73:THR:HG23	46:DN:82:LEU:HD11	1.89	0.48
11:CK:27:ASN:HD21	11:CK:45:GLY:H	1.62	0.48
1:AA:1031:G:H2'	1:AA:1032:G:O4'	2.13	0.48
19:CS:49:ILE:O	19:CS:60:VAL:HG12	2.14	0.48
57:DY:2:ARG:C	57:DY:4:LYS:H	2.16	0.48
3:CC:22:TRP:NE1	3:CC:36:ASP:OD2	2.45	0.48
1:AA:44:G:C2	1:AA:45:U:H1'	2.48	0.48
10:AJ:6:ILE:HG13	10:AJ:6:ILE:O	2.13	0.48
20:CT:13:LEU:O	20:CT:16:HIS:N	2.45	0.48
36:BA:2030:A:H4'	36:BA:2031:A:H8	1.77	0.48
41:BF:107:LYS:HE3	41:BF:205:ARG:CG	2.43	0.48
47:DO:8:LEU:CD2	47:DO:8:LEU:N	2.76	0.48
1:AA:1124:G:C5'	10:AJ:35:SER:HB2	2.43	0.48
36:DA:425:G:O2'	36:DA:426:C:H5'	2.14	0.48
36:BA:1472:A:O2'	36:BA:1473:G:H5'	2.13	0.48
1:CA:977:A:O2'	1:CA:978:A:H5"	2.14	0.48
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.86	0.48
3:AC:11:ARG:NH2	3:AC:182:ILE:HD12	2.29	0.48
41:DF:63:LYS:HA	41:DF:76:GLY:O	2.14	0.48
36:DA:644:A:H2	36:DA:2369:A:H1'	1.78	0.48
36:BA:1750:G:H2'	36:BA:1751:C:C6	2.49	0.48
1:CA:312:C:H2'	1:CA:313:A:C8	2.48	0.48
36:DA:2553:G:H3'	36:DA:2554:U:H5"	1.93	0.48
15:CO:7:GLU:O	15:CO:11:VAL:HG23	2.14	0.48
36:DA:2257:U:O2'	36:DA:2258:C:H5'	2.13	0.48
36:DA:2166:G:H2'	36:DA:2167:U:C6	2.48	0.48
27:B1:27:GLU:O	27:B1:28:GLY:C	2.52	0.48
5:AE:20:GLN:NE2	5:AE:22:GLY:H	2.12	0.48
26:D0:18:ALA:HB2	36:DA:2272:U:OP2	2.14	0.48
10:AJ:47:PHE:CE1	14:AN:37:PHE:HE2	2.31	0.48
36:DA:865:C:H4'	36:DA:866:A:OP1	2.14	0.48
42:BG:149:VAL:C	42:BG:151:ALA:H	2.17	0.48
22:CV:48:C:OP2	22:CV:48:C:H6	1.96	0.48
56:DX:12:VAL:CG1	56:DX:27:THR:H	2.25	0.48
28:D2:5:GLU:O	28:D2:8:LYS:HB2	2.13	0.48
36:DA:628:G:C3'	36:DA:629:G:H5"	2.43	0.48
36:DA:2190:G:C2	36:DA:2191:G:H1'	2.48	0.48
36:DA:2293:C:H5"	51:DS:92:TYR:OH	2.13	0.48
32:D6:20:ASN:O	32:D6:21:TYR:CD2	2.67	0.48
42:DG:82:LEU:HD23	42:DG:83:ARG:O	2.13	0.48
1:AA:981:U:H5'	14:AN:21:TYR:CE1	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:17:PHE:CD2	2:AB:44:LEU:HD11	2.48	0.48
1:AA:1271:G:C3'	1:AA:1272:G:H5"	2.42	0.48
36:BA:2188:C:H2'	36:BA:2189:U:C6	2.49	0.48
47:DO:104:ARG:NH2	52:DT:33:LYS:HE2	2.13	0.48
40:DE:40:GLU:O	40:DE:41:LYS:HB3	2.14	0.48
52:DT:55:ASN:H	52:DT:59:THR:CG2	2.23	0.48
40:DE:52:LEU:O	40:DE:75:VAL:HG23	2.14	0.48
25:AZ:94:THR:HG22	25:AZ:95:GLY:N	2.29	0.48
48:BP:131:SER:OG	48:BP:134:ALA:HB3	2.13	0.48
36:DA:875:G:H2'	36:DA:876:C:C6	2.49	0.48
54:BV:19:LYS:HB2	54:BV:96:ILE:HG12	1.96	0.48
20:CT:45:GLN:NE2	20:CT:46:GLU:CG	2.76	0.48
20:CT:92:LEU:C	20:CT:94:ALA:N	2.67	0.48
54:BV:52:VAL:CG1	54:BV:55:ALA:HB3	2.44	0.48
13:CM:83:ASP:C	13:CM:85:GLY:H	2.16	0.48
50:DR:86:ARG:HB3	50:DR:118:GLU:OE2	2.13	0.48
9:AI:19:LEU:CD1	9:AI:59:PHE:HD2	2.19	0.48
1:CA:1190:G:P	3:CC:5:ILE:HD12	2.53	0.48
1:CA:1431:C:H2'	1:CA:1432:G:H5'	1.95	0.48
49:BQ:134:ARG:HA	49:BQ:137:TYR:CE2	2.48	0.48
49:DQ:133:ARG:HH11	49:DQ:133:ARG:HB2	1.79	0.48
3:AC:114:PRO:O	3:AC:118:GLN:HG3	2.13	0.48
36:DA:2801(A):A:H4'	36:DA:2802:G:H2'	1.96	0.48
36:BA:1720:U:H2'	36:BA:1721:G:C4'	2.43	0.48
1:CA:1030(D):A:H62	1:CA:1031:G:N2	2.11	0.48
46:BN:32:THR:HG22	46:BN:37:LYS:HD3	1.96	0.48
3:CC:91:LEU:O	3:CC:94:LEU:O	2.31	0.48
33:D7:22:MET:HE3	33:D7:31:LEU:HD12	1.94	0.48
25:CZ:267:VAL:CG2	25:CZ:288:VAL:HG13	2.43	0.48
12:AL:93:LEU:HB2	12:AL:96:VAL:HB	1.95	0.48
36:BA:1022:G:H22	36:BA:1142(A):A:H2	1.58	0.48
24:AY:6:C:H42	24:AY:67:G:H1	1.60	0.48
15:CO:27:VAL:O	15:CO:31:LEU:CD1	2.60	0.48
14:CN:25:VAL:HG23	14:CN:38:GLY:O	2.13	0.48
1:AA:1534:A:N6	23:AX:12:A:C2	2.77	0.48
4:CD:152:SER:O	4:CD:154:ASN:N	2.47	0.48
36:BA:848:G:O6	36:BA:928:G:H2'	2.14	0.48
36:DA:2121:G:H22	36:DA:2176:A:H2	1.59	0.48
36:DA:823:G:H2'	36:DA:824:A:C8	2.48	0.48
36:BA:118:A:H1'	36:BA:178:G:O4'	2.14	0.48
58:DZ:109:ALA:C	58:DZ:111:VAL:H	2.16	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:198:G:O2'	1:CA:199:G:H8	1.97	0.48
1:AA:1220:G:O2'	1:AA:1221:G:H5'	2.13	0.48
36:BA:1417:C:O2'	36:BA:1418:G:H5'	2.14	0.48
6:CF:38:GLU:O	6:CF:39:LYS:C	2.52	0.48
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.95	0.48
12:AL:86:ARG:HG2	12:AL:87:GLY:N	2.27	0.48
22:CW:65:G:O2'	32:D6:28:ARG:NH2	2.47	0.48
1:CA:1535:C:O2'	1:CA:1536:C:H5'	2.12	0.48
46:DN:70:LYS:O	46:DN:86:PRO:HA	2.14	0.48
36:BA:1386:C:H2'	36:BA:1387:C:C6	2.49	0.48
4:CD:135:LEU:HD13	4:CD:135:LEU:N	2.29	0.48
36:DA:2882:A:H5"	50:DR:98:LEU:HD21	1.95	0.48
38:DC:199:HIS:O	38:DC:201:PRO:HD3	2.13	0.48
36:BA:875:G:H2'	36:BA:876:C:C6	2.49	0.48
3:AC:82:GLU:N	3:AC:82:GLU:OE1	2.47	0.48
25:CZ:94:THR:HG22	25:CZ:95:GLY:N	2.28	0.48
25:CZ:355:LEU:HD23	25:CZ:370:PHE:CD2	2.48	0.48
39:DD:30:GLU:HB3	39:DD:35:LYS:NZ	2.05	0.48
58:BZ:69:THR:HG22	58:BZ:90:VAL:CA	2.16	0.48
34:D8:11:LYS:HG3	34:D8:60:LEU:HD22	1.96	0.48
36:BA:910:A:N1	36:BA:2277:G:H1'	2.28	0.48
26:D0:14:ARG:NH1	26:D0:14:ARG:HG3	2.22	0.48
1:CA:1483:A:H1'	36:DA:1948:G:O4'	2.13	0.48
31:B5:40:LYS:NZ	31:B5:44:THR:O	2.45	0.48
36:BA:1539:G:C6	36:BA:1540:U:H1'	2.49	0.48
36:DA:1539:G:C6	36:DA:1540:U:H1'	2.48	0.48
48:BP:66:GLY:O	48:BP:67:MET:CB	2.59	0.48
40:DE:49:LEU:O	40:DE:78:LEU:HB3	2.14	0.48
40:BE:49:LEU:O	40:BE:78:LEU:HB3	2.13	0.48
25:AZ:266:VAL:HB	25:AZ:291:ARG:HH12	1.79	0.48
25:AZ:318:ALA:HB1	25:AZ:399:VAL:O	2.14	0.48
36:DA:1654:A:P	50:DR:3:HIS:HB3	2.53	0.48
3:AC:16:ARG:CD	3:AC:17:ASP:H	2.26	0.48
53:BU:92:ARG:CZ	54:BV:11:GLN:H	2.27	0.48
10:CJ:61:GLU:OE2	14:CN:49:HIS:HE1	1.97	0.48
48:DP:126:VAL:HG22	48:DP:145:PRO:HG2	1.95	0.48
38:DC:76:ALA:HB2	38:DC:153:ILE:HD11	1.94	0.48
38:DC:76:ALA:CB	38:DC:94:VAL:HG13	2.41	0.48
1:CA:8:A:C2	4:CD:209:ARG:HB3	2.48	0.48
43:BH:125:VAL:HG12	43:BH:125:VAL:O	2.13	0.48
1:AA:264:U:H4'	17:AQ:63:ARG:HD3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DO:47:ILE:O	47:DO:48:PRO:C	2.52	0.48
1:CA:1325:C:OP1	21:CU:15:ARG:NH2	2.37	0.48
41:DF:88:VAL:CG1	41:DF:88:VAL:O	2.60	0.48
1:AA:722:A:HO2'	1:AA:724:G:H8	1.60	0.48
1:CA:1031:G:H2'	1:CA:1032:G:O4'	2.13	0.48
4:CD:121:VAL:HA	4:CD:126:ILE:HD13	1.95	0.48
43:BH:19:VAL:CG1	43:BH:20:ALA:N	2.77	0.48
12:CL:45:PRO:HG3	12:CL:53:ARG:CD	2.44	0.48
12:CL:53:ARG:HD2	12:CL:53:ARG:N	2.29	0.48
4:AD:182:LYS:HB3	4:AD:183:GLY:H	1.55	0.48
36:DA:402:A:C2'	36:DA:403:U:H5'	2.43	0.48
43:BH:89:ILE:HD11	43:BH:129:THR:HA	1.94	0.48
36:DA:2496:C:OP2	49:DQ:82:ARG:HG2	2.14	0.48
38:DC:214:VAL:HG23	38:DC:224:ILE:HD13	1.96	0.48
1:CA:782:A:H2'	1:CA:783:C:H5'	1.94	0.48
55:BW:64:MET:O	55:BW:65:LEU:HB3	2.13	0.48
18:AR:29:PHE:HD1	18:AR:29:PHE:H	1.62	0.48
1:AA:166:G:O2'	1:AA:167:G:H5'	2.13	0.48
36:DA:1436:G:H1'	36:DA:1477:A:O2'	2.14	0.48
25:CZ:226:GLU:HG3	25:CZ:240:GLY:HA2	1.95	0.48
2:AB:236:TYR:C	2:AB:238:LEU:N	2.65	0.48
36:DA:2030:A:H4'	36:DA:2031:A:H8	1.78	0.48
36:DA:473:G:H5"	36:DA:508:G:N2	2.29	0.48
25:CZ:230:THR:CG2	25:CZ:295:ARG:HD2	2.44	0.48
23:CX:23:G:C5	24:CY:36:A:C2	3.02	0.48
36:BA:1914:C:H2'	36:BA:1915:U:O4'	2.13	0.48
1:CA:1291:G:H4'	9:CI:39:GLY:HA3	1.95	0.48
36:BA:2239:G:H5'	39:BD:251:GLY:HA3	1.95	0.48
36:BA:353:G:H2'	36:BA:353:G:N3	2.29	0.48
12:CL:42:THR:HG23	12:CL:42:THR:O	2.13	0.48
27:B1:80:LEU:C	27:B1:80:LEU:HD23	2.34	0.48
36:DA:184:C:H2'	36:DA:185:U:C6	2.48	0.48
36:DA:994:C:OP2	53:DU:54:LYS:NZ	2.46	0.48
13:CM:8:GLU:OE1	13:CM:22:ILE:HG13	2.14	0.48
31:B5:3:LYS:CD	31:B5:3:LYS:H	2.20	0.48
54:BV:62:LEU:H	54:BV:62:LEU:HD22	1.79	0.48
36:BA:2312:U:C2'	36:BA:2313:C:C5'	2.92	0.48
1:AA:1270:C:H2'	1:AA:1271:G:C8	2.48	0.48
36:DA:1858:G:H2'	36:DA:1883:G:N2	2.26	0.48
52:DT:30:VAL:CG2	52:DT:84:GLN:HG3	2.44	0.48
26:D0:10:THR:CG2	26:D0:11:ARG:N	2.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:54:ARG:O	52:DT:55:ASN:HB2	2.14	0.48
26:B0:51:VAL:HG22	26:B0:81:VAL:HG23	1.96	0.48
51:BS:89:ARG:CG	51:BS:92:TYR:HA	2.42	0.48
5:AE:33:VAL:HG21	5:AE:109:ILE:HG12	1.96	0.48
51:BS:104:GLY:O	51:BS:106:ARG:N	2.40	0.48
53:DU:61:TRP:O	53:DU:65:ILE:CD1	2.62	0.48
40:DE:3:GLY:N	40:DE:81:ILE:HG21	2.27	0.48
9:CI:20:ARG:NH1	9:CI:20:ARG:HG3	2.26	0.48
32:D6:53:LYS:HE2	32:D6:54:ILE:CG1	2.44	0.48
36:DA:1677:A:H2'	36:DA:1678:G:H8	1.79	0.48
36:DA:2157:G:H8	36:DA:2157:G:H3'	1.78	0.48
58:DZ:149:SER:HB2	58:DZ:172:ALA:O	2.14	0.48
38:BC:76:ALA:O	38:BC:94:VAL:O	2.32	0.48
20:AT:27:LYS:O	20:AT:27:LYS:HD3	2.13	0.48
5:AE:144:THR:N	5:AE:147:ASP:OD1	2.47	0.48
36:BA:2039:C:O2'	36:BA:2040:C:H5'	2.14	0.48
25:CZ:65:THR:HG22	25:CZ:80:VAL:HG13	1.92	0.48
29:B3:6:VAL:HB	29:B3:54:VAL:HG11	1.95	0.48
57:DY:44:ILE:HD12	57:DY:44:ILE:N	2.28	0.48
57:BY:87:LYS:HG3	57:BY:88:LYS:N	2.25	0.48
40:BE:116:VAL:HG11	40:BE:138:PRO:HB3	1.96	0.48
10:AJ:6:ILE:HG12	10:AJ:72:VAL:HB	1.95	0.48
36:DA:2006:C:O2'	36:DA:2823:A:N3	2.45	0.48
13:AM:97:PRO:HA	13:AM:110:ARG:CD	2.44	0.48
1:AA:1442(B):A:C4	52:BT:118:ARG:CZ	2.97	0.48
35:B9:17:ILE:CG2	35:B9:18:ARG:H	2.27	0.48
56:DX:61:GLY:HA3	56:DX:73:ARG:O	2.14	0.48
34:B8:30:ARG:CZ	36:BA:2419:U:O4	2.61	0.48
39:DD:136:ILE:HB	39:DD:165:ILE:CD1	2.44	0.48
2:CB:95:GLN:O	2:CB:96:ARG:HD2	2.14	0.48
57:BY:33:LYS:C	57:BY:35:TYR:N	2.66	0.48
36:DA:2389:G:H5"	36:DA:2390:U:H5'	1.95	0.48
46:BN:56:ASN:H	46:BN:125:GLY:HA3	1.79	0.48
36:BA:1286:A:N6	36:BA:1289:C:N3	2.61	0.48
36:DA:729:G:OP2	39:DD:13:ARG:NH1	2.46	0.48
43:BH:147:ASN:O	43:BH:151:ILE:HG12	2.14	0.48
1:CA:1171:G:H2'	1:CA:1172:C:C6	2.48	0.48
36:DA:1771:C:O2'	36:DA:1786:A:H8	1.96	0.48
1:AA:167:G:H2'	1:AA:168:G:O4'	2.14	0.48
36:BA:1525:G:H2'	36:BA:1526:G:H8	1.77	0.48
17:CQ:27:PHE:CE1	17:CQ:36:ILE:HD11	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:105:ARG:HD2	50:DR:105:ARG:H	1.78	0.48
22:CW:52:G:O6	22:CW:62:C:N4	2.46	0.48
44:DJ:99:UNK:C	44:DJ:101:UNK:N	2.74	0.48
36:BA:460:A:H2'	36:BA:461:C:O4'	2.14	0.48
36:DA:759:G:O4'	36:DA:1981:A:C2	2.67	0.48
15:CO:80:ALA:O	15:CO:84:LYS:HG3	2.14	0.48
5:CE:153:LYS:HB3	5:CE:154:GLY:H	1.41	0.48
17:CQ:83:ASP:CG	17:CQ:84:LEU:N	2.67	0.48
50:BR:88:ARG:HD2	50:BR:88:ARG:O	2.14	0.48
20:CT:89:ARG:NH1	20:CT:104:LEU:HD21	2.29	0.48
1:CA:237:C:O2'	1:CA:238:G:H5'	2.14	0.48
39:BD:31:LYS:HE3	39:BD:33:LEU:HD12	1.95	0.48
56:DX:12:VAL:HG12	56:DX:27:THR:OG1	2.14	0.48
56:DX:35:THR:O	56:DX:39:ILE:HG13	2.13	0.48
36:BA:1614:A:N1	55:BW:93:ALA:HB2	2.29	0.48
32:D6:11:LEU:HD22	32:D6:12:GLU:N	2.26	0.48
51:DS:93:LYS:O	51:DS:95:HIS:N	2.47	0.48
42:BG:46:ALA:O	42:BG:47:LYS:HG3	2.14	0.48
42:DG:77:ILE:N	42:DG:83:ARG:CB	2.75	0.48
2:AB:18:GLY:O	2:AB:19:HIS:HB2	2.14	0.48
51:BS:28:VAL:CG1	51:BS:29:PHE:H	2.25	0.48
4:AD:61:LYS:HZ3	4:AD:62:GLN:NE2	2.12	0.48
37:DB:7:G:O5'	51:DS:29:PHE:CE2	2.66	0.48
36:BA:2160:G:H2'	36:BA:2161:C:O4'	2.14	0.48
25:CZ:19:HIS:HA	25:CZ:115:GLN:CB	2.44	0.48
54:DV:39:LEU:HD12	54:DV:50:PRO:O	2.14	0.48
51:BS:57:LYS:O	51:BS:58:LEU:HB2	2.14	0.48
41:DF:160:ASN:ND2	41:DF:160:ASN:C	2.67	0.48
38:DC:114:VAL:HG12	38:DC:144:THR:CA	2.44	0.48
50:BR:86:ARG:HB3	50:BR:118:GLU:OE2	2.14	0.48
1:AA:501:C:OP1	12:AL:117:ARG:NH2	2.47	0.48
58:DZ:29:TYR:O	58:DZ:30:ASN:HB3	2.14	0.48
36:DA:1054:A:O2'	36:DA:1055:G:H5'	2.14	0.48
16:AP:71:ARG:HA	16:AP:74:LEU:CD1	2.44	0.48
40:DE:12:THR:O	40:DE:23:VAL:HG22	2.14	0.48
36:DA:657:U:H2'	36:DA:658:C:H6	1.79	0.48
35:B9:29:ASN:ND2	35:B9:29:ASN:O	2.47	0.48
21:CU:12:LYS:HG2	21:CU:22:ARG:CB	2.44	0.48
1:AA:723:U:N3	1:AA:1537:U:C2'	2.73	0.48
36:DA:1038:C:C3'	36:DA:1039:G:H5"	2.43	0.48
58:BZ:28:MET:HA	58:BZ:88:PHE:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:101:VAL:HB	48:BP:107:LYS:HA	1.96	0.48
36:DA:2853:C:O2'	36:DA:2854:G:H5'	2.14	0.48
46:BN:107:LEU:HB3	46:BN:108:PRO:CD	2.43	0.48
36:BA:2779:U:H1'	36:BA:2781:A:C5	2.49	0.48
36:BA:271(E):U:H3	36:BA:271(S):G:H1	1.61	0.48
39:DD:146:GLU:OE1	39:DD:190:TYR:HB2	2.14	0.48
36:BA:2631:G:H21	40:BE:61:ARG:HH12	1.59	0.48
6:CF:63:TYR:N	6:CF:63:TYR:CD1	2.81	0.48
36:DA:309:G:H1'	36:DA:329:G:O2'	2.13	0.48
36:BA:1504:C:O2'	36:BA:1505:C:C5'	2.62	0.48
2:AB:95:GLN:HG3	2:AB:147:LYS:O	2.14	0.48
1:CA:1158:C:H2'	1:CA:1158:C:O2	2.14	0.48
36:DA:2526:G:H5'	36:DA:2742:C:O2'	2.13	0.48
41:DF:10:PRO:HG2	41:DF:13:SER:OG	2.13	0.48
36:DA:115:C:O2'	36:DA:116:C:H5'	2.14	0.48
1:CA:735:C:H2'	1:CA:736:C:H6	1.78	0.48
36:DA:142:A:H5"	36:DA:142(A):C:H5	1.79	0.48
36:BA:414:C:H1'	36:BA:1864:U:O2'	2.14	0.48
38:BC:210:ARG:HH11	38:BC:210:ARG:HG2	1.79	0.48
47:BO:11:ALA:HB1	47:BO:99:PHE:O	2.14	0.48
33:D7:43:THR:HG22	33:D7:44:PRO:O	2.14	0.48
25:AZ:104:LEU:CD2	25:AZ:120:ILE:HD11	2.44	0.48
33:B7:5:TRP:CD1	33:B7:7:PRO:HD3	2.49	0.48
36:BA:2554:U:H2'	36:BA:2555:U:C6	2.49	0.48
4:CD:36:ARG:HH11	4:CD:36:ARG:CG	2.27	0.48
1:CA:603:U:H2'	1:CA:604:G:H8	1.78	0.48
36:BA:1534:U:O2'	36:BA:1535:A:H5'	2.13	0.48
1:AA:106:C:O2	1:AA:379:C:H4'	2.14	0.48
36:BA:37:C:H2'	36:BA:38:A:C8	2.48	0.48
1:CA:304:U:O2'	1:CA:305:G:H5'	2.14	0.48
36:DA:955:C:OP1	49:DQ:87:LYS:HE2	2.14	0.48
1:AA:142:G:N3	1:AA:196:A:H2	2.12	0.48
36:BA:227:A:C2	36:BA:2407:G:H1'	2.49	0.48
36:DA:389:G:C6	48:DP:70:GLN:HG3	2.49	0.48
3:CC:116:VAL:HG21	3:CC:202:ILE:HD11	1.95	0.48
25:AZ:355:LEU:HD13	25:AZ:356:PRO:HD2	1.96	0.47
28:D2:56:GLN:O	28:D2:57:ILE:HB	2.14	0.47
34:B8:61:LEU:C	34:B8:63:PRO:HD2	2.34	0.47
42:DG:95:ARG:C	42:DG:99:MET:SD	2.93	0.47
1:CA:1533:C:H2'	1:CA:1534:A:O4'	2.14	0.47
41:BF:37:VAL:HG11	48:BP:7:ARG:CZ	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:25:MET:HG3	48:BP:64:LYS:HB2	1.95	0.47
42:BG:11:TYR:O	42:BG:15:VAL:N	2.47	0.47
37:BB:104:U:O2'	37:BB:105:A:H5'	2.14	0.47
37:BB:104:U:O3'	58:BZ:72:ARG:NH1	2.47	0.47
25:AZ:226:GLU:HG3	25:AZ:240:GLY:HA2	1.95	0.47
20:AT:92:LEU:C	20:AT:94:ALA:N	2.67	0.47
51:DS:57:LYS:O	51:DS:58:LEU:HB2	2.14	0.47
41:DF:125:LEU:H	41:DF:125:LEU:CD2	2.20	0.47
3:CC:16:ARG:CD	3:CC:17:ASP:H	2.27	0.47
1:AA:407:G:H2'	1:AA:408:A:C8	2.48	0.47
12:AL:75:HIS:HA	12:AL:102:ARG:HH22	1.79	0.47
20:CT:27:LYS:O	20:CT:27:LYS:HD3	2.14	0.47
38:BC:53:ARG:HH11	38:BC:53:ARG:CB	2.18	0.47
22:AW:43:C:C3'	22:AW:44:G:O4'	2.62	0.47
25:AZ:159:ASN:C	25:AZ:161:TYR:H	2.16	0.47
25:CZ:177:LEU:O	25:CZ:181:GLN:HG3	2.14	0.47
49:BQ:109:VAL:HG12	49:BQ:113:GLN:HB2	1.96	0.47
36:BA:1038:C:C3'	36:BA:1039:G:H5"	2.43	0.47
3:AC:70:VAL:HG21	3:AC:76:VAL:HG11	1.96	0.47
58:DZ:145:GLU:HG3	58:DZ:146:ILE:N	2.29	0.47
58:DZ:70:LEU:HD21	58:DZ:91:LEU:HD21	1.95	0.47
1:AA:191:G:C4	20:AT:105:SER:HB2	2.48	0.47
12:AL:43:VAL:HG23	12:AL:93:LEU:HD22	1.94	0.47
22:AV:59:U:H2'	22:AV:60:U:C6	2.49	0.47
36:BA:1353:A:H4'	39:BD:38:LYS:HE3	1.96	0.47
36:DA:1222:C:H2'	36:DA:1223:G:C5'	2.43	0.47
57:DY:46:LYS:CG	57:DY:47:LYS:N	2.76	0.47
5:CE:147:ASP:N	5:CE:147:ASP:OD1	2.45	0.47
36:BA:2472:G:H3'	36:BA:2475:C:N4	2.29	0.47
46:BN:7:LYS:O	46:BN:9:VAL:N	2.47	0.47
3:AC:95:THR:HG23	3:AC:97:LYS:HD2	1.95	0.47
35:D9:15:LYS:HZ2	35:D9:15:LYS:HB3	1.79	0.47
38:DC:107:TRP:NE1	38:DC:110:PHE:CE2	2.82	0.47
46:DN:6:PRO:HG2	46:DN:7:LYS:H	1.77	0.47
23:AX:11:U:C2'	23:AX:12:A:OP1	2.62	0.47
1:CA:1286:A:O2'	1:CA:1287:A:P	2.71	0.47
36:DA:1336:A:O2'	36:DA:1337:G:H5'	2.14	0.47
1:AA:391:G:H5"	16:AP:8:ARG:NE	2.29	0.47
36:BA:84:A:H2	36:BA:98:G:N3	2.12	0.47
36:BA:2206:G:C2	36:BA:2207:G:H5'	2.48	0.47
36:BA:309:G:H1'	36:BA:329:G:O2'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:972:C:O3'	10:CJ:57:LYS:HG2	2.14	0.47
36:DA:1640:C:H5'	36:DA:1640:C:H6	1.79	0.47
6:AF:69:GLU:HG2	6:AF:70:ASP:N	2.28	0.47
36:BA:1376:C:O2'	36:BA:1377:G:H5'	2.14	0.47
2:CB:209:ARG:HH11	2:CB:239:VAL:HG11	1.78	0.47
36:BA:994:C:OP1	53:BU:53:ARG:NH2	2.47	0.47
28:B2:16:LEU:O	28:B2:17:SER:O	2.32	0.47
25:AZ:230:THR:CG2	25:AZ:295:ARG:HD2	2.44	0.47
36:DA:1316:U:H2'	36:DA:1317:A:C8	2.49	0.47
36:DA:291:C:H2'	36:DA:292:C:C6	2.49	0.47
36:BA:1799:G:H5'	36:BA:1819:A:H61	1.78	0.47
36:BA:1099:G:O2'	36:BA:1100:C:H5'	2.14	0.47
36:DA:753:C:O2'	36:DA:754:C:H5'	2.13	0.47
36:DA:212:G:O2'	36:DA:213:A:H5'	2.13	0.47
1:CA:188:C:O4'	20:CT:89:ARG:NH1	2.47	0.47
1:CA:142:G:N3	1:CA:196:A:H2	2.11	0.47
1:CA:652:U:C2	1:CA:752:G:N2	2.82	0.47
1:CA:681:C:O2'	1:CA:682:G:H5'	2.14	0.47
36:BA:2064:C:H2'	36:BA:2065:C:C6	2.49	0.47
49:DQ:118:LEU:HD12	49:DQ:131:ILE:HG23	1.94	0.47
4:CD:180:GLY:O	4:CD:181:MET:C	2.52	0.47
36:DA:2506:U:H5'	36:DA:2506:U:C6	2.49	0.47
36:DA:1914:C:O4'	36:DA:1914:C:O2	2.31	0.47
32:B6:22:ALA:HB2	32:B6:39:TYR:CZ	2.49	0.47
22:AW:18:G:N1	22:AW:55:U:H1'	2.10	0.47
36:BA:2012:G:H4'	55:BW:96:ILE:CD1	2.29	0.47
48:DP:62:LEU:N	48:DP:62:LEU:CD2	2.69	0.47
1:CA:1320:C:H5"	19:CS:70:LYS:HG3	1.95	0.47
4:AD:12:CYS:O	4:AD:33:MET:CE	2.62	0.47
40:DE:69:LYS:NZ	40:DE:89:ASP:HA	2.29	0.47
40:BE:46:ALA:HB1	40:BE:80:GLU:HB3	1.96	0.47
40:BE:69:LYS:NZ	40:BE:89:ASP:HA	2.29	0.47
14:CN:13:THR:H	14:CN:14:PRO:HD2	1.76	0.47
4:CD:12:CYS:O	4:CD:33:MET:HE2	2.14	0.47
9:AI:17:VAL:CG1	9:AI:81:ILE:HD13	2.37	0.47
41:DF:126:VAL:HG21	41:DF:129:PHE:CZ	2.49	0.47
1:AA:1438:G:N7	1:AA:1464:G:C2	2.82	0.47
50:BR:29:LEU:C	50:BR:30:THR:HG22	2.34	0.47
10:AJ:81:THR:C	10:AJ:83:GLU:N	2.68	0.47
4:AD:101:LEU:O	4:AD:104:VAL:N	2.47	0.47
43:DH:125:VAL:O	43:DH:125:VAL:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2777:G:C4'	36:BA:2778:A:H5'	2.44	0.47
13:CM:120:LYS:HA	13:CM:120:LYS:HE3	1.95	0.47
22:AW:39:U:OP2	22:AW:39:U:H4'	2.13	0.47
1:AA:1319:A:OP1	19:AS:10:PHE:CE1	2.67	0.47
10:CJ:16:LEU:HD11	10:CJ:70:ARG:HG2	1.96	0.47
42:BG:114:ILE:O	42:BG:116:ASP:O	2.33	0.47
36:BA:2801(A):A:H4'	36:BA:2802:G:H2'	1.96	0.47
55:DW:12:ILE:HB	55:DW:42:ARG:HH12	1.79	0.47
58:DZ:114:GLY:N	58:DZ:146:ILE:HG21	2.28	0.47
4:CD:127:THR:N	4:CD:147:ALA:O	2.47	0.47
55:DW:29:LEU:CG	55:DW:33:ARG:HD2	2.42	0.47
27:B1:10:LYS:HE2	36:BA:396:G:OP2	2.14	0.47
7:AG:44:TYR:C	7:AG:46:ALA:N	2.67	0.47
15:AO:81:LEU:CD1	15:AO:85:LEU:HD12	2.44	0.47
1:AA:542:G:P	4:AD:10:ARG:NH2	2.87	0.47
53:DU:115:ALA:C	53:DU:117:GLN:N	2.67	0.47
37:BB:54:G:C2	37:BB:55:U:C6	3.03	0.47
24:CY:6:C:H42	24:CY:67:G:H1	1.61	0.47
10:CJ:6:ILE:HG12	10:CJ:72:VAL:HB	1.96	0.47
13:AM:84:ILE:O	13:AM:84:ILE:HG22	2.14	0.47
47:DO:35:VAL:HA	47:DO:62:VAL:O	2.14	0.47
39:BD:50:THR:O	39:BD:51:VAL:HG23	2.14	0.47
36:BA:2869:G:H2'	36:BA:2870:C:O4'	2.14	0.47
1:AA:473:G:H2'	1:AA:474:G:C8	2.48	0.47
36:BA:2264:C:H2'	36:BA:2265:U:C6	2.49	0.47
27:B1:44:PRO:HG2	27:B1:46:LEU:HD11	1.96	0.47
25:CZ:233:GLY:O	25:CZ:234:ARG:HD2	2.13	0.47
36:BA:115:C:O2'	36:BA:116:C:H5'	2.14	0.47
36:DA:1286:A:H2'	36:DA:1288:U:OP2	2.13	0.47
46:DN:1:MET:C	46:DN:1:MET:SD	2.93	0.47
25:AZ:358:GLY:C	25:AZ:360:GLU:H	2.16	0.47
38:BC:46:LYS:NZ	38:BC:168:THR:O	2.47	0.47
9:CI:6:GLY:CA	9:CI:84:ALA:HB2	2.44	0.47
36:BA:272(J):C:C2'	36:BA:274:G:H5"	2.44	0.47
36:DA:2746:U:H5'	43:DH:139:GLN:HA	1.95	0.47
11:AK:124:LYS:HD2	11:AK:125:PHE:CZ	2.50	0.47
31:D5:19:ARG:HG3	36:DA:2046:G:H5'	1.96	0.47
2:CB:233:SER:O	2:CB:234:PRO:C	2.51	0.47
36:DA:2373:G:H2'	36:DA:2374:C:C6	2.49	0.47
2:AB:48:MET:HA	2:AB:51:LEU:HB2	1.97	0.47
2:CB:46:LYS:C	2:CB:48:MET:N	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:237:C:O2'	1:AA:238:G:H5'	2.13	0.47
39:BD:196:VAL:O	39:BD:196:VAL:HG12	2.15	0.47
22:AW:71:G:O2'	36:BA:1851:U:O2'	2.26	0.47
3:AC:147:LYS:HB2	3:AC:203:PHE:CD2	2.49	0.47
39:DD:33:LEU:O	39:DD:34:VAL:C	2.53	0.47
39:DD:61:LEU:O	39:DD:63:ARG:NH1	2.47	0.47
39:DD:65:ILE:HD11	39:DD:88:ARG:CZ	2.45	0.47
20:CT:49:ALA:O	20:CT:53:LEU:HD13	2.14	0.47
58:BZ:30:ASN:OD1	58:BZ:90:VAL:HB	2.14	0.47
13:AM:2:ALA:HB1	13:AM:4:ILE:CD1	2.44	0.47
28:D2:3:LEU:O	28:D2:7:ARG:NE	2.38	0.47
28:D2:6:VAL:CG1	28:D2:59:ARG:HE	2.25	0.47
36:DA:1504:C:O2'	36:DA:1505:C:C5'	2.62	0.47
32:D6:22:ALA:HB2	32:D6:39:TYR:CZ	2.49	0.47
42:DG:133:LEU:HD12	42:DG:133:LEU:O	2.14	0.47
58:DZ:69:THR:HG22	58:DZ:90:VAL:HA	1.96	0.47
2:AB:28:PHE:CE2	2:AB:190:THR:HG22	2.49	0.47
36:DA:910:A:N1	36:DA:2277:G:H1'	2.29	0.47
48:BP:7:ARG:HB3	48:BP:8:PRO:HD3	1.95	0.47
36:DA:1022:G:N2	36:DA:1142(A):A:C2	2.81	0.47
36:BA:321:G:N2	41:BF:165:ARG:NH2	2.54	0.47
41:DF:103:LYS:HA	41:DF:106:ARG:HE	1.79	0.47
36:BA:2245:U:H5'	36:BA:2246:G:C5'	2.33	0.47
40:BE:24:THR:HG21	40:BE:188:VAL:HG12	1.96	0.47
42:BG:132:ASN:HA	42:BG:157:ILE:O	2.14	0.47
25:CZ:147:LEU:H	25:CZ:147:LEU:HD22	1.78	0.47
37:BB:15:A:H1'	37:BB:110:G:C5	2.49	0.47
1:AA:1316:G:O3'	14:AN:18:VAL:HG22	2.14	0.47
58:DZ:166:SER:HB2	58:DZ:167:PRO:CA	2.43	0.47
1:AA:266:G:H5'	1:AA:267:C:C5	2.50	0.47
36:BA:886:C:O2'	36:BA:887:A:C4'	2.60	0.47
19:CS:31:ILE:CG2	19:CS:49:ILE:HA	2.40	0.47
27:B1:15:ALA:HB2	27:B1:42:GLN:CG	2.40	0.47
36:DA:1495:A:C4	36:DA:1496:A:H2	2.32	0.47
25:CZ:68:VAL:O	25:CZ:69:GLU:CB	2.62	0.47
39:BD:28:GLU:H	39:BD:29:PRO:HD3	1.78	0.47
48:DP:77:ARG:HG2	48:DP:77:ARG:HH11	1.79	0.47
36:DA:2632:A:O2'	40:DE:61:ARG:NH2	2.46	0.47
36:BA:914:C:C2'	36:BA:915:C:H5'	2.44	0.47
57:BY:46:LYS:CG	57:BY:47:LYS:N	2.77	0.47
42:BG:20:ILE:HD13	42:BG:28:VAL:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:6:LYS:N	19:CS:6:LYS:HD3	2.29	0.47
1:AA:1313:U:OP1	19:AS:6:LYS:HB2	2.12	0.47
1:CA:1286:A:O2'	1:CA:1287:A:OP2	2.28	0.47
4:CD:145:GLU:O	4:CD:145:GLU:HG3	2.14	0.47
10:AJ:46:ARG:CG	10:AJ:46:ARG:HH11	2.27	0.47
1:CA:346:G:O2'	1:CA:347:G:P	2.72	0.47
1:AA:346:G:O2'	1:AA:347:G:P	2.72	0.47
9:AI:110:GLU:HG2	9:AI:119:ALA:HB1	1.95	0.47
36:DA:2199:A:C5'	36:DA:2200:C:OP2	2.62	0.47
36:DA:848:G:C4	36:DA:933:A:C8	3.01	0.47
53:DU:104:GLN:HB3	54:DV:44:LYS:NZ	2.30	0.47
1:CA:563:A:H5"	1:CA:566:G:N2	2.29	0.47
34:D8:30:ARG:NH2	36:DA:2419:U:O4	2.48	0.47
36:BA:2341:G:H2'	36:BA:2342:C:H6	1.77	0.47
1:CA:407:G:H2'	1:CA:408:A:C8	2.49	0.47
2:CB:80:ILE:H	2:CB:80:ILE:CD1	2.27	0.47
1:CA:137:C:H2'	1:CA:137:C:O2	2.14	0.47
50:DR:87:TYR:O	50:DR:90:ARG:N	2.47	0.47
1:CA:429:U:H4'	1:CA:430:A:O5'	2.14	0.47
36:BA:1889:A:H1'	36:BA:2087:G:O4'	2.15	0.47
41:BF:40:GLN:NE2	41:BF:182:ASN:HB2	2.29	0.47
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.44	0.47
58:BZ:85:HIS:CE1	58:BZ:87:ASP:OD1	2.67	0.47
55:DW:37:ARG:HG3	55:DW:37:ARG:HH11	1.79	0.47
1:CA:511:C:C2	1:CA:512:U:C5	3.02	0.47
1:AA:1060:C:H4'	10:AJ:52:GLY:N	2.30	0.47
36:BA:1787:A:O4'	36:BA:2589:A:H4'	2.15	0.47
36:DA:706:A:H2'	36:DA:707:G:O4'	2.14	0.47
26:B0:32:ARG:HA	26:B0:64:ASP:OD1	2.14	0.47
47:DO:105:GLU:O	47:DO:108:GLU:HG2	2.14	0.47
44:DJ:25:UNK:HA	44:DJ:116:UNK:CB	2.44	0.47
51:BS:64:GLU:HA	51:BS:67:ARG:HG3	1.96	0.47
36:BA:2882:A:H5"	50:BR:98:LEU:HD21	1.97	0.47
1:AA:313:A:H2'	1:AA:314:C:C6	2.50	0.47
1:AA:1044:A:H2'	1:AA:1045:C:O5'	2.14	0.47
36:DA:2032:G:OP2	36:DA:2454:G:O2'	2.27	0.47
52:BT:42:ILE:O	52:BT:42:ILE:HG13	2.14	0.47
25:AZ:366:ASP:C	25:AZ:367:ASN:HD22	2.17	0.47
39:DD:174:ILE:HG23	39:DD:271:ILE:HD12	1.96	0.47
39:BD:76:PRO:HG2	39:BD:98:VAL:HG21	1.96	0.47
14:CN:24:CYS:N	14:CN:29:ARG:O	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B4:9:LEU:CD1	30:B4:10:VAL:H	2.23	0.47
30:B4:8:LYS:O	30:B4:9:LEU:CB	2.62	0.47
42:BG:96:ARG:O	42:BG:99:MET:N	2.44	0.47
36:DA:2832:U:C2	36:DA:2834:G:N2	2.83	0.47
32:D6:30:THR:O	32:D6:32:ASN:N	2.47	0.47
51:DS:34:HIS:HB2	51:DS:36:TYR:CE1	2.32	0.47
51:DS:89:ARG:CG	51:DS:92:TYR:HA	2.42	0.47
36:BA:2308:G:H21	42:BG:79:ASN:ND2	2.13	0.47
1:CA:1483:A:H2	36:DA:1959:G:N3	2.12	0.47
41:DF:37:VAL:HG11	48:DP:7:ARG:CZ	2.44	0.47
19:CS:10:PHE:HD2	19:CS:12:ASP:OD1	1.97	0.47
36:DA:1019:U:HO2'	36:DA:1021:A:H2	1.47	0.47
36:BA:1888:G:H5'	36:BA:1888:G:N3	2.29	0.47
40:BE:65:GLY:O	40:BE:67:PHE:N	2.47	0.47
25:CZ:272:MET:CE	25:CZ:284:ASP:HB2	2.43	0.47
54:DV:19:LYS:HB2	54:DV:96:ILE:HG12	1.96	0.47
58:BZ:24:LEU:CD1	58:BZ:41:LEU:HD23	2.44	0.47
36:BA:1293:C:C3'	36:BA:1294:U:H5"	2.45	0.47
5:CE:11:ILE:HD12	5:CE:31:LEU:HD11	1.97	0.47
32:B6:53:LYS:HE2	32:B6:54:ILE:CG1	2.44	0.47
36:DA:1293:C:C3'	36:DA:1294:U:H5"	2.44	0.47
36:BA:2711:A:OP1	36:BA:2712(A):A:P	2.73	0.47
53:BU:88:ILE:HG23	53:BU:90:VAL:HG23	1.96	0.47
48:BP:96:THR:CG2	48:BP:126:VAL:HB	2.45	0.47
25:CZ:397:ALA:HB1	61:CZ:502:KIR:O27	2.14	0.47
50:DR:92:GLY:N	50:DR:94:TYR:CE1	2.75	0.47
25:CZ:159:ASN:C	25:CZ:161:TYR:H	2.16	0.47
58:DZ:120:ILE:O	58:DZ:121:HIS:C	2.51	0.47
20:CT:14:LYS:O	20:CT:18:GLN:HB2	2.15	0.47
41:DF:154:VAL:HG13	41:DF:191:ARG:O	2.13	0.47
36:BA:674:G:H1'	41:BF:74:ARG:HD3	1.94	0.47
43:DH:126:PRO:O	43:DH:127:GLU:CG	2.56	0.47
25:AZ:137:LYS:HG2	60:AZ:501:GDP:N1	2.28	0.47
17:CQ:69:LYS:O	17:CQ:70:ARG:HD2	2.14	0.47
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.97	0.47
10:CJ:16:LEU:CD1	10:CJ:70:ARG:HG3	2.44	0.47
1:AA:927:G:OP2	1:AA:927:G:H4'	2.14	0.47
36:DA:1720:U:H2'	36:DA:1721:G:C4'	2.44	0.47
29:B3:15:TYR:CD2	29:B3:19:GLN:NE2	2.82	0.47
12:CL:50:SER:O	12:CL:51:ALA:HB2	2.15	0.47
5:CE:6:PHE:HB3	5:CE:35:GLY:C	2.34	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:7:LYS:HG3	10:AJ:71:LEU:HD13	1.95	0.47
2:AB:122:PHE:HA	2:AB:127:ILE:HD11	1.97	0.47
36:BA:78:A:C2	36:BA:109:G:C6	3.02	0.47
16:CP:9:PHE:CE2	16:CP:18:ARG:NE	2.82	0.47
36:BA:856:C:H2'	36:BA:857:C:C6	2.49	0.47
36:BA:903:C:O2'	36:BA:904:C:H5'	2.14	0.47
1:AA:486:U:O2'	1:AA:487:A:H5'	2.13	0.47
36:DA:814:C:H2'	36:DA:815:C:H6	1.80	0.47
21:CU:10:ARG:O	21:CU:11:GLY:C	2.52	0.47
36:DA:1288:U:O2'	36:DA:1647:G:N2	2.47	0.47
36:DA:1327:C:H2'	36:DA:1328:G:O4'	2.15	0.47
13:AM:57:ARG:O	13:AM:61:GLU:HB2	2.14	0.47
36:DA:118:A:H1'	36:DA:178:G:O4'	2.15	0.47
36:BA:1786:A:H2	36:BA:2606:C:H1'	1.78	0.47
27:B1:52:ARG:HH11	27:B1:57:GLU:HB2	1.78	0.47
36:DA:2807:G:C3'	36:DA:2808:U:H5"	2.44	0.47
1:CA:1251:A:H4'	9:CI:12:GLU:OE1	2.15	0.47
36:BA:1412:A:O2'	36:BA:1413:G:H5'	2.14	0.47
39:BD:152:GLY:O	39:BD:154:LYS:HG3	2.13	0.47
36:DA:740:U:H2'	36:DA:741:G:H8	1.79	0.47
36:BA:2746:U:H5'	43:BH:139:GLN:HA	1.95	0.47
8:AH:110:ALA:HB3	8:AH:121:ASP:HB3	1.96	0.47
36:BA:660:G:H5'	41:BF:99:TYR:CE2	2.49	0.47
36:BA:291:C:H2'	36:BA:292:C:C6	2.48	0.47
36:BA:1914:C:O4'	36:BA:1914:C:O2	2.32	0.47
1:AA:141:A:H1'	1:AA:182:U:O2	2.14	0.47
24:CY:49:G:O2'	24:CY:50:G:H5'	2.14	0.47
36:DA:1534:U:O2'	36:DA:1535:A:H5'	2.13	0.47
49:BQ:120:ILE:O	49:BQ:121:ALA:C	2.52	0.47
7:AG:152:ALA:O	7:AG:155:ARG:HB2	2.15	0.47
46:DN:134:ARG:O	46:DN:136:GLU:N	2.46	0.47
33:D7:47:ARG:O	33:D7:48:LYS:HB3	2.14	0.47
44:BJ:72:UNK:O	44:BJ:74:UNK:N	2.47	0.47
26:D0:32:ARG:HA	26:D0:64:ASP:OD1	2.14	0.47
6:CF:47:ARG:O	6:CF:47:ARG:HG3	2.14	0.47
58:DZ:41:LEU:O	58:DZ:41:LEU:HD22	2.14	0.47
36:BA:2735:G:H2'	36:BA:2736:G:H8	1.80	0.47
39:BD:33:LEU:O	39:BD:34:VAL:C	2.52	0.47
57:DY:85:VAL:O	57:DY:86:ARG:CB	2.62	0.47
25:AZ:277:LEU:CD1	25:AZ:279:GLU:H	2.26	0.47
42:DG:52:ILE:HA	42:DG:54:GLU:OE2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:85:VAL:O	57:BY:86:ARG:CB	2.62	0.47
43:BH:83:TYR:O	43:BH:84:SER:O	2.31	0.47
36:BA:1946:U:H2'	36:BA:1947:C:C6	2.48	0.47
31:B5:47:PRO:C	31:B5:49:CYS:H	2.17	0.47
32:B6:37:ARG:O	32:B6:48:VAL:O	2.32	0.47
47:BO:14:THR:HG21	47:BO:86:ILE:CD1	2.34	0.47
58:BZ:153:SER:H	58:BZ:167:PRO:HB2	1.79	0.47
10:CJ:55:LYS:N	10:CJ:55:LYS:CD	2.78	0.47
53:DU:92:ARG:HB2	54:DV:11:GLN:NE2	2.30	0.47
54:BV:20:LEU:HB3	54:BV:21:ARG:HD3	1.97	0.47
50:DR:29:LEU:C	50:DR:30:THR:HG22	2.35	0.47
56:BX:10:ALA:O	56:BX:28:PHE:CB	2.62	0.47
49:DQ:51:ARG:HH11	49:DQ:51:ARG:HG3	1.79	0.47
25:CZ:196:VAL:O	25:CZ:196:VAL:CG1	2.63	0.47
46:BN:22:THR:HG1	46:BN:25:ARG:HB2	1.80	0.47
58:DZ:80:ARG:O	58:DZ:81:ARG:C	2.53	0.47
16:CP:71:ARG:HA	16:CP:74:LEU:CD1	2.43	0.47
42:BG:51:ARG:CZ	42:BG:52:ILE:HD13	2.44	0.47
46:DN:112:LEU:O	46:DN:115:ARG:HB3	2.14	0.47
36:BA:823:G:H2'	36:BA:824:A:C8	2.50	0.47
36:DA:914:C:C2'	36:DA:915:C:H5'	2.43	0.47
24:AY:49:G:O2'	24:AY:50:G:H5'	2.14	0.47
36:DA:481:G:H1'	36:DA:506:G:N2	2.29	0.47
46:BN:5:VAL:HG12	46:BN:7:LYS:HG3	1.97	0.47
19:CS:65:ASN:C	19:CS:67:VAL:H	2.17	0.47
48:DP:122:PRO:HB3	48:DP:141:ALA:CB	2.45	0.47
50:BR:45:ARG:O	50:BR:46:GLY:C	2.52	0.47
36:DA:1314:C:OP1	36:DA:1332:G:OP1	2.32	0.47
1:CA:1124:G:C5'	10:CJ:35:SER:HB2	2.44	0.47
1:CA:1256:A:C2	1:CA:1278:U:H5'	2.49	0.47
41:DF:84:VAL:C	41:DF:86:GLY:H	2.16	0.47
36:DA:2869:G:H2'	36:DA:2870:C:O4'	2.15	0.47
36:DA:2223:G:H2'	36:DA:2224:G:H5'	1.95	0.47
20:AT:39:LYS:O	20:AT:43:LEU:HG	2.13	0.47
49:DQ:1:MET:CE	49:DQ:44:ALA:HB1	2.44	0.47
36:BA:1151:G:H4'	53:BU:81:HIS:CG	2.49	0.47
1:AA:956:U:O2'	1:AA:957:U:H5'	2.13	0.47
1:CA:473:G:H5"	16:CP:81:ARG:HE	1.77	0.47
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	1.95	0.47
18:CR:50:ILE:CD1	18:CR:70:ILE:HG21	2.45	0.47
36:BA:16:G:H2'	36:BA:17:G:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:15:G:O2'	36:DA:16:G:H5'	2.15	0.47
36:BA:1688:U:O2	36:BA:1700:A:H5"	2.15	0.47
43:DH:109:PHE:CZ	43:DH:152:ARG:NH1	2.83	0.47
18:AR:67:ALA:O	18:AR:71:LYS:HG3	2.14	0.47
36:BA:793:A:OP2	36:BA:2072:G:H5'	2.14	0.47
53:BU:14:HIS:CD2	53:BU:36:ARG:NH2	2.83	0.47
44:DJ:24:UNK:O	44:DJ:117:UNK:N	2.48	0.47
36:DA:2753:A:O2'	36:DA:2754:U:H5'	2.14	0.47
20:CT:39:LYS:O	20:CT:43:LEU:HG	2.14	0.47
25:AZ:256:VAL:HG13	25:AZ:262:THR:HG21	1.95	0.47
6:CF:3:ARG:HH11	6:CF:3:ARG:HG3	1.79	0.47
39:DD:68:LYS:O	39:DD:68:LYS:HG3	2.15	0.47
41:BF:17:ARG:HG3	41:BF:17:ARG:HH11	1.79	0.47
39:DD:24:ILE:HG13	39:DD:84:TYR:HB2	1.96	0.47
30:B4:25:TYR:O	30:B4:26:SER:HB3	2.13	0.47
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.49	0.47
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.95	0.47
57:DY:28:LYS:HB3	57:DY:37:VAL:HB	1.96	0.47
54:BV:60:GLU:O	54:BV:62:LEU:HD22	2.15	0.47
25:AZ:272:MET:CE	25:AZ:284:ASP:HB2	2.42	0.47
42:DG:94:LEU:HD22	42:DG:98:ARG:HG3	1.97	0.47
56:BX:72:LYS:N	56:BX:72:LYS:HD2	2.29	0.47
36:BA:2603:G:H2'	36:BA:2604:U:C5'	2.25	0.47
42:BG:87:PRO:O	42:BG:88:ILE:CG1	2.61	0.47
57:BY:96:ILE:O	57:BY:96:ILE:HG13	2.14	0.47
37:DB:22:U:H2'	37:DB:23:G:H8	1.78	0.47
22:AV:5:G:H8	22:AV:5:G:C5'	2.28	0.47
36:DA:339:U:O2'	36:DA:340:A:H5'	2.14	0.47
58:BZ:97:GLU:HA	58:BZ:126:VAL:O	2.14	0.47
40:BE:76:ARG:O	40:BE:77:ILE:C	2.53	0.47
41:DF:28:ILE:HG12	41:DF:28:ILE:O	2.14	0.47
4:CD:11:LEU:O	4:CD:12:CYS:C	2.52	0.47
54:DV:17:GLY:O	54:DV:18:LEU:HD13	2.15	0.47
39:DD:231:HIS:ND1	39:DD:232:PRO:HD2	2.29	0.47
48:BP:91:PHE:N	48:BP:91:PHE:CD1	2.82	0.47
50:DR:104:ARG:O	50:DR:106:GLY:N	2.48	0.47
38:DC:114:VAL:HG12	38:DC:144:THR:HA	1.96	0.47
10:AJ:54:PHE:CG	10:AJ:55:LYS:N	2.81	0.47
58:BZ:6:LYS:HG3	58:BZ:60:GLU:HB2	1.97	0.47
36:BA:1054:A:O2'	36:BA:1055:G:H5'	2.14	0.47
37:DB:15:A:H3'	37:DB:16:G:C5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:3:LYS:O	16:AP:21:VAL:HA	2.15	0.47
4:AD:3:ARG:HH11	4:AD:3:ARG:HG2	1.79	0.47
1:CA:1431:C:O2'	1:CA:1432:G:H5'	2.15	0.47
25:AZ:143:ASP:OD1	25:AZ:144:PRO:HD2	2.14	0.47
1:CA:375:U:C2	1:CA:376:G:C8	3.03	0.47
2:AB:15:VAL:N	2:AB:16:HIS:CE1	2.79	0.47
53:DU:59:ARG:HH11	53:DU:59:ARG:HG2	1.80	0.47
55:DW:17:VAL:O	55:DW:19:LEU:N	2.47	0.47
51:DS:74:ALA:O	51:DS:76:LYS:N	2.43	0.47
46:BN:129:PRO:O	46:BN:130:HIS:CB	2.60	0.47
36:BA:2069:G:O2'	36:BA:2070:G:H5'	2.14	0.47
36:BA:1019:U:C2'	36:BA:1021:A:C2	2.97	0.47
52:DT:96:ARG:CZ	52:DT:96:ARG:HB2	2.44	0.47
12:CL:43:VAL:HG23	12:CL:93:LEU:HD22	1.95	0.47
36:BA:426:C:O2'	36:BA:427:U:H5'	2.14	0.47
35:D9:27:CYS:HB3	35:D9:32:HIS:HB2	1.97	0.47
1:AA:1251:A:H4'	9:AI:12:GLU:OE1	2.14	0.47
36:BA:814:C:H2'	36:BA:815:C:H6	1.80	0.47
1:CA:390:C:H2'	1:CA:391:G:C8	2.50	0.47
1:CA:390:C:H4'	16:CP:28:ARG:HH21	1.79	0.47
36:BA:848:G:C4	36:BA:933:A:C8	2.99	0.47
36:DA:191:A:H2'	36:DA:192:C:H6	1.76	0.47
18:CR:36:ASN:HD21	18:CR:39:VAL:HB	1.79	0.47
53:BU:102:GLU:HB3	53:BU:105:VAL:CG2	2.45	0.47
36:DA:2326:C:N4	36:DA:2389:G:H1	2.13	0.47
1:AA:369:C:C6	1:AA:369:C:H5'	2.47	0.47
36:DA:1374:G:H2'	36:DA:1375:C:C6	2.50	0.47
1:AA:1445:C:C2'	1:AA:1446:U:H5'	2.45	0.47
49:BQ:27:VAL:HG12	49:BQ:28:ALA:N	2.28	0.47
25:CZ:300:ARG:C	25:CZ:302:GLN:H	2.18	0.47
38:BC:210:ARG:NH1	38:BC:210:ARG:CG	2.78	0.47
22:AW:7:A:C6	22:AW:49:C:N4	2.79	0.47
1:CA:167:G:H2'	1:CA:168:G:O4'	2.14	0.47
39:BD:6:PHE:N	39:BD:6:PHE:HD1	2.12	0.47
3:AC:173:VAL:HG12	3:AC:175:LEU:HD11	1.97	0.47
1:AA:892:A:O2'	1:AA:1415:G:H4'	2.15	0.47
20:AT:63:ILE:HG21	20:AT:81:LYS:HG3	1.96	0.47
9:AI:86:VAL:HG22	9:AI:86:VAL:O	2.14	0.47
36:BA:1316:U:H2'	36:BA:1317:A:C8	2.49	0.47
8:CH:119:LEU:HD12	8:CH:124:ALA:N	2.29	0.47
33:B7:5:TRP:CZ3	36:BA:464:U:H4'	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:277:C:OP1	17:AQ:41:LYS:HE2	2.14	0.47
27:B1:23:LYS:CE	27:B1:28:GLY:HA3	2.45	0.47
2:AB:46:LYS:C	2:AB:48:MET:N	2.66	0.47
2:CB:48:MET:HA	2:CB:51:LEU:HB2	1.96	0.47
1:CA:807:A:H2'	1:CA:808:C:C6	2.50	0.47
2:AB:57:PHE:HE2	2:AB:185:ILE:HD11	1.78	0.47
1:CA:1372:U:OP1	9:CI:71:SER:HB3	2.14	0.47
1:AA:681:C:O2'	1:AA:682:G:H5'	2.14	0.47
38:DC:159:GLY:O	38:DC:160:ARG:O	2.32	0.47
36:DA:1199:U:H2'	36:DA:1200:C:C6	2.49	0.47
36:BA:137:C:O2	36:BA:137:C:H2'	2.15	0.47
36:BA:2506:U:C6	36:BA:2506:U:H5'	2.49	0.47
47:DO:10:VAL:HG21	47:DO:16:ALA:O	2.14	0.47
1:CA:697:U:H2'	1:CA:698:G:H5'	1.96	0.47
25:CZ:256:VAL:HG13	25:CZ:262:THR:HG21	1.96	0.47
15:AO:69:TYR:CZ	15:AO:73:GLU:HG3	2.50	0.47
25:AZ:355:LEU:HD23	25:AZ:370:PHE:CD2	2.49	0.47
39:BD:30:GLU:HA	39:BD:83:GLU:OE1	2.15	0.47
56:BX:36:LYS:HE2	56:BX:54:VAL:O	2.14	0.47
36:BA:925:C:H2'	36:BA:926:A:C5'	2.21	0.47
25:CZ:2:LYS:C	25:CZ:275:LYS:HE3	2.28	0.47
36:DA:84:A:H2	36:DA:98:G:N3	2.13	0.47
24:AY:5:G:H8	24:AY:5:G:H5'	1.80	0.47
34:B8:11:LYS:HG3	34:B8:60:LEU:CD2	2.44	0.47
48:DP:49:ARG:HG3	48:DP:49:ARG:NH1	2.30	0.47
20:AT:49:ALA:O	20:AT:53:LEU:HD13	2.15	0.47
30:D4:8:LYS:O	30:D4:9:LEU:CB	2.62	0.47
42:DG:99:MET:HE2	42:DG:100:TRP:HD1	1.79	0.47
42:DG:174:GLU:C	42:DG:176:LEU:N	2.67	0.47
42:DG:174:GLU:HG3	42:DG:175:LEU:N	2.30	0.47
30:D4:25:TYR:O	30:D4:26:SER:HB3	2.15	0.47
42:DG:133:LEU:HD11	42:DG:157:ILE:HD12	1.95	0.47
32:D6:41:PRO:HD2	32:D6:46:HIS:N	2.13	0.47
1:AA:1282:C:H2'	1:AA:1283:G:H5'	1.97	0.47
57:BY:28:LYS:HD2	57:BY:37:VAL:HG21	1.96	0.47
42:DG:47:LYS:HE3	42:DG:81:LYS:CB	2.45	0.47
36:BA:2190:G:C2	36:BA:2191:G:H1'	2.49	0.47
43:BH:153:LYS:H	43:BH:153:LYS:CD	2.08	0.47
1:CA:723:U:O2'	1:CA:724:G:H5'	2.14	0.47
1:CA:858:G:H8	1:CA:858:G:O5'	1.97	0.47
19:CS:16:LEU:O	19:CS:18:LYS:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:50:ASN:ND2	26:D0:63:VAL:HG11	2.30	0.47
36:BA:2101:G:H3'	36:BA:2102:U:H5"	1.97	0.47
36:BA:1189:A:H2'	36:BA:1190:G:O4'	2.15	0.47
36:DA:250:G:H2'	36:DA:251:A:C8	2.50	0.47
47:BO:86:ILE:C	47:BO:87:ILE:HD13	2.34	0.47
58:DZ:102:LEU:HD11	58:DZ:124:ILE:HG23	1.96	0.47
40:BE:68:ALA:C	40:BE:70:ALA:H	2.17	0.47
40:BE:48:GLN:HA	40:BE:80:GLU:HA	1.96	0.47
31:D5:51:TYR:N	31:D5:56:LYS:NZ	2.62	0.47
54:BV:91:TYR:N	54:BV:91:TYR:CD1	2.83	0.47
36:BA:2580:U:H4'	40:BE:130:GLY:CA	2.44	0.47
36:DA:2579:C:O2'	36:DA:2580:U:H5'	2.15	0.47
16:CP:20:VAL:CG2	16:CP:21:VAL:N	2.77	0.47
20:CT:18:GLN:HG2	20:CT:22:ARG:HH12	1.80	0.47
18:AR:30:ASP:C	18:AR:32:ARG:H	2.17	0.47
1:AA:321:A:O2'	1:AA:322:C:H5'	2.15	0.47
10:CJ:3:LYS:N	10:CJ:77:PRO:HD3	2.30	0.47
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.28	0.47
27:D1:36:GLY:O	27:D1:37:ILE:CG1	2.57	0.47
43:DH:70:THR:O	43:DH:74:ASN:ND2	2.47	0.47
36:DA:2110:G:N2	36:DA:2178:C:H5	2.11	0.47
4:CD:101:LEU:O	4:CD:104:VAL:N	2.47	0.47
19:AS:29:ARG:NH1	19:AS:30:LEU:HB2	2.30	0.47
25:CZ:145:GLU:O	25:CZ:149:LEU:N	2.38	0.47
36:BA:2110:G:C2	36:BA:2178:C:H5	2.33	0.47
12:AL:32:PHE:HB3	12:AL:84:LEU:HD11	1.95	0.47
36:BA:29:U:C1'	53:BU:11:ARG:HH22	2.28	0.47
1:AA:977:A:O2'	1:AA:978:A:H5"	2.15	0.47
4:CD:202:LEU:O	4:CD:202:LEU:HD13	2.14	0.47
41:BF:89:VAL:HG12	41:BF:90:PHE:H	1.79	0.47
34:D8:14:VAL:CG2	34:D8:22:VAL:HG13	2.44	0.47
34:D8:50:LEU:C	34:D8:53:PRO:CD	2.83	0.47
36:DA:2801(A):A:C5'	36:DA:2802:G:H8	2.26	0.47
36:BA:2572:A:C4	40:BE:144:ARG:NH1	2.82	0.47
36:BA:2053:G:OP1	40:BE:144:ARG:HG2	2.15	0.47
27:B1:29:GLY:O	27:B1:30:VAL:CG2	2.61	0.47
36:DA:1495:A:N3	36:DA:1496:A:H2	2.12	0.47
40:DE:9:VAL:CG1	40:DE:25:VAL:O	2.63	0.47
36:BA:1495:A:N3	36:BA:1496:A:H2	2.13	0.47
54:DV:35:LEU:HD22	54:DV:35:LEU:H	1.79	0.47
36:DA:481:G:P	57:DY:47:LYS:HD3	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:60:PHE:HA	57:DY:62:GLU:OE2	2.13	0.47
29:D3:15:TYR:HB3	29:D3:19:GLN:NE2	2.30	0.47
27:D1:52:ARG:NH1	27:D1:52:ARG:HA	2.27	0.47
39:DD:73:VAL:HG13	39:DD:120:GLY:HA2	1.96	0.47
37:BB:56:G:H4'	37:BB:57:A:H8	1.80	0.47
53:BU:64:ARG:HG2	53:BU:64:ARG:HH11	1.80	0.47
36:BA:2502:G:H5"	36:BA:2503:A:C5'	2.45	0.47
49:BQ:81:VAL:HG12	49:BQ:82:ARG:O	2.15	0.47
35:D9:31:LYS:HE2	36:DA:2478:A:H5'	1.96	0.47
18:CR:59:SER:H	18:CR:62:GLU:HB2	1.79	0.47
52:DT:3:ARG:HH11	52:DT:6:LEU:HD13	1.80	0.47
36:DA:1332:G:H5'	36:DA:1333:C:H5	1.79	0.47
36:DA:271(F):C:O2'	36:DA:271(G):C:H5'	2.14	0.47
37:BB:81:G:H2'	37:BB:82:G:H5'	1.97	0.47
1:CA:1286:A:H2	21:CU:18:TYR:HH	1.63	0.47
10:CJ:29:ARG:O	10:CJ:30:SER:CB	2.63	0.47
36:DA:856:C:H2'	36:DA:857:C:C6	2.50	0.47
36:DA:1472:A:O2'	36:DA:1473:G:H5'	2.15	0.47
49:BQ:67:ARG:NH1	49:BQ:102:VAL:HB	2.30	0.47
53:DU:111:GLU:C	53:DU:113:ALA:N	2.67	0.47
2:CB:95:GLN:HG3	2:CB:147:LYS:O	2.15	0.47
6:CF:46:ARG:NH2	18:CR:38:GLU:OE1	2.48	0.47
46:DN:125:GLY:CA	46:DN:126:PRO:O	2.63	0.47
36:BA:1270:C:H5"	36:BA:1271:G:C5'	2.45	0.47
4:CD:6:GLY:O	4:CD:7:PRO:C	2.52	0.47
2:AB:77:ALA:CB	2:AB:211:ILE:HD13	2.44	0.47
36:DA:2672:G:H2'	36:DA:2673:G:H5"	1.95	0.47
36:BA:411:G:OP2	36:BA:2406:U:O2'	2.32	0.47
2:CB:229:VAL:CG1	2:CB:230:VAL:N	2.77	0.47
4:CD:32:ALA:C	4:CD:34:GLU:N	2.66	0.47
54:BV:81:TYR:C	54:BV:82:ARG:HD2	2.35	0.47
36:DA:31:C:H2'	36:DA:32:C:O4'	2.15	0.47
36:BA:30:G:O2'	36:BA:31:C:H5'	2.15	0.47
36:BA:31:C:H2'	36:BA:32:C:O4'	2.15	0.47
1:AA:197:A:N6	1:AA:221:C:C5'	2.77	0.47
36:BA:1839:G:H5'	36:BA:1839:G:C8	2.48	0.47
1:CA:539:A:H2'	1:CA:540:G:C8	2.49	0.47
41:DF:40:GLN:NE2	41:DF:182:ASN:HB2	2.30	0.47
1:CA:1328:C:O2'	1:CA:1329:A:H5'	2.14	0.47
25:AZ:104:LEU:HD21	25:AZ:120:ILE:HD11	1.97	0.47
36:DA:660:G:H5'	41:DF:99:TYR:CE2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:103:ALA:HB1	47:BO:105:GLU:OE1	2.15	0.47
36:DA:752:A:O2'	36:DA:753:C:OP2	2.28	0.47
22:CW:64:A:H2'	22:CW:65:G:H8	1.80	0.47
36:BA:1386:C:H2'	36:BA:1387:C:H6	1.80	0.47
36:BA:1385:G:H4'	36:BA:1386:C:OP1	2.14	0.47
1:CA:603:U:H2'	1:CA:604:G:C8	2.49	0.47
27:D1:20:ARG:HB3	27:D1:34:THR:HG22	1.96	0.47
5:AE:99:GLY:O	5:AE:117:ASP:HA	2.13	0.47
36:BA:171:G:O2'	36:BA:172:C:H5'	2.14	0.47
1:AA:1466:C:H2'	1:AA:1467:G:O4'	2.14	0.47
1:CA:520:A:N1	1:CA:536:C:H1'	2.29	0.47
1:CA:995:C:HO2'	1:CA:996:A:P	2.38	0.47
1:AA:1294:G:O2'	1:AA:1295:G:H5'	2.15	0.47
3:AC:186:PHE:CE2	3:AC:188:LEU:HD23	2.50	0.47
22:AV:75:C:H2'	22:AV:76:A:O4'	2.14	0.47
5:CE:145:LYS:O	5:CE:149:GLU:HG3	2.15	0.47
36:BA:1767:C:O2'	36:BA:1768:U:H5'	2.15	0.47
1:AA:879:C:O2'	1:AA:880:C:H5'	2.14	0.47
54:DV:3:ALA:HB3	54:DV:14:VAL:HG23	1.97	0.47
36:BA:1506:C:O2	36:BA:1506:C:H2'	2.13	0.47
8:CH:6:ILE:HD12	8:CH:6:ILE:N	2.30	0.47
5:AE:40:ARG:HH11	5:AE:40:ARG:HG2	1.79	0.47
1:AA:511:C:C2	1:AA:512:U:C5	3.03	0.47
36:DA:1120:G:H2'	36:DA:1121:C:C6	2.50	0.47
1:CA:509:A:H5'	4:CD:54:TYR:HD2	1.80	0.47
6:AF:79:LEU:O	6:AF:79:LEU:HD23	2.15	0.47
39:BD:227:ASN:HB3	39:BD:228:PRO:HD2	1.97	0.47
1:AA:913:A:H4'	1:AA:914:A:H4'	1.96	0.47
46:DN:96:GLU:HB2	46:DN:100:GLU:OE2	2.14	0.47
36:DA:1432:C:H2'	36:DA:1433:U:O4'	2.15	0.47
36:DA:1092:C:H42	36:DA:1100:C:H42	1.61	0.47
8:CH:126:LYS:O	8:CH:127:LEU:HD22	2.14	0.47
36:DA:1469:A:O2'	36:DA:1470:G:H5'	2.15	0.47
27:B1:63:ALA:O	27:B1:64:ALA:O	2.33	0.47
6:AF:3:ARG:HG3	6:AF:3:ARG:HH11	1.80	0.47
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.30	0.47
36:BA:2540:C:H2'	36:BA:2541:A:O4'	2.14	0.47
13:AM:4:ILE:HG22	13:AM:5:ALA:N	2.30	0.47
36:DA:1349:A:N6	36:DA:1598:C:N4	2.63	0.47
28:D2:2:LYS:HA	28:D2:6:VAL:HB	1.97	0.47
48:BP:56:SER:O	48:BP:57:THR:C	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:9:LEU:CD1	30:D4:10:VAL:H	2.22	0.47
42:DG:66:GLN:CG	42:DG:94:LEU:HD21	2.37	0.47
36:BA:2762:G:H2'	36:BA:2763:G:O4'	2.15	0.47
40:DE:55:ASN:HA	40:DE:55:ASN:HD22	1.52	0.47
36:DA:2308:G:N2	42:DG:79:ASN:CG	2.68	0.47
52:DT:28:VAL:HG21	52:DT:46:GLU:HG3	1.96	0.47
1:CA:1203:C:OP1	14:CN:3:ARG:HD3	2.14	0.47
41:BF:176:LEU:O	41:BF:177:ALA:HB2	2.15	0.47
48:BP:147:LEU:CG	48:BP:148:LEU:H	2.03	0.47
36:DA:1141:U:H6	46:DN:63:THR:HG21	1.79	0.47
55:BW:6:ILE:HG22	55:BW:8:ARG:HD2	1.95	0.47
4:CD:28:SER:CB	4:CD:29:PRO:CD	2.88	0.47
32:D6:37:ARG:O	32:D6:48:VAL:O	2.33	0.47
41:DF:167:ALA:HB1	41:DF:173:VAL:CG1	2.44	0.47
41:BF:126:VAL:HG21	41:BF:129:PHE:CZ	2.49	0.47
58:BZ:153:SER:HB2	58:BZ:167:PRO:HB2	1.93	0.47
40:BE:69:LYS:C	40:BE:71:GLY:H	2.16	0.47
36:DA:2160:G:H2'	36:DA:2161:C:O4'	2.14	0.47
25:AZ:328:GLY:O	25:AZ:329:GLY:O	2.33	0.47
36:BA:652:C:HO2'	36:BA:653:A:P	2.37	0.47
31:D5:47:PRO:C	31:D5:49:CYS:H	2.18	0.47
12:CL:58:VAL:HG12	12:CL:60:LEU:HD22	1.96	0.47
1:AA:1347:G:C5	9:AI:107:ARG:NH2	2.83	0.47
36:BA:1557:C:H5"	36:BA:1558:A:OP2	2.15	0.47
25:CZ:65:THR:CG2	25:CZ:80:VAL:CG1	2.89	0.47
1:AA:1316:G:H4'	14:AN:18:VAL:HG13	1.95	0.47
57:BY:2:ARG:C	57:BY:4:LYS:H	2.17	0.47
36:BA:1222:C:H2'	36:BA:1223:G:C5'	2.45	0.47
34:D8:19:SER:HG	36:DA:651:G:P	2.38	0.47
52:BT:96:ARG:HB2	52:BT:96:ARG:CZ	2.44	0.47
6:AF:61:LEU:HB3	6:AF:63:TYR:HE1	1.80	0.47
27:B1:90:ILE:O	27:B1:94:LEU:CD1	2.60	0.47
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.33	0.47
14:CN:4:LYS:O	14:CN:7:ILE:HG12	2.15	0.47
40:BE:176:ILE:CG2	40:BE:178:GLU:HB3	2.44	0.47
10:AJ:35:SER:OG	10:AJ:73:ASP:HB2	2.14	0.47
36:BA:2672:G:C2'	36:BA:2673:G:H5"	2.45	0.47
39:BD:136:ILE:HB	39:BD:165:ILE:CD1	2.45	0.47
53:DU:102:GLU:HB3	53:DU:105:VAL:CG2	2.45	0.47
18:CR:53:ARG:NH1	18:CR:60:ALA:HA	2.30	0.47
39:BD:95:LEU:H	39:BD:95:LEU:HD12	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2286:A:H4'	36:BA:2287:A:O4'	2.15	0.47
31:D5:52:TYR:O	31:D5:52:TYR:CD1	2.68	0.47
39:DD:95:LEU:HD12	39:DD:95:LEU:H	1.78	0.47
55:DW:20:VAL:CG2	55:DW:47:VAL:HG21	2.45	0.47
36:DA:1272:A:C2	36:DA:1618:A:C2	3.03	0.47
36:DA:1192:G:N7	48:DP:29:LYS:NZ	2.44	0.47
1:CA:737:A:H2'	1:CA:738:C:H6	1.77	0.47
50:BR:87:TYR:O	50:BR:90:ARG:N	2.48	0.47
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.97	0.47
36:BA:588:U:H2'	36:BA:589:C:C6	2.50	0.47
36:BA:753:C:O2'	36:BA:754:C:H5'	2.15	0.47
1:AA:540:G:H2'	1:AA:541:G:O4'	2.15	0.47
36:BA:142:A:H5"	36:BA:142(A):C:H5	1.80	0.47
36:BA:2807:G:H3'	36:BA:2808:U:H5"	1.97	0.47
36:BA:1782:C:H1'	36:BA:2609:U:C5'	2.44	0.47
36:BA:453:C:H4'	36:BA:472:A:N6	2.29	0.47
46:DN:120:LEU:HD13	46:DN:120:LEU:C	2.35	0.47
36:BA:807:U:O2'	36:BA:808:G:H5'	2.15	0.47
1:CA:983:A:H5'	1:CA:984:C:OP2	2.14	0.47
40:BE:147:PRO:HB2	40:BE:149:ARG:HG2	1.96	0.47
6:CF:79:LEU:O	6:CF:79:LEU:HD23	2.14	0.47
36:BA:955:C:OP1	49:BQ:87:LYS:HE2	2.15	0.47
36:DA:271(U):G:H2'	36:DA:271(V):G:H8	1.80	0.47
1:CA:451:A:N6	1:CA:480:U:H2'	2.30	0.47
36:DA:1921:G:O2'	36:DA:1922:G:H5'	2.14	0.47
36:DA:1385:G:H4'	36:DA:1386:C:OP1	2.14	0.47
3:CC:103:VAL:O	3:CC:103:VAL:HG12	2.13	0.47
52:BT:134:GLU:O	52:BT:135:ALA:HB3	2.14	0.47
36:BA:603:A:N6	36:BA:626:U:H4'	2.29	0.47
20:CT:53:LEU:N	20:CT:53:LEU:HD12	2.30	0.47
20:CT:50:GLU:HB2	20:CT:99:LEU:CD1	2.45	0.47
13:CM:67:GLU:O	13:CM:69:GLU:N	2.44	0.47
28:D2:29:LYS:HE3	28:D2:32:LEU:HD22	1.97	0.47
57:DY:77:PRO:O	57:DY:78:ALA:CB	2.63	0.47
31:B5:3:LYS:CD	31:B5:3:LYS:N	2.78	0.47
41:DF:21:ALA:HB3	41:DF:23:ASP:OD2	2.15	0.47
1:AA:858:G:H5"	1:AA:858:G:C8	2.49	0.47
41:BF:200:GLU:O	41:BF:204:ASN:ND2	2.48	0.47
36:DA:1061:U:C4'	36:DA:1070:A:H1'	2.42	0.47
58:BZ:166:SER:N	58:BZ:167:PRO:HA	2.29	0.47
24:AY:1:A:H2'	24:AY:2:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:40:LEU:CD2	10:CJ:40:LEU:N	2.77	0.47
53:DU:61:TRP:C	53:DU:65:ILE:HD13	2.35	0.47
53:DU:95:LEU:C	53:DU:97:ASP:H	2.18	0.47
39:DD:222:ARG:O	39:DD:224:ALA:O	2.33	0.47
53:BU:61:TRP:CD2	53:BU:94:ASN:HA	2.50	0.47
1:AA:1438:G:N1	1:AA:1439:C:C4	2.83	0.47
17:AQ:53:LEU:HD23	17:AQ:54:GLY:H	1.79	0.47
1:CA:1399:C:C2	1:CA:1502:A:N6	2.83	0.47
38:DC:125:SER:C	38:DC:127:LEU:H	2.17	0.47
36:BA:1054:A:H2'	36:BA:1054:A:N3	2.29	0.47
36:DA:1054:A:N3	36:DA:1054:A:H2'	2.30	0.47
22:CW:39:U:C2'	22:CW:40:C:H5'	2.45	0.47
4:CD:3:ARG:HE	4:CD:5:ILE:CG1	2.25	0.47
36:DA:887:A:N3	36:DA:887:A:H2'	2.30	0.47
46:DN:119:ARG:HB3	46:DN:119:ARG:HH11	1.78	0.47
3:AC:106:VAL:HG23	3:AC:106:VAL:O	2.14	0.47
46:BN:119:ARG:HH11	46:BN:119:ARG:HB3	1.77	0.47
40:DE:167:VAL:HG11	40:DE:188:VAL:HA	1.97	0.47
1:AA:1015:A:H2'	1:AA:1016:A:H8	1.76	0.47
36:DA:363(E):U:H2'	36:DA:363(F):A:O4'	2.15	0.47
36:BA:1221:C:H2'	36:BA:1221(A):C:C6	2.49	0.47
36:DA:638:G:N2	36:DA:651:G:H1'	2.30	0.47
1:CA:59:A:H2'	1:CA:59:A:N3	2.30	0.47
54:DV:35:LEU:C	54:DV:37:VAL:H	2.15	0.47
36:BA:1141:U:H6	46:BN:63:THR:HG21	1.80	0.47
57:DY:46:LYS:CG	57:DY:47:LYS:H	2.27	0.47
48:BP:77:ARG:HH11	48:BP:77:ARG:HG2	1.80	0.47
58:DZ:9:TYR:CE2	58:DZ:35:ARG:NE	2.71	0.47
8:CH:112:LEU:CD2	8:CH:112:LEU:N	2.78	0.47
15:AO:31:LEU:N	15:AO:31:LEU:HD12	2.30	0.47
37:DB:28:C:O2'	37:DB:29:A:H5'	2.14	0.47
58:BZ:144:LEU:HD21	58:BZ:149:SER:HA	1.96	0.47
1:CA:1524:C:H6	1:CA:1524:C:C5'	2.28	0.47
8:AH:18:ARG:CB	8:AH:18:ARG:HH11	2.28	0.47
1:CA:1277:C:H2'	1:CA:1278:U:H5'	1.97	0.47
36:BA:774:A:H2	36:BA:787:U:O2'	1.97	0.47
1:CA:861:G:O2'	1:CA:862:C:H5'	2.15	0.47
18:AR:36:ASN:ND2	18:AR:39:VAL:HB	2.29	0.47
15:CO:29:VAL:HG11	15:CO:67:LEU:HD21	1.97	0.47
36:DA:534:U:O2'	53:DU:49:HIS:CD2	2.68	0.47
33:B7:19:ARG:NH1	33:B7:19:ARG:HG2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:1:MET:CE	49:BQ:44:ALA:HB1	2.44	0.47
41:BF:63:LYS:HA	41:BF:76:GLY:O	2.14	0.47
1:CA:594:G:C2'	1:CA:595:G:H5'	2.44	0.47
36:DA:2886:G:H2'	36:DA:2887:U:C6	2.50	0.47
46:BN:96:GLU:O	46:BN:100:GLU:HG3	2.15	0.47
27:D1:20:ARG:HD3	27:D1:34:THR:HG22	1.95	0.47
36:DA:1099:G:O2'	36:DA:1100:C:H5'	2.15	0.47
47:DO:26:LYS:HE3	47:DO:37:ASP:OD2	2.15	0.47
8:AH:103:VAL:HG12	8:AH:108:GLY:HA3	1.96	0.47
8:CH:26:VAL:HG13	8:CH:59:LEU:HB2	1.95	0.47
36:DA:1357:U:H2'	36:DA:1358:G:O4'	2.15	0.47
9:AI:97:LYS:N	9:AI:98:PRO:CD	2.78	0.47
36:BA:1777:U:O2'	36:BA:1778:U:H5'	2.15	0.47
1:AA:328:C:H4'	1:AA:329:A:H5'	1.97	0.47
36:DA:855:G:H1	36:DA:922:U:H3	1.63	0.47
52:DT:42:ILE:HG13	52:DT:42:ILE:O	2.15	0.47
58:BZ:67:LEU:HD12	58:BZ:67:LEU:N	2.30	0.47
36:DA:2766:G:N3	36:DA:2766:G:H2'	2.30	0.47
57:DY:27:VAL:HG12	57:DY:28:LYS:N	2.29	0.47
25:AZ:277:LEU:HD11	25:AZ:280:GLY:N	2.30	0.47
36:DA:2107:C:C2	36:DA:2182:G:N1	2.80	0.47
30:D4:7:PRO:O	30:D4:8:LYS:CB	2.63	0.47
37:DB:42:C:O2'	37:DB:43:C:P	2.72	0.47
32:B6:41:PRO:HD2	32:B6:46:HIS:N	2.12	0.47
42:BG:47:LYS:HE2	42:BG:80:PHE:HE1	1.79	0.47
36:DA:2604:U:C5'	36:DA:2604:U:C6	2.92	0.47
42:DG:42:GLY:CA	42:DG:89:GLY:HA2	2.44	0.47
28:B2:69:ARG:HH22	36:BA:111:A:H4'	1.80	0.47
52:BT:86:ILE:HG12	52:BT:87:ASP:N	2.30	0.47
52:DT:28:VAL:HG13	52:DT:46:GLU:CA	2.37	0.47
1:AA:359:U:OP1	25:AZ:235:GLY:HA2	2.15	0.47
2:AB:72:GLY:HA2	2:AB:165:VAL:HG22	1.97	0.47
46:DN:23:LEU:HD21	46:DN:102:ALA:HB1	1.95	0.47
56:DX:72:LYS:HD2	56:DX:72:LYS:N	2.30	0.47
41:BF:133:ASN:O	41:BF:135:LYS:N	2.48	0.47
51:DS:28:VAL:CG1	51:DS:29:PHE:N	2.75	0.47
34:B8:59:LYS:HB2	34:B8:59:LYS:HZ3	1.72	0.47
42:BG:16:ARG:NH1	42:BG:16:ARG:HG3	2.30	0.47
48:BP:16:ARG:CZ	48:BP:16:ARG:HB2	2.45	0.47
36:DA:1877:A:C2'	36:DA:1878:G:H5'	2.36	0.47
36:BA:2579:C:O2'	40:BE:131:ALA:CB	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2713:A:OP1	50:BR:14:SER:HB3	2.15	0.47
18:AR:32:ARG:CA	18:AR:69:THR:HG21	2.39	0.47
38:BC:114:VAL:HG12	38:BC:144:THR:CA	2.45	0.47
25:CZ:143:ASP:OD1	25:CZ:144:PRO:HD2	2.14	0.47
25:CZ:206:ILE:O	25:CZ:210:ILE:HG22	2.15	0.47
1:AA:1320:C:H5"	19:AS:70:LYS:HG3	1.97	0.47
3:CC:43:LEU:HD13	3:CC:68:VAL:CG2	2.45	0.47
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.97	0.47
58:BZ:8:TYR:O	58:BZ:9:TYR:C	2.52	0.47
36:DA:1403:C:H5"	36:DA:1471:A:C1'	2.39	0.47
1:CA:740:U:O2'	1:CA:741:G:H5'	2.15	0.47
36:DA:638:G:C6	36:DA:639:U:N3	2.83	0.47
47:DO:120:GLU:OE1	52:DT:67:SER:OG	2.27	0.47
22:AV:60:U:H5"	22:AV:61:C:H5	1.79	0.47
56:DX:57:LEU:HD13	56:DX:57:LEU:N	2.30	0.47
36:BA:139(A):G:H3'	36:BA:140:G:C8	2.50	0.47
36:DA:2472:G:H3'	36:DA:2475:C:N4	2.30	0.47
2:AB:69:LEU:CD1	2:AB:71:VAL:HG22	2.45	0.47
1:AA:1216:G:O2'	1:AA:1217:C:H5'	2.15	0.47
36:BA:2464:C:O2'	36:BA:2465:C:P	2.73	0.47
1:AA:346:G:N3	1:AA:346:G:C2'	2.78	0.47
36:DA:848:G:C8	36:DA:848:G:H5'	2.47	0.47
2:AB:97:TRP:CZ3	2:AB:176:GLU:OE2	2.68	0.47
41:BF:164:ARG:HG2	41:BF:164:ARG:NH1	2.29	0.47
36:BA:2121:G:N2	36:BA:2176:A:C2	2.79	0.47
58:DZ:103:ARG:HD3	58:DZ:138:GLU:HG3	1.97	0.47
1:CA:67:C:O2'	1:CA:171:A:H1'	2.14	0.47
1:CA:540:G:H2'	1:CA:541:G:O4'	2.15	0.47
2:AB:60:ASP:O	2:AB:61:LEU:C	2.54	0.47
38:BC:61:THR:HG22	38:BC:162:GLU:HA	1.96	0.47
1:CA:1220:G:O2'	1:CA:1221:G:H5'	2.14	0.47
36:BA:1526:G:O2'	36:BA:1527:G:H5'	2.15	0.47
8:CH:110:ALA:HB3	8:CH:121:ASP:HB3	1.97	0.47
53:DU:99:ALA:HB2	53:DU:106:PHE:CE1	2.50	0.47
3:CC:121:ALA:O	3:CC:125:GLU:HG3	2.15	0.47
1:CA:987:G:O2'	1:CA:988:G:H5'	2.15	0.47
36:BA:536:A:H2'	36:BA:537:C:C6	2.50	0.47
7:CG:80:VAL:O	7:CG:83:ALA:HB3	2.15	0.47
36:BA:850:C:O2'	36:BA:851:U:H5'	2.16	0.47
36:DA:2492:U:O2'	36:DA:2493:U:H5'	2.15	0.47
22:AV:57:G:H2'	22:AV:58:A:H5'	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.15	0.47
1:CA:784:C:H4'	36:DA:1837:C:OP1	2.15	0.47
20:AT:93:GLU:O	20:AT:93:GLU:HG2	2.15	0.47
36:DA:2320:A:N3	36:DA:2320:A:H2'	2.30	0.47
36:DA:1506:C:H2'	36:DA:1506:C:O2	2.14	0.47
24:CY:26:A:H2'	24:CY:27:C:H6	1.81	0.46
31:B5:3:LYS:O	31:B5:5:PRO:HD2	2.13	0.46
22:AW:76:A:O2'	36:BA:2394:C:N3	2.38	0.46
28:B2:36:ARG:HA	28:B2:39:ALA:HB3	1.96	0.46
34:D8:61:LEU:O	34:D8:64:TYR:N	2.47	0.46
20:AT:53:LEU:HD12	20:AT:53:LEU:H	1.80	0.46
42:DG:120:LEU:O	42:DG:121:ASN:C	2.53	0.46
1:AA:1004:A:C3'	1:AA:1005:A:H5'	2.45	0.46
32:D6:15:GLU:OE1	32:D6:18:ARG:CG	2.63	0.46
22:CV:5:G:H5'	22:CV:5:G:C8	2.50	0.46
57:BY:15:VAL:HG22	57:BY:72:VAL:HG12	1.97	0.46
42:DG:81:LYS:HB3	42:DG:82:LEU:H	1.40	0.46
36:BA:1960:A:C5'	36:BA:1960:A:C8	2.95	0.46
52:BT:33:LYS:HE2	52:BT:43:GLN:HE21	1.79	0.46
39:BD:267:SER:HA	39:BD:270:ILE:CG1	2.42	0.46
40:DE:76:ARG:O	40:DE:77:ILE:C	2.53	0.46
34:D8:15:LYS:HB3	34:D8:46:ARG:HH22	1.80	0.46
25:CZ:19:HIS:CD2	25:CZ:20:VAL:O	2.63	0.46
48:BP:84:ASN:HA	48:BP:116:GLY:HA3	1.96	0.46
36:BA:2724:C:P	50:BR:2:ARG:HH21	2.38	0.46
25:AZ:19:HIS:HA	25:AZ:115:GLN:CB	2.44	0.46
40:BE:3:GLY:HA3	40:BE:81:ILE:CG2	2.45	0.46
3:CC:6:HIS:CD2	3:CC:8:ILE:HB	2.50	0.46
36:DA:2157:G:H3'	36:DA:2157:G:C8	2.50	0.46
38:BC:76:ALA:CB	38:BC:94:VAL:HG13	2.41	0.46
4:AD:3:ARG:HE	4:AD:5:ILE:CG1	2.26	0.46
52:DT:106:SER:O	52:DT:107:ASP:CG	2.53	0.46
22:CW:43:C:C3'	22:CW:44:G:O4'	2.63	0.46
1:CA:266:G:H5'	1:CA:267:C:C5	2.49	0.46
42:BG:52:ILE:HB	42:BG:54:GLU:CG	2.44	0.46
17:AQ:45:HIS:HA	17:AQ:69:LYS:NZ	2.30	0.46
25:AZ:196:VAL:CG1	25:AZ:196:VAL:O	2.64	0.46
57:BY:3:VAL:HG12	57:BY:3:VAL:O	2.15	0.46
1:AA:1152:A:OP1	10:AJ:68:HIS:HD2	1.99	0.46
36:DA:1264:G:C3'	36:DA:1265:A:H5"	2.40	0.46
57:DY:41:GLY:O	57:DY:42:VAL:O	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:62:TRP:C	6:AF:63:TYR:CD1	2.83	0.46
13:AM:83:ASP:C	13:AM:85:GLY:H	2.16	0.46
36:BA:483:A:C2	36:BA:484:C:H1'	2.49	0.46
1:AA:1269:A:H2	1:AA:1312:G:N3	2.13	0.46
19:AS:6:LYS:N	19:AS:6:LYS:HD3	2.30	0.46
36:BA:1453:U:O4'	50:BR:63:ARG:HD3	2.15	0.46
1:CA:263:A:OP2	20:CT:79:ARG:NH1	2.48	0.46
1:CA:346:G:N3	1:CA:346:G:C2'	2.78	0.46
1:CA:347:G:N2	1:CA:348:G:H1'	2.30	0.46
36:DA:848:G:H2'	36:DA:849:A:C8	2.50	0.46
39:DD:12:SER:HB2	39:DD:208:LYS:HB3	1.98	0.46
53:BU:45:TYR:O	53:BU:49:HIS:CG	2.68	0.46
4:CD:111:ALA:HA	4:CD:116:GLN:OE1	2.15	0.46
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.97	0.46
1:AA:1006:C:N4	1:AA:1024:G:H21	2.13	0.46
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.78	0.46
36:DA:2807:G:H3'	36:DA:2808:U:H5"	1.97	0.46
36:DA:756:C:C2'	36:DA:757:U:H5'	2.45	0.46
33:B7:43:THR:HG22	33:B7:44:PRO:O	2.15	0.46
8:AH:119:LEU:HD12	8:AH:124:ALA:N	2.30	0.46
3:AC:157:ILE:HD11	3:AC:166:GLU:HB2	1.96	0.46
36:BA:2170:A:OP1	38:BC:134:ARG:NH1	2.48	0.46
41:DF:40:GLN:HE22	41:DF:182:ASN:HB2	1.80	0.46
36:BA:383:U:H2'	36:BA:385:C:H5	1.80	0.46
36:DA:184:C:H2'	36:DA:185:U:H6	1.80	0.46
36:DA:696:G:C2	36:DA:767:U:O2	2.67	0.46
1:CA:620:C:H2'	1:CA:621:A:O4'	2.14	0.46
42:BG:175:LEU:O	42:BG:176:LEU:HG	2.15	0.46
36:DA:2726:U:H6	47:DO:67:LYS:HZ3	1.62	0.46
58:DZ:40:ASP:HB3	58:DZ:43:GLU:HB2	1.97	0.46
27:B1:39:LYS:O	27:B1:40:ARG:HG2	2.15	0.46
23:AX:26:A:H3'	23:AX:27:A:C8	2.50	0.46
36:DA:137:C:O2	36:DA:137:C:H2'	2.15	0.46
36:BA:1432:C:H2'	36:BA:1433:U:O4'	2.15	0.46
56:BX:35:THR:CG2	56:BX:36:LYS:N	2.78	0.46
1:CA:1305:G:C5'	21:CU:4:GLY:HA3	2.40	0.46
34:B8:11:LYS:HG3	34:B8:60:LEU:HD22	1.96	0.46
36:BA:2602:A:H4'	36:BA:2603:G:C5'	2.45	0.46
2:AB:44:LEU:HA	2:AB:47:THR:OG1	2.14	0.46
28:B2:56:GLN:O	28:B2:60:LEU:HG	2.14	0.46
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:7:ARG:HB3	48:BP:8:PRO:CD	2.44	0.46
1:AA:453:A:C4'	16:AP:72:ARG:HG3	2.38	0.46
41:DF:6:VAL:CG1	41:DF:7:TYR:H	2.15	0.46
51:BS:35:ILE:O	51:BS:35:ILE:HG12	2.15	0.46
40:DE:69:LYS:C	40:DE:71:GLY:H	2.17	0.46
36:BA:2579:C:C1'	40:BE:134:ILE:HD13	2.45	0.46
25:CZ:155:ARG:HG2	25:CZ:165:GLY:O	2.14	0.46
14:AN:12:ARG:NH1	14:AN:14:PRO:HG2	2.31	0.46
43:DH:46:GLU:O	43:DH:47:GLU:C	2.53	0.46
43:BH:50:VAL:HG12	43:BH:51:ARG:N	2.30	0.46
12:AL:17:LYS:HD3	12:AL:18:VAL:HG22	1.97	0.46
46:DN:45:ASN:HD22	46:DN:45:ASN:H	1.64	0.46
1:CA:453:A:C4'	16:CP:72:ARG:HG3	2.41	0.46
40:DE:184:VAL:O	40:DE:186:GLY:N	2.49	0.46
36:BA:1265:A:N1	36:BA:2013:A:H5"	2.31	0.46
29:B3:44:ARG:O	29:B3:47:VAL:HB	2.15	0.46
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.81	0.46
36:BA:1827:C:OP2	39:BD:222:ARG:NH1	2.46	0.46
14:AN:25:VAL:HG23	14:AN:38:GLY:O	2.15	0.46
22:CV:51:U:H2'	22:CV:52:G:C8	2.50	0.46
36:BA:1652:A:C2	36:BA:2006:C:N3	2.83	0.46
50:BR:10:LEU:O	50:BR:11:ASN:HB2	2.15	0.46
27:B1:84:GLY:O	27:B1:86:SER:N	2.47	0.46
46:BN:9:VAL:HG12	46:BN:10:GLU:H	1.80	0.46
1:CA:659:U:O2'	1:CA:660:G:H5'	2.15	0.46
52:BT:106:SER:O	52:BT:107:ASP:CG	2.54	0.46
36:DA:2050:C:H1'	40:DE:156:MET:HE2	1.95	0.46
36:BA:2223:G:H2'	36:BA:2224:G:H5'	1.97	0.46
36:DA:64:A:H5'	56:DX:64:LYS:HE3	1.97	0.46
34:B8:30:ARG:HA	34:B8:30:ARG:NE	2.27	0.46
1:AA:473:G:H5'	16:AP:81:ARG:HG3	1.95	0.46
10:AJ:29:ARG:O	10:AJ:29:ARG:HG2	2.14	0.46
36:BA:756:C:C2'	36:BA:757:U:H5'	2.45	0.46
36:DA:1750:G:H2'	36:DA:1751:C:C6	2.49	0.46
36:BA:2653:U:H3'	36:BA:2654:A:C8	2.49	0.46
27:D1:26:ARG:HD3	27:D1:27:GLU:OE2	2.15	0.46
46:BN:120:LEU:C	46:BN:121:LYS:HD2	2.36	0.46
36:BA:1287:A:OP1	50:BR:104:ARG:HG2	2.15	0.46
42:DG:177:GLY:O	42:DG:179:PRO:HD3	2.15	0.46
4:CD:85:LYS:HG2	4:CD:86:LYS:N	2.30	0.46
1:CA:720:C:H2'	1:CA:721:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:586:C:O2'	1:AA:587:G:H5'	2.15	0.46
1:CA:678:U:H2'	1:CA:679:C:C6	2.51	0.46
1:AA:304:U:O2'	1:AA:305:G:H5'	2.16	0.46
1:AA:82:U:H6	1:AA:83:U:H5	1.63	0.46
22:CV:22:G:O2'	22:CV:23:A:H5'	2.15	0.46
37:BB:76:G:OP1	58:BZ:15:PRO:HB3	2.14	0.46
13:AM:107:ALA:O	13:AM:111:LYS:HG3	2.15	0.46
6:AF:47:ARG:HG3	6:AF:47:ARG:O	2.15	0.46
1:AA:135:C:O2	16:AP:1:MET:HB3	2.15	0.46
24:CY:20:H2U:H4'	24:CY:21:A:O5'	2.15	0.46
39:BD:80:ALA:HB2	39:BD:96:HIS:CD2	2.50	0.46
28:D2:35:LEU:CD2	28:D2:50:ILE:HG13	2.45	0.46
31:D5:3:LYS:CA	31:D5:3:LYS:HE3	2.44	0.46
2:CB:72:GLY:HA2	2:CB:165:VAL:HG22	1.98	0.46
42:BG:125:PHE:CD2	42:BG:131:TYR:HD1	2.33	0.46
41:BF:157:VAL:HG21	41:BF:194:MET:HG2	1.98	0.46
57:BY:73:ARG:NH2	57:BY:82:PRO:HA	2.30	0.46
36:DA:2312:U:C2'	36:DA:2313:C:C5'	2.91	0.46
36:BA:1543:C:C3'	36:BA:1544:A:C5'	2.90	0.46
39:BD:183:ARG:HD2	39:BD:184:LYS:H	1.80	0.46
1:AA:858:G:H8	1:AA:858:G:O5'	1.97	0.46
34:D8:23:VAL:HA	34:D8:47:LYS:O	2.15	0.46
25:CZ:345:ARG:C	25:CZ:347:THR:H	2.18	0.46
48:DP:91:PHE:N	48:DP:91:PHE:CD1	2.83	0.46
13:CM:97:PRO:N	13:CM:110:ARG:HD3	2.29	0.46
36:BA:2157:G:H8	36:BA:2157:G:H3'	1.80	0.46
50:DR:26:LYS:O	50:DR:30:THR:HG22	2.15	0.46
50:DR:75:LEU:HD13	50:DR:75:LEU:C	2.36	0.46
50:BR:26:LYS:O	50:BR:30:THR:HG22	2.14	0.46
1:AA:375:U:OP1	16:AP:69:THR:HG21	2.15	0.46
16:AP:20:VAL:CG2	16:AP:21:VAL:N	2.78	0.46
16:AP:25:ARG:NH1	16:AP:25:ARG:HG3	2.24	0.46
3:AC:5:ILE:H	3:AC:5:ILE:HD12	1.74	0.46
43:BH:46:GLU:O	43:BH:47:GLU:C	2.54	0.46
2:CB:112:VAL:O	2:CB:115:LEU:HB3	2.16	0.46
52:DT:117:ASP:OD2	52:DT:120:ARG:HG3	2.16	0.46
2:AB:8:LYS:O	2:AB:10:LEU:N	2.49	0.46
1:AA:1256:A:C2	1:AA:1278:U:H5'	2.50	0.46
55:DW:29:LEU:HG	55:DW:33:ARG:CD	2.43	0.46
36:BA:363(E):U:H2'	36:BA:363(F):A:O4'	2.14	0.46
1:AA:1145:C:O2'	1:AA:1146:A:O5'	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:310:A:P	57:DY:18:GLY:HA2	2.54	0.46
27:B1:37:ILE:HG12	27:B1:37:ILE:O	2.16	0.46
36:BA:139(A):G:N2	56:BX:44:GLU:OE1	2.40	0.46
25:AZ:339:ARG:HE	25:AZ:352:VAL:CG2	2.28	0.46
6:CF:45:LEU:HA	6:CF:58:GLY:O	2.16	0.46
36:BA:990:A:N6	36:BA:1186:G:H1'	2.31	0.46
37:DB:52:A:H62	51:DS:33:LYS:HG2	1.81	0.46
37:DB:57:A:H1'	42:DG:30:GLU:HB2	1.98	0.46
57:BY:46:LYS:CG	57:BY:47:LYS:H	2.28	0.46
35:D9:15:LYS:HB3	35:D9:15:LYS:HZ3	1.79	0.46
36:BA:1314:C:OP1	36:BA:1332:G:OP1	2.34	0.46
36:BA:848:G:H2'	36:BA:849:A:C8	2.51	0.46
8:CH:18:ARG:HB2	8:CH:18:ARG:NH1	2.30	0.46
1:AA:189(I):G:O2'	1:AA:189(J):G:H5'	2.15	0.46
36:BA:845:G:O2'	36:BA:846:C:H5	1.97	0.46
36:BA:2289:G:H1'	36:BA:2346:A:H2	1.80	0.46
36:BA:1327:C:H2'	36:BA:1328:G:O4'	2.15	0.46
43:BH:149:ARG:HA	43:BH:162:ILE:CD1	2.44	0.46
36:DA:1151:G:H4'	53:DU:81:HIS:CG	2.50	0.46
53:DU:45:TYR:O	53:DU:49:HIS:CG	2.68	0.46
43:BH:107:VAL:O	43:BH:107:VAL:HG23	2.15	0.46
41:BF:10:PRO:HG2	41:BF:13:SER:OG	2.14	0.46
22:AW:64:A:H2'	22:AW:65:G:H8	1.79	0.46
22:AW:65:G:O3'	32:B6:28:ARG:NH2	2.47	0.46
38:DC:151:GLU:HA	38:DC:154:ARG:HG2	1.97	0.46
9:AI:6:GLY:CA	9:AI:84:ALA:HB2	2.45	0.46
2:CB:60:ASP:O	2:CB:61:LEU:C	2.53	0.46
36:BA:1138:G:C4	36:BA:1139:G:H1'	2.50	0.46
36:DA:949:C:H2'	36:DA:950:G:C8	2.49	0.46
55:BW:70:TYR:OH	55:BW:72:LYS:HG2	2.15	0.46
36:BA:1357:U:H2'	36:BA:1358:G:O4'	2.15	0.46
36:DA:2364:C:O2'	36:DA:2365:G:H5'	2.15	0.46
38:BC:159:GLY:O	38:BC:160:ARG:O	2.32	0.46
1:CA:1354:C:H2'	1:CA:1355:G:H8	1.80	0.46
53:DU:14:HIS:CD2	53:DU:36:ARG:NH2	2.84	0.46
36:BA:2033:A:O2'	36:BA:2034:U:P	2.74	0.46
54:BV:3:ALA:HB3	54:BV:14:VAL:HG23	1.97	0.46
36:DA:664:C:O2'	36:DA:665:C:H5'	2.16	0.46
36:DA:736:C:O2'	36:DA:737:C:H5'	2.15	0.46
1:CA:922:G:N3	1:CA:1398:A:H2	2.12	0.46
42:BG:152:LEU:HD23	42:BG:152:LEU:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:40:GLN:OE1	26:D0:44:ARG:N	2.48	0.46
31:D5:27:PRO:HA	55:DW:23:LEU:HD11	1.97	0.46
1:CA:1054:C:H4'	1:CA:1055:A:O5'	2.16	0.46
25:CZ:355:LEU:CD2	25:CZ:370:PHE:CD2	2.98	0.46
39:DD:27:THR:HG21	39:DD:81:ALA:CB	2.45	0.46
42:BG:104:GLU:C	42:BG:106:LEU:H	2.18	0.46
42:BG:56:ALA:O	42:BG:59:GLU:HG2	2.15	0.46
36:DA:1600:C:C2'	36:DA:1601:G:H5'	2.45	0.46
28:D2:23:LYS:N	28:D2:26:ARG:HB3	2.29	0.46
1:CA:1004:A:C3'	1:CA:1005:A:H5'	2.45	0.46
32:D6:15:GLU:CG	32:D6:18:ARG:NH1	2.75	0.46
32:B6:15:GLU:OE1	32:B6:18:ARG:CD	2.64	0.46
36:BA:336:C:H4'	57:BY:7:VAL:CG2	2.45	0.46
57:BY:98:VAL:O	57:BY:98:VAL:HG12	2.14	0.46
42:DG:48:GLU:O	42:DG:49:ASP:HB3	2.15	0.46
38:DC:175:VAL:HG12	38:DC:188:ASN:CB	2.28	0.46
36:DA:1884:A:C3'	36:DA:1885:A:H5"	2.46	0.46
41:DF:176:LEU:O	41:DF:177:ALA:HB2	2.14	0.46
2:CB:44:LEU:HA	2:CB:47:THR:OG1	2.15	0.46
36:BA:1747(A):G:C3'	36:BA:1748:G:H5"	2.45	0.46
1:AA:148:G:H2'	1:AA:149:A:C8	2.51	0.46
36:DA:1887:C:H2'	36:DA:1888:G:C5'	2.34	0.46
40:BE:103:ASP:OD2	40:BE:201:THR:HA	2.16	0.46
48:DP:23:PRO:HB2	48:DP:33:ARG:HG3	1.98	0.46
41:DF:28:ILE:N	41:DF:28:ILE:HD13	2.17	0.46
5:AE:11:ILE:HD12	5:AE:31:LEU:HD11	1.97	0.46
9:AI:85:LEU:C	9:AI:85:LEU:HD12	2.35	0.46
53:DU:65:ILE:HD12	53:DU:65:ILE:N	2.31	0.46
5:CE:11:ILE:HD11	5:CE:33:VAL:CG2	2.44	0.46
7:AG:18:TYR:CD2	7:AG:59:LEU:HB2	2.51	0.46
1:CA:1342:C:O2'	9:CI:124:GLN:HG3	2.14	0.46
1:CA:255:G:H1'	17:CQ:16:GLN:HE21	1.79	0.46
2:AB:7:VAL:HG13	2:AB:11:LEU:HD12	1.97	0.46
54:BV:28:GLU:O	54:BV:61:VAL:HG21	2.16	0.46
57:BY:31:LEU:HD23	57:BY:36:ALA:C	2.36	0.46
57:BY:36:ALA:HB2	57:BY:68:HIS:HA	1.96	0.46
25:CZ:269:GLY:O	25:CZ:288:VAL:HA	2.16	0.46
36:DA:990:A:OP2	36:DA:991:C:OP2	2.32	0.46
36:DA:1352:U:O2'	36:DA:1353:A:H5'	2.16	0.46
52:BT:10:VAL:C	52:BT:12:SER:H	2.18	0.46
11:CK:57:THR:HG22	11:CK:60:ALA:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:187:LYS:H	25:CZ:187:LYS:CD	2.28	0.46
40:DE:73:GLU:OE2	40:DE:74:PRO:HD2	2.15	0.46
1:AA:952:U:O2'	1:AA:953:G:H5'	2.14	0.46
1:AA:1158:C:H2'	1:AA:1158:C:O2	2.15	0.46
1:AA:347:G:N2	1:AA:348:G:H1'	2.29	0.46
36:DA:1203:G:H3'	36:DA:1204:A:C5'	2.45	0.46
6:AF:30:LEU:HD21	6:AF:65:VAL:HG11	1.96	0.46
37:BB:60:C:O2'	37:BB:61:G:H5'	2.15	0.46
4:AD:85:LYS:HG2	4:AD:86:LYS:N	2.31	0.46
36:DA:2341:G:H2'	36:DA:2342:C:H6	1.80	0.46
36:DA:1010:A:H1'	36:DA:1153:C:C1'	2.46	0.46
50:DR:59:ASP:O	50:DR:60:LEU:CB	2.62	0.46
1:CA:458:C:H2'	1:CA:460:G:C8	2.50	0.46
49:BQ:64:ILE:CG2	49:BQ:65:PHE:N	2.78	0.46
13:AM:74:VAL:HA	13:AM:77:ASN:HD22	1.79	0.46
36:DA:1799:G:H5'	36:DA:1819:A:H61	1.80	0.46
3:AC:14:ILE:CG1	3:AC:15:THR:N	2.78	0.46
6:AF:75:LEU:O	6:AF:79:LEU:HB2	2.15	0.46
18:AR:40:LEU:O	18:AR:42:ARG:N	2.49	0.46
36:BA:720:C:H2'	36:BA:721:C:H6	1.80	0.46
4:AD:180:GLY:O	4:AD:181:MET:C	2.54	0.46
5:CE:76:ILE:HG13	5:CE:93:PRO:HG3	1.98	0.46
36:BA:1668:A:H1'	36:BA:1670:C:C5	2.50	0.46
1:AA:594:G:C2'	1:AA:595:G:H5'	2.45	0.46
27:B1:77:ALA:C	27:B1:79:GLY:H	2.19	0.46
41:BF:31:HIS:ND1	48:BP:13:ASN:HB2	2.30	0.46
36:BA:2766:G:N3	36:BA:2766:G:H2'	2.30	0.46
51:DS:64:GLU:HA	51:DS:67:ARG:HG3	1.98	0.46
36:BA:370:G:C6	36:BA:424:G:N7	2.84	0.46
25:AZ:40:PRO:O	25:AZ:41:ASN:CB	2.62	0.46
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.96	0.46
42:BG:39:ILE:CD1	42:BG:60:LEU:HD11	2.44	0.46
57:DY:28:LYS:CD	57:DY:39:VAL:HG22	2.40	0.46
32:B6:5:VAL:HB	32:B6:8:LYS:CB	2.45	0.46
42:DG:143:GLU:O	42:DG:144:ILE:HG22	2.15	0.46
41:DF:23:ASP:O	41:DF:115:ALA:HA	2.14	0.46
52:BT:28:VAL:HG13	52:BT:46:GLU:CA	2.35	0.46
52:DT:28:VAL:CG1	52:DT:88:ILE:HD11	2.46	0.46
46:BN:23:LEU:HD21	46:BN:102:ALA:CB	2.45	0.46
19:CS:16:LEU:CD1	19:CS:16:LEU:H	2.09	0.46
51:BS:29:PHE:CD1	51:BS:29:PHE:C	2.88	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1528:A:N1	36:BA:1542:A:H2	2.14	0.46
36:BA:1449:A:N3	36:BA:1529:G:H1'	2.30	0.46
48:DP:47:ASP:HB3	48:DP:48:PRO:C	2.35	0.46
4:CD:12:CYS:O	4:CD:33:MET:CE	2.63	0.46
50:DR:117:VAL:CG2	50:DR:118:GLU:H	2.22	0.46
21:AU:12:LYS:HG2	21:AU:22:ARG:CB	2.45	0.46
12:AL:33:ARG:O	12:AL:84:LEU:HD22	2.15	0.46
58:DZ:165:VAL:CG1	58:DZ:166:SER:N	2.74	0.46
46:BN:71:ILE:HG21	46:BN:84:LYS:HB3	1.98	0.46
17:AQ:69:LYS:O	17:AQ:70:ARG:HD2	2.15	0.46
34:D8:49:VAL:O	34:D8:50:LEU:HB3	2.14	0.46
40:BE:144:ARG:HB3	40:BE:145:LYS:H	1.54	0.46
1:AA:1255:G:H3'	1:AA:1279:A:H61	1.80	0.46
31:D5:16:ARG:NH1	31:D5:17:ASP:OD1	2.49	0.46
43:DH:157:TYR:O	43:DH:158:HIS:CG	2.69	0.46
58:BZ:110:GLY:HA2	58:BZ:146:ILE:HG22	1.98	0.46
20:AT:84:LEU:C	20:AT:86:ARG:N	2.68	0.46
36:BA:1495:A:C4	36:BA:1496:A:H2	2.33	0.46
22:CW:4:C:N4	22:CW:5:G:O6	2.49	0.46
1:CA:1499:A:C1'	1:CA:1520:G:H5'	2.45	0.46
40:BE:9:VAL:CG1	40:BE:25:VAL:O	2.63	0.46
36:DA:2502:G:H5"	36:DA:2503:A:C5'	2.42	0.46
36:BA:478:A:C6	36:BA:480:A:C6	3.04	0.46
1:AA:1048:G:P	14:AN:4:LYS:HB2	2.54	0.46
52:BT:107:ASP:H	52:BT:110:ILE:CG1	2.28	0.46
37:BB:80:U:O2'	37:BB:81:G:H5"	2.16	0.46
36:BA:2688:U:H1'	36:BA:2721:A:H62	1.81	0.46
36:BA:2720:U:C2	36:BA:2721:A:C8	3.04	0.46
58:BZ:133:ILE:O	58:BZ:133:ILE:HG22	2.16	0.46
18:AR:53:ARG:NH1	18:AR:60:ALA:HA	2.30	0.46
4:AD:152:SER:O	4:AD:154:ASN:N	2.48	0.46
1:AA:625:G:O2'	1:AA:626:U:H5'	2.15	0.46
38:BC:84:LYS:N	38:BC:84:LYS:HD2	2.30	0.46
38:DC:84:LYS:HD2	38:DC:84:LYS:N	2.30	0.46
37:DB:60:C:O2'	37:DB:61:G:H5'	2.15	0.46
6:CF:30:LEU:HD21	6:CF:65:VAL:HG11	1.97	0.46
1:CA:707:C:H2'	1:CA:708:C:H6	1.81	0.46
41:BF:167:ALA:HB1	41:BF:173:VAL:CG1	2.46	0.46
36:DA:2406:U:C2	48:DP:72:PRO:HB2	2.51	0.46
6:CF:69:GLU:HG2	6:CF:70:ASP:N	2.30	0.46
36:BA:2544:G:O5'	36:BA:2544:G:H8	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2807:G:C3'	36:BA:2808:U:H5"	2.45	0.46
36:BA:2886:G:H2'	36:BA:2887:U:C6	2.50	0.46
36:DA:1750:G:O2'	36:DA:1751:C:H5'	2.15	0.46
46:BN:15:LEU:HD13	46:BN:16:ILE:N	2.31	0.46
6:CF:75:LEU:O	6:CF:79:LEU:HB2	2.15	0.46
36:BA:1668:A:N3	36:BA:1670:C:C4	2.84	0.46
36:BA:2533:A:H2'	36:BA:2534:A:O4'	2.15	0.46
36:BA:57:C:H2'	36:BA:58:G:O4'	2.14	0.46
1:CA:82:U:H6	1:CA:83:U:H5	1.63	0.46
36:DA:2147:G:H2'	36:DA:2148:G:O5'	2.15	0.46
11:CK:125:PHE:C	11:CK:127:LYS:H	2.19	0.46
25:AZ:189:ARG:HB2	25:AZ:192:GLU:OE2	2.16	0.46
13:AM:8:GLU:OE1	13:AM:22:ILE:HG13	2.15	0.46
34:D8:62:LEU:HG	34:D8:62:LEU:H	1.52	0.46
57:BY:28:LYS:HB3	57:BY:37:VAL:HB	1.96	0.46
49:DQ:141:GLN:NE2	58:DZ:72:ARG:HG2	2.30	0.46
48:BP:24:GLY:HA2	48:BP:33:ARG:NH1	2.28	0.46
42:BG:11:TYR:CG	42:BG:12:TYR:N	2.83	0.46
49:BQ:141:GLN:HB3	58:BZ:99:TYR:CD1	2.50	0.46
40:DE:65:GLY:HA2	40:DE:70:ALA:CB	2.45	0.46
24:AY:64:U:C4'	25:AZ:392:GLY:H	2.27	0.46
58:DZ:151:HIS:ND1	58:DZ:152:ALA:N	2.64	0.46
54:DV:47:VAL:O	54:DV:49:THR:O	2.33	0.46
32:D6:52:VAL:O	32:D6:53:LYS:O	2.34	0.46
36:BA:1058:G:C3'	36:BA:1059:G:H5"	2.46	0.46
53:BU:90:VAL:CG1	53:BU:91:ASP:H	2.23	0.46
8:AH:85:ARG:HG3	8:AH:85:ARG:HH11	1.79	0.46
2:AB:114:ARG:HH11	2:AB:118:LEU:CD2	2.21	0.46
1:AA:973:G:H3'	1:AA:974:A:H5"	1.97	0.46
20:AT:18:GLN:HG2	20:AT:22:ARG:HH12	1.79	0.46
41:BF:100:THR:O	41:BF:100:THR:HG22	2.16	0.46
13:CM:120:LYS:HA	13:CM:120:LYS:NZ	2.31	0.46
43:BH:88:LEU:HD13	43:BH:130:ARG:HG2	1.96	0.46
58:DZ:165:VAL:HG12	58:DZ:166:SER:H	1.78	0.46
8:CH:85:ARG:HG3	8:CH:85:ARG:HH11	1.79	0.46
16:CP:22:THR:HG23	16:CP:23:ASP:N	2.31	0.46
12:AL:25:PRO:C	12:AL:27:LEU:N	2.68	0.46
36:DA:2648:C:H2'	36:DA:2649:U:C6	2.50	0.46
36:DA:2464:C:O2'	36:DA:2465:C:P	2.73	0.46
1:CA:1127:G:H1	1:CA:1145:C:H42	1.62	0.46
36:DA:1496:A:H8	36:DA:1498:C:N3	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:16:ALA:C	15:AO:18:PHE:H	2.16	0.46
43:BH:20:ALA:CB	43:BH:21:PRO:CD	2.92	0.46
5:CE:144:THR:N	5:CE:147:ASP:OD1	2.45	0.46
40:DE:79:ARG:NH1	40:DE:79:ARG:CG	2.78	0.46
43:DH:19:VAL:CG1	43:DH:20:ALA:N	2.78	0.46
25:AZ:187:LYS:H	25:AZ:187:LYS:CD	2.29	0.46
2:CB:134:GLU:C	2:CB:136:VAL:N	2.67	0.46
35:D9:17:ILE:CG2	35:D9:18:ARG:H	2.29	0.46
36:DA:1336:A:H2'	36:DA:1337:G:C8	2.51	0.46
36:DA:958:U:H5"	49:DQ:14:ARG:HD2	1.97	0.46
36:DA:2688:U:H1'	36:DA:2721:A:H62	1.79	0.46
9:CI:114:TYR:CE2	10:CJ:59:SER:HA	2.48	0.46
39:BD:112:GLN:O	39:BD:115:GLN:HB2	2.16	0.46
39:BD:142:VAL:HG21	39:BD:191:ALA:HB1	1.98	0.46
31:B5:52:TYR:CD1	31:B5:52:TYR:O	2.68	0.46
34:D8:30:ARG:CZ	36:DA:2419:U:O4	2.64	0.46
39:DD:16:MET:HG3	39:DD:206:LEU:O	2.16	0.46
40:BE:199:ARG:CB	40:BE:199:ARG:HH11	2.29	0.46
36:BA:2406:U:C2	48:BP:72:PRO:HB2	2.51	0.46
27:D1:56:GLN:CB	27:D1:87:PRO:HB3	2.45	0.46
20:AT:61:SER:O	20:AT:65:LYS:HG2	2.15	0.46
2:CB:239:VAL:O	2:CB:240:GLN:HB3	2.16	0.46
3:CC:166:GLU:OE1	3:CC:166:GLU:HA	2.15	0.46
40:BE:47:VAL:HG21	40:BE:86:PRO:HD2	1.97	0.46
36:DA:1668:A:H1'	36:DA:1670:C:C5	2.51	0.46
55:BW:10:VAL:HG23	55:BW:101:SER:O	2.15	0.46
1:CA:511:C:HO2'	1:CA:512:U:H6	1.62	0.46
23:AX:27:A:H8	23:AX:27:A:OP2	1.98	0.46
4:CD:86:LYS:HE3	4:CD:86:LYS:HA	1.97	0.46
44:DJ:91:UNK:C	44:DJ:93:UNK:N	2.78	0.46
45:DK:97:UNK:CB	45:DK:134:UNK:HA	2.46	0.46
25:CZ:375:ILE:HG13	25:CZ:376:LYS:HG3	1.97	0.46
36:BA:2750:A:OP2	43:BH:62:LYS:HE2	2.16	0.46
15:AO:7:GLU:O	15:AO:11:VAL:HG23	2.14	0.46
36:BA:1142:U:H6	36:BA:1142:U:O5'	1.99	0.46
36:DA:2792:G:O2'	36:DA:2793:G:H5'	2.16	0.46
1:CA:877:C:O2'	1:CA:878:G:H5'	2.16	0.46
46:BN:27:ALA:HB3	46:BN:106:MET:HE1	1.97	0.46
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.51	0.46
39:DD:30:GLU:HA	39:DD:83:GLU:OE1	2.16	0.46
36:DA:1598:C:O2	36:DA:1598:C:H2'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:47:ASN:CB	28:D2:51:ARG:HG3	2.43	0.46
28:D2:67:LYS:HE2	28:D2:71:ASN:HD22	1.79	0.46
24:CY:5:G:H5'	24:CY:5:G:H8	1.79	0.46
34:B8:13:ARG:HA	48:BP:63:PRO:HA	1.98	0.46
36:BA:2392:A:H5'	36:BA:2392:A:N3	2.30	0.46
36:DA:2101:G:H3'	36:DA:2102:U:H5"	1.97	0.46
23:CX:11:U:C2'	23:CX:12:A:OP1	2.64	0.46
57:BY:73:ARG:O	57:BY:74:PRO:O	2.33	0.46
2:AB:187:LEU:CD1	2:AB:205:ASP:HA	2.46	0.46
43:BH:157:TYR:O	43:BH:158:HIS:CG	2.68	0.46
41:DF:177:ALA:HB1	41:DF:178:PRO:CD	2.44	0.46
2:CB:18:GLY:O	2:CB:19:HIS:HB2	2.16	0.46
36:BA:271(L):U:H5"	36:BA:271(M):G:C5'	2.32	0.46
40:BE:40:GLU:O	40:BE:41:LYS:HB3	2.16	0.46
26:B0:70:GLN:NE2	26:B0:80:HIS:NE2	2.64	0.46
37:DB:8:U:C5'	37:DB:8:U:H6	2.15	0.46
36:BA:638:G:C6	36:BA:639:U:N3	2.84	0.46
1:CA:973:G:C4	10:CJ:55:LYS:HE2	2.51	0.46
54:BV:47:VAL:O	54:BV:49:THR:O	2.34	0.46
38:DC:78:ALA:H	38:DC:115:ALA:CB	2.28	0.46
10:CJ:33:GLN:H	10:CJ:75:ILE:HD11	1.81	0.46
1:AA:1373:G:H5"	7:AG:36:LYS:HB2	1.98	0.46
1:AA:375:U:C2	1:AA:376:G:C8	3.04	0.46
43:DH:88:LEU:HD13	43:DH:130:ARG:HG2	1.97	0.46
25:CZ:193:ASN:O	25:CZ:195:TRP:N	2.48	0.46
35:B9:27:CYS:HB3	35:B9:32:HIS:HB2	1.97	0.46
4:CD:187:ARG:HG2	4:CD:188:LEU:N	2.31	0.46
34:B8:14:VAL:CG2	34:B8:22:VAL:HG13	2.45	0.46
2:CB:7:VAL:O	2:CB:11:LEU:CB	2.60	0.46
53:DU:11:ARG:O	53:DU:15:LYS:HG2	2.15	0.46
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.49	0.46
25:AZ:65:THR:HG22	25:AZ:80:VAL:HG13	1.95	0.46
36:BA:2801(A):A:H5'	36:BA:2802:G:H8	1.78	0.46
46:BN:34:LEU:HD11	46:BN:116:LEU:HB3	1.97	0.46
58:BZ:28:MET:O	58:BZ:34:ASN:HA	2.15	0.46
11:CK:48:ILE:HD11	11:CK:67:ASP:HB2	1.96	0.46
29:D3:47:VAL:HG11	29:D3:56:VAL:HG21	1.98	0.46
52:BT:92:GLY:O	52:BT:93:ARG:C	2.54	0.46
22:CV:59:U:H2'	22:CV:60:U:C6	2.50	0.46
36:BA:582:G:H2'	36:BA:583:G:H8	1.81	0.46
58:BZ:150:LEU:HD21	58:BZ:172:ALA:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2787:C:H1'	40:DE:61:ARG:CD	2.46	0.46
19:CS:43:GLU:C	19:CS:45:VAL:N	2.69	0.46
52:BT:3:ARG:HH11	52:BT:6:LEU:HD13	1.80	0.46
34:B8:20:GLY:O	34:B8:57:ARG:HD3	2.16	0.46
49:DQ:67:ARG:NH1	49:DQ:102:VAL:HB	2.30	0.46
10:CJ:29:ARG:HG2	10:CJ:29:ARG:O	2.16	0.46
3:AC:135:LYS:O	3:AC:138:VAL:HG13	2.16	0.46
1:CA:542:G:P	4:CD:10:ARG:NH2	2.88	0.46
6:AF:72:VAL:HG22	6:AF:72:VAL:O	2.15	0.46
58:DZ:103:ARG:CG	58:DZ:138:GLU:HG2	2.45	0.46
1:AA:137:C:H2'	1:AA:137:C:O2	2.15	0.46
36:DA:7:G:H2'	36:DA:8:A:C8	2.51	0.46
2:AB:239:VAL:O	2:AB:240:GLN:HB3	2.15	0.46
53:DU:76:TYR:C	53:DU:76:TYR:CD1	2.89	0.46
46:DN:96:GLU:O	46:DN:100:GLU:HG3	2.15	0.46
36:BA:535:C:O2'	36:BA:536:A:H5'	2.15	0.46
1:CA:617:G:H4'	16:CP:44:THR:O	2.16	0.46
38:DC:189:ILE:O	38:DC:193:ILE:HG13	2.16	0.46
36:BA:189:G:H2'	36:BA:205:G:N2	2.30	0.46
1:AA:567:G:H2'	1:AA:568:G:O4'	2.16	0.46
36:BA:39:C:O2'	36:BA:40:C:H5'	2.14	0.46
1:AA:499:A:H4'	1:AA:500:G:H5'	1.98	0.46
36:DA:2758:A:C2	36:DA:2759:G:H1'	2.50	0.46
24:AY:20:H2U:H4'	24:AY:21:A:O5'	2.16	0.46
38:BC:130:ILE:HG22	38:BC:130:ILE:O	2.14	0.46
36:DA:2474:C:O2	36:DA:2474:C:H2'	2.15	0.46
36:BA:1064:C:C3'	36:BA:1065:U:C5'	2.94	0.46
25:AZ:355:LEU:CD2	25:AZ:370:PHE:CD2	2.98	0.46
39:BD:27:THR:HG21	39:BD:81:ALA:HB3	1.97	0.46
56:BX:27:THR:HG22	56:BX:80:ILE:CB	2.46	0.46
36:DA:83:G:O2'	36:DA:84:A:C8	2.59	0.46
20:AT:53:LEU:HD22	20:AT:100:ILE:O	2.16	0.46
20:AT:53:LEU:N	20:AT:53:LEU:HD12	2.31	0.46
32:B6:45:LYS:HZ2	32:B6:45:LYS:HB3	1.80	0.46
36:BA:2312:U:H5'	42:BG:73:ALA:HA	1.98	0.46
52:BT:28:VAL:CG1	52:BT:88:ILE:HD11	2.46	0.46
1:CA:976:G:H5'	1:CA:1358:U:O2'	2.16	0.46
46:DN:58:ASP:C	46:DN:60:ILE:N	2.62	0.46
31:B5:51:TYR:N	31:B5:56:LYS:NZ	2.64	0.46
36:BA:1464:C:C2	36:BA:1465:G:C8	3.04	0.46
36:BA:812:C:H5'	48:BP:25:SER:HA	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:87:ILE:HG21	47:BO:91:LEU:HA	1.96	0.46
40:DE:48:GLN:HA	40:DE:80:GLU:HA	1.97	0.46
40:BE:167:VAL:HG11	40:BE:188:VAL:HA	1.98	0.46
36:BA:649:G:H2'	36:BA:650:C:C6	2.51	0.46
48:BP:84:ASN:HA	48:BP:116:GLY:CA	2.45	0.46
53:DU:61:TRP:CD2	53:DU:94:ASN:HA	2.51	0.46
40:BE:96:PHE:O	40:BE:175:VAL:HG11	2.16	0.46
48:BP:95:VAL:O	48:BP:125:VAL:HA	2.16	0.46
25:CZ:324:LYS:HD3	25:CZ:365:GLY:CA	2.42	0.46
50:DR:29:LEU:HD11	50:DR:52:ILE:CD1	2.45	0.46
36:DA:2133:G:C2	36:DA:2157:G:O6	2.69	0.46
26:D0:43:THR:HG22	36:DA:2331:G:O3'	2.16	0.46
4:AD:5:ILE:O	4:AD:5:ILE:HG22	2.14	0.46
1:CA:1347:G:O2'	1:CA:1348:U:P	2.74	0.46
1:CA:1065:U:H6	1:CA:1190:G:N2	2.13	0.46
4:CD:171:GLY:C	4:CD:173:TRP:H	2.19	0.46
52:BT:23:ARG:HA	52:BT:52:ILE:HD11	1.98	0.46
52:DT:23:ARG:HA	52:DT:52:ILE:HD11	1.98	0.46
1:CA:375:U:OP1	16:CP:69:THR:HG21	2.16	0.46
4:CD:200:GLU:C	4:CD:202:LEU:H	2.19	0.46
1:AA:266:G:O2'	1:AA:267:C:OP2	2.29	0.46
36:BA:1803:A:O3'	39:BD:259:THR:HG22	2.16	0.46
22:AW:4:C:N4	22:AW:5:G:O6	2.49	0.46
25:CZ:28:THR:HG23	25:CZ:79:HIS:CE1	2.50	0.46
37:DB:56:G:H4'	37:DB:57:A:H8	1.80	0.46
9:AI:114:TYR:CE2	10:AJ:59:SER:HA	2.44	0.46
25:AZ:378:VAL:O	25:AZ:380:LEU:HG	2.16	0.46
1:CA:1216:G:H5"	14:CN:5:ALA:HB2	1.98	0.46
2:CB:127:ILE:HG22	2:CB:128:GLU:N	2.31	0.46
41:BF:84:VAL:C	41:BF:86:GLY:H	2.19	0.46
36:BA:192:C:O2'	36:BA:802:A:N3	2.44	0.46
9:CI:118:LYS:O	9:CI:119:ALA:CB	2.64	0.46
38:DC:74:VAL:CG1	38:DC:75:LEU:N	2.78	0.46
41:BF:167:ALA:O	41:BF:168:ARG:C	2.54	0.46
1:CA:473:G:H2'	1:CA:474:G:C8	2.48	0.46
36:DA:1786:A:H2	36:DA:2606:C:H1'	1.79	0.46
36:DA:590:A:H2'	36:DA:591:C:C6	2.51	0.46
2:CB:25:ASN:O	2:CB:27:LYS:N	2.49	0.46
3:AC:107:GLN:NE2	3:AC:107:GLN:H	2.13	0.46
25:CZ:104:LEU:CD2	25:CZ:120:ILE:HD11	2.45	0.46
6:AF:38:GLU:O	6:AF:39:LYS:C	2.53	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:76:TYR:C	53:BU:76:TYR:CD1	2.88	0.46
53:BU:66:ASN:ND2	53:BU:76:TYR:N	2.64	0.46
25:AZ:372:VAL:HG12	25:AZ:373:GLU:N	2.31	0.46
11:AK:125:PHE:C	11:AK:127:LYS:H	2.18	0.46
46:DN:120:LEU:C	46:DN:121:LYS:HD2	2.35	0.46
1:AA:312:C:H2'	1:AA:313:A:C8	2.51	0.46
5:AE:24:ARG:NH1	23:AX:27:A:N3	2.63	0.46
27:D1:35:THR:HG22	36:DA:2433:A:C2	2.51	0.46
50:DR:10:LEU:O	50:DR:11:ASN:HB2	2.15	0.46
19:AS:51:VAL:O	19:AS:57:HIS:HA	2.16	0.46
4:AD:119:GLN:HG3	4:AD:123:HIS:CD2	2.50	0.46
36:BA:2171:A:O2'	36:BA:2172:U:C5	2.67	0.46
1:AA:516:U:C4	1:AA:517:G:C6	3.04	0.46
56:BX:14:SER:H	56:BX:17:ALA:HB3	1.80	0.46
48:DP:57:THR:OG1	48:DP:58:THR:N	2.48	0.46
57:DY:28:LYS:HD2	57:DY:37:VAL:HG21	1.97	0.46
57:DY:81:LYS:NZ	57:DY:99:CYS:SG	2.85	0.46
34:B8:62:LEU:H	34:B8:62:LEU:HG	1.55	0.46
20:AT:98:PRO:O	20:AT:99:LEU:O	2.33	0.46
36:DA:2762:G:H2'	36:DA:2763:G:C5'	2.45	0.46
26:B0:10:THR:CG2	26:B0:11:ARG:N	2.79	0.46
1:CA:1281:U:C5'	1:CA:1282:C:H5	2.09	0.46
48:DP:7:ARG:HB3	48:DP:8:PRO:CD	2.46	0.46
48:DP:7:ARG:HB3	48:DP:8:PRO:HD3	1.98	0.46
19:CS:16:LEU:HB3	19:CS:20:LEU:HG	1.96	0.46
55:BW:4:LYS:CG	55:BW:5:ALA:N	2.77	0.46
36:BA:321:G:OP2	41:BF:135:LYS:HD3	2.16	0.46
36:BA:339:U:O2'	36:BA:340:A:H5'	2.15	0.46
31:B5:42:PRO:HB2	36:BA:2815:C:O2'	2.16	0.46
36:DA:2298:A:H2'	36:DA:2299:G:O4'	2.15	0.46
51:DS:28:VAL:CG1	51:DS:29:PHE:H	2.25	0.46
55:DW:4:LYS:CG	55:DW:5:ALA:N	2.78	0.46
40:BE:65:GLY:HA2	40:BE:70:ALA:CB	2.45	0.46
48:DP:84:ASN:HA	48:DP:116:GLY:CA	2.46	0.46
24:AY:3:G:H5'	24:AY:3:G:C8	2.48	0.46
54:DV:47:VAL:O	54:DV:47:VAL:HG23	2.16	0.46
40:BE:114:ALA:HB3	40:BE:160:TYR:HB3	1.98	0.46
12:CL:102:ARG:NH1	12:CL:102:ARG:CG	2.75	0.46
58:DZ:30:ASN:HD22	58:DZ:31:ARG:N	2.13	0.46
43:DH:55:PRO:HG2	43:DH:61:HIS:HD2	1.81	0.46
25:CZ:191:GLY:HA3	25:CZ:197:ASP:OD2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:50:LEU:C	34:B8:53:PRO:CD	2.84	0.46
8:CH:4:ASP:OD2	8:CH:7:ALA:HB2	2.16	0.46
2:CB:7:VAL:HG13	2:CB:11:LEU:HD12	1.97	0.46
4:AD:187:ARG:HG2	4:AD:188:LEU:N	2.30	0.46
39:DD:186:HIS:HD2	39:DD:188:GLU:HB2	1.79	0.46
36:BA:442:G:O4'	41:BF:46:ARG:HD3	2.15	0.46
22:AW:1:G:C2	22:AW:73:A:C2	3.04	0.46
36:BA:1009:A:OP2	46:BN:37:LYS:NZ	2.38	0.46
19:CS:29:ARG:O	19:CS:31:ILE:HG22	2.15	0.46
4:CD:126:ILE:CG2	4:CD:127:THR:N	2.79	0.46
57:DY:36:ALA:HB2	57:DY:68:HIS:HA	1.96	0.46
36:DA:648:G:O2'	36:DA:649:G:H5'	2.16	0.46
48:DP:83:VAL:HG23	48:DP:105:LEU:CD2	2.46	0.46
40:BE:117:MET:HA	40:BE:122:PHE:N	2.29	0.46
5:AE:6:PHE:CD1	5:AE:6:PHE:N	2.83	0.46
52:DT:101:PHE:HE2	52:DT:113:LYS:HG2	1.80	0.46
12:CL:43:VAL:HG21	12:CL:93:LEU:HD22	1.96	0.46
42:DG:30:GLU:O	42:DG:31:VAL:HB	2.16	0.46
1:AA:1442(A):G:O2'	1:AA:1442(B):A:OP2	2.31	0.46
36:DA:2360:A:O2'	36:DA:2361:A:C5'	2.64	0.46
5:CE:6:PHE:N	5:CE:6:PHE:CD1	2.84	0.46
36:BA:1208:C:C2'	36:BA:1208:C:O2	2.64	0.46
46:DN:5:VAL:HG12	46:DN:7:LYS:HG3	1.97	0.46
12:CL:57:LYS:HA	12:CL:67:THR:HA	1.97	0.46
3:CC:30:ARG:HH21	3:CC:31:HIS:HE1	1.62	0.46
10:CJ:35:SER:O	10:CJ:36:GLY:O	2.34	0.46
36:DA:1453:U:O4'	50:DR:63:ARG:HD3	2.16	0.46
36:BA:2219:G:C2'	36:BA:2220:G:H5'	2.46	0.46
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.16	0.46
36:DA:774:A:H2	36:DA:787:U:O2'	1.99	0.46
49:BQ:1:MET:HE2	49:BQ:44:ALA:O	2.15	0.46
36:BA:1010:A:H1'	36:BA:1153:C:C1'	2.46	0.46
47:BO:97:ARG:HH21	47:BO:99:PHE:HE1	1.64	0.46
39:BD:276:LYS:CA	39:BD:276:LYS:HE2	2.46	0.46
1:CA:593:G:O2'	1:CA:594:G:H5'	2.16	0.46
36:DA:994:C:OP1	53:DU:53:ARG:NH2	2.49	0.46
39:BD:98:VAL:HG12	39:BD:98:VAL:O	2.16	0.46
24:CY:21:A:H5'	24:CY:22:G:OP1	2.16	0.46
11:CK:127:LYS:O	11:CK:129:SER:N	2.48	0.46
1:AA:397:A:C8	1:AA:548:G:OP2	2.69	0.46
1:AA:987:G:O2'	1:AA:988:G:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:152:ARG:HB3	8:AH:43:GLY:HA3	1.98	0.46
36:DA:1064:C:H3'	36:DA:1065:U:C5'	2.46	0.46
36:DA:1064:C:C3'	36:DA:1065:U:C5'	2.94	0.46
36:BA:1469:A:O2'	36:BA:1470:G:H5'	2.16	0.46
5:CE:82:VAL:HG21	5:CE:138:ALA:HA	1.97	0.46
3:AC:60:ALA:H	3:AC:63:ASN:HD21	1.64	0.46
12:CL:34:ARG:HG2	12:CL:35:GLY:N	2.30	0.46
1:AA:414:A:H2'	1:AA:415:A:O4'	2.15	0.46
55:BW:75:TYR:N	55:BW:75:TYR:CD1	2.84	0.46
8:CH:30:ARG:CZ	8:CH:30:ARG:HB3	2.45	0.46
36:BA:1983:C:O2'	36:BA:1984:G:H5'	2.16	0.46
22:CV:18:G:H2'	22:CV:57:G:N2	2.31	0.46
1:CA:414:A:H2'	1:CA:415:A:O4'	2.16	0.46
36:BA:1600:C:C2'	36:BA:1601:G:H5'	2.45	0.46
28:D2:25:VAL:HA	28:D2:29:LYS:HG2	1.97	0.46
31:B5:4:HIS:C	36:BA:2056:G:N2	2.68	0.46
20:AT:50:GLU:HB2	20:AT:99:LEU:HD13	1.98	0.46
51:DS:89:ARG:CB	51:DS:92:TYR:HB3	2.41	0.46
32:B6:19:ARG:CG	32:B6:20:ASN:N	2.53	0.46
36:DA:2602:A:H4'	36:DA:2603:G:C5'	2.45	0.46
42:DG:47:LYS:NZ	42:DG:81:LYS:HB3	2.31	0.46
49:BQ:60:ARG:HH11	49:BQ:60:ARG:CB	2.10	0.46
22:CW:18:G:N1	22:CW:55:U:H1'	2.10	0.46
36:DA:271(K):U:H3'	36:DA:271(L):U:H5'	1.97	0.46
36:DA:1449:A:N3	36:DA:1529:G:H1'	2.31	0.46
36:BA:2416:C:H2'	36:BA:2417:C:C6	2.51	0.46
41:DF:32:LEU:HD23	41:DF:32:LEU:O	2.16	0.46
48:DP:84:ASN:HA	48:DP:116:GLY:HA3	1.96	0.46
25:AZ:300:ARG:C	25:AZ:302:GLN:H	2.18	0.46
54:DV:91:TYR:CD1	54:DV:91:TYR:N	2.83	0.46
36:DA:2580:U:H4'	40:DE:130:GLY:CA	2.45	0.46
13:CM:84:ILE:HG22	13:CM:84:ILE:O	2.16	0.46
1:AA:963:G:N2	10:AJ:55:LYS:CE	2.71	0.46
36:DA:1657:C:H2'	36:DA:1658:C:C6	2.51	0.46
1:CA:1373:G:H5"	7:CG:36:LYS:HB2	1.98	0.46
43:DH:50:VAL:HG12	43:DH:51:ARG:N	2.30	0.46
25:AZ:25:THR:HB	60:AZ:501:GDP:O2B	2.15	0.46
11:AK:126:ARG:C	11:AK:128:ALA:N	2.68	0.46
1:CA:376:G:P	16:CP:67:THR:HG21	2.56	0.46
19:CS:29:ARG:NH1	19:CS:30:LEU:HB2	2.31	0.46
54:DV:29:PRO:HA	54:DV:61:VAL:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:74:C:O2'	22:CW:75:C:H5'	2.16	0.46
22:CW:71:G:O2'	36:DA:1851:U:O2'	2.20	0.46
36:BA:363(F):A:O2'	36:BA:364:C:C5	2.69	0.46
11:AK:48:ILE:HD11	11:AK:67:ASP:HB2	1.98	0.46
12:AL:51:ALA:O	12:AL:52:LEU:HD22	2.15	0.46
36:DA:1221:C:H2'	36:DA:1221(A):C:C6	2.51	0.46
36:BA:481:G:H1'	36:BA:506:G:N2	2.30	0.46
24:AY:62:U:H2'	24:AY:63:C:O4'	2.16	0.46
52:DT:57:PHE:HE1	52:DT:79:HIS:HD1	1.64	0.46
40:DE:176:ILE:CG2	40:DE:178:GLU:HB3	2.45	0.46
37:BB:96:U:H2'	37:BB:97:G:C8	2.50	0.46
36:BA:64:A:H5'	56:BX:64:LYS:HE3	1.98	0.46
56:BX:64:LYS:HD3	56:BX:73:ARG:NH2	2.31	0.46
35:B9:17:ILE:HG22	35:B9:18:ARG:H	1.81	0.46
11:AK:59:TYR:O	11:AK:62:GLN:HB3	2.15	0.46
2:CB:122:PHE:HA	2:CB:127:ILE:HD11	1.98	0.46
1:CA:972:C:H4'	10:CJ:57:LYS:HB2	1.98	0.46
36:DA:2121:G:N1	36:DA:2176:A:C2	2.77	0.46
36:BA:2176:A:H4'	38:BC:213:TYR:CD1	2.51	0.46
48:DP:6:LEU:H	48:DP:6:LEU:CD2	2.26	0.46
11:CK:99:GLN:HG2	11:CK:105:VAL:HG21	1.98	0.46
36:BA:878:A:H2'	36:BA:879:G:O4'	2.16	0.46
36:DA:1297:C:O2'	36:DA:1298:C:H5'	2.16	0.46
9:AI:56:LEU:CD2	9:AI:56:LEU:H	2.29	0.46
36:BA:2537:U:H2'	36:BA:2538:C:C6	2.50	0.46
31:B5:22:HIS:HE1	36:BA:2624:G:H1'	1.81	0.46
31:D5:22:HIS:HE1	36:DA:2624:G:H1'	1.80	0.46
36:BA:2886:G:H2'	36:BA:2887:U:H6	1.80	0.46
1:AA:1242:C:O2'	1:AA:1243:C:H5'	2.16	0.46
40:DE:47:VAL:HG23	40:DE:84:PHE:O	2.16	0.46
1:AA:519:C:H2'	1:AA:520:A:O4'	2.16	0.46
1:CA:555:C:H2'	1:CA:556:C:H6	1.80	0.46
36:DA:453:C:H4'	36:DA:472:A:N6	2.31	0.46
1:CA:519:C:H2'	1:CA:520:A:O4'	2.15	0.46
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.51	0.46
36:DA:370:G:C6	36:DA:424:G:N7	2.84	0.46
7:CG:69:VAL:HG21	7:CG:104:LEU:CD1	2.45	0.46
8:CH:53:VAL:HB	8:CH:58:TYR:CD1	2.50	0.46
1:CA:826:C:H2'	1:CA:827:U:H6	1.81	0.46
36:DA:380:U:H2'	36:DA:381:G:H8	1.81	0.46
36:BA:135:G:O2'	36:BA:136:G:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:27:THR:CG2	39:DD:81:ALA:HB1	2.45	0.45
36:DA:779:U:O2'	36:DA:780:G:H5'	2.16	0.45
28:D2:33:MET:O	28:D2:36:ARG:N	2.46	0.45
54:DV:60:GLU:O	54:DV:62:LEU:HD22	2.16	0.45
42:DG:172:LEU:O	42:DG:176:LEU:HB2	2.16	0.45
36:BA:336:C:H4'	57:BY:7:VAL:HG21	1.96	0.45
36:DA:2305:A:C3'	36:DA:2306:C:H5"	2.43	0.45
42:DG:71:THR:CB	42:DG:89:GLY:O	2.61	0.45
52:BT:32:TYR:HD2	52:BT:81:PRO:HB2	1.78	0.45
36:BA:1023:U:H2'	36:BA:1024:G:H5'	1.97	0.45
36:BA:1528(A):A:N6	36:BA:1541:G:C2	2.84	0.45
42:BG:10:LYS:O	42:BG:15:VAL:HG23	2.16	0.45
40:BE:16:ARG:NH1	40:BE:171:GLU:OE1	2.49	0.45
25:AZ:162:GLU:OE2	61:AZ:502:KIR:H151	2.15	0.45
51:BS:106:ARG:HH11	51:BS:108:GLY:H	1.59	0.45
24:CY:1:A:H2'	24:CY:2:G:C8	2.50	0.45
25:CZ:328:GLY:O	25:CZ:329:GLY:O	2.34	0.45
25:CZ:90:LYS:O	25:CZ:93:ILE:HG23	2.16	0.45
12:CL:75:HIS:HA	12:CL:102:ARG:HH22	1.79	0.45
1:AA:1392:G:N2	1:AA:1502:A:C8	2.83	0.45
1:AA:1399:C:C2	1:AA:1502:A:N6	2.84	0.45
1:CA:320:C:H2'	1:CA:321:A:C8	2.51	0.45
12:CL:33:ARG:HD3	12:CL:62:SER:CB	2.45	0.45
36:DA:1058:G:C3'	36:DA:1059:G:H5"	2.46	0.45
10:CJ:81:THR:C	10:CJ:83:GLU:N	2.69	0.45
36:DA:806:C:C5	48:DP:39:LYS:HE2	2.51	0.45
4:CD:3:ARG:HG2	4:CD:3:ARG:HH11	1.81	0.45
25:AZ:143:ASP:HB3	25:AZ:146:LEU:HB2	1.98	0.45
1:AA:978:A:C5	1:AA:1319:A:C2	3.04	0.45
38:DC:66:HIS:CG	38:DC:184:LYS:HD2	2.51	0.45
34:D8:22:VAL:CG2	34:D8:53:PRO:HB2	2.47	0.45
1:CA:1030:C:H41	1:CA:1032:G:N2	2.07	0.45
3:AC:50:ALA:O	3:AC:70:VAL:CG1	2.63	0.45
54:BV:29:PRO:HA	54:BV:61:VAL:O	2.16	0.45
57:DY:31:LEU:HD23	57:DY:36:ALA:C	2.36	0.45
51:BS:83:LYS:CG	51:BS:105:ALA:HB3	2.42	0.45
57:DY:87:LYS:HG3	57:DY:88:LYS:N	2.26	0.45
5:AE:6:PHE:HB2	5:AE:34:VAL:HG22	1.98	0.45
19:AS:43:GLU:C	19:AS:45:VAL:N	2.69	0.45
42:BG:28:VAL:HG12	42:BG:28:VAL:O	2.16	0.45
3:CC:79:ARG:HB2	3:CC:79:ARG:NH1	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:69:ILE:HG13	47:BO:77:ILE:O	2.15	0.45
4:AD:149:ALA:HB3	4:AD:152:SER:OG	2.16	0.45
39:BD:95:LEU:HD12	39:BD:103:ARG:O	2.16	0.45
36:DA:1270:C:H5"	36:DA:1271:G:C5'	2.45	0.45
36:BA:2121:G:H22	36:BA:2176:A:H2	1.61	0.45
36:DA:1286:A:N6	36:DA:1289:C:C2	2.85	0.45
37:DB:96:U:H2'	37:DB:97:G:C8	2.51	0.45
36:DA:201:C:H2'	36:DA:202:U:H5'	1.99	0.45
36:DA:2537:U:H2'	36:DA:2538:C:C6	2.51	0.45
36:BA:2649:U:H2'	36:BA:2650:U:C6	2.51	0.45
36:BA:2583:G:H2'	36:BA:2584:U:O2	2.16	0.45
36:BA:1526:G:H2'	36:BA:1527:G:O4'	2.17	0.45
22:CW:76:A:N6	36:DA:2422:A:O4'	2.49	0.45
36:BA:445:C:O2'	36:BA:446:G:H5'	2.16	0.45
47:DO:103:ALA:HB1	47:DO:105:GLU:OE1	2.16	0.45
1:AA:1097:C:O2'	1:AA:1098:C:H5'	2.16	0.45
41:BF:68:LYS:HB3	41:BF:69:HIS:CD2	2.50	0.45
12:AL:34:ARG:HG2	12:AL:35:GLY:N	2.31	0.45
36:BA:1996:C:H5	47:BO:32:TYR:OH	1.99	0.45
3:CC:159:GLY:O	3:CC:160:ALA:C	2.53	0.45
1:AA:678:U:H2'	1:AA:679:C:C6	2.49	0.45
36:DA:2750:A:OP2	43:DH:62:LYS:HE2	2.16	0.45
36:DA:541:C:O2'	36:DA:542:C:H5'	2.16	0.45
36:DA:1493:C:O2	36:DA:1493:C:H2'	2.15	0.45
4:AD:135:LEU:HD13	4:AD:135:LEU:N	2.32	0.45
45:BK:97:UNK:CB	45:BK:134:UNK:HA	2.46	0.45
53:DU:47:TYR:O	53:DU:51:LYS:HG2	2.17	0.45
30:B4:7:PRO:O	30:B4:8:LYS:CB	2.64	0.45
42:BG:63:ILE:HG22	42:BG:143:GLU:CB	2.40	0.45
56:BX:12:VAL:HA	56:BX:27:THR:O	2.15	0.45
13:CM:2:ALA:HB1	13:CM:4:ILE:CD1	2.46	0.45
28:D2:29:LYS:HZ2	28:D2:32:LEU:HD11	1.80	0.45
25:AZ:11:HIS:O	25:AZ:12:VAL:HG13	2.17	0.45
36:DA:2762:G:H2'	36:DA:2763:G:O4'	2.16	0.45
42:DG:96:ARG:O	42:DG:98:ARG:N	2.49	0.45
32:D6:13:CYS:HA	32:D6:50:ARG:O	2.17	0.45
57:BY:95:LYS:HG3	57:BY:99:CYS:O	2.17	0.45
52:DT:30:VAL:HA	52:DT:43:GLN:O	2.16	0.45
36:DA:1019:U:C2'	36:DA:1021:A:C2	2.99	0.45
31:B5:48:GLU:O	31:B5:49:CYS:CB	2.64	0.45
41:DF:142:TRP:C	41:DF:142:TRP:CE3	2.90	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:171:PRO:C	41:DF:173:VAL:H	2.20	0.45
40:BE:52:LEU:CD1	52:BT:1:MET:HG2	2.36	0.45
25:AZ:325:LYS:HE3	25:AZ:331:HIS:CG	2.52	0.45
40:DE:111:ARG:CB	50:DR:2:ARG:NH1	2.72	0.45
32:B6:52:VAL:O	32:B6:53:LYS:O	2.34	0.45
56:DX:28:PHE:CE2	56:DX:92:LEU:HD11	2.50	0.45
12:AL:110:VAL:HG21	12:AL:120:TYR:HB3	1.95	0.45
1:AA:59:A:N3	1:AA:59:A:H2'	2.31	0.45
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.80	0.45
25:CZ:64:ASN:N	25:CZ:83:PRO:HG2	2.31	0.45
1:CA:1442(B):A:C2	52:DT:118:ARG:CZ	2.99	0.45
25:AZ:147:LEU:H	25:AZ:147:LEU:HD22	1.81	0.45
10:CJ:16:LEU:HD11	10:CJ:70:ARG:CG	2.46	0.45
34:D8:49:VAL:CG1	34:D8:53:PRO:HD3	2.44	0.45
48:BP:83:VAL:HG23	48:BP:105:LEU:CD2	2.46	0.45
36:DA:652:C:O2'	36:DA:653:A:O5'	2.33	0.45
52:BT:101:PHE:HE2	52:BT:113:LYS:HG2	1.82	0.45
46:BN:63:THR:O	46:BN:64:GLY:O	2.34	0.45
36:DA:478:A:C6	36:DA:480:A:C6	3.04	0.45
36:BA:271(F):C:O2'	36:BA:271(G):C:H5'	2.16	0.45
52:DT:10:VAL:O	52:DT:12:SER:N	2.47	0.45
36:BA:481:G:P	57:BY:47:LYS:HD3	2.56	0.45
25:AZ:375:ILE:HG13	25:AZ:376:LYS:HG3	1.98	0.45
3:CC:82:GLU:OE1	3:CC:82:GLU:N	2.49	0.45
46:DN:9:VAL:HG12	46:DN:10:GLU:H	1.80	0.45
52:BT:126:ALA:O	52:BT:128:GLU:HG3	2.17	0.45
48:DP:80:TYR:CD1	48:DP:111:ARG:CB	2.98	0.45
10:CJ:58:ASP:O	10:CJ:59:SER:HB3	2.16	0.45
36:BA:1272:A:C2	36:BA:1618:A:C2	3.05	0.45
49:DQ:39:PRO:O	49:DQ:40:ALA:HB2	2.16	0.45
36:DA:729:G:C8	39:DD:208:LYS:HD2	2.51	0.45
36:DA:845:G:O2'	36:DA:846:C:H5	2.00	0.45
36:BA:1259:G:O2'	36:BA:1260:G:H5'	2.16	0.45
36:BA:2584:U:O4'	36:BA:2584:U:O2	2.34	0.45
24:CY:76:A:C8	25:CZ:231:ILE:HG12	2.50	0.45
1:AA:1308:U:OP2	13:AM:99:ARG:HG3	2.16	0.45
5:CE:20:GLN:HB3	5:CE:20:GLN:HE21	1.53	0.45
40:DE:47:VAL:HG21	40:DE:86:PRO:HD2	1.98	0.45
47:BO:105:GLU:O	47:BO:109:LYS:HG2	2.16	0.45
25:CZ:372:VAL:HG12	25:CZ:373:GLU:N	2.30	0.45
46:DN:16:ILE:HG23	46:DN:54:VAL:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.49	0.45
36:BA:2032:G:OP2	36:BA:2454:G:O2'	2.30	0.45
7:CG:75:VAL:HG13	7:CG:145:ALA:HB2	1.98	0.45
39:DD:147:LEU:HD12	39:DD:147:LEU:HA	1.80	0.45
36:DA:189:G:H2'	36:DA:205:G:N2	2.32	0.45
4:CD:122:ARG:HA	4:CD:122:ARG:HD2	1.83	0.45
15:AO:21:ASP:C	15:AO:21:ASP:OD1	2.52	0.45
36:BA:1493:C:O2	36:BA:1493:C:H2'	2.16	0.45
4:AD:60:GLU:OE1	4:AD:60:GLU:HA	2.17	0.45
5:AE:76:ILE:HG13	5:AE:93:PRO:HG3	1.99	0.45
42:DG:41:GLN:HE21	42:DG:155:MET:HB3	1.81	0.45
24:AY:25:C:C2'	24:AY:26:A:C5'	2.78	0.45
28:D2:21:LEU:O	28:D2:64:LEU:HD11	2.15	0.45
34:B8:18:ALA:HB2	36:BA:628:G:H5"	1.98	0.45
36:DA:1301:A:HO2'	36:DA:1302:A:P	2.40	0.45
52:DT:33:LYS:HE2	52:DT:43:GLN:HE21	1.79	0.45
46:BN:99:LEU:O	46:BN:102:ALA:HB3	2.16	0.45
46:DN:99:LEU:O	46:DN:102:ALA:HB3	2.16	0.45
36:BA:2298:A:H2'	36:BA:2299:G:O4'	2.17	0.45
42:DG:107:LEU:HD13	42:DG:178:PHE:CD1	2.52	0.45
41:BF:142:TRP:CE3	41:BF:142:TRP:C	2.89	0.45
4:AD:12:CYS:SG	4:AD:31:CYS:SG	3.14	0.45
4:AD:20:TYR:HD1	4:AD:26:CYS:O	1.99	0.45
25:AZ:251:ASP:HB2	25:AZ:267:VAL:CG1	2.47	0.45
24:AY:76:A:C6	25:AZ:271:GLU:CD	2.89	0.45
34:B8:23:VAL:HA	34:B8:47:LYS:O	2.15	0.45
58:BZ:100:VAL:O	58:BZ:124:ILE:HG12	2.16	0.45
37:BB:106:G:C5'	58:BZ:31:ARG:HG2	2.44	0.45
36:DA:812:C:H5'	48:DP:25:SER:HA	1.97	0.45
51:DS:106:ARG:CB	51:DS:106:ARG:HH11	2.21	0.45
5:AE:112:LEU:HA	5:AE:112:LEU:HD23	1.71	0.45
10:CJ:54:PHE:CE1	10:CJ:55:LYS:HE3	2.51	0.45
54:BV:17:GLY:O	54:BV:18:LEU:HD13	2.15	0.45
50:DR:2:ARG:HH11	50:DR:2:ARG:CG	2.29	0.45
32:D6:53:LYS:HE2	32:D6:54:ILE:HG13	1.99	0.45
27:D1:78:LYS:HE2	27:D1:78:LYS:HB3	1.76	0.45
26:D0:42:GLY:O	26:D0:57:PHE:CG	2.69	0.45
26:D0:43:THR:HG22	36:DA:2331:G:O2'	2.16	0.45
38:BC:118:ASP:CG	38:BC:119:VAL:H	2.20	0.45
36:BA:860:U:O4'	36:BA:860:U:O2	2.31	0.45
25:AZ:155:ARG:HG2	25:AZ:165:GLY:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:59:ILE:HG21	17:CQ:71:PHE:HB3	1.94	0.45
36:BA:1479:G:H5'	36:BA:1558:A:C2	2.51	0.45
46:DN:29:LYS:C	46:DN:31:ALA:N	2.69	0.45
36:DA:2179:C:H4'	36:DA:2180:U:N3	2.30	0.45
52:BT:117:ASP:OD2	52:BT:120:ARG:HG3	2.17	0.45
36:BA:887:A:N3	36:BA:887:A:H2'	2.30	0.45
25:AZ:191:GLY:HA3	25:AZ:197:ASP:OD2	2.16	0.45
58:BZ:27:VAL:HG22	58:BZ:36:LYS:HA	1.99	0.45
55:BW:17:VAL:O	55:BW:19:LEU:N	2.50	0.45
25:CZ:12:VAL:HG23	25:CZ:77:TYR:CD1	2.51	0.45
36:BA:2657:A:H5'	36:BA:2658:C:OP2	2.16	0.45
20:CT:84:LEU:C	20:CT:86:ARG:N	2.67	0.45
36:DA:2779:U:H1'	36:DA:2781:A:C5	2.52	0.45
37:DB:29:A:H2'	37:DB:30:C:H6	1.81	0.45
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HD12	1.97	0.45
50:BR:21:TYR:HB3	50:BR:47:PHE:CD2	2.51	0.45
27:B1:67:ILE:N	27:B1:68:PRO:CD	2.79	0.45
36:BA:1331:A:C2'	36:BA:1332:G:H5"	2.45	0.45
47:DO:34:THR:OG1	47:DO:35:VAL:N	2.50	0.45
1:CA:391:G:H5"	16:CP:8:ARG:NE	2.30	0.45
36:BA:958:U:H5"	49:BQ:14:ARG:HD2	1.99	0.45
36:DA:2870:C:H2'	36:DA:2871:C:O4'	2.17	0.45
36:DA:848:G:O6	36:DA:928:G:H2'	2.16	0.45
36:DA:2289:G:H1'	36:DA:2346:A:H2	1.82	0.45
2:CB:97:TRP:CH2	2:CB:176:GLU:CD	2.87	0.45
10:AJ:8:LEU:CD2	10:AJ:96:ILE:HG22	2.46	0.45
6:CF:12:PRO:HG3	6:CF:55:ASP:CB	2.47	0.45
37:DB:81:G:H2'	37:DB:82:G:H5'	1.98	0.45
36:BA:7:G:H2'	36:BA:8:A:C8	2.51	0.45
36:BA:1771:C:C1'	36:BA:1786:A:H8	2.30	0.45
1:CA:1006:C:N4	1:CA:1024:G:H21	2.14	0.45
36:DA:2788:C:O2'	36:DA:2809:A:N3	2.48	0.45
36:BA:221:A:O2'	36:BA:222:A:OP2	2.28	0.45
25:CZ:339:ARG:HE	25:CZ:352:VAL:CG2	2.29	0.45
2:CB:39:ILE:CG2	2:CB:40:HIS:N	2.79	0.45
9:AI:5:TYR:CG	9:AI:6:GLY:N	2.85	0.45
54:DV:80:GLN:OE1	54:DV:80:GLN:HA	2.15	0.45
47:BO:26:LYS:HB2	47:BO:30:ALA:HB2	1.98	0.45
36:BA:603:A:H1'	36:BA:604:G:OP1	2.17	0.45
24:AY:21:A:H5'	24:AY:22:G:OP1	2.16	0.45
6:AF:76:ALA:O	6:AF:80:ARG:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:70:LYS:O	46:BN:86:PRO:HA	2.16	0.45
17:AQ:83:ASP:CG	17:AQ:84:LEU:N	2.68	0.45
36:DA:171:G:O2'	36:DA:172:C:H5'	2.15	0.45
1:CA:291:C:O2'	1:CA:292:G:H5'	2.17	0.45
1:CA:775:G:O2'	1:CA:776:G:H5'	2.16	0.45
5:CE:55:VAL:O	5:CE:55:VAL:HG12	2.15	0.45
36:DA:227:A:C2	36:DA:2407:G:H1'	2.51	0.45
36:DA:1036:G:O2'	36:DA:1037:G:H5'	2.17	0.45
13:AM:22:ILE:CB	13:AM:25:ILE:HD12	2.47	0.45
34:B8:6:THR:CB	34:B8:11:LYS:HZ1	2.26	0.45
48:BP:57:THR:OG1	48:BP:58:THR:N	2.49	0.45
1:AA:1004:A:C2'	1:AA:1005:A:H5'	2.47	0.45
7:CG:54:THR:HG22	7:CG:56:GLN:N	2.05	0.45
41:DF:157:VAL:HG21	41:DF:194:MET:HG2	1.97	0.45
52:BT:30:VAL:CG2	52:BT:84:GLN:HG3	2.47	0.45
43:BH:84:SER:O	43:BH:85:LYS:HB3	2.16	0.45
52:DT:85:LYS:HZ2	52:DT:85:LYS:HB3	1.73	0.45
36:BA:1884:A:C3'	36:BA:1885:A:H5"	2.46	0.45
2:CB:203:GLY:O	2:CB:204:ASN:C	2.55	0.45
41:DF:37:VAL:HG11	48:DP:7:ARG:HH12	1.81	0.45
42:DG:107:LEU:O	42:DG:108:ASN:CB	2.64	0.45
1:AA:858:G:C5	1:AA:869:G:N7	2.82	0.45
36:DA:1464:C:C2	36:DA:1465:G:C8	3.03	0.45
41:DF:36:VAL:HA	41:DF:101:LEU:HD21	1.98	0.45
55:DW:107:LEU:N	55:DW:107:LEU:CD1	2.76	0.45
26:B0:41:ARG:O	26:B0:57:PHE:CD2	2.69	0.45
43:BH:55:PRO:HG2	43:BH:61:HIS:HD2	1.80	0.45
46:BN:29:LYS:C	46:BN:31:ALA:N	2.70	0.45
36:BA:257:A:H2'	36:BA:258:G:H5'	1.99	0.45
36:BA:2485:G:O2'	36:BA:2486:G:H5'	2.16	0.45
22:CW:1:G:C2	22:CW:73:A:C2	3.05	0.45
36:BA:2864:G:OP1	52:BT:119:LYS:HD2	2.17	0.45
12:AL:43:VAL:HG22	12:AL:55:VAL:CG1	2.47	0.45
36:DA:2572:A:N7	40:DE:145:LYS:HG2	2.32	0.45
1:CA:628:G:O2'	1:CA:629:G:H5'	2.17	0.45
52:DT:90:GLN:C	52:DT:92:GLY:N	2.68	0.45
28:B2:52:ASP:OD1	28:B2:55:ARG:HD2	2.16	0.45
35:B9:15:LYS:HZ2	35:B9:15:LYS:HB3	1.79	0.45
49:BQ:43:THR:HB	49:BQ:45:GLN:HE21	1.81	0.45
39:DD:132:PRO:HG3	39:DD:190:TYR:CZ	2.51	0.45
36:BA:2787:C:H1'	40:BE:61:ARG:CD	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:89:GLY:O	13:AM:93:ARG:HD2	2.16	0.45
4:AD:145:GLU:HG3	4:AD:145:GLU:O	2.15	0.45
38:DC:80:GLY:O	38:DC:83:ILE:HG13	2.16	0.45
25:CZ:31:LEU:HD23	25:CZ:199:ILE:HG23	1.98	0.45
1:AA:1309:G:O2'	1:AA:1310:G:H5'	2.17	0.45
24:CY:75:C:H5	25:CZ:232:THR:HB	1.78	0.45
41:BF:171:PRO:C	41:BF:173:VAL:H	2.19	0.45
49:DQ:81:VAL:HG12	49:DQ:82:ARG:O	2.17	0.45
41:BF:81:PRO:C	41:BF:82:ILE:O	2.52	0.45
2:AB:239:VAL:O	2:AB:240:GLN:CB	2.65	0.45
2:CB:213:LEU:O	2:CB:213:LEU:HD23	2.17	0.45
3:CC:165:THR:CG2	3:CC:165:THR:O	2.65	0.45
2:AB:39:ILE:CG2	2:AB:40:HIS:N	2.79	0.45
36:DA:414:C:H1'	36:DA:1864:U:O2'	2.16	0.45
7:AG:69:VAL:HG21	7:AG:104:LEU:HD13	1.99	0.45
12:AL:41:ARG:NH1	12:AL:41:ARG:HB2	2.31	0.45
1:CA:1222:G:OP1	19:CS:77:THR:HG21	2.15	0.45
33:B7:21:ARG:NH1	33:B7:21:ARG:HG2	2.32	0.45
41:DF:65:TRP:CZ3	41:DF:72:ARG:HB2	2.51	0.45
2:CB:233:SER:HB2	2:CB:234:PRO:HD2	1.98	0.45
1:AA:245:C:O2'	1:AA:246:A:P	2.75	0.45
36:BA:271(U):G:H2'	36:BA:271(V):G:H8	1.81	0.45
36:DA:2540:C:H2'	36:DA:2541:A:O4'	2.17	0.45
36:DA:1512:U:H2'	36:DA:1513:C:C6	2.51	0.45
55:DW:50:VAL:HG22	55:DW:105:VAL:HG23	1.97	0.45
36:DA:2848:G:C8	52:DT:97:ALA:HB2	2.51	0.45
8:AH:126:LYS:O	8:AH:127:LEU:HD22	2.16	0.45
53:BU:47:TYR:O	53:BU:51:LYS:HG2	2.16	0.45
36:DA:975:C:H4'	36:DA:975:C:OP2	2.17	0.45
36:BA:986:C:O2'	36:BA:987:G:H5'	2.17	0.45
11:AK:17:GLY:O	11:AK:80:VAL:HA	2.17	0.45
34:D8:33:ASN:HA	34:D8:36:LYS:HE3	1.97	0.45
25:AZ:5:PHE:CD1	25:AZ:277:LEU:HD22	2.52	0.45
42:DG:53:LEU:N	42:DG:53:LEU:HD22	2.32	0.45
32:D6:20:ASN:O	32:D6:21:TYR:CG	2.69	0.45
2:CB:73:THR:HG22	2:CB:94:ASN:C	2.36	0.45
42:DG:87:PRO:CG	42:DG:88:ILE:H	2.30	0.45
47:DO:104:ARG:C	47:DO:106:LEU:N	2.69	0.45
2:CB:204:ASN:HD22	2:CB:206:ASP:H	1.64	0.45
36:DA:271(K):U:C3'	36:DA:271(L):U:H5'	2.47	0.45
4:AD:59:ARG:NH2	4:AD:62:GLN:HG3	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:811:U:OP2	48:BP:30:THR:HG23	2.16	0.45
58:BZ:99:TYR:CD2	58:BZ:123:ASP:HB3	2.46	0.45
40:BE:89:ASP:CG	40:BE:90:THR:H	2.19	0.45
36:BA:1045:A:N3	36:BA:1047:G:N2	2.65	0.45
1:CA:973:G:H3'	1:CA:974:A:H5"	1.97	0.45
54:BV:16:PRO:O	54:BV:96:ILE:HB	2.17	0.45
36:BA:2580:U:H5'	40:BE:131:ALA:CB	2.38	0.45
36:DA:2579:C:C1'	40:DE:134:ILE:HD13	2.45	0.45
4:AD:23:GLY:O	4:AD:27:TYR:HD2	1.99	0.45
10:AJ:32:ALA:CB	10:AJ:76:ASN:H	2.29	0.45
16:AP:22:THR:HG23	16:AP:23:ASP:N	2.32	0.45
39:BD:43:ARG:NH2	39:BD:44:ASN:ND2	2.55	0.45
4:CD:5:ILE:O	4:CD:5:ILE:HG22	2.15	0.45
25:AZ:145:GLU:O	25:AZ:149:LEU:N	2.39	0.45
11:CK:126:ARG:C	11:CK:128:ALA:N	2.70	0.45
7:CG:15:ASP:OD1	7:CG:16:LEU:N	2.48	0.45
51:DS:18:ILE:HD12	51:DS:18:ILE:H	1.80	0.45
36:DA:2649:U:H2'	36:DA:2650:U:C6	2.52	0.45
58:DZ:79:ARG:O	58:DZ:79:ARG:HG2	2.17	0.45
48:DP:112:LEU:O	48:DP:112:LEU:HD13	2.16	0.45
1:CA:627:G:HO2'	1:CA:628:G:H5'	1.81	0.45
36:DA:676:A:C8	36:DA:2443:C:H1'	2.51	0.45
39:DD:142:VAL:HG23	39:DD:193:VAL:HA	1.98	0.45
7:AG:65:ALA:HB1	7:AG:127:ALA:CB	2.41	0.45
7:CG:65:ALA:HB1	7:CG:127:ALA:CB	2.43	0.45
36:BA:2030:A:H5"	36:BA:2031:A:OP1	2.16	0.45
48:BP:92:GLU:HA	48:BP:123:LEU:HD11	1.97	0.45
40:DE:60:ASN:OD1	40:DE:62:PRO:HD2	2.16	0.45
19:CS:45:VAL:C	19:CS:47:HIS:H	2.20	0.45
50:DR:45:ARG:O	50:DR:46:GLY:C	2.53	0.45
41:BF:185:ASP:CA	41:BF:188:ARG:HG2	2.45	0.45
1:CA:1315:U:O2	1:CA:1360:A:H2	1.99	0.45
38:BC:90:GLY:O	38:BC:157:LYS:HE3	2.17	0.45
1:AA:390:C:H2'	1:AA:391:G:C8	2.52	0.45
25:CZ:34:VAL:C	25:CZ:36:ALA:H	2.19	0.45
38:BC:189:ILE:O	38:BC:193:ILE:HG13	2.16	0.45
38:DC:72:VAL:HG13	38:DC:72:VAL:O	2.17	0.45
2:AB:103:THR:CG2	2:AB:176:GLU:HG2	2.46	0.45
25:CZ:385:ARG:HA	25:CZ:399:VAL:HA	1.98	0.45
36:BA:1286:A:N6	36:BA:1289:C:C2	2.85	0.45
24:AY:52:A:O2'	24:AY:53:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:7:ARG:CD	28:B2:7:ARG:N	2.80	0.45
1:AA:458:C:H2'	1:AA:460:G:C8	2.51	0.45
36:BA:2648:C:H2'	36:BA:2649:U:C6	2.51	0.45
4:CD:91:SER:O	4:CD:92:VAL:C	2.53	0.45
50:DR:87:TYR:C	50:DR:89:ASP:N	2.70	0.45
36:DA:2824:C:H2'	36:DA:2825:C:O4'	2.16	0.45
39:DD:276:LYS:CA	39:DD:276:LYS:HE2	2.46	0.45
36:DA:1103:A:H5"	36:DA:1104:C:H5	1.81	0.45
36:DA:1315:C:O2'	36:DA:1316:U:H5'	2.17	0.45
38:DC:162:GLU:HG2	38:DC:163:PHE:N	2.31	0.45
41:DF:114:VAL:HG21	41:DF:202:PHE:CE2	2.51	0.45
33:D7:12:ARG:HG3	33:D7:12:ARG:O	2.15	0.45
22:AV:57:G:C2'	22:AV:58:A:H5'	2.47	0.45
1:AA:818:G:O2'	1:AA:819:A:H5'	2.17	0.45
33:B7:1:MET:HA	36:BA:1620:G:O4'	2.15	0.45
36:DA:2266:A:H4'	36:DA:2267:A:N3	2.32	0.45
22:AV:14:A:H2'	22:AV:15:G:H5'	1.99	0.45
36:BA:1199:U:H2'	36:BA:1200:C:C6	2.52	0.45
19:CS:36:ARG:NH1	19:CS:53:ASN:HA	2.31	0.45
46:DN:27:ALA:HB3	46:DN:106:MET:HE1	1.98	0.45
58:BZ:57:ILE:N	58:BZ:69:THR:O	2.50	0.45
34:D8:31:HIS:HE1	36:DA:2392:A:OP2	2.00	0.45
28:D2:25:VAL:O	28:D2:27:GLU:N	2.48	0.45
28:D2:25:VAL:HG21	28:D2:61:LEU:HD21	1.99	0.45
57:DY:73:ARG:O	57:DY:74:PRO:O	2.35	0.45
57:DY:96:ILE:O	57:DY:96:ILE:HG13	2.16	0.45
54:BV:62:LEU:H	54:BV:62:LEU:CD2	2.29	0.45
42:DG:11:TYR:O	42:DG:15:VAL:HB	2.17	0.45
30:D4:7:PRO:CG	42:DG:61:ALA:HB1	2.46	0.45
2:CB:92:TYR:HE1	2:CB:94:ASN:HD21	1.64	0.45
32:B6:15:GLU:OE2	32:B6:18:ARG:CZ	2.63	0.45
14:CN:19:ARG:O	14:CN:20:ALA:O	2.34	0.45
57:BY:77:PRO:O	57:BY:78:ALA:CB	2.64	0.45
1:CA:1270:C:H2'	1:CA:1271:G:H8	1.82	0.45
22:AV:5:G:H5'	22:AV:5:G:C8	2.52	0.45
22:AW:57:G:O2'	22:AW:58:A:H5'	2.15	0.45
41:DF:178:PRO:HG2	41:DF:179:GLU:H	1.82	0.45
4:CD:62:GLN:HE21	4:CD:62:GLN:CA	2.25	0.45
41:BF:36:VAL:HA	41:BF:101:LEU:HD21	1.98	0.45
4:AD:12:CYS:SG	4:AD:26:CYS:SG	3.15	0.45
34:B8:15:LYS:HB3	34:B8:46:ARG:HH22	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:8:ILE:HD11	56:BX:43:VAL:CG2	2.47	0.45
40:BE:73:GLU:OE2	40:BE:74:PRO:HD2	2.17	0.45
25:AZ:345:ARG:C	25:AZ:347:THR:H	2.19	0.45
53:DU:93:LYS:O	53:DU:96:ALA:HB3	2.16	0.45
51:BS:59:LYS:CG	51:BS:60:GLY:H	2.14	0.45
48:DP:96:THR:CG2	48:DP:126:VAL:HB	2.44	0.45
17:AQ:10:VAL:HG23	17:AQ:54:GLY:H	1.80	0.45
9:CI:53:VAL:C	9:CI:55:ALA:H	2.20	0.45
36:DA:1516:C:H2'	36:DA:1517:G:H5"	1.94	0.45
26:D0:53:MET:CG	26:D0:57:PHE:HA	2.47	0.45
38:DC:118:ASP:CG	38:DC:119:VAL:H	2.19	0.45
16:AP:22:THR:OG1	16:AP:26:ARG:HG3	2.16	0.45
1:CA:1189:C:O3'	3:CC:5:ILE:HD12	2.17	0.45
1:CA:1190:G:OP1	3:CC:4:LYS:HA	2.17	0.45
36:DA:1779:U:C2	36:DA:1783:A:N7	2.85	0.45
19:AS:49:ILE:O	19:AS:60:VAL:HG12	2.16	0.45
36:BA:2179:C:H4'	36:BA:2180:U:N3	2.30	0.45
36:DA:1131:G:HO2'	36:DA:1132:A:H8	1.63	0.45
22:CW:9:A:O2'	22:CW:10:G:N7	2.48	0.45
51:BS:16:ASN:O	51:BS:18:ILE:N	2.50	0.45
9:AI:70:LYS:O	9:AI:73:GLN:HB2	2.17	0.45
1:AA:1256:A:H2	1:AA:1278:U:H5'	1.80	0.45
29:D3:17:LYS:HA	29:D3:17:LYS:HD3	1.62	0.45
10:AJ:94:VAL:HG12	10:AJ:95:GLU:H	1.80	0.45
40:BE:137:HIS:HB3	40:BE:138:PRO:HD2	1.97	0.45
24:AY:50:G:O2'	25:AZ:339:ARG:HD2	2.16	0.45
33:B7:22:MET:HE2	33:B7:22:MET:HA	1.98	0.45
39:DD:142:VAL:HG22	39:DD:143:HIS:H	1.80	0.45
50:BR:10:LEU:HB2	50:BR:11:ASN:H	1.55	0.45
20:CT:15:ARG:O	20:CT:19:SER:HB2	2.17	0.45
39:BD:70:TRP:CZ3	39:BD:146:GLU:OE2	2.69	0.45
40:BE:61:ARG:HB3	40:BE:62:PRO:CD	2.46	0.45
41:BF:185:ASP:OD1	41:BF:188:ARG:HD3	2.16	0.45
51:BS:25:ARG:HD3	51:BS:42:ASP:OD1	2.17	0.45
28:B2:6:VAL:HG13	28:B2:59:ARG:NH1	2.32	0.45
36:DA:64:A:H5'	56:DX:64:LYS:CE	2.46	0.45
43:DH:147:ASN:O	43:DH:151:ILE:HG12	2.17	0.45
36:BA:1288:U:O2'	36:BA:1647:G:N2	2.49	0.45
27:D1:79:GLY:O	27:D1:80:LEU:CB	2.64	0.45
43:BH:94:TYR:O	43:BH:95:ARG:HB3	2.17	0.45
36:BA:360:G:H2'	36:BA:361:G:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:880:G:H22	36:BA:897:C:N4	2.15	0.45
41:DF:93:LYS:O	41:DF:94:PRO:C	2.55	0.45
25:AZ:129:PRO:HB2	25:AZ:130:TYR:CE2	2.52	0.45
24:CY:52:A:H2'	24:CY:53:G:H5'	1.99	0.45
36:BA:696:G:C2	36:BA:767:U:O2	2.70	0.45
1:CA:189:G:O2'	1:CA:189(A):C:H5'	2.17	0.45
1:AA:310:G:H2'	1:AA:311:C:H6	1.82	0.45
1:AA:1042:G:O2'	1:AA:1043:C:H5'	2.16	0.45
47:BO:10:VAL:HG21	47:BO:16:ALA:O	2.17	0.45
36:BA:1120:G:H2'	36:BA:1121:C:C6	2.51	0.45
13:AM:68:GLY:H	13:AM:71:ARG:CG	2.28	0.45
41:DF:17:ARG:HH11	41:DF:17:ARG:HG3	1.81	0.45
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.51	0.45
36:BA:332:A:O2'	36:BA:333:G:O5'	2.34	0.45
34:D8:18:ALA:HB2	36:DA:628:G:H5"	1.99	0.45
42:DG:68:PRO:HB3	42:DG:92:VAL:HB	1.99	0.45
56:BX:71:GLY:C	56:BX:72:LYS:HD2	2.37	0.45
32:B6:44:ARG:O	32:B6:46:HIS:ND1	2.49	0.45
36:BA:2306:C:H5	36:BA:2307:G:HO2'	1.62	0.45
42:BG:131:TYR:HB3	42:BG:159:VAL:HG11	1.96	0.45
42:DG:87:PRO:CG	42:DG:88:ILE:N	2.77	0.45
36:BA:271(K):U:H3'	36:BA:271(L):U:H5'	1.97	0.45
41:BF:37:VAL:HG11	48:BP:7:ARG:HH12	1.81	0.45
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.16	0.45
40:BE:52:LEU:HD23	40:BE:75:VAL:HB	1.99	0.45
1:AA:367:U:H5'	25:AZ:291:ARG:HE	1.77	0.45
25:AZ:327:GLU:HA	61:AZ:502:KIR:H101	1.98	0.45
25:AZ:90:LYS:HA	25:AZ:93:ILE:CG2	2.46	0.45
36:DA:1076:C:N4	36:DA:1088:A:H61	2.14	0.45
54:DV:16:PRO:O	54:DV:96:ILE:HB	2.16	0.45
54:DV:49:THR:O	54:DV:50:PRO:C	2.55	0.45
53:BU:61:TRP:C	53:BU:65:ILE:HD13	2.36	0.45
53:BU:92:ARG:CB	54:BV:11:GLN:NE2	2.80	0.45
25:CZ:90:LYS:HA	25:CZ:93:ILE:CG2	2.47	0.45
9:CI:93:ARG:O	9:CI:95:LYS:N	2.49	0.45
36:BA:2131:G:C1'	36:BA:2133:G:H21	2.25	0.45
36:DA:2157:G:C3'	36:DA:2157:G:C8	2.99	0.45
9:AI:20:ARG:CG	9:AI:20:ARG:HH11	2.26	0.45
38:DC:118:ASP:CG	38:DC:119:VAL:N	2.70	0.45
1:AA:972:C:H4'	10:AJ:57:LYS:HB2	1.98	0.45
9:CI:56:LEU:H	9:CI:56:LEU:CD2	2.28	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:942:G:H2'	1:CA:943:U:H6	1.82	0.45
1:CA:1116:C:HO2'	9:CI:108:VAL:HG21	1.82	0.45
9:AI:53:VAL:C	9:AI:55:ALA:H	2.20	0.45
36:DA:2110:G:C2	36:DA:2178:C:H5	2.34	0.45
36:BA:1131:G:OP1	46:BN:80:GLY:N	2.45	0.45
4:AD:171:GLY:C	4:AD:173:TRP:H	2.19	0.45
1:CA:374:A:C4	1:CA:375:U:C5	3.05	0.45
9:CI:40:LEU:C	9:CI:42:ARG:N	2.70	0.45
57:DY:3:VAL:O	57:DY:3:VAL:HG12	2.16	0.45
54:BV:28:GLU:O	54:BV:61:VAL:CG2	2.64	0.45
36:BA:1827:C:H2'	36:BA:1828:G:C5'	2.47	0.45
40:DE:101:ARG:HD2	40:DE:169:ASN:O	2.16	0.45
5:CE:50:GLU:HB3	5:CE:53:LEU:HD13	1.98	0.45
39:DD:108:PRO:HB3	39:DD:143:HIS:CE1	2.52	0.45
46:BN:41:ASP:O	46:BN:42:TRP:C	2.54	0.45
3:AC:32:LEU:O	3:AC:35:GLU:HB3	2.16	0.45
36:DA:1331:A:C2'	36:DA:1332:G:H5"	2.47	0.45
38:BC:80:GLY:O	38:BC:83:ILE:HG13	2.17	0.45
11:AK:110:ASP:HB2	18:AR:88:LYS:HG3	1.99	0.45
36:BA:1313:U:H3'	36:BA:1314:C:H5'	1.98	0.45
52:BT:57:PHE:HE1	52:BT:79:HIS:HD1	1.64	0.45
1:CA:1125:U:C6	1:CA:1125:U:C3'	2.92	0.45
10:CJ:5:ARG:HG3	10:CJ:73:ASP:OD2	2.17	0.45
27:B1:58:ILE:HD11	27:B1:91:LYS:HB2	1.99	0.45
41:DF:107:LYS:HE3	41:DF:205:ARG:HG2	1.98	0.45
56:DX:64:LYS:HD3	56:DX:73:ARG:NH2	2.31	0.45
38:BC:30:LYS:NZ	38:BC:30:LYS:HB3	2.31	0.45
36:DA:2219:G:C2'	36:DA:2220:G:H5'	2.47	0.45
36:DA:1362:C:C2'	36:DA:1363:C:H5'	2.47	0.45
53:BU:59:ARG:HH11	53:BU:59:ARG:HG2	1.80	0.45
36:DA:2326:C:H41	36:DA:2389:G:H1	1.65	0.45
46:DN:56:ASN:H	46:DN:125:GLY:HA3	1.81	0.45
55:BW:20:VAL:CG2	55:BW:47:VAL:HG21	2.47	0.45
48:DP:92:GLU:HA	48:DP:123:LEU:HD11	1.98	0.45
1:AA:735:C:H2'	1:AA:736:C:C6	2.51	0.45
1:AA:61:G:H2'	1:AA:62:U:O4'	2.17	0.45
38:BC:74:VAL:CG1	38:BC:75:LEU:N	2.80	0.45
53:DU:69:CYS:HG	53:DU:79:PHE:HD2	1.65	0.45
46:DN:67:LEU:C	46:DN:69:GLN:H	2.19	0.45
9:CI:6:GLY:HA3	9:CI:84:ALA:HB2	1.98	0.45
58:DZ:7:ALA:O	58:DZ:61:LEU:HA	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:229:VAL:CG1	2:AB:230:VAL:N	2.80	0.45
13:AM:40:ASN:ND2	13:AM:43:THR:HG23	2.31	0.45
36:DA:1259:G:O2'	36:DA:1260:G:H5'	2.17	0.45
36:BA:185:U:C2	36:BA:212:G:N2	2.85	0.45
3:CC:84:ILE:HG23	3:CC:85:ARG:HH11	1.82	0.45
1:CA:1409:C:H4'	36:DA:1915:U:O4	2.17	0.45
36:BA:1997:G:O2'	36:BA:1998:G:H5'	2.17	0.45
36:BA:2545:G:N3	36:BA:2565:A:H2	2.14	0.45
39:BD:147:LEU:HD12	39:BD:147:LEU:HA	1.79	0.45
36:DA:603:A:N6	36:DA:626:U:H4'	2.31	0.45
43:BH:65:HIS:O	43:BH:67:LEU:N	2.40	0.45
22:AV:22:G:O2'	22:AV:23:A:H5'	2.16	0.45
36:BA:380:U:H2'	36:BA:381:G:H8	1.81	0.45
36:BA:2792:G:O2'	36:BA:2793:G:H5'	2.16	0.45
1:CA:1413:A:C2	1:CA:1488:G:C2	3.05	0.45
1:AA:1054:C:H4'	1:AA:1055:A:O5'	2.16	0.45
38:DC:192:PHE:O	38:DC:192:PHE:CG	2.69	0.45
25:CZ:334:PHE:CD1	25:CZ:334:PHE:N	2.85	0.45
12:AL:42:THR:O	12:AL:42:THR:HG23	2.16	0.45
9:CI:58:HIS:CG	9:CI:58:HIS:O	2.70	0.45
38:BC:57:ASN:HA	38:BC:57:ASN:HD22	1.53	0.45
1:AA:179:A:H2'	1:AA:180:U:C6	2.52	0.45
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.16	0.45
42:BG:139:LEU:HA	42:BG:144:ILE:CG1	2.20	0.45
56:DX:30:VAL:HG21	56:DX:39:ILE:HD11	1.99	0.45
32:B6:26:ASN:HB3	32:B6:27:LYS:H	1.46	0.45
34:D8:61:LEU:HD22	36:DA:593:G:H4'	1.98	0.45
1:AA:192:U:H1'	20:AT:103:GLY:CA	2.44	0.45
42:DG:20:ILE:C	42:DG:22:ARG:H	2.20	0.45
32:D6:15:GLU:O	32:D6:17:LYS:N	2.49	0.45
32:D6:45:LYS:HG2	32:D6:45:LYS:O	2.17	0.45
36:BA:2762:G:H2'	36:BA:2763:G:C5'	2.46	0.45
37:DB:73:A:H2'	37:DB:74:U:H5'	1.98	0.45
42:DG:76:SER:OG	42:DG:83:ARG:HB2	2.17	0.45
36:BA:2188:C:H2'	36:BA:2189:U:C5	2.52	0.45
52:DT:32:TYR:HD2	52:DT:81:PRO:HB2	1.77	0.45
36:DA:512:G:OP1	36:DA:1235:G:H5'	2.17	0.45
2:AB:165:VAL:CG2	2:AB:166:ASP:N	2.71	0.45
36:BA:271(K):U:C3'	36:BA:271(L):U:H5'	2.47	0.45
1:CA:148:G:H2'	1:CA:149:A:C8	2.52	0.45
41:DF:133:ASN:N	41:DF:133:ASN:HD22	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:7:VAL:HB	56:BX:8:ILE:HD12	1.99	0.45
25:CZ:284:ASP:OD1	25:CZ:284:ASP:N	2.48	0.45
10:CJ:40:LEU:HG	10:CJ:69:ASN:HB2	1.99	0.45
49:BQ:51:ARG:HG3	49:BQ:51:ARG:HH11	1.81	0.45
50:DR:49:ASP:OD1	50:DR:95:THR:HG22	2.17	0.45
1:CA:1347:G:C5	9:CI:107:ARG:NH2	2.85	0.45
9:AI:48:GLU:HG3	9:AI:101:PHE:CZ	2.52	0.45
36:BA:742:G:H2'	36:BA:743:G:H8	1.81	0.45
36:BA:1131:G:O6	36:BA:2040:C:H1'	2.17	0.45
25:CZ:206:ILE:C	25:CZ:208:GLU:H	2.19	0.45
58:BZ:122:ARG:CG	58:BZ:122:ARG:NH1	2.77	0.45
19:AS:35:SER:C	19:AS:37:ARG:H	2.21	0.45
58:BZ:10:ARG:CZ	58:BZ:36:LYS:HB2	2.46	0.45
31:B5:16:ARG:NH1	31:B5:17:ASP:OD1	2.50	0.45
36:BA:562:U:O4	36:BA:2036:C:H1'	2.16	0.45
36:DA:653:A:N3	36:DA:653:A:H2'	2.32	0.45
22:AV:61:C:O2	22:AV:61:C:H2'	2.17	0.45
3:AC:35:GLU:CD	3:AC:95:THR:HG23	2.38	0.45
41:BF:110:LEU:HA	41:BF:183:VAL:CG1	2.47	0.45
36:BA:2464:C:HO2'	36:BA:2465:C:P	2.39	0.45
12:AL:57:LYS:HA	12:AL:67:THR:HA	1.97	0.45
41:DF:84:VAL:O	41:DF:86:GLY:N	2.50	0.45
39:BD:142:VAL:HG22	39:BD:143:HIS:H	1.82	0.45
1:CA:1239:A:H62	1:CA:1299:A:N6	2.14	0.45
36:BA:1375:C:O2'	36:BA:1376:C:H5'	2.17	0.45
43:DH:107:VAL:HG23	43:DH:107:VAL:O	2.16	0.45
43:DH:94:TYR:O	43:DH:95:ARG:HB3	2.17	0.45
1:AA:719:C:C2	18:AR:50:ILE:HG12	2.51	0.45
20:CT:32:ALA:O	20:CT:36:LEU:HB2	2.17	0.45
1:CA:1006:C:H2'	1:CA:1007:C:H6	1.81	0.45
18:CR:29:PHE:HD1	18:CR:29:PHE:H	1.62	0.45
36:BA:320:A:H3'	41:BF:136:THR:CG2	2.47	0.45
3:AC:152:ILE:HG12	3:AC:167:TRP:HB2	1.99	0.45
17:CQ:86:GLU:O	17:CQ:87:LYS:C	2.54	0.45
25:CZ:104:LEU:HD21	25:CZ:120:ILE:HD11	1.99	0.45
47:DO:105:GLU:O	47:DO:109:LYS:HG2	2.17	0.45
15:CO:39:LEU:O	15:CO:39:LEU:HD23	2.17	0.45
36:DA:1247:A:OP1	41:DF:95:ARG:NH2	2.50	0.45
57:DY:52:SER:O	57:DY:54:LYS:N	2.40	0.45
36:BA:391:G:O2'	36:BA:392:C:H5'	2.17	0.45
36:BA:769:G:O2'	36:BA:770:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:186:PHE:CE2	3:CC:188:LEU:HD23	2.51	0.45
18:CR:87:ARG:CB	18:CR:87:ARG:HH11	2.30	0.45
18:CR:28:GLU:HG3	18:CR:28:GLU:O	2.15	0.45
34:D8:32:LEU:CG	34:D8:36:LYS:HZ1	2.30	0.45
28:D2:20:GLU:HG3	28:D2:23:LYS:HD2	1.99	0.45
28:B2:53:LEU:HD23	28:B2:53:LEU:O	2.17	0.45
14:AN:32:SER:HB3	14:AN:41:ARG:HG2	1.98	0.45
51:BS:61:ASN:O	51:BS:62:LYS:C	2.56	0.45
52:DT:83:ILE:CG1	52:DT:84:GLN:H	2.29	0.45
22:AV:5:G:H1	22:AV:68:C:N4	2.14	0.45
1:CA:722:A:HO2'	1:CA:724:G:H8	1.61	0.45
43:DH:84:SER:O	43:DH:85:LYS:HB3	2.16	0.45
36:BA:338:G:H2'	36:BA:339:U:C6	2.52	0.45
26:D0:51:VAL:HG22	26:D0:81:VAL:HG23	1.98	0.45
1:CA:151:A:H2'	1:CA:152:A:O4'	2.17	0.45
1:AA:858:G:OP2	1:AA:858:G:C8	2.70	0.45
47:BO:12:ASP:OD1	47:BO:14:THR:HG22	2.16	0.45
41:BF:28:ILE:O	41:BF:28:ILE:HG12	2.16	0.45
48:DP:33:ARG:O	48:DP:34:GLY:O	2.34	0.45
13:CM:12:ASN:ND2	13:CM:12:ASN:N	2.63	0.45
53:DU:95:LEU:HD11	54:DV:11:GLN:O	2.17	0.45
50:BR:2:ARG:CG	50:BR:2:ARG:HH11	2.30	0.45
36:BA:2690:C:H5	50:BR:14:SER:HG	1.62	0.45
53:BU:95:LEU:HD13	54:BV:4:ILE:HG23	1.99	0.45
48:BP:95:VAL:HG23	48:BP:125:VAL:CA	2.46	0.45
26:B0:43:THR:HG22	36:BA:2331:G:O3'	2.17	0.45
50:BR:55:ALA:CB	50:BR:79:LEU:CD1	2.95	0.45
10:AJ:57:LYS:C	10:AJ:58:ASP:O	2.53	0.45
22:AW:44:G:P	22:AW:44:G:O4'	2.75	0.45
36:DA:673:C:H6	36:DA:673:C:C5'	2.23	0.45
21:AU:6:ARG:HD3	21:AU:15:ARG:HH12	1.74	0.45
25:CZ:143:ASP:HB3	25:CZ:146:LEU:HB2	1.98	0.45
22:AW:39:U:C2'	22:AW:40:C:H5'	2.47	0.45
54:DV:92:THR:O	54:DV:93:GLU:C	2.55	0.45
42:BG:51:ARG:NH1	42:BG:52:ILE:HD13	2.32	0.45
36:BA:586:A:H5'	41:BF:89:VAL:CG2	2.42	0.45
1:CA:1153:C:O2'	1:CA:1154:G:H5"	2.16	0.45
36:DA:2801(A):A:C5'	36:DA:2802:G:C8	3.00	0.45
53:DU:52:ARG:O	53:DU:56:ASP:OD1	2.35	0.45
29:D3:44:ARG:O	29:D3:47:VAL:HB	2.16	0.45
12:CL:43:VAL:HG22	12:CL:55:VAL:CG1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:28:MET:CE	58:DZ:37:VAL:HG11	2.47	0.45
37:BB:29:A:C2	37:BB:56:G:C2	3.05	0.45
19:AS:66:MET:O	19:AS:67:VAL:C	2.54	0.45
6:CF:87:ARG:CG	6:CF:87:ARG:NH1	2.72	0.45
40:DE:60:ASN:OD1	40:DE:61:ARG:N	2.50	0.45
52:DT:10:VAL:C	52:DT:12:SER:H	2.19	0.45
40:BE:60:ASN:OD1	40:BE:62:PRO:HD2	2.17	0.45
36:BA:863:A:H2'	36:BA:864:G:C8	2.52	0.45
11:CK:38:ASN:HA	11:CK:39:PRO:HD3	1.75	0.45
19:CS:24:ALA:O	19:CS:25:LYS:CB	2.64	0.45
2:CB:157:ARG:HH11	2:CB:157:ARG:HB3	1.81	0.45
39:DD:131:LEU:N	39:DD:131:LEU:HD12	2.32	0.45
53:BU:111:GLU:C	53:BU:113:ALA:N	2.69	0.45
40:DE:159:HIS:HE1	40:DE:162:ALA:HB3	1.81	0.45
18:AR:44:LEU:CD1	18:AR:50:ILE:HD13	2.47	0.45
37:DB:80:U:O2'	37:DB:81:G:H5"	2.17	0.45
18:CR:44:LEU:HD21	18:CR:79:LEU:HD13	1.99	0.45
36:DA:588:U:H2'	36:DA:589:C:C6	2.52	0.45
36:BA:589:C:H2'	36:BA:590:A:H8	1.81	0.45
4:AD:36:ARG:HH11	4:AD:36:ARG:CG	2.29	0.45
9:AI:24:GLY:O	9:AI:25:LYS:HD2	2.17	0.45
36:DA:2726:U:H6	47:DO:67:LYS:NZ	2.15	0.45
22:CV:22:G:C2'	22:CV:23:A:H5'	2.47	0.45
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.51	0.45
15:CO:8:LYS:O	15:CO:12:ILE:HG13	2.16	0.45
43:BH:109:PHE:CZ	43:BH:152:ARG:NH1	2.85	0.45
42:DG:37:VAL:HG12	42:DG:37:VAL:O	2.17	0.45
1:AA:349:A:O2'	1:AA:350:G:H5'	2.16	0.45
28:D2:26:ARG:O	56:DX:5:TYR:CE1	2.69	0.45
28:D2:47:ASN:N	28:D2:50:ILE:HB	2.31	0.45
25:AZ:284:ASP:N	25:AZ:284:ASP:OD1	2.50	0.45
28:B2:48:HIS:CG	28:B2:49:LYS:N	2.85	0.45
42:DG:19:LEU:HD13	42:DG:32:PRO:HG2	1.99	0.45
51:DS:89:ARG:HH11	51:DS:89:ARG:HG2	1.80	0.45
36:DA:2305:A:O2'	42:DG:136:ARG:HG2	2.16	0.45
42:DG:77:ILE:O	42:DG:77:ILE:HG12	2.17	0.45
43:DH:121:ILE:HG23	43:DH:133:VAL:HG13	1.98	0.45
1:CA:1320:C:H6	1:CA:1320:C:C5'	2.28	0.45
26:B0:50:ASN:ND2	26:B0:63:VAL:HG11	2.32	0.45
4:AD:32:ALA:C	4:AD:34:GLU:N	2.70	0.45
48:DP:131:SER:OG	48:DP:134:ALA:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2724:C:OP1	50:BR:2:ARG:NH2	2.50	0.45
53:BU:61:TRP:CH2	53:BU:94:ASN:HB2	2.52	0.45
4:AD:194:LEU:N	4:AD:194:LEU:HD22	2.32	0.45
11:AK:29:ILE:HB	11:AK:44:SER:HB3	1.99	0.45
1:CA:189(H):G:O2'	1:CA:189(I):G:O5'	2.35	0.45
38:BC:78:ALA:H	38:BC:115:ALA:CB	2.30	0.45
48:DP:41:ARG:HH11	48:DP:41:ARG:CB	2.30	0.45
1:AA:376:G:H4'	16:AP:5:ARG:HH11	1.82	0.45
4:CD:151:LYS:O	4:CD:151:LYS:HG2	2.17	0.45
25:CZ:65:THR:HG23	25:CZ:80:VAL:CG1	2.45	0.45
46:DN:32:THR:HG22	46:DN:37:LYS:HD3	1.98	0.45
37:BB:69:G:N2	37:BB:70:C:H1'	2.32	0.45
49:BQ:133:ARG:HB2	49:BQ:133:ARG:NH1	2.32	0.45
2:CB:7:VAL:N	2:CB:10:LEU:HD12	2.32	0.45
1:AA:926:G:H5"	1:AA:927:G:O5'	2.16	0.45
31:B5:20:ARG:HA	31:B5:23:HIS:ND1	2.32	0.45
3:CC:95:THR:HG23	3:CC:97:LYS:HD2	1.97	0.45
52:BT:45:PHE:CE2	52:BT:74:ARG:HG3	2.52	0.45
1:AA:1015:A:H4'	14:AN:15:LYS:NZ	2.32	0.45
36:DA:1496:A:C8	36:DA:1498:C:N3	2.85	0.45
40:DE:144:ARG:HB3	40:DE:145:LYS:H	1.50	0.45
36:BA:2376:A:H2'	36:BA:2377:A:O4'	2.16	0.45
40:BE:79:ARG:NH1	40:BE:79:ARG:CG	2.78	0.45
39:BD:70:TRP:CD1	39:BD:70:TRP:C	2.89	0.45
36:DA:2811:G:O2'	36:DA:2812:G:H5'	2.17	0.45
36:BA:2495:G:OP1	49:BQ:82:ARG:NH1	2.50	0.45
6:CF:61:LEU:HB3	6:CF:63:TYR:HE1	1.81	0.45
35:D9:29:ASN:H	35:D9:29:ASN:HD22	1.64	0.45
43:DH:136:ILE:O	43:DH:136:ILE:HG22	2.17	0.45
36:DA:176:G:C2'	36:DA:177:G:H5'	2.47	0.45
10:CJ:29:ARG:HH11	10:CJ:29:ARG:HG2	1.82	0.45
36:BA:958:U:C5'	49:BQ:14:ARG:HD3	2.46	0.45
1:CA:863:U:H6	1:CA:866:C:H41	1.65	0.45
46:BN:125:GLY:CA	46:BN:126:PRO:O	2.65	0.45
58:DZ:108:PRO:HA	58:DZ:142:SER:HA	1.99	0.45
26:D0:20:ARG:CG	26:D0:20:ARG:NH1	2.80	0.45
50:BR:87:TYR:C	50:BR:89:ASP:N	2.70	0.45
38:BC:151:GLU:HA	38:BC:154:ARG:HG2	1.99	0.45
47:BO:26:LYS:HE3	47:BO:37:ASP:CG	2.38	0.45
36:BA:470:A:H2'	36:BA:471:A:C8	2.51	0.45
36:DA:1526:G:H2'	36:DA:1527:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D1:24:ALA:HB3	27:D1:27:GLU:HB2	1.99	0.45
36:BA:949:C:H2'	36:BA:950:G:C8	2.50	0.45
39:BD:227:ASN:HB3	39:BD:228:PRO:CD	2.47	0.45
42:BG:152:LEU:HD23	42:BG:152:LEU:N	2.32	0.45
36:BA:1064:C:H3'	36:BA:1065:U:C5'	2.47	0.45
1:AA:647:C:O2'	1:AA:648:A:H5'	2.17	0.45
1:CA:349:A:O2'	1:CA:350:G:H5'	2.16	0.45
37:BB:52:A:O2'	37:BB:53:A:C8	2.70	0.45
36:BA:1855:G:O2'	36:BA:1856:G:H5'	2.17	0.45
33:D7:1:MET:HA	36:DA:1620:G:O4'	2.17	0.45
36:BA:269:U:O2	36:BA:269:U:H2'	2.16	0.45
27:D1:83:GLU:OE1	27:D1:83:GLU:C	2.55	0.45
39:DD:218:ARG:HG3	39:DD:218:ARG:HH11	1.82	0.45
24:AY:15:A:O5'	24:AY:15:A:H8	2.00	0.45
49:DQ:120:ILE:O	49:DQ:121:ALA:C	2.54	0.45
25:CZ:370:PHE:HB2	25:CZ:371:THR:H	1.63	0.44
42:BG:141:PHE:O	42:BG:144:ILE:HG22	2.16	0.44
56:BX:12:VAL:CG1	56:BX:27:THR:O	2.65	0.44
29:D3:35:ARG:HD3	29:D3:37:LEU:HD11	1.98	0.44
28:D2:11:GLU:HG2	28:D2:14:ARG:NH2	2.32	0.44
28:D2:27:GLU:O	28:D2:30:ARG:HB3	2.17	0.44
57:DY:98:VAL:HG12	57:DY:98:VAL:O	2.17	0.44
31:B5:3:LYS:HE3	31:B5:3:LYS:CA	2.43	0.44
31:D5:3:LYS:O	31:D5:5:PRO:N	2.50	0.44
42:DG:60:LEU:HD11	42:DG:92:VAL:HG11	1.98	0.44
28:B2:60:LEU:O	28:B2:63:VAL:HB	2.17	0.44
1:AA:358:U:H5'	25:AZ:234:ARG:O	2.16	0.44
2:CB:187:LEU:CD1	2:CB:205:ASP:HA	2.46	0.44
1:CA:1316:G:O3'	14:CN:18:VAL:HG22	2.17	0.44
36:BA:1948:G:C5'	36:BA:1948:G:H8	2.13	0.44
36:BA:299:A:N1	36:BA:322:A:O2'	2.43	0.44
4:AD:30:LYS:C	4:AD:32:ALA:N	2.71	0.44
36:BA:622:G:O2'	36:BA:623:G:H5'	2.16	0.44
41:BF:32:LEU:O	41:BF:32:LEU:HD23	2.17	0.44
42:BG:16:ARG:C	42:BG:18:GLU:H	2.18	0.44
42:BG:9:ARG:O	42:BG:11:TYR:N	2.50	0.44
54:DV:15:GLU:O	54:DV:96:ILE:HG21	2.17	0.44
36:BA:2157:G:C8	36:BA:2157:G:H3'	2.52	0.44
36:DA:2156:G:C6	36:DA:2157:G:N2	2.85	0.44
4:AD:111:ALA:HA	4:AD:116:GLN:OE1	2.16	0.44
58:BZ:60:GLU:O	58:BZ:65:GLN:O	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:77:ILE:CG2	38:BC:119:VAL:HG21	2.47	0.44
2:CB:142:LEU:HD21	2:CB:146:GLN:OE1	2.17	0.44
48:DP:124:LYS:HA	48:DP:142:GLY:O	2.17	0.44
36:BA:2110:G:N2	36:BA:2178:C:C5	2.78	0.44
1:AA:255:G:H1'	17:AQ:16:GLN:HE21	1.81	0.44
36:DA:886:C:O2'	36:DA:887:A:C4'	2.60	0.44
1:CA:1153:C:O2'	1:CA:1154:G:C5'	2.66	0.44
25:AZ:193:ASN:O	25:AZ:195:TRP:N	2.50	0.44
25:AZ:206:ILE:O	25:AZ:210:ILE:HG22	2.17	0.44
46:BN:45:ASN:HD22	46:BN:45:ASN:H	1.65	0.44
53:DU:3:ARG:HH11	53:DU:3:ARG:CG	2.23	0.44
36:DA:363(F):A:O2'	36:DA:364:C:C5	2.70	0.44
40:DE:117:MET:HA	40:DE:122:PHE:N	2.28	0.44
36:BA:2358:G:H2'	36:BA:2359:C:C6	2.51	0.44
1:AA:659:U:H2'	1:AA:660:G:H8	1.82	0.44
39:BD:146:GLU:OE1	39:BD:190:TYR:HB2	2.17	0.44
37:DB:52:A:O2'	37:DB:53:A:C8	2.70	0.44
7:CG:44:TYR:C	7:CG:46:ALA:N	2.68	0.44
1:AA:1432:G:P	52:BT:107:ASP:HB2	2.57	0.44
36:DA:1314:C:C2	36:DA:1339:G:N2	2.85	0.44
36:BA:64:A:H5'	56:BX:64:LYS:CE	2.47	0.44
11:CK:59:TYR:O	11:CK:62:GLN:HB3	2.17	0.44
39:BD:273:ARG:HB3	39:BD:274:ARG:H	1.64	0.44
36:DA:953:A:O2'	36:DA:954:G:H5'	2.17	0.44
1:AA:736:C:H2'	1:AA:737:A:H8	1.82	0.44
13:AM:57:ARG:HH12	30:B4:34:GLU:HG3	1.80	0.44
46:BN:67:LEU:C	46:BN:69:GLN:H	2.19	0.44
33:D7:30:VAL:HG22	33:D7:33:ARG:NH2	2.32	0.44
5:CE:40:ARG:HG2	5:CE:40:ARG:NH1	2.31	0.44
36:BA:1304:C:O2'	36:BA:1305:C:H5'	2.17	0.44
28:B2:16:LEU:HD22	28:B2:20:GLU:CG	2.46	0.44
53:BU:66:ASN:HD21	53:BU:76:TYR:H	1.63	0.44
3:AC:82:GLU:N	3:AC:82:GLU:CD	2.70	0.44
36:BA:1534:U:H2'	36:BA:1535:A:O4'	2.16	0.44
36:DA:1386:C:H2'	36:DA:1387:C:C6	2.52	0.44
36:BA:1064:C:C3'	36:BA:1065:U:H5"	2.47	0.44
36:BA:332:A:O2'	36:BA:333:G:P	2.75	0.44
44:BJ:35:UNK:C	44:BJ:37:UNK:N	2.80	0.44
36:BA:2492:U:O2'	36:BA:2493:U:H5'	2.17	0.44
42:BG:127:GLY:O	42:BG:129:GLY:N	2.50	0.44
14:AN:24:CYS:N	14:AN:29:ARG:O	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:47:PHE:CE2	14:CN:37:PHE:HE2	2.35	0.44
36:DA:271(N):U:H5'	36:DA:271(O):C:C5	2.52	0.44
36:DA:1820:U:O2	39:DD:201:HIS:HB3	2.17	0.44
1:AA:412:A:H4'	1:AA:413:G:H8	1.82	0.44
1:AA:1291:G:H4'	9:AI:39:GLY:HA3	1.99	0.44
1:CA:1230:C:O2'	1:CA:1231:G:H5'	2.17	0.44
42:BG:93:THR:HG22	42:BG:94:LEU:N	2.33	0.44
36:DA:2392:A:N3	36:DA:2392:A:H5'	2.32	0.44
28:D2:22:GLU:O	28:D2:26:ARG:N	2.45	0.44
28:D2:3:LEU:HD23	28:D2:3:LEU:C	2.38	0.44
28:D2:8:LYS:O	28:D2:10:LEU:N	2.51	0.44
57:DY:13:VAL:CG1	57:DY:28:LYS:HD3	2.32	0.44
42:DG:22:ARG:HH22	42:DG:175:LEU:HD21	1.83	0.44
28:B2:66:GLU:HG3	28:B2:67:LYS:N	2.32	0.44
52:DT:29:ARG:HD3	52:DT:86:ILE:HG23	1.98	0.44
52:DT:48:ILE:HD12	52:DT:48:ILE:C	2.36	0.44
2:CB:189:ASP:HB2	2:CB:205:ASP:OD1	2.17	0.44
2:CB:28:PHE:CE2	2:CB:190:THR:HG22	2.52	0.44
55:BW:6:ILE:HA	55:BW:104:THR:HG22	1.99	0.44
36:DA:321:G:OP2	41:DF:135:LYS:HD3	2.16	0.44
36:DA:1069:A:HO2'	36:DA:1070:A:P	2.40	0.44
36:DA:248:G:H5'	36:DA:250:G:N7	2.32	0.44
48:BP:31:ALA:C	48:BP:33:ARG:H	2.19	0.44
1:AA:942:G:H2'	1:AA:943:U:H6	1.82	0.44
37:BB:104:U:O2'	58:BZ:72:ARG:HD2	2.17	0.44
58:BZ:152:ALA:C	58:BZ:154:ASP:H	2.20	0.44
36:BA:1602:U:C3'	36:BA:1603:A:C5'	2.90	0.44
25:AZ:126:VAL:CG1	25:AZ:126:VAL:O	2.64	0.44
13:CM:11:ARG:O	13:CM:13:LYS:N	2.50	0.44
24:CY:3:G:H5'	24:CY:3:G:C8	2.49	0.44
51:DS:58:LEU:CG	51:DS:59:LYS:H	2.30	0.44
26:B0:41:ARG:HD3	26:B0:41:ARG:HA	1.56	0.44
26:B0:53:MET:CG	26:B0:57:PHE:HA	2.47	0.44
26:D0:53:MET:HA	26:D0:58:THR:O	2.17	0.44
10:AJ:33:GLN:H	10:AJ:75:ILE:HD11	1.81	0.44
55:DW:71:VAL:HG23	55:DW:71:VAL:O	2.17	0.44
38:BC:78:ALA:CB	38:BC:116:THR:HG23	2.46	0.44
4:CD:101:LEU:O	4:CD:102:ASP:C	2.55	0.44
49:DQ:134:ARG:HA	49:DQ:137:TYR:CE2	2.52	0.44
51:DS:75:GLU:O	51:DS:76:LYS:HG2	2.17	0.44
57:BY:67:LEU:HD23	57:BY:67:LEU:C	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1494:A:H3'	36:DA:1494:A:N3	2.32	0.44
40:DE:116:VAL:HG11	40:DE:138:PRO:HB3	2.00	0.44
52:DT:92:GLY:O	52:DT:93:ARG:C	2.56	0.44
40:BE:79:ARG:NH1	40:BE:79:ARG:HG2	2.29	0.44
20:CT:10:LEU:C	20:CT:12:ALA:H	2.20	0.44
36:BA:2472:G:H5"	36:BA:2473:U:H5"	1.95	0.44
41:BF:110:LEU:HA	41:BF:183:VAL:HG12	1.99	0.44
34:D8:20:GLY:O	34:D8:57:ARG:HD3	2.17	0.44
36:DA:1313:U:H3'	36:DA:1314:C:H5'	1.99	0.44
9:CI:43:ALA:C	9:CI:45:ALA:N	2.70	0.44
28:B2:3:LEU:HD23	36:BA:98:G:H5"	1.99	0.44
1:AA:1285:A:OP1	1:AA:1285:A:H8	2.00	0.44
36:BA:1640:C:H6	36:BA:1640:C:H5'	1.81	0.44
36:BA:2326:C:O4'	36:BA:2326:C:O2	2.33	0.44
18:CR:25:THR:O	18:CR:25:THR:HG22	2.18	0.44
6:AF:46:ARG:NH2	18:AR:38:GLU:OE1	2.50	0.44
36:DA:2263:C:O2'	36:DA:2264:C:H5'	2.17	0.44
3:AC:136:GLN:O	3:AC:139:GLN:HB3	2.17	0.44
22:AW:11:C:H2'	22:AW:12:U:H6	1.82	0.44
36:DA:21:A:O2'	36:DA:22:C:H5'	2.18	0.44
36:DA:1801:G:H3'	36:DA:1802:A:H5'	1.98	0.44
36:DA:383:U:H2'	36:DA:385:C:H5	1.83	0.44
47:DO:71:ARG:NE	47:DO:105:GLU:OE2	2.50	0.44
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.17	0.44
22:AV:75:C:H2'	22:AV:76:A:C1'	2.47	0.44
39:BD:147:LEU:HD13	39:BD:155:LEU:CD1	2.47	0.44
25:CZ:96:ALA:O	25:CZ:99:MET:HG2	2.16	0.44
54:BV:74:LYS:HB2	54:BV:83:ARG:HB2	1.99	0.44
1:CA:668:G:O2'	15:CO:46:HIS:HD2	2.00	0.44
36:BA:1366:A:O2'	36:BA:1367:A:H5'	2.17	0.44
36:DA:510:C:H2'	36:DA:511:U:O4'	2.16	0.44
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.52	0.44
36:DA:1916:A:H2'	36:DA:1917:U:O4'	2.17	0.44
24:CY:15:A:H8	24:CY:15:A:O5'	2.00	0.44
38:DC:57:ASN:HA	38:DC:57:ASN:HD22	1.53	0.44
36:BA:2474:C:H2'	36:BA:2474:C:O2	2.17	0.44
36:BA:764:A:H5"	39:BD:210:GLY:HA2	1.99	0.44
42:BG:106:LEU:HD13	42:BG:141:PHE:HE1	1.81	0.44
20:CT:98:PRO:O	20:CT:99:LEU:O	2.36	0.44
36:DA:2392:A:C8	48:DP:60:MET:HG2	2.51	0.44
28:D2:40:SER:O	28:D2:41:ILE:HG12	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:925:C:C3'	36:DA:926:A:H5"	2.47	0.44
36:DA:2762:G:C2'	36:DA:2763:G:H5'	2.47	0.44
51:DS:95:HIS:CG	51:DS:96:GLY:H	2.35	0.44
51:DS:97:ARG:C	51:DS:97:ARG:NE	2.71	0.44
32:B6:15:GLU:O	32:B6:17:LYS:N	2.51	0.44
36:DA:1666:G:H8	36:DA:1666:G:H5'	1.83	0.44
52:DT:28:VAL:HG23	52:DT:47:GLY:O	2.17	0.44
1:AA:358:U:O3'	25:AZ:235:GLY:CA	2.56	0.44
36:BA:1069:A:HO2'	36:BA:1070:A:P	2.41	0.44
36:DA:1541:G:O2'	36:DA:1542:A:C5'	2.66	0.44
37:DB:7:G:C3'	37:DB:8:U:C5'	2.95	0.44
51:BS:89:ARG:HH11	51:BS:89:ARG:HG2	1.81	0.44
34:D8:7:HIS:HD2	48:DP:50:ARG:HD3	1.80	0.44
40:DE:52:LEU:HD23	40:DE:75:VAL:HB	1.99	0.44
36:BA:661:C:O2'	48:BP:16:ARG:O	2.32	0.44
36:BA:1877:A:C2'	36:BA:1878:G:H5'	2.37	0.44
13:AM:12:ASN:ND2	13:AM:12:ASN:N	2.65	0.44
53:BU:95:LEU:C	53:BU:97:ASP:H	2.19	0.44
17:CQ:53:LEU:HD23	17:CQ:54:GLY:H	1.81	0.44
14:CN:57:ARG:CG	14:CN:58:LYS:N	2.80	0.44
51:DS:58:LEU:HG	51:DS:59:LYS:N	2.32	0.44
13:CM:97:PRO:HA	13:CM:110:ARG:CD	2.45	0.44
1:CA:189(I):G:O2'	1:CA:189(J):G:H5'	2.16	0.44
38:DC:78:ALA:CB	38:DC:116:THR:HG23	2.47	0.44
50:BR:49:ASP:OD1	50:BR:95:THR:HG22	2.17	0.44
1:AA:322:C:O2'	20:AT:23:ARG:HB2	2.17	0.44
36:BA:1677:A:H2'	36:BA:1678:G:H8	1.78	0.44
35:B9:29:ASN:HD21	35:B9:32:HIS:CE1	2.33	0.44
22:CW:9:A:H2	22:CW:45:U:C4	2.35	0.44
36:DA:29:U:C1'	53:DU:11:ARG:HH22	2.29	0.44
46:DN:48:MET:HE3	46:DN:48:MET:N	2.32	0.44
34:D8:10:ALA:O	34:D8:14:VAL:HG12	2.16	0.44
13:AM:120:LYS:HA	13:AM:120:LYS:NZ	2.32	0.44
36:DA:2512:C:H4'	40:DE:122:PHE:CE2	2.52	0.44
20:AT:13:LEU:C	20:AT:15:ARG:N	2.71	0.44
25:AZ:28:THR:HG23	25:AZ:79:HIS:CE1	2.51	0.44
22:CV:62:C:C2'	22:CV:62:C:O2	2.66	0.44
36:DA:984:A:H5"	36:DA:985:C:C5	2.45	0.44
25:AZ:87:ASP:HB2	25:AZ:88:TYR:HD1	1.82	0.44
19:AS:45:VAL:C	19:AS:47:HIS:H	2.21	0.44
37:DB:54:G:C2	37:DB:55:U:C6	3.04	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:44:LEU:HD13	50:BR:44:LEU:C	2.37	0.44
1:AA:1131:G:N3	1:AA:1132:C:N4	2.65	0.44
46:DN:4:TYR:N	46:DN:4:TYR:CD1	2.85	0.44
38:BC:107:TRP:NE1	38:BC:110:PHE:CE2	2.82	0.44
43:BH:136:ILE:HG22	43:BH:136:ILE:O	2.17	0.44
2:AB:111:ARG:NH1	2:AB:111:ARG:HG2	2.31	0.44
25:AZ:34:VAL:C	25:AZ:36:ALA:H	2.21	0.44
36:BA:2869:G:H2'	36:BA:2870:C:H6	1.81	0.44
27:D1:30:VAL:HG23	27:D1:30:VAL:O	2.17	0.44
53:BU:109:LEU:O	53:BU:113:ALA:HB2	2.17	0.44
36:DA:954:G:H4'	49:DQ:13:GLN:NE2	2.32	0.44
36:BA:654(M):C:H2'	36:BA:654(N):G:C8	2.53	0.44
1:CA:707:C:OP1	11:CK:85:ARG:NH1	2.49	0.44
36:BA:1192:G:O6	48:BP:29:LYS:NZ	2.50	0.44
1:CA:473:G:H5'	16:CP:81:ARG:HG3	1.99	0.44
10:AJ:62:HIS:HB2	14:AN:59:ALA:HB3	1.98	0.44
1:CA:782:A:C2'	1:CA:783:C:H5'	2.47	0.44
15:AO:29:VAL:HG11	15:AO:67:LEU:HD21	1.99	0.44
3:CC:52:LEU:HD21	3:CC:55:VAL:CG2	2.47	0.44
15:CO:69:TYR:CE1	15:CO:73:GLU:HG3	2.51	0.44
36:DA:2115:G:C2	36:DA:2117:A:N7	2.86	0.44
28:B2:30:ARG:HG3	56:BX:5:TYR:CE2	2.53	0.44
11:CK:124:LYS:HD2	11:CK:125:PHE:CZ	2.52	0.44
19:AS:58:VAL:HG11	19:AS:75:ALA:HA	2.00	0.44
1:AA:38:G:C2	1:AA:397:A:C2	3.06	0.44
36:DA:1064:C:C3'	36:DA:1065:U:H5"	2.47	0.44
55:BW:79:GLY:CA	55:BW:100:THR:HG23	2.47	0.44
22:CV:75:C:H2'	22:CV:76:A:O4'	2.18	0.44
1:AA:1375:A:H2'	1:AA:1376:U:O4'	2.17	0.44
36:BA:748:G:C8	55:BW:89:ALA:HB1	2.52	0.44
36:BA:654(A):G:H2'	36:BA:654(B):C:H5'	2.00	0.44
36:BA:2147:G:H2'	36:BA:2148:G:O5'	2.17	0.44
36:DA:1744:C:C2'	36:DA:1745:C:H5'	2.48	0.44
5:AE:119:LEU:HA	5:AE:119:LEU:HD23	1.83	0.44
36:BA:1096:A:N3	36:BA:1096:A:H2'	2.32	0.44
26:B0:26:TYR:N	26:B0:26:TYR:CD1	2.86	0.44
25:AZ:334:PHE:CD1	25:AZ:334:PHE:N	2.85	0.44
1:CA:219:C:H2'	1:CA:220:G:O4'	2.18	0.44
36:BA:1512:U:H2'	36:BA:1513:C:C6	2.52	0.44
36:BA:2364:C:O2'	36:BA:2365:G:H5'	2.17	0.44
24:CY:25:C:C2'	24:CY:26:A:C5'	2.78	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:26:A:H2'	24:AY:27:C:H6	1.83	0.44
36:DA:2392:A:H8	48:DP:60:MET:HG2	1.82	0.44
57:DY:13:VAL:CG2	57:DY:73:ARG:O	2.62	0.44
57:DY:95:LYS:HG3	57:DY:99:CYS:O	2.18	0.44
32:B6:26:ASN:HD22	32:B6:32:ASN:HD21	1.63	0.44
23:CX:11:U:H2'	23:CX:11:U:O2	2.17	0.44
42:DG:73:ALA:O	42:DG:85:GLY:HA2	2.17	0.44
2:AB:204:ASN:HD22	2:AB:206:ASP:H	1.59	0.44
43:DH:85:LYS:NZ	43:DH:133:VAL:N	2.45	0.44
19:AS:11:VAL:O	19:AS:11:VAL:HG22	2.17	0.44
46:DN:23:LEU:HD21	46:DN:102:ALA:CB	2.47	0.44
41:DF:167:ALA:O	41:DF:168:ARG:C	2.55	0.44
51:BS:97:ARG:C	51:BS:97:ARG:NE	2.70	0.44
37:BB:73:A:H2'	37:BB:74:U:H5'	2.00	0.44
58:BZ:100:VAL:HB	58:BZ:124:ILE:HD11	1.99	0.44
40:DE:69:LYS:HD3	40:DE:90:THR:N	2.33	0.44
40:DE:48:GLN:NE2	40:DE:78:LEU:HD22	2.32	0.44
40:BE:69:LYS:HD3	40:BE:90:THR:N	2.32	0.44
34:D8:8:LYS:HG3	36:DA:246:C:N4	2.32	0.44
4:CD:20:TYR:HD1	4:CD:26:CYS:O	2.00	0.44
54:DV:19:LYS:HG2	54:DV:94:LEU:CB	2.41	0.44
51:BS:106:ARG:HH11	51:BS:106:ARG:CB	2.22	0.44
9:AI:4:TYR:HA	9:AI:87:GLN:HG2	2.00	0.44
36:BA:2712(A):A:C5'	36:BA:2713:A:OP2	2.65	0.44
38:BC:34:THR:CG2	38:BC:34:THR:O	2.65	0.44
36:BA:2156:G:C6	36:BA:2157:G:N2	2.85	0.44
16:CP:3:LYS:O	16:CP:21:VAL:HA	2.17	0.44
10:CJ:32:ALA:CB	10:CJ:76:ASN:H	2.31	0.44
1:AA:376:G:H4'	16:AP:5:ARG:NH1	2.32	0.44
46:DN:29:LYS:C	46:DN:31:ALA:H	2.21	0.44
43:BH:70:THR:O	43:BH:74:ASN:ND2	2.50	0.44
49:BQ:111:GLU:OE1	49:BQ:133:ARG:NH2	2.49	0.44
43:BH:126:PRO:O	43:BH:127:GLU:CG	2.58	0.44
19:AS:10:PHE:HD2	19:AS:12:ASP:OD1	2.00	0.44
49:DQ:109:VAL:HG12	49:DQ:113:GLN:HB2	1.98	0.44
3:CC:70:VAL:HG21	3:CC:76:VAL:HG11	1.99	0.44
49:DQ:21:THR:CG2	49:DQ:23:GLY:O	2.66	0.44
36:DA:2376:A:H2'	36:DA:2377:A:O4'	2.17	0.44
36:DA:1709:U:H2'	36:DA:1710:C:H6	1.80	0.44
4:CD:155:LEU:O	4:CD:159:ARG:HG2	2.17	0.44
41:BF:107:LYS:HE3	41:BF:205:ARG:HG2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:60:ASN:OD1	40:BE:61:ARG:N	2.50	0.44
50:DR:45:ARG:O	50:DR:48:VAL:HG12	2.17	0.44
52:BT:107:ASP:OD2	52:BT:109:GLU:HG3	2.17	0.44
5:CE:6:PHE:HB2	5:CE:34:VAL:HG22	1.99	0.44
11:AK:63:LEU:HD12	11:AK:63:LEU:H	1.83	0.44
47:BO:34:THR:OG1	47:BO:35:VAL:N	2.51	0.44
1:AA:783:C:O2'	1:AA:784:C:H5'	2.18	0.44
18:CR:44:LEU:CD1	18:CR:50:ILE:HD13	2.48	0.44
36:DA:9:U:HO2'	36:DA:10:G:P	2.41	0.44
1:CA:173:U:H5"	1:CA:197:A:O4'	2.18	0.44
36:DA:2584:U:O2	36:DA:2584:U:O4'	2.35	0.44
1:CA:153:C:H42	1:CA:168:G:H1	1.64	0.44
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.18	0.44
13:CM:74:VAL:HA	13:CM:77:ASN:HD22	1.81	0.44
36:BA:382:G:H2'	36:BA:383:U:H5'	1.99	0.44
23:CX:26:A:H3'	23:CX:27:A:C8	2.52	0.44
4:AD:119:GLN:HG3	4:AD:123:HIS:NE2	2.33	0.44
22:CV:57:G:H2'	22:CV:58:A:H5'	2.00	0.44
1:AA:909:A:H2'	1:AA:910:C:O4'	2.17	0.44
1:AA:824:C:H1'	8:AH:1:MET:HE2	1.99	0.44
36:DA:2350:C:H2'	36:DA:2351:G:O4'	2.17	0.44
25:AZ:96:ALA:O	25:AZ:99:MET:HG2	2.17	0.44
43:BH:142:GLY:O	43:BH:145:ALA:HB3	2.16	0.44
36:BA:1036:G:O2'	36:BA:1037:G:H5'	2.17	0.44
25:CZ:330:ARG:HG2	25:CZ:330:ARG:HH11	1.82	0.44
55:DW:75:TYR:N	55:DW:75:TYR:CD1	2.84	0.44
18:AR:87:ARG:CB	18:AR:87:ARG:HH11	2.31	0.44
36:DA:850:C:O2'	36:DA:851:U:H5'	2.17	0.44
55:BW:50:VAL:HG22	55:BW:105:VAL:HG23	1.99	0.44
1:AA:441:A:H3'	1:AA:442:C:C6	2.52	0.44
39:BD:31:LYS:HE3	39:BD:33:LEU:CD1	2.47	0.44
42:BG:94:LEU:HB3	42:BG:99:MET:HB2	2.00	0.44
24:CY:26:A:C5	24:CY:27:C:C5	3.05	0.44
28:D2:27:GLU:HG3	28:D2:30:ARG:HD3	1.99	0.44
36:BA:593:G:O2'	36:BA:594:U:H5'	2.18	0.44
42:DG:120:LEU:O	42:DG:180:PHE:CD1	2.69	0.44
42:DG:176:LEU:O	42:DG:176:LEU:HD23	2.17	0.44
42:DG:61:ALA:O	42:DG:63:ILE:N	2.50	0.44
36:DA:1023:U:C2'	36:DA:1024:G:H5'	2.48	0.44
1:AA:979:C:O2	14:AN:19:ARG:HG2	2.17	0.44
49:DQ:60:ARG:CB	49:DQ:60:ARG:HH11	2.10	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:31:TYR:CD2	2:CB:202:PRO:HG3	2.52	0.44
36:DA:2277:G:C6	36:DA:2278:A:N7	2.85	0.44
41:DF:37:VAL:HG11	48:DP:7:ARG:NH1	2.33	0.44
19:AS:16:LEU:O	19:AS:18:LYS:N	2.50	0.44
41:BF:133:ASN:N	41:BF:133:ASN:HD22	2.15	0.44
4:AD:30:LYS:HB3	4:AD:35:ARG:NH1	2.33	0.44
26:D0:70:GLN:NE2	26:D0:80:HIS:NE2	2.65	0.44
24:AY:76:A:H2	25:AZ:270:VAL:HA	1.82	0.44
51:BS:95:HIS:CG	51:BS:96:GLY:H	2.35	0.44
5:CE:12:LEU:HD21	5:CE:14:ARG:HB3	1.98	0.44
40:DE:52:LEU:CD1	52:DT:1:MET:HG2	2.34	0.44
53:DU:92:ARG:CB	54:DV:11:GLN:NE2	2.81	0.44
40:DE:98:PRO:HD3	40:DE:175:VAL:CG1	2.46	0.44
9:CI:20:ARG:HH11	9:CI:20:ARG:CG	2.24	0.44
27:D1:75:GLU:O	27:D1:78:LYS:HG2	2.17	0.44
17:CQ:10:VAL:HG23	17:CQ:54:GLY:N	2.32	0.44
48:DP:95:VAL:O	48:DP:125:VAL:HA	2.17	0.44
12:CL:110:VAL:HG21	12:CL:120:TYR:HB3	1.98	0.44
1:CA:323:U:H2'	1:CA:324:G:O4'	2.16	0.44
4:CD:194:LEU:N	4:CD:194:LEU:HD22	2.33	0.44
11:CK:22:HIS:HB3	11:CK:29:ILE:HG12	1.99	0.44
1:AA:973:G:C4	10:AJ:55:LYS:HE2	2.53	0.44
54:BV:99:ILE:H	54:BV:99:ILE:CD1	2.14	0.44
25:AZ:166:ASP:N	25:AZ:166:ASP:OD1	2.50	0.44
25:AZ:64:ASN:N	25:AZ:83:PRO:HG2	2.32	0.44
25:AZ:197:ASP:O	25:AZ:201:GLU:N	2.51	0.44
36:BA:1721:G:C2	36:BA:1739:U:OP2	2.70	0.44
31:D5:20:ARG:HA	31:D5:23:HIS:ND1	2.32	0.44
54:DV:28:GLU:O	54:DV:30:GLY:N	2.51	0.44
1:AA:1152:A:H5'	10:AJ:70:ARG:NH2	2.31	0.44
1:AA:658:G:H2'	1:AA:659:U:C6	2.53	0.44
37:BB:28:C:O2'	37:BB:29:A:H5'	2.17	0.44
36:DA:2657:A:H5'	36:DA:2658:C:OP2	2.17	0.44
19:CS:66:MET:O	19:CS:67:VAL:C	2.55	0.44
50:BR:45:ARG:O	50:BR:48:VAL:HG12	2.17	0.44
36:BA:302:C:O2'	36:BA:303:U:H5'	2.17	0.44
1:CA:1216:G:H2'	1:CA:1217:C:H6	1.83	0.44
16:AP:9:PHE:CE2	16:AP:18:ARG:NE	2.85	0.44
36:BA:2687:U:C4	36:BA:2688:U:C5	3.05	0.44
36:BA:1472:A:H2'	36:BA:1473:G:H5'	1.98	0.44
1:AA:1411:C:H2'	1:AA:1412:C:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:118:ALA:HB3	22:AV:29:G:H5'	1.99	0.44
46:BN:55:VAL:CG2	46:BN:126:PRO:HA	2.47	0.44
41:DF:164:ARG:HG2	41:DF:164:ARG:NH1	2.30	0.44
16:AP:60:LEU:HD21	16:AP:66:PRO:HG3	1.98	0.44
36:DA:1389:G:H2'	36:DA:1390:U:O4'	2.18	0.44
2:CB:77:ALA:HB2	2:CB:211:ILE:CD1	2.47	0.44
36:BA:2678:C:H2'	36:BA:2679:A:O4'	2.18	0.44
1:CA:61:G:H2'	1:CA:62:U:O4'	2.17	0.44
37:DB:111:G:H2'	37:DB:112:U:H5'	2.00	0.44
36:DA:1906:G:O2'	36:DA:1907:G:H5'	2.18	0.44
13:AM:40:ASN:HB3	13:AM:43:THR:HG23	1.99	0.44
1:AA:197:A:C6	1:AA:221:C:H4'	2.53	0.44
3:AC:166:GLU:HA	3:AC:166:GLU:OE1	2.16	0.44
1:CA:1193:G:OP2	3:CC:167:TRP:CZ3	2.70	0.44
36:DA:2369:A:O2'	36:DA:2370:G:H5'	2.18	0.44
12:CL:41:ARG:HB2	12:CL:41:ARG:NH1	2.32	0.44
36:DA:1534:U:H2'	36:DA:1535:A:O4'	2.17	0.44
46:DN:15:LEU:HD13	46:DN:16:ILE:N	2.33	0.44
13:AM:68:GLY:N	13:AM:71:ARG:HG3	2.33	0.44
19:AS:36:ARG:NH1	19:AS:53:ASN:HA	2.32	0.44
25:CZ:249:VAL:HG13	25:CZ:268:THR:HA	1.99	0.44
1:AA:1458:G:H2'	1:AA:1459:C:C6	2.52	0.44
36:BA:271(N):U:H5'	36:BA:271(O):C:C5	2.53	0.44
50:BR:78:LYS:O	50:BR:83:ILE:HG12	2.17	0.44
3:AC:179:ARG:HD2	3:AC:206:GLU:OE2	2.17	0.44
1:AA:1230:C:O2'	1:AA:1231:G:H5'	2.17	0.44
47:BO:122:LEU:HD13	52:BT:72:VAL:HG11	1.99	0.44
4:CD:60:GLU:OE1	4:CD:60:GLU:HA	2.16	0.44
27:B1:11:ARG:HH11	27:B1:11:ARG:HG2	1.81	0.44
52:DT:11:GLU:N	52:DT:11:GLU:OE1	2.51	0.44
36:DA:1767:C:O2'	36:DA:1768:U:H5'	2.18	0.44
17:AQ:12:SER:HB3	17:AQ:20:THR:OG1	2.17	0.44
36:DA:776:G:H4'	36:DA:777:A:O5'	2.17	0.44
20:CT:56:MET:HG3	20:CT:88:VAL:HG21	1.99	0.44
36:BA:1568:G:H4'	39:BD:59:LYS:HB3	1.98	0.44
36:DA:1484:G:C3'	36:DA:1485:G:H5"	2.46	0.44
34:B8:61:LEU:HD22	36:BA:593:G:H4'	1.98	0.44
24:AY:77:TRP:N	25:AZ:272:MET:HA	2.33	0.44
25:AZ:12:VAL:HG23	25:AZ:77:TYR:CD1	2.52	0.44
23:CX:13:A:OP2	23:CX:13:A:H8	2.00	0.44
42:BG:47:LYS:HE2	42:BG:80:PHE:CE1	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:28:LYS:C	57:BY:38:ILE:HG22	2.38	0.44
2:CB:200:ILE:HG22	2:CB:201:ILE:N	2.33	0.44
2:AB:92:TYR:HE2	2:AB:94:ASN:HD21	1.65	0.44
34:B8:25:MET:CG	48:BP:64:LYS:HB2	2.48	0.44
48:BP:23:PRO:HB2	48:BP:33:ARG:CG	2.47	0.44
25:AZ:397:ALA:CB	61:AZ:502:KIR:H252	2.40	0.44
36:BA:652:C:O2'	36:BA:653:A:O5'	2.35	0.44
36:DA:2711:A:OP1	36:DA:2712(A):A:P	2.76	0.44
36:DA:2712(A):A:C5'	36:DA:2713:A:OP2	2.65	0.44
36:BA:2659:G:C2'	36:BA:2660:A:H5"	2.47	0.44
3:AC:6:HIS:CD2	3:AC:8:ILE:HB	2.53	0.44
16:AP:53:VAL:CG2	16:AP:54:GLU:N	2.77	0.44
36:BA:2481:G:HO2'	36:BA:2482:G:P	2.40	0.44
50:BR:26:LYS:O	50:BR:30:THR:CG2	2.66	0.44
50:BR:52:ILE:O	50:BR:55:ALA:HB3	2.18	0.44
1:AA:59:A:H1'	1:AA:354:G:N2	2.32	0.44
1:AA:59:A:C5'	1:AA:60:A:H5"	2.47	0.44
58:DZ:122:ARG:NH1	58:DZ:122:ARG:CG	2.81	0.44
34:D8:21:LYS:HD3	34:D8:48:PHE:CZ	2.52	0.44
25:AZ:200:TRP:O	25:AZ:204:ASP:HB2	2.17	0.44
25:AZ:206:ILE:C	25:AZ:208:GLU:H	2.19	0.44
1:CA:1036:G:H3'	1:CA:1037:C:C6	2.53	0.44
10:AJ:94:VAL:CG1	10:AJ:95:GLU:N	2.80	0.44
54:BV:36:PRO:O	54:BV:37:VAL:HG13	2.17	0.44
24:CY:62:U:H2'	24:CY:63:C:O4'	2.17	0.44
40:BE:31:CYS:HA	40:BE:32:PRO:HD3	1.82	0.44
3:AC:30:ARG:HH21	3:AC:31:HIS:HE1	1.60	0.44
1:AA:863:U:H6	1:AA:866:C:H41	1.65	0.44
23:AX:11:U:O2	23:AX:11:U:H2'	2.17	0.44
36:BA:99:U:C4'	36:BA:102:G:H1'	2.47	0.44
47:BO:35:VAL:HA	47:BO:62:VAL:O	2.16	0.44
25:AZ:27:LEU:O	25:AZ:30:ALA:HB3	2.18	0.44
25:AZ:27:LEU:HD11	25:AZ:31:LEU:HD11	2.00	0.44
58:BZ:98:MET:SD	58:BZ:133:ILE:HG23	2.58	0.44
36:BA:1499:C:C2'	36:BA:1500:G:H5'	2.48	0.44
49:BQ:24:GLY:O	49:BQ:102:VAL:HG23	2.17	0.44
36:DA:2326:C:O4'	36:DA:2326:C:O2	2.32	0.44
36:DA:2672:G:C2'	36:DA:2673:G:H5"	2.48	0.44
36:BA:1773:A:H2'	36:BA:1774:C:O4'	2.17	0.44
13:AM:37:THR:O	13:AM:39:ILE:HG13	2.17	0.44
37:DB:77:U:P	58:DZ:19:ARG:HH21	2.41	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2355:C:C4	36:BA:2356:C:C4	3.06	0.44
36:DA:1478:G:N2	36:DA:1514:U:C2	2.86	0.44
1:CA:222:U:H2'	1:CA:223:U:H6	1.81	0.44
2:CB:239:VAL:O	2:CB:240:GLN:CB	2.65	0.44
3:AC:84:ILE:HG23	3:AC:85:ARG:HH11	1.83	0.44
20:AT:89:ARG:NH1	20:AT:104:LEU:HD21	2.32	0.44
25:AZ:125:GLN:HE22	25:AZ:394:THR:HB	1.83	0.44
36:DA:1889:A:O2'	36:DA:2087:G:H5'	2.16	0.44
36:DA:57:C:O2'	36:DA:58:G:H5'	2.18	0.44
6:CF:53:ALA:O	6:CF:54:LYS:CB	2.65	0.44
1:AA:470:C:C2'	1:AA:471:G:OP1	2.65	0.44
36:BA:57:C:O2'	36:BA:58:G:H5'	2.18	0.44
7:CG:69:VAL:HG12	7:CG:100:ALA:HA	1.98	0.44
39:BD:62:TYR:HA	39:BD:87:ASN:HD21	1.83	0.44
1:AA:35:G:H2'	1:AA:36:C:C6	2.53	0.44
36:DA:135:G:O2'	36:DA:136:G:H5'	2.17	0.44
36:DA:231:C:O2'	36:DA:232:G:H5'	2.17	0.44
36:BA:2850:A:N3	50:BR:61:HIS:CE1	2.86	0.44
6:CF:76:ALA:O	6:CF:80:ARG:HG3	2.18	0.44
1:CA:277:C:O2'	1:CA:278:G:H5'	2.18	0.44
13:AM:34:LEU:HD13	13:AM:41:PRO:HA	2.00	0.44
58:BZ:19:ARG:HH11	58:BZ:19:ARG:HG2	1.83	0.44
36:BA:1596:A:O2'	36:BA:1597:A:H5'	2.17	0.44
37:BB:78:A:H2'	37:BB:79:C:O4'	2.17	0.44
7:AG:26:PHE:O	7:AG:30:ILE:HG12	2.18	0.44
42:BG:43:LEU:N	42:BG:43:LEU:HD22	2.33	0.44
1:AA:995:C:HO2'	1:AA:996:A:H8	1.66	0.44
53:DU:44:ASN:HD21	54:DV:75:PHE:HB3	1.83	0.44
58:DZ:76:LEU:HD23	58:DZ:83:PRO:HA	1.99	0.44
37:BB:94:C:O2'	37:BB:95:C:H5'	2.18	0.44
36:BA:1598:C:O2	36:BA:1598:C:H2'	2.17	0.44
34:D8:36:LYS:HB3	34:D8:40:GLU:HB3	1.99	0.44
13:CM:25:ILE:HD11	13:CM:66:LEU:HD21	1.98	0.44
34:B8:36:LYS:HB3	34:B8:40:GLU:HB3	1.99	0.44
14:AN:41:ARG:NH2	14:AN:42:ILE:HD11	2.32	0.44
26:B0:10:THR:CG2	26:B0:12:ASN:HB2	2.48	0.44
58:DZ:128:VAL:CG2	58:DZ:129:SER:H	2.28	0.44
2:AB:28:PHE:CE2	2:AB:190:THR:HA	2.53	0.44
52:BT:29:ARG:HD3	52:BT:86:ILE:HG23	1.99	0.44
26:D0:14:ARG:NH1	26:D0:14:ARG:CG	2.81	0.44
36:DA:1019:U:O2'	36:DA:1021:A:C2	2.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:142:TRP:C	41:BF:142:TRP:HE3	2.21	0.44
1:AA:858:G:O2'	1:AA:859:A:H5'	2.17	0.44
42:BG:172:LEU:HD13	42:BG:172:LEU:O	2.18	0.44
36:DA:1045:A:N3	36:DA:1047:G:N2	2.65	0.44
48:DP:31:ALA:C	48:DP:33:ARG:H	2.21	0.44
9:CI:85:LEU:HD12	9:CI:85:LEU:C	2.38	0.44
36:DA:2400:G:N2	36:DA:2417:C:C2	2.85	0.44
34:D8:25:MET:HG3	48:DP:64:LYS:HB2	1.98	0.44
54:DV:19:LYS:HB3	54:DV:94:LEU:O	2.18	0.44
54:DV:20:LEU:HB3	54:DV:21:ARG:HD3	1.99	0.44
47:DO:88:ASN:ND2	47:DO:92:GLU:HB2	2.32	0.44
1:CA:1505:G:H2'	23:CX:18:G:OP2	2.18	0.44
36:BA:1053:C:O2'	36:BA:1054:A:H5'	2.18	0.44
8:AH:44:PHE:CE2	8:AH:109:ILE:CG2	3.00	0.44
40:DE:132:HIS:C	40:DE:135:HIS:CE1	2.90	0.44
3:CC:3:ASN:HB2	3:CC:4:LYS:H	1.60	0.44
1:CA:1432:G:P	52:DT:107:ASP:HB2	2.57	0.44
48:BP:124:LYS:HA	48:BP:142:GLY:O	2.18	0.44
36:DA:1558:A:O2'	36:DA:1559:G:P	2.76	0.44
3:AC:70:VAL:CG1	3:AC:71:ALA:N	2.81	0.44
48:BP:83:VAL:CG1	48:BP:112:LEU:HD21	2.46	0.44
1:AA:1036:G:H3'	1:AA:1037:C:C6	2.53	0.44
6:AF:1:MET:HA	6:AF:67:MET:O	2.18	0.44
28:B2:38:GLN:O	28:B2:41:ILE:HG12	2.18	0.44
12:CL:92:ASP:O	12:CL:94:PRO:HD3	2.18	0.44
46:BN:4:TYR:O	46:BN:5:VAL:CB	2.65	0.44
36:DA:1106:G:H2'	36:DA:1107:G:O4'	2.18	0.44
36:DA:2360:A:O2'	36:DA:2361:A:O5'	2.36	0.44
52:DT:126:ALA:O	52:DT:128:GLU:HG3	2.16	0.44
49:DQ:24:GLY:O	49:DQ:102:VAL:HG23	2.17	0.44
46:DN:41:ASP:O	46:DN:42:TRP:C	2.55	0.44
11:AK:21:ILE:HB	11:AK:84:VAL:HG12	2.00	0.44
51:DS:20:ARG:HE	51:DS:20:ARG:HA	1.83	0.44
43:BH:37:VAL:HG21	43:BH:68:THR:HG23	1.99	0.44
10:CJ:7:LYS:HG3	10:CJ:71:LEU:HD13	1.99	0.44
11:AK:33:THR:HB	11:AK:38:ASN:O	2.18	0.44
18:AR:59:SER:OG	18:AR:62:GLU:HG3	2.18	0.44
36:BA:2870:C:H2'	36:BA:2871:C:O4'	2.18	0.44
16:CP:60:LEU:HD21	16:CP:66:PRO:HG2	2.00	0.44
36:DA:1389:G:H2'	36:DA:1390:U:H6	1.80	0.44
1:AA:782:A:C2'	1:AA:783:C:H5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.53	0.44
36:BA:181:A:H5'	36:BA:181:A:C8	2.51	0.44
3:CC:14:ILE:CG1	3:CC:15:THR:N	2.81	0.44
58:BZ:135:GLU:N	58:BZ:135:GLU:OE1	2.51	0.44
30:D4:37:SER:O	30:D4:38:LYS:CB	2.64	0.44
36:BA:2369:A:O2'	36:BA:2370:G:H5'	2.18	0.44
42:DG:34:LEU:O	42:DG:34:LEU:HD12	2.18	0.44
15:AO:39:LEU:HD23	15:AO:39:LEU:O	2.18	0.44
3:CC:107:GLN:NE2	3:CC:107:GLN:H	2.16	0.44
1:CA:403:C:O2'	1:CA:404:U:H5'	2.17	0.44
33:D7:5:TRP:CZ3	36:DA:464:U:H4'	2.52	0.44
25:CZ:40:PRO:O	25:CZ:41:ASN:HB3	2.18	0.44
6:AF:53:ALA:O	6:AF:54:LYS:CB	2.66	0.44
1:AA:178:C:O2'	1:AA:179:A:H5'	2.18	0.44
56:DX:18:TYR:O	56:DX:20:GLY:N	2.51	0.44
36:BA:2758:A:C2	36:BA:2759:G:H1'	2.52	0.44
36:BA:1635:G:H2'	36:BA:1636:C:C6	2.52	0.44
1:CA:441:A:H3'	1:CA:442:C:C6	2.53	0.44
1:CA:179:A:H2'	1:CA:180:U:C6	2.52	0.44
39:DD:98:VAL:O	39:DD:98:VAL:HG12	2.18	0.44
1:CA:926:G:H5"	1:CA:927:G:O5'	2.18	0.44
12:AL:61:THR:C	12:AL:63:GLY:H	2.21	0.44
15:AO:48:LYS:HA	15:AO:48:LYS:HD3	1.78	0.44
36:DA:1114:G:H2'	36:DA:1115:G:H8	1.82	0.44
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.99	0.44
36:DA:1596:A:O2'	36:DA:1597:A:H5'	2.17	0.44
36:BA:341:G:O2'	36:BA:342:G:H5'	2.18	0.44
36:DA:1568:G:P	39:DD:63:ARG:HH22	2.40	0.44
56:BX:53:LYS:HB3	56:BX:82:GLN:CB	2.48	0.44
20:CT:53:LEU:HD22	20:CT:100:ILE:O	2.17	0.44
36:BA:925:C:C3'	36:BA:926:A:H5"	2.46	0.44
28:D2:32:LEU:HD21	28:D2:36:ARG:NH2	2.33	0.44
36:DA:1502:C:H2'	36:DA:1502:C:O2	2.18	0.44
31:D5:3:LYS:O	31:D5:5:PRO:CD	2.66	0.44
42:DG:170:ARG:HG3	42:DG:174:GLU:OE2	2.17	0.44
41:DF:157:VAL:HG22	41:DF:194:MET:HG2	1.99	0.44
2:AB:31:TYR:HD2	2:AB:202:PRO:HG3	1.83	0.44
52:DT:45:PHE:CE2	52:DT:74:ARG:HG3	2.52	0.44
37:BB:7:G:C3'	37:BB:8:U:C5'	2.96	0.44
36:BA:1061:U:C4'	36:BA:1070:A:H1'	2.43	0.44
39:BD:240:ALA:HB1	39:BD:241:PRO:HD2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:42:C:O2'	37:BB:43:C:P	2.76	0.44
34:D8:59:LYS:CB	34:D8:59:LYS:NZ	2.71	0.44
42:BG:11:TYR:O	42:BG:15:VAL:HG23	2.17	0.44
58:BZ:100:VAL:HG23	58:BZ:126:VAL:HG22	2.00	0.44
40:DE:89:ASP:CG	40:DE:90:THR:H	2.22	0.44
25:AZ:117:ARG:NE	25:AZ:157:LEU:HD11	2.32	0.44
53:BU:92:ARG:HH22	54:BV:10:LYS:HB3	1.75	0.44
54:BV:47:VAL:O	54:BV:47:VAL:HG23	2.17	0.44
36:BA:2491:U:C5'	36:BA:2570:G:H5"	2.36	0.44
25:CZ:155:ARG:O	25:CZ:159:ASN:ND2	2.46	0.44
25:CZ:159:ASN:C	25:CZ:161:TYR:N	2.71	0.44
26:B0:53:MET:HA	26:B0:58:THR:O	2.18	0.44
38:BC:118:ASP:CG	38:BC:119:VAL:N	2.70	0.44
38:BC:76:ALA:O	38:BC:77:ILE:HG12	2.18	0.44
36:DA:1042:G:H1	36:DA:1112:G:H22	1.66	0.44
43:DH:49:VAL:O	43:DH:50:VAL:CG2	2.66	0.44
27:D1:37:ILE:CG1	27:D1:37:ILE:O	2.65	0.44
25:AZ:159:ASN:C	25:AZ:161:TYR:N	2.71	0.44
36:BA:806:C:C5	48:BP:39:LYS:HE2	2.52	0.44
36:BA:1479:G:O2'	36:BA:1480:G:H5'	2.18	0.44
2:CB:114:ARG:HH11	2:CB:118:LEU:CD2	2.23	0.44
2:CB:118:LEU:HD13	2:CB:142:LEU:HB2	1.99	0.44
46:DN:34:LEU:HD11	46:DN:116:LEU:HB3	1.99	0.44
34:B8:10:ALA:O	34:B8:14:VAL:HG12	2.18	0.44
1:AA:723:U:C2'	1:AA:723:U:O2	2.65	0.44
36:BA:257:A:C2'	36:BA:258:G:H5'	2.47	0.44
41:BF:53:THR:O	41:BF:57:VAL:HG23	2.18	0.44
29:B3:47:VAL:HG11	29:B3:56:VAL:HG21	1.98	0.44
36:BA:2852:G:O2'	36:BA:2853:C:H5'	2.17	0.44
36:DA:156:U:C2'	36:DA:157:U:H5'	2.48	0.44
57:DY:67:LEU:C	57:DY:67:LEU:HD23	2.38	0.44
36:BA:1360:A:H5'	36:BA:1361:G:OP2	2.18	0.44
25:CZ:87:ASP:HB2	25:CZ:88:TYR:HD1	1.82	0.44
1:AA:659:U:H2'	1:AA:660:G:C8	2.52	0.44
36:DA:2631:G:N2	40:DE:61:ARG:HH12	2.15	0.44
35:D9:1:MET:CG	36:DA:2478:A:OP2	2.66	0.44
36:BA:67:U:H2'	36:BA:68:G:C8	2.52	0.44
1:AA:861:G:O2'	1:AA:862:C:H5'	2.18	0.44
1:CA:1452:C:O2'	1:CA:1456:G:N2	2.48	0.44
4:CD:182:LYS:HB3	4:CD:183:GLY:H	1.54	0.44
28:B2:2:LYS:CB	36:BA:97:C:H5"	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:107:THR:HA	40:DE:163:GLU:O	2.17	0.44
40:DE:112:GLY:O	40:DE:159:HIS:HA	2.18	0.44
14:AN:60:SER:O	14:AN:61:TRP:HB3	2.18	0.44
36:BA:534:U:O2'	53:BU:49:HIS:CD2	2.71	0.44
25:AZ:330:ARG:HH11	25:AZ:330:ARG:HG2	1.83	0.44
58:DZ:103:ARG:HD2	58:DZ:136:PHE:CD1	2.53	0.44
20:CT:36:LEU:HD13	20:CT:36:LEU:O	2.16	0.44
36:BA:1203:G:H3'	36:BA:1204:A:C5'	2.47	0.44
36:DA:117:G:C6	36:DA:119:A:C6	3.06	0.44
1:CA:197:A:C6	1:CA:221:C:H4'	2.52	0.44
41:BF:82:ILE:O	41:BF:83:PHE:HB2	2.17	0.44
36:DA:589:C:H2'	36:DA:590:A:H8	1.80	0.44
3:AC:131:ARG:HH11	3:AC:166:GLU:CG	2.31	0.44
36:DA:2695:C:O2'	36:DA:2696:U:H5'	2.17	0.44
46:BN:16:ILE:HG23	46:BN:54:VAL:HG22	2.00	0.44
47:BO:71:ARG:NE	47:BO:105:GLU:OE2	2.50	0.44
13:CM:111:LYS:O	13:CM:112:GLY:O	2.36	0.44
36:BA:1916:A:H2'	36:BA:1917:U:O4'	2.18	0.44
1:AA:189:G:O2'	1:AA:189(A):C:H5'	2.17	0.44
36:BA:1466:G:H2'	36:BA:1547:C:N4	2.33	0.44
1:AA:294:U:H2'	1:AA:295:C:H6	1.83	0.44
1:AA:836:G:C6	1:AA:851:G:C6	3.06	0.44
27:D1:3:LYS:HG3	36:DA:1365:A:OP2	2.17	0.44
1:CA:665:A:H2'	1:CA:732:C:O2	2.18	0.44
36:DA:133:C:H6	36:DA:133:C:O5'	2.01	0.44
50:DR:84:ALA:HB3	50:DR:85:PRO:HD3	2.00	0.44
24:AY:54:5MU:H73	24:AY:55:PSU:C2	2.52	0.44
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.52	0.44
25:AZ:2:LYS:C	25:AZ:275:LYS:HE3	2.29	0.44
13:AM:4:ILE:CD1	13:AM:4:ILE:H	2.31	0.44
13:CM:4:ILE:CD1	13:CM:4:ILE:H	2.31	0.44
56:DX:35:THR:CG2	56:DX:36:LYS:N	2.80	0.44
28:D2:11:GLU:HA	28:D2:14:ARG:HE	1.81	0.44
28:D2:63:VAL:O	28:D2:64:LEU:C	2.56	0.44
57:DY:7:VAL:CB	57:DY:8:LYS:HD2	2.48	0.44
36:BA:2575:C:H2'	36:BA:2578:G:O6	2.18	0.44
1:CA:1004:A:C2'	1:CA:1005:A:H5'	2.47	0.44
58:DZ:96:VAL:CG1	58:DZ:97:GLU:N	2.71	0.44
52:DT:31:SER:OG	52:DT:32:TYR:CE1	2.62	0.44
1:CA:976:G:OP1	14:CN:32:SER:N	2.49	0.44
52:DT:56:GLY:O	52:DT:59:THR:CG2	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:321:G:C1'	41:BF:165:ARG:HD3	2.48	0.44
48:DP:47:ASP:OD2	48:DP:50:ARG:HG2	2.18	0.44
58:BZ:161:VAL:CG1	58:BZ:162:GLU:N	2.81	0.44
24:AY:64:U:O2'	25:AZ:341:GLN:NE2	2.51	0.44
4:CD:18:LYS:HE3	4:CD:31:CYS:HB3	1.99	0.44
42:BG:135:LEU:HD22	42:BG:140:ILE:CD1	2.48	0.44
9:CI:20:ARG:NH1	9:CI:20:ARG:CG	2.81	0.44
27:D1:70:VAL:O	27:D1:73:LEU:HB2	2.17	0.44
53:BU:65:ILE:HD12	53:BU:65:ILE:N	2.33	0.44
14:CN:57:ARG:HG2	14:CN:58:LYS:N	2.33	0.44
58:DZ:149:SER:OG	58:DZ:173:ALA:HA	2.18	0.44
38:DC:77:ILE:HB	38:DC:115:ALA:CB	2.43	0.44
12:AL:117:ARG:HB3	12:AL:122:THR:OG1	2.17	0.44
37:DB:17:C:O2'	37:DB:18:G:H5'	2.18	0.44
37:DB:69:G:N2	37:DB:70:C:H1'	2.33	0.44
4:AD:3:ARG:HG2	4:AD:118:ARG:HE	1.83	0.44
3:CC:3:ASN:O	3:CC:4:LYS:CB	2.66	0.44
1:CA:1363(A):A:C4'	1:CA:1364:U:H5"	2.41	0.44
1:CA:376:G:H4'	16:CP:5:ARG:NH1	2.32	0.44
16:CP:22:THR:OG1	16:CP:26:ARG:HG3	2.18	0.44
42:BG:54:GLU:HA	42:BG:57:ALA:CB	2.47	0.44
1:AA:130:A:H1'	1:AA:263:A:O2'	2.17	0.44
36:DA:2841:C:H2'	36:DA:2842:G:C8	2.53	0.44
46:BN:29:LYS:C	46:BN:31:ALA:H	2.20	0.44
39:BD:186:HIS:HD2	39:BD:188:GLU:HB2	1.78	0.44
36:DA:139(A):G:H3'	36:DA:140:G:C8	2.51	0.44
1:AA:628:G:O2'	1:AA:629:G:H5'	2.17	0.44
36:BA:1494:A:N3	36:BA:1494:A:H3'	2.32	0.44
12:AL:7:ILE:HG21	17:AQ:34:LYS:HB2	2.00	0.44
5:CE:53:LEU:HD12	5:CE:53:LEU:N	2.32	0.44
7:AG:44:TYR:O	7:AG:45:ASP:C	2.57	0.44
4:AD:6:GLY:O	4:AD:7:PRO:C	2.56	0.44
58:DZ:10:ARG:NH1	58:DZ:10:ARG:HG2	2.28	0.44
58:DZ:35:ARG:NH2	58:DZ:36:LYS:HG2	2.32	0.44
49:DQ:43:THR:HB	49:DQ:45:GLN:HE21	1.83	0.44
51:BS:20:ARG:HA	51:BS:20:ARG:HE	1.82	0.44
40:BE:59:VAL:O	40:BE:60:ASN:CG	2.57	0.44
39:DD:50:THR:O	39:DD:51:VAL:HG23	2.17	0.44
56:DX:64:LYS:HZ2	56:DX:73:ARG:HH21	1.65	0.44
58:BZ:132:ASN:C	58:BZ:134:PRO:HD3	2.38	0.44
36:BA:598:G:C5'	48:BP:15:ARG:HB3	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:138:ASP:C	49:BQ:139:GLU:OE1	2.56	0.44
53:BU:74:LEU:HD13	53:BU:79:PHE:HB2	2.00	0.44
21:AU:10:ARG:O	21:AU:11:GLY:C	2.54	0.44
40:BE:152:LYS:HG2	46:BN:78:TYR:CZ	2.52	0.44
2:CB:97:TRP:CZ3	2:CB:176:GLU:OE2	2.70	0.44
34:D8:30:ARG:NE	34:D8:30:ARG:HA	2.29	0.44
4:AD:91:SER:O	4:AD:92:VAL:C	2.54	0.44
24:AY:52:A:H2'	24:AY:53:G:H5'	1.99	0.44
36:DA:703:U:O2'	36:DA:704:G:H5'	2.18	0.44
36:DA:534:U:O2'	53:DU:49:HIS:HD2	2.00	0.44
53:DU:69:CYS:HB2	53:DU:74:LEU:HD11	1.99	0.44
36:BA:1389:G:H2'	36:BA:1390:U:O4'	2.18	0.44
36:BA:1101:U:O2'	36:BA:1102:C:H5'	2.17	0.44
30:B4:37:SER:O	30:B4:38:LYS:CB	2.65	0.44
1:AA:153:C:H42	1:AA:168:G:H1	1.65	0.44
36:DA:2153:G:H2'	36:DA:2154:G:C8	2.53	0.44
27:D1:21:ARG:HH11	27:D1:21:ARG:HB2	1.81	0.44
13:CM:40:ASN:ND2	13:CM:43:THR:HG23	2.31	0.44
41:BF:93:LYS:O	41:BF:94:PRO:C	2.55	0.44
28:B2:16:LEU:HD22	28:B2:20:GLU:HG2	1.98	0.44
36:DA:445:C:H2'	36:DA:446:G:C8	2.53	0.44
41:BF:114:VAL:HG21	41:BF:202:PHE:CE2	2.52	0.44
13:AM:125:ARG:NH1	36:BA:1913:A:N7	2.65	0.44
36:DA:382:G:H2'	36:DA:383:U:H5'	2.00	0.44
27:B1:80:LEU:HD23	27:B1:81:LYS:O	2.18	0.44
36:DA:271(U):G:H2'	36:DA:271(V):G:C8	2.53	0.44
1:AA:1459:C:O2'	1:AA:1460:A:H5'	2.17	0.44
1:CA:605:U:O2'	1:CA:606:G:H5'	2.17	0.44
36:BA:1440:G:H2'	36:BA:1441:G:H8	1.83	0.44
36:BA:1087:G:O2'	36:BA:1089:G:H5'	2.18	0.44
42:DG:26:GLN:HG3	42:DG:27:ASN:H	1.83	0.44
39:BD:229:VAL:HG13	39:BD:230:ASP:N	2.32	0.44
1:AA:1012:U:O2'	1:AA:1013:G:H5'	2.18	0.44
36:DA:341:G:O2'	36:DA:342:G:H5'	2.18	0.44
36:BA:855:G:H1	36:BA:922:U:H3	1.66	0.44
54:DV:74:LYS:HB2	54:DV:83:ARG:HB2	1.99	0.44
1:CA:639:G:O2'	1:CA:640:A:H5'	2.18	0.44
50:BR:81:ASP:O	50:BR:85:PRO:HG2	2.18	0.44
36:BA:776:G:H4'	36:BA:777:A:O5'	2.18	0.44
36:DA:654(A):G:H2'	36:DA:654(B):C:H5'	1.99	0.44
49:DQ:96:VAL:HG23	49:DQ:96:VAL:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:675:A:H1'	11:CK:116:HIS:ND1	2.33	0.44
30:D4:47:GLN:HE21	30:D4:47:GLN:HB3	1.63	0.44
36:DA:269:U:O2	36:DA:269:U:H2'	2.18	0.44
1:CA:1042:G:O2'	1:CA:1043:C:H5'	2.17	0.44
36:BA:2457:U:C2'	36:BA:2458:G:H5'	2.48	0.44
36:BA:2461:C:H2'	36:BA:2462:U:C6	2.53	0.44
34:D8:36:LYS:O	34:D8:37:SER:C	2.56	0.43
42:DG:114:ILE:HD12	42:DG:115:ARG:H	1.83	0.43
1:CA:1282:C:H2'	1:CA:1283:G:H5'	1.99	0.43
51:BS:61:ASN:O	51:BS:63:THR:N	2.51	0.43
2:AB:28:PHE:HE2	2:AB:190:THR:HG22	1.83	0.43
43:BH:83:TYR:HB2	43:BH:135:GLY:H	1.82	0.43
52:DT:86:ILE:HG12	52:DT:87:ASP:N	2.33	0.43
41:BF:178:PRO:HG2	41:BF:179:GLU:H	1.82	0.43
56:DX:71:GLY:C	56:DX:72:LYS:HD2	2.39	0.43
31:B5:36:CYS:HB3	31:B5:49:CYS:SG	2.58	0.43
41:BF:36:VAL:HA	41:BF:101:LEU:CD2	2.48	0.43
55:DW:6:ILE:HA	55:DW:104:THR:HG22	2.00	0.43
36:BA:973:A:O4'	36:BA:1188:U:C6	2.70	0.43
25:AZ:385:ARG:HA	25:AZ:399:VAL:HA	2.00	0.43
36:DA:2469:A:O2'	49:DQ:56:ARG:CD	2.65	0.43
36:BA:2481:G:C2'	36:BA:2482:G:OP2	2.66	0.43
17:AQ:10:VAL:HG23	17:AQ:54:GLY:N	2.33	0.43
9:CI:93:ARG:C	9:CI:95:LYS:N	2.71	0.43
17:AQ:58:GLU:O	17:AQ:59:ILE:HD13	2.18	0.43
17:AQ:5:VAL:HG22	17:AQ:60:ILE:CD1	2.45	0.43
38:DC:78:ALA:H	38:DC:115:ALA:CA	2.30	0.43
50:BR:75:LEU:C	50:BR:75:LEU:HD13	2.37	0.43
37:DB:17:C:H2'	37:DB:18:G:C8	2.52	0.43
25:AZ:82:CYS:HA	25:AZ:83:PRO:HD3	1.88	0.43
19:AS:29:ARG:O	19:AS:31:ILE:HG22	2.17	0.43
36:BA:606:U:H4'	36:BA:658:C:H4'	2.00	0.43
25:AZ:136:ASN:HA	25:AZ:173:GLY:O	2.17	0.43
22:CW:9:A:C2	22:CW:45:U:C4	3.06	0.43
58:DZ:153:SER:HB2	58:DZ:167:PRO:HG3	2.00	0.43
7:AG:20:ASP:HB3	7:AG:23:VAL:CG2	2.47	0.43
25:AZ:65:THR:HG23	25:AZ:80:VAL:CG1	2.47	0.43
40:DE:24:THR:HB	40:DE:186:GLY:HA2	1.99	0.43
36:DA:2650:U:O2'	36:DA:2651:C:H5'	2.19	0.43
27:D1:67:ILE:O	27:D1:68:PRO:C	2.55	0.43
36:DA:1721:G:H8	36:DA:1741:A:H62	1.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:59:A:C5'	1:CA:60:A:H5"	2.48	0.43
29:D3:48:GLU:H	29:D3:48:GLU:HG2	1.65	0.43
36:BA:2360:A:O2'	36:BA:2361:A:C5'	2.66	0.43
43:DH:76:VAL:C	43:DH:78:GLY:H	2.21	0.43
36:DA:990:A:N6	36:DA:1186:G:H1'	2.33	0.43
22:CV:49:C:H2'	22:CV:50:U:H6	1.83	0.43
12:CL:53:ARG:HB2	12:CL:93:LEU:HD21	1.99	0.43
46:BN:3:THR:C	46:BN:4:TYR:CG	2.92	0.43
13:AM:83:ASP:OD1	13:AM:85:GLY:N	2.51	0.43
46:DN:3:THR:C	46:DN:4:TYR:CG	2.92	0.43
1:AA:1315:U:O2	1:AA:1360:A:H2	2.01	0.43
36:BA:1336:A:O2'	36:BA:1337:G:H5'	2.18	0.43
36:BA:25:U:H5'	55:BW:78:GLU:O	2.18	0.43
36:BA:2884:U:H2'	36:BA:2885:C:H5'	2.00	0.43
18:CR:36:ASN:ND2	18:CR:39:VAL:HB	2.33	0.43
53:BU:69:CYS:O	53:BU:74:LEU:HD12	2.18	0.43
1:CA:476:G:H2'	1:CA:477:A:C8	2.53	0.43
36:BA:2821:A:O2'	36:BA:2822:G:H5'	2.17	0.43
42:DG:135:LEU:CD2	42:DG:140:ILE:HD11	2.47	0.43
9:AI:50:LEU:O	9:AI:56:LEU:HB3	2.18	0.43
44:DJ:56:UNK:HA	44:DJ:82:UNK:O	2.18	0.43
36:DA:2562:U:C2'	36:DA:2563:U:H5'	2.47	0.43
36:DA:419:C:H2'	36:DA:420:C:C6	2.53	0.43
48:DP:100:LEU:C	48:DP:100:LEU:HD13	2.38	0.43
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.17	0.43
36:DA:1138:G:C4	36:DA:1139:G:H1'	2.53	0.43
53:BU:66:ASN:ND2	53:BU:76:TYR:HB2	2.33	0.43
1:CA:1073:U:O2'	1:CA:1074:G:H5'	2.18	0.43
10:AJ:47:PHE:CE1	14:AN:37:PHE:CE2	3.06	0.43
36:DA:850:C:H2'	36:DA:851:U:H6	1.82	0.43
36:BA:1713:U:O2'	36:BA:1714:G:H5'	2.18	0.43
57:BY:56:PRO:O	57:BY:57:GLN:C	2.56	0.43
57:BY:57:GLN:HA	57:BY:57:GLN:OE1	2.18	0.43
36:BA:541:C:O2'	36:BA:542:C:H5'	2.18	0.43
15:CO:70:LEU:C	15:CO:72:ARG:H	2.21	0.43
1:CA:547:A:H4'	1:CA:548:G:O5'	2.18	0.43
5:AE:48:ALA:HB2	5:AE:57:LYS:NZ	2.33	0.43
56:BX:25:LYS:HA	56:BX:81:VAL:O	2.18	0.43
48:DP:133:SER:O	48:DP:136:GLU:HG2	2.17	0.43
43:DH:142:GLY:O	43:DH:145:ALA:HB3	2.18	0.43
56:DX:35:THR:CG2	56:DX:37:THR:H	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:21:ALA:HB3	41:BF:23:ASP:OD2	2.18	0.43
34:B8:36:LYS:O	34:B8:37:SER:C	2.56	0.43
32:D6:41:PRO:HD2	32:D6:45:LYS:HA	2.00	0.43
42:BG:73:ALA:N	42:BG:87:PRO:CG	2.76	0.43
1:CA:979:C:O2	14:CN:19:ARG:HG2	2.17	0.43
57:BY:13:VAL:CG2	57:BY:73:ARG:O	2.58	0.43
42:DG:42:GLY:O	42:DG:44:GLY:N	2.45	0.43
27:B1:53:VAL:HG22	27:B1:74:VAL:HG13	2.00	0.43
43:BH:85:LYS:HE3	43:BH:86:GLU:N	2.33	0.43
19:CS:70:LYS:O	19:CS:71:LEU:C	2.56	0.43
41:DF:142:TRP:C	41:DF:142:TRP:HE3	2.21	0.43
24:AY:76:A:C2	25:AZ:270:VAL:CA	3.01	0.43
56:BX:41:ASN:C	56:BX:43:VAL:H	2.21	0.43
51:BS:89:ARG:CB	51:BS:92:TYR:HB3	2.39	0.43
36:BA:251:A:H5"	48:BP:51:PHE:CZ	2.53	0.43
48:DP:131:SER:O	48:DP:132:LYS:C	2.56	0.43
25:AZ:318:ALA:O	25:AZ:369:THR:HA	2.18	0.43
53:DU:61:TRP:CH2	53:DU:94:ASN:HB2	2.53	0.43
53:DU:92:ARG:NE	54:DV:11:GLN:HG2	2.33	0.43
54:BV:15:GLU:O	54:BV:96:ILE:HG21	2.17	0.43
36:DA:2724:C:P	50:DR:2:ARG:HH21	2.41	0.43
32:B6:53:LYS:HE2	32:B6:54:ILE:HG13	1.99	0.43
54:BV:49:THR:CB	54:BV:50:PRO:CD	2.96	0.43
13:CM:97:PRO:HB2	13:CM:101:GLN:NE2	2.33	0.43
38:DC:118:ASP:C	38:DC:120:MET:N	2.71	0.43
38:DC:118:ASP:O	38:DC:120:MET:N	2.51	0.43
50:BR:118:GLU:HA	50:BR:118:GLU:OE1	2.18	0.43
33:B7:14:LYS:HB2	33:B7:14:LYS:HE2	1.83	0.43
13:AM:49:THR:O	13:AM:53:VAL:HG23	2.18	0.43
36:BA:1042:G:H1	36:BA:1112:G:H22	1.66	0.43
38:BC:118:ASP:O	38:BC:120:MET:N	2.50	0.43
36:DA:743:G:O2'	36:DA:744:G:H5'	2.18	0.43
10:CJ:32:ALA:H	10:CJ:78:ASN:ND2	2.12	0.43
4:AD:101:LEU:O	4:AD:102:ASP:C	2.56	0.43
1:AA:1065:U:C6	1:AA:1190:G:N3	2.87	0.43
1:AA:1065:U:H6	1:AA:1190:G:N2	2.12	0.43
36:DA:916:G:C2'	36:DA:917:A:H5"	2.49	0.43
25:CZ:195:TRP:HA	25:CZ:195:TRP:HE3	1.84	0.43
25:CZ:197:ASP:O	25:CZ:201:GLU:N	2.51	0.43
22:CW:44:G:O4'	22:CW:44:G:P	2.76	0.43
52:DT:115:ARG:CG	52:DT:115:ARG:NH1	2.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1114:G:H2'	36:BA:1115:G:H8	1.83	0.43
3:AC:73:PRO:O	3:AC:76:VAL:HG22	2.18	0.43
51:DS:66:ALA:C	51:DS:69:VAL:HG12	2.38	0.43
54:BV:28:GLU:O	54:BV:30:GLY:N	2.51	0.43
22:AV:59:U:HO2'	22:AV:60:U:H6	1.65	0.43
1:AA:656:C:O2'	1:AA:657:G:H5'	2.18	0.43
20:CT:13:LEU:O	20:CT:15:ARG:N	2.51	0.43
25:AZ:323:LEU:N	25:AZ:323:LEU:HD12	2.26	0.43
58:DZ:28:MET:HG2	58:DZ:37:VAL:HG11	2.00	0.43
36:BA:548:A:H2'	36:BA:549:G:H5'	1.99	0.43
36:DA:2785:C:O2'	40:DE:64:LYS:NZ	2.49	0.43
43:DH:37:VAL:HG21	43:DH:68:THR:HG23	2.00	0.43
36:BA:2494:G:O2'	49:BQ:80:GLU:HA	2.18	0.43
38:BC:72:VAL:HG13	38:BC:72:VAL:O	2.17	0.43
10:CJ:35:SER:OG	10:CJ:73:ASP:HB2	2.18	0.43
25:CZ:27:LEU:HD11	25:CZ:31:LEU:HD11	2.00	0.43
18:AR:53:ARG:HH11	18:AR:60:ALA:CA	2.31	0.43
40:DE:107:THR:O	40:DE:190:GLY:CA	2.63	0.43
36:BA:2262:U:H2'	36:BA:2263:C:C6	2.49	0.43
18:AR:25:THR:O	18:AR:25:THR:HG22	2.17	0.43
36:DA:2358:G:H2'	36:DA:2359:C:C6	2.52	0.43
1:AA:1171:G:H2'	1:AA:1172:C:H6	1.83	0.43
36:DA:360:G:H2'	36:DA:361:G:H8	1.82	0.43
1:CA:475:G:H2'	1:CA:476:G:H8	1.83	0.43
1:CA:477:A:O2'	1:CA:479:C:H5'	2.18	0.43
18:AR:50:ILE:CD1	18:AR:70:ILE:HG21	2.48	0.43
42:DG:135:LEU:HD23	42:DG:140:ILE:HD11	2.01	0.43
37:BB:91:C:P	49:BQ:16:ARG:HH21	2.40	0.43
1:CA:719:C:C2	18:CR:50:ILE:HG12	2.54	0.43
36:DA:320:A:H3'	41:DF:136:THR:CG2	2.48	0.43
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	2.00	0.43
36:BA:2624:G:O2'	36:BA:2625:G:H5'	2.17	0.43
22:CW:11:C:H2'	22:CW:12:U:H6	1.82	0.43
1:AA:332:G:H2'	1:AA:333:G:H8	1.83	0.43
3:CC:107:GLN:CD	3:CC:107:GLN:H	2.20	0.43
1:CA:312:C:H2'	1:CA:313:A:H8	1.83	0.43
5:AE:20:GLN:HE21	5:AE:20:GLN:HB3	1.52	0.43
36:BA:1915:U:H3'	36:BA:1916:A:H8	1.83	0.43
36:DA:1914:C:H2'	36:DA:1915:U:O4'	2.17	0.43
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.53	0.43
36:DA:2162:G:O2'	36:DA:2163:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:80:ALA:O	15:AO:84:LYS:HG3	2.18	0.43
1:AA:746:A:O2'	1:AA:747:C:H5'	2.18	0.43
36:DA:986:C:O2'	36:DA:987:G:H5'	2.18	0.43
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.53	0.43
1:CA:1238:A:C8	1:CA:1303:C:H1'	2.53	0.43
55:DW:70:TYR:OH	55:DW:72:LYS:HG2	2.17	0.43
54:DV:89:GLN:OE1	54:DV:89:GLN:HA	2.18	0.43
2:CB:57:PHE:HE2	2:CB:185:ILE:HD11	1.84	0.43
33:D7:4:THR:HG22	36:DA:687:C:H1'	1.99	0.43
36:DA:2300:G:O2'	36:DA:2301:C:H5'	2.18	0.43
38:DC:21:THR:OG1	38:DC:24:GLU:HG3	2.18	0.43
7:CG:89:MET:HE2	7:CG:89:MET:HB2	1.80	0.43
28:D2:29:LYS:CB	28:D2:32:LEU:HD22	2.47	0.43
28:D2:32:LEU:HA	28:D2:35:LEU:HB2	2.00	0.43
28:D2:67:LYS:O	28:D2:69:ARG:N	2.51	0.43
34:B8:61:LEU:O	34:B8:64:TYR:N	2.51	0.43
41:DF:192:LEU:CD2	41:DF:194:MET:HG3	2.27	0.43
52:BT:83:ILE:CG1	52:BT:84:GLN:H	2.30	0.43
47:DO:104:ARG:CZ	52:DT:33:LYS:HD2	2.48	0.43
52:DT:62:THR:HA	52:DT:74:ARG:O	2.18	0.43
36:BA:512:G:OP1	36:BA:1235:G:H5'	2.18	0.43
47:BO:60:ALA:HA	47:BO:87:ILE:HG12	2.00	0.43
9:CI:4:TYR:HA	9:CI:87:GLN:HG2	2.01	0.43
36:BA:637:A:OP2	48:BP:115:LEU:HB2	2.17	0.43
1:CA:963:G:C2	10:CJ:55:LYS:NZ	2.81	0.43
51:BS:85:VAL:CG2	51:BS:106:ARG:HG3	2.42	0.43
18:AR:31:LEU:H	18:AR:31:LEU:CD2	2.31	0.43
25:AZ:19:HIS:CE1	25:AZ:113:MET:CG	3.02	0.43
11:AK:43:SER:HA	11:AK:47:VAL:HG21	2.00	0.43
1:CA:189(D):C:O2	1:CA:189(H):G:C6	2.72	0.43
50:DR:52:ILE:O	50:DR:55:ALA:HB3	2.19	0.43
27:B1:21:ARG:HH11	27:B1:21:ARG:CB	2.19	0.43
26:D0:41:ARG:O	26:D0:57:PHE:CD2	2.71	0.43
11:CK:44:SER:N	11:CK:47:VAL:HG23	2.33	0.43
36:BA:673:C:H6	36:BA:673:C:C5'	2.22	0.43
25:CZ:135:MET:HE3	25:CZ:150:VAL:CG1	2.39	0.43
25:CZ:136:ASN:HA	25:CZ:173:GLY:O	2.18	0.43
46:BN:82:LEU:HA	46:BN:82:LEU:HD12	1.80	0.43
25:AZ:145:GLU:CG	25:AZ:149:LEU:HB2	2.40	0.43
39:BD:8:PRO:HB3	39:BD:14:ARG:CB	2.41	0.43
4:CD:171:GLY:HA2	4:CD:172:PRO:HD3	1.88	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:16:LEU:CD1	10:CJ:70:ARG:CG	2.96	0.43
36:DA:2841:C:H2'	36:DA:2842:G:H8	1.83	0.43
13:CM:57:ARG:NH1	30:D4:34:GLU:CG	2.77	0.43
36:BA:106:C:H1'	57:BY:2:ARG:HH21	1.81	0.43
36:DA:442:G:O4'	41:DF:46:ARG:HD3	2.18	0.43
36:DA:1495:A:H2'	36:DA:1496:A:N3	2.33	0.43
1:AA:1127:G:H1	1:AA:1145:C:H42	1.65	0.43
40:DE:137:HIS:HB3	40:DE:138:PRO:HD2	1.98	0.43
20:AT:15:ARG:O	20:AT:19:SER:HB2	2.17	0.43
20:CT:13:LEU:C	20:CT:15:ARG:N	2.70	0.43
15:AO:71:GLN:HB2	15:AO:78:TYR:CD1	2.54	0.43
50:DR:21:TYR:HB3	50:DR:47:PHE:CD2	2.53	0.43
36:BA:1502:C:O2	36:BA:1502:C:H2'	2.16	0.43
1:AA:1286:A:H1'	1:AA:1287:A:H4'	1.99	0.43
36:DA:89:G:N2	36:DA:456:C:N4	2.67	0.43
16:CP:60:LEU:HD21	16:CP:66:PRO:HG3	2.00	0.43
10:AJ:29:ARG:O	10:AJ:30:SER:CB	2.66	0.43
52:BT:35:LYS:O	52:BT:38:ASN:ND2	2.52	0.43
46:DN:55:VAL:CG2	46:DN:126:PRO:HA	2.46	0.43
37:DB:91:C:OP2	49:DQ:16:ARG:NH2	2.50	0.43
36:DA:2884:U:H2'	36:DA:2885:C:H5'	2.00	0.43
49:BQ:21:THR:CG2	49:BQ:23:GLY:O	2.65	0.43
40:BE:107:THR:O	40:BE:190:GLY:CA	2.66	0.43
25:AZ:333:GLY:HA2	25:AZ:363:MET:HA	2.00	0.43
1:CA:1171:G:H2'	1:CA:1172:C:H6	1.84	0.43
39:BD:12:SER:HB2	39:BD:208:LYS:HB3	1.99	0.43
3:CC:132:ARG:O	3:CC:136:GLN:HG3	2.18	0.43
47:DO:28:SER:O	47:DO:29:ASN:CB	2.66	0.43
36:DA:1773:A:H2'	36:DA:1774:C:C5'	2.48	0.43
47:BO:114:ILE:HD12	47:BO:114:ILE:H	1.83	0.43
36:DA:2807:G:C2'	36:DA:2808:U:H5"	2.48	0.43
4:AD:155:LEU:O	4:AD:159:ARG:HG2	2.19	0.43
13:CM:40:ASN:HB3	13:CM:43:THR:HG23	2.00	0.43
36:DA:624:C:H5'	36:DA:625:G:OP2	2.19	0.43
36:BA:1416:G:HO2'	36:BA:1417:C:H5	1.62	0.43
36:BA:491:G:H2'	36:BA:492:A:C8	2.53	0.43
25:CZ:129:PRO:HB2	25:CZ:130:TYR:CE2	2.53	0.43
36:BA:2087:G:C2'	36:BA:2088:G:H5'	2.47	0.43
43:DH:97:ARG:HH21	43:DH:99:VAL:HG21	1.82	0.43
1:AA:222:U:H2'	1:AA:223:U:H6	1.82	0.43
36:DA:2171:A:HO2'	36:DA:2172:U:H5	1.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:200:TRP:O	25:CZ:204:ASP:HB2	2.18	0.43
1:AA:774:G:O2'	1:AA:775:G:H5'	2.18	0.43
53:DU:32:PHE:CB	53:DU:36:ARG:HH12	2.32	0.43
1:AA:441:A:H3'	1:AA:442:C:H6	1.83	0.43
17:CQ:21:VAL:O	17:CQ:41:LYS:HA	2.18	0.43
1:CA:178:C:O2'	1:CA:179:A:H5'	2.18	0.43
2:CB:106:LYS:HB2	2:CB:106:LYS:NZ	2.33	0.43
16:CP:45:THR:O	16:CP:47:ASP:N	2.41	0.43
1:AA:718:G:O6	18:AR:74:ARG:NH1	2.52	0.43
49:DQ:48:GLU:O	49:DQ:49:ALA:C	2.57	0.43
26:B0:55:ARG:HB3	26:B0:55:ARG:HE	1.70	0.43
46:DN:137:LYS:HG2	46:DN:138:LEU:N	2.33	0.43
46:DN:94:HIS:N	46:DN:95:PRO:CD	2.81	0.43
44:BJ:125:UNK:C	44:BJ:127:UNK:N	2.81	0.43
41:DF:145:GLU:O	41:DF:146:ALA:HB2	2.19	0.43
49:BQ:18:LYS:O	49:BQ:19:GLY:O	2.36	0.43
36:BA:133:C:H6	36:BA:133:C:O5'	2.02	0.43
40:DE:183:LEU:N	40:DE:183:LEU:HD12	2.34	0.43
25:CZ:214:VAL:HG13	25:CZ:214:VAL:O	2.18	0.43
1:AA:605:U:O2'	1:AA:606:G:H5'	2.18	0.43
36:BA:510:C:H2'	36:BA:511:U:O4'	2.17	0.43
36:DA:1680:U:O2	36:DA:1763:G:H3'	2.18	0.43
11:CK:17:GLY:O	11:CK:80:VAL:HA	2.18	0.43
36:BA:1438:U:O2'	36:BA:1439:A:H5'	2.17	0.43
20:CT:57:ARG:HD3	20:CT:102:GLY:HA2	2.01	0.43
24:CY:25:C:O2'	24:CY:26:A:H5'	2.18	0.43
48:DP:58:THR:O	48:DP:61:ARG:CD	2.65	0.43
56:DX:12:VAL:CG1	56:DX:27:THR:O	2.67	0.43
51:DS:61:ASN:O	51:DS:63:THR:N	2.52	0.43
28:D2:56:GLN:NE2	28:D2:60:LEU:HD12	2.34	0.43
34:B8:4:MET:HE2	36:BA:666:G:H1'	2.00	0.43
34:B8:32:LEU:HD21	36:BA:2391:G:OP1	2.19	0.43
36:BA:2428:G:H21	48:BP:60:MET:HE1	1.83	0.43
32:B6:25:LYS:HE2	34:B8:34:TRP:CZ2	2.52	0.43
32:B6:30:THR:O	32:B6:32:ASN:N	2.50	0.43
31:D5:4:HIS:CB	36:DA:2577:A:H1'	2.48	0.43
42:DG:143:GLU:O	42:DG:144:ILE:CG2	2.66	0.43
42:BG:46:ALA:C	42:BG:47:LYS:HG3	2.39	0.43
57:BY:13:VAL:CG2	57:BY:14:LEU:N	2.82	0.43
58:DZ:72:ARG:NH2	58:DZ:97:GLU:O	2.51	0.43
42:DG:88:ILE:HG23	42:DG:89:GLY:H	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:42:ILE:CD1	2:AB:202:PRO:HB2	2.45	0.43
43:BH:169:VAL:CG2	43:BH:170:ARG:H	2.11	0.43
31:B5:36:CYS:CB	31:B5:49:CYS:HB3	2.49	0.43
36:BA:1539:G:H2'	36:BA:1540:U:C5'	2.38	0.43
36:DA:1210:A:O2'	36:DA:1211:U:OP2	2.27	0.43
24:AY:76:A:C2	25:AZ:271:GLU:N	2.86	0.43
51:DS:29:PHE:C	51:DS:29:PHE:CD1	2.91	0.43
5:CE:12:LEU:CD2	5:CE:13:ILE:N	2.81	0.43
40:BE:36:ARG:NH1	40:BE:85:ASN:OD1	2.50	0.43
36:DA:2415:G:H4'	48:DP:66:GLY:O	2.18	0.43
51:BS:56:LEU:O	51:BS:57:LYS:O	2.36	0.43
40:DE:3:GLY:HA3	40:DE:81:ILE:CG2	2.48	0.43
54:BV:19:LYS:HB3	54:BV:94:LEU:O	2.17	0.43
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	2.01	0.43
53:BU:91:ASP:O	53:BU:92:ARG:HB3	2.18	0.43
25:CZ:325:LYS:HE3	25:CZ:331:HIS:CG	2.53	0.43
38:DC:116:THR:CG2	38:DC:147:PHE:HA	2.48	0.43
11:CK:43:SER:HA	11:CK:47:VAL:HG21	2.01	0.43
25:CZ:176:LEU:O	25:CZ:180:GLU:HG3	2.19	0.43
3:CC:3:ASN:O	3:CC:4:LYS:HB2	2.18	0.43
37:BB:17:C:O2'	37:BB:18:G:H5'	2.19	0.43
36:DA:2039:C:O2'	36:DA:2040:C:H5'	2.18	0.43
43:BH:137:ASP:O	43:BH:138:LYS:HB2	2.19	0.43
34:B8:21:LYS:HD3	34:B8:48:PHE:CZ	2.53	0.43
34:B8:22:VAL:CG2	34:B8:53:PRO:HB2	2.48	0.43
34:B8:50:LEU:H	34:B8:53:PRO:HG3	1.83	0.43
16:CP:67:THR:CG2	16:CP:68:ASP:N	2.79	0.43
17:AQ:63:ARG:O	17:AQ:64:PRO:C	2.57	0.43
4:AD:127:THR:N	4:AD:147:ALA:O	2.50	0.43
43:BH:27:LYS:HE2	43:BH:27:LYS:HB3	1.88	0.43
12:AL:53:ARG:HB2	12:AL:93:LEU:HD21	2.00	0.43
29:D3:15:TYR:CD2	29:D3:19:GLN:NE2	2.84	0.43
43:DH:23:ARG:O	43:DH:24:VAL:CG2	2.66	0.43
36:BA:583:G:H2'	36:BA:584:C:H6	1.82	0.43
40:DE:59:VAL:HG13	40:DE:60:ASN:N	2.33	0.43
6:AF:22:GLU:HA	6:AF:25:ILE:HG22	2.00	0.43
36:DA:67:U:H2'	36:DA:68:G:C8	2.54	0.43
1:CA:1269:A:H2	1:CA:1312:G:N3	2.16	0.43
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.18	0.43
10:CJ:46:ARG:CG	10:CJ:46:ARG:HH11	2.27	0.43
13:AM:118:ALA:HB3	22:AV:29:G:C5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:79:PHE:CE1	53:BU:83:LEU:HD11	2.54	0.43
36:DA:2678:C:H2'	36:DA:2679:A:O4'	2.19	0.43
4:AD:85:LYS:HD3	4:AD:92:VAL:HG11	1.99	0.43
36:BA:117:G:C6	36:BA:119:A:C6	3.07	0.43
18:AR:44:LEU:HD21	18:AR:79:LEU:HD13	1.99	0.43
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.81	0.43
36:DA:1771:C:C1'	36:DA:1786:A:H8	2.31	0.43
36:DA:1788:C:C2'	36:DA:1789:A:H5'	2.49	0.43
36:BA:897:C:H2'	36:BA:897:C:O2	2.18	0.43
1:AA:337:C:H2'	1:AA:338:A:H8	1.83	0.43
36:BA:2808:U:H5'	36:BA:2891:G:O6	2.18	0.43
3:CC:173:VAL:HG12	3:CC:175:LEU:CD1	2.48	0.43
36:BA:211:A:O2'	36:BA:212:G:H5'	2.19	0.43
53:DU:66:ASN:ND2	53:DU:76:TYR:HB2	2.33	0.43
1:AA:509:A:H5'	4:AD:54:TYR:CD2	2.52	0.43
36:DA:2659:G:C2'	36:DA:2660:A:H5"	2.48	0.43
25:CZ:41:ASN:O	25:CZ:42:VAL:HG23	2.18	0.43
15:AO:69:TYR:CE1	15:AO:73:GLU:HG3	2.53	0.43
47:DO:26:LYS:HB2	47:DO:30:ALA:HB2	2.00	0.43
50:DR:56:LYS:HA	50:DR:84:ALA:HB1	2.00	0.43
22:CV:71:G:C2'	22:CV:72:C:H5'	2.48	0.43
36:DA:888:C:H2'	36:DA:889:C:O4'	2.19	0.43
46:BN:137:LYS:HG2	46:BN:138:LEU:N	2.33	0.43
4:AD:15:GLU:HG2	4:AD:63:LYS:HG3	2.00	0.43
1:CA:1359:C:OP2	14:CN:35:ARG:NH1	2.49	0.43
36:DA:2551:C:H2'	36:DA:2552:U:C6	2.54	0.43
36:BA:2626:C:O2'	36:BA:2627:G:H5'	2.18	0.43
36:BA:1844:C:O2'	36:BA:1845:G:H5'	2.19	0.43
56:BX:27:THR:CG2	56:BX:80:ILE:HG22	2.48	0.43
57:DY:85:VAL:CG1	57:DY:86:ARG:H	2.30	0.43
20:AT:53:LEU:HB3	20:AT:102:GLY:HA3	2.00	0.43
30:D4:12:ALA:HB1	30:D4:29:PRO:HA	2.00	0.43
32:B6:20:ASN:O	32:B6:21:TYR:CD2	2.72	0.43
42:BG:78:SER:O	42:BG:80:PHE:N	2.50	0.43
52:DT:22:PHE:HE2	52:DT:85:LYS:HZ1	1.64	0.43
14:CN:41:ARG:NH2	14:CN:42:ILE:HD11	2.34	0.43
1:CA:1316:G:H4'	14:CN:18:VAL:HG13	1.99	0.43
31:B5:46:CYS:SG	31:B5:47:PRO:CD	3.05	0.43
36:BA:1541:G:O2'	36:BA:1542:A:C5'	2.67	0.43
36:DA:1070:A:H3'	36:DA:1072:C:H5	1.84	0.43
36:BA:2416:C:H2'	36:BA:2417:C:H6	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1190:G:H5'	48:BP:35:HIS:CA	2.48	0.43
42:BG:16:ARG:C	42:BG:18:GLU:N	2.71	0.43
40:BE:77:ILE:CG2	40:BE:78:LEU:H	2.26	0.43
36:BA:2247:A:O2'	36:BA:2248:C:H5'	2.18	0.43
31:D5:48:GLU:O	31:D5:49:CYS:CB	2.65	0.43
36:DA:902:C:H2'	36:DA:903:C:H6	1.83	0.43
9:CI:48:GLU:HG3	9:CI:101:PHE:CZ	2.54	0.43
26:D0:41:ARG:HD3	26:D0:41:ARG:HA	1.54	0.43
50:BR:52:ILE:CG2	50:BR:94:TYR:CD2	3.00	0.43
38:BC:78:ALA:H	38:BC:115:ALA:CA	2.30	0.43
10:CJ:33:GLN:HB2	10:CJ:75:ILE:HD11	1.99	0.43
48:BP:41:ARG:CB	48:BP:41:ARG:HH11	2.32	0.43
9:AI:52:ALA:HB3	9:AI:95:LYS:NZ	2.33	0.43
36:DA:1131:G:O6	36:DA:2040:C:H1'	2.18	0.43
12:AL:24:VAL:CG1	12:AL:24:VAL:O	2.60	0.43
25:AZ:195:TRP:HE3	25:AZ:195:TRP:HA	1.82	0.43
46:BN:34:LEU:HD13	46:BN:34:LEU:C	2.39	0.43
4:AD:200:GLU:C	4:AD:202:LEU:H	2.21	0.43
1:AA:1153:C:O2'	1:AA:1154:G:H5"	2.19	0.43
39:BD:223:GLY:O	39:BD:226:MET:HG3	2.18	0.43
20:AT:10:LEU:C	20:AT:12:ALA:H	2.22	0.43
12:CL:53:ARG:NH1	12:CL:92:ASP:OD2	2.45	0.43
40:BE:30:PRO:O	40:BE:32:PRO:HD3	2.19	0.43
40:DE:29:GLY:O	40:DE:30:PRO:C	2.55	0.43
52:BT:128:GLU:O	52:BT:129:ARG:C	2.56	0.43
23:AX:13:A:H8	23:AX:13:A:OP2	2.00	0.43
1:AA:1286:A:O2'	1:AA:1287:A:C5'	2.66	0.43
41:BF:84:VAL:O	41:BF:86:GLY:N	2.51	0.43
2:CB:158:LEU:HA	2:CB:159:PRO:HD3	1.85	0.43
2:CB:95:GLN:C	2:CB:96:ARG:HD2	2.39	0.43
46:BN:126:PRO:O	46:BN:127:ASP:CB	2.65	0.43
37:DB:91:C:H5'	49:DQ:17:LEU:O	2.17	0.43
36:DA:882:G:H2'	36:DA:883:G:C8	2.51	0.43
43:BH:147:ASN:N	43:BH:147:ASN:HD22	2.16	0.43
36:BA:559:G:N2	53:BU:49:HIS:CD2	2.86	0.43
33:B7:30:VAL:HA	33:B7:33:ARG:HH21	1.83	0.43
36:DA:654(M):C:H2'	36:DA:654(N):G:C8	2.53	0.43
4:CD:30:LYS:C	4:CD:32:ALA:N	2.71	0.43
36:DA:1304:C:O2'	36:DA:1305:C:H5'	2.19	0.43
36:BA:2027:G:H2'	36:BA:2028:U:C6	2.51	0.43
36:BA:1649:G:C6	36:BA:2009:G:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:140:PRO:HA	38:BC:145:VAL:HB	2.00	0.43
41:BF:78:ILE:C	41:BF:80:ALA:H	2.21	0.43
38:BC:46:LYS:O	38:BC:210:ARG:HB2	2.18	0.43
36:DA:897:C:O2	36:DA:897:C:H2'	2.18	0.43
25:CZ:358:GLY:O	25:CZ:360:GLU:N	2.52	0.43
36:BA:320:A:H3'	41:BF:136:THR:HG22	2.00	0.43
36:BA:1103:A:H5"	36:BA:1104:C:H5	1.83	0.43
36:BA:2788:C:O2'	36:BA:2809:A:N3	2.51	0.43
47:BO:26:LYS:HB2	47:BO:30:ALA:CB	2.48	0.43
12:CL:32:PHE:HB3	12:CL:84:LEU:CD1	2.48	0.43
36:DA:2886:G:H2'	36:DA:2887:U:H6	1.81	0.43
36:DA:470:A:OP1	41:DF:59:TYR:CE1	2.71	0.43
1:CA:470:C:C2'	1:CA:471:G:OP1	2.66	0.43
1:AA:552:U:O3'	12:AL:87:GLY:HA3	2.19	0.43
22:AV:18:G:H2'	22:AV:57:G:N2	2.33	0.43
25:AZ:40:PRO:O	25:AZ:41:ASN:HB3	2.19	0.43
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.84	0.43
58:BZ:19:ARG:NH1	58:BZ:84:GLU:O	2.34	0.43
54:DV:89:GLN:HA	54:DV:90:PRO:HD3	1.90	0.43
1:AA:639:G:O2'	1:AA:640:A:H5'	2.19	0.43
41:BF:66:PRO:HD2	41:BF:70:THR:HG21	2.00	0.43
27:B1:14:VAL:HG21	36:BA:188:G:H5'	2.01	0.43
36:DA:1573:G:H2'	36:DA:1574:C:H5'	2.01	0.43
36:DA:1171:G:H1	36:DA:1178:C:H42	1.65	0.43
44:BJ:96:UNK:O	44:BJ:100:UNK:N	2.51	0.43
36:BA:60:G:C6	36:BA:74:A:N6	2.86	0.43
36:DA:2033:A:H4'	36:DA:2034:U:OP1	2.18	0.43
1:CA:765:G:C6	1:CA:812:C:C2	3.05	0.43
6:CF:40:VAL:HG22	6:CF:40:VAL:O	2.18	0.43
25:AZ:141:VAL:HG23	25:AZ:141:VAL:O	2.19	0.43
36:DA:1855:G:O2'	36:DA:1856:G:H5'	2.19	0.43
39:BD:65:ILE:HD11	39:BD:88:ARG:CZ	2.49	0.43
42:BG:143:GLU:H	42:BG:143:GLU:HG2	1.57	0.43
28:D2:25:VAL:HG21	28:D2:61:LEU:CD2	2.47	0.43
36:DA:99:U:C4'	36:DA:102:G:H1'	2.49	0.43
1:AA:976:G:OP1	14:AN:32:SER:N	2.49	0.43
30:D4:7:PRO:HG3	42:DG:61:ALA:HB1	2.01	0.43
42:BG:82:LEU:HD13	42:BG:87:PRO:CB	2.48	0.43
57:BY:7:VAL:CG2	57:BY:8:LYS:NZ	2.78	0.43
49:DQ:141:GLN:CG	58:DZ:72:ARG:CD	2.93	0.43
1:CA:1270:C:H2'	1:CA:1271:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:858:G:O2'	1:CA:859:A:H5'	2.19	0.43
43:DH:85:LYS:HE3	43:DH:86:GLU:N	2.34	0.43
41:BF:132:VAL:CG2	41:BF:133:ASN:H	2.11	0.43
36:DA:1528:A:N1	36:DA:1542:A:H2	2.15	0.43
36:DA:299:A:N1	36:DA:322:A:O2'	2.42	0.43
48:BP:65:ARG:O	48:BP:66:GLY:C	2.57	0.43
48:BP:47:ASP:OD2	48:BP:50:ARG:HG2	2.19	0.43
40:BE:184:VAL:O	40:BE:186:GLY:N	2.52	0.43
25:CZ:8:THR:HG1	25:CZ:9:LYS:HG2	1.82	0.43
13:CM:15:VAL:HA	13:CM:18:ALA:HB3	2.00	0.43
36:DA:1876:A:H2'	36:DA:1877:A:C5'	2.40	0.43
51:BS:24:LEU:CB	51:BS:85:VAL:HG12	2.41	0.43
40:DE:114:ALA:HB3	40:DE:160:TYR:HB3	2.01	0.43
13:AM:15:VAL:HA	13:AM:18:ALA:HB3	2.00	0.43
13:AM:10:PRO:HB2	13:AM:45:VAL:HG21	2.00	0.43
36:BA:2157:G:C8	36:BA:2157:G:C3'	3.01	0.43
27:B1:21:ARG:HB3	27:B1:21:ARG:NH1	2.19	0.43
25:CZ:166:ASP:OD1	25:CZ:166:ASP:N	2.51	0.43
11:CK:29:ILE:HB	11:CK:44:SER:HB3	2.00	0.43
12:CL:60:LEU:HB2	12:CL:64:TYR:O	2.18	0.43
1:AA:320:C:H2'	1:AA:321:A:C8	2.54	0.43
48:DP:41:ARG:HD2	48:DP:41:ARG:N	2.33	0.43
9:CI:16:ARG:HH11	9:CI:16:ARG:HG3	1.83	0.43
9:AI:93:ARG:O	9:AI:95:LYS:N	2.51	0.43
36:BA:743:G:O2'	36:BA:744:G:H5'	2.19	0.43
25:AZ:138:VAL:HG21	25:AZ:173:GLY:N	2.33	0.43
49:BQ:137:TYR:CE1	58:BZ:81:ARG:NH2	2.86	0.43
53:DU:6:THR:O	53:DU:9:VAL:CG2	2.67	0.43
28:B2:14:ARG:HG2	28:B2:14:ARG:O	2.19	0.43
42:BG:54:GLU:HG3	42:BG:54:GLU:H	1.61	0.43
42:BG:111:LEU:O	42:BG:114:ILE:HG22	2.18	0.43
54:BV:92:THR:O	54:BV:93:GLU:C	2.57	0.43
7:CG:20:ASP:HB3	7:CG:23:VAL:CG2	2.47	0.43
1:CA:1218:C:H2'	1:CA:1219:U:C5	2.53	0.43
36:DA:257:A:H2'	36:DA:258:G:H5'	2.00	0.43
22:CW:71:G:HO2'	36:DA:1851:U:HO2'	1.51	0.43
36:DA:2852:G:O2'	36:DA:2853:C:H5'	2.19	0.43
40:DE:22:PRO:O	40:DE:185:LYS:O	2.36	0.43
25:CZ:28:THR:HG23	25:CZ:79:HIS:ND1	2.34	0.43
41:DF:200:GLU:O	41:DF:204:ASN:ND2	2.51	0.43
4:CD:157:LEU:C	4:CD:159:ARG:N	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:44:TYR:O	7:CG:45:ASP:C	2.55	0.43
40:DE:30:PRO:O	40:DE:32:PRO:HD3	2.17	0.43
36:DA:2043:C:C2	36:DA:2044:C:C5	3.07	0.43
36:DA:79:G:H2'	36:DA:80:G:H8	1.84	0.43
36:DA:1472:A:H2'	36:DA:1473:G:H5'	2.01	0.43
58:DZ:14:LYS:O	58:DZ:18:LEU:HD22	2.19	0.43
36:DA:2223:G:O2'	36:DA:2224:G:H5'	2.18	0.43
36:BA:845:G:HO2'	36:BA:846:C:H5	1.61	0.43
5:AE:45:PHE:CD2	5:AE:47:LYS:HD2	2.54	0.43
55:DW:56:ALA:C	55:DW:57:ASN:HD22	2.21	0.43
58:DZ:108:PRO:CB	58:DZ:141:VAL:HG12	2.49	0.43
40:BE:107:THR:HA	40:BE:163:GLU:O	2.17	0.43
22:CW:7:A:C5	22:CW:49:C:H5	2.37	0.43
36:DA:1688:U:O2	36:DA:1700:A:H5"	2.19	0.43
36:DA:2695:C:H2'	36:DA:2696:U:C6	2.53	0.43
1:AA:1508:G:H2'	1:AA:1509:C:H6	1.83	0.43
1:AA:547:A:H4'	1:AA:548:G:O5'	2.17	0.43
13:AM:68:GLY:H	13:AM:71:ARG:HG3	1.84	0.43
1:AA:995:C:O2'	1:AA:996:A:H8	2.02	0.43
26:B0:54:GLY:O	26:B0:55:ARG:C	2.57	0.43
36:BA:999:U:O2'	36:BA:1000:A:H5'	2.19	0.43
7:CG:152:ALA:O	7:CG:155:ARG:HB2	2.18	0.43
36:DA:1149:G:H2'	36:DA:1150:C:C6	2.54	0.43
46:BN:94:HIS:N	46:BN:95:PRO:CD	2.81	0.43
57:DY:56:PRO:O	57:DY:57:GLN:C	2.57	0.43
36:DA:720:C:H2'	36:DA:721:C:H6	1.83	0.43
36:BA:231:C:O2'	36:BA:232:G:H5'	2.19	0.43
41:BF:150:GLY:HA2	41:BF:172:TRP:CD2	2.54	0.43
50:DR:78:LYS:O	50:DR:83:ILE:HG12	2.19	0.43
36:BA:2848:G:C8	52:BT:97:ALA:HB2	2.54	0.43
46:BN:38:HIS:O	53:BU:67:ALA:HB1	2.19	0.43
39:DD:33:LEU:HB3	39:DD:34:VAL:H	1.59	0.43
42:BG:34:LEU:CD1	42:BG:99:MET:HE3	2.47	0.43
24:AY:26:A:C5	24:AY:27:C:C5	3.06	0.43
36:DA:336:C:H4'	57:DY:7:VAL:CG2	2.49	0.43
37:DB:43:C:H5'	37:DB:44:G:OP2	2.18	0.43
32:B6:13:CYS:HA	32:B6:50:ARG:O	2.19	0.43
52:BT:28:VAL:HG23	52:BT:47:GLY:O	2.18	0.43
41:BF:37:VAL:HG11	48:BP:7:ARG:NH1	2.33	0.43
19:AS:19:VAL:O	19:AS:23:ASN:N	2.52	0.43
42:DG:107:LEU:HD13	42:DG:178:PHE:HD1	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1887:C:H3'	36:DA:1888:G:H5"	1.99	0.43
37:DB:7:G:C3'	37:DB:8:U:H5"	2.48	0.43
41:BF:28:ILE:HD13	41:BF:28:ILE:N	2.17	0.43
36:DA:2416:C:H2'	36:DA:2417:C:C6	2.54	0.43
51:DS:85:VAL:CG2	51:DS:106:ARG:HG3	2.41	0.43
18:CR:31:LEU:H	18:CR:31:LEU:CD2	2.32	0.43
25:AZ:368:VAL:CG1	25:AZ:369:THR:N	2.82	0.43
25:CZ:117:ARG:NE	25:CZ:157:LEU:HD11	2.33	0.43
51:BS:103:GLU:HG2	51:BS:104:GLY:N	2.34	0.43
53:DU:90:VAL:HG11	54:DV:40:LEU:HD23	2.01	0.43
36:DA:1827:C:OP2	39:DD:222:ARG:NH1	2.50	0.43
13:AM:11:ARG:O	13:AM:13:LYS:N	2.51	0.43
50:BR:17:ARG:O	50:BR:20:LEU:HB3	2.19	0.43
11:AK:44:SER:N	11:AK:47:VAL:HG23	2.33	0.43
50:DR:106:GLY:O	50:DR:107:ASP:HB3	2.18	0.43
58:DZ:104:PHE:HE2	58:DZ:119:GLU:HG3	1.83	0.43
38:DC:76:ALA:O	38:DC:77:ILE:HG12	2.17	0.43
50:BR:95:THR:OG1	50:BR:96:ARG:N	2.51	0.43
10:AJ:54:PHE:CE1	10:AJ:55:LYS:CE	3.01	0.43
22:AW:9:A:O2'	22:AW:10:G:N7	2.50	0.43
36:DA:2120:G:C2	36:DA:2178:C:C5	3.06	0.43
19:AS:29:ARG:O	19:AS:30:LEU:C	2.57	0.43
25:CZ:64:ASN:N	25:CZ:83:PRO:CG	2.81	0.43
58:BZ:81:ARG:O	58:BZ:82:ARG:CB	2.65	0.43
27:D1:13:ILE:HD12	36:DA:396:G:O4'	2.19	0.43
49:DQ:133:ARG:HB2	49:DQ:133:ARG:NH1	2.34	0.43
9:AI:40:LEU:C	9:AI:42:ARG:N	2.70	0.43
36:BA:655:A:C4'	36:BA:656:G:H5'	2.41	0.43
36:BA:885:C:H2'	36:BA:886:C:H6	1.82	0.43
25:CZ:251:ASP:HB2	25:CZ:267:VAL:CG1	2.49	0.43
36:DA:2053:G:OP1	40:DE:144:ARG:HG2	2.18	0.43
55:BW:29:LEU:CG	55:BW:33:ARG:HD2	2.43	0.43
36:BA:1570:A:H2'	36:BA:1571:A:C8	2.54	0.43
32:D6:8:LYS:HD2	32:D6:8:LYS:HA	1.78	0.43
58:DZ:28:MET:O	58:DZ:28:MET:HG3	2.18	0.43
37:BB:29:A:H2'	37:BB:30:C:H6	1.83	0.43
37:DB:29:A:C2	37:DB:56:G:C2	3.07	0.43
58:BZ:150:LEU:N	58:BZ:150:LEU:HD23	2.32	0.43
3:CC:82:GLU:N	3:CC:82:GLU:CD	2.72	0.43
6:CF:62:TRP:C	6:CF:63:TYR:CD1	2.86	0.43
55:BW:25:ARG:CB	55:BW:25:ARG:NH1	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1332:G:N2	36:BA:1609:A:O2'	2.52	0.43
1:CA:1140:C:HO2'	1:CA:1141:C:P	2.42	0.43
1:CA:1133:G:C4	1:CA:1142:G:N2	2.86	0.43
36:DA:268:C:O2	36:DA:268:C:C2'	2.67	0.43
19:AS:6:LYS:HG2	19:AS:7:LYS:HE3	2.01	0.43
1:CA:1285:A:H8	1:CA:1285:A:OP1	2.01	0.43
48:DP:14:LYS:O	48:DP:15:ARG:HB2	2.18	0.43
36:DA:598:G:C5'	48:DP:15:ARG:HB3	2.47	0.43
53:DU:109:LEU:O	53:DU:113:ALA:HB2	2.19	0.43
1:AA:189(D):C:O2	1:AA:189(H):G:C6	2.72	0.43
38:DC:90:GLY:O	38:DC:157:LYS:HE3	2.19	0.43
36:BA:2264:C:H2'	36:BA:2265:U:H6	1.83	0.43
43:DH:149:ARG:HA	43:DH:162:ILE:HD13	1.99	0.43
5:CE:143:ARG:HA	5:CE:143:ARG:HD3	1.73	0.43
55:DW:55:ALA:O	55:DW:57:ASN:N	2.51	0.43
38:DC:75:LEU:HD11	38:DC:113:VAL:HG13	2.01	0.43
36:DA:878:A:H2'	36:DA:879:G:O4'	2.17	0.43
40:BE:199:ARG:NH1	40:BE:199:ARG:CB	2.81	0.43
55:BW:56:ALA:C	55:BW:57:ASN:HD22	2.21	0.43
50:BR:4:LEU:HD12	50:BR:7:GLY:H	1.83	0.43
3:CC:136:GLN:O	3:CC:139:GLN:HB3	2.19	0.43
36:DA:1101:U:O2'	36:DA:1102:C:H5'	2.18	0.43
5:CE:18:ARG:NH1	5:CE:18:ARG:HG3	2.33	0.43
2:AB:25:ASN:O	2:AB:27:LYS:N	2.52	0.43
33:D7:43:THR:HG23	33:D7:44:PRO:CD	2.48	0.43
36:BA:2123:G:H1	36:BA:2174:C:H42	1.67	0.43
3:CC:152:ILE:HG12	3:CC:167:TRP:HB2	2.01	0.43
1:AA:600:C:H4'	8:AH:128:GLY:O	2.17	0.43
36:DA:436:C:H2'	36:DA:437:G:C8	2.54	0.43
36:DA:292:C:O2'	36:DA:293:U:H5'	2.19	0.43
53:BU:66:ASN:ND2	53:BU:76:TYR:H	2.17	0.43
27:B1:6:GLU:HG3	27:B1:61:ARG:HB2	1.99	0.43
36:DA:455:C:N3	36:DA:473:G:H5'	2.34	0.43
12:CL:32:PHE:CB	12:CL:84:LEU:HD11	2.49	0.43
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	2.00	0.43
1:AA:371:G:N2	1:AA:374:A:N6	2.67	0.43
22:CV:57:G:C2'	22:CV:58:A:H5'	2.49	0.43
36:DA:603:A:H1'	36:DA:604:G:OP1	2.18	0.43
2:CB:105:PHE:O	2:CB:106:LYS:C	2.57	0.43
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.54	0.43
1:AA:575:G:H4'	1:AA:576:G:O5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1477:C:H2'	1:CA:1478:C:H6	1.83	0.43
36:BA:1680:U:O2	36:BA:1763:G:H3'	2.19	0.43
6:AF:56:PRO:HD2	6:AF:57:GLN:HE21	1.83	0.43
2:AB:84:GLU:OE1	2:AB:216:SER:HA	2.18	0.43
2:CB:226:ARG:HD2	2:CB:226:ARG:C	2.39	0.43
5:AE:131:ILE:HD13	5:AE:131:ILE:HA	1.87	0.43
46:DN:128:HIS:O	46:DN:128:HIS:CG	2.71	0.43
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.19	0.43
3:CC:112:SER:HB3	3:CC:115:LEU:HD12	1.99	0.43
42:BG:97:ASP:O	42:BG:101:ILE:HG13	2.19	0.43
57:DY:81:LYS:HZ3	57:DY:98:VAL:HB	1.84	0.43
34:B8:31:HIS:HE1	36:BA:2392:A:OP2	2.02	0.43
28:B2:47:ASN:O	28:B2:50:ILE:HD13	2.18	0.43
34:D8:4:MET:HE2	36:DA:666:G:H1'	1.99	0.43
37:DB:49:C:O5'	37:DB:49:C:H6	2.00	0.43
36:BA:2760:C:C3'	36:BA:2761:G:H5"	2.49	0.43
1:AA:1283:G:O2'	1:AA:1284:C:C6	2.72	0.43
22:CV:67:C:H2'	22:CV:68:C:C6	2.54	0.43
41:DF:192:LEU:C	41:DF:192:LEU:CD2	2.86	0.43
36:BA:1666:G:H5'	36:BA:1666:G:H8	1.83	0.43
39:DD:183:ARG:HD2	39:DD:184:LYS:H	1.83	0.43
36:BA:2292:C:O2'	36:BA:2293:C:H5'	2.19	0.43
25:AZ:327:GLU:HA	61:AZ:502:KIR:C10	2.48	0.43
34:B8:19:SER:CB	36:BA:651:G:OP1	2.66	0.43
36:BA:653:A:H2'	36:BA:653:A:N3	2.33	0.43
31:D5:36:CYS:CB	31:D5:49:CYS:HB3	2.49	0.43
31:D5:33:CYS:CB	31:D5:49:CYS:HG	2.29	0.43
47:DO:60:ALA:HA	47:DO:87:ILE:HG12	2.00	0.43
36:BA:2131:G:H5"	36:BA:2132:U:O5'	2.18	0.43
50:DR:103:ARG:O	50:DR:104:ARG:HB2	2.19	0.43
50:DR:118:GLU:HA	50:DR:118:GLU:OE1	2.19	0.43
38:DC:77:ILE:CG2	38:DC:119:VAL:HG21	2.48	0.43
39:BD:176:ARG:CG	39:BD:176:ARG:NH1	2.75	0.43
25:AZ:64:ASN:N	25:AZ:83:PRO:CG	2.81	0.43
52:DT:107:ASP:OD2	52:DT:109:GLU:HG3	2.18	0.43
36:BA:1558:A:O2'	36:BA:1559:G:P	2.77	0.43
46:DN:34:LEU:C	46:DN:34:LEU:HD13	2.39	0.43
25:CZ:191:GLY:CA	25:CZ:197:ASP:OD2	2.67	0.43
24:CY:40:C:O2'	24:CY:41:C:H5"	2.18	0.43
3:CC:43:LEU:HD13	3:CC:68:VAL:HG23	1.99	0.43
51:BS:18:ILE:H	51:BS:18:ILE:CD1	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:43:ALA:C	9:AI:45:ALA:N	2.72	0.43
12:AL:25:PRO:O	12:AL:26:ALA:HB3	2.19	0.43
36:BA:1721:G:H8	36:BA:1741:A:H62	1.66	0.43
54:BV:28:GLU:C	54:BV:30:GLY:H	2.22	0.43
32:B6:42:TRP:CZ2	36:BA:643:A:N7	2.87	0.43
36:BA:676:A:C8	36:BA:2443:C:H1'	2.54	0.43
47:BO:64:ARG:HD3	47:BO:79:PHE:CD2	2.53	0.43
36:BA:527:C:OP2	36:BA:2779:U:C5	2.71	0.43
36:BA:527:C:OP2	36:BA:2779:U:H5	2.01	0.43
1:CA:275:G:H5'	17:CQ:14:LYS:HD2	2.00	0.43
40:DE:61:ARG:HB3	40:DE:62:PRO:CD	2.47	0.43
3:AC:22:TRP:CZ2	14:AN:54:PRO:HG2	2.54	0.43
1:CA:1048:G:P	14:CN:4:LYS:HB2	2.58	0.43
40:BE:61:ARG:CB	40:BE:62:PRO:CD	2.96	0.43
52:DT:123:GLN:O	52:DT:127:ALA:HB3	2.19	0.43
1:AA:865:A:H2	1:AA:918:A:C4'	2.29	0.43
25:AZ:378:VAL:O	25:AZ:380:LEU:N	2.52	0.43
1:CA:1131:G:N3	1:CA:1132:C:N4	2.67	0.43
1:CA:1125:U:O5'	1:CA:1125:U:O2	2.36	0.43
1:CA:1286:A:H1'	1:CA:1287:A:H4'	2.01	0.43
1:CA:1255:G:H3'	1:CA:1279:A:H61	1.84	0.43
36:DA:2687:U:C4	36:DA:2688:U:C5	3.07	0.43
48:BP:14:LYS:O	48:BP:15:ARG:HB2	2.17	0.43
53:BU:57:PHE:O	53:BU:58:ARG:C	2.57	0.43
36:DA:1204:A:N1	36:DA:1241:A:H2	2.17	0.43
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.72	0.43
53:BU:83:LEU:CD1	53:BU:83:LEU:H	2.32	0.43
1:AA:201:C:H2'	1:AA:202:U:H3'	2.01	0.43
39:BD:13:ARG:NH1	39:BD:16:MET:SD	2.92	0.43
36:BA:1771:C:HO2'	36:BA:1786:A:C1'	2.32	0.43
25:CZ:352:VAL:HG12	25:CZ:353:VAL:N	2.33	0.43
47:DO:97:ARG:HH21	47:DO:99:PHE:HE1	1.66	0.43
9:AI:6:GLY:HA3	9:AI:84:ALA:HB2	2.00	0.43
36:DA:2624:G:O2'	36:DA:2625:G:H5'	2.19	0.43
3:CC:157:ILE:HD11	3:CC:166:GLU:HB2	2.00	0.43
36:BA:1750:G:O2'	36:BA:1751:C:H5'	2.19	0.43
1:AA:1243:C:H2'	1:AA:1244:C:C6	2.54	0.43
12:CL:126:LYS:HD2	12:CL:126:LYS:HA	1.84	0.43
53:DU:66:ASN:ND2	53:DU:76:TYR:N	2.67	0.43
36:BA:292:C:O2'	36:BA:293:U:H5'	2.19	0.43
15:CO:11:VAL:HG21	15:CO:34:LEU:HD22	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:80:GLY:C	3:AC:82:GLU:OE2	2.57	0.43
36:BA:850:C:H2'	36:BA:851:U:H6	1.82	0.43
1:CA:1242:C:O5'	1:CA:1242:C:H6	2.02	0.43
36:BA:271(V):G:O2'	36:BA:271(W):G:H5'	2.19	0.43
36:DA:2533:A:H2'	36:DA:2534:A:O4'	2.18	0.43
36:DA:1996:C:H5	47:DO:32:TYR:OH	2.01	0.43
17:CQ:4:LYS:HE3	17:CQ:6:LEU:CD2	2.48	0.43
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.54	0.43
1:CA:909:A:H2'	1:CA:910:C:O4'	2.18	0.43
39:DD:93:ALA:HB3	39:DD:105:ILE:HG22	1.99	0.43
20:CT:38:LYS:O	20:CT:42:GLN:HB2	2.19	0.43
44:DJ:36:UNK:O	44:DJ:40:UNK:CB	2.67	0.43
1:CA:939:G:H2'	1:CA:940:C:C6	2.54	0.43
43:BH:30:LYS:HA	43:BH:30:LYS:HE2	2.01	0.43
20:CT:93:GLU:O	20:CT:93:GLU:HG2	2.18	0.43
9:CI:97:LYS:N	9:CI:98:PRO:CD	2.80	0.43
24:CY:26:A:C4	24:CY:27:C:C6	3.07	0.43
28:D2:57:ILE:O	28:D2:61:LEU:HG	2.19	0.43
28:D2:62:THR:HG21	36:DA:76:C:O2'	2.19	0.43
36:DA:336:C:H4'	57:DY:7:VAL:HG21	2.00	0.43
32:B6:8:LYS:HA	32:B6:8:LYS:HD2	1.82	0.43
32:D6:11:LEU:O	32:D6:23:THR:HB	2.19	0.43
32:B6:41:PRO:HD2	32:B6:45:LYS:HA	2.01	0.43
57:BY:28:LYS:HE3	57:BY:28:LYS:HB2	1.88	0.43
57:BY:39:VAL:HG12	57:BY:40:GLU:N	2.34	0.43
57:BY:7:VAL:CB	57:BY:8:LYS:HD2	2.49	0.43
52:DT:87:ASP:OD1	52:DT:87:ASP:N	2.49	0.43
22:AV:68:C:O2'	22:AV:69:G:H5'	2.19	0.43
42:BG:9:ARG:O	42:BG:13:GLU:HG2	2.19	0.43
48:DP:23:PRO:HB2	48:DP:33:ARG:CG	2.49	0.43
36:DA:941:A:H4'	48:DP:35:HIS:CE1	2.54	0.43
25:AZ:348:ASP:O	25:AZ:348:ASP:CG	2.57	0.43
37:DB:117:G:H2'	37:DB:118:G:C8	2.54	0.43
10:CJ:40:LEU:HD23	10:CJ:69:ASN:O	2.18	0.43
47:DO:12:ASP:OD1	47:DO:14:THR:HG22	2.18	0.43
54:BV:91:TYR:HD1	54:BV:91:TYR:N	2.17	0.43
36:BA:2579:C:H1'	40:BE:134:ILE:HD13	2.01	0.43
17:CQ:10:VAL:O	17:CQ:10:VAL:HG23	2.19	0.43
50:DR:55:ALA:CB	50:DR:79:LEU:CD1	2.96	0.43
50:BR:116:LEU:O	50:BR:117:VAL:CG1	2.66	0.43
2:AB:115:LEU:HB2	2:AB:145:LEU:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:71:THR:O	20:CT:72:LEU:HD23	2.19	0.43
36:BA:674:G:H2'	36:BA:804:A:H61	1.83	0.43
1:AA:376:G:P	16:AP:67:THR:HG21	2.59	0.43
16:AP:67:THR:CG2	16:AP:68:ASP:N	2.81	0.43
37:BB:16:G:C6	37:BB:69:G:C2	3.07	0.43
34:B8:52:LYS:H	34:B8:53:PRO:CD	2.32	0.43
60:AZ:501:GDP:O2B	60:AZ:501:GDP:O1A	2.36	0.43
51:BS:15:ARG:HH11	51:BS:15:ARG:CG	2.31	0.43
1:CA:376:G:H4'	16:CP:5:ARG:HH11	1.82	0.43
3:AC:70:VAL:HG12	3:AC:71:ALA:N	2.33	0.43
29:B3:3:ARG:HG2	29:B3:38:GLU:OE2	2.19	0.43
57:BY:88:LYS:HZ1	57:BY:93:GLY:HA3	1.84	0.43
36:BA:1362:C:C2'	36:BA:1363:C:H5'	2.48	0.43
22:AV:49:C:H2'	22:AV:50:U:H6	1.84	0.43
56:BX:57:LEU:N	56:BX:57:LEU:CD1	2.81	0.43
22:CW:2:C:N4	22:CW:3:C:N4	2.67	0.43
25:CZ:77:TYR:OH	25:CZ:207:ASP:HB3	2.18	0.43
52:BT:90:GLN:C	52:BT:92:GLY:N	2.67	0.43
1:AA:676:A:H2'	1:AA:677:U:C6	2.54	0.43
36:DA:2444:G:OP2	41:DF:68:LYS:NZ	2.47	0.43
22:CV:61:C:H2'	22:CV:61:C:O2	2.19	0.43
4:CD:78:LEU:CD2	4:CD:96:LEU:HB3	2.45	0.43
49:BQ:45:GLN:H	49:BQ:45:GLN:HE21	1.67	0.43
52:DT:128:GLU:O	52:DT:129:ARG:C	2.56	0.43
36:BA:64:A:N9	56:BX:66:LEU:HD12	2.34	0.43
26:B0:27:GLU:OE2	26:B0:69:PHE:HB2	2.19	0.43
2:AB:95:GLN:C	2:AB:96:ARG:HD2	2.38	0.43
4:CD:149:ALA:HB3	4:CD:152:SER:OG	2.18	0.43
1:AA:476:G:H2'	1:AA:477:A:C8	2.53	0.43
4:AD:148:VAL:CG1	4:AD:152:SER:HB2	2.48	0.43
27:D1:30:VAL:H	36:DA:2396:G:C4'	2.29	0.43
38:DC:73:ARG:HB2	38:DC:111:ASP:OD2	2.19	0.43
36:DA:116:C:O2'	36:DA:117:G:H5'	2.19	0.43
9:CI:5:TYR:CG	9:CI:6:GLY:N	2.86	0.43
3:CC:15:THR:CG2	3:CC:181:ASN:HA	2.48	0.43
36:DA:880:G:H22	36:DA:897:C:N4	2.16	0.43
36:BA:156:U:C2'	36:BA:157:U:H5'	2.49	0.43
48:DP:100:LEU:HD13	48:DP:100:LEU:O	2.18	0.43
36:DA:2815:C:H2'	36:DA:2816:C:O4'	2.19	0.43
36:DA:470:A:H2'	36:DA:471:A:C8	2.54	0.43
36:DA:389:G:N1	48:DP:70:GLN:HB3	2.33	0.43

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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:C8	2.54	0.43
1:CA:189:G:C6	1:CA:189(A):C:C4	3.07	0.43
44:BJ:35:UNK:O	44:BJ:37:UNK:N	2.52	0.43
1:AA:189:G:C6	1:AA:189(A):C:C4	3.07	0.43
6:CF:40:VAL:HG13	6:CF:40:VAL:O	2.18	0.43
1:CA:500:G:H5"	12:CL:124:LYS:NZ	2.34	0.43
1:AA:820:U:H4'	1:AA:821:G:OP2	2.18	0.43
36:DA:2446:G:H2'	36:DA:2447:G:H5"	2.01	0.43
6:AF:91:VAL:HG12	6:AF:92:LYS:N	2.34	0.43
5:CE:79:GLU:OE2	8:CH:104:ARG:HA	2.19	0.43
36:BA:378:C:O2'	36:BA:379:G:H5'	2.19	0.43
36:BA:2350:C:H2'	36:BA:2351:G:O4'	2.18	0.43
36:DA:1360:A:H5'	36:DA:1361:G:OP2	2.19	0.43
1:CA:924:C:H2'	1:CA:925:G:C8	2.54	0.43
1:AA:1137:C:H4'	1:AA:1138:G:N2	2.34	0.43
36:BA:1860:G:H1	36:BA:1882:C:H42	1.67	0.43
36:DA:1096:A:H2'	36:DA:1096:A:N3	2.33	0.43
3:CC:190:ARG:HH11	3:CC:190:ARG:HG3	1.82	0.43
3:CC:206:GLU:HB3	3:CC:207:VAL:H	1.45	0.43
8:AH:26:VAL:HG13	8:AH:59:LEU:HB2	1.99	0.43
1:AA:22:G:H4'	1:AA:885:G:C8	2.54	0.43
42:BG:138:GLN:HG3	42:BG:139:LEU:HD12	2.01	0.43
56:DX:14:SER:H	56:DX:17:ALA:HB3	1.82	0.43
36:DA:2106:G:C5	36:DA:2107:C:N3	2.87	0.43
36:DA:2184:G:H2'	36:DA:2185:C:H1'	2.01	0.43
34:D8:6:THR:CB	34:D8:11:LYS:HZ1	2.30	0.43
36:DA:593:G:O2'	36:DA:594:U:H5'	2.18	0.43
36:DA:2577:A:H5"	36:DA:2578:G:H5'	2.01	0.43
42:DG:22:ARG:NH2	42:DG:175:LEU:HD21	2.34	0.43
36:BA:2762:G:C2'	36:BA:2763:G:H5'	2.49	0.43
22:CV:5:G:H1	22:CV:68:C:N4	2.16	0.43
32:B6:35:GLU:HB2	32:B6:51:GLU:OE1	2.18	0.43
43:BH:121:ILE:HG23	43:BH:133:VAL:HG13	2.00	0.43
1:AA:359:U:H2'	1:AA:360:A:C8	2.54	0.43
43:DH:169:VAL:CG2	43:DH:170:ARG:H	2.13	0.43
48:BP:33:ARG:O	48:BP:34:GLY:O	2.37	0.43
41:DF:36:VAL:HA	41:DF:101:LEU:CD2	2.48	0.43
40:DE:36:ARG:NH1	40:DE:85:ASN:OD1	2.52	0.43
48:DP:126:VAL:HA	48:DP:145:PRO:CB	2.48	0.43
1:CA:190:U:H2'	1:CA:191:G:H8	1.84	0.43
14:AN:12:ARG:HH11	14:AN:14:PRO:HG2	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:44:LEU:HD13	50:DR:44:LEU:C	2.38	0.43
38:BC:120:MET:O	38:BC:124:GLY:HA3	2.19	0.43
43:DH:54:ARG:HB2	43:DH:55:PRO:CD	2.44	0.43
43:BH:54:ARG:CB	43:BH:55:PRO:HD2	2.43	0.43
14:AN:57:ARG:CG	14:AN:58:LYS:N	2.82	0.43
35:B9:1:MET:CG	36:BA:2478:A:OP2	2.66	0.43
12:AL:33:ARG:HD3	12:AL:62:SER:CB	2.47	0.43
36:DA:129:C:H2'	36:DA:129:C:O2	2.19	0.43
2:CB:11:LEU:O	2:CB:16:HIS:CE1	2.71	0.43
24:AY:40:C:H2'	24:AY:41:C:H5'	1.99	0.43
52:BT:25:GLY:O	52:BT:26:ASP:CB	2.64	0.43
46:DN:46:VAL:HG13	46:DN:47:ALA:N	2.34	0.43
27:D1:45:ASN:HD21	27:D1:47:GLN:NE2	2.16	0.43
53:BU:115:ALA:C	53:BU:117:GLN:N	2.68	0.43
4:CD:120:LEU:HB3	4:CD:126:ILE:CD1	2.45	0.43
12:AL:45:PRO:HG3	12:AL:53:ARG:CD	2.47	0.43
48:DP:83:VAL:CG1	48:DP:112:LEU:HD21	2.47	0.43
36:BA:1496:A:H8	36:BA:1498:C:N3	2.17	0.43
57:DY:88:LYS:O	57:DY:90:LEU:HD23	2.19	0.43
57:DY:91:GLU:CG	57:DY:92:ASN:H	2.31	0.43
25:AZ:352:VAL:HG12	25:AZ:353:VAL:N	2.34	0.43
36:DA:480:A:H2	36:DA:499:U:O2	2.02	0.43
28:B2:51:ARG:HD3	28:B2:55:ARG:HH12	1.82	0.43
7:AG:22:LEU:HD22	7:AG:62:PHE:CZ	2.54	0.43
3:AC:22:TRP:CH2	3:AC:32:LEU:HB2	2.54	0.43
24:AY:61:C:C2'	24:AY:62:U:C5'	2.88	0.43
2:AB:69:LEU:HB2	2:AB:159:PRO:CG	2.49	0.43
40:BE:63:LEU:O	40:BE:64:LYS:C	2.57	0.43
3:CC:80:GLY:C	3:CC:82:GLU:OE2	2.58	0.43
52:BT:78:LEU:O	52:BT:78:LEU:HD23	2.18	0.43
10:CJ:46:ARG:NH1	10:CJ:46:ARG:CG	2.82	0.43
36:DA:65:C:H2'	36:DA:66:C:C6	2.54	0.43
36:DA:2206:G:N2	36:DA:2207:G:C5'	2.81	0.43
49:DQ:97:VAL:O	49:DQ:97:VAL:HG23	2.19	0.43
36:DA:708:C:N4	36:DA:723:G:H1	2.14	0.43
26:B0:19:LYS:HD3	36:BA:2262:U:OP1	2.19	0.43
36:BA:2263:C:O2'	36:BA:2264:C:H5'	2.18	0.43
36:BA:2024:G:O2'	36:BA:2025:C:H5'	2.19	0.43
17:AQ:17:LYS:HA	17:AQ:49:GLU:HG2	2.01	0.43
36:BA:1374:G:H2'	36:BA:1375:C:C6	2.54	0.43
10:CJ:8:LEU:CD2	10:CJ:96:ILE:HG22	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:21:A:O2'	36:BA:22:C:H5'	2.18	0.43
4:AD:70:ILE:CG2	4:AD:71:SER:N	2.81	0.43
36:DA:2027:G:H2'	36:DA:2028:U:C6	2.52	0.43
3:AC:165:THR:O	3:AC:165:THR:CG2	2.66	0.43
36:DA:2583:G:H2'	36:DA:2584:U:O2	2.19	0.43
3:AC:175:LEU:HD21	3:AC:201:TYR:CE2	2.54	0.43
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.49	0.43
36:BA:2153:G:O2'	36:BA:2154:G:H5'	2.19	0.43
7:CG:41:ARG:HG2	7:CG:41:ARG:NH1	2.33	0.43
33:D7:21:ARG:HG2	33:D7:21:ARG:NH1	2.34	0.43
27:B1:39:LYS:O	27:B1:40:ARG:CG	2.66	0.43
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	2.00	0.43
1:CA:1488:G:H2'	1:CA:1489:G:C8	2.54	0.43
1:AA:294:U:H2'	1:AA:295:C:C6	2.54	0.43
7:AG:68:ASN:O	7:AG:138:LYS:HD2	2.18	0.43
24:CY:54:5MU:H73	24:CY:55:PSU:C2	2.54	0.43
36:BA:640:C:N4	36:BA:641:C:N4	2.66	0.43
1:AA:665:A:H2'	1:AA:732:C:O2	2.19	0.43
36:DA:2461:C:H2'	36:DA:2462:U:C6	2.54	0.43
1:CA:1120:G:H2'	1:CA:1121:U:C6	2.54	0.43
5:CE:152:ARG:HB3	8:CH:43:GLY:HA3	2.01	0.43
36:DA:37:C:H2'	36:DA:38:A:C8	2.54	0.43
36:DA:730:C:O2'	36:DA:731:C:H5'	2.19	0.43
7:AG:114:ARG:HG2	7:AG:114:ARG:H	1.74	0.43
5:CE:131:ILE:HA	5:CE:131:ILE:HD13	1.89	0.43
3:AC:190:ARG:HG3	3:AC:190:ARG:HH11	1.83	0.43
12:CL:111:LYS:O	12:CL:112:ASP:HB2	2.19	0.43
37:DB:114:C:O2'	51:DS:46:VAL:HG13	2.18	0.43
36:DA:1599:C:OP2	56:DX:36:LYS:HD2	2.19	0.42
31:B5:4:HIS:CB	36:BA:2577:A:H1'	2.49	0.42
36:DA:1902:C:H4'	39:DD:244:ARG:HB2	2.01	0.42
41:BF:25:PRO:HB3	41:BF:119:ARG:CB	2.45	0.42
7:CG:54:THR:HG22	7:CG:55:GLY:N	2.33	0.42
42:BG:125:PHE:CD1	42:BG:126:ASP:N	2.79	0.42
57:BY:13:VAL:HG23	57:BY:73:ARG:C	2.39	0.42
2:AB:32:ILE:HA	2:AB:42:ILE:HA	2.01	0.42
37:BB:21:G:H2'	37:BB:22:U:C5'	2.49	0.42
52:BT:28:VAL:HG22	52:BT:46:GLU:C	2.37	0.42
52:BT:87:ASP:OD1	52:BT:87:ASP:N	2.51	0.42
22:AW:18:G:O4'	22:AW:58:A:C2	2.72	0.42
41:BF:184:TYR:CE1	48:BP:7:ARG:CZ	3.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:67:LYS:N	42:BG:67:LYS:CD	2.72	0.42
1:AA:151:A:H2'	1:AA:152:A:O4'	2.19	0.42
39:DD:266:SER:O	39:DD:267:SER:O	2.36	0.42
24:AY:76:A:H1'	25:AZ:287:GLY:HA3	2.00	0.42
47:DO:86:ILE:H	47:DO:86:ILE:CD1	2.31	0.42
25:AZ:19:HIS:CD2	25:AZ:20:VAL:N	2.87	0.42
25:CZ:397:ALA:CB	61:CZ:502:KIR:H252	2.46	0.42
13:CM:83:ASP:OD1	13:CM:85:GLY:N	2.52	0.42
36:BA:2133:G:C2	36:BA:2157:G:O6	2.72	0.42
50:DR:95:THR:OG1	50:DR:96:ARG:N	2.52	0.42
36:BA:2330:G:H2'	36:BA:2331:G:O4'	2.18	0.42
50:DR:38:VAL:O	50:DR:42:LYS:HB2	2.19	0.42
4:AD:151:LYS:HG2	4:AD:151:LYS:O	2.19	0.42
36:BA:742:G:O2'	36:BA:743:G:H5'	2.18	0.42
52:DT:109:GLU:HG2	52:DT:112:ARG:NH2	2.34	0.42
41:DF:100:THR:O	41:DF:100:THR:HG22	2.19	0.42
40:DE:197:ILE:O	40:DE:197:ILE:HG12	2.19	0.42
8:CH:44:PHE:HE2	8:CH:109:ILE:HG21	1.84	0.42
36:DA:1557:C:H5"	36:DA:1558:A:OP2	2.19	0.42
9:AI:40:LEU:HD12	9:AI:74:ILE:HD11	2.00	0.42
34:D8:50:LEU:O	34:D8:52:LYS:N	2.46	0.42
1:AA:1030(D):A:H62	1:AA:1031:G:N2	2.13	0.42
25:AZ:191:GLY:CA	25:AZ:197:ASP:OD2	2.67	0.42
46:BN:34:LEU:CD1	46:BN:116:LEU:HB3	2.49	0.42
51:DS:16:ASN:O	51:DS:18:ILE:N	2.52	0.42
46:BN:51:PHE:CE1	46:BN:119:ARG:HD2	2.53	0.42
27:D1:45:ASN:ND2	27:D1:45:ASN:C	2.70	0.42
36:DA:257:A:C2'	36:DA:258:G:H5'	2.49	0.42
27:D1:67:ILE:H	27:D1:68:PRO:CD	2.31	0.42
43:BH:76:VAL:C	43:BH:78:GLY:H	2.22	0.42
36:DA:1721:G:C2	36:DA:1739:U:OP2	2.72	0.42
1:AA:190:U:H2'	1:AA:191:G:H8	1.83	0.42
57:DY:88:LYS:HZ1	57:DY:93:GLY:HA3	1.80	0.42
20:AT:13:LEU:O	20:AT:16:HIS:N	2.50	0.42
55:BW:29:LEU:HG	55:BW:33:ARG:CD	2.43	0.42
36:DA:2070:G:H2'	36:DA:2071:A:C8	2.54	0.42
25:AZ:85:HIS:NE2	36:BA:2662:A:H5'	2.34	0.42
35:D9:29:ASN:O	35:D9:31:LYS:N	2.51	0.42
36:DA:1332:G:N2	36:DA:1609:A:O2'	2.52	0.42
1:AA:1216:G:H5"	14:AN:5:ALA:HB2	2.01	0.42
36:BA:65:C:H2'	36:BA:66:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.72	0.42
50:BR:63:ARG:O	50:BR:67:LEU:HD23	2.18	0.42
1:AA:1286:A:O2'	1:AA:1287:A:P	2.77	0.42
25:CZ:27:LEU:O	25:CZ:30:ALA:HB3	2.19	0.42
36:BA:786:C:O2'	36:BA:787:U:H5'	2.19	0.42
1:AA:475:G:H2'	1:AA:476:G:H8	1.83	0.42
35:B9:33:LYS:NZ	36:BA:2743:C:OP1	2.41	0.42
26:B0:17:GLN:O	26:B0:19:LYS:HD2	2.19	0.42
36:DA:2544:G:H8	36:DA:2544:G:O5'	2.02	0.42
6:AF:12:PRO:HG3	6:AF:55:ASP:CB	2.48	0.42
2:AB:77:ALA:O	2:AB:81:VAL:HG23	2.19	0.42
42:DG:147:ASP:O	42:DG:148:MET:HB2	2.19	0.42
55:BW:55:ALA:C	55:BW:57:ASN:N	2.71	0.42
38:BC:75:LEU:HD11	38:BC:113:VAL:HG13	2.01	0.42
36:DA:1297:C:H2'	36:DA:1298:C:H6	1.84	0.42
40:BE:47:VAL:HG23	40:BE:84:PHE:O	2.18	0.42
36:BA:496:G:H1'	55:BW:61:ASN:ND2	2.34	0.42
41:BF:65:TRP:CZ3	41:BF:72:ARG:HB2	2.54	0.42
9:CI:24:GLY:O	9:CI:25:LYS:HD2	2.19	0.42
47:DO:26:LYS:HB2	47:DO:30:ALA:CB	2.49	0.42
36:DA:1358:G:O2'	36:DA:1359:A:H5"	2.19	0.42
36:BA:1358:G:O2'	36:BA:1359:A:H5"	2.18	0.42
3:CC:188:LEU:HD22	3:CC:188:LEU:HA	1.79	0.42
1:CA:1428:A:H2'	1:CA:1429:C:C6	2.54	0.42
36:BA:736:C:O2'	36:BA:737:C:H5'	2.18	0.42
1:CA:811:C:H4'	1:CA:900:A:N6	2.34	0.42
55:DW:79:GLY:CA	55:DW:100:THR:HG23	2.48	0.42
43:DH:80:SER:O	43:DH:81:GLU:CB	2.67	0.42
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.54	0.42
12:AL:111:LYS:O	12:AL:112:ASP:HB2	2.19	0.42
1:AA:797:C:O2'	1:AA:798:G:H5'	2.19	0.42
4:CD:49:ARG:H	4:CD:49:ARG:HG2	1.54	0.42
39:BD:218:ARG:HG3	39:BD:218:ARG:HH11	1.83	0.42
42:DG:162:THR:HG22	42:DG:162:THR:O	2.19	0.42
6:AF:86:ARG:H	6:AF:86:ARG:HG2	1.68	0.42
17:AQ:91:ARG:HH11	17:AQ:91:ARG:HB2	1.84	0.42
1:CA:1137:C:H4'	1:CA:1138:G:N2	2.34	0.42
1:AA:802:A:H2'	1:AA:803:G:O4'	2.19	0.42
36:DA:2428:G:H5"	36:DA:2429:G:O5'	2.18	0.42
1:CA:412:A:H4'	1:CA:413:G:H8	1.84	0.42
39:DD:30:GLU:HB2	39:DD:35:LYS:NZ	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:50:GLU:HB2	20:CT:99:LEU:HD13	2.00	0.42
24:AY:25:C:O2'	24:AY:26:A:H5'	2.19	0.42
56:DX:53:LYS:HB3	56:DX:82:GLN:CB	2.49	0.42
22:AV:47:U:HO2'	22:AV:48:C:C5'	2.32	0.42
25:AZ:77:TYR:OH	25:AZ:207:ASP:HB3	2.19	0.42
34:B8:28:GLY:O	34:B8:36:LYS:NZ	2.52	0.42
42:DG:99:MET:CG	42:DG:100:TRP:N	2.81	0.42
36:BA:2604:U:C5'	36:BA:2604:U:C6	2.92	0.42
42:BG:87:PRO:C	42:BG:88:ILE:HG12	2.39	0.42
41:DF:25:PRO:HB3	41:DF:119:ARG:CB	2.44	0.42
58:DZ:99:TYR:CE2	58:DZ:125:LEU:HD13	2.54	0.42
52:DT:19:LEU:HA	52:DT:20:PRO:HD3	1.85	0.42
2:CB:200:ILE:O	2:CB:201:ILE:HG13	2.19	0.42
19:CS:11:VAL:HG22	19:CS:11:VAL:O	2.19	0.42
37:BB:7:G:C3'	37:BB:8:U:H5"	2.48	0.42
36:DA:271(K):U:H3'	36:DA:271(L):U:C5'	2.49	0.42
57:BY:49:VAL:O	57:BY:50:ARG:CB	2.57	0.42
31:B5:56:LYS:HE2	31:B5:59:GLU:OE2	2.19	0.42
36:BA:1448:G:H21	36:BA:1528(A):A:H2	1.65	0.42
48:BP:31:ALA:C	48:BP:33:ARG:N	2.72	0.42
34:B8:59:LYS:CE	48:BP:50:ARG:HB3	2.36	0.42
1:AA:367:U:H4'	25:AZ:291:ARG:HH21	1.83	0.42
10:AJ:40:LEU:N	10:AJ:40:LEU:CD2	2.78	0.42
36:DA:637:A:OP2	48:DP:115:LEU:HB2	2.20	0.42
42:BG:107:LEU:HD21	42:BG:178:PHE:CE1	2.53	0.42
36:DA:1878:G:H2'	36:DA:1879:C:C6	2.54	0.42
36:DA:904:C:H4'	58:DZ:169:GLU:OE1	2.19	0.42
54:BV:18:LEU:CD2	54:BV:19:LYS:N	2.76	0.42
50:BR:99:LYS:HA	50:BR:112:ALA:HA	2.01	0.42
53:BU:91:ASP:CG	53:BU:96:ALA:HB2	2.40	0.42
36:DA:2579:C:H1'	40:DE:134:ILE:HD13	2.01	0.42
25:CZ:348:ASP:O	25:CZ:348:ASP:CG	2.57	0.42
1:CA:191:G:H1'	20:CT:105:SER:HA	2.01	0.42
1:AA:353:A:H2'	1:AA:354:G:OP2	2.19	0.42
25:AZ:131:ILE:HG12	25:AZ:163:PHE:CE1	2.53	0.42
1:AA:1190:G:OP1	3:AC:4:LYS:HA	2.18	0.42
43:BH:49:VAL:O	43:BH:50:VAL:CG2	2.67	0.42
43:BH:54:ARG:HB2	43:BH:55:PRO:CD	2.45	0.42
49:BQ:133:ARG:O	49:BQ:134:ARG:HB2	2.19	0.42
58:DZ:166:SER:HB2	58:DZ:167:PRO:HA	2.01	0.42
46:DN:71:ILE:HG22	46:DN:72:TYR:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:110:THR:O	49:DQ:111:GLU:C	2.56	0.42
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.92	0.42
42:BG:51:ARG:NH2	42:BG:52:ILE:CD1	2.83	0.42
41:DF:53:THR:O	41:DF:57:VAL:HG23	2.19	0.42
58:BZ:27:VAL:CG1	58:BZ:28:MET:N	2.83	0.42
31:B5:16:ARG:HH11	31:B5:20:ARG:HH12	1.66	0.42
29:B3:47:VAL:CG1	29:B3:56:VAL:HG21	2.49	0.42
1:AA:1015:A:C6	1:AA:1016:A:C6	3.07	0.42
12:AL:53:ARG:NH1	12:AL:92:ASP:OD2	2.46	0.42
36:DA:649:G:H2'	36:DA:650:C:C6	2.54	0.42
48:DP:83:VAL:HG13	48:DP:83:VAL:O	2.20	0.42
52:DT:96:ARG:HB2	52:DT:96:ARG:HH11	1.82	0.42
25:CZ:85:HIS:C	25:CZ:87:ASP:N	2.71	0.42
7:CG:38:LEU:O	7:CG:42:ILE:HG13	2.20	0.42
40:BE:29:GLY:O	40:BE:30:PRO:C	2.56	0.42
15:CO:31:LEU:N	15:CO:31:LEU:HD12	2.34	0.42
35:D9:17:ILE:HG22	35:D9:18:ARG:H	1.84	0.42
36:DA:1963:U:C2'	36:DA:1963:U:O2	2.67	0.42
36:DA:2460:U:H4'	49:DQ:79:LEU:HD11	2.01	0.42
2:AB:127:ILE:HG22	2:AB:128:GLU:N	2.33	0.42
36:DA:2869:G:H2'	36:DA:2870:C:H6	1.82	0.42
43:DH:146:ALA:O	43:DH:147:ASN:C	2.57	0.42
3:AC:139:GLN:O	3:AC:142:MET:HB2	2.19	0.42
36:BA:1192:G:C2'	36:BA:1193:G:H5'	2.49	0.42
1:CA:952:U:O2'	1:CA:953:G:H5'	2.19	0.42
6:CF:72:VAL:HG22	6:CF:72:VAL:O	2.18	0.42
3:CC:135:LYS:O	3:CC:138:VAL:HG13	2.20	0.42
20:CT:33:ILE:HG21	20:CT:63:ILE:HG12	2.01	0.42
1:AA:173:U:H5"	1:AA:197:A:O4'	2.18	0.42
33:D7:43:THR:CG2	33:D7:44:PRO:N	2.82	0.42
7:AG:143:ARG:HD3	22:AW:41:C:O3'	2.19	0.42
3:CC:131:ARG:HH11	3:CC:166:GLU:CG	2.32	0.42
27:B1:49:VAL:HG13	27:B1:49:VAL:O	2.18	0.42
36:DA:2171:A:O2'	36:DA:2172:U:H5	1.99	0.42
14:CN:15:LYS:HB3	14:CN:16:PHE:CD2	2.54	0.42
3:AC:107:GLN:CD	3:AC:107:GLN:H	2.21	0.42
36:BA:2115:G:C2	36:BA:2117:A:N7	2.87	0.42
1:AA:827:U:N3	1:AA:870:U:C4	2.87	0.42
44:BJ:118:UNK:O	44:BJ:119:UNK:C	2.67	0.42
53:BU:32:PHE:CB	53:BU:36:ARG:HH22	2.31	0.42
27:B1:39:LYS:HD2	27:B1:39:LYS:HA	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:499:A:H4'	1:CA:500:G:H5'	2.00	0.42
36:DA:2612:C:C5	36:DA:2613:U:H5	2.37	0.42
37:DB:78:A:H2'	37:DB:79:C:O4'	2.19	0.42
14:CN:60:SER:O	14:CN:61:TRP:HB3	2.18	0.42
6:CF:56:PRO:HD2	6:CF:57:GLN:HE21	1.83	0.42
36:DA:2081:C:H2'	36:DA:2082:A:H8	1.83	0.42
36:BA:271(H):G:O2'	36:BA:271(I):G:C8	2.70	0.42
1:AA:1476:G:H2'	1:AA:1477:C:C6	2.55	0.42
3:CC:147:LYS:HB2	3:CC:203:PHE:CD2	2.54	0.42
7:AG:134:ALA:O	7:AG:135:VAL:C	2.58	0.42
36:DA:2738:A:H2'	36:DA:2739:U:O5'	2.19	0.42
22:AV:71:G:C2'	22:AV:72:C:H5'	2.49	0.42
1:CA:647:C:O2'	1:CA:648:A:H5'	2.18	0.42
36:DA:1087:G:O2'	36:DA:1089:G:H5'	2.19	0.42
1:AA:1120:G:H2'	1:AA:1121:U:C6	2.55	0.42
54:BV:46:VAL:HG13	54:BV:46:VAL:O	2.19	0.42
58:BZ:70:LEU:HD12	58:BZ:70:LEU:H	1.84	0.42
36:BA:150:C:H2'	36:BA:151:C:C6	2.54	0.42
39:BD:80:ALA:HB3	39:BD:94:LEU:HD13	2.02	0.42
51:DS:61:ASN:O	51:DS:62:LYS:C	2.56	0.42
28:D2:47:ASN:ND2	28:D2:50:ILE:HG22	2.34	0.42
57:DY:73:ARG:NH2	57:DY:82:PRO:HA	2.32	0.42
36:BA:2394:C:OP1	48:BP:63:PRO:HD2	2.18	0.42
36:DA:2100:G:C2	36:DA:2101:G:C6	3.08	0.42
36:DA:2182:G:O2'	36:DA:2183:C:H5'	2.19	0.42
42:DG:117:PHE:CE1	42:DG:119:GLY:O	2.72	0.42
42:DG:90:LEU:CD1	42:DG:90:LEU:C	2.86	0.42
32:D6:36:LEU:HD23	32:D6:36:LEU:C	2.39	0.42
57:BY:75:ILE:CG2	57:BY:76:CYS:N	2.75	0.42
2:AB:200:ILE:O	2:AB:201:ILE:HG13	2.19	0.42
28:B2:21:LEU:HA	28:B2:21:LEU:HD23	1.91	0.42
47:BO:104:ARG:C	47:BO:106:LEU:N	2.73	0.42
47:DO:104:ARG:NH2	52:DT:33:LYS:CE	2.79	0.42
36:BA:330:A:O2'	36:BA:331:A:H2'	2.20	0.42
4:AD:9:CYS:HA	4:AD:12:CYS:SG	2.59	0.42
36:DA:321:G:C1'	41:DF:165:ARG:HD3	2.49	0.42
56:DX:8:ILE:HD11	56:DX:43:VAL:CG2	2.48	0.42
37:BB:44:G:C2	37:BB:48:A:C2	3.07	0.42
40:DE:69:LYS:HD3	40:DE:90:THR:H	1.85	0.42
54:DV:19:LYS:HG3	54:DV:20:LEU:N	2.34	0.42
36:BA:635:C:O2'	36:BA:639:U:OP1	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:39:VAL:CG2	58:BZ:44:PHE:HB2	2.49	0.42
53:BU:95:LEU:HD11	54:BV:11:GLN:O	2.19	0.42
54:BV:49:THR:O	54:BV:50:PRO:C	2.57	0.42
25:CZ:327:GLU:HA	61:CZ:502:KIR:H101	2.01	0.42
10:AJ:81:THR:HG23	10:AJ:82:ILE:N	2.34	0.42
56:BX:10:ALA:HB1	56:BX:11:PRO:CD	2.50	0.42
53:BU:13:LYS:HD3	53:BU:13:LYS:N	2.35	0.42
18:CR:32:ARG:CA	18:CR:69:THR:HG21	2.39	0.42
5:AE:145:LYS:HA	8:AH:107:LEU:HD22	2.02	0.42
36:BA:690:G:O2'	39:BD:43:ARG:NH1	2.53	0.42
52:DT:107:ASP:N	52:DT:110:ILE:HG12	2.33	0.42
25:CZ:210:ILE:HG23	25:CZ:210:ILE:O	2.19	0.42
37:BB:17:C:H2'	37:BB:18:G:C8	2.54	0.42
49:BQ:110:THR:OG1	49:BQ:113:GLN:HG3	2.19	0.42
53:DU:13:LYS:HD3	53:DU:13:LYS:N	2.34	0.42
36:DA:1479:G:O2'	36:DA:1480:G:H5'	2.19	0.42
2:CB:8:LYS:C	2:CB:10:LEU:N	2.72	0.42
1:AA:130:A:C8	17:AQ:63:ARG:HG3	2.55	0.42
36:DA:655:A:C4'	36:DA:656:G:H5'	2.43	0.42
36:DA:2125:G:H21	36:DA:2173:A:H61	1.66	0.42
36:BA:2841:C:H2'	36:BA:2842:G:C8	2.54	0.42
36:DA:2463:C:C2'	36:DA:2464:C:H5'	2.49	0.42
1:AA:190:U:O2'	1:AA:191:G:H5'	2.20	0.42
47:DO:49:ARG:HB2	47:DO:50:GLY:H	1.58	0.42
57:BY:91:GLU:CG	57:BY:92:ASN:H	2.31	0.42
48:DP:107:LYS:C	48:DP:109:GLY:H	2.23	0.42
22:AV:62:C:O2	22:AV:62:C:C2'	2.66	0.42
43:BH:23:ARG:O	43:BH:24:VAL:CG2	2.67	0.42
1:AA:275:G:H5'	17:AQ:14:LYS:HD2	2.01	0.42
4:AD:163:GLU:C	4:AD:165:MET:H	2.23	0.42
36:BA:271(F):C:C2'	36:BA:271(G):C:H5'	2.50	0.42
25:AZ:85:HIS:C	25:AZ:87:ASP:N	2.71	0.42
46:BN:4:TYR:CD1	46:BN:4:TYR:N	2.86	0.42
19:CS:40:ILE:HD13	19:CS:62:ILE:HD13	2.00	0.42
49:BQ:82:ARG:HG3	49:BQ:82:ARG:HH11	1.84	0.42
52:BT:123:GLN:O	52:BT:127:ALA:HB3	2.19	0.42
23:AX:12:A:H2'	23:AX:13:A:O5'	2.19	0.42
47:DO:110:GLY:C	47:DO:112:MET:HE2	2.40	0.42
1:AA:1286:A:O2'	1:AA:1287:A:OP2	2.32	0.42
38:BC:193:ILE:O	38:BC:194:ARG:C	2.58	0.42
18:AR:53:ARG:NH1	18:AR:60:ALA:CA	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:57:LYS:C	10:CJ:58:ASP:O	2.57	0.42
39:BD:130:ALA:HA	39:BD:192:THR:HA	2.02	0.42
1:AA:298:A:H2'	1:AA:299:G:O4'	2.19	0.42
2:AB:77:ALA:HB2	2:AB:211:ILE:CD1	2.49	0.42
1:AA:202:U:O2'	1:AA:203:U:OP1	2.36	0.42
47:BO:49:ARG:HB2	47:BO:50:GLY:H	1.62	0.42
36:DA:703:U:H2'	36:DA:704:G:C5'	2.49	0.42
40:DE:199:ARG:HH11	40:DE:199:ARG:CB	2.30	0.42
40:DE:199:ARG:CB	40:DE:199:ARG:NH1	2.83	0.42
36:BA:18:C:O2'	53:BU:23:GLY:HA2	2.18	0.42
36:DA:1649:G:C6	36:DA:2009:G:C6	3.08	0.42
1:AA:403:C:O2'	1:AA:404:U:H5'	2.18	0.42
38:BC:163:PHE:CE1	38:BC:196:LEU:HD23	2.53	0.42
36:BA:1315:C:O2'	36:BA:1316:U:H5'	2.19	0.42
36:DA:536:A:H2'	36:DA:537:C:C6	2.54	0.42
36:DA:947:G:H2'	36:DA:948:G:C8	2.55	0.42
1:AA:312:C:H2'	1:AA:313:A:H8	1.84	0.42
38:DC:62:VAL:O	38:DC:160:ARG:HA	2.19	0.42
36:BA:719:C:O2'	36:BA:720:C:H5'	2.20	0.42
3:AC:60:ALA:N	3:AC:63:ASN:OD1	2.52	0.42
17:AQ:56:VAL:HG23	17:AQ:81:ARG:HG3	2.01	0.42
50:DR:81:ASP:O	50:DR:85:PRO:HG2	2.18	0.42
36:BA:640:C:N4	36:BA:641:C:H41	2.17	0.42
36:BA:2345:G:N3	36:BA:2381:C:H2'	2.34	0.42
36:DA:793:A:OP2	36:DA:2072:G:H5'	2.20	0.42
50:BR:56:LYS:HA	50:BR:84:ALA:HB1	2.00	0.42
41:DF:66:PRO:HD2	41:DF:70:THR:HG21	2.01	0.42
41:BF:145:GLU:O	41:BF:146:ALA:HB2	2.19	0.42
36:DA:1713:U:O2'	36:DA:1714:G:H5'	2.18	0.42
43:BH:80:SER:O	43:BH:81:GLU:CB	2.66	0.42
1:AA:219:C:H2'	1:AA:220:G:O4'	2.19	0.42
36:DA:640:C:N4	36:DA:641:C:N4	2.68	0.42
13:CM:34:LEU:HD13	13:CM:41:PRO:HA	2.00	0.42
4:AD:122:ARG:HA	4:AD:122:ARG:HD2	1.85	0.42
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.54	0.42
38:DC:2:LYS:O	38:DC:2:LYS:HG2	2.20	0.42
52:DT:133:GLU:O	52:DT:133:GLU:HG2	2.19	0.42
36:BA:1247:A:OP1	41:BF:95:ARG:NH2	2.52	0.42
25:CZ:354:GLN:O	25:CZ:371:THR:HB	2.19	0.42
42:BG:139:LEU:CD1	42:BG:149:VAL:HG11	2.48	0.42
42:BG:63:ILE:HD12	42:BG:141:PHE:CD2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:81:LEU:CD1	15:CO:85:LEU:HD12	2.49	0.42
28:D2:20:GLU:O	28:D2:20:GLU:HG2	2.17	0.42
28:D2:30:ARG:O	28:D2:34:GLU:HG3	2.19	0.42
31:B5:2:ALA:O	31:B5:3:LYS:C	2.57	0.42
31:B5:3:LYS:O	31:B5:5:PRO:N	2.52	0.42
34:B8:4:MET:HE1	36:BA:592:G:H21	1.84	0.42
28:B2:47:ASN:O	28:B2:50:ILE:CD1	2.67	0.42
42:DG:18:GLU:O	42:DG:22:ARG:HG3	2.20	0.42
42:DG:60:LEU:HD13	42:DG:60:LEU:C	2.40	0.42
42:DG:7:LEU:O	42:DG:8:LYS:C	2.57	0.42
32:D6:15:GLU:CG	32:D6:15:GLU:O	2.67	0.42
1:CA:1280:A:O2'	1:CA:1281:U:P	2.78	0.42
29:B3:35:ARG:HD3	29:B3:37:LEU:HD11	2.01	0.42
32:B6:45:LYS:O	32:B6:45:LYS:HG2	2.19	0.42
42:BG:84:LYS:O	42:BG:85:GLY:C	2.58	0.42
57:BY:85:VAL:CG1	57:BY:86:ARG:H	2.30	0.42
58:DZ:128:VAL:CG2	58:DZ:129:SER:N	2.79	0.42
43:BH:153:LYS:HB2	43:BH:154:PRO:HD2	2.02	0.42
1:AA:358:U:C1'	25:AZ:233:GLY:CA	2.91	0.42
31:B5:36:CYS:HB3	31:B5:49:CYS:HB3	2.00	0.42
36:BA:624:C:H5'	36:BA:625:G:OP2	2.19	0.42
39:BD:174:ILE:HG23	39:BD:271:ILE:HD12	2.01	0.42
36:DA:1445(A):C:O2'	36:DA:1446:C:H5'	2.19	0.42
36:DA:1540:U:C4	36:DA:1541:G:N7	2.88	0.42
56:DX:7:VAL:HB	56:DX:8:ILE:HD12	2.02	0.42
37:BB:73:A:C2'	37:BB:74:U:H5'	2.50	0.42
58:BZ:166:SER:H	58:BZ:167:PRO:CA	2.33	0.42
36:DA:2160:G:H8	36:DA:2160:G:C5'	2.16	0.42
42:BG:77:ILE:CD1	42:BG:77:ILE:N	2.79	0.42
39:DD:223:GLY:O	39:DD:226:MET:HG3	2.18	0.42
40:BE:98:PRO:HD3	40:BE:175:VAL:CG1	2.49	0.42
9:CI:52:ALA:HB3	9:CI:95:LYS:NZ	2.35	0.42
25:CZ:131:ILE:HG12	25:CZ:163:PHE:CE1	2.55	0.42
9:CI:50:LEU:O	9:CI:56:LEU:HB3	2.19	0.42
38:BC:82:LYS:HB3	38:BC:149:ILE:HG21	2.02	0.42
48:DP:39:LYS:HD2	48:DP:40:SER:N	2.33	0.42
36:BA:673:C:H2'	36:BA:674:G:H5'	1.99	0.42
25:CZ:171:ILE:HG13	25:CZ:202:LEU:HA	2.02	0.42
25:CZ:201:GLU:O	25:CZ:205:ALA:HB3	2.19	0.42
37:BB:15:A:H3'	37:BB:16:G:H5'	2.00	0.42
41:DF:89:VAL:HG12	41:DF:90:PHE:H	1.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:106:VAL:HG21	3:AC:115:LEU:HD11	2.01	0.42
23:AX:16:A:H5"	23:AX:17:U:OP2	2.20	0.42
48:BP:107:LYS:C	48:BP:109:GLY:H	2.23	0.42
58:DZ:70:LEU:CD2	58:DZ:70:LEU:N	2.83	0.42
57:BY:42:VAL:HG23	57:BY:67:LEU:HD12	2.02	0.42
54:BV:32:THR:CG2	54:BV:58:VAL:HG12	2.50	0.42
36:BA:1363:C:H2'	36:BA:1364:G:H8	1.84	0.42
22:AV:59:U:O2'	22:AV:60:U:O5'	2.37	0.42
40:DE:59:VAL:O	40:DE:60:ASN:CG	2.58	0.42
40:DE:63:LEU:O	40:DE:64:LYS:C	2.57	0.42
2:AB:158:LEU:HA	2:AB:159:PRO:HD3	1.82	0.42
40:BE:59:VAL:CG2	40:BE:63:LEU:HA	2.50	0.42
50:BR:21:TYR:HB3	50:BR:47:PHE:CE2	2.54	0.42
50:BR:48:VAL:O	50:BR:51:LEU:HB2	2.20	0.42
12:CL:39:VAL:HG13	12:CL:39:VAL:O	2.18	0.42
36:BA:65:C:H2'	36:BA:66:C:C6	2.54	0.42
36:BA:2721:A:H2'	36:BA:2722:G:O4'	2.19	0.42
10:CJ:38:ILE:HD12	10:CJ:38:ILE:C	2.40	0.42
36:DA:90:U:H4'	36:DA:92:A:H8	1.84	0.42
27:D1:29:GLY:O	27:D1:30:VAL:O	2.36	0.42
36:DA:848:G:C2	36:DA:933:A:H1'	2.54	0.42
20:AT:32:ALA:O	20:AT:36:LEU:HB2	2.19	0.42
20:AT:36:LEU:HD13	20:AT:36:LEU:O	2.19	0.42
43:BH:94:TYR:CD1	43:BH:107:VAL:HA	2.55	0.42
1:AA:781:A:H2'	1:AA:782:A:H5'	2.00	0.42
1:CA:782:A:H4'	1:CA:1514:C:O2'	2.20	0.42
27:D1:76:ARG:HH12	27:D1:95:LEU:CD1	2.32	0.42
47:DO:98:VAL:HG11	47:DO:118:ALA:N	2.35	0.42
38:DC:140:PRO:HA	38:DC:145:VAL:HB	2.00	0.42
39:DD:6:PHE:N	39:DD:6:PHE:HD1	2.15	0.42
41:DF:81:PRO:C	41:DF:82:ILE:O	2.54	0.42
36:DA:221:A:H4'	36:DA:222:A:O5'	2.19	0.42
36:BA:491:G:H2'	36:BA:492:A:H8	1.83	0.42
53:DU:66:ASN:HD21	53:DU:76:TYR:H	1.66	0.42
1:AA:454:C:H5"	1:AA:455:C:H5	1.83	0.42
36:BA:2514:U:H2'	36:BA:2515:C:H6	1.82	0.42
41:DF:65:TRP:CE3	41:DF:72:ARG:HB2	2.54	0.42
3:CC:141:VAL:O	3:CC:141:VAL:HG12	2.20	0.42
25:AZ:41:ASN:O	25:AZ:42:VAL:HG23	2.19	0.42
46:DN:137:LYS:CG	46:DN:138:LEU:N	2.83	0.42
57:DY:57:GLN:HA	57:DY:57:GLN:OE1	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:720:C:H2'	1:AA:721:G:C8	2.54	0.42
4:CD:65:ARG:HB2	4:CD:75:PHE:CE1	2.54	0.42
38:BC:22:ILE:HB	38:BC:228:SER:OXT	2.20	0.42
1:CA:1375:A:H2'	1:CA:1376:U:O4'	2.19	0.42
1:CA:1294:G:O2'	1:CA:1295:G:H5'	2.19	0.42
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	2.02	0.42
36:BA:1861:G:O2'	36:BA:1862:G:H5'	2.20	0.42
36:DA:2123:G:O2'	36:DA:2124:G:H5'	2.20	0.42
42:DG:106:LEU:HD12	42:DG:141:PHE:HE1	1.85	0.42
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.55	0.42
11:CK:91:ARG:C	11:CK:91:ARG:HD2	2.39	0.42
58:DZ:162:GLU:O	58:DZ:162:GLU:HG3	2.19	0.42
52:BT:11:GLU:OE1	52:BT:11:GLU:N	2.52	0.42
43:DH:30:LYS:HA	43:DH:30:LYS:HE2	2.00	0.42
1:CA:131:C:H2'	1:CA:132:C:H6	1.83	0.42
39:BD:3:VAL:HG21	39:BD:203:ASN:HB2	2.02	0.42
53:BU:44:ASN:HD21	54:BV:75:PHE:HB3	1.83	0.42
38:BC:131:LEU:HD22	38:BC:136:LEU:HB2	2.02	0.42
36:DA:2064:C:H2'	36:DA:2065:C:C6	2.54	0.42
1:AA:811:C:H4'	1:AA:900:A:N6	2.34	0.42
25:CZ:355:LEU:HD13	25:CZ:356:PRO:HD2	2.00	0.42
24:AY:25:C:H2'	24:AY:26:A:O5'	2.19	0.42
28:D2:20:GLU:CG	28:D2:23:LYS:HD2	2.49	0.42
32:B6:7:ILE:CB	32:B6:27:LYS:HZ2	2.26	0.42
42:DG:170:ARG:NE	42:DG:180:PHE:CD2	2.87	0.42
32:D6:44:ARG:O	32:D6:46:HIS:ND1	2.52	0.42
1:AA:1281:U:C5'	1:AA:1282:C:H5	2.07	0.42
47:BO:104:ARG:CZ	52:BT:33:LYS:HD2	2.49	0.42
52:DT:19:LEU:HD22	52:DT:85:LYS:HD3	2.02	0.42
43:BH:157:TYR:O	43:BH:157:TYR:CD1	2.72	0.42
4:AD:58:LEU:O	4:AD:62:GLN:HG2	2.20	0.42
42:DG:107:LEU:O	42:DG:108:ASN:ND2	2.53	0.42
36:BA:260:G:H1'	36:BA:621:A:H1'	2.02	0.42
36:BA:1540:U:C4	36:BA:1541:G:N7	2.88	0.42
39:BD:184:LYS:HG3	39:BD:271:ILE:HD11	2.02	0.42
41:BF:196:LEU:HD23	41:BF:196:LEU:HA	1.89	0.42
51:BS:97:ARG:O	51:BS:99:LYS:N	2.53	0.42
40:BE:89:ASP:CG	40:BE:90:THR:N	2.73	0.42
40:BE:69:LYS:HD3	40:BE:90:THR:H	1.85	0.42
40:BE:101:ARG:HB2	40:BE:201:THR:CG2	2.48	0.42
25:AZ:90:LYS:HA	25:AZ:93:ILE:HG21	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:20:LYS:CD	12:CL:20:LYS:N	2.79	0.42
36:BA:1517:G:H2'	36:BA:1518:U:O4'	2.20	0.42
11:AK:22:HIS:HB3	11:AK:29:ILE:HG12	2.00	0.42
36:DA:1517:G:H2'	36:DA:1518:U:O4'	2.19	0.42
10:AJ:82:ILE:O	10:AJ:82:ILE:HG22	2.20	0.42
22:AW:9:A:C2	22:AW:45:U:C4	3.06	0.42
36:DA:673:C:H2'	36:DA:674:G:H5'	2.01	0.42
7:CG:18:TYR:CD2	7:CG:59:LEU:HB2	2.53	0.42
54:DV:93:GLU:H	54:DV:93:GLU:HG3	1.65	0.42
12:AL:58:VAL:HG12	12:AL:60:LEU:HD22	2.01	0.42
1:CA:1152:A:H5'	10:CJ:70:ARG:NH2	2.34	0.42
36:BA:885:C:C2	36:BA:886:C:C5	3.08	0.42
46:BN:30:ILE:O	46:BN:30:ILE:HG22	2.20	0.42
27:D1:47:GLN:HG2	36:DA:2091:U:H1'	2.01	0.42
4:AD:120:LEU:HB3	4:AD:126:ILE:CD1	2.45	0.42
4:AD:121:VAL:CA	4:AD:126:ILE:HD13	2.49	0.42
12:AL:92:ASP:O	12:AL:94:PRO:HD3	2.20	0.42
1:AA:1145:C:H1'	1:AA:1146:A:C8	2.54	0.42
52:DT:65:LYS:HB2	52:DT:65:LYS:NZ	2.33	0.42
29:D3:47:VAL:CG1	29:D3:56:VAL:HG21	2.49	0.42
36:BA:2400:G:C5	36:BA:2401:U:O2	2.72	0.42
36:BA:1170:G:N2	36:BA:1180:C:C2	2.88	0.42
46:BN:42:TRP:CZ2	46:BN:44:PRO:HA	2.54	0.42
10:CJ:6:ILE:O	10:CJ:6:ILE:HG13	2.19	0.42
15:CO:24:SER:OG	15:CO:27:VAL:HG23	2.20	0.42
41:DF:110:LEU:HD13	41:DF:110:LEU:C	2.40	0.42
41:DF:110:LEU:HA	41:DF:183:VAL:CG1	2.49	0.42
12:AL:39:VAL:HG13	12:AL:39:VAL:O	2.19	0.42
36:BA:90:U:H4'	36:BA:92:A:H8	1.85	0.42
36:BA:191:A:O2'	36:BA:192:C:H5'	2.20	0.42
36:BA:723:G:C6	36:BA:724:U:C4	3.07	0.42
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	2.01	0.42
36:BA:284:U:H2'	36:BA:285:C:H6	1.84	0.42
26:B0:16:SER:HB2	36:BA:2262:U:C5	2.55	0.42
2:AB:80:ILE:CD1	2:AB:80:ILE:N	2.82	0.42
1:CA:474:G:O2'	1:CA:475:G:H5'	2.20	0.42
36:BA:1204:A:N1	36:BA:1241:A:C2	2.88	0.42
1:CA:781:A:C3'	1:CA:782:A:H5'	2.49	0.42
36:DA:1771:C:HO2'	36:DA:1786:A:C1'	2.33	0.42
36:DA:1773:A:H2'	36:DA:1774:C:O4'	2.19	0.42
36:BA:894:C:C2'	36:BA:895:U:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:16:G:H2'	36:DA:17:G:H8	1.84	0.42
33:B7:43:THR:HG23	33:B7:44:PRO:CD	2.48	0.42
1:AA:538:G:H3'	12:AL:115:LYS:NZ	2.35	0.42
36:DA:2007:C:H4'	36:DA:2824:C:H4'	2.02	0.42
36:DA:1013:C:O2'	36:DA:1014:U:H5'	2.20	0.42
4:CD:36:ARG:NH1	4:CD:36:ARG:HG2	2.33	0.42
1:CA:594:G:H2'	1:CA:595:G:H5'	2.01	0.42
36:BA:2695:C:O2'	36:BA:2696:U:H5'	2.20	0.42
36:DA:1386:C:H2'	36:DA:1387:C:H6	1.84	0.42
48:BP:12:ALA:O	48:BP:13:ASN:O	2.38	0.42
36:DA:2545:G:N3	36:DA:2565:A:H2	2.18	0.42
36:DA:1425:G:H2'	36:DA:1426:G:O4'	2.20	0.42
36:DA:332:A:O2'	36:DA:333:G:O5'	2.37	0.42
1:CA:818:G:O2'	1:CA:819:A:H5'	2.18	0.42
36:DA:575:A:OP2	36:DA:2499:C:O2'	2.37	0.42
6:CF:91:VAL:CG1	6:CF:92:LYS:N	2.82	0.42
6:CF:91:VAL:HG12	6:CF:92:LYS:N	2.34	0.42
1:CA:567:G:H2'	1:CA:568:G:O4'	2.18	0.42
44:BJ:114:UNK:O	44:BJ:115:UNK:CB	2.67	0.42
1:AA:131:C:H2'	1:AA:132:C:H6	1.84	0.42
42:BG:165:THR:OG1	42:BG:168:GLU:HG3	2.18	0.42
36:BA:2162:G:O2'	36:BA:2163:C:H5'	2.18	0.42
2:AB:226:ARG:C	2:AB:226:ARG:HD2	2.39	0.42
36:DA:2150:U:H2'	36:DA:2151:G:C8	2.54	0.42
44:DJ:70:UNK:O	44:DJ:71:UNK:C	2.67	0.42
2:CB:84:GLU:OE1	2:CB:216:SER:HA	2.19	0.42
39:DD:41:GLY:O	39:DD:42:GLY:C	2.57	0.42
54:DV:46:VAL:O	54:DV:48:GLY:N	2.52	0.42
25:CZ:355:LEU:CD2	25:CZ:370:PHE:HD2	2.33	0.42
39:DD:24:ILE:O	39:DD:25:THR:C	2.58	0.42
39:DD:63:ARG:O	39:DD:65:ILE:HG23	2.19	0.42
30:B4:25:TYR:CE2	42:BG:2:PRO:HA	2.55	0.42
48:DP:58:THR:O	48:DP:58:THR:CG2	2.67	0.42
32:D6:27:LYS:HG3	32:D6:30:THR:OG1	2.20	0.42
28:D2:43:GLN:O	28:D2:44:LEU:CB	2.67	0.42
28:D2:62:THR:O	28:D2:63:VAL:C	2.58	0.42
57:DY:13:VAL:CG2	57:DY:14:LEU:N	2.83	0.42
31:B5:3:LYS:O	31:B5:5:PRO:CD	2.68	0.42
32:B6:27:LYS:HD3	36:BA:2285:C:OP2	2.20	0.42
42:DG:92:VAL:HG13	42:DG:92:VAL:O	2.20	0.42
36:BA:2313:C:O2'	36:BA:2314:C:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:73:A:C4	37:DB:105:A:C2	3.07	0.42
58:DZ:96:VAL:CG2	58:DZ:97:GLU:H	2.20	0.42
2:AB:30:ARG:HH21	2:AB:194:PRO:CG	2.30	0.42
36:BA:2184:G:H2'	36:BA:2185:C:H1'	2.02	0.42
43:DH:83:TYR:HB2	43:DH:135:GLY:H	1.82	0.42
19:CS:35:SER:C	19:CS:37:ARG:H	2.21	0.42
26:B0:62:LEU:CD2	26:B0:62:LEU:N	2.80	0.42
36:BA:1070:A:H3'	36:BA:1072:C:H5	1.83	0.42
36:DA:1069:A:H1'	36:DA:1070:A:P	2.59	0.42
51:BS:88:ASP:CG	51:BS:89:ARG:H	1.99	0.42
49:BQ:141:GLN:O	58:BZ:53:ILE:HB	2.20	0.42
40:DE:70:ALA:O	40:DE:71:GLY:C	2.58	0.42
36:BA:1108:U:H6	36:BA:1109:C:C6	2.37	0.42
36:DA:733:G:C8	36:DA:761:A:C6	3.07	0.42
25:CZ:9:LYS:NZ	25:CZ:73:ALA:C	2.73	0.42
53:DU:95:LEU:HD13	54:DV:4:ILE:HG23	2.01	0.42
53:DU:91:ASP:CG	53:DU:96:ALA:HB2	2.39	0.42
36:BA:1878:G:H2'	36:BA:1879:C:C6	2.55	0.42
41:BF:125:LEU:CD2	41:BF:125:LEU:N	2.80	0.42
36:DA:2129:C:OP1	38:DC:6:ARG:HB3	2.19	0.42
51:DS:56:LEU:O	51:DS:57:LYS:O	2.37	0.42
50:DR:96:ARG:CZ	50:DR:117:VAL:HG23	2.50	0.42
50:DR:26:LYS:O	50:DR:30:THR:CG2	2.68	0.42
50:DR:99:LYS:HA	50:DR:112:ALA:HA	2.02	0.42
8:AH:7:ALA:CB	8:AH:85:ARG:HD3	2.39	0.42
13:AM:49:THR:C	13:AM:51:ALA:N	2.72	0.42
36:BA:1106:G:H2'	36:BA:1107:G:O4'	2.19	0.42
48:BP:38:GLN:O	48:BP:39:LYS:HB2	2.19	0.42
14:AN:57:ARG:HG2	14:AN:58:LYS:N	2.35	0.42
25:CZ:145:GLU:O	25:CZ:148:ASP:N	2.53	0.42
3:CC:70:VAL:HG12	3:CC:71:ALA:N	2.33	0.42
16:CP:71:ARG:HD3	16:CP:75:ARG:NH2	2.35	0.42
1:AA:189(E):U:O2'	1:AA:189(F):U:H5'	2.19	0.42
12:CL:25:PRO:C	12:CL:27:LEU:N	2.67	0.42
9:CI:70:LYS:O	9:CI:73:GLN:HB2	2.20	0.42
46:DN:51:PHE:CE1	46:DN:119:ARG:HD2	2.55	0.42
31:B5:11:THR:OG1	36:BA:1264:G:H5'	2.20	0.42
22:AW:35:A:N1	23:AX:17:U:O4	2.51	0.42
51:BS:66:ALA:C	51:BS:69:VAL:HG12	2.40	0.42
47:BO:76:ALA:CB	52:BT:75:ILE:HD13	2.45	0.42
58:BZ:113:ALA:HB3	58:BZ:146:ILE:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:46:LYS:HB2	12:AL:92:ASP:O	2.19	0.42
36:DA:156:U:H2'	36:DA:157:U:H5'	2.01	0.42
57:DY:36:ALA:HA	57:DY:69:ALA:HB2	2.02	0.42
36:BA:1496:A:C8	36:BA:1498:C:N3	2.87	0.42
44:DJ:85:UNK:CG	44:DJ:86:UNK:H	2.25	0.42
36:BA:2043:C:C2	36:BA:2044:C:C5	3.07	0.42
28:B2:41:ILE:HD11	28:B2:44:LEU:CG	2.50	0.42
32:D6:8:LYS:CE	32:D6:25:LYS:HD3	2.49	0.42
32:D6:9:LEU:HD22	32:D6:10:LEU:O	2.19	0.42
39:BD:70:TRP:CD1	39:BD:71:ASP:N	2.88	0.42
58:BZ:144:LEU:CD1	58:BZ:174:VAL:HG23	2.44	0.42
4:CD:163:GLU:C	4:CD:165:MET:H	2.23	0.42
57:BY:59:GLY:O	57:BY:60:PHE:HB2	2.20	0.42
49:DQ:45:GLN:H	49:DQ:45:GLN:HE21	1.65	0.42
36:BA:2811:G:O2'	36:BA:2812:G:H5'	2.19	0.42
36:BA:233:A:H2'	36:BA:234:C:O4'	2.19	0.42
36:BA:1336:A:H2'	36:BA:1337:G:C8	2.54	0.42
36:DA:2494:G:O2'	49:DQ:80:GLU:HA	2.19	0.42
36:DA:2720:U:C2	36:DA:2721:A:C8	3.08	0.42
1:AA:1239:A:H62	1:AA:1299:A:N6	2.17	0.42
39:BD:79:VAL:HG21	39:BD:111:LEU:HD22	2.01	0.42
37:BB:66:A:H61	37:BB:108:U:H2'	1.84	0.42
36:BA:2893:G:H5'	36:BA:2894:G:C5'	2.50	0.42
1:CA:1299:A:N3	1:CA:1299:A:H5"	2.35	0.42
36:BA:534:U:O2'	53:BU:49:HIS:HD2	2.03	0.42
2:CB:178:ARG:NH2	2:CB:198:ASP:OD2	2.53	0.42
30:B4:15:ILE:HD13	30:B4:21:VAL:HG13	2.00	0.42
36:BA:954:G:H4'	49:BQ:13:GLN:NE2	2.35	0.42
46:BN:68:GLU:HG2	46:BN:88:GLU:OE1	2.19	0.42
2:AB:221:LEU:C	2:AB:221:LEU:HD13	2.40	0.42
36:DA:977:G:HO2'	36:DA:1001:A:H2	1.60	0.42
36:DA:17:G:H2'	36:DA:18:C:C6	2.55	0.42
20:AT:33:ILE:H	20:AT:33:ILE:HG13	1.64	0.42
25:AZ:124:ARG:HG3	25:AZ:124:ARG:NH1	2.34	0.42
36:DA:1889:A:H1'	36:DA:2087:G:O4'	2.18	0.42
25:AZ:295:ARG:HH11	25:AZ:295:ARG:HG2	1.84	0.42
36:BA:1138:G:H2'	36:BA:1139:G:O4'	2.18	0.42
36:BA:2695:C:H2'	36:BA:2696:U:C6	2.55	0.42
36:DA:470:A:OP1	41:DF:59:TYR:HE1	2.03	0.42
53:BU:32:PHE:CB	53:BU:36:ARG:HH12	2.32	0.42
1:CA:995:C:O2'	1:CA:996:A:H8	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1837:C:H2'	36:DA:1838:C:H5"	2.01	0.42
18:CR:87:ARG:NH1	18:CR:87:ARG:HB3	2.35	0.42
36:DA:332:A:O2'	36:DA:333:G:P	2.78	0.42
1:CA:154:C:H2'	1:CA:155:C:C6	2.54	0.42
38:DC:200:LYS:HG3	38:DC:208:PHE:CD1	2.55	0.42
44:BJ:27:UNK:HA	44:BJ:113:UNK:CB	2.49	0.42
36:DA:807:U:O2'	36:DA:808:G:H5'	2.19	0.42
36:DA:355:G:H2'	36:DA:356:G:O4'	2.19	0.42
4:AD:190:ASP:CG	4:AD:191:ARG:N	2.73	0.42
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.33	0.42
58:DZ:85:HIS:CG	58:DZ:86:VAL:N	2.88	0.42
56:BX:18:TYR:O	56:BX:20:GLY:N	2.52	0.42
1:CA:948:C:O2'	1:CA:949:A:H5'	2.20	0.42
52:BT:133:GLU:HG2	52:BT:133:GLU:O	2.19	0.42
26:D0:54:GLY:O	26:D0:55:ARG:C	2.56	0.42
1:CA:1447:A:H2'	1:CA:1447:A:N3	2.34	0.42
2:AB:106:LYS:NZ	2:AB:106:LYS:HB2	2.33	0.42
36:BA:888:C:H2'	36:BA:889:C:O4'	2.20	0.42
44:DJ:44:UNK:O	44:DJ:52:UNK:O	2.38	0.42
3:CC:60:ALA:H	3:CC:63:ASN:HD21	1.67	0.42
4:CD:56:VAL:HG12	4:CD:57:ARG:N	2.35	0.42
30:B4:9:LEU:HA	30:B4:26:SER:O	2.19	0.42
28:D2:18:PRO:HD2	28:D2:72:ALA:O	2.19	0.42
28:D2:33:MET:C	28:D2:37:PHE:CD1	2.93	0.42
36:DA:335:C:H2'	36:DA:336:C:C6	2.54	0.42
32:B6:8:LYS:CE	32:B6:25:LYS:HD3	2.46	0.42
36:DA:2762:G:H2'	36:DA:2763:G:H5'	2.01	0.42
36:BA:2277:G:C6	36:BA:2278:A:N7	2.88	0.42
42:BG:81:LYS:O	42:BG:82:LEU:O	2.37	0.42
49:DQ:141:GLN:OXT	58:DZ:99:TYR:CD2	2.72	0.42
37:DB:21:G:H2'	37:DB:22:U:C5'	2.49	0.42
2:AB:203:GLY:O	2:AB:204:ASN:C	2.57	0.42
52:BT:48:ILE:C	52:BT:48:ILE:HD12	2.40	0.42
43:BH:167:GLU:HB3	43:BH:168:PRO:HD2	2.02	0.42
36:DA:1210:A:C8	36:DA:1210:A:H5'	2.50	0.42
36:BA:2415:G:H4'	48:BP:66:GLY:O	2.18	0.42
42:BG:16:ARG:NH1	42:BG:31:VAL:HG11	2.34	0.42
40:BE:21:VAL:HG23	40:BE:21:VAL:O	2.20	0.42
48:DP:12:ALA:CB	48:DP:16:ARG:HG2	2.50	0.42
54:DV:18:LEU:CD2	54:DV:19:LYS:N	2.76	0.42
10:CJ:54:PHE:O	10:CJ:56:HIS:N	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1827:C:H2'	36:DA:1828:G:C5'	2.49	0.42
12:CL:117:ARG:HB3	12:CL:122:THR:OG1	2.18	0.42
1:CA:189(H):G:O2'	1:CA:189(I):G:P	2.78	0.42
36:DA:1287:A:OP1	50:DR:104:ARG:HG2	2.20	0.42
1:AA:974:A:H8	1:AA:974:A:OP1	2.03	0.42
16:AP:71:ARG:HD3	16:AP:75:ARG:NH2	2.34	0.42
25:CZ:26:THR:HG23	60:CZ:501:GDP:O2A	2.20	0.42
43:DH:41:MET:CG	43:DH:42:ARG:N	2.70	0.42
9:AI:78:LYS:HZ1	9:AI:101:PHE:HE1	1.68	0.42
1:CA:1065:U:C6	1:CA:1190:G:N3	2.87	0.42
36:DA:606:U:H4'	36:DA:658:C:H4'	2.00	0.42
53:DU:9:VAL:O	53:DU:13:LYS:HE2	2.20	0.42
3:CC:70:VAL:CG1	3:CC:71:ALA:N	2.82	0.42
2:AB:11:LEU:O	2:AB:16:HIS:CE1	2.73	0.42
46:DN:115:ARG:HG3	46:DN:115:ARG:HH11	1.84	0.42
25:AZ:190:ARG:NH1	25:AZ:200:TRP:CE3	2.86	0.42
30:D4:16:CYS:HA	30:D4:33:VAL:O	2.20	0.42
58:DZ:70:LEU:HD23	58:DZ:70:LEU:N	2.35	0.42
33:D7:22:MET:HA	33:D7:22:MET:HE3	1.99	0.42
1:AA:191:G:H1'	20:AT:105:SER:HA	2.01	0.42
36:DA:2852:G:H1	36:DA:2865:U:H3	1.68	0.42
36:BA:444:C:H4'	41:BF:49:ALA:HB2	2.01	0.42
54:DV:34:GLU:HA	54:DV:58:VAL:HA	2.02	0.42
4:CD:78:LEU:HD23	4:CD:78:LEU:HA	1.92	0.42
20:CT:13:LEU:C	20:CT:15:ARG:H	2.23	0.42
36:BA:271(B):C:O2'	36:BA:271(C):C:H5'	2.20	0.42
19:AS:40:ILE:HD13	19:AS:62:ILE:HD13	2.01	0.42
40:DE:61:ARG:CB	40:DE:62:PRO:CD	2.97	0.42
19:CS:66:MET:H	19:CS:66:MET:HG2	1.66	0.42
6:CF:22:GLU:HA	6:CF:25:ILE:HG22	2.02	0.42
2:AB:69:LEU:HB2	2:AB:159:PRO:HG2	2.01	0.42
43:DH:72:ILE:O	43:DH:75:ALA:N	2.53	0.42
50:DR:12:ARG:HH11	50:DR:12:ARG:CG	2.32	0.42
46:DN:4:TYR:O	46:DN:5:VAL:CB	2.67	0.42
39:DD:273:ARG:HB3	39:DD:274:ARG:H	1.64	0.42
14:CN:21:TYR:HE2	14:CN:23:ARG:CZ	2.33	0.42
1:AA:1157:A:HO2'	1:AA:1158:C:P	2.43	0.42
1:AA:1299:A:N3	1:AA:1299:A:H5"	2.35	0.42
36:DA:2176:A:H4'	38:DC:213:TYR:CD1	2.55	0.42
1:AA:1452:C:H4'	1:AA:1456:G:N2	2.35	0.42
36:DA:1204:A:N1	36:DA:1241:A:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:223:ILE:H	2:AB:223:ILE:HG13	1.66	0.42
46:DN:126:PRO:O	46:DN:127:ASP:CB	2.66	0.42
53:BU:83:LEU:HD12	53:BU:83:LEU:N	2.35	0.42
5:CE:110:LEU:HD13	5:CE:118:ILE:HD13	2.02	0.42
48:DP:28:GLY:O	48:DP:29:LYS:HB2	2.19	0.42
4:CD:30:LYS:HB3	4:CD:35:ARG:NH1	2.35	0.42
1:AA:436:C:H2'	1:AA:437:U:H6	1.84	0.42
54:BV:82:ARG:HD2	54:BV:82:ARG:N	2.35	0.42
38:DC:96:GLY:O	38:DC:98:GLU:N	2.50	0.42
20:CT:62:LEU:HA	20:CT:65:LYS:HG3	2.02	0.42
20:AT:33:ILE:HG21	20:AT:63:ILE:HG12	2.01	0.42
36:BA:2562:U:C2'	36:BA:2563:U:H5'	2.50	0.42
2:AB:61:LEU:HD11	2:AB:160:ASP:CB	2.50	0.42
36:BA:2153:G:H2'	36:BA:2154:G:C8	2.53	0.42
25:AZ:389:ARG:HG2	25:AZ:394:THR:HA	2.01	0.42
36:BA:2726:U:H6	47:BO:67:LYS:NZ	2.17	0.42
1:CA:913:A:H4'	1:CA:914:A:H4'	2.01	0.42
1:CA:277:C:OP1	17:CQ:41:LYS:HE2	2.20	0.42
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.55	0.42
13:CM:68:GLY:N	13:CM:71:ARG:HG3	2.35	0.42
36:DA:318:C:H2'	36:DA:319:C:H6	1.85	0.42
42:BG:49:ASP:O	42:BG:50:ALA:HB3	2.19	0.42
49:BQ:48:GLU:O	49:BQ:49:ALA:C	2.58	0.42
37:DB:92:C:OP1	49:DQ:19:GLY:HA3	2.20	0.42
36:BA:2113:U:H2'	36:BA:2114:A:H8	1.84	0.42
26:B0:33:ALA:O	36:BA:2353:G:H1'	2.20	0.42
1:AA:958:A:C6	1:AA:959:A:N1	2.88	0.42
36:DA:908:C:O2'	36:DA:909:A:H5'	2.19	0.42
36:DA:1466:G:H2'	36:DA:1547:C:N4	2.35	0.42
36:DA:2772:C:H2'	36:DA:2773:C:H6	1.85	0.42
1:AA:1536:C:H6	1:AA:1536:C:O5'	2.02	0.42
36:BA:1425:G:H2'	36:BA:1426:G:O4'	2.19	0.42
7:CG:26:PHE:O	7:CG:30:ILE:HG12	2.19	0.42
36:BA:2639:A:H2'	36:BA:2640:G:O4'	2.20	0.42
25:AZ:355:LEU:HB3	25:AZ:370:PHE:CB	2.50	0.42
30:B4:25:TYR:HB2	42:BG:101:ILE:HD13	2.02	0.42
56:BX:27:THR:HB	56:BX:80:ILE:HG22	2.02	0.42
20:CT:99:LEU:O	20:CT:100:ILE:C	2.57	0.42
42:DG:172:LEU:CD2	42:DG:176:LEU:HD12	2.50	0.42
42:DG:40:ASN:HA	42:DG:91:ARG:HA	2.02	0.42
2:CB:165:VAL:CG2	2:CB:166:ASP:N	2.70	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:8:LYS:HB2	57:BY:28:LYS:HZ1	1.85	0.42
49:DQ:140:ALA:O	49:DQ:141:GLN:CB	2.67	0.42
42:DG:72:ARG:CD	42:DG:86:MET:HA	2.49	0.42
28:B2:63:VAL:C	28:B2:65:ASN:N	2.73	0.42
52:BT:88:ILE:HD13	52:BT:88:ILE:N	2.35	0.42
47:DO:76:ALA:CB	52:DT:75:ILE:HD13	2.46	0.42
1:CA:1202:G:H2'	1:CA:1203:C:C5'	2.50	0.42
2:CB:32:ILE:HA	2:CB:42:ILE:HA	2.02	0.42
46:BN:23:LEU:CD2	46:BN:24:GLY:N	2.68	0.42
4:AD:34:GLU:O	4:AD:35:ARG:CB	2.68	0.42
41:DF:167:ALA:HB1	41:DF:173:VAL:HG11	2.02	0.42
36:BA:941:A:H4'	48:BP:35:HIS:CE1	2.54	0.42
36:BA:2636:U:H1'	36:BA:2783:G:N2	2.35	0.42
40:BE:34:VAL:O	40:BE:34:VAL:HG13	2.19	0.42
48:DP:65:ARG:O	48:DP:66:GLY:C	2.58	0.42
25:AZ:89:ILE:O	25:AZ:92:MET:HB3	2.19	0.42
36:BA:1779:U:C2	36:BA:1783:A:N7	2.88	0.42
4:CD:9:CYS:HA	4:CD:12:CYS:SG	2.59	0.42
13:CM:10:PRO:HB2	13:CM:45:VAL:HG21	2.01	0.42
37:BB:117:G:H2'	37:BB:118:G:C8	2.55	0.42
36:DA:2713:A:OP1	50:DR:14:SER:HB3	2.19	0.42
40:BE:81:ILE:O	40:BE:82:ARG:O	2.37	0.42
56:DX:10:ALA:HB1	56:DX:11:PRO:CD	2.50	0.42
36:DA:2580:U:H5'	40:DE:131:ALA:CB	2.40	0.42
1:CA:1399:C:H4'	1:CA:1400:C:O5'	2.20	0.42
20:CT:27:LYS:C	20:CT:27:LYS:HD3	2.40	0.42
36:DA:744:G:O2'	36:DA:745:G:H5'	2.20	0.42
1:AA:324:G:OP1	20:AT:70:SER:HB2	2.20	0.42
25:CZ:138:VAL:HG21	25:CZ:173:GLY:N	2.35	0.42
48:BP:39:LYS:HD2	48:BP:40:SER:N	2.34	0.42
24:CY:40:C:H2'	24:CY:41:C:H5'	2.00	0.42
24:AY:40:C:C2'	24:AY:41:C:C5'	2.94	0.42
3:CC:73:PRO:O	3:CC:74:GLY:C	2.58	0.42
36:DA:2801(A):A:H5'	36:DA:2802:G:H8	1.79	0.42
25:AZ:201:GLU:O	25:AZ:205:ALA:HB3	2.19	0.42
36:BA:2572:A:N7	40:BE:144:ARG:HD2	2.35	0.42
57:DY:2:ARG:HG2	57:DY:2:ARG:NH1	2.35	0.42
34:D8:19:SER:CB	36:DA:651:G:OP1	2.67	0.42
27:B1:34:THR:HG21	27:B1:37:ILE:HG23	2.02	0.42
32:D6:42:TRP:CZ2	36:DA:643:A:N7	2.88	0.42
1:CA:1499:A:C2'	1:CA:1500:A:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:9:VAL:HG11	40:BE:25:VAL:HB	1.97	0.42
43:DH:20:ALA:CB	43:DH:21:PRO:CD	2.93	0.42
1:AA:1133:G:C4	1:AA:1142:G:N2	2.87	0.42
46:DN:42:TRP:CZ2	46:DN:44:PRO:HA	2.54	0.42
25:CZ:34:VAL:O	25:CZ:36:ALA:N	2.49	0.42
36:DA:1208:C:O2	36:DA:1208:C:C2'	2.65	0.42
36:BA:710:G:H2'	36:BA:711:G:C8	2.55	0.42
41:BF:108:LYS:H	41:BF:108:LYS:HD3	1.85	0.42
36:DA:2630:G:H1'	36:DA:2894:G:C8	2.55	0.42
26:B0:15:ASP:OD1	26:B0:16:SER:N	2.48	0.42
43:DH:94:TYR:CD1	43:DH:107:VAL:HA	2.55	0.42
43:BH:143:GLN:HE21	43:BH:143:GLN:HA	1.85	0.42
41:DF:9:ILE:HG23	41:DF:13:SER:O	2.19	0.42
36:BA:1297:C:H2'	36:BA:1298:C:H6	1.85	0.42
58:DZ:19:ARG:HA	58:DZ:23:LYS:O	2.19	0.42
9:AI:56:LEU:HG	9:AI:57:GLY:N	2.34	0.42
51:BS:39:ILE:CD1	51:BS:73:LEU:HD21	2.50	0.42
1:CA:197:A:C5	1:CA:221:C:H4'	2.55	0.42
25:CZ:300:ARG:C	25:CZ:302:GLN:N	2.73	0.42
36:BA:419:C:H2'	36:BA:420:C:C6	2.54	0.42
3:AC:14:ILE:HG12	3:AC:15:THR:N	2.34	0.42
7:AG:81:GLY:C	7:AG:83:ALA:H	2.22	0.42
36:BA:404:C:H4'	36:BA:405:U:H5'	2.02	0.42
17:CQ:81:ARG:HH21	17:CQ:84:LEU:HD11	1.84	0.42
1:AA:303:A:H2'	1:AA:304:U:O4'	2.20	0.42
15:CO:36:ILE:HG23	15:CO:56:LEU:HD11	2.01	0.42
7:CG:75:VAL:O	7:CG:75:VAL:HG23	2.20	0.42
18:AR:87:ARG:HB3	18:AR:87:ARG:NH1	2.35	0.42
1:AA:1137:C:O2'	1:AA:1138:G:N2	2.52	0.42
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.52	0.42
1:AA:154:C:H2'	1:AA:155:C:C6	2.54	0.42
8:CH:41:ARG:NH1	8:CH:123:GLU:OE2	2.53	0.42
36:BA:2300:G:O2'	36:BA:2301:C:H5'	2.20	0.42
36:DA:999:U:O2'	36:DA:1000:A:H5'	2.20	0.42
39:DD:227:ASN:HB3	39:DD:228:PRO:HD2	2.02	0.42
1:CA:822:C:O2'	1:CA:823:G:H5'	2.20	0.42
40:BE:10:GLY:HA2	40:BE:192:ASN:OD1	2.19	0.42
36:BA:2150:U:H2'	36:BA:2151:G:C8	2.55	0.42
45:DK:30:UNK:O	45:DK:31:UNK:O	2.38	0.42
36:BA:408:G:C5	36:BA:409:C:C5	3.07	0.42
25:CZ:141:VAL:HG23	25:CZ:141:VAL:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1142:U:O5'	36:DA:1142:U:H6	2.02	0.42
58:BZ:76:LEU:HD12	58:BZ:76:LEU:N	2.35	0.42
36:BA:514:A:O2'	36:BA:515:A:H5'	2.17	0.42
39:BD:63:ARG:O	39:BD:65:ILE:HG23	2.20	0.42
36:BA:1484:G:C3'	36:BA:1485:G:H5"	2.48	0.42
20:CT:53:LEU:HB3	20:CT:102:GLY:HA3	2.00	0.42
28:D2:2:LYS:HA	28:D2:6:VAL:CG2	2.50	0.42
28:D2:50:ILE:HG22	28:D2:51:ARG:N	2.33	0.42
57:DY:13:VAL:HG23	57:DY:73:ARG:C	2.40	0.42
1:AA:976:G:H5'	1:AA:1358:U:O2'	2.20	0.42
57:BY:13:VAL:CG1	57:BY:28:LYS:HD3	2.32	0.42
57:BY:81:LYS:HZ3	57:BY:98:VAL:HB	1.85	0.42
36:DA:1301:A:HO2'	36:DA:1302:A:C2'	2.24	0.42
49:DQ:141:GLN:NE2	58:DZ:71:VAL:O	2.52	0.42
36:DA:1528(A):A:N6	36:DA:1541:G:C2	2.87	0.42
51:BS:34:HIS:CB	51:BS:36:TYR:HE1	2.20	0.42
53:DU:65:ILE:HD12	53:DU:65:ILE:H	1.84	0.42
53:DU:91:ASP:O	53:DU:92:ARG:HB3	2.19	0.42
20:CT:92:LEU:O	20:CT:94:ALA:N	2.53	0.42
48:BP:97:PRO:O	48:BP:98:GLU:CB	2.67	0.42
36:BA:2155:G:H3'	36:BA:2156:G:C8	2.53	0.42
10:AJ:54:PHE:CZ	10:AJ:55:LYS:CE	3.02	0.42
40:DE:132:HIS:CA	40:DE:135:HIS:CE1	2.84	0.42
37:DB:16:G:C6	37:DB:69:G:C2	3.07	0.42
48:BP:41:ARG:N	48:BP:41:ARG:HD2	2.34	0.42
9:AI:95:LYS:NZ	9:AI:96:LEU:CD1	2.83	0.42
1:CA:1431:C:H2'	1:CA:1432:G:C5'	2.50	0.42
25:CZ:145:GLU:CG	25:CZ:149:LEU:HB2	2.40	0.42
2:CB:142:LEU:HD23	2:CB:142:LEU:C	2.39	0.42
46:DN:34:LEU:CD1	46:DN:116:LEU:HB3	2.50	0.42
38:BC:66:HIS:CG	38:BC:184:LYS:HD2	2.54	0.42
35:B9:14:CYS:SG	35:B9:27:CYS:CB	3.06	0.42
1:CA:375:U:P	16:CP:69:THR:HG21	2.60	0.42
42:BG:52:ILE:HD13	42:BG:52:ILE:N	2.34	0.42
34:D8:48:PHE:O	34:D8:49:VAL:CG2	2.67	0.42
36:BA:2802:G:C3'	36:BA:2803:C:H5"	2.49	0.42
46:BN:47:ALA:O	46:BN:119:ARG:NH2	2.52	0.42
36:DA:140:G:C1'	36:DA:141:A:H2	2.29	0.42
43:DH:167:GLU:HB3	43:DH:168:PRO:HD2	2.02	0.42
1:AA:1153:C:O2'	1:AA:1154:G:C5'	2.68	0.42
39:BD:231:HIS:ND1	39:BD:232:PRO:HD2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:34:GLU:O	54:BV:36:PRO:HD3	2.18	0.42
15:AO:17:ARG:NH1	15:AO:17:ARG:HG3	2.26	0.42
57:DY:59:GLY:O	57:DY:60:PHE:HB2	2.20	0.42
3:CC:79:ARG:O	3:CC:82:GLU:OE2	2.37	0.42
1:AA:1125:U:H1'	10:AJ:5:ARG:NH2	2.35	0.42
1:CA:1269:A:C2	1:CA:1313:U:O4'	2.72	0.42
36:BA:64:A:H2'	36:BA:65:C:O4'	2.19	0.42
19:AS:6:LYS:C	19:AS:7:LYS:HE3	2.40	0.42
55:DW:25:ARG:HH11	55:DW:25:ARG:CB	2.32	0.42
25:AZ:34:VAL:O	25:AZ:36:ALA:N	2.51	0.42
49:BQ:35:VAL:HG23	49:BQ:101:ARG:O	2.19	0.42
4:CD:148:VAL:CG1	4:CD:152:SER:HB2	2.48	0.42
24:AY:70:C:O2'	24:AY:71:C:H5'	2.20	0.42
36:DA:847:U:H2'	36:DA:848:G:H5"	2.02	0.42
36:BA:2121:G:C1'	38:BC:167:LYS:HE2	2.50	0.42
3:AC:132:ARG:O	3:AC:136:GLN:HG3	2.20	0.42
10:CJ:94:VAL:CG1	10:CJ:95:GLU:N	2.82	0.42
36:BA:1843:C:H5'	39:BD:253:GLN:NE2	2.34	0.42
36:BA:1204:A:N1	36:BA:1241:A:H2	2.17	0.42
50:BR:87:TYR:C	50:BR:89:ASP:H	2.22	0.42
41:BF:78:ILE:O	41:BF:80:ALA:N	2.52	0.42
36:BA:754:C:H2'	36:BA:755:C:C6	2.55	0.42
36:BA:2174:C:O4'	38:BC:218:MET:HE2	2.20	0.42
38:BC:196:LEU:O	38:BC:199:HIS:N	2.51	0.42
36:BA:470:A:OP1	41:BF:59:TYR:CE1	2.73	0.42
54:BV:76:LYS:HB3	54:BV:79:VAL:HG21	2.01	0.42
1:AA:124:G:C6	1:AA:125:U:C4	3.07	0.42
7:AG:75:VAL:HG23	7:AG:75:VAL:O	2.19	0.42
36:DA:754:C:H2'	36:DA:755:C:C6	2.55	0.42
1:AA:552:U:O2	12:AL:31:PRO:HB3	2.20	0.42
36:DA:271(V):G:O2'	36:DA:271(W):G:H5'	2.20	0.42
38:BC:63:SER:HA	38:BC:160:ARG:HA	2.01	0.42
7:CG:104:LEU:HD12	7:CG:104:LEU:HA	1.86	0.42
53:DU:46:ALA:O	53:DU:47:TYR:C	2.57	0.42
22:AV:14:A:C2'	22:AV:15:G:H5'	2.50	0.42
39:BD:147:LEU:HD13	39:BD:155:LEU:HD11	2.01	0.42
46:BN:137:LYS:CG	46:BN:138:LEU:N	2.82	0.42
17:AQ:91:ARG:NH1	17:AQ:91:ARG:HB2	2.34	0.42
1:AA:131:C:H2'	1:AA:132:C:C6	2.54	0.42
52:DT:40:THR:O	52:DT:41:ARG:O	2.38	0.42
45:DK:86:UNK:O	45:DK:87:UNK:CB	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1429:G:H2'	36:DA:1430:C:C6	2.55	0.42
28:B2:13:ALA:C	28:B2:15:LYS:H	2.23	0.42
1:CA:1458:G:O2'	1:CA:1459:C:H5'	2.20	0.42
1:CA:1095:U:P	1:CA:1108:G:H1	2.42	0.42
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.19	0.42
44:DJ:30:UNK:O	44:DJ:31:UNK:CB	2.67	0.42
1:AA:697:U:H2'	1:AA:698:G:H5'	2.02	0.42
25:AZ:194:GLU:HG3	25:AZ:194:GLU:H	1.44	0.42
25:CZ:194:GLU:H	25:CZ:194:GLU:HG3	1.43	0.42
58:DZ:105:VAL:O	58:DZ:105:VAL:HG13	2.19	0.42
40:BE:183:LEU:HD12	40:BE:183:LEU:N	2.35	0.42
26:B0:18:ALA:HB2	36:BA:2272:U:OP2	2.19	0.42
16:AP:52:ASP:CG	16:AP:55:ARG:HB2	2.41	0.42
39:DD:35:LYS:CD	39:DD:36:PRO:N	2.77	0.42
39:BD:65:ILE:HD11	39:BD:88:ARG:NH2	2.35	0.42
36:DA:690:G:O2'	39:DD:43:ARG:NH2	2.51	0.42
1:CA:1305:G:OP1	21:CU:2:GLY:N	2.53	0.42
28:D2:42:GLY:O	28:D2:43:GLN:HB2	2.18	0.42
28:D2:3:LEU:HD23	28:D2:7:ARG:NE	2.33	0.42
1:CA:1039:C:H2'	1:CA:1040:U:H5	1.84	0.42
25:AZ:13:ASN:ND2	25:AZ:241:ARG:HD2	2.35	0.42
34:B8:13:ARG:HD3	48:BP:61:ARG:O	2.20	0.42
32:D6:35:GLU:HB2	32:D6:51:GLU:OE1	2.19	0.42
30:D4:26:SER:OG	30:D4:27:THR:N	2.51	0.42
42:DG:95:ARG:O	42:DG:96:ARG:C	2.57	0.42
32:D6:41:PRO:O	32:D6:41:PRO:HG2	2.20	0.42
36:DA:2306:C:H5	36:DA:2307:G:O2'	2.03	0.42
48:BP:62:LEU:N	48:BP:62:LEU:CD2	2.70	0.42
41:BF:135:LYS:HB3	41:BF:138:GLU:OE1	2.19	0.42
31:B5:51:TYR:N	31:B5:56:LYS:HZ1	2.18	0.42
36:DA:1446:C:O2'	36:DA:1447:G:H5'	2.19	0.42
41:BF:129:PHE:CD2	41:BF:163:VAL:HG21	2.55	0.42
56:DX:41:ASN:C	56:DX:43:VAL:H	2.23	0.42
51:BS:53:SER:C	51:BS:55:ALA:N	2.74	0.42
42:BG:18:GLU:OE1	42:BG:18:GLU:HA	2.20	0.42
1:AA:367:U:H5'	25:AZ:291:ARG:HD2	2.02	0.42
1:AA:367:U:C4'	25:AZ:291:ARG:NE	2.70	0.42
25:CZ:19:HIS:HB2	25:CZ:116:THR:OG1	2.19	0.42
40:DE:21:VAL:HG23	40:DE:21:VAL:O	2.19	0.42
31:D5:56:LYS:O	31:D5:57:VAL:O	2.38	0.42
41:DF:125:LEU:N	41:DF:125:LEU:CD2	2.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:103:ARG:NH1	50:BR:110:PRO:HB3	2.35	0.42
10:AJ:3:LYS:HG2	10:AJ:75:ILE:O	2.20	0.42
9:CI:56:LEU:HG	9:CI:57:GLY:N	2.35	0.42
38:BC:118:ASP:C	38:BC:120:MET:N	2.71	0.42
10:CJ:81:THR:HG23	10:CJ:82:ILE:N	2.34	0.42
1:AA:375:U:P	16:AP:69:THR:HG21	2.60	0.42
36:BA:1657:C:H2'	36:BA:1658:C:C6	2.54	0.42
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.34	0.42
36:BA:2524:G:H2'	36:BA:2525:G:O4'	2.20	0.42
58:BZ:81:ARG:CZ	58:BZ:81:ARG:HB3	2.50	0.42
25:AZ:26:THR:N	60:AZ:501:GDP:O2A	2.53	0.42
1:AA:1318:A:HO2'	19:AS:10:PHE:HE2	1.67	0.42
58:DZ:80:ARG:O	58:DZ:82:ARG:HB2	2.20	0.42
1:CA:376:G:O3'	16:CP:5:ARG:NH1	2.52	0.42
1:AA:266:G:C5'	1:AA:267:C:H5	2.21	0.42
36:DA:885:C:H2'	36:DA:886:C:H6	1.83	0.42
1:CA:1153:C:O2'	1:CA:1154:G:P	2.78	0.42
36:DA:1762:A:C8	36:DA:1762:A:O5'	2.72	0.42
13:AM:120:LYS:HA	13:AM:120:LYS:HZ1	1.85	0.42
36:BA:2572:A:N7	40:BE:145:LYS:HG2	2.35	0.42
36:DA:2125:G:H21	36:DA:2173:A:N6	2.17	0.42
36:DA:2864:G:OP1	52:DT:119:LYS:HD2	2.19	0.42
39:BD:223:GLY:O	39:BD:224:ALA:O	2.38	0.42
40:BE:126:PRO:C	40:BE:128:SER:N	2.73	0.42
12:CL:46:LYS:CG	12:CL:47:LYS:H	2.33	0.42
36:BA:2359:C:O2'	36:BA:2360:A:H5'	2.19	0.42
4:AD:6:GLY:O	4:AD:8:VAL:HG13	2.20	0.42
27:D1:52:ARG:NH1	27:D1:57:GLU:HG2	2.35	0.42
36:BA:2455:G:H2'	36:BA:2456:C:H6	1.84	0.42
55:DW:34:ASN:HA	55:DW:34:ASN:HD22	1.54	0.42
36:DA:548:A:H2'	36:DA:549:G:H5'	2.01	0.42
36:DA:195:A:C8	36:DA:197:A:OP1	2.73	0.42
52:DT:78:LEU:O	52:DT:78:LEU:HD23	2.19	0.42
1:AA:865:A:O2'	1:AA:866:C:H5'	2.20	0.42
1:AA:953:G:H5"	1:AA:965:A:H61	1.83	0.42
43:DH:105:LEU:CD2	43:DH:105:LEU:N	2.82	0.42
28:B2:59:ARG:O	28:B2:62:THR:HB	2.20	0.42
43:BH:105:LEU:CD2	43:BH:105:LEU:N	2.83	0.42
1:CA:346:G:O2'	1:CA:347:G:O5'	2.38	0.42
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.54	0.42
38:DC:73:ARG:HG3	38:DC:73:ARG:HH11	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:146:ALA:O	43:BH:147:ASN:C	2.57	0.42
9:CI:33:PHE:CE2	9:CI:47:LEU:HD21	2.55	0.42
1:CA:201:C:H2'	1:CA:202:U:H3'	2.02	0.42
47:BO:23:ARG:HG3	47:BO:24:VAL:N	2.35	0.42
27:D1:76:ARG:HH12	27:D1:95:LEU:HD12	1.85	0.42
36:BA:1297:C:O2'	36:BA:1298:C:H5'	2.20	0.42
1:CA:991:U:O4	1:CA:1212:U:H1'	2.19	0.42
4:CD:70:ILE:CG2	4:CD:71:SER:N	2.81	0.42
36:DA:894:C:C2'	36:DA:895:U:H5'	2.50	0.42
1:CA:338:A:H2'	1:CA:339:C:C6	2.55	0.42
36:DA:30:G:C5	36:DA:31:C:C4	3.08	0.42
36:DA:320:A:H3'	41:DF:136:THR:HG22	2.01	0.42
3:CC:12:LEU:O	3:CC:14:ILE:N	2.53	0.42
36:DA:2174:C:H1'	38:DC:218:MET:HA	2.02	0.42
36:DA:2174:C:O4'	38:DC:218:MET:HE2	2.20	0.42
1:AA:538:G:H3'	12:AL:115:LYS:HZ2	1.84	0.42
1:CA:1222:G:O2'	1:CA:1223:C:H5'	2.19	0.42
36:DA:404:C:H4'	36:DA:405:U:H5'	2.02	0.42
33:D7:12:ARG:NH2	36:DA:464:U:O3'	2.52	0.42
50:BR:106:GLY:O	50:BR:107:ASP:HB3	2.20	0.42
46:DN:117:PHE:O	46:DN:120:LEU:HB3	2.20	0.42
39:BD:76:PRO:HG2	39:BD:98:VAL:CG2	2.50	0.42
46:DN:15:LEU:HD12	46:DN:136:GLU:HG2	2.02	0.42
44:BJ:71:UNK:O	44:BJ:72:UNK:CB	2.67	0.42
53:BU:35:ALA:O	53:BU:36:ARG:C	2.56	0.42
13:AM:111:LYS:O	13:AM:112:GLY:O	2.38	0.42
36:BA:2171:A:O2'	36:BA:2172:U:H5	2.02	0.42
1:AA:515:G:H2'	1:AA:516:U:O4'	2.20	0.42
17:AQ:81:ARG:HH21	17:AQ:84:LEU:HD11	1.84	0.42
36:BA:1367:A:C5	36:BA:1368:G:H1'	2.54	0.42
55:BW:79:GLY:HA3	55:BW:100:THR:HG23	2.01	0.42
43:BH:80:SER:O	43:BH:81:GLU:HB2	2.20	0.42
36:DA:2771:C:H2'	36:DA:2772:C:C6	2.55	0.42
53:DU:86:ALA:HB2	53:DU:116:ALA:CB	2.50	0.42
1:AA:652:U:C2	1:AA:752:G:N2	2.88	0.42
1:CA:802:A:H2'	1:CA:803:G:O4'	2.20	0.42
36:BA:2052:G:O4'	40:BE:142:GLY:HA3	2.19	0.42
36:DA:2639:A:H2'	36:DA:2640:G:O4'	2.20	0.42
36:DA:1078:U:H4'	36:DA:1079:C:O2	2.20	0.42
1:AA:948:C:O2'	1:AA:949:A:H5'	2.19	0.42
36:BA:389:G:C6	48:BP:70:GLN:HG3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:675:A:H1'	11:AK:116:HIS:ND1	2.34	0.42
40:DE:142:GLY:O	40:DE:143:ASN:ND2	2.53	0.42
36:DA:60:G:C6	36:DA:74:A:N6	2.87	0.42
36:BA:975:C:OP2	36:BA:975:C:H4'	2.20	0.42
46:BN:128:HIS:O	46:BN:128:HIS:CG	2.72	0.42
36:BA:2517:C:C2	36:BA:2542:A:C6	3.08	0.42
36:BA:1429:G:H2'	36:BA:1430:C:C6	2.54	0.42
36:BA:529:A:H4'	36:BA:530:G:O5'	2.20	0.42
39:DD:80:ALA:HB3	39:DD:94:LEU:HD13	2.01	0.41
39:BD:35:LYS:CD	39:BD:36:PRO:HD3	2.49	0.41
30:B4:26:SER:OG	30:B4:27:THR:N	2.53	0.41
42:BG:59:GLU:OE2	42:BG:138:GLN:NE2	2.53	0.41
42:BG:96:ARG:O	42:BG:97:ASP:C	2.58	0.41
56:BX:30:VAL:HG21	56:BX:39:ILE:HD11	2.01	0.41
13:AM:25:ILE:HD11	13:AM:66:LEU:HD21	2.02	0.41
34:D8:37:SER:O	34:D8:38:GLY:C	2.58	0.41
1:CA:1305:G:O2'	1:CA:1331:G:N2	2.53	0.41
57:DY:86:ARG:NH2	57:DY:95:LYS:HZ2	2.17	0.41
57:DY:8:LYS:HB2	57:DY:28:LYS:HZ1	1.84	0.41
36:DA:1902:C:H1'	39:DD:244:ARG:HD2	2.02	0.41
52:DT:31:SER:HG	52:DT:32:TYR:HE1	1.53	0.41
1:CA:858:G:C8	1:CA:869:G:O6	2.73	0.41
36:BA:296:C:C2'	36:BA:297:C:H5'	2.49	0.41
34:B8:7:HIS:HD2	48:BP:50:ARG:HD3	1.85	0.41
36:DA:260:G:H1'	36:DA:621:A:H1'	2.02	0.41
40:DE:34:VAL:HG13	40:DE:34:VAL:O	2.19	0.41
40:BE:48:GLN:NE2	40:BE:78:LEU:HD22	2.34	0.41
36:DA:1190:G:H5'	48:DP:35:HIS:CA	2.50	0.41
48:DP:16:ARG:CZ	48:DP:16:ARG:HB2	2.46	0.41
36:BA:651:G:H2'	36:BA:652:C:C5'	2.49	0.41
48:BP:131:SER:O	48:BP:132:LYS:C	2.57	0.41
51:BS:58:LEU:CG	51:BS:59:LYS:H	2.31	0.41
5:CE:7:GLU:HB3	5:CE:112:LEU:HD22	2.01	0.41
40:BE:93:VAL:HG12	40:BE:93:VAL:O	2.20	0.41
53:BU:92:ARG:NE	54:BV:11:GLN:HG2	2.35	0.41
36:BA:2129:C:OP1	38:BC:6:ARG:HB3	2.20	0.41
1:AA:1347:G:O2'	1:AA:1348:U:P	2.78	0.41
36:DA:943:U:OP2	48:DP:38:GLN:NE2	2.53	0.41
48:DP:39:LYS:CD	48:DP:40:SER:H	2.33	0.41
3:AC:3:ASN:HB2	3:AC:4:LYS:H	1.63	0.41
27:D1:13:ILE:HD11	27:D1:42:GLN:HE21	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1322:C:H6	1:AA:1322:C:OP2	2.03	0.41
46:BN:71:ILE:HG22	46:BN:72:TYR:N	2.34	0.41
1:CA:373:A:O2'	1:CA:374:A:H5'	2.20	0.41
46:BN:46:VAL:HG13	46:BN:47:ALA:N	2.35	0.41
54:BV:61:VAL:C	54:BV:63:GLY:H	2.23	0.41
33:D7:22:MET:HE1	33:D7:31:LEU:HD12	2.01	0.41
54:BV:5:VAL:HG23	54:BV:37:VAL:O	2.20	0.41
1:AA:522:C:H41	12:AL:53:ARG:NH2	2.09	0.41
29:B3:17:LYS:HA	29:B3:17:LYS:HD3	1.61	0.41
54:DV:36:PRO:O	54:DV:37:VAL:HG13	2.19	0.41
40:DE:145:LYS:HZ2	40:DE:145:LYS:HB3	1.84	0.41
36:BA:2031:A:O2'	36:BA:2455:G:H4'	2.20	0.41
4:CD:163:GLU:C	4:CD:165:MET:N	2.73	0.41
40:BE:59:VAL:HG13	40:BE:60:ASN:N	2.34	0.41
1:AA:1526:G:C6	1:AA:1527:C:N4	2.88	0.41
1:CA:1125:U:H1'	10:CJ:5:ARG:NH2	2.35	0.41
51:DS:11:LYS:N	51:DS:11:LYS:CD	2.82	0.41
36:BA:79:G:H2'	36:BA:80:G:H8	1.85	0.41
36:BA:902:C:H2'	36:BA:903:C:H6	1.81	0.41
36:BA:286:C:H2'	36:BA:287:C:H6	1.81	0.41
1:CA:298:A:H2'	1:CA:299:G:O4'	2.20	0.41
55:DW:59:VAL:O	55:DW:60:ASN:HB2	2.20	0.41
8:CH:18:ARG:CB	8:CH:18:ARG:HH11	2.33	0.41
49:BQ:97:VAL:HG21	49:BQ:103:MET:CE	2.49	0.41
6:AF:35:ALA:HB1	6:AF:65:VAL:HB	2.02	0.41
2:AB:87:ARG:HH12	2:AB:223:ILE:CD1	2.33	0.41
9:CI:47:LEU:N	9:CI:47:LEU:HD12	2.34	0.41
24:AY:53:G:OP1	25:AZ:332:THR:OG1	2.27	0.41
36:DA:654(N):G:N7	36:DA:654(O):G:C4	2.88	0.41
27:D1:76:ARG:NH2	27:D1:95:LEU:H	2.18	0.41
50:DR:4:LEU:HD12	50:DR:7:GLY:H	1.84	0.41
46:DN:62:VAL:HG11	46:DN:67:LEU:HG	2.02	0.41
19:AS:77:THR:HG23	19:AS:78:ARG:HG3	2.02	0.41
50:DR:87:TYR:C	50:DR:89:ASP:H	2.22	0.41
3:CC:175:LEU:HD21	3:CC:201:TYR:CE2	2.55	0.41
1:CA:189(E):U:O2'	1:CA:189(F):U:H5'	2.19	0.41
1:CA:417:C:O2'	1:CA:418:C:H5'	2.20	0.41
36:DA:211:A:O2'	36:DA:212:G:H5'	2.20	0.41
29:B3:49:LYS:HD3	36:BA:851:U:H5'	2.01	0.41
1:AA:1095:U:P	1:AA:1108:G:H1	2.43	0.41
29:D3:50:VAL:O	29:D3:52:HIS:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:294:U:H2'	1:CA:295:C:H6	1.85	0.41
18:AR:68:LYS:HE2	18:AR:68:LYS:HB2	1.89	0.41
1:CA:530:G:O6	23:CX:24:G:H1'	2.20	0.41
25:AZ:354:GLN:O	25:AZ:371:THR:HB	2.19	0.41
13:CM:8:GLU:OE1	13:CM:22:ILE:HA	2.21	0.41
31:B5:3:LYS:CD	36:BA:747:U:OP1	2.57	0.41
25:AZ:272:MET:CB	25:AZ:277:LEU:HD23	2.50	0.41
31:D5:2:ALA:O	31:D5:3:LYS:C	2.59	0.41
30:D4:31:ILE:HG21	42:DG:142:PRO:CB	2.46	0.41
51:DS:50:SER:O	51:DS:51:ALA:CB	2.67	0.41
58:DZ:57:ILE:O	58:DZ:69:THR:O	2.38	0.41
22:CV:56:C:C1'	42:DG:76:SER:O	2.69	0.41
46:BN:57:ALA:O	46:BN:58:ASP:O	2.38	0.41
41:DF:184:TYR:CE1	48:DP:7:ARG:CZ	3.03	0.41
48:DP:9:ASN:N	48:DP:10:PRO:CD	2.81	0.41
36:DA:338:G:H2'	36:DA:339:U:C6	2.54	0.41
31:D5:44:THR:HG23	50:DR:100:LEU:C	2.40	0.41
47:BO:86:ILE:HG22	47:BO:94:ARG:HD3	2.03	0.41
40:BE:70:ALA:O	40:BE:71:GLY:C	2.58	0.41
36:DA:2400:G:C5	36:DA:2401:U:O2	2.73	0.41
25:CZ:113:MET:HG3	25:CZ:114:PRO:CD	2.36	0.41
27:D1:73:LEU:O	27:D1:77:ALA:HB2	2.19	0.41
53:BU:90:VAL:HG11	54:BV:40:LEU:HD23	2.01	0.41
48:BP:126:VAL:HA	48:BP:145:PRO:CB	2.49	0.41
36:BA:1278:A:C5'	50:BR:36:THR:HG22	2.49	0.41
1:AA:376:G:O3'	16:AP:5:ARG:NH1	2.51	0.41
25:AZ:163:PHE:C	25:AZ:165:GLY:H	2.23	0.41
9:AI:48:GLU:H	9:AI:49:PRO:HD2	1.84	0.41
36:BA:605:C:H1'	36:BA:657:U:O2'	2.19	0.41
13:CM:120:LYS:HZ1	13:CM:120:LYS:HA	1.85	0.41
35:D9:35:ARG:O	35:D9:36:GLN:O	2.39	0.41
35:B9:29:ASN:O	35:B9:31:LYS:N	2.52	0.41
34:B8:49:VAL:HG11	34:B8:52:LYS:HB3	2.01	0.41
40:BE:12:THR:O	40:BE:23:VAL:HG22	2.20	0.41
25:AZ:24:LYS:HG3	60:AZ:501:GDP:O3B	2.20	0.41
19:AS:70:LYS:O	19:AS:71:LEU:C	2.57	0.41
52:BT:26:ASP:OD1	52:BT:26:ASP:O	2.38	0.41
34:D8:14:VAL:CG2	34:D8:22:VAL:CG1	2.98	0.41
1:AA:740:U:O2'	1:AA:741:G:H5'	2.20	0.41
36:DA:2802:G:C3'	36:DA:2803:C:H5"	2.50	0.41
36:BA:2801(A):A:C5'	36:BA:2802:G:C8	3.00	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:14:ARG:CG	26:B0:14:ARG:NH1	2.79	0.41
46:BN:48:MET:N	46:BN:48:MET:HE3	2.35	0.41
55:DW:12:ILE:HD13	55:DW:17:VAL:HG22	2.02	0.41
12:AL:46:LYS:CG	12:AL:47:LYS:H	2.33	0.41
36:DA:635:C:O2'	36:DA:639:U:OP1	2.38	0.41
25:CZ:15:GLY:HA2	25:CZ:79:HIS:CD2	2.55	0.41
36:BA:140:G:C1'	36:BA:141:A:H2	2.32	0.41
36:DA:861:A:C2'	36:DA:862:G:H5'	2.50	0.41
1:AA:1442:G:H2'	1:AA:1442(A):G:H5'	2.02	0.41
1:AA:1160:G:C6	1:AA:1181:G:O6	2.73	0.41
36:DA:80:G:H2'	36:DA:81:G:H8	1.85	0.41
36:DA:64:A:H2'	36:DA:65:C:O4'	2.20	0.41
36:DA:2721:A:H2'	36:DA:2722:G:O4'	2.20	0.41
18:CR:53:ARG:NH1	18:CR:60:ALA:CA	2.83	0.41
37:BB:35:U:H2'	37:BB:36:C:H6	1.86	0.41
25:CZ:368:VAL:CG1	25:CZ:369:THR:N	2.81	0.41
37:DB:66:A:H61	37:DB:108:U:H2'	1.86	0.41
28:D2:15:LYS:O	28:D2:16:LEU:O	2.38	0.41
36:DA:2264:C:O2'	36:DA:2265:U:H5'	2.20	0.41
10:CJ:94:VAL:HG12	10:CJ:95:GLU:H	1.84	0.41
2:CB:211:ILE:O	2:CB:212:GLN:C	2.56	0.41
48:BP:71:VAL:HG12	48:BP:72:PRO:HD3	2.02	0.41
36:BA:1837:C:H2'	36:BA:1838:C:H5"	2.02	0.41
2:AB:59:GLU:HB2	2:AB:221:LEU:HD11	2.02	0.41
36:BA:993:G:C6	36:BA:1162:G:C6	3.08	0.41
36:DA:1750:G:H2'	36:DA:1751:C:H6	1.86	0.41
47:BO:1:MET:H1	47:BO:67:LYS:HB3	1.85	0.41
36:BA:464:U:H2'	36:BA:465:G:O4'	2.20	0.41
2:CB:61:LEU:CD2	2:CB:68:ILE:HG13	2.50	0.41
36:BA:455:C:N3	36:BA:473:G:H5'	2.35	0.41
23:CX:26:A:H3'	23:CX:27:A:O4'	2.19	0.41
36:BA:740:U:H2'	36:BA:741:G:H8	1.85	0.41
36:BA:36:G:H2'	36:BA:37:C:H6	1.85	0.41
2:AB:57:PHE:CE2	2:AB:185:ILE:HD11	2.55	0.41
36:DA:922:U:H2'	36:DA:923:C:C6	2.56	0.41
1:AA:500:G:H5"	12:AL:124:LYS:NZ	2.35	0.41
1:AA:514:C:O2'	1:AA:515:G:H5'	2.21	0.41
36:DA:2149:G:O2'	36:DA:2150:U:H5'	2.20	0.41
1:CA:514:C:O2'	1:CA:515:G:H5'	2.20	0.41
1:AA:377:G:H2'	1:AA:378:G:C8	2.55	0.41
29:D3:3:ARG:HG2	29:D3:38:GLU:OE2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1847:A:H3'	36:DA:1848:A:C5'	2.50	0.41
36:BA:1847:A:H2'	36:BA:1847:A:N3	2.35	0.41
36:DA:1184:G:O2'	36:DA:1185:C:H5'	2.20	0.41
36:BA:2599:G:O2'	36:BA:2600:A:H5'	2.20	0.41
36:DA:43:A:O2'	36:DA:44:G:H5'	2.19	0.41
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.55	0.41
40:BE:37:ARG:HA	40:BE:42:ASP:OD2	2.20	0.41
36:BA:2612:C:C5	36:BA:2613:U:H5	2.37	0.41
36:BA:1149:G:H2'	36:BA:1150:C:C6	2.55	0.41
39:DD:25:THR:HG22	39:DD:26:LYS:HE3	2.02	0.41
30:B4:31:ILE:CG2	42:BG:142:PRO:HB2	2.43	0.41
56:BX:12:VAL:HG21	56:BX:21:PHE:HZ	1.84	0.41
56:BX:21:PHE:O	56:BX:22:ALA:C	2.58	0.41
28:D2:25:VAL:CA	28:D2:29:LYS:HG2	2.50	0.41
28:D2:27:GLU:C	28:D2:29:LYS:H	2.24	0.41
37:DB:44:G:C2	37:DB:48:A:C2	3.08	0.41
42:BG:128:ARG:HA	42:BG:128:ARG:HD3	1.74	0.41
41:BF:184:TYR:CE1	48:BP:7:ARG:NH2	2.89	0.41
36:DA:251:A:H5"	48:DP:51:PHE:CZ	2.56	0.41
42:BG:32:PRO:HB2	42:BG:172:LEU:CG	2.34	0.41
58:BZ:166:SER:HB2	58:BZ:167:PRO:CA	2.51	0.41
40:BE:24:THR:HG23	40:BE:24:THR:O	2.20	0.41
58:DZ:177:PRO:O	58:DZ:178:GLU:HB3	2.19	0.41
4:CD:12:CYS:SG	4:CD:19:LEU:O	2.78	0.41
54:DV:47:VAL:O	54:DV:49:THR:N	2.53	0.41
40:BE:111:ARG:CB	50:BR:2:ARG:NH1	2.73	0.41
36:DA:2724:C:OP1	50:DR:2:ARG:NH2	2.54	0.41
36:BA:2126:A:H1'	36:BA:2127:G:O4'	2.20	0.41
1:CA:189(C):C:C2	1:CA:189(I):G:N2	2.89	0.41
38:DC:82:LYS:HB3	38:DC:149:ILE:HG21	2.02	0.41
2:AB:142:LEU:HD21	2:AB:146:GLN:OE1	2.19	0.41
10:AJ:81:THR:O	10:AJ:83:GLU:N	2.53	0.41
1:CA:1116:C:H2'	1:CA:1117:G:H5'	2.02	0.41
10:AJ:61:GLU:OE2	14:AN:49:HIS:CE1	2.72	0.41
4:AD:171:GLY:HA2	4:AD:172:PRO:HD3	1.87	0.41
25:AZ:176:LEU:O	25:AZ:180:GLU:HG3	2.19	0.41
25:AZ:174:SER:OG	60:AZ:501:GDP:O6	2.37	0.41
46:DN:71:ILE:HG21	46:DN:84:LYS:HB3	2.01	0.41
24:AY:40:C:O2'	24:AY:41:C:H5"	2.19	0.41
49:DQ:110:THR:OG1	49:DQ:113:GLN:HG3	2.21	0.41
49:DQ:113:GLN:O	49:DQ:114:ALA:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:106:C:H1'	57:DY:2:ARG:HH21	1.82	0.41
36:DA:562:U:O4	36:DA:2036:C:H1'	2.20	0.41
22:AW:2:C:N4	22:AW:3:C:N4	2.69	0.41
17:CQ:26:GLN:HB3	17:CQ:37:LYS:CA	2.46	0.41
40:DE:116:VAL:HG21	40:DE:122:PHE:CE2	2.55	0.41
36:BA:1352:U:O2	36:BA:1570:A:H2	2.04	0.41
36:BA:195:A:C8	36:BA:197:A:OP1	2.73	0.41
50:DR:21:TYR:HB3	50:DR:47:PHE:CE2	2.54	0.41
52:BT:10:VAL:O	52:BT:12:SER:N	2.46	0.41
48:BP:121:LYS:HA	48:BP:122:PRO:HD3	1.93	0.41
29:D3:31:LEU:C	29:D3:33:GLN:N	2.73	0.41
57:BY:46:LYS:HB3	57:BY:62:GLU:CG	2.50	0.41
46:DN:42:TRP:CD1	53:DU:63:VAL:HG11	2.55	0.41
11:CK:110:ASP:HB2	18:CR:88:LYS:HG3	2.01	0.41
10:AJ:35:SER:OG	10:AJ:73:ASP:CB	2.68	0.41
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.55	0.41
36:BA:1314:C:C2	36:BA:1339:G:N2	2.89	0.41
38:BC:73:ARG:HH11	38:BC:73:ARG:HG3	1.84	0.41
11:CK:63:LEU:N	11:CK:63:LEU:HD12	2.36	0.41
36:BA:1076:C:C2'	36:BA:1077:A:H5'	2.50	0.41
36:BA:201:C:H2'	36:BA:202:U:H5'	2.01	0.41
14:AN:59:ALA:HB1	14:AN:61:TRP:CZ3	2.56	0.41
36:BA:729:G:OP2	39:BD:13:ARG:NH1	2.53	0.41
25:CZ:222:LEU:HA	25:CZ:304:LEU:O	2.21	0.41
36:BA:1773:A:H2'	36:BA:1774:C:C5'	2.49	0.41
36:DA:523:C:H2'	36:DA:524:U:C5'	2.50	0.41
48:DP:71:VAL:N	48:DP:72:PRO:CD	2.83	0.41
4:CD:34:GLU:O	4:CD:35:ARG:CB	2.67	0.41
20:AT:62:LEU:HA	20:AT:65:LYS:HG3	2.02	0.41
36:DA:272(J):C:H2'	36:DA:274:G:C5'	2.50	0.41
36:DA:1316:U:H2'	36:DA:1317:A:H8	1.85	0.41
36:BA:436:C:H2'	36:BA:437:G:C8	2.55	0.41
33:B7:12:ARG:HG3	33:B7:12:ARG:O	2.20	0.41
44:BJ:72:UNK:C	44:BJ:74:UNK:N	2.82	0.41
29:D3:49:LYS:HD3	36:DA:851:U:H5'	2.02	0.41
54:BV:46:VAL:O	54:BV:48:GLY:N	2.53	0.41
36:DA:2626:C:O2'	36:DA:2627:G:H5'	2.21	0.41
36:BA:1171:G:H1	36:BA:1178:C:H42	1.68	0.41
36:BA:908:C:O2'	36:BA:909:A:H5'	2.20	0.41
44:DJ:106:UNK:O	44:DJ:107:UNK:C	2.69	0.41
8:CH:1:MET:HE2	8:CH:2:LEU:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:645:C:H2'	1:CA:646:U:H6	1.85	0.41
4:CD:190:ASP:CG	4:CD:191:ARG:N	2.73	0.41
39:BD:41:GLY:O	39:BD:42:GLY:C	2.57	0.41
36:BA:687:C:H2'	36:BA:688:U:O4'	2.20	0.41
36:BA:431:U:O5'	36:BA:431:U:H6	2.03	0.41
2:AB:175:ARG:NH1	2:AB:175:ARG:HB3	2.36	0.41
26:B0:24:LYS:HA	26:B0:24:LYS:HD3	1.81	0.41
10:AJ:86:MET:O	10:AJ:86:MET:HG2	2.20	0.41
26:D0:26:TYR:N	26:D0:26:TYR:CD1	2.87	0.41
25:AZ:355:LEU:CD2	25:AZ:370:PHE:HD2	2.34	0.41
24:CY:25:C:H2'	24:CY:26:A:O5'	2.17	0.41
28:D2:23:LYS:HE3	28:D2:26:ARG:HH11	1.84	0.41
36:DA:2187:G:C3'	36:DA:2188:C:H5'	2.50	0.41
42:DG:172:LEU:C	42:DG:172:LEU:HD23	2.40	0.41
42:DG:73:ALA:H	42:DG:87:PRO:CD	2.33	0.41
36:BA:2186:G:H2'	36:BA:2187:G:C4	2.54	0.41
36:BA:26:G:C6	36:BA:27:G:N1	2.88	0.41
36:BA:271(K):U:H3'	36:BA:271(L):U:C5'	2.50	0.41
19:AS:11:VAL:HG11	19:AS:16:LEU:HD21	2.03	0.41
56:DX:63:LYS:CD	56:DX:70:LEU:HD21	2.34	0.41
31:B5:44:THR:HG23	50:BR:100:LEU:C	2.40	0.41
31:B5:57:VAL:HG12	31:B5:58:LEU:HD12	2.03	0.41
5:AE:12:LEU:CD2	5:AE:13:ILE:N	2.80	0.41
36:BA:1528:A:O2'	36:BA:1528(A):A:H5'	2.20	0.41
36:BA:1529:G:C2	36:BA:1541:G:N2	2.89	0.41
33:B7:39:ARG:HD2	36:BA:458:G:O2'	2.20	0.41
36:DA:1541:G:O2'	36:DA:1542:A:H5"	2.20	0.41
36:DA:296:C:C2'	36:DA:297:C:H5'	2.50	0.41
36:DA:1097:U:O2'	36:DA:1098:A:H5'	2.20	0.41
37:BB:106:G:O2'	37:BB:107:G:H5'	2.21	0.41
36:DA:761:A:C3'	36:DA:761:A:C8	3.04	0.41
34:D8:15:LYS:HD3	48:DP:65:ARG:NH2	2.15	0.41
25:AZ:385:ARG:HD3	61:AZ:502:KIR:H301	2.02	0.41
36:DA:2712:U:O2	36:DA:2712:U:H5'	2.21	0.41
33:D7:14:LYS:HE2	33:D7:14:LYS:HB2	1.87	0.41
36:BA:997:G:O2'	36:BA:998:C:H5'	2.21	0.41
13:CM:89:GLY:C	13:CM:91:ARG:N	2.72	0.41
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.55	0.41
58:DZ:104:PHE:CZ	58:DZ:119:GLU:HB2	2.55	0.41
38:DC:79:LYS:HD3	38:DC:119:VAL:CG1	2.51	0.41
4:CD:98:GLU:CG	4:CD:189:PRO:HG3	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:50:LEU:HG	9:CI:81:ILE:HG21	2.02	0.41
38:BC:128:GLY:HA2	38:BC:137:LEU:CD2	2.50	0.41
36:BA:806:C:OP2	48:BP:39:LYS:HD2	2.20	0.41
36:BA:691:C:O4'	39:BD:43:ARG:NH1	2.53	0.41
36:DA:1131:G:O2'	36:DA:1132:A:H8	2.03	0.41
54:DV:64:HIS:CE1	54:DV:92:THR:HG22	2.54	0.41
34:B8:48:PHE:HB3	34:B8:49:VAL:H	1.63	0.41
19:CS:29:ARG:O	19:CS:30:LEU:C	2.58	0.41
3:AC:73:PRO:O	3:AC:74:GLY:C	2.56	0.41
1:CA:1435:G:H2'	1:CA:1436:U:H6	1.82	0.41
54:DV:28:GLU:C	54:DV:30:GLY:H	2.23	0.41
3:CC:22:TRP:CZ2	14:CN:54:PRO:HG2	2.55	0.41
36:DA:1803:A:O3'	39:DD:259:THR:HG22	2.20	0.41
14:AN:15:LYS:HB3	14:AN:16:PHE:CD2	2.55	0.41
31:D5:11:THR:OG1	36:DA:1264:G:H5'	2.21	0.41
1:CA:676:A:H2'	1:CA:677:U:C6	2.56	0.41
36:DA:2069:G:O2'	36:DA:2070:G:H5'	2.20	0.41
26:B0:7:LEU:CB	49:BQ:85:LYS:HD2	2.50	0.41
11:CK:21:ILE:HB	11:CK:84:VAL:HG12	2.01	0.41
13:AM:86:CYS:O	13:AM:87:TYR:C	2.59	0.41
11:CK:33:THR:HG22	11:CK:39:PRO:CA	2.49	0.41
36:DA:64:A:N9	56:DX:66:LEU:HD12	2.35	0.41
41:DF:185:ASP:CA	41:DF:188:ARG:HG2	2.46	0.41
1:AA:346:G:O2'	1:AA:347:G:O5'	2.39	0.41
1:CA:1239:A:O2'	1:CA:1240:U:OP2	2.33	0.41
36:DA:729:G:C6	39:DD:208:LYS:HB2	2.54	0.41
36:BA:118:A:H5'	36:BA:119:A:H8	1.86	0.41
25:AZ:185:ASN:HD22	25:AZ:185:ASN:N	2.14	0.41
1:AA:993:G:H4'	1:AA:994:A:OP2	2.20	0.41
1:AA:877:C:O2'	1:AA:878:G:H5'	2.20	0.41
35:B9:19:ARG:NH1	36:BA:2755:C:C2	2.89	0.41
8:CH:83:ILE:O	8:CH:83:ILE:HG23	2.20	0.41
46:BN:15:LEU:HD12	46:BN:136:GLU:HG2	2.02	0.41
36:DA:948:G:O2'	36:DA:949:C:H5'	2.21	0.41
24:CY:52:A:O2'	24:CY:53:G:H5'	2.20	0.41
36:DA:2116:G:C5	36:DA:2117:A:C2	3.09	0.41
11:AK:124:LYS:HD2	11:AK:125:PHE:CE2	2.55	0.41
17:CQ:56:VAL:HG23	17:CQ:81:ARG:HG3	2.02	0.41
53:DU:35:ALA:O	53:DU:36:ARG:C	2.57	0.41
5:AE:93:PRO:HD2	8:AH:105:ARG:HH21	1.85	0.41
55:DW:79:GLY:HA3	55:DW:100:THR:HG23	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:131:C:H2'	1:CA:132:C:C6	2.55	0.41
39:BD:3:VAL:HG23	39:BD:200:ASP:OD2	2.19	0.41
26:D0:55:ARG:HE	26:D0:55:ARG:HB3	1.67	0.41
36:BA:1847:A:H3'	36:BA:1848:A:C5'	2.49	0.41
36:BA:355:G:H2'	36:BA:356:G:O4'	2.20	0.41
36:DA:1482:G:C6	36:DA:1507:A:C6	3.09	0.41
1:AA:743:U:H2'	1:AA:744:C:C6	2.55	0.41
36:DA:514:A:O2'	36:DA:515:A:H5'	2.21	0.41
37:DB:94:C:O2'	37:DB:95:C:H5'	2.21	0.41
1:AA:1010:G:H2'	1:AA:1011:G:H8	1.85	0.41
42:DG:43:LEU:N	42:DG:43:LEU:HD22	2.35	0.41
36:BA:2716:U:O2'	36:BA:2717:G:H5'	2.20	0.41
36:DA:529:A:H4'	36:DA:530:G:O5'	2.20	0.41
39:DD:62:TYR:HA	39:DD:87:ASN:HD21	1.84	0.41
36:DA:1437:C:H2'	36:DA:1437:C:O2	2.20	0.41
36:BA:1011:G:OP1	53:BU:75:ASN:HB2	2.20	0.41
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.86	0.41
40:BE:53:PRO:O	40:BE:54:GLN:C	2.59	0.41
45:DK:99:UNK:O	45:DK:100:UNK:O	2.37	0.41
1:AA:903:G:H2'	1:AA:904:C:C6	2.55	0.41
30:B4:27:THR:HG21	42:BG:62:LEU:HB2	2.03	0.41
30:B4:12:ALA:HB1	30:B4:29:PRO:HA	2.00	0.41
36:BA:1902:C:H1'	39:BD:244:ARG:HD2	2.03	0.41
32:D6:33:LYS:O	32:D6:34:LEU:HB2	2.20	0.41
36:BA:593:G:H2'	36:BA:594:U:C6	2.55	0.41
32:B6:10:LEU:HG	34:B8:34:TRP:CD1	2.56	0.41
36:DA:2186:G:H2'	36:DA:2187:G:C4	2.54	0.41
36:DA:2292:C:O2'	36:DA:2293:C:H5'	2.20	0.41
42:DG:96:ARG:C	42:DG:99:MET:SD	2.99	0.41
25:CZ:13:ASN:ND2	25:CZ:241:ARG:HD2	2.36	0.41
42:DG:77:ILE:CD1	42:DG:77:ILE:N	2.73	0.41
22:AV:41:C:C3'	22:AV:42:C:H5"	2.51	0.41
14:CN:32:SER:HB3	14:CN:41:ARG:HG2	2.01	0.41
46:DN:63:THR:O	46:DN:64:GLY:O	2.38	0.41
36:BA:1948:G:O2'	36:BA:1949:G:H5'	2.21	0.41
55:BW:5:ALA:O	55:BW:6:ILE:HB	2.21	0.41
31:B5:56:LYS:O	31:B5:57:VAL:O	2.38	0.41
36:BA:2815:C:H2'	36:BA:2816:C:O4'	2.20	0.41
36:BA:1446:C:O2'	36:BA:1447:G:H5'	2.20	0.41
36:DA:1528:A:O2'	36:DA:1528(A):A:H5'	2.21	0.41
41:BF:6:VAL:CG1	41:BF:7:TYR:H	2.15	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2245:U:H5'	36:DA:2246:G:C5'	2.33	0.41
36:BA:1188:U:H2'	36:BA:1189:A:H5'	2.02	0.41
36:DA:2636:U:H1'	36:DA:2783:G:N2	2.34	0.41
40:DE:67:PHE:O	40:DE:70:ALA:HB2	2.20	0.41
40:BE:167:VAL:CG1	40:BE:189:PRO:HD3	2.42	0.41
25:AZ:94:THR:O	25:AZ:98:GLN:NE2	2.54	0.41
36:DA:1602:U:C3'	36:DA:1603:A:C5'	2.90	0.41
12:AL:20:LYS:CD	12:AL:20:LYS:H	2.14	0.41
50:DR:114:VAL:O	50:DR:114:VAL:HG23	2.21	0.41
38:DC:128:GLY:HA2	38:DC:137:LEU:CD2	2.50	0.41
36:DA:1053:C:O2'	36:DA:1054:A:H5'	2.20	0.41
43:DH:127:GLU:HG3	43:DH:130:ARG:HE	1.86	0.41
53:DU:9:VAL:O	53:DU:13:LYS:HG2	2.20	0.41
34:B8:48:PHE:O	34:B8:49:VAL:CG2	2.68	0.41
1:CA:371:G:N2	1:CA:374:A:N6	2.68	0.41
36:DA:885:C:C2	36:DA:886:C:C5	3.09	0.41
11:AK:27:ASN:ND2	11:AK:28:THR:H	2.04	0.41
1:AA:1014:A:H2'	1:AA:1015:A:C8	2.55	0.41
27:D1:81:LYS:HZ1	36:DA:156:U:C4'	2.33	0.41
4:AD:163:GLU:C	4:AD:165:MET:N	2.74	0.41
6:AF:6:VAL:O	6:AF:62:TRP:HA	2.21	0.41
32:D6:25:LYS:HE2	34:D8:34:TRP:CZ2	2.51	0.41
32:D6:25:LYS:CE	34:D8:34:TRP:HZ2	2.34	0.41
7:AG:22:LEU:HD22	7:AG:62:PHE:CE2	2.56	0.41
36:DA:1652:A:C2	36:DA:2006:C:N3	2.89	0.41
48:BP:121:LYS:O	48:BP:123:LEU:N	2.52	0.41
29:D3:31:LEU:O	29:D3:33:GLN:N	2.54	0.41
3:AC:79:ARG:O	3:AC:79:ARG:HG3	2.21	0.41
34:B8:56:GLU:O	34:B8:57:ARG:C	2.58	0.41
39:BD:127:VAL:HA	39:BD:193:VAL:HG13	2.03	0.41
8:AH:18:ARG:CB	8:AH:18:ARG:NH1	2.84	0.41
11:AK:57:THR:HG22	11:AK:60:ALA:HB2	2.02	0.41
36:DA:2121:G:N2	36:DA:2176:A:H2	2.17	0.41
36:BA:203:C:C3'	36:BA:204:A:H5"	2.49	0.41
16:AP:60:LEU:HD21	16:AP:66:PRO:HG2	2.00	0.41
2:CB:97:TRP:CH2	2:CB:176:GLU:OE2	2.74	0.41
1:AA:781:A:C3'	1:AA:782:A:H5'	2.50	0.41
36:DA:1375:C:H2'	36:DA:1376:C:C6	2.52	0.41
34:D8:42:ARG:NH2	36:DA:2382:G:H21	2.19	0.41
40:DE:152:LYS:HG2	46:DN:78:TYR:CZ	2.55	0.41
36:DA:21:A:H2'	36:DA:22:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:257:LEU:C	39:DD:257:LEU:CD2	2.88	0.41
1:CA:337:C:H2'	1:CA:338:A:H8	1.81	0.41
33:B7:43:THR:CG2	33:B7:44:PRO:N	2.83	0.41
2:AB:238:LEU:CG	2:AB:239:VAL:N	2.83	0.41
8:AH:137:VAL:HG12	8:AH:138:TRP:N	2.36	0.41
36:DA:374:A:H2'	36:DA:375:C:O4'	2.21	0.41
25:CZ:129:PRO:O	25:CZ:130:TYR:O	2.39	0.41
25:AZ:221:PHE:CD1	25:AZ:247:VAL:HG13	2.56	0.41
25:AZ:315:LYS:HB3	25:AZ:315:LYS:HE2	1.83	0.41
25:AZ:315:LYS:HG2	25:AZ:372:VAL:O	2.21	0.41
1:CA:454:C:H5"	1:CA:455:C:H5	1.85	0.41
1:AA:123:C:OP1	1:AA:312:C:H5'	2.21	0.41
23:AX:26:A:H3'	23:AX:27:A:O4'	2.21	0.41
38:BC:62:VAL:O	38:BC:160:ARG:HA	2.20	0.41
22:CV:75:C:H2'	22:CV:76:A:C1'	2.50	0.41
1:CA:38:G:C2	1:CA:397:A:C2	3.08	0.41
6:AF:91:VAL:CG1	6:AF:92:LYS:N	2.83	0.41
1:CA:644:G:N2	1:CA:645:C:H1'	2.35	0.41
1:AA:983:A:H5'	1:AA:984:C:OP2	2.20	0.41
1:CA:903:G:H2'	1:CA:904:C:C6	2.56	0.41
36:BA:1744:C:C2'	36:BA:1745:C:H5'	2.49	0.41
48:BP:133:SER:O	48:BP:136:GLU:HG2	2.19	0.41
31:B5:19:ARG:HG3	36:BA:2046:G:H5'	2.02	0.41
29:B3:4:LEU:HA	29:B3:4:LEU:HD23	1.90	0.41
54:BV:71:LEU:HD23	54:BV:71:LEU:HA	1.89	0.41
54:BV:89:GLN:OE1	54:BV:89:GLN:HA	2.20	0.41
16:AP:45:THR:O	16:AP:47:ASP:N	2.43	0.41
36:BA:759:G:O4'	36:BA:1981:A:C2	2.73	0.41
39:DD:35:LYS:CD	39:DD:36:PRO:HD3	2.50	0.41
56:BX:37:THR:C	56:BX:39:ILE:H	2.23	0.41
36:BA:1899:G:H22	36:BA:1902:C:N4	2.15	0.41
56:DX:27:THR:HB	56:DX:80:ILE:HG22	2.02	0.41
57:DY:75:ILE:CG1	57:DY:76:CYS:H	2.27	0.41
1:AA:1003:G:H21	1:AA:1039:C:H42	1.63	0.41
41:BF:157:VAL:HG22	41:BF:194:MET:HG2	2.00	0.41
57:BY:86:ARG:NH2	57:BY:95:LYS:HZ3	2.13	0.41
37:DB:73:A:C2'	37:DB:74:U:H5'	2.49	0.41
36:DA:2306:C:H5	36:DA:2307:G:HO2'	1.63	0.41
2:CB:189:ASP:OD1	2:CB:190:THR:N	2.43	0.41
19:CS:11:VAL:O	19:CS:12:ASP:O	2.39	0.41
31:B5:36:CYS:C	31:B5:38:ALA:N	2.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:32:LEU:CD2	41:BF:105:VAL:HG13	2.48	0.41
41:DF:132:VAL:CG2	41:DF:133:ASN:H	2.11	0.41
41:BF:126:VAL:O	41:BF:196:LEU:HG	2.21	0.41
41:BF:7:TYR:CE1	41:BF:196:LEU:HD11	2.56	0.41
58:BZ:127:LYS:HE2	58:BZ:162:GLU:OE2	2.20	0.41
51:DS:103:GLU:HG2	51:DS:104:GLY:N	2.36	0.41
25:AZ:325:LYS:O	25:AZ:326:GLU:C	2.59	0.41
5:AE:11:ILE:HD11	5:AE:33:VAL:CG2	2.48	0.41
58:BZ:24:LEU:HD22	58:BZ:39:VAL:HG22	2.03	0.41
51:BS:58:LEU:HG	51:BS:59:LYS:N	2.35	0.41
40:DE:3:GLY:O	40:DE:4:ILE:HB	2.20	0.41
55:BW:71:VAL:HG23	55:BW:71:VAL:O	2.20	0.41
48:BP:96:THR:O	48:BP:100:LEU:HB2	2.21	0.41
48:DP:125:VAL:O	48:DP:145:PRO:CD	2.67	0.41
48:DP:97:PRO:O	48:DP:98:GLU:CB	2.68	0.41
1:AA:407:G:H2'	1:AA:408:A:H8	1.84	0.41
38:BC:82:LYS:HE2	38:BC:82:LYS:CA	2.45	0.41
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HD2	1.85	0.41
17:CQ:5:VAL:HG22	17:CQ:60:ILE:CD1	2.47	0.41
46:BN:21:LYS:HD2	46:BN:26:LEU:HB2	2.03	0.41
46:BN:22:THR:CB	46:BN:61:ARG:HB2	2.51	0.41
36:DA:2524:G:H2'	36:DA:2525:G:O4'	2.21	0.41
42:BG:54:GLU:HA	42:BG:57:ALA:HB3	2.02	0.41
1:CA:1326:C:P	21:CU:12:LYS:HZ2	2.43	0.41
36:DA:654(U):A:O2'	36:DA:654(V):A:H5'	2.21	0.41
51:DS:12:PHE:O	51:DS:13:ARG:HG2	2.20	0.41
48:BP:107:LYS:HG3	48:BP:107:LYS:O	2.20	0.41
43:DH:16:SER:HB2	43:DH:27:LYS:CB	2.46	0.41
36:BA:2852:G:H1	36:BA:2865:U:H3	1.69	0.41
40:DE:101:ARG:HB2	40:DE:201:THR:CG2	2.49	0.41
25:CZ:219:LYS:CB	25:CZ:244:ARG:HD2	2.43	0.41
27:B1:37:ILE:CD1	27:B1:37:ILE:H	2.28	0.41
25:AZ:28:THR:HG23	25:AZ:79:HIS:ND1	2.35	0.41
41:DF:68:LYS:HB3	41:DF:69:HIS:CD2	2.56	0.41
52:DT:93:ARG:HA	52:DT:93:ARG:HD2	1.80	0.41
1:AA:46:G:O2'	1:AA:365:U:H1'	2.20	0.41
7:AG:119:ARG:O	7:AG:120:ILE:C	2.58	0.41
36:BA:832:G:N3	48:BP:53:GLY:HA2	2.35	0.41
25:AZ:323:LEU:CD1	25:AZ:396:GLY:HA2	2.50	0.41
52:BT:7:ILE:O	52:BT:10:VAL:HB	2.21	0.41
1:CA:658:G:H2'	1:CA:659:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:6:VAL:O	6:CF:62:TRP:HA	2.21	0.41
10:AJ:35:SER:O	10:AJ:36:GLY:O	2.38	0.41
1:AA:1312:G:O2'	1:AA:1313:U:H5'	2.21	0.41
47:DO:107:ARG:O	47:DO:112:MET:HE3	2.21	0.41
11:CK:38:ASN:N	11:CK:38:ASN:ND2	2.66	0.41
1:AA:1157:A:H1'	1:AA:1181:G:C2	2.56	0.41
55:BW:59:VAL:O	55:BW:60:ASN:HB2	2.21	0.41
36:DA:1473:G:C2	36:DA:1474:C:H1'	2.56	0.41
1:AA:347:G:O2'	1:AA:348:G:C5'	2.69	0.41
39:BD:107:ALA:HA	39:BD:108:PRO:HD2	1.96	0.41
36:DA:2121:G:C1'	38:DC:167:LYS:HE2	2.50	0.41
36:DA:1363:C:H2'	36:DA:1364:G:H8	1.85	0.41
25:CZ:318:ALA:O	25:CZ:369:THR:HA	2.20	0.41
10:CJ:62:HIS:HB2	14:CN:59:ALA:HB3	2.02	0.41
43:BH:87:LEU:HD13	43:BH:162:ILE:HD11	2.02	0.41
36:DA:1499:C:C2'	36:DA:1500:G:H5'	2.50	0.41
48:BP:71:VAL:N	48:BP:72:PRO:CD	2.83	0.41
36:DA:411:G:OP2	36:DA:2406:U:O2'	2.34	0.41
1:AA:1006:C:H2'	1:AA:1007:C:H6	1.81	0.41
37:BB:49:C:H6	37:BB:49:C:O5'	2.04	0.41
37:DB:112:U:H2'	37:DB:113:G:H8	1.85	0.41
1:CA:339:C:OP2	47:DO:97:ARG:NH1	2.54	0.41
4:CD:88:VAL:HG12	4:CD:90:GLY:H	1.85	0.41
58:DZ:5:LEU:O	58:DZ:60:GLU:HG3	2.20	0.41
43:BH:163:TYR:HD1	43:BH:163:TYR:N	2.18	0.41
2:AB:40:HIS:C	2:AB:41:ILE:HD12	2.41	0.41
51:DS:39:ILE:CD1	51:DS:73:LEU:HD21	2.51	0.41
2:CB:238:LEU:CG	2:CB:239:VAL:N	2.83	0.41
36:DA:1103:A:H3'	36:DA:1104:C:C6	2.56	0.41
38:BC:162:GLU:HG2	38:BC:163:PHE:N	2.33	0.41
36:DA:2696:U:H2'	36:DA:2697:G:H8	1.85	0.41
26:D0:47:PRO:HG3	26:D0:59:LEU:CD2	2.51	0.41
1:CA:303:A:H2'	1:CA:304:U:O4'	2.21	0.41
44:BJ:72:UNK:O	44:BJ:73:UNK:C	2.69	0.41
13:CM:68:GLY:H	13:CM:71:ARG:CG	2.32	0.41
56:DX:25:LYS:HA	56:DX:81:VAL:O	2.20	0.41
1:AA:50:A:H4'	1:AA:51:A:H5'	2.03	0.41
20:AT:38:LYS:O	20:AT:42:GLN:HB2	2.21	0.41
1:CA:22:G:H4'	1:CA:885:G:C8	2.56	0.41
36:BA:43:A:O2'	36:BA:44:G:H5'	2.21	0.41
1:CA:743:U:H2'	1:CA:744:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:48:LYS:HD3	15:CO:48:LYS:HA	1.76	0.41
1:CA:1406:U:H2'	1:CA:1407:C:H5'	2.02	0.41
45:BK:99:UNK:O	45:BK:100:UNK:O	2.39	0.41
1:CA:78:G:N2	1:CA:91:C:N4	2.69	0.41
15:AO:70:LEU:C	15:AO:72:ARG:H	2.22	0.41
39:DD:30:GLU:C	39:DD:35:LYS:HZ1	2.24	0.41
36:BA:1599:C:OP2	56:BX:36:LYS:HD2	2.21	0.41
1:CA:192:U:H1'	20:CT:103:GLY:CA	2.44	0.41
24:AY:26:A:C4	24:AY:27:C:C6	3.09	0.41
1:AA:1303:C:N4	1:AA:1304:G:C6	2.89	0.41
57:DY:40:GLU:HA	57:DY:40:GLU:OE1	2.21	0.41
57:DY:76:CYS:SG	57:DY:77:PRO:CD	3.08	0.41
36:DA:2102:U:C5	36:DA:2103:C:N3	2.89	0.41
32:D6:12:GLU:HA	32:D6:23:THR:CB	2.51	0.41
28:B2:47:ASN:C	28:B2:50:ILE:HD13	2.41	0.41
34:D8:4:MET:HE1	36:DA:592:G:H21	1.86	0.41
55:DW:88:ARG:HB2	55:DW:92:ARG:HB2	2.02	0.41
20:AT:57:ARG:HD3	20:AT:102:GLY:HA2	2.02	0.41
42:BG:76:SER:HB3	42:BG:83:ARG:HB3	2.03	0.41
49:DQ:141:GLN:OXT	58:DZ:99:TYR:HD2	2.04	0.41
28:B2:67:LYS:O	28:B2:69:ARG:N	2.53	0.41
1:CA:1202:G:C2'	1:CA:1203:C:H5'	2.51	0.41
14:CN:33:VAL:HG23	14:CN:33:VAL:O	2.21	0.41
36:DA:2278:A:H2'	36:DA:2279:G:O5'	2.20	0.41
36:BA:338:G:H2'	36:BA:339:U:H6	1.85	0.41
36:BA:1541:G:O2'	36:BA:1542:A:H5"	2.21	0.41
36:DA:1543:C:C3'	36:DA:1544:A:C5'	2.90	0.41
40:BE:67:PHE:O	40:BE:70:ALA:HB2	2.21	0.41
34:D8:25:MET:CG	48:DP:64:LYS:HB2	2.51	0.41
53:DU:90:VAL:O	53:DU:91:ASP:C	2.58	0.41
54:BV:19:LYS:HG3	54:BV:20:LEU:N	2.35	0.41
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD2	2.56	0.41
36:DA:2131:G:C1'	36:DA:2133:G:H21	2.25	0.41
36:DA:2155:G:H3'	36:DA:2156:G:C8	2.55	0.41
38:DC:100:ILE:HD13	38:DC:127:LEU:HB2	2.03	0.41
1:CA:322:C:O2'	20:CT:23:ARG:HB2	2.19	0.41
10:AJ:55:LYS:H	10:AJ:55:LYS:HD3	1.86	0.41
36:BA:1052:C:O2'	36:BA:1053:C:P	2.79	0.41
20:AT:71:THR:O	20:AT:72:LEU:HD23	2.21	0.41
36:BA:674:G:H21	41:BF:74:ARG:HH12	1.68	0.41
25:CZ:135:MET:HG2	25:CZ:138:VAL:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:125:VAL:N	43:DH:126:PRO:CD	2.83	0.41
43:BH:125:VAL:N	43:BH:126:PRO:CD	2.84	0.41
2:CB:15:VAL:C	2:CB:16:HIS:CG	2.93	0.41
49:DQ:135:ASP:CB	58:DZ:49:ARG:HH11	2.34	0.41
1:CA:1378:C:OP1	7:CG:7:ALA:CB	2.69	0.41
36:DA:586:A:H5'	41:DF:89:VAL:CG2	2.42	0.41
16:CP:71:ARG:HG3	16:CP:80:PHE:CZ	2.56	0.41
2:AB:7:VAL:O	2:AB:11:LEU:CB	2.62	0.41
42:BG:45:GLU:O	42:BG:51:ARG:HG3	2.20	0.41
27:B1:30:VAL:HG23	27:B1:31:GLY:H	1.84	0.41
46:BN:115:ARG:HG3	46:BN:115:ARG:HH11	1.84	0.41
54:DV:28:GLU:O	54:DV:61:VAL:HG21	2.20	0.41
52:BT:65:LYS:HB2	52:BT:65:LYS:NZ	2.36	0.41
57:BY:43:ASN:HA	57:BY:64:GLU:C	2.41	0.41
58:DZ:130:PRO:C	58:DZ:133:ILE:HD11	2.41	0.41
54:DV:32:THR:CG2	54:DV:58:VAL:HG12	2.50	0.41
27:B1:20:ARG:HG2	27:B1:34:THR:HA	2.02	0.41
52:BT:93:ARG:HA	52:BT:93:ARG:HD2	1.82	0.41
25:AZ:15:GLY:HA2	25:AZ:79:HIS:CD2	2.55	0.41
36:BA:2779:U:H1'	36:BA:2781:A:C6	2.56	0.41
20:CT:86:ARG:NH1	20:CT:86:ARG:HG3	2.36	0.41
27:B1:82:LEU:HD11	27:B1:90:ILE:HD12	2.02	0.41
19:AS:43:GLU:O	19:AS:45:VAL:N	2.48	0.41
1:AA:1442(B):A:N7	52:BT:118:ARG:NE	2.69	0.41
5:CE:61:TYR:O	5:CE:62:ALA:C	2.57	0.41
36:DA:580:C:H2'	36:DA:581:C:C6	2.56	0.41
36:DA:271(B):C:O2'	36:DA:271(C):C:H5'	2.21	0.41
46:DN:3:THR:C	46:DN:4:TYR:CD1	2.94	0.41
6:AF:11:ASN:CB	6:AF:14:LEU:HD23	2.48	0.41
36:BA:2199:A:C2	36:BA:2200:C:H1'	2.55	0.41
36:DA:92:A:H2'	36:DA:92:A:N3	2.36	0.41
36:DA:25:U:H5'	55:DW:78:GLU:O	2.21	0.41
38:BC:29:VAL:HG11	38:BC:214:VAL:HG12	2.02	0.41
1:AA:477:A:O2'	1:AA:479:C:H5'	2.20	0.41
36:BA:848:G:C2	36:BA:933:A:H1'	2.55	0.41
36:DA:2207:G:O2'	36:DA:2208:A:H5"	2.21	0.41
22:CV:44:G:H2'	22:CV:44:G:N3	2.35	0.41
43:DH:147:ASN:N	43:DH:147:ASN:HD22	2.17	0.41
36:DA:953:A:OP2	49:DQ:16:ARG:CD	2.68	0.41
2:AB:215:LEU:O	2:AB:218:ALA:HB3	2.21	0.41
26:D0:16:SER:HB2	36:DA:2262:U:C5	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:278:A:H61	36:DA:362:U:H3	1.69	0.41
48:BP:102:ARG:NH1	48:BP:102:ARG:HB3	2.36	0.41
58:DZ:108:PRO:CA	58:DZ:141:VAL:HG12	2.51	0.41
36:BA:523:C:H2'	36:BA:524:U:C5'	2.50	0.41
36:DA:2405:G:HO2'	36:DA:2406:U:P	2.44	0.41
3:CC:134:ILE:HD11	3:CC:153:VAL:HB	2.03	0.41
2:AB:100:GLY:O	2:AB:104:ASN:N	2.50	0.41
22:AW:7:A:C5	22:AW:49:C:H5	2.38	0.41
2:CB:213:LEU:C	2:CB:213:LEU:CD2	2.89	0.41
36:BA:1790:C:H2'	36:BA:1791:A:C4	2.55	0.41
3:CC:173:VAL:HG12	3:CC:175:LEU:HD11	2.01	0.41
14:CN:26:ARG:NH1	14:CN:47:LEU:HD21	2.36	0.41
1:AA:1242:C:O5'	1:AA:1242:C:H6	2.04	0.41
1:CA:418:C:H2'	1:CA:419:C:H6	1.86	0.41
25:CZ:221:PHE:CD1	25:CZ:247:VAL:HG13	2.56	0.41
43:DH:109:PHE:CE1	43:DH:152:ARG:NH1	2.89	0.41
36:DA:1469:A:H2'	36:DA:1470:G:C8	2.56	0.41
1:CA:441:A:H3'	1:CA:442:C:H6	1.83	0.41
2:AB:106:LYS:H	2:AB:106:LYS:HG3	1.64	0.41
44:BJ:8:UNK:C	44:BJ:10:UNK:N	2.81	0.41
36:BA:1820:U:O2	39:BD:201:HIS:HB3	2.20	0.41
58:DZ:45:ASP:O	58:DZ:46:LYS:C	2.58	0.41
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.20	0.41
1:CA:746:A:O2'	1:CA:747:C:H5'	2.21	0.41
1:CA:1012:U:O2'	1:CA:1013:G:H5'	2.19	0.41
36:BA:2266:A:H4'	36:BA:2267:A:N3	2.35	0.41
45:BK:86:UNK:O	45:BK:87:UNK:CB	2.68	0.41
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.56	0.41
10:CJ:86:MET:HG2	10:CJ:86:MET:O	2.21	0.41
2:AB:55:PHE:N	2:AB:55:PHE:CD1	2.89	0.41
12:AL:54:LYS:HD2	12:AL:54:LYS:N	2.35	0.41
17:CQ:72:ARG:HB2	17:CQ:72:ARG:HE	1.65	0.41
16:CP:6:LEU:CD1	16:CP:19:ILE:HD13	2.51	0.41
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.20	0.41
36:BA:751:A:C6	36:BA:789:A:C5	3.09	0.41
39:BD:27:THR:HG21	39:BD:81:ALA:HB1	2.03	0.41
34:D8:13:ARG:HD3	48:DP:61:ARG:O	2.20	0.41
24:AY:4:G:C3'	24:AY:5:G:H5"	2.50	0.41
36:DA:301:G:H3'	36:DA:335:C:OP2	2.21	0.41
32:B6:15:GLU:O	32:B6:15:GLU:CG	2.68	0.41
32:B6:45:LYS:C	32:B6:46:HIS:HD1	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:21:LEU:HB2	28:B2:64:LEU:HD21	2.03	0.41
28:B2:18:PRO:HA	28:B2:64:LEU:CD2	2.50	0.41
52:BT:28:VAL:CG2	52:BT:47:GLY:N	2.68	0.41
52:BT:85:LYS:CB	52:BT:85:LYS:HZ2	2.27	0.41
1:CA:723:U:O2	1:CA:723:U:C2'	2.66	0.41
2:CB:47:THR:HG22	2:CB:47:THR:O	2.20	0.41
46:BN:60:ILE:CD1	46:BN:99:LEU:HD23	2.51	0.41
19:CS:11:VAL:HG11	19:CS:16:LEU:HD21	2.02	0.41
46:DN:22:THR:O	46:DN:23:LEU:O	2.39	0.41
36:BA:1887:C:H2'	36:BA:1888:G:C5'	2.33	0.41
4:AD:29:PRO:O	4:AD:30:LYS:CB	2.69	0.41
36:DA:330:A:O2'	36:DA:331:A:H2'	2.21	0.41
48:DP:47:ASP:CB	48:DP:48:PRO:HA	2.44	0.41
48:BP:47:ASP:CB	48:BP:48:PRO:HA	2.44	0.41
58:BZ:152:ALA:C	58:BZ:154:ASP:N	2.74	0.41
25:AZ:300:ARG:C	25:AZ:302:GLN:N	2.73	0.41
34:B8:19:SER:HB2	36:BA:651:G:OP1	2.20	0.41
48:BP:88:LEU:C	48:BP:90:ARG:H	2.24	0.41
40:DE:93:VAL:C	40:DE:95:ILE:N	2.74	0.41
25:AZ:19:HIS:HB2	25:AZ:116:THR:OG1	2.21	0.41
53:BU:65:ILE:HG13	53:BU:96:ALA:HB1	2.03	0.41
48:BP:125:VAL:O	48:BP:145:PRO:CD	2.68	0.41
25:CZ:325:LYS:O	25:CZ:326:GLU:C	2.59	0.41
50:DR:76:VAL:CG1	50:DR:77:ARG:N	2.84	0.41
25:CZ:163:PHE:C	25:CZ:165:GLY:H	2.23	0.41
25:CZ:166:ASP:O	25:CZ:167:GLU:CB	2.68	0.41
1:AA:923:A:C6	1:AA:924:C:C4	3.09	0.41
38:BC:77:ILE:HB	38:BC:115:ALA:CB	2.43	0.41
37:DB:16:G:N2	37:DB:69:G:H1'	2.36	0.41
12:CL:18:VAL:O	12:CL:19:ARG:CB	2.68	0.41
16:AP:22:THR:HA	16:AP:33:ILE:H	1.86	0.41
43:DH:49:VAL:C	43:DH:50:VAL:HG23	2.41	0.41
9:AI:93:ARG:C	9:AI:95:LYS:N	2.73	0.41
43:BH:51:ARG:O	43:BH:52:VAL:HB	2.21	0.41
36:DA:605:C:C4	36:DA:606:U:C5	3.09	0.41
2:CB:115:LEU:HB2	2:CB:145:LEU:HD12	2.02	0.41
25:AZ:145:GLU:O	25:AZ:148:ASP:N	2.53	0.41
36:BA:1683:C:C2	36:BA:1684:C:C5	3.09	0.41
52:DT:25:GLY:O	52:DT:26:ASP:CB	2.67	0.41
1:AA:189(F):U:O2	17:AQ:63:ARG:NH2	2.54	0.41
25:AZ:65:THR:CG2	25:AZ:80:VAL:CG1	2.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1683:C:C2	36:DA:1684:C:C5	3.08	0.41
25:AZ:197:ASP:HA	25:AZ:200:TRP:HB2	2.03	0.41
40:DE:104:VAL:HG11	40:DE:188:VAL:HG21	2.03	0.41
30:D4:33:VAL:CG1	30:D4:34:GLU:N	2.84	0.41
1:AA:1036:G:H3'	1:AA:1037:C:H6	1.86	0.41
27:B1:3:LYS:HB3	27:B1:4:VAL:H	1.41	0.41
33:B7:22:MET:CE	33:B7:28:ARG:HG2	2.43	0.41
47:DO:64:ARG:HD3	47:DO:79:PHE:CD2	2.56	0.41
39:DD:70:TRP:CD1	39:DD:70:TRP:C	2.93	0.41
19:AS:61:TYR:O	19:AS:66:MET:HE2	2.20	0.41
11:CK:54:ARG:O	11:CK:57:THR:HG22	2.20	0.41
36:BA:480:A:H2	36:BA:499:U:O2	2.04	0.41
36:BA:2395:C:C2	36:BA:2396:G:C8	3.09	0.41
34:D8:56:GLU:O	34:D8:57:ARG:C	2.59	0.41
25:AZ:187:LYS:CD	25:AZ:187:LYS:N	2.82	0.41
36:BA:366:C:H5	36:BA:403:U:HO2'	1.69	0.41
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.56	0.41
55:BW:34:ASN:HA	55:BW:34:ASN:HD22	1.54	0.41
42:DG:152:LEU:H	42:DG:152:LEU:CD2	2.29	0.41
41:DF:185:ASP:OD1	41:DF:188:ARG:HD3	2.20	0.41
38:BC:20:TYR:O	38:BC:224:ILE:HA	2.21	0.41
36:BA:708:C:N4	36:BA:723:G:H1	2.12	0.41
53:DU:109:LEU:HA	53:DU:109:LEU:HD23	1.92	0.41
1:CA:346:G:O2'	1:CA:347:G:O4'	2.38	0.41
24:CY:16:H2U:H4'	24:CY:17:H2U:OP2	2.21	0.41
13:CM:116:THR:O	13:CM:116:THR:CG2	2.67	0.41
36:BA:1076:C:N4	36:BA:1088:A:H61	2.16	0.41
27:B1:46:LEU:N	27:B1:46:LEU:HD12	2.34	0.41
36:DA:2358:G:H22	48:DP:55:ARG:NH2	2.19	0.41
38:BC:161:ILE:HD12	38:BC:161:ILE:O	2.20	0.41
2:CB:77:ALA:O	2:CB:81:VAL:HG23	2.21	0.41
24:AY:52:A:O2'	25:AZ:330:ARG:NH1	2.27	0.41
2:CB:178:ARG:HG2	8:CH:72:PRO:HA	2.03	0.41
36:BA:729:G:C8	39:BD:208:LYS:HD2	2.56	0.41
58:DZ:103:ARG:NH1	58:DZ:136:PHE:CD2	2.89	0.41
36:BA:21:A:H2'	36:BA:22:C:O4'	2.20	0.41
47:BO:98:VAL:HG11	47:BO:118:ALA:N	2.35	0.41
36:DA:565:C:H4'	36:DA:1253:A:C6	2.55	0.41
44:DJ:56:UNK:HA	44:DJ:83:UNK:CA	2.51	0.41
1:AA:198:G:O2'	1:AA:199:G:P	2.78	0.41
36:BA:1103:A:H5"	36:BA:1104:C:C5	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	2.03	0.41
41:DF:78:ILE:C	41:DF:80:ALA:H	2.24	0.41
49:BQ:118:LEU:HD12	49:BQ:131:ILE:CG2	2.50	0.41
39:DD:173:VAL:HG12	39:DD:185:VAL:O	2.20	0.41
25:CZ:125:GLN:HE22	25:CZ:394:THR:HB	1.86	0.41
2:CB:98:LEU:O	2:CB:101:MET:HG3	2.20	0.41
4:AD:36:ARG:HG2	4:AD:36:ARG:NH1	2.35	0.41
38:BC:45:ALA:HA	38:BC:211:SER:O	2.21	0.41
1:AA:1354:C:O2'	1:AA:1355:G:H5'	2.20	0.41
36:DA:1910:G:C2'	36:DA:1911:U:H5'	2.51	0.41
17:AQ:21:VAL:O	17:AQ:41:LYS:HA	2.20	0.41
27:B1:27:GLU:HB3	27:B1:28:GLY:H	1.64	0.41
3:CC:141:VAL:HG11	3:CC:202:ILE:HG12	2.03	0.41
36:DA:333:G:N3	36:DA:333:G:H2'	2.36	0.41
49:DQ:18:LYS:O	49:DQ:19:GLY:O	2.39	0.41
33:B7:4:THR:HG22	36:BA:687:C:H1'	2.03	0.41
36:BA:1450:G:O2'	36:BA:1450(A):C:H5'	2.20	0.41
36:DA:2457:U:C2'	36:DA:2458:G:H5'	2.51	0.41
36:DA:2849:U:OP2	52:DT:95:ARG:NH1	2.54	0.41
58:BZ:156:LYS:O	58:BZ:158:PRO:HD3	2.20	0.41
36:BA:318:C:H2'	36:BA:319:C:H6	1.85	0.41
52:BT:40:THR:O	52:BT:41:ARG:O	2.38	0.41
1:AA:685:G:O2'	1:AA:686:U:H5'	2.21	0.41
41:DF:150:GLY:HA2	41:DF:172:TRP:CD2	2.55	0.41
36:BA:947:G:H2'	36:BA:948:G:C8	2.56	0.41
7:CG:68:ASN:O	7:CG:138:LYS:HD2	2.20	0.41
36:DA:569:U:H5"	36:DA:821:A:C2	2.56	0.41
1:CA:1049:U:H1'	1:CA:1201:A:N7	2.35	0.41
36:DA:1568:G:OP2	39:DD:63:ARG:NH2	2.53	0.41
36:BA:2645:G:H4'	36:BA:2646:C:OP2	2.21	0.41
42:BG:144:ILE:O	42:BG:144:ILE:HG23	2.19	0.41
36:DA:773:U:O2'	39:DD:48:ARG:HD3	2.21	0.41
56:BX:80:ILE:O	56:BX:80:ILE:CG1	2.69	0.41
28:D2:10:LEU:HD13	28:D2:63:VAL:CG2	2.46	0.41
28:D2:25:VAL:CG2	28:D2:61:LEU:HD21	2.51	0.41
28:D2:2:LYS:HB2	36:DA:97:C:H5'	2.00	0.41
25:AZ:7:ARG:C	25:AZ:8:THR:CG2	2.89	0.41
34:B8:32:LEU:CG	34:B8:36:LYS:HZ1	2.33	0.41
32:B6:33:LYS:O	32:B6:34:LEU:HB2	2.21	0.41
32:B6:32:ASN:O	32:B6:33:LYS:CG	2.68	0.41
36:DA:2187:G:H2'	36:DA:2188:C:C5'	2.26	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2578:G:C5	40:DE:140:SER:HB2	2.56	0.41
55:DW:92:ARG:O	55:DW:93:ALA:CB	2.69	0.41
36:DA:2760:C:C3'	36:DA:2761:G:H5"	2.50	0.41
36:DA:2303:G:C5'	42:DG:126:ASP:HB2	2.50	0.41
42:DG:114:ILE:CD1	42:DG:115:ARG:N	2.83	0.41
42:DG:68:PRO:CB	42:DG:90:LEU:HD13	2.48	0.41
1:CA:1283:G:O2'	1:CA:1284:C:C6	2.72	0.41
25:CZ:241:ARG:CB	25:CZ:241:ARG:HH11	2.10	0.41
32:B6:15:GLU:OE2	32:B6:41:PRO:CB	2.69	0.41
42:BG:83:ARG:O	42:BG:84:LYS:C	2.59	0.41
38:BC:175:VAL:HG12	38:BC:188:ASN:CB	2.29	0.41
36:BA:335:C:H2'	36:BA:336:C:C6	2.54	0.41
41:DF:21:ALA:HB3	41:DF:23:ASP:CG	2.41	0.41
37:DB:106:G:O2'	37:DB:107:G:H5'	2.20	0.41
49:DQ:141:GLN:HG3	58:DZ:72:ARG:CZ	2.50	0.41
32:B6:11:LEU:O	32:B6:23:THR:HB	2.21	0.41
14:CN:27:CYS:SG	14:CN:40:CYS:SG	3.19	0.41
36:BA:1210:A:C8	36:BA:1210:A:H5'	2.52	0.41
36:BA:1210:A:O2'	36:BA:1211:U:OP2	2.29	0.41
36:BA:1234:U:H2'	36:BA:1235:G:O4'	2.21	0.41
19:CS:19:VAL:O	19:CS:23:ASN:N	2.54	0.41
48:DP:146:VAL:HG13	48:DP:147:LEU:N	2.36	0.41
46:DN:21:LYS:HD2	46:DN:26:LEU:HB2	2.03	0.41
46:DN:60:ILE:CD1	46:DN:99:LEU:HD23	2.51	0.41
36:BA:2297:C:O2'	36:BA:2298:A:H5'	2.21	0.41
36:BA:1068:G:N3	36:BA:1068:G:C2'	2.83	0.41
4:AD:11:LEU:HD22	4:AD:66:ARG:HD3	2.02	0.41
36:DA:338:G:H2'	36:DA:339:U:H6	1.86	0.41
41:DF:135:LYS:HB3	41:DF:138:GLU:OE1	2.20	0.41
36:DA:1068:G:N3	36:DA:1068:G:C2'	2.82	0.41
50:DR:100:LEU:CD1	50:DR:100:LEU:N	2.83	0.41
37:BB:73:A:C4	37:BB:105:A:C2	3.09	0.41
36:DA:1108:U:H6	36:DA:1109:C:C6	2.38	0.41
36:DA:1188:U:H2'	36:DA:1189:A:H5'	2.02	0.41
48:DP:85:LEU:CD2	48:DP:85:LEU:N	2.84	0.41
25:CZ:7:ARG:C	25:CZ:8:THR:CG2	2.88	0.41
36:DA:1076:C:C2'	36:DA:1077:A:H5'	2.51	0.41
31:D5:36:CYS:HB3	31:D5:49:CYS:HB3	2.03	0.41
36:BA:2579:C:O2'	36:BA:2580:U:H5'	2.21	0.41
4:AD:98:GLU:CG	4:AD:189:PRO:HG3	2.49	0.41
51:DS:58:LEU:O	51:DS:59:LYS:O	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:95:VAL:HG23	48:DP:125:VAL:CA	2.46	0.41
25:CZ:89:ILE:O	25:CZ:92:MET:HB3	2.21	0.41
9:CI:52:ALA:HB3	9:CI:95:LYS:HZ3	1.86	0.41
1:CA:189(C):C:C2'	1:CA:189(D):C:H5'	2.51	0.41
1:CA:189(L):G:H2'	1:CA:190:U:C6	2.55	0.41
50:DR:38:VAL:CB	50:DR:39:PRO:HD3	2.39	0.41
38:DC:120:MET:O	38:DC:124:GLY:HA3	2.21	0.41
56:BX:10:ALA:HB1	56:BX:11:PRO:HD2	2.01	0.41
9:CI:56:LEU:N	9:CI:56:LEU:HD23	2.36	0.41
22:AW:26:A:O2'	22:AW:27:G:H5'	2.21	0.41
16:AP:71:ARG:HG3	16:AP:80:PHE:CZ	2.56	0.41
25:CZ:136:ASN:OD1	60:CZ:501:GDP:O6	2.39	0.41
36:BA:861:A:C2	36:BA:917:A:C4	3.09	0.41
25:CZ:147:LEU:H	25:CZ:147:LEU:CD2	2.34	0.41
2:CB:109:SER:O	2:CB:112:VAL:N	2.54	0.41
12:AL:18:VAL:O	12:AL:19:ARG:CB	2.69	0.41
36:BA:2120:G:C2	36:BA:2178:C:C5	3.08	0.41
34:B8:49:VAL:CG1	34:B8:53:PRO:HD3	2.42	0.41
34:B8:14:VAL:CG2	34:B8:22:VAL:CG1	2.99	0.41
46:DN:90:MET:O	46:DN:93:THR:O	2.39	0.41
49:DQ:133:ARG:O	49:DQ:134:ARG:HB2	2.21	0.41
3:CC:73:PRO:O	3:CC:76:VAL:HG22	2.21	0.41
36:DA:586:A:N1	36:DA:809:G:O2'	2.44	0.41
16:CP:22:THR:OG1	16:CP:23:ASP:N	2.52	0.41
16:CP:67:THR:HG22	16:CP:68:ASP:H	1.85	0.41
36:BA:654(U):A:O2'	36:BA:654(V):A:H5'	2.21	0.41
1:AA:1032:G:H2'	1:AA:1033:G:C8	2.56	0.41
25:AZ:210:ILE:O	25:AZ:210:ILE:HG23	2.21	0.41
36:BA:2125:G:H21	36:BA:2173:A:H61	1.68	0.41
36:BA:2125:G:H21	36:BA:2173:A:N6	2.19	0.41
24:AY:44:G:H1'	24:AY:45:U:C6	2.56	0.41
58:BZ:10:ARG:NH2	58:BZ:26:GLY:O	2.54	0.41
57:BY:2:ARG:HG2	57:BY:2:ARG:NH1	2.36	0.41
4:AD:121:VAL:N	4:AD:126:ILE:HD13	2.36	0.41
29:B3:38:GLU:HB3	29:B3:40:THR:HG23	2.03	0.41
36:BA:1762:A:C8	36:BA:1762:A:O5'	2.73	0.41
36:BA:327:G:C2	36:BA:328:U:C2	3.09	0.41
36:BA:444:C:C4'	41:BF:49:ALA:HB2	2.50	0.41
57:BY:88:LYS:O	57:BY:90:LEU:HD23	2.20	0.41
51:BS:75:GLU:O	51:BS:76:LYS:HG2	2.20	0.41
15:CO:71:GLN:HB2	15:CO:78:TYR:CD1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1170:G:N2	36:DA:1180:C:C2	2.89	0.41
54:DV:34:GLU:O	54:DV:36:PRO:HD3	2.20	0.41
54:DV:6:LYS:O	54:DV:37:VAL:HG21	2.21	0.41
20:AT:13:LEU:O	20:AT:15:ARG:N	2.54	0.41
56:BX:87:GLN:O	56:BX:88:LYS:HG3	2.20	0.41
5:CE:50:GLU:HA	5:CE:50:GLU:OE1	2.21	0.41
1:AA:48:C:H5"	1:AA:365:U:O4	2.21	0.41
33:B7:22:MET:HE1	33:B7:31:LEU:HD12	2.02	0.41
12:CL:44:THR:HA	12:CL:45:PRO:HD3	1.89	0.41
1:AA:426:G:H4'	4:AD:41:GLY:O	2.21	0.41
57:DY:47:LYS:HD2	57:DY:47:LYS:N	2.35	0.41
36:BA:195:A:H5"	48:BP:46:LYS:NZ	2.36	0.41
27:B1:89:GLU:O	27:B1:90:ILE:C	2.58	0.41
1:CA:383:A:C2'	1:CA:384:G:H5'	2.50	0.41
7:AG:78:ARG:CG	7:AG:79:ARG:N	2.82	0.41
57:BY:47:LYS:HD2	57:BY:47:LYS:N	2.36	0.41
36:BA:2631:G:N2	40:BE:61:ARG:HH12	2.15	0.41
1:CA:1524:C:C3'	1:CA:1524:C:C6	3.04	0.41
40:DE:176:ILE:HG22	40:DE:176:ILE:O	2.20	0.41
1:AA:1431:C:H2'	1:AA:1432:G:H5'	2.02	0.41
36:DA:1313:U:H4'	36:DA:1333:C:OP2	2.20	0.41
51:DS:25:ARG:HD3	51:DS:42:ASP:OD1	2.21	0.41
36:BA:2460:U:H4'	49:BQ:79:LEU:HD11	2.01	0.41
1:CA:1216:G:O2'	1:CA:1217:C:H5'	2.21	0.41
36:BA:2463:C:C2'	36:BA:2464:C:H5'	2.50	0.41
11:AK:63:LEU:N	11:AK:63:LEU:HD12	2.35	0.41
36:DA:65:C:H2'	36:DA:66:C:H6	1.84	0.41
2:CB:69:LEU:HB2	2:CB:159:PRO:CG	2.51	0.41
48:DP:110:TYR:O	48:DP:111:ARG:C	2.60	0.41
36:BA:1291:C:H2'	36:BA:1292:U:C6	2.56	0.41
36:BA:2206:G:N2	36:BA:2207:G:C5'	2.84	0.41
35:B9:25:VAL:O	35:B9:33:LYS:HA	2.21	0.41
25:AZ:222:LEU:HA	25:AZ:304:LEU:O	2.21	0.41
26:D0:7:LEU:CB	49:DQ:85:LYS:HD2	2.51	0.41
36:BA:2822:G:OP1	40:BE:112:GLY:N	2.53	0.41
42:DG:111:LEU:N	42:DG:112:PRO:CD	2.83	0.41
20:CT:36:LEU:HD12	20:CT:59:ALA:CB	2.51	0.41
36:DA:1376:C:O2'	36:DA:1377:G:H5'	2.20	0.41
18:CR:73:ALA:CB	18:CR:79:LEU:HD12	2.50	0.41
36:BA:1260:G:H2'	36:BA:1261:C:H6	1.84	0.41
1:AA:563:A:H5"	1:AA:566:G:N2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:221:A:H4'	36:BA:222:A:O5'	2.21	0.41
36:DA:491:G:H2'	36:DA:492:A:C8	2.55	0.41
47:DO:114:ILE:HD12	47:DO:114:ILE:H	1.86	0.41
36:BA:272(J):C:H2'	36:BA:274:G:C5'	2.51	0.41
41:DF:78:ILE:O	41:DF:80:ALA:N	2.54	0.41
36:BA:156:U:H2'	36:BA:157:U:H5'	2.02	0.41
36:BA:2174:C:H1'	38:BC:218:MET:HA	2.03	0.41
25:CZ:389:ARG:HG2	25:CZ:394:THR:HA	2.02	0.41
36:BA:2370:G:H2'	36:BA:2371:G:C8	2.56	0.41
36:DA:1103:A:H5"	36:DA:1104:C:C5	2.55	0.41
1:AA:668:G:O2'	15:AO:46:HIS:CD2	2.73	0.41
41:BF:65:TRP:CE3	41:BF:72:ARG:HB2	2.55	0.41
22:AW:61:C:O2'	22:AW:62:C:C6	2.73	0.41
1:AA:940:C:O2'	1:AA:941:G:H5'	2.21	0.41
43:BH:97:ARG:HH21	43:BH:99:VAL:HG21	1.85	0.41
36:DA:2815:C:C2	36:DA:2816:C:C6	3.08	0.41
36:DA:2554:U:H2'	36:DA:2555:U:H6	1.86	0.41
49:DQ:118:LEU:HD12	49:DQ:131:ILE:CG2	2.50	0.41
38:DC:63:SER:HA	38:DC:160:ARG:HA	2.03	0.41
47:DO:1:MET:H1	47:DO:67:LYS:HB3	1.86	0.41
13:AM:106:ASN:O	13:AM:107:ALA:HB3	2.20	0.41
19:AS:51:VAL:HB	19:AS:75:ALA:HB2	2.01	0.41
36:DA:2848:G:H8	52:DT:97:ALA:HB2	1.86	0.41
36:BA:333:G:N3	36:BA:333:G:H2'	2.36	0.41
10:CJ:47:PHE:CE2	14:CN:37:PHE:CE2	3.09	0.41
36:BA:74:A:H5"	36:BA:75:G:O4'	2.21	0.41
36:DA:2033:A:HO2'	36:DA:2034:U:P	2.44	0.41
36:DA:1712:C:O2'	36:DA:1713:U:H5'	2.21	0.41
37:DB:92:C:OP1	49:DQ:19:GLY:CA	2.69	0.41
28:B2:12:GLU:HA	28:B2:15:LYS:HE2	2.03	0.41
36:DA:1844:C:O2'	36:DA:1845:G:H5'	2.21	0.41
36:DA:1438:U:O2'	36:DA:1439:A:H5'	2.21	0.41
33:D7:24:THR:HG23	33:D7:27:GLY:H	1.86	0.41
1:AA:78:G:N2	1:AA:91:C:N4	2.69	0.41
10:CJ:45:ARG:NE	14:CN:36:PHE:CD2	2.88	0.41
36:DA:1630:G:C2	36:DA:1637:A:C2	3.08	0.41
4:AD:103:ASN:OD1	4:AD:114:ARG:NE	2.39	0.41
19:CS:78:ARG:HG3	19:CS:78:ARG:HH11	1.86	0.41
58:BZ:112:ARG:HB2	58:BZ:112:ARG:NH1	2.35	0.41
36:BA:516:C:O2'	36:BA:517:C:H5'	2.21	0.41
36:BA:2551:C:H2'	36:BA:2552:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:60:ARG:HD3	39:BD:86:PRO:O	2.21	0.41
36:BA:1711:C:O2'	36:BA:1712:C:H5'	2.21	0.41
1:AA:985:C:O2'	1:AA:986:A:H5'	2.21	0.41
38:DC:216:THR:CG2	38:DC:219:GLY:HA3	2.51	0.41
58:BZ:59:LEU:O	58:BZ:66:SER:HA	2.21	0.41
36:DA:1427:A:H4'	36:DA:1428:C:O4'	2.20	0.41
1:AA:966:G:C4	22:AV:34:G:H4'	2.56	0.41
40:BE:17:ASP:HB3	40:BE:18:ASP:H	1.59	0.41
44:BJ:99:UNK:C	44:BJ:101:UNK:N	2.83	0.41
26:D0:25:ARG:HD2	26:D0:29:GLN:HE21	1.86	0.41
19:CS:51:VAL:HB	19:CS:75:ALA:HB2	2.03	0.41
36:BA:2707:G:H2'	36:BA:2708:G:H8	1.86	0.41
12:CL:54:LYS:N	12:CL:54:LYS:HD2	2.36	0.41
1:CA:1527:C:H6	1:CA:1527:C:O5'	2.04	0.41
25:CZ:315:LYS:HE2	25:CZ:315:LYS:HB3	1.83	0.41
1:AA:423:G:H2'	1:AA:424:G:H5'	2.03	0.41
1:AA:622:A:C8	1:AA:623:C:C5	3.09	0.41
1:CA:1058:G:H2'	1:CA:1059:C:C6	2.55	0.41
39:BD:27:THR:HG23	39:BD:83:GLU:HG3	2.02	0.41
36:BA:1902:C:H4'	39:BD:244:ARG:CA	2.51	0.41
13:AM:25:ILE:HD11	13:AM:60:VAL:HG11	2.03	0.41
56:DX:12:VAL:HG21	56:DX:21:PHE:HZ	1.86	0.41
28:D2:6:VAL:HG21	28:D2:59:ARG:HH21	1.86	0.41
48:BP:58:THR:CG2	48:BP:58:THR:O	2.69	0.41
32:B6:27:LYS:HG3	32:B6:30:THR:OG1	2.21	0.41
37:DB:40:U:H3'	37:DB:41:U:C5'	2.45	0.41
42:DG:14:GLU:HA	42:DG:17:PRO:CG	2.51	0.41
23:CX:12:A:H2'	23:CX:13:A:O5'	2.20	0.41
32:B6:41:PRO:HG2	32:B6:41:PRO:O	2.21	0.41
51:BS:61:ASN:H	51:BS:65:VAL:CG2	2.34	0.41
36:BA:2316:C:O2'	42:BG:128:ARG:NH2	2.53	0.41
57:BY:26:LYS:HB3	57:BY:27:VAL:H	1.78	0.41
57:BY:11:ASP:HA	57:BY:27:VAL:HG22	2.03	0.41
57:BY:76:CYS:SG	57:BY:77:PRO:CD	3.08	0.41
36:DA:2012:G:H4'	55:DW:96:ILE:CD1	2.29	0.41
36:BA:1666:G:H1'	47:BO:3:GLN:NE2	2.36	0.41
28:B2:26:ARG:C	28:B2:28:LYS:H	2.24	0.41
43:BH:85:LYS:HZ3	43:BH:132:ARG:C	2.19	0.41
46:DN:60:ILE:HG22	46:DN:61:ARG:O	2.21	0.41
31:B5:41:PRO:HA	31:B5:42:PRO:HD3	1.97	0.41
36:DA:1541:G:O2'	36:DA:1542:A:P	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:252:G:OP2	48:DP:50:ARG:NH2	2.45	0.41
25:AZ:385:ARG:HD3	61:AZ:502:KIR:H452	2.03	0.41
48:DP:12:ALA:O	48:DP:13:ASN:O	2.39	0.41
5:AE:7:GLU:HB3	5:AE:112:LEU:HD22	2.02	0.41
31:D5:56:LYS:HE2	31:D5:59:GLU:OE2	2.20	0.41
9:AI:16:ARG:HG3	9:AI:16:ARG:HH11	1.86	0.41
36:BA:1876:A:H2'	36:BA:1877:A:C5'	2.39	0.41
41:DF:129:PHE:CD2	41:DF:163:VAL:HG21	2.55	0.41
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HD2	1.86	0.41
1:AA:408:A:H4'	4:AD:112:VAL:HG11	2.03	0.41
8:AH:4:ASP:OD2	8:AH:7:ALA:HB2	2.21	0.41
1:CA:324:G:OP1	20:CT:70:SER:HB2	2.20	0.41
38:BC:100:ILE:HD13	38:BC:127:LEU:HB2	2.02	0.41
36:DA:1059:G:N7	36:DA:1060:U:C4	2.89	0.41
36:DA:1658:C:C2	36:DA:1659:U:C5	3.09	0.41
13:CM:49:THR:O	13:CM:53:VAL:HG23	2.21	0.41
20:AT:27:LYS:C	20:AT:27:LYS:HD3	2.42	0.41
36:BA:674:G:N3	41:BF:74:ARG:NH1	2.69	0.41
1:CA:1442(B):A:P	1:CA:1442(B):A:H3'	2.60	0.41
58:BZ:81:ARG:CB	58:BZ:81:ARG:HH11	2.33	0.41
35:B9:1:MET:SD	35:B9:1:MET:N	2.86	0.41
9:AI:65:VAL:O	9:AI:65:VAL:HG13	2.21	0.41
34:D8:50:LEU:H	34:D8:53:PRO:HG3	1.85	0.41
1:AA:1218:C:H2'	1:AA:1219:U:C5	2.53	0.41
1:CA:1145:C:H1'	1:CA:1146:A:C8	2.56	0.41
49:DQ:22:LYS:H	58:DZ:78:LYS:HZ1	1.69	0.41
40:DE:126:PRO:C	40:DE:128:SER:N	2.74	0.41
36:DA:2572:A:N7	40:DE:145:LYS:CG	2.84	0.41
43:DH:76:VAL:C	43:DH:78:GLY:N	2.75	0.41
46:DN:129:PRO:O	46:DN:130:HIS:CB	2.62	0.41
4:AD:78:LEU:HA	4:AD:78:LEU:HD23	1.91	0.41
36:DA:2779:U:H5'	36:DA:2780:G:O5'	2.21	0.41
3:AC:95:THR:O	3:AC:95:THR:CG2	2.60	0.41
2:AB:157:ARG:CB	2:AB:157:ARG:HH11	2.33	0.41
36:DA:366:C:H5	36:DA:403:U:HO2'	1.67	0.41
52:BT:128:GLU:CD	52:BT:129:ARG:H	2.24	0.41
11:CK:63:LEU:H	11:CK:63:LEU:HD12	1.86	0.41
1:AA:474:G:O2'	1:AA:475:G:H5'	2.20	0.41
24:CY:75:C:C5	25:CZ:232:THR:CB	3.01	0.41
36:BA:2327:A:H2'	36:BA:2328:A:C8	2.56	0.41
49:BQ:139:GLU:OE1	49:BQ:139:GLU:CA	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:160:A:H2'	1:CA:161:A:O4'	2.21	0.41
38:DC:75:LEU:CG	38:DC:113:VAL:HG22	2.51	0.41
26:D0:7:LEU:HD13	49:DQ:85:LYS:CD	2.49	0.41
4:CD:111:ALA:HB3	4:CD:117:ALA:HB2	2.03	0.41
41:BF:9:ILE:HG23	41:BF:13:SER:O	2.20	0.41
46:BN:87:LEU:O	46:BN:88:GLU:C	2.59	0.41
36:BA:1298:C:N4	36:BA:1299:G:C6	2.89	0.41
1:AA:1211:U:O2	1:AA:1211:U:O4'	2.39	0.41
25:AZ:358:GLY:O	25:AZ:360:GLU:N	2.53	0.41
1:CA:66:G:H4'	1:CA:173:U:C4	2.56	0.41
37:BB:111:G:H2'	37:BB:112:U:H5'	2.02	0.41
43:DH:163:TYR:N	43:DH:163:TYR:HD1	2.19	0.41
25:CZ:389:ARG:NH1	25:CZ:389:ARG:HG2	2.35	0.41
36:DA:2239:G:H5'	39:DD:251:GLY:CA	2.51	0.41
36:BA:470:A:OP1	41:BF:59:TYR:HE1	2.04	0.41
38:DC:163:PHE:CE1	38:DC:196:LEU:HD23	2.55	0.41
7:AG:41:ARG:HG2	7:AG:41:ARG:NH1	2.36	0.41
1:AA:418:C:H2'	1:AA:419:C:H6	1.86	0.41
8:CH:127:LEU:HD13	8:CH:127:LEU:HA	1.87	0.41
7:CG:81:GLY:C	7:CG:83:ALA:H	2.25	0.41
36:DA:696:G:N3	36:DA:696:G:H2'	2.35	0.41
7:CG:88:PRO:HB2	7:CG:145:ALA:HB1	2.02	0.41
36:BA:1440:G:O6	36:BA:1552:G:C2	2.74	0.41
1:CA:397:A:C8	1:CA:548:G:OP2	2.74	0.41
1:CA:940:C:O2'	1:CA:941:G:H5'	2.21	0.41
36:BA:640:C:C4	36:BA:641:C:N4	2.89	0.41
43:DH:80:SER:O	43:DH:81:GLU:HB2	2.21	0.41
54:DV:46:VAL:O	54:DV:46:VAL:HG13	2.21	0.41
22:CW:29:G:H1	22:CW:41:C:H42	1.69	0.41
40:DE:37:ARG:HA	40:DE:42:ASP:OD2	2.20	0.41
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.56	0.41
39:DD:3:VAL:HG23	39:DD:200:ASP:OD2	2.20	0.41
44:BJ:106:UNK:O	44:BJ:107:UNK:CB	2.68	0.41
36:DA:1367:A:C5	36:DA:1368:G:H1'	2.56	0.41
36:BA:2078:C:H2'	36:BA:2079:U:C6	2.55	0.41
26:D0:33:ALA:O	36:DA:2353:G:H1'	2.21	0.41
17:CQ:85:VAL:HG12	17:CQ:89:LEU:CD1	2.51	0.41
25:CZ:103:ILE:HG22	25:CZ:103:ILE:O	2.21	0.41
26:B0:46:LYS:HE3	26:B0:46:LYS:HB2	1.84	0.41
36:DA:764:A:H3'	36:DA:765:G:H5'	2.03	0.41
12:CL:61:THR:C	12:CL:63:GLY:H	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:21:PHE:HB3	39:DD:24:ILE:CG2	2.51	0.40
36:BA:1568:G:P	39:BD:63:ARG:HH22	2.44	0.40
1:AA:1331:G:OP2	13:AM:23:TYR:CD2	2.74	0.40
48:DP:58:THR:C	48:DP:61:ARG:CZ	2.90	0.40
21:CU:2:GLY:O	21:CU:4:GLY:N	2.53	0.40
28:D2:34:GLU:HA	28:D2:37:PHE:CG	2.54	0.40
36:BA:2428:G:H21	48:BP:60:MET:CE	2.34	0.40
32:D6:12:GLU:HA	32:D6:23:THR:HB	2.04	0.40
20:AT:99:LEU:O	20:AT:100:ILE:C	2.58	0.40
30:D4:9:LEU:HA	30:D4:26:SER:O	2.22	0.40
32:D6:44:ARG:HA	32:D6:44:ARG:HD2	1.87	0.40
1:CA:1283:G:O2'	1:CA:1284:C:OP2	2.40	0.40
42:BG:125:PHE:HB3	42:BG:131:TYR:HD1	1.86	0.40
52:BT:19:LEU:HD22	52:BT:85:LYS:HD3	2.02	0.40
43:BH:167:GLU:CB	43:BH:168:PRO:HD2	2.51	0.40
36:BA:1097:U:O2'	36:BA:1098:A:H5'	2.20	0.40
41:BF:39:TRP:CZ2	41:BF:106:ARG:HD3	2.56	0.40
36:DA:494:G:H2'	36:DA:494:G:N3	2.36	0.40
34:B8:23:VAL:CG1	34:B8:46:ARG:HB3	2.50	0.40
51:BS:93:LYS:O	51:BS:95:HIS:HB3	2.20	0.40
58:BZ:99:TYR:HA	58:BZ:124:ILE:O	2.22	0.40
40:BE:184:VAL:HG12	40:BE:185:LYS:N	2.36	0.40
48:DP:24:GLY:CA	48:DP:33:ARG:HH12	2.30	0.40
48:DP:31:ALA:C	48:DP:33:ARG:N	2.74	0.40
36:BA:637:A:C6	36:BA:652:C:H4'	2.56	0.40
42:BG:135:LEU:HD22	42:BG:140:ILE:HD13	2.03	0.40
36:DA:2713:A:C3'	36:DA:2714:G:C5'	2.99	0.40
47:DO:87:ILE:HG21	47:DO:91:LEU:HA	1.98	0.40
54:BV:21:ARG:CG	54:BV:91:TYR:CD2	3.02	0.40
4:CD:23:GLY:O	4:CD:27:TYR:HD2	2.03	0.40
36:BA:2712:U:O2	36:BA:2712:U:H5'	2.20	0.40
48:BP:96:THR:HG22	48:BP:126:VAL:CG2	2.51	0.40
49:BQ:52:VAL:HA	49:BQ:55:VAL:CG1	2.52	0.40
50:DR:96:ARG:NH2	50:DR:117:VAL:HG23	2.37	0.40
16:CP:21:VAL:CG2	16:CP:21:VAL:O	2.66	0.40
50:BR:29:LEU:HD11	50:BR:52:ILE:CD1	2.45	0.40
36:DA:1041:G:C2'	36:DA:1042:G:H5'	2.51	0.40
52:DT:102:ILE:HD12	52:DT:102:ILE:C	2.42	0.40
4:AD:174:LEU:CD2	4:AD:185:PHE:HA	2.50	0.40
1:CA:265:G:C2'	1:CA:266:G:H5"	2.47	0.40
42:BG:52:ILE:HD13	42:BG:52:ILE:H	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:106:VAL:CG2	3:AC:106:VAL:O	2.70	0.40
36:BA:2173:A:C2'	36:BA:2173:A:N3	2.79	0.40
1:AA:926:G:O2'	23:AX:16:A:N3	2.46	0.40
29:B3:54:VAL:CG1	29:B3:55:ARG:N	2.84	0.40
54:DV:61:VAL:O	54:DV:63:GLY:N	2.53	0.40
22:CW:71:G:O2'	22:CW:72:C:H5'	2.21	0.40
36:BA:2842:G:C2	36:BA:2876:G:C2	3.09	0.40
36:DA:1402:C:O2'	36:DA:1403:C:H5'	2.21	0.40
49:DQ:22:LYS:H	58:DZ:78:LYS:NZ	2.18	0.40
40:DE:201:THR:OG1	40:DE:202:LYS:N	2.54	0.40
57:DY:43:ASN:HA	57:DY:64:GLU:C	2.42	0.40
24:AY:47:U:O2'	24:AY:50:G:OP1	2.36	0.40
28:B2:43:GLN:HB3	28:B2:44:LEU:H	1.48	0.40
12:CL:7:ILE:HG21	17:CQ:34:LYS:HB2	2.04	0.40
36:BA:1653:G:C5	50:BR:10:LEU:CD1	3.04	0.40
1:AA:731:G:H5'	1:AA:766:A:H4'	2.02	0.40
37:BB:31:C:H4'	42:BG:29:TRP:HZ2	1.86	0.40
36:DA:271(F):C:H2'	36:DA:271(G):C:O4'	2.21	0.40
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.55	0.40
11:AK:21:ILE:HD13	11:AK:94:ALA:HB3	2.03	0.40
1:CA:1313:U:OP1	19:CS:6:LYS:HB2	2.21	0.40
56:BX:64:LYS:HE2	56:BX:73:ARG:NE	2.36	0.40
36:DA:302:C:O2'	36:DA:303:U:H5'	2.20	0.40
36:DA:79:G:H2'	36:DA:80:G:C8	2.55	0.40
56:DX:64:LYS:HE2	56:DX:73:ARG:NE	2.36	0.40
49:BQ:35:VAL:HA	49:BQ:101:ARG:O	2.20	0.40
13:CM:94:ARG:HE	19:CS:81:ARG:C	2.24	0.40
36:DA:2893:G:H5'	36:DA:2894:G:C5'	2.50	0.40
40:DE:165:VAL:HG12	40:DE:166:THR:N	2.35	0.40
3:AC:139:GLN:HE22	3:AC:170:GLN:HE22	1.67	0.40
36:BA:654(N):G:N7	36:BA:654(O):G:C4	2.89	0.40
48:BP:28:GLY:O	48:BP:29:LYS:HB2	2.21	0.40
10:AJ:48:THR:OG1	10:AJ:62:HIS:CD2	2.72	0.40
1:AA:160:A:H2'	1:AA:161:A:O4'	2.21	0.40
40:BE:159:HIS:HE1	40:BE:162:ALA:HB3	1.85	0.40
46:DN:68:GLU:HG2	46:DN:88:GLU:OE1	2.20	0.40
1:AA:398:C:H2'	1:AA:399:G:H8	1.87	0.40
1:AA:338:A:H2'	1:AA:339:C:C6	2.56	0.40
36:BA:2807:G:C2'	36:BA:2808:U:H5"	2.50	0.40
8:AH:6:ILE:N	8:AH:6:ILE:CD1	2.84	0.40
15:AO:39:LEU:O	15:AO:42:HIS:HB3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:61:LEU:CD2	2:CB:68:ILE:CG1	2.99	0.40
1:CA:509:A:H5'	4:CD:54:TYR:CD2	2.55	0.40
7:CG:88:PRO:CB	7:CG:145:ALA:HB1	2.51	0.40
1:CA:818:G:HO2'	1:CA:820:U:H6	1.68	0.40
36:BA:889:C:O2'	36:BA:890:A:P	2.80	0.40
42:DG:43:LEU:HB3	42:DG:45:GLU:HB2	2.03	0.40
36:DA:1860:G:H1	36:DA:1882:C:H42	1.69	0.40
36:DA:1011:G:OP1	53:DU:75:ASN:HB2	2.21	0.40
45:BK:30:UNK:O	45:BK:31:UNK:O	2.38	0.40
25:CZ:229:PHE:O	25:CZ:236:THR:HA	2.21	0.40
3:AC:53:ALA:O	3:AC:54:ARG:HB2	2.21	0.40
37:BB:87:G:N2	37:BB:89:G:H3'	2.36	0.40
15:AO:64:ARG:HG3	15:AO:64:ARG:HH11	1.85	0.40
16:CP:58:TYR:CD1	16:CP:58:TYR:C	2.94	0.40
38:BC:192:PHE:CG	38:BC:192:PHE:O	2.73	0.40
8:AH:41:ARG:NH1	8:AH:123:GLU:OE2	2.53	0.40
1:AA:1304:G:C6	1:AA:1305:G:C6	3.09	0.40
28:D2:62:THR:HG23	36:DA:72:U:C2	2.55	0.40
34:B8:37:SER:O	34:B8:38:GLY:C	2.58	0.40
36:BA:2308:G:C2	36:BA:2309:A:N6	2.89	0.40
42:BG:73:ALA:N	42:BG:87:PRO:HG2	2.18	0.40
57:BY:12:THR:CG2	57:BY:13:VAL:N	2.84	0.40
52:DT:33:LYS:HZ2	52:DT:74:ARG:HH21	1.69	0.40
22:AV:68:C:H2'	22:AV:69:G:H5'	2.03	0.40
1:AA:58:C:O2	1:AA:58:C:H2'	2.21	0.40
36:BA:1023:U:C2'	36:BA:1024:G:H5'	2.51	0.40
36:DA:1947:C:C3'	36:DA:1948:G:C5'	2.99	0.40
22:CW:18:G:O4'	22:CW:58:A:C2	2.74	0.40
22:CW:58:A:C5	22:CW:61:C:C4	3.09	0.40
36:BA:1947:C:C3'	36:BA:1948:G:C5'	3.00	0.40
42:DG:107:LEU:H	42:DG:107:LEU:HD23	1.86	0.40
26:D0:50:ASN:C	26:D0:62:LEU:CD2	2.90	0.40
41:DF:132:VAL:O	41:DF:133:ASN:HB2	2.22	0.40
37:BB:48:A:H4'	51:BS:95:HIS:CD2	2.54	0.40
47:BO:90:GLN:O	47:BO:91:LEU:HB2	2.22	0.40
58:BZ:165:VAL:HB	58:BZ:166:SER:H	1.42	0.40
1:AA:1435:G:H2'	1:AA:1436:U:C5	2.52	0.40
48:DP:88:LEU:C	48:DP:90:ARG:H	2.25	0.40
34:D8:23:VAL:CG1	34:D8:46:ARG:HB3	2.51	0.40
48:DP:18:ARG:O	48:DP:19:VAL:C	2.60	0.40
36:DA:2481:G:C2'	36:DA:2482:G:OP2	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:112:LEU:HD23	5:CE:112:LEU:HA	1.73	0.40
36:DA:1291:C:H2'	36:DA:1292:U:C6	2.56	0.40
40:BE:93:VAL:C	40:BE:95:ILE:N	2.75	0.40
54:BV:47:VAL:O	54:BV:49:THR:N	2.54	0.40
17:CQ:10:VAL:CG2	17:CQ:53:LEU:HA	2.51	0.40
26:D0:42:GLY:HA3	36:DA:2331:G:C1'	2.52	0.40
58:DZ:148:ASP:O	58:DZ:149:SER:OG	2.33	0.40
50:BR:38:VAL:O	50:BR:42:LYS:HB2	2.21	0.40
2:AB:142:LEU:HD23	2:AB:142:LEU:C	2.41	0.40
38:BC:79:LYS:HB2	38:BC:118:ASP:OD2	2.21	0.40
36:DA:674:G:H1'	41:DF:74:ARG:HD3	1.98	0.40
25:AZ:166:ASP:O	25:AZ:167:GLU:CB	2.69	0.40
24:CY:44:G:H1'	24:CY:45:U:C6	2.56	0.40
4:CD:174:LEU:CD2	4:CD:185:PHE:HA	2.51	0.40
49:BQ:110:THR:O	49:BQ:111:GLU:C	2.58	0.40
12:AL:32:PHE:CB	12:AL:84:LEU:HD11	2.51	0.40
24:CY:41:C:H6	24:CY:41:C:C5'	2.25	0.40
3:CC:106:VAL:CG2	3:CC:106:VAL:O	2.68	0.40
42:BG:52:ILE:CG1	42:BG:53:LEU:N	2.84	0.40
34:D8:49:VAL:HG11	34:D8:52:LYS:HB3	2.03	0.40
36:DA:1682:G:H2'	36:DA:1683:C:H6	1.85	0.40
25:AZ:171:ILE:HG13	25:AZ:202:LEU:HA	2.02	0.40
40:DE:167:VAL:CG1	40:DE:189:PRO:HD3	2.44	0.40
39:BD:186:HIS:HD2	39:BD:188:GLU:N	2.10	0.40
36:DA:444:C:H4'	41:DF:49:ALA:HB2	2.03	0.40
27:D1:45:ASN:HD21	27:D1:47:GLN:HE22	1.69	0.40
48:BP:83:VAL:O	48:BP:83:VAL:HG13	2.21	0.40
22:CW:60:U:H2'	22:CW:60:U:O2	2.21	0.40
54:DV:28:GLU:O	54:DV:61:VAL:CG2	2.70	0.40
36:DA:1740:G:H4'	36:DA:1741:A:OP1	2.21	0.40
36:DA:2863:C:C5	36:DA:2864:G:N7	2.89	0.40
39:BD:224:ALA:O	39:BD:225:ALA:CB	2.65	0.40
36:DA:651:G:H2'	36:DA:652:C:C5'	2.49	0.40
36:BA:1341:U:O4'	56:BX:57:LEU:HG	2.21	0.40
6:AF:8:ILE:HG23	6:AF:85:VAL:HG13	2.02	0.40
54:DV:5:VAL:HG23	54:DV:37:VAL:O	2.21	0.40
12:AL:8:ASN:O	12:AL:12:ARG:HG3	2.22	0.40
25:AZ:14:VAL:HG23	25:AZ:79:HIS:CD2	2.56	0.40
15:AO:5:LYS:HA	15:AO:5:LYS:HD2	1.88	0.40
46:DN:107:LEU:HB3	46:DN:108:PRO:CD	2.45	0.40
36:BA:271(F):C:H2'	36:BA:271(G):C:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1710:C:H2'	36:DA:1711:C:C6	2.57	0.40
50:BR:12:ARG:CG	50:BR:12:ARG:HH11	2.33	0.40
4:CD:157:LEU:O	4:CD:159:ARG:N	2.54	0.40
3:AC:94:LEU:HD12	3:AC:94:LEU:C	2.41	0.40
6:CF:11:ASN:CB	6:CF:14:LEU:HD23	2.48	0.40
52:DT:126:ALA:O	52:DT:128:GLU:N	2.49	0.40
36:DA:271(F):C:C2'	36:DA:271(G):C:H5'	2.50	0.40
1:AA:1123:A:H4'	10:AJ:36:GLY:HA3	2.03	0.40
6:AF:11:ASN:O	6:AF:14:LEU:HD23	2.21	0.40
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.57	0.40
36:BA:176:G:C2'	36:BA:177:G:H5'	2.50	0.40
36:BA:2207:G:O2'	36:BA:2208:A:H5"	2.22	0.40
49:DQ:97:VAL:HG21	49:DQ:103:MET:CE	2.52	0.40
39:BD:97:TYR:HE1	39:BD:103:ARG:HB2	1.85	0.40
49:DQ:1:MET:O	49:DQ:2:LEU:HB2	2.20	0.40
25:CZ:378:VAL:O	25:CZ:380:LEU:HG	2.20	0.40
19:AS:25:LYS:O	19:AS:26:GLY:C	2.60	0.40
36:DA:2262:U:H2'	36:DA:2263:C:C6	2.51	0.40
20:AT:36:LEU:HD12	20:AT:59:ALA:CB	2.51	0.40
1:CA:781:A:H2'	1:CA:782:A:H5'	2.03	0.40
29:B3:26:LEU:HB2	29:B3:28:LEU:HD12	2.04	0.40
36:BA:2585:U:O2	36:BA:2585:U:O4'	2.39	0.40
36:BA:1751:C:H2'	36:BA:1752:C:C6	2.57	0.40
25:CZ:124:ARG:NH1	25:CZ:124:ARG:HG3	2.36	0.40
35:D9:19:ARG:NH1	36:DA:2755:C:C2	2.88	0.40
55:DW:64:MET:HE2	55:DW:109:GLU:HG3	2.03	0.40
49:DQ:64:ILE:CG2	49:DQ:65:PHE:N	2.83	0.40
36:BA:2320:A:C2	36:BA:2333:A:C8	3.10	0.40
36:DA:2881:C:C2	36:DA:2882:A:C8	3.09	0.40
36:BA:719:C:H2'	36:BA:720:C:C6	2.57	0.40
39:DD:147:LEU:HD13	39:DD:155:LEU:CD1	2.50	0.40
36:DA:271(N):U:H5'	36:DA:271(O):C:H5	1.86	0.40
36:DA:408:G:C5	36:DA:409:C:C5	3.10	0.40
1:AA:1417:G:C6	1:AA:1482:G:C6	3.10	0.40
25:AZ:229:PHE:O	25:AZ:236:THR:HA	2.21	0.40
36:DA:391:G:O2'	36:DA:392:C:H5'	2.21	0.40
36:DA:1821:A:H2'	36:DA:1822:G:H8	1.85	0.40
46:DN:38:HIS:ND1	46:DN:39:ARG:N	2.70	0.40
39:DD:27:THR:HG21	39:DD:81:ALA:HB3	2.03	0.40
15:CO:16:ALA:C	15:CO:18:PHE:N	2.74	0.40
32:D6:32:ASN:O	32:D6:33:LYS:CG	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:66:GLU:CD	28:D2:67:LYS:N	2.74	0.40
57:DY:39:VAL:HG12	57:DY:40:GLU:N	2.36	0.40
25:AZ:69:GLU:OE1	25:AZ:273:HIS:CD2	2.75	0.40
32:B6:20:ASN:O	32:B6:21:TYR:CG	2.74	0.40
57:BY:8:LYS:HG2	57:BY:72:VAL:HG23	2.04	0.40
2:AB:200:ILE:HG22	2:AB:201:ILE:N	2.35	0.40
37:BB:21:G:C2'	37:BB:22:U:H5'	2.51	0.40
36:DA:1666:G:H1'	47:DO:3:GLN:NE2	2.36	0.40
36:BA:2182:G:O2'	36:BA:2183:C:H5'	2.21	0.40
7:AG:54:THR:HG22	7:AG:55:GLY:N	2.35	0.40
14:CN:33:VAL:HA	14:CN:40:CYS:HA	2.03	0.40
19:CS:16:LEU:C	19:CS:19:VAL:H	2.24	0.40
36:DA:1142(A):A:H4'	46:DN:25:ARG:HH22	1.85	0.40
46:DN:57:ALA:O	46:DN:58:ASP:O	2.38	0.40
42:BG:67:LYS:HA	42:BG:68:PRO:HD3	1.79	0.40
31:B5:44:THR:HG22	31:B5:45:VAL:N	2.35	0.40
1:AA:858:G:C4'	1:AA:858:G:C8	3.05	0.40
41:DF:101:LEU:CD1	41:DF:102:PRO:HD2	2.44	0.40
40:BE:51:PHE:CG	40:BE:52:LEU:N	2.90	0.40
40:BE:69:LYS:CE	40:BE:89:ASP:HA	2.52	0.40
36:DA:875:G:H4'	58:DZ:170:THR:OG1	2.21	0.40
53:DU:90:VAL:CG1	53:DU:91:ASP:H	2.24	0.40
36:DA:1292:U:H2'	36:DA:1293:C:C6	2.56	0.40
48:BP:100:LEU:HD13	48:BP:100:LEU:C	2.41	0.40
2:AB:118:LEU:HD13	2:AB:142:LEU:HB2	2.02	0.40
43:BH:103:LEU:CB	43:BH:123:PHE:HD2	2.24	0.40
10:CJ:3:LYS:HG2	10:CJ:75:ILE:O	2.21	0.40
36:BA:916:G:C2'	36:BA:917:A:H5"	2.52	0.40
3:AC:3:ASN:O	3:AC:4:LYS:HB2	2.21	0.40
36:BA:605:C:C4	36:BA:606:U:C5	3.10	0.40
36:BA:1131:G:O2'	36:BA:1132:A:H8	2.03	0.40
36:BA:2523:G:O2'	36:BA:2524:G:H5"	2.20	0.40
24:CY:40:C:C2'	24:CY:41:C:C5'	2.94	0.40
1:AA:1316:G:N1	1:AA:1319:A:OP2	2.47	0.40
1:AA:267:C:P	17:AQ:67:LYS:HB2	2.61	0.40
42:BG:114:ILE:HG12	42:BG:114:ILE:O	2.20	0.40
22:AW:74:C:O2'	22:AW:75:C:H5'	2.21	0.40
1:CA:1032:G:H2'	1:CA:1033:G:C8	2.56	0.40
43:DH:157:TYR:O	43:DH:158:HIS:CB	2.70	0.40
10:AJ:16:LEU:HD23	10:AJ:94:VAL:HG13	2.04	0.40
36:BA:1361:G:O2'	36:BA:1362:C:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:5:VAL:HG21	54:DV:35:LEU:HG	2.02	0.40
54:DV:34:GLU:CG	54:DV:58:VAL:HG22	2.49	0.40
54:DV:5:VAL:CG2	54:DV:6:LYS:N	2.84	0.40
12:CL:8:ASN:O	12:CL:12:ARG:HG3	2.21	0.40
36:BA:984:A:H5"	36:BA:985:C:C5	2.45	0.40
39:BD:158:ALA:O	39:BD:161:THR:HG23	2.21	0.40
32:D6:5:VAL:HB	32:D6:8:LYS:CB	2.52	0.40
1:AA:383:A:C2'	1:AA:384:G:H5'	2.51	0.40
29:B3:31:LEU:C	29:B3:33:GLN:N	2.74	0.40
8:AH:111:ILE:C	8:AH:112:LEU:HD23	2.41	0.40
3:AC:99:VAL:HG23	3:AC:99:VAL:O	2.21	0.40
19:AS:42:PRO:O	19:AS:44:MET:N	2.51	0.40
48:BP:110:TYR:O	48:BP:111:ARG:C	2.59	0.40
13:AM:89:GLY:C	13:AM:91:ARG:N	2.74	0.40
35:D9:10:ILE:O	35:D9:11:CYS:CB	2.68	0.40
36:DA:581:C:P	53:DU:33:ARG:HG3	2.62	0.40
23:AX:12:A:C2'	23:AX:13:A:O5'	2.69	0.40
27:B1:59:THR:O	27:B1:91:LYS:NZ	2.54	0.40
41:DF:107:LYS:HD3	41:DF:107:LYS:HA	1.96	0.40
36:BA:80:G:H2'	36:BA:81:G:H8	1.86	0.40
4:AD:149:ALA:O	4:AD:153:ARG:HG3	2.22	0.40
36:BA:598:G:H5'	48:BP:15:ARG:CB	2.50	0.40
38:DC:34:THR:CG2	38:DC:34:THR:O	2.68	0.40
36:DA:826:U:H4'	48:DP:55:ARG:HB3	2.03	0.40
38:DC:161:ILE:O	38:DC:161:ILE:HD12	2.21	0.40
33:B7:30:VAL:HG22	33:B7:33:ARG:NH2	2.37	0.40
36:DA:559:G:N2	53:DU:49:HIS:CD2	2.89	0.40
41:BF:9:ILE:H	41:BF:9:ILE:HG13	1.72	0.40
1:AA:227:G:H2'	1:AA:228:A:O4'	2.21	0.40
2:AB:104:ASN:O	2:AB:108:ILE:HG12	2.22	0.40
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.55	0.40
54:BV:24:LYS:HG3	54:BV:90:PRO:HB2	2.03	0.40
36:DA:993:G:C6	36:DA:1162:G:C6	3.10	0.40
36:BA:17:G:H2'	36:BA:18:C:C6	2.56	0.40
36:BA:1952:A:C2	47:BO:22:ILE:HG23	2.55	0.40
1:CA:189(F):U:O2	17:CQ:63:ARG:NH2	2.54	0.40
56:BX:45:THR:O	56:BX:47:PHE:N	2.54	0.40
36:DA:455:C:N3	36:DA:472:A:H2'	2.36	0.40
1:CA:135:C:H2'	1:CA:136:C:H5'	2.02	0.40
1:AA:511:C:HO2'	1:AA:512:U:H6	1.65	0.40
39:DD:76:PRO:HG2	39:DD:98:VAL:HG21	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.56	0.40
3:CC:60:ALA:N	3:CC:63:ASN:OD1	2.54	0.40
36:BA:2149:G:O2'	36:BA:2150:U:H5'	2.21	0.40
40:BE:142:GLY:O	40:BE:143:ASN:ND2	2.54	0.40
1:CA:515:G:H2'	1:CA:516:U:O4'	2.21	0.40
1:AA:51:A:H4'	1:AA:52:G:C5'	2.52	0.40
36:DA:1462:C:H4'	36:DA:2703:C:O4'	2.20	0.40
37:DB:87:G:N2	37:DB:89:G:H3'	2.36	0.40
36:DA:2547:U:H2'	36:DA:2548:G:C8	2.56	0.40
36:BA:825:C:H2'	36:BA:826:U:O4'	2.21	0.40
38:BC:21:THR:OG1	38:BC:24:GLU:HG3	2.21	0.40
36:DA:1081:U:H2'	36:DA:1082:U:H6	1.87	0.40
36:BA:2693:A:H2'	36:BA:2694:G:H8	1.86	0.40
44:BJ:102:UNK:C	44:BJ:104:UNK:H	2.34	0.40
36:DA:724:U:O2'	36:DA:725:G:H5'	2.22	0.40
4:CD:15:GLU:HG2	4:CD:63:LYS:HG3	2.03	0.40
1:CA:552:U:O2	12:CL:31:PRO:HB3	2.20	0.40
36:BA:871:U:O2	36:BA:871:U:H2'	2.20	0.40
11:AK:91:ARG:HD2	11:AK:91:ARG:C	2.41	0.40
29:B3:50:VAL:O	29:B3:52:HIS:N	2.54	0.40
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.22	0.40
39:BD:33:LEU:HB3	39:BD:34:VAL:H	1.58	0.40
1:CA:1331:G:OP2	13:CM:23:TYR:CD2	2.74	0.40
28:D2:29:LYS:HE3	28:D2:32:LEU:CD2	2.51	0.40
34:B8:4:MET:CE	36:BA:592:G:H21	2.34	0.40
32:B6:25:LYS:CE	34:B8:34:TRP:HZ2	2.34	0.40
36:DA:593:G:H2'	36:DA:594:U:C6	2.56	0.40
42:DG:51:ARG:NH2	42:DG:52:ILE:HD11	2.36	0.40
32:D6:15:GLU:CG	32:D6:18:ARG:CZ	3.00	0.40
41:DF:123:LEU:HD12	41:DF:124:LEU:N	2.35	0.40
28:B2:60:LEU:HD23	28:B2:60:LEU:HA	1.94	0.40
36:BA:2106:G:C5	36:BA:2107:C:N3	2.89	0.40
43:BH:154:PRO:HB2	43:BH:155:SER:H	1.58	0.40
26:D0:10:THR:CG2	26:D0:12:ASN:HB2	2.51	0.40
1:CA:858:G:N1	1:CA:869:G:N7	2.69	0.40
41:DF:34:TRP:HB2	48:DP:10:PRO:HB2	2.04	0.40
32:B6:48:VAL:O	32:B6:49:HIS:HB2	2.21	0.40
36:BA:248:G:H5'	36:BA:250:G:N7	2.37	0.40
58:BZ:97:GLU:HA	58:BZ:127:LYS:HA	2.02	0.40
41:DF:32:LEU:CD2	41:DF:105:VAL:HG13	2.48	0.40
40:BE:101:ARG:HD2	40:BE:169:ASN:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:115:GLY:HA2	58:DZ:176:PRO:HA	2.03	0.40
25:CZ:277:LEU:CD1	25:CZ:279:GLU:N	2.84	0.40
38:BC:6:ARG:HH11	38:BC:34:THR:HB	1.87	0.40
4:AD:196:LEU:C	4:AD:198:VAL:H	2.25	0.40
1:CA:190:U:O2'	1:CA:191:G:H5'	2.21	0.40
26:D0:41:ARG:O	26:D0:42:GLY:O	2.40	0.40
58:DZ:119:GLU:C	58:DZ:120:ILE:O	2.58	0.40
50:DR:41:ALA:O	50:DR:42:LYS:C	2.60	0.40
9:AI:52:ALA:HB3	9:AI:95:LYS:HZ3	1.86	0.40
43:BH:44:VAL:CG1	43:BH:45:VAL:H	2.33	0.40
22:CW:44:G:C2'	22:CW:45:U:OP1	2.70	0.40
25:AZ:176:LEU:HB2	60:AZ:501:GDP:C5	2.57	0.40
16:CP:75:ARG:HH11	16:CP:75:ARG:HG3	1.85	0.40
2:AB:8:LYS:C	2:AB:10:LEU:N	2.74	0.40
40:DE:24:THR:HG21	40:DE:188:VAL:CG1	2.51	0.40
13:CM:3:ARG:CB	42:DG:113:ARG:HH22	2.34	0.40
4:AD:127:THR:HB	4:AD:147:ALA:O	2.21	0.40
51:DS:66:ALA:O	51:DS:69:VAL:HG12	2.22	0.40
3:CC:22:TRP:CH2	3:CC:32:LEU:HB2	2.57	0.40
52:BT:62:THR:HA	52:BT:74:ARG:O	2.21	0.40
36:BA:780:G:H2'	36:BA:782:A:N7	2.36	0.40
57:BY:91:GLU:HG2	57:BY:92:ASN:N	2.36	0.40
29:D3:54:VAL:CG1	29:D3:55:ARG:N	2.84	0.40
15:AO:16:ALA:C	15:AO:18:PHE:N	2.74	0.40
25:CZ:87:ASP:C	25:CZ:88:TYR:HD1	2.25	0.40
36:DA:2781:A:H5'	36:DA:2782:G:C5'	2.50	0.40
53:BU:10:ARG:O	53:BU:12:ARG:N	2.54	0.40
3:AC:36:ASP:OD1	3:AC:57:ILE:HG21	2.21	0.40
36:DA:1106:G:O2'	36:DA:1107:G:H5'	2.22	0.40
25:CZ:323:LEU:CD1	25:CZ:396:GLY:HA2	2.51	0.40
6:AF:22:GLU:C	6:AF:24:GLU:N	2.75	0.40
35:D9:29:ASN:C	35:D9:31:LYS:H	2.25	0.40
1:AA:1431:C:C2'	1:AA:1432:G:H5'	2.52	0.40
36:DA:710:G:H2'	36:DA:711:G:C8	2.57	0.40
36:DA:581:C:OP1	53:DU:33:ARG:HG3	2.21	0.40
1:CA:1312:G:O2'	1:CA:1313:U:H5'	2.21	0.40
43:BH:72:ILE:O	43:BH:75:ALA:N	2.54	0.40
36:BA:2467:C:C4'	49:BQ:123:HIS:ND1	2.84	0.40
26:D0:27:GLU:OE2	26:D0:69:PHE:HB2	2.22	0.40
1:CA:130:A:H1'	1:CA:263:A:O2'	2.20	0.40
2:CB:69:LEU:HB2	2:CB:159:PRO:HG2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:847:U:H2'	36:BA:848:G:H5"	2.04	0.40
1:CA:865:A:O2'	1:CA:866:C:H5'	2.21	0.40
36:DA:2223:G:H2'	36:DA:2224:G:C5'	2.52	0.40
41:DF:108:LYS:HD3	41:DF:108:LYS:H	1.85	0.40
17:CQ:17:LYS:HA	17:CQ:49:GLU:HG2	2.03	0.40
49:DQ:138:ASP:C	49:DQ:139:GLU:OE1	2.60	0.40
25:CZ:378:VAL:O	25:CZ:380:LEU:N	2.55	0.40
39:DD:97:TYR:HE1	39:DD:103:ARG:HB2	1.86	0.40
25:CZ:5:PHE:O	25:CZ:5:PHE:HD1	2.04	0.40
49:BQ:1:MET:O	49:BQ:2:LEU:HB2	2.21	0.40
47:DO:19:ILE:HG22	47:DO:43:VAL:HA	2.03	0.40
2:AB:230:VAL:HG23	2:AB:231:GLU:N	2.36	0.40
36:DA:2825:C:H2'	36:DA:2826:A:H5'	2.04	0.40
36:DA:406:G:O5'	36:DA:406:G:H8	2.05	0.40
1:AA:125:U:H2'	1:AA:126:G:C8	2.56	0.40
3:CC:195:VAL:HG12	3:CC:196:LEU:N	2.36	0.40
33:B7:48:LYS:HE2	33:B7:48:LYS:HB3	1.90	0.40
1:AA:373:A:O2'	1:AA:374:A:H5'	2.21	0.40
36:BA:2735:G:H2'	36:BA:2736:G:C8	2.56	0.40
58:DZ:76:LEU:HA	58:DZ:76:LEU:HD23	1.85	0.40
36:BA:1424:G:H2'	36:BA:1425:G:O4'	2.21	0.40
1:AA:617:G:H1	1:AA:623:C:H42	1.69	0.40
1:CA:1245:A:H2'	1:CA:1246:C:C6	2.56	0.40
36:DA:1635:G:H2'	36:DA:1636:C:C6	2.56	0.40
36:BA:2738:A:H2'	36:BA:2739:U:O5'	2.21	0.40
36:DA:688:U:H5'	36:DA:1780:A:C2	2.56	0.40
15:CO:85:LEU:HB2	15:CO:87:ILE:HG13	2.03	0.40
1:CA:1305:G:P	21:CU:2:GLY:N	2.95	0.40
28:D2:29:LYS:HD3	28:D2:57:ILE:HG21	2.03	0.40
28:D2:62:THR:CG2	36:DA:76:C:O2'	2.70	0.40
36:DA:1485:G:H2'	36:DA:1486:A:H8	1.87	0.40
32:B6:36:LEU:HD23	32:B6:36:LEU:C	2.42	0.40
2:AB:204:ASN:C	2:AB:204:ASN:HD22	2.23	0.40
52:BT:30:VAL:HA	52:BT:44:ASP:HA	2.03	0.40
36:BA:1544:A:O2'	36:BA:1545:A:H5'	2.22	0.40
42:BG:16:ARG:N	42:BG:17:PRO:CD	2.83	0.40
36:BA:2160:G:C5'	36:BA:2160:G:C8	2.99	0.40
40:BE:24:THR:HB	40:BE:186:GLY:HA2	2.03	0.40
51:DS:103:GLU:OE1	51:DS:103:GLU:N	2.47	0.40
54:DV:16:PRO:O	54:DV:96:ILE:O	2.40	0.40
1:AA:1148:U:O4'	9:AI:16:ARG:HD3	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:19:HIS:CD2	25:AZ:20:VAL:O	2.62	0.40
40:BE:3:GLY:O	40:BE:4:ILE:HB	2.21	0.40
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.83	0.40
1:CA:191:G:N3	20:CT:105:SER:HB2	2.36	0.40
36:BA:1053:C:N4	36:BA:1107:G:N2	2.69	0.40
38:BC:116:THR:CG2	38:BC:147:PHE:HA	2.49	0.40
38:BC:77:ILE:HG22	38:BC:119:VAL:HG21	2.04	0.40
38:BC:79:LYS:HD3	38:BC:119:VAL:CG1	2.51	0.40
36:DA:1052:C:O2'	36:DA:1053:C:P	2.79	0.40
10:CJ:82:ILE:HG22	10:CJ:82:ILE:O	2.22	0.40
22:AW:9:A:H2	22:AW:45:U:C4	2.35	0.40
43:DH:51:ARG:O	43:DH:52:VAL:HB	2.21	0.40
43:DH:54:ARG:CB	43:DH:55:PRO:HD2	2.42	0.40
4:CD:100:ARG:NH2	4:CD:118:ARG:NH1	2.56	0.40
36:DA:605:C:H1'	36:DA:657:U:O2'	2.22	0.40
1:CA:374:A:H2'	1:CA:375:U:H6	1.85	0.40
16:CP:23:ASP:OD1	16:CP:24:ALA:N	2.54	0.40
58:BZ:145:GLU:CG	58:BZ:146:ILE:N	2.85	0.40
54:BV:35:LEU:C	54:BV:37:VAL:N	2.73	0.40
36:DA:1495:A:H2'	36:DA:1496:A:H2	1.85	0.40
36:BA:2662:A:H2'	36:BA:2663:G:O4'	2.21	0.40
36:BA:583:G:C5	36:BA:584:C:C5	3.10	0.40
46:BN:42:TRP:CD1	53:BU:63:VAL:HG11	2.57	0.40
36:DA:547:A:H2'	36:DA:548:A:H8	1.86	0.40
37:DB:53:A:C5	37:DB:54:G:C8	3.10	0.40
36:DA:861:A:H2'	36:DA:862:G:H5'	2.04	0.40
58:BZ:107:THR:HA	58:BZ:108:PRO:HD2	1.85	0.40
4:CD:159:ARG:O	4:CD:163:GLU:N	2.55	0.40
52:DT:7:ILE:O	52:DT:10:VAL:HB	2.20	0.40
40:BE:176:ILE:HG22	40:BE:176:ILE:O	2.20	0.40
36:DA:2144:U:H4'	36:DA:2145:C:H5	1.87	0.40
24:AY:66:C:H4'	25:AZ:375:ILE:HD11	2.04	0.40
18:CR:59:SER:OG	18:CR:62:GLU:HG3	2.20	0.40
1:AA:1442(B):A:N7	52:BT:118:ARG:CD	2.84	0.40
36:BA:447:A:H4'	36:BA:449:A:N7	2.37	0.40
36:BA:2464:C:HO2'	36:BA:2465:C:C5'	2.33	0.40
1:CA:1125:U:C1'	10:CJ:5:ARG:NH2	2.84	0.40
13:AM:94:ARG:HE	19:AS:81:ARG:C	2.25	0.40
2:CB:127:ILE:O	2:CB:129:GLU:N	2.54	0.40
11:AK:38:ASN:ND2	11:AK:38:ASN:N	2.66	0.40
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:131:LEU:HD22	39:BD:136:ILE:HD13	2.04	0.40
18:AR:36:ASN:OD1	18:AR:39:VAL:HG23	2.22	0.40
53:BU:69:CYS:HB2	53:BU:74:LEU:HD11	2.02	0.40
5:CE:45:PHE:CD2	5:CE:47:LYS:HD2	2.56	0.40
47:DO:24:VAL:HA	47:DO:39:ILE:HG22	2.03	0.40
55:DW:20:VAL:HG23	55:DW:47:VAL:HG21	2.04	0.40
55:BW:55:ALA:O	55:BW:57:ASN:N	2.55	0.40
36:BA:729:G:C6	39:BD:208:LYS:HB2	2.57	0.40
46:BN:62:VAL:HG11	46:BN:67:LEU:HG	2.03	0.40
36:DA:1374:G:H2'	36:DA:1375:C:H6	1.86	0.40
9:AI:33:PHE:CE2	9:AI:47:LEU:HD21	2.57	0.40
36:BA:2008:C:H2'	36:BA:2009:G:H8	1.87	0.40
47:BO:28:SER:O	47:BO:29:ASN:CB	2.67	0.40
36:DA:18:C:O2'	53:DU:23:GLY:HA2	2.21	0.40
29:D3:26:LEU:HB2	29:D3:28:LEU:HD12	2.03	0.40
2:CB:236:TYR:O	2:CB:238:LEU:N	2.55	0.40
1:CA:538:G:H3'	12:CL:115:LYS:NZ	2.37	0.40
18:CR:40:LEU:C	18:CR:42:ARG:N	2.75	0.40
7:AG:88:PRO:HB2	7:AG:145:ALA:HB1	2.03	0.40
1:AA:827:U:C2	1:AA:870:U:C4	3.10	0.40
55:BW:35:ILE:C	55:BW:37:ARG:N	2.75	0.40
28:B2:30:ARG:NH1	56:BX:5:TYR:HE2	2.20	0.40
36:DA:185:U:C2	36:DA:212:G:N2	2.90	0.40
55:DW:35:ILE:C	55:DW:37:ARG:N	2.75	0.40
1:CA:995:C:O2'	1:CA:996:A:P	2.80	0.40
42:BG:152:LEU:HG	42:BG:152:LEU:O	2.22	0.40
36:BA:332:A:H4'	36:BA:333:G:OP1	2.21	0.40
36:BA:271(N):U:H5'	36:BA:271(O):C:H5	1.86	0.40
37:BB:78:A:C2	37:BB:100:A:C4	3.10	0.40
1:CA:1477:C:H2'	1:CA:1478:C:C6	2.55	0.40
36:DA:640:C:C4	36:DA:641:C:N4	2.90	0.40
1:AA:1245:A:H2'	1:AA:1246:C:C6	2.56	0.40
3:CC:148:GLY:HA3	3:CC:172:ARG:O	2.22	0.40
36:BA:2771:C:H2'	36:BA:2772:C:C6	2.57	0.40
2:AB:193:ASP:OD1	2:AB:193:ASP:O	2.39	0.40
25:AZ:214:VAL:O	25:AZ:214:VAL:HG13	2.22	0.40
13:CM:16:ASP:OD1	13:CM:16:ASP:N	2.53	0.40
18:CR:76:LEU:HD12	18:CR:76:LEU:HA	1.77	0.40
6:AF:40:VAL:O	6:AF:40:VAL:HG13	2.22	0.40
1:CA:945:G:H2'	1:CA:945:G:N3	2.37	0.40
1:AA:256:U:H2'	1:AA:257:G:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1427:A:H4'	36:BA:1428:C:O4'	2.22	0.40
1:CA:695:A:H2'	1:CA:696:A:C8	2.57	0.40
51:DS:70:GLY:C	51:DS:72:ALA:N	2.75	0.40

All (4) 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_445]	1.97	0.23
2:AB:65:GLY:O	38:BC:27:ARG:NH2[2_646]	2.02	0.18
2:CB:66:GLY:CA	38:DC:27:ARG:NH2[2_445]	2.09	0.11
2:AB:66:GLY:CA	38:BC:27:ARG:NH2[2_646]	2.18	0.02

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%)	161 (69%)	48 (21%)	23 (10%)	1 4
2	CB	232/256 (91%)	164 (71%)	45 (19%)	23 (10%)	1 4
3	AC	204/239 (85%)	169 (83%)	22 (11%)	13 (6%)	2 10
3	CC	204/239 (85%)	171 (84%)	21 (10%)	12 (6%)	2 12
4	AD	206/209 (99%)	149 (72%)	39 (19%)	18 (9%)	1 5
4	CD	206/209 (99%)	149 (72%)	38 (18%)	19 (9%)	1 4
5	AE	148/162 (91%)	136 (92%)	10 (7%)	2 (1%)	14 48
5	CE	148/162 (91%)	136 (92%)	9 (6%)	3 (2%)	9 38
6	AF	99/101 (98%)	72 (73%)	18 (18%)	9 (9%)	1 5
6	CF	99/101 (98%)	73 (74%)	17 (17%)	9 (9%)	1 5
7	AG	153/156 (98%)	127 (83%)	22 (14%)	4 (3%)	7 32

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
7	CG	153/156 (98%)	129 (84%)	21 (14%)	3 (2%)	9 38
8	AH	136/138 (99%)	123 (90%)	11 (8%)	2 (2%)	13 46
8	CH	136/138 (99%)	123 (90%)	11 (8%)	2 (2%)	13 46
9	AI	125/128 (98%)	83 (66%)	34 (27%)	8 (6%)	2 10
9	CI	125/128 (98%)	83 (66%)	35 (28%)	7 (6%)	2 13
10	AJ	96/105 (91%)	69 (72%)	21 (22%)	6 (6%)	2 10
10	CJ	96/105 (91%)	71 (74%)	19 (20%)	6 (6%)	2 10
11	AK	117/129 (91%)	98 (84%)	18 (15%)	1 (1%)	21 61
11	CK	117/129 (91%)	99 (85%)	17 (14%)	1 (1%)	21 61
12	AL	122/131 (93%)	104 (85%)	10 (8%)	8 (7%)	1 9
12	CL	122/131 (93%)	104 (85%)	10 (8%)	8 (7%)	1 9
13	AM	122/126 (97%)	85 (70%)	27 (22%)	10 (8%)	1 6
13	CM	122/126 (97%)	85 (70%)	28 (23%)	9 (7%)	1 7
14	AN	58/61 (95%)	42 (72%)	9 (16%)	7 (12%)	0 2
14	CN	58/61 (95%)	43 (74%)	7 (12%)	8 (14%)	0 1
15	AO	86/89 (97%)	75 (87%)	9 (10%)	2 (2%)	8 35
15	CO	86/89 (97%)	75 (87%)	9 (10%)	2 (2%)	8 35
16	AP	81/88 (92%)	58 (72%)	17 (21%)	6 (7%)	1 7
16	CP	81/88 (92%)	59 (73%)	16 (20%)	6 (7%)	1 7
17	AQ	97/105 (92%)	85 (88%)	7 (7%)	5 (5%)	2 15
17	CQ	97/105 (92%)	85 (88%)	7 (7%)	5 (5%)	2 15
18	AR	68/88 (77%)	55 (81%)	11 (16%)	2 (3%)	6 29
18	CR	68/88 (77%)	56 (82%)	10 (15%)	2 (3%)	6 29
19	AS	76/93 (82%)	48 (63%)	15 (20%)	13 (17%)	0 0
19	CS	76/93 (82%)	47 (62%)	16 (21%)	13 (17%)	0 0
20	AT	97/106 (92%)	67 (69%)	22 (23%)	8 (8%)	1 6
20	CT	97/106 (92%)	67 (69%)	21 (22%)	9 (9%)	1 4
21	AU	22/27 (82%)	17 (77%)	4 (18%)	1 (4%)	3 17
21	CU	22/27 (82%)	17 (77%)	4 (18%)	1 (4%)	3 17
25	AZ	381/405 (94%)	263 (69%)	80 (21%)	38 (10%)	1 4
25	CZ	381/405 (94%)	266 (70%)	77 (20%)	38 (10%)	1 4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
26	B0	82/85 (96%)	68 (83%)	10 (12%)	4 (5%)	3 16
26	D0	82/85 (96%)	68 (83%)	10 (12%)	4 (5%)	3 16
27	B1	91/98 (93%)	68 (75%)	13 (14%)	10 (11%)	0 3
27	D1	91/98 (93%)	63 (69%)	10 (11%)	18 (20%)	0 0
28	B2	69/72 (96%)	46 (67%)	17 (25%)	6 (9%)	1 5
28	D2	69/72 (96%)	37 (54%)	16 (23%)	16 (23%)	0 0
29	B3	57/60 (95%)	46 (81%)	6 (10%)	5 (9%)	1 5
29	D3	57/60 (95%)	46 (81%)	6 (10%)	5 (9%)	1 5
30	B4	42/71 (59%)	24 (57%)	11 (26%)	7 (17%)	0 0
30	D4	42/71 (59%)	24 (57%)	11 (26%)	7 (17%)	0 0
31	B5	57/60 (95%)	41 (72%)	7 (12%)	9 (16%)	0 0
31	D5	57/60 (95%)	40 (70%)	8 (14%)	9 (16%)	0 0
32	B6	48/54 (89%)	23 (48%)	8 (17%)	17 (35%)	0 0
32	D6	48/54 (89%)	23 (48%)	8 (17%)	17 (35%)	0 0
33	B7	46/49 (94%)	39 (85%)	7 (15%)	0	100 100
33	D7	46/49 (94%)	39 (85%)	7 (15%)	0	100 100
34	B8	61/65 (94%)	43 (70%)	12 (20%)	6 (10%)	1 4
34	D8	61/65 (94%)	45 (74%)	10 (16%)	6 (10%)	1 4
35	B9	35/37 (95%)	25 (71%)	7 (20%)	3 (9%)	1 5
35	D9	35/37 (95%)	25 (71%)	7 (20%)	3 (9%)	1 5
38	BC	226/229 (99%)	170 (75%)	40 (18%)	16 (7%)	1 8
38	DC	226/229 (99%)	170 (75%)	40 (18%)	16 (7%)	1 8
39	BD	273/276 (99%)	214 (78%)	33 (12%)	26 (10%)	1 4
39	DD	273/276 (99%)	214 (78%)	34 (12%)	25 (9%)	1 4
40	BE	202/206 (98%)	125 (62%)	46 (23%)	31 (15%)	0 0
40	DE	202/206 (98%)	125 (62%)	47 (23%)	30 (15%)	0 1
41	BF	205/210 (98%)	153 (75%)	23 (11%)	29 (14%)	0 1
41	DF	205/210 (98%)	153 (75%)	23 (11%)	29 (14%)	0 1
42	BG	179/182 (98%)	103 (58%)	45 (25%)	31 (17%)	0 0
42	DG	179/182 (98%)	111 (62%)	40 (22%)	28 (16%)	0 0
43	BH	157/180 (87%)	105 (67%)	28 (18%)	24 (15%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
43	DH	157/180 (87%)	105 (67%)	29 (18%)	23 (15%)	0 1
46	BN	136/140 (97%)	85 (62%)	32 (24%)	19 (14%)	0 1
46	DN	136/140 (97%)	86 (63%)	32 (24%)	18 (13%)	0 1
47	BO	120/122 (98%)	100 (83%)	15 (12%)	5 (4%)	3 19
47	DO	120/122 (98%)	100 (83%)	15 (12%)	5 (4%)	3 19
48	BP	144/150 (96%)	72 (50%)	31 (22%)	41 (28%)	0 0
48	DP	144/150 (96%)	71 (49%)	33 (23%)	40 (28%)	0 0
49	BQ	139/141 (99%)	108 (78%)	25 (18%)	6 (4%)	3 19
49	DQ	139/141 (99%)	108 (78%)	25 (18%)	6 (4%)	3 19
50	BR	115/118 (98%)	81 (70%)	15 (13%)	19 (16%)	0 0
50	DR	115/118 (98%)	82 (71%)	14 (12%)	19 (16%)	0 0
51	BS	96/112 (86%)	44 (46%)	31 (32%)	21 (22%)	0 0
51	DS	96/112 (86%)	44 (46%)	32 (33%)	20 (21%)	0 0
52	BT	135/146 (92%)	85 (63%)	24 (18%)	26 (19%)	0 0
52	DT	135/146 (92%)	85 (63%)	24 (18%)	26 (19%)	0 0
53	BU	115/118 (98%)	82 (71%)	28 (24%)	5 (4%)	3 19
53	DU	115/118 (98%)	82 (71%)	28 (24%)	5 (4%)	3 19
54	BV	99/101 (98%)	67 (68%)	19 (19%)	13 (13%)	0 1
54	DV	99/101 (98%)	67 (68%)	19 (19%)	13 (13%)	0 1
55	BW	111/113 (98%)	82 (74%)	23 (21%)	6 (5%)	2 14
55	DW	111/113 (98%)	84 (76%)	21 (19%)	6 (5%)	2 14
56	BX	90/96 (94%)	63 (70%)	16 (18%)	11 (12%)	0 2
56	DX	90/96 (94%)	64 (71%)	15 (17%)	11 (12%)	0 2
57	BY	98/110 (89%)	32 (33%)	36 (37%)	30 (31%)	0 0
57	DY	98/110 (89%)	32 (33%)	37 (38%)	29 (30%)	0 0
58	BZ	174/206 (84%)	111 (64%)	36 (21%)	27 (16%)	0 0
58	DZ	174/206 (84%)	119 (68%)	31 (18%)	24 (14%)	0 1
All	All	12256/13098 (94%)	8805 (72%)	2168 (18%)	1283 (10%)	1 3

All (1283) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL

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Mol	Chain	Res	Type
2	AB	18	GLY
2	AB	130	ARG
2	AB	234	PRO
3	AC	12	LEU
3	AC	45	LYS
3	AC	47	LEU
3	AC	146	ALA
4	AD	26	CYS
4	AD	27	TYR
4	AD	30	LYS
4	AD	35	ARG
4	AD	44	GLY
4	AD	125	HIS
5	AE	64	ARG
6	AF	39	LYS
6	AF	44	GLY
6	AF	64	GLN
7	AG	7	ALA
7	AG	8	GLU
8	AH	2	LEU
9	AI	23	ASN
9	AI	41	VAL
9	AI	89	ASN
9	AI	108	VAL
9	AI	118	LYS
10	AJ	30	SER
10	AJ	55	LYS
12	AL	46	LYS
12	AL	127	GLU
13	AM	12	ASN
13	AM	83	ASP
13	AM	117	VAL
14	AN	14	PRO
14	AN	15	LYS
14	AN	59	ALA
15	AO	3	ILE
19	AS	5	LEU
19	AS	6	LYS
19	AS	12	ASP
19	AS	14	HIS
19	AS	26	GLY
19	AS	28	LYS

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Mol	Chain	Res	Type
19	AS	67	VAL
20	AT	48	LYS
20	AT	73	HIS
20	AT	75	ASN
20	AT	99	LEU
25	AZ	41	ASN
25	AZ	69	GLU
25	AZ	130	TYR
25	AZ	141	VAL
25	AZ	167	GLU
25	AZ	196	VAL
25	AZ	211	PRO
25	AZ	280	GLY
25	AZ	329	GLY
27	B1	39	LYS
27	B1	64	ALA
27	B1	66	HIS
27	B1	83	GLU
28	B2	48	HIS
28	B2	68	ARG
29	B3	27	GLY
30	B4	26	SER
31	B5	4	HIS
31	B5	24	ALA
31	B5	25	LEU
31	B5	49	CYS
31	B5	57	VAL
32	B6	16	CYS
32	B6	18	ARG
32	B6	20	ASN
32	B6	27	LYS
32	B6	28	ARG
32	B6	31	PRO
32	B6	33	LYS
32	B6	45	LYS
32	B6	53	LYS
34	B8	31	HIS
34	B8	34	TRP
34	B8	43	GLN
34	B8	49	VAL
38	BC	128	GLY
38	BC	160	ARG

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Mol	Chain	Res	Type
38	BC	167	LYS
39	BD	31	LYS
39	BD	33	LEU
39	BD	42	GLY
39	BD	58	HIS
39	BD	246	PRO
39	BD	267	SER
39	BD	268	ARG
39	BD	273	ARG
40	BE	2	LYS
40	BE	4	ILE
40	BE	36	ARG
40	BE	41	LYS
40	BE	45	THR
40	BE	53	PRO
40	BE	66	HIS
40	BE	69	LYS
40	BE	76	ARG
40	BE	77	ILE
40	BE	82	ARG
40	BE	88	GLY
40	BE	197	ILE
41	BF	10	PRO
41	BF	14	PRO
41	BF	21	ALA
41	BF	89	VAL
41	BF	132	VAL
41	BF	146	ALA
41	BF	168	ARG
41	BF	175	THR
41	BF	176	LEU
42	BG	3	LEU
42	BG	11	TYR
42	BG	25	TYR
42	BG	71	THR
42	BG	80	PHE
42	BG	81	LYS
42	BG	82	LEU
42	BG	87	PRO
42	BG	96	ARG
42	BG	120	LEU
42	BG	126	ASP

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Mol	Chain	Res	Type
42	BG	129	GLY
43	BH	46	GLU
43	BH	55	PRO
43	BH	84	SER
43	BH	138	LYS
43	BH	158	HIS
43	BH	159	GLU
43	BH	169	VAL
46	BN	8	GLN
46	BN	42	TRP
46	BN	58	ASP
46	BN	64	GLY
46	BN	130	HIS
47	BO	29	ASN
47	BO	48	PRO
48	BP	10	PRO
48	BP	13	ASN
48	BP	17	LYS
48	BP	19	VAL
48	BP	21	ARG
48	BP	40	SER
48	BP	47	ASP
48	BP	52	GLU
48	BP	58	THR
48	BP	65	ARG
48	BP	67	MET
48	BP	107	LYS
48	BP	111	ARG
48	BP	132	LYS
48	BP	146	VAL
48	BP	147	LEU
48	BP	149	GLU
49	BQ	2	LEU
49	BQ	19	GLY
49	BQ	27	VAL
49	BQ	137	TYR
50	BR	4	LEU
50	BR	6	SER
50	BR	11	ASN
50	BR	29	LEU
50	BR	30	THR
50	BR	117	VAL

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Mol	Chain	Res	Type
51	BS	23	ARG
51	BS	51	ALA
51	BS	57	LYS
51	BS	59	LYS
51	BS	62	LYS
51	BS	94	TYR
51	BS	97	ARG
51	BS	98	VAL
52	BT	2	ASN
52	BT	24	PRO
52	BT	26	ASP
52	BT	27	THR
52	BT	28	VAL
52	BT	32	TYR
52	BT	55	ASN
52	BT	80	SER
52	BT	89	VAL
52	BT	91	ARG
52	BT	92	GLY
52	BT	93	ARG
52	BT	95	ARG
52	BT	105	LEU
52	BT	107	ASP
52	BT	112	ARG
53	BU	90	VAL
53	BU	91	ASP
53	BU	93	LYS
54	BV	16	PRO
54	BV	18	LEU
55	BW	63	ASP
56	BX	12	VAL
57	BY	3	VAL
57	BY	50	ARG
57	BY	51	VAL
57	BY	56	PRO
57	BY	60	PHE
57	BY	74	PRO
57	BY	75	ILE
57	BY	78	ALA
57	BY	82	PRO
57	BY	86	ARG
58	BZ	17	ALA

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Mol	Chain	Res	Type
58	BZ	82	ARG
58	BZ	113	ALA
58	BZ	124	ILE
58	BZ	145	GLU
58	BZ	153	SER
58	BZ	159	PRO
58	BZ	163	LEU
58	BZ	165	VAL
2	CB	8	LYS
2	CB	15	VAL
2	CB	18	GLY
2	CB	77	ALA
2	CB	130	ARG
2	CB	234	PRO
3	CC	12	LEU
3	CC	45	LYS
3	CC	47	LEU
3	CC	146	ALA
4	CD	26	CYS
4	CD	27	TYR
4	CD	30	LYS
4	CD	35	ARG
4	CD	44	GLY
4	CD	125	HIS
5	CE	64	ARG
6	CF	39	LYS
6	CF	44	GLY
6	CF	64	GLN
7	CG	7	ALA
7	CG	8	GLU
8	CH	2	LEU
9	CI	23	ASN
9	CI	41	VAL
9	CI	89	ASN
9	CI	108	VAL
9	CI	118	LYS
10	CJ	30	SER
10	CJ	36	GLY
10	CJ	55	LYS
12	CL	46	LYS
12	CL	127	GLU
13	CM	12	ASN

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Mol	Chain	Res	Type
13	CM	83	ASP
13	CM	117	VAL
14	CN	14	PRO
14	CN	15	LYS
14	CN	59	ALA
15	CO	3	ILE
19	CS	5	LEU
19	CS	6	LYS
19	CS	12	ASP
19	CS	14	HIS
19	CS	26	GLY
19	CS	28	LYS
19	CS	67	VAL
20	CT	48	LYS
20	CT	73	HIS
20	CT	75	ASN
20	CT	99	LEU
25	CZ	41	ASN
25	CZ	69	GLU
25	CZ	130	TYR
25	CZ	141	VAL
25	CZ	167	GLU
25	CZ	196	VAL
25	CZ	211	PRO
25	CZ	280	GLY
25	CZ	300	ARG
25	CZ	329	GLY
27	D1	30	VAL
27	D1	45	ASN
27	D1	67	ILE
27	D1	76	ARG
27	D1	83	GLU
28	D2	3	LEU
28	D2	9	GLN
28	D2	16	LEU
28	D2	25	VAL
28	D2	27	GLU
28	D2	41	ILE
28	D2	57	ILE
28	D2	66	GLU
28	D2	68	ARG
28	D2	71	ASN

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Mol	Chain	Res	Type
29	D3	27	GLY
30	D4	26	SER
31	D5	4	HIS
31	D5	24	ALA
31	D5	25	LEU
31	D5	49	CYS
31	D5	57	VAL
32	D6	16	CYS
32	D6	18	ARG
32	D6	20	ASN
32	D6	27	LYS
32	D6	28	ARG
32	D6	31	PRO
32	D6	33	LYS
32	D6	45	LYS
32	D6	47	THR
32	D6	53	LYS
34	D8	31	HIS
34	D8	34	TRP
34	D8	43	GLN
34	D8	49	VAL
38	DC	128	GLY
38	DC	160	ARG
39	DD	31	LYS
39	DD	33	LEU
39	DD	42	GLY
39	DD	58	HIS
39	DD	246	PRO
39	DD	267	SER
39	DD	268	ARG
39	DD	273	ARG
40	DE	2	LYS
40	DE	4	ILE
40	DE	36	ARG
40	DE	41	LYS
40	DE	45	THR
40	DE	53	PRO
40	DE	66	HIS
40	DE	69	LYS
40	DE	76	ARG
40	DE	77	ILE
40	DE	82	ARG

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Mol	Chain	Res	Type
40	DE	88	GLY
40	DE	189	PRO
40	DE	197	ILE
41	DF	10	PRO
41	DF	14	PRO
41	DF	21	ALA
41	DF	89	VAL
41	DF	132	VAL
41	DF	146	ALA
41	DF	168	ARG
41	DF	175	THR
41	DF	176	LEU
42	DG	81	LYS
42	DG	87	PRO
42	DG	103	LEU
42	DG	108	ASN
42	DG	115	ARG
42	DG	126	ASP
42	DG	137	GLU
42	DG	138	GLN
42	DG	147	ASP
42	DG	148	MET
43	DH	46	GLU
43	DH	55	PRO
43	DH	84	SER
43	DH	138	LYS
43	DH	158	HIS
43	DH	159	GLU
43	DH	169	VAL
46	DN	8	GLN
46	DN	42	TRP
46	DN	58	ASP
46	DN	64	GLY
46	DN	130	HIS
47	DO	29	ASN
47	DO	48	PRO
48	DP	10	PRO
48	DP	13	ASN
48	DP	17	LYS
48	DP	19	VAL
48	DP	21	ARG
48	DP	40	SER

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Mol	Chain	Res	Type
48	DP	47	ASP
48	DP	52	GLU
48	DP	58	THR
48	DP	65	ARG
48	DP	67	MET
48	DP	107	LYS
48	DP	111	ARG
48	DP	132	LYS
48	DP	146	VAL
48	DP	147	LEU
48	DP	149	GLU
49	DQ	2	LEU
49	DQ	19	GLY
49	DQ	27	VAL
49	DQ	137	TYR
50	DR	4	LEU
50	DR	6	SER
50	DR	11	ASN
50	DR	29	LEU
50	DR	30	THR
50	DR	117	VAL
51	DS	23	ARG
51	DS	51	ALA
51	DS	57	LYS
51	DS	59	LYS
51	DS	62	LYS
51	DS	94	TYR
51	DS	97	ARG
51	DS	98	VAL
52	DT	2	ASN
52	DT	24	PRO
52	DT	26	ASP
52	DT	27	THR
52	DT	28	VAL
52	DT	32	TYR
52	DT	55	ASN
52	DT	80	SER
52	DT	89	VAL
52	DT	91	ARG
52	DT	92	GLY
52	DT	93	ARG
52	DT	95	ARG

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Mol	Chain	Res	Type
52	DT	105	LEU
52	DT	107	ASP
52	DT	112	ARG
53	DU	90	VAL
53	DU	91	ASP
53	DU	93	LYS
54	DV	16	PRO
54	DV	18	LEU
55	DW	63	ASP
56	DX	12	VAL
57	DY	3	VAL
57	DY	50	ARG
57	DY	51	VAL
57	DY	56	PRO
57	DY	60	PHE
57	DY	74	PRO
57	DY	75	ILE
57	DY	78	ALA
57	DY	82	PRO
57	DY	86	ARG
58	DZ	81	ARG
58	DZ	113	ALA
58	DZ	120	ILE
58	DZ	158	PRO
58	DZ	161	VAL
58	DZ	163	LEU
2	AB	8	LYS
2	AB	77	ALA
2	AB	110	GLN
2	AB	127	ILE
2	AB	129	GLU
2	AB	230	VAL
2	AB	238	LEU
3	AC	26	LYS
4	AD	3	ARG
4	AD	153	ARG
4	AD	181	MET
6	AF	45	LEU
6	AF	62	TRP
9	AI	44	VAL
9	AI	94	ALA
10	AJ	27	ALA

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Mol	Chain	Res	Type
10	AJ	36	GLY
11	AK	128	ALA
12	AL	39	VAL
13	AM	7	VAL
13	AM	67	GLU
14	AN	16	PHE
14	AN	20	ALA
14	AN	22	THR
17	AQ	13	ASP
17	AQ	68	ARG
20	AT	95	ALA
25	AZ	8	THR
25	AZ	35	ALA
25	AZ	146	LEU
25	AZ	169	PRO
25	AZ	300	ARG
25	AZ	301	GLY
25	AZ	310	ILE
25	AZ	374	LEU
25	AZ	379	ALA
26	B0	42	GLY
27	B1	28	GLY
27	B1	85	LEU
29	B3	30	ARG
29	B3	51	ALA
31	B5	37	LYS
31	B5	52	TYR
32	B6	46	HIS
32	B6	47	THR
34	B8	3	LYS
34	B8	33	ASN
38	BC	36	LYS
38	BC	37	PHE
38	BC	77	ILE
38	BC	79	LYS
38	BC	94	VAL
38	BC	117	PRO
38	BC	119	VAL
39	BD	24	ILE
39	BD	34	VAL
39	BD	127	VAL
40	BE	35	GLN

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Mol	Chain	Res	Type
40	BE	57	LYS
40	BE	71	GLY
40	BE	72	VAL
40	BE	117	MET
40	BE	130	GLY
40	BE	185	LYS
40	BE	189	PRO
41	BF	7	TYR
41	BF	26	ALA
41	BF	82	ILE
41	BF	83	PHE
41	BF	86	GLY
41	BF	88	VAL
41	BF	134	GLY
41	BF	169	ASN
42	BG	35	GLU
42	BG	75	LYS
42	BG	79	ASN
42	BG	84	LYS
42	BG	97	ASP
42	BG	115	ARG
42	BG	127	GLY
42	BG	128	ARG
42	BG	151	ALA
43	BH	24	VAL
43	BH	44	VAL
43	BH	81	GLU
43	BH	154	PRO
46	BN	23	LEU
46	BN	47	ALA
46	BN	63	THR
46	BN	76	SER
46	BN	129	PRO
47	BO	5	GLN
47	BO	49	ARG
48	BP	15	ARG
48	BP	31	ALA
48	BP	33	ARG
48	BP	34	GLY
48	BP	35	HIS
48	BP	56	SER
48	BP	59	LEU

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Mol	Chain	Res	Type
48	BP	116	GLY
48	BP	148	LEU
50	BR	3	HIS
50	BR	45	ARG
50	BR	57	ARG
50	BR	60	LEU
50	BR	88	ARG
50	BR	104	ARG
50	BR	107	ASP
51	BS	13	ARG
51	BS	17	ARG
51	BS	63	THR
51	BS	80	LEU
51	BS	96	GLY
51	BS	103	GLU
51	BS	105	ALA
52	BT	17	THR
52	BT	41	ARG
52	BT	104	ASN
52	BT	129	ARG
53	BU	77	SER
54	BV	46	VAL
54	BV	62	LEU
55	BW	18	ARG
55	BW	60	ASN
55	BW	67	ASP
56	BX	7	VAL
56	BX	62	LYS
57	BY	8	LYS
57	BY	17	SER
57	BY	26	LYS
57	BY	39	VAL
57	BY	42	VAL
57	BY	63	LYS
57	BY	65	ALA
57	BY	66	PRO
57	BY	68	HIS
57	BY	85	VAL
58	BZ	9	TYR
58	BZ	108	PRO
58	BZ	110	GLY
58	BZ	111	VAL

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Mol	Chain	Res	Type
58	BZ	177	PRO
2	CB	110	GLN
2	CB	127	ILE
2	CB	129	GLU
2	CB	230	VAL
2	CB	238	LEU
3	CC	26	LYS
4	CD	3	ARG
4	CD	153	ARG
4	CD	181	MET
6	CF	62	TRP
9	CI	44	VAL
10	CJ	27	ALA
11	CK	128	ALA
12	CL	39	VAL
13	CM	7	VAL
13	CM	67	GLU
14	CN	20	ALA
14	CN	22	THR
17	CQ	13	ASP
17	CQ	68	ARG
20	CT	95	ALA
25	CZ	35	ALA
25	CZ	146	LEU
25	CZ	169	PRO
25	CZ	301	GLY
25	CZ	310	ILE
25	CZ	326	GLU
25	CZ	374	LEU
25	CZ	379	ALA
26	D0	42	GLY
27	D1	18	ILE
27	D1	52	ARG
27	D1	55	GLY
27	D1	78	LYS
28	D2	19	VAL
28	D2	44	LEU
29	D3	30	ARG
29	D3	51	ALA
31	D5	37	LYS
31	D5	52	TYR
32	D6	46	HIS

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Mol	Chain	Res	Type
34	D8	3	LYS
38	DC	77	ILE
38	DC	79	LYS
38	DC	94	VAL
38	DC	117	PRO
38	DC	119	VAL
38	DC	167	LYS
39	DD	24	ILE
39	DD	34	VAL
39	DD	127	VAL
40	DE	35	GLN
40	DE	57	LYS
40	DE	71	GLY
40	DE	72	VAL
40	DE	117	MET
40	DE	130	GLY
40	DE	185	LYS
41	DF	7	TYR
41	DF	26	ALA
41	DF	82	ILE
41	DF	86	GLY
41	DF	134	GLY
41	DF	169	ASN
42	DG	3	LEU
42	DG	10	LYS
42	DG	14	GLU
42	DG	84	LYS
42	DG	96	ARG
43	DH	24	VAL
43	DH	44	VAL
43	DH	81	GLU
43	DH	154	PRO
46	DN	23	LEU
46	DN	47	ALA
46	DN	63	THR
46	DN	76	SER
46	DN	129	PRO
47	DO	49	ARG
48	DP	15	ARG
48	DP	20	GLY
48	DP	31	ALA
48	DP	33	ARG

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Mol	Chain	Res	Type
48	DP	34	GLY
48	DP	35	HIS
48	DP	56	SER
48	DP	59	LEU
48	DP	116	GLY
48	DP	148	LEU
50	DR	3	HIS
50	DR	42	LYS
50	DR	45	ARG
50	DR	57	ARG
50	DR	60	LEU
50	DR	88	ARG
50	DR	104	ARG
50	DR	107	ASP
51	DS	13	ARG
51	DS	17	ARG
51	DS	63	THR
51	DS	80	LEU
51	DS	96	GLY
51	DS	103	GLU
51	DS	105	ALA
52	DT	17	THR
52	DT	41	ARG
52	DT	104	ASN
52	DT	129	ARG
53	DU	77	SER
54	DV	46	VAL
54	DV	62	LEU
55	DW	18	ARG
55	DW	60	ASN
55	DW	67	ASP
56	DX	7	VAL
57	DY	8	LYS
57	DY	17	SER
57	DY	26	LYS
57	DY	39	VAL
57	DY	42	VAL
57	DY	63	LYS
57	DY	66	PRO
57	DY	68	HIS
57	DY	85	VAL
58	DZ	30	ASN

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Mol	Chain	Res	Type
58	DZ	61	LEU
58	DZ	79	ARG
58	DZ	142	SER
58	DZ	146	ILE
58	DZ	152	ALA
2	AB	9	GLU
2	AB	20	GLU
2	AB	126	GLU
2	AB	128	GLU
2	AB	153	ARG
2	AB	204	ASN
2	AB	232	PRO
3	AC	65	ALA
4	AD	4	TYR
6	AF	54	LYS
6	AF	79	LEU
7	AG	53	LYS
12	AL	62	SER
13	AM	112	GLY
13	AM	120	LYS
16	AP	26	ARG
16	AP	47	ASP
16	AP	68	ASP
16	AP	81	ARG
17	AQ	34	LYS
17	AQ	49	GLU
18	AR	41	LYS
19	AS	29	ARG
19	AS	46	GLY
21	AU	3	LYS
25	AZ	23	GLY
25	AZ	65	THR
25	AZ	85	HIS
25	AZ	191	GLY
25	AZ	285	ASN
25	AZ	326	GLU
26	B0	20	ARG
26	B0	75	LEU
27	B1	52	ARG
27	B1	53	VAL
27	B1	91	LYS
28	B2	22	GLU

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Mol	Chain	Res	Type
28	B2	35	LEU
28	B2	69	ARG
30	B4	8	LYS
30	B4	34	GLU
31	B5	53	ALA
32	B6	17	LYS
32	B6	23	THR
35	B9	30	PRO
35	B9	35	ARG
35	B9	36	GLN
38	BC	109	ASP
38	BC	118	ASP
39	BD	27	THR
39	BD	30	GLU
39	BD	35	LYS
39	BD	242	ARG
40	BE	54	GLN
40	BE	56	PRO
40	BE	61	ARG
40	BE	68	ALA
40	BE	75	VAL
41	BF	79	GLY
41	BF	127	GLU
41	BF	133	ASN
41	BF	178	PRO
41	BF	206	ILE
42	BG	150	ASP
43	BH	47	GLU
43	BH	52	VAL
46	BN	57	ALA
48	BP	9	ASN
48	BP	20	GLY
48	BP	25	SER
48	BP	39	LYS
48	BP	57	THR
48	BP	70	GLN
48	BP	122	PRO
48	BP	131	SER
49	BQ	54	MET
50	BR	14	SER
50	BR	42	LYS
50	BR	58	GLY

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Mol	Chain	Res	Type
50	BR	105	ARG
51	BS	14	VAL
51	BS	88	ASP
52	BT	36	GLU
54	BV	29	PRO
54	BV	48	GLY
54	BV	56	SER
55	BW	56	ALA
56	BX	4	ALA
56	BX	11	PRO
56	BX	19	ALA
57	BY	53	PRO
57	BY	77	PRO
57	BY	81	LYS
58	BZ	24	LEU
58	BZ	156	LYS
58	BZ	166	SER
2	CB	9	GLU
2	CB	20	GLU
2	CB	126	GLU
2	CB	128	GLU
2	CB	153	ARG
2	CB	204	ASN
2	CB	232	PRO
3	CC	65	ALA
3	CC	96	GLY
4	CD	4	TYR
4	CD	201	GLN
6	CF	45	LEU
6	CF	54	LYS
6	CF	79	LEU
8	CH	83	ILE
9	CI	94	ALA
12	CL	62	SER
13	CM	112	GLY
13	CM	120	LYS
14	CN	16	PHE
16	CP	47	ASP
16	CP	81	ARG
17	CQ	49	GLU
18	CR	41	LYS
19	CS	29	ARG

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Mol	Chain	Res	Type
19	CS	46	GLY
20	CT	14	LYS
21	CU	3	LYS
25	CZ	8	THR
25	CZ	23	GLY
25	CZ	85	HIS
25	CZ	190	ARG
25	CZ	191	GLY
25	CZ	285	ASN
26	D0	74	ARG
26	D0	75	LEU
27	D1	80	LEU
27	D1	81	LYS
28	D2	37	PHE
28	D2	70	GLN
30	D4	8	LYS
30	D4	34	GLU
31	D5	36	CYS
31	D5	53	ALA
32	D6	17	LYS
32	D6	23	THR
34	D8	33	ASN
35	D9	30	PRO
35	D9	35	ARG
35	D9	36	GLN
38	DC	36	LYS
38	DC	37	PHE
38	DC	109	ASP
38	DC	118	ASP
39	DD	27	THR
39	DD	30	GLU
39	DD	35	LYS
39	DD	242	ARG
40	DE	54	GLN
40	DE	56	PRO
40	DE	61	ARG
40	DE	68	ALA
40	DE	75	VAL
41	DF	83	PHE
41	DF	88	VAL
41	DF	127	GLU
41	DF	133	ASN

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Mol	Chain	Res	Type
41	DF	178	PRO
41	DF	206	ILE
42	DG	6	ALA
42	DG	62	LEU
42	DG	99	MET
43	DH	47	GLU
43	DH	52	VAL
46	DN	57	ALA
47	DO	5	GLN
48	DP	9	ASN
48	DP	25	SER
48	DP	66	GLY
48	DP	122	PRO
48	DP	131	SER
50	DR	14	SER
50	DR	58	GLY
50	DR	105	ARG
51	DS	14	VAL
51	DS	88	ASP
52	DT	36	GLU
54	DV	29	PRO
54	DV	48	GLY
54	DV	56	SER
55	DW	56	ALA
56	DX	4	ALA
56	DX	11	PRO
56	DX	19	ALA
56	DX	62	LYS
57	DY	53	PRO
57	DY	65	ALA
57	DY	77	PRO
57	DY	81	LYS
58	DZ	139	VAL
58	DZ	148	ASP
58	DZ	166	SER
2	AB	165	VAL
3	AC	93	LYS
3	AC	96	GLY
4	AD	102	ASP
8	AH	83	ILE
12	AL	25	PRO
16	AP	49	LEU

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Mol	Chain	Res	Type
18	AR	31	LEU
19	AS	9	VAL
19	AS	35	SER
20	AT	93	GLU
25	AZ	72	THR
25	AZ	128	VAL
25	AZ	186	PRO
25	AZ	190	ARG
25	AZ	330	ARG
26	B0	74	ARG
27	B1	94	LEU
29	B3	2	PRO
29	B3	32	GLN
30	B4	28	LYS
30	B4	41	PRO
30	B4	44	THR
31	B5	36	CYS
32	B6	15	GLU
32	B6	41	PRO
32	B6	49	HIS
38	BC	84	LYS
39	BD	32	SER
39	BD	156	ALA
39	BD	224	ALA
39	BD	245	PRO
40	BE	62	PRO
41	BF	94	PRO
41	BF	171	PRO
41	BF	177	ALA
42	BG	10	LYS
42	BG	32	PRO
43	BH	25	LYS
43	BH	41	MET
43	BH	85	LYS
43	BH	109	PHE
46	BN	5	VAL
46	BN	33	LEU
48	BP	43	GLY
48	BP	66	GLY
50	BR	102	GLU
52	BT	86	ILE
54	BV	50	PRO

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Mol	Chain	Res	Type
56	BX	46	ALA
56	BX	87	GLN
58	BZ	18	LEU
58	BZ	116	VAL
2	CB	165	VAL
3	CC	93	LYS
3	CC	156	ARG
4	CD	13	ARG
4	CD	102	ASP
7	CG	53	LYS
12	CL	25	PRO
16	CP	26	ARG
16	CP	68	ASP
17	CQ	34	LYS
17	CQ	64	PRO
18	CR	31	LEU
19	CS	9	VAL
19	CS	35	SER
19	CS	80	TYR
20	CT	93	GLU
25	CZ	65	THR
25	CZ	68	VAL
25	CZ	72	THR
25	CZ	128	VAL
25	CZ	330	ARG
26	D0	20	ARG
27	D1	31	GLY
27	D1	65	SER
27	D1	85	LEU
28	D2	23	LYS
29	D3	2	PRO
29	D3	32	GLN
30	D4	28	LYS
30	D4	41	PRO
30	D4	44	THR
32	D6	15	GLU
32	D6	41	PRO
32	D6	49	HIS
38	DC	84	LYS
39	DD	3	VAL
39	DD	32	SER
39	DD	241	PRO

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Mol	Chain	Res	Type
39	DD	245	PRO
40	DE	62	PRO
40	DE	135	HIS
41	DF	94	PRO
41	DF	171	PRO
41	DF	177	ALA
42	DG	21	ARG
42	DG	97	ASP
42	DG	117	PHE
42	DG	121	ASN
42	DG	144	ILE
43	DH	25	LYS
43	DH	85	LYS
43	DH	109	PHE
46	DN	5	VAL
46	DN	33	LEU
47	DO	68	GLU
48	DP	39	LYS
48	DP	57	THR
48	DP	70	GLN
49	DQ	54	MET
51	DS	24	LEU
54	DV	50	PRO
56	DX	46	ALA
58	DZ	97	GLU
58	DZ	151	HIS
58	DZ	177	PRO
3	AC	15	THR
3	AC	61	ALA
3	AC	144	SER
3	AC	156	ARG
4	AD	13	ARG
4	AD	28	SER
4	AD	155	LEU
4	AD	159	ARG
5	AE	8	GLU
6	AF	28	ARG
6	AF	40	VAL
13	AM	124	PRO
14	AN	60	SER
17	AQ	64	PRO
19	AS	80	TYR

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Mol	Chain	Res	Type
20	AT	70	SER
25	AZ	68	VAL
25	AZ	79	HIS
28	B2	17	SER
38	BC	55	ASP
39	BD	3	VAL
39	BD	26	LYS
39	BD	28	GLU
39	BD	241	PRO
40	BE	34	VAL
40	BE	135	HIS
41	BF	25	PRO
41	BF	172	TRP
42	BG	50	ALA
43	BH	21	PRO
43	BH	49	VAL
43	BH	95	ARG
43	BH	156	ALA
46	BN	40	PRO
47	BO	68	GLU
48	BP	6	LEU
48	BP	141	ALA
51	BS	24	LEU
51	BS	36	TYR
52	BT	30	VAL
52	BT	33	LYS
52	BT	85	LYS
54	BV	19	LYS
54	BV	36	PRO
54	BV	40	LEU
54	BV	47	VAL
55	BW	6	ILE
56	BX	42	ALA
57	BY	57	GLN
58	BZ	61	LEU
58	BZ	78	LYS
58	BZ	80	ARG
58	BZ	134	PRO
58	BZ	162	GLU
3	CC	61	ALA
3	CC	144	SER
4	CD	155	LEU

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Mol	Chain	Res	Type
5	CE	8	GLU
5	CE	153	LYS
6	CF	28	ARG
6	CF	40	VAL
12	CL	26	ALA
13	CM	124	PRO
14	CN	23	ARG
14	CN	60	SER
16	CP	49	LEU
20	CT	70	SER
20	CT	85	MET
25	CZ	79	HIS
25	CZ	186	PRO
25	CZ	360	GLU
27	D1	37	ILE
38	DC	55	ASP
39	DD	26	LYS
39	DD	28	GLU
40	DE	34	VAL
41	DF	25	PRO
41	DF	79	GLY
41	DF	172	TRP
42	DG	31	VAL
42	DG	109	VAL
42	DG	181	ARG
43	DH	21	PRO
43	DH	41	MET
43	DH	49	VAL
43	DH	95	ARG
43	DH	156	ALA
46	DN	40	PRO
48	DP	6	LEU
48	DP	43	GLY
48	DP	141	ALA
50	DR	102	GLU
52	DT	30	VAL
52	DT	33	LYS
52	DT	86	ILE
54	DV	19	LYS
54	DV	36	PRO
54	DV	40	LEU
54	DV	47	VAL

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Mol	Chain	Res	Type
55	DW	6	ILE
56	DX	42	ALA
56	DX	87	GLN
57	DY	57	GLN
58	DZ	46	LYS
58	DZ	165	VAL
2	AB	131	PRO
4	AD	5	ILE
7	AG	59	LEU
9	AI	11	LYS
10	AJ	91	PRO
12	AL	26	ALA
16	AP	46	PRO
20	AT	14	LYS
25	AZ	126	VAL
25	AZ	276	THR
32	B6	34	LEU
39	BD	236	GLY
40	BE	30	PRO
40	BE	187	ALA
42	BG	26	GLN
42	BG	34	LEU
42	BG	44	GLY
43	BH	127	GLU
46	BN	7	LYS
46	BN	135	PRO
48	BP	23	PRO
53	BU	59	ARG
54	BV	51	VAL
56	BX	84	ALA
57	BY	7	VAL
57	BY	97	ARG
58	BZ	142	SER
2	CB	131	PRO
4	CD	5	ILE
4	CD	28	SER
4	CD	159	ARG
10	CJ	91	PRO
16	CP	46	PRO
25	CZ	93	ILE
27	D1	54	ALA
32	D6	34	LEU

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Mol	Chain	Res	Type
39	DD	45	ASN
40	DE	30	PRO
42	DG	80	PHE
43	DH	127	GLU
46	DN	135	PRO
48	DP	23	PRO
48	DP	109	GLY
50	DR	46	GLY
51	DS	36	TYR
52	DT	25	GLY
52	DT	127	ALA
53	DU	59	ARG
54	DV	51	VAL
56	DX	84	ALA
57	DY	7	VAL
58	DZ	96	VAL
3	AC	66	VAL
13	AM	10	PRO
19	AS	45	VAL
25	AZ	93	ILE
25	AZ	359	VAL
41	BF	87	GLY
48	BP	109	GLY
49	BQ	62	GLY
51	BS	49	VAL
52	BT	25	GLY
57	BY	27	VAL
58	BZ	25	PRO
2	CB	26	PRO
3	CC	66	VAL
19	CS	45	VAL
25	CZ	126	VAL
25	CZ	359	VAL
27	D1	86	SER
38	DC	130	ILE
41	DF	87	GLY
51	DS	49	VAL
58	DZ	114	GLY
2	AB	26	PRO
4	AD	172	PRO
25	AZ	355	LEU
25	AZ	356	PRO

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Mol	Chain	Res	Type
38	BC	90	GLY
38	BC	130	ILE
46	BN	9	VAL
50	BR	46	GLY
57	BY	76	CYS
4	CD	172	PRO
28	D2	63	VAL
38	DC	90	GLY
39	DD	244	ARG
42	DG	52	ILE
46	DN	9	VAL
49	DQ	62	GLY
57	DY	27	VAL
57	DY	76	CYS
4	AD	37	PRO
10	AJ	39	PRO
12	AL	18	VAL
13	AM	38	GLY
39	BD	244	ARG
41	BF	126	VAL
42	BG	52	ILE
42	BG	70	VAL
51	BS	22	GLY
58	BZ	130	PRO
2	CB	229	VAL
4	CD	37	PRO
10	CJ	39	PRO
12	CL	18	VAL
13	CM	10	PRO
15	CO	87	ILE
25	CZ	34	VAL
25	CZ	355	LEU
25	CZ	356	PRO
39	DD	51	VAL
58	DZ	64	GLY
2	AB	229	VAL
12	AL	74	GLY
15	AO	87	ILE
25	AZ	34	VAL
30	B4	40	HIS
39	BD	51	VAL
43	BH	79	VAL

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Mol	Chain	Res	Type
46	BN	6	PRO
46	BN	77	GLY
56	BX	32	PRO
57	BY	31	LEU
57	BY	55	TYR
12	CL	47	LYS
30	D4	40	HIS
41	DF	126	VAL
46	DN	6	PRO
46	DN	77	GLY
56	DX	32	PRO
57	DY	55	TYR
2	AB	228	GLY
42	BG	149	VAL
43	BH	20	ALA
48	BP	97	PRO
2	CB	228	GLY
27	D1	84	GLY
39	DD	236	GLY
43	DH	43	VAL
57	DY	31	LEU
58	DZ	167	PRO

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AB	202/220 (92%)	181 (90%)	21 (10%)	9 32
2	CB	202/220 (92%)	180 (89%)	22 (11%)	8 30
3	AC	160/188 (85%)	141 (88%)	19 (12%)	6 25
3	CC	160/188 (85%)	142 (89%)	18 (11%)	7 28
4	AD	180/181 (99%)	162 (90%)	18 (10%)	9 34
4	CD	180/181 (99%)	162 (90%)	18 (10%)	9 34
5	AE	115/123 (94%)	102 (89%)	13 (11%)	7 28

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
5	CE	115/123 (94%)	102 (89%)	13 (11%)	7 28
6	AF	90/90 (100%)	80 (89%)	10 (11%)	8 29
6	CF	90/90 (100%)	80 (89%)	10 (11%)	8 29
7	AG	126/127 (99%)	118 (94%)	8 (6%)	22 58
7	CG	126/127 (99%)	118 (94%)	8 (6%)	22 58
8	AH	119/119 (100%)	107 (90%)	12 (10%)	9 33
8	CH	119/119 (100%)	107 (90%)	12 (10%)	9 33
9	AI	98/99 (99%)	90 (92%)	8 (8%)	14 47
9	CI	98/99 (99%)	89 (91%)	9 (9%)	11 40
10	AJ	88/92 (96%)	77 (88%)	11 (12%)	6 22
10	CJ	88/92 (96%)	77 (88%)	11 (12%)	6 22
11	AK	90/99 (91%)	80 (89%)	10 (11%)	8 29
11	CK	90/99 (91%)	80 (89%)	10 (11%)	8 29
12	AL	104/108 (96%)	92 (88%)	12 (12%)	7 27
12	CL	104/108 (96%)	92 (88%)	12 (12%)	7 27
13	AM	99/101 (98%)	88 (89%)	11 (11%)	8 29
13	CM	99/101 (98%)	88 (89%)	11 (11%)	8 29
14	AN	49/50 (98%)	42 (86%)	7 (14%)	4 17
14	CN	49/50 (98%)	42 (86%)	7 (14%)	4 17
15	AO	79/80 (99%)	70 (89%)	9 (11%)	7 28
15	CO	79/80 (99%)	70 (89%)	9 (11%)	7 28
16	AP	72/74 (97%)	64 (89%)	8 (11%)	8 29
16	CP	72/74 (97%)	65 (90%)	7 (10%)	10 36
17	AQ	94/97 (97%)	88 (94%)	6 (6%)	22 57
17	CQ	94/97 (97%)	88 (94%)	6 (6%)	22 57
18	AR	61/77 (79%)	51 (84%)	10 (16%)	3 12
18	CR	61/77 (79%)	51 (84%)	10 (16%)	3 12
19	AS	69/80 (86%)	56 (81%)	13 (19%)	2 8
19	CS	69/80 (86%)	56 (81%)	13 (19%)	2 8
20	AT	76/82 (93%)	68 (90%)	8 (10%)	8 31
20	CT	76/82 (93%)	68 (90%)	8 (10%)	8 31

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
21	AU	19/22 (86%)	18 (95%)	1 (5%)	28 64
21	CU	19/22 (86%)	18 (95%)	1 (5%)	28 64
25	AZ	322/338 (95%)	279 (87%)	43 (13%)	5 20
25	CZ	322/338 (95%)	281 (87%)	41 (13%)	5 22
26	B0	66/67 (98%)	59 (89%)	7 (11%)	8 31
26	D0	66/67 (98%)	59 (89%)	7 (11%)	8 31
27	B1	78/83 (94%)	67 (86%)	11 (14%)	4 18
27	D1	78/83 (94%)	68 (87%)	10 (13%)	5 21
28	B2	66/67 (98%)	64 (97%)	2 (3%)	48 81
28	D2	66/67 (98%)	57 (86%)	9 (14%)	5 19
29	B3	51/52 (98%)	45 (88%)	6 (12%)	6 25
29	D3	51/52 (98%)	45 (88%)	6 (12%)	6 25
30	B4	39/63 (62%)	32 (82%)	7 (18%)	2 10
30	D4	39/63 (62%)	33 (85%)	6 (15%)	3 14
31	B5	51/52 (98%)	45 (88%)	6 (12%)	6 25
31	D5	51/52 (98%)	45 (88%)	6 (12%)	6 25
32	B6	49/52 (94%)	32 (65%)	17 (35%)	0 0
32	D6	49/52 (94%)	31 (63%)	18 (37%)	0 0
33	B7	41/42 (98%)	38 (93%)	3 (7%)	17 52
33	D7	41/42 (98%)	38 (93%)	3 (7%)	17 52
34	B8	53/55 (96%)	44 (83%)	9 (17%)	2 11
34	D8	53/55 (96%)	44 (83%)	9 (17%)	2 11
35	B9	34/34 (100%)	31 (91%)	3 (9%)	12 43
35	D9	34/34 (100%)	31 (91%)	3 (9%)	12 43
38	BC	180/181 (99%)	172 (96%)	8 (4%)	35 71
38	DC	180/181 (99%)	172 (96%)	8 (4%)	35 71
39	BD	217/218 (100%)	186 (86%)	31 (14%)	4 17
39	DD	217/218 (100%)	187 (86%)	30 (14%)	4 19
40	BE	165/166 (99%)	145 (88%)	20 (12%)	6 24
40	DE	165/166 (99%)	143 (87%)	22 (13%)	5 20
41	BF	165/166 (99%)	152 (92%)	13 (8%)	15 49

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
41	DF	165/166 (99%)	152 (92%)	13 (8%)	15 49
42	BG	155/156 (99%)	135 (87%)	20 (13%)	5 21
42	DG	155/156 (99%)	124 (80%)	31 (20%)	1 7
43	BH	132/148 (89%)	118 (89%)	14 (11%)	8 31
43	DH	132/148 (89%)	118 (89%)	14 (11%)	8 31
46	BN	117/119 (98%)	101 (86%)	16 (14%)	4 19
46	DN	117/119 (98%)	101 (86%)	16 (14%)	4 19
47	BO	100/100 (100%)	93 (93%)	7 (7%)	19 54
47	DO	100/100 (100%)	93 (93%)	7 (7%)	19 54
48	BP	112/116 (97%)	93 (83%)	19 (17%)	2 11
48	DP	112/116 (97%)	93 (83%)	19 (17%)	2 11
49	BQ	111/111 (100%)	101 (91%)	10 (9%)	12 41
49	DQ	111/111 (100%)	101 (91%)	10 (9%)	12 41
50	BR	100/101 (99%)	87 (87%)	13 (13%)	5 21
50	DR	100/101 (99%)	85 (85%)	15 (15%)	3 15
51	BS	77/88 (88%)	65 (84%)	12 (16%)	3 14
51	DS	77/88 (88%)	65 (84%)	12 (16%)	3 14
52	BT	120/127 (94%)	97 (81%)	23 (19%)	2 8
52	DT	120/127 (94%)	97 (81%)	23 (19%)	2 8
53	BU	92/94 (98%)	86 (94%)	6 (6%)	21 57
53	DU	92/94 (98%)	86 (94%)	6 (6%)	21 57
54	BV	82/82 (100%)	67 (82%)	15 (18%)	2 9
54	DV	82/82 (100%)	67 (82%)	15 (18%)	2 9
55	BW	91/92 (99%)	87 (96%)	4 (4%)	35 71
55	DW	91/92 (99%)	86 (94%)	5 (6%)	27 63
56	BX	74/78 (95%)	67 (90%)	7 (10%)	11 38
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%)	72 (86%)	12 (14%)	4 17
58	BZ	155/179 (87%)	130 (84%)	25 (16%)	3 13
58	DZ	155/179 (87%)	131 (84%)	24 (16%)	3 14

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	10338/10854 (95%)	9112 (88%)	1226 (12%)	6 25

All (1226) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	16	HIS
2	AB	17	PHE
2	AB	24	TRP
2	AB	32	ILE
2	AB	36	ARG
2	AB	42	ILE
2	AB	51	LEU
2	AB	67	THR
2	AB	74	LYS
2	AB	93	VAL
2	AB	140	HIS
2	AB	144	ARG
2	AB	156	LYS
2	AB	170	GLU
2	AB	178	ARG
2	AB	187	LEU
2	AB	200	ILE
2	AB	204	ASN
2	AB	208	ILE
2	AB	234	PRO
3	AC	3	ASN
3	AC	5	ILE
3	AC	14	ILE
3	AC	16	ARG
3	AC	20	SER
3	AC	21	ARG
3	AC	26	LYS
3	AC	46	GLU
3	AC	52	LEU
3	AC	79	ARG
3	AC	105	GLU
3	AC	107	GLN
3	AC	119	ARG
3	AC	120	VAL
3	AC	135	LYS
3	AC	138	VAL

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Mol	Chain	Res	Type
3	AC	167	TRP
3	AC	178	LEU
3	AC	188	LEU
4	AD	3	ARG
4	AD	10	ARG
4	AD	15	GLU
4	AD	24	GLU
4	AD	27	TYR
4	AD	33	MET
4	AD	36	ARG
4	AD	49	ARG
4	AD	59	ARG
4	AD	62	GLN
4	AD	86	LYS
4	AD	100	ARG
4	AD	127	THR
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	162	LEU
4	AD	209	ARG
5	AE	6	PHE
5	AE	10	MET
5	AE	12	LEU
5	AE	16	THR
5	AE	18	ARG
5	AE	20	GLN
5	AE	38	GLN
5	AE	41	VAL
5	AE	68	GLU
5	AE	73	ASN
5	AE	79	GLU
5	AE	125	SER
5	AE	147	ASP
6	AF	14	LEU
6	AF	25	ILE
6	AF	27	GLN
6	AF	31	GLU
6	AF	32	ASN
6	AF	47	ARG
6	AF	57	GLN
6	AF	83	ASP

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Mol	Chain	Res	Type
6	AF	86	ARG
6	AF	98	LEU
7	AG	24	THR
7	AG	51	GLN
7	AG	91	VAL
7	AG	104	LEU
7	AG	113	GLU
7	AG	114	ARG
7	AG	137	LYS
7	AG	151	TYR
8	AH	1	MET
8	AH	18	ARG
8	AH	52	ASP
8	AH	54	ASP
8	AH	56	LYS
8	AH	91	ARG
8	AH	102	ARG
8	AH	109	ILE
8	AH	112	LEU
8	AH	115	SER
8	AH	119	LEU
8	AH	127	LEU
9	AI	4	TYR
9	AI	10	ARG
9	AI	44	VAL
9	AI	47	LEU
9	AI	75	ASP
9	AI	95	LYS
9	AI	112	LYS
9	AI	128	ARG
10	AJ	9	ARG
10	AJ	22	LYS
10	AJ	40	LEU
10	AJ	49	VAL
10	AJ	55	LYS
10	AJ	67	THR
10	AJ	73	ASP
10	AJ	78	ASN
10	AJ	81	THR
10	AJ	96	ILE
10	AJ	97	GLU
11	AK	27	ASN

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Mol	Chain	Res	Type
11	AK	29	ILE
11	AK	30	VAL
11	AK	38	ASN
11	AK	47	VAL
11	AK	57	THR
11	AK	84	VAL
11	AK	104	GLN
11	AK	106	LYS
11	AK	116	HIS
12	AL	20	LYS
12	AL	33	ARG
12	AL	41	ARG
12	AL	53	ARG
12	AL	55	VAL
12	AL	60	LEU
12	AL	83	VAL
12	AL	85	ILE
12	AL	89	ARG
12	AL	102	ARG
12	AL	106	ASP
12	AL	118	SER
13	AM	64	TRP
13	AM	65	LYS
13	AM	69	GLU
13	AM	70	LEU
13	AM	71	ARG
13	AM	82	MET
13	AM	93	ARG
13	AM	101	GLN
13	AM	108	ARG
13	AM	115	LYS
13	AM	120	LYS
14	AN	13	THR
14	AN	14	PRO
14	AN	18	VAL
14	AN	21	TYR
14	AN	22	THR
14	AN	29	ARG
14	AN	41	ARG
15	AO	10	LYS
15	AO	13	GLN
15	AO	25	THR

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Mol	Chain	Res	Type
15	AO	38	ARG
15	AO	39	LEU
15	AO	41	GLU
15	AO	66	LEU
15	AO	82	ILE
15	AO	88	ARG
16	AP	1	MET
16	AP	21	VAL
16	AP	23	ASP
16	AP	25	ARG
16	AP	43	LYS
16	AP	45	THR
16	AP	62	VAL
16	AP	69	THR
17	AQ	26	GLN
17	AQ	38	ARG
17	AQ	49	GLU
17	AQ	52	LYS
17	AQ	70	ARG
17	AQ	74	LEU
18	AR	29	PHE
18	AR	36	ASN
18	AR	37	VAL
18	AR	38	GLU
18	AR	44	LEU
18	AR	46	GLU
18	AR	47	THR
18	AR	54	ARG
18	AR	59	SER
18	AR	76	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	10	PHE
19	AS	13	ASP
19	AS	15	LEU
19	AS	16	LEU
19	AS	29	ARG
19	AS	37	ARG
19	AS	41	VAL
19	AS	49	ILE
19	AS	63	THR
19	AS	65	ASN

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Mol	Chain	Res	Type
19	AS	66	MET
20	AT	23	ARG
20	AT	26	ASN
20	AT	36	LEU
20	AT	45	GLN
20	AT	64	ASP
20	AT	74	LYS
20	AT	75	ASN
20	AT	100	ILE
21	AU	22	ARG
25	AZ	5	PHE
25	AZ	7	ARG
25	AZ	8	THR
25	AZ	9	LYS
25	AZ	27	LEU
25	AZ	38	GLU
25	AZ	63	ILE
25	AZ	64	ASN
25	AZ	82	CYS
25	AZ	85	HIS
25	AZ	88	TYR
25	AZ	93	ILE
25	AZ	114	PRO
25	AZ	121	LEU
25	AZ	130	TYR
25	AZ	135	MET
25	AZ	160	GLN
25	AZ	163	PHE
25	AZ	166	ASP
25	AZ	167	GLU
25	AZ	185	ASN
25	AZ	189	ARG
25	AZ	194	GLU
25	AZ	196	VAL
25	AZ	206	ILE
25	AZ	218	ASP
25	AZ	230	THR
25	AZ	272	MET
25	AZ	274	ARG
25	AZ	275	LYS
25	AZ	277	LEU
25	AZ	284	ASP

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Mol	Chain	Res	Type
25	AZ	285	ASN
25	AZ	291	ARG
25	AZ	295	ARG
25	AZ	324	LYS
25	AZ	325	LYS
25	AZ	326	GLU
25	AZ	334	PHE
25	AZ	335	PHE
25	AZ	336	SER
25	AZ	345	ARG
25	AZ	347	THR
26	B0	14	ARG
26	B0	16	SER
26	B0	19	LYS
26	B0	20	ARG
26	B0	62	LEU
26	B0	75	LEU
26	B0	84	LEU
27	B1	3	LYS
27	B1	21	ARG
27	B1	26	ARG
27	B1	33	LYS
27	B1	37	ILE
27	B1	45	ASN
27	B1	67	ILE
27	B1	69	LYS
27	B1	73	LEU
27	B1	75	GLU
27	B1	83	GLU
28	B2	7	ARG
28	B2	68	ARG
29	B3	18	ASP
29	B3	35	ARG
29	B3	36	VAL
29	B3	38	GLU
29	B3	46	ASN
29	B3	48	GLU
30	B4	5	ILE
30	B4	9	LEU
30	B4	20	ASN
30	B4	28	LYS
30	B4	32	TYR

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Mol	Chain	Res	Type
30	B4	43	TYR
30	B4	47	GLN
31	B5	3	LYS
31	B5	11	THR
31	B5	25	LEU
31	B5	35	GLU
31	B5	49	CYS
31	B5	51	TYR
32	B6	7	ILE
32	B6	9	LEU
32	B6	12	GLU
32	B6	18	ARG
32	B6	19	ARG
32	B6	21	TYR
32	B6	23	THR
32	B6	26	ASN
32	B6	27	LYS
32	B6	29	ASN
32	B6	30	THR
32	B6	31	PRO
32	B6	41	PRO
32	B6	42	TRP
32	B6	44	ARG
32	B6	45	LYS
32	B6	53	LYS
33	B7	1	MET
33	B7	24	THR
33	B7	34	ARG
34	B8	30	ARG
34	B8	34	TRP
34	B8	35	GLN
34	B8	40	GLU
34	B8	41	ILE
34	B8	44	LYS
34	B8	47	LYS
34	B8	61	LEU
34	B8	64	TYR
35	B9	11	CYS
35	B9	29	ASN
35	B9	34	GLN
38	BC	11	LEU
38	BC	55	ASP

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Mol	Chain	Res	Type
38	BC	57	ASN
38	BC	81	GLU
38	BC	93	TYR
38	BC	134	ARG
38	BC	210	ARG
38	BC	218	MET
39	BD	6	PHE
39	BD	10	THR
39	BD	24	ILE
39	BD	26	LYS
39	BD	27	THR
39	BD	28	GLU
39	BD	43	ARG
39	BD	44	ASN
39	BD	46	GLN
39	BD	95	LEU
39	BD	104	TYR
39	BD	106	ILE
39	BD	111	LEU
39	BD	112	GLN
39	BD	155	LEU
39	BD	157	ARG
39	BD	166	GLN
39	BD	176	ARG
39	BD	192	THR
39	BD	198	ASN
39	BD	200	ASP
39	BD	211	ARG
39	BD	217	ARG
39	BD	218	ARG
39	BD	221	VAL
39	BD	226	MET
39	BD	241	PRO
39	BD	246	PRO
39	BD	270	ILE
39	BD	275	LYS
39	BD	276	LYS
40	BE	17	ASP
40	BE	18	ASP
40	BE	25	VAL
40	BE	33	VAL
40	BE	55	ASN

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Mol	Chain	Res	Type
40	BE	56	PRO
40	BE	57	LYS
40	BE	62	PRO
40	BE	67	PHE
40	BE	76	ARG
40	BE	78	LEU
40	BE	79	ARG
40	BE	121	ASN
40	BE	144	ARG
40	BE	146	THR
40	BE	167	VAL
40	BE	181	LEU
40	BE	188	VAL
40	BE	202	LYS
40	BE	203	LYS
41	BF	19	GLU
41	BF	23	ASP
41	BF	28	ILE
41	BF	72	ARG
41	BF	88	VAL
41	BF	98	SER
41	BF	122	LYS
41	BF	125	LEU
41	BF	135	LYS
41	BF	142	TRP
41	BF	157	VAL
41	BF	160	ASN
41	BF	169	ASN
42	BG	10	LYS
42	BG	12	TYR
42	BG	21	ARG
42	BG	22	ARG
42	BG	26	GLN
42	BG	34	LEU
42	BG	52	ILE
42	BG	54	GLU
42	BG	60	LEU
42	BG	67	LYS
42	BG	77	ILE
42	BG	84	LYS
42	BG	98	ARG
42	BG	113	ARG

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Mol	Chain	Res	Type
42	BG	123	ASN
42	BG	125	PHE
42	BG	143	GLU
42	BG	153	ARG
42	BG	159	VAL
42	BG	164	GLU
43	BH	43	VAL
43	BH	54	ARG
43	BH	57	ASP
43	BH	83	TYR
43	BH	85	LYS
43	BH	104	GLU
43	BH	105	LEU
43	BH	111	HIS
43	BH	139	GLN
43	BH	152	ARG
43	BH	153	LYS
43	BH	157	TYR
43	BH	162	ILE
43	BH	163	TYR
46	BN	1	MET
46	BN	4	TYR
46	BN	19	GLU
46	BN	25	ARG
46	BN	32	THR
46	BN	38	HIS
46	BN	45	ASN
46	BN	48	MET
46	BN	56	ASN
46	BN	87	LEU
46	BN	96	GLU
46	BN	99	LEU
46	BN	119	ARG
46	BN	120	LEU
46	BN	127	ASP
46	BN	136	GLU
47	BO	1	MET
47	BO	8	LEU
47	BO	23	ARG
47	BO	24	VAL
47	BO	48	PRO
47	BO	69	ILE

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Mol	Chain	Res	Type
47	BO	94	ARG
48	BP	6	LEU
48	BP	16	ARG
48	BP	32	THR
48	BP	39	LYS
48	BP	41	ARG
48	BP	42	SER
48	BP	45	LEU
48	BP	57	THR
48	BP	61	ARG
48	BP	68	GLN
48	BP	70	GLN
48	BP	75	ILE
48	BP	85	LEU
48	BP	91	PHE
48	BP	112	LEU
48	BP	114	ILE
48	BP	115	LEU
48	BP	136	GLU
48	BP	149	GLU
49	BQ	1	MET
49	BQ	45	GLN
49	BQ	54	MET
49	BQ	55	VAL
49	BQ	56	ARG
49	BQ	58	PHE
49	BQ	59	ARG
49	BQ	79	LEU
49	BQ	104	PHE
49	BQ	139	GLU
50	BR	2	ARG
50	BR	4	LEU
50	BR	5	LYS
50	BR	10	LEU
50	BR	30	THR
50	BR	49	ASP
50	BR	76	VAL
50	BR	79	LEU
50	BR	89	ASP
50	BR	94	TYR
50	BR	99	LYS
50	BR	100	LEU

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Mol	Chain	Res	Type
50	BR	111	LEU
51	BS	11	LYS
51	BS	12	PHE
51	BS	15	ARG
51	BS	18	ILE
51	BS	25	ARG
51	BS	29	PHE
51	BS	36	TYR
51	BS	40	ILE
51	BS	76	LYS
51	BS	92	TYR
51	BS	97	ARG
51	BS	106	ARG
52	BT	11	GLU
52	BT	24	PRO
52	BT	29	ARG
52	BT	32	TYR
52	BT	38	ASN
52	BT	39	ARG
52	BT	41	ARG
52	BT	43	GLN
52	BT	44	ASP
52	BT	48	ILE
52	BT	49	VAL
52	BT	50	ILE
52	BT	53	ARG
52	BT	58	ASN
52	BT	65	LYS
52	BT	78	LEU
52	BT	82	LEU
52	BT	88	ILE
52	BT	99	LEU
52	BT	108	ARG
52	BT	115	ARG
52	BT	124	ASP
52	BT	128	GLU
53	BU	9	VAL
53	BU	66	ASN
53	BU	74	LEU
53	BU	78	THR
53	BU	92	ARG
53	BU	108	GLU

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Mol	Chain	Res	Type
54	BV	2	PHE
54	BV	12	TYR
54	BV	16	PRO
54	BV	18	LEU
54	BV	19	LYS
54	BV	21	ARG
54	BV	26	ASP
54	BV	35	LEU
54	BV	39	LEU
54	BV	68	LYS
54	BV	79	VAL
54	BV	82	ARG
54	BV	91	TYR
54	BV	95	LEU
54	BV	99	ILE
55	BW	8	ARG
55	BW	11	ARG
55	BW	34	ASN
55	BW	107	LEU
56	BX	11	PRO
56	BX	28	PHE
56	BX	37	THR
56	BX	57	LEU
56	BX	60	ARG
56	BX	68	ARG
56	BX	75	ASP
57	BY	2	ARG
57	BY	5	MET
57	BY	6	HIS
57	BY	7	VAL
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	97	ARG
58	BZ	6	LYS
58	BZ	9	TYR
58	BZ	11	GLU

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Mol	Chain	Res	Type
58	BZ	30	ASN
58	BZ	38	TYR
58	BZ	41	LEU
58	BZ	55	HIS
58	BZ	70	LEU
58	BZ	76	LEU
58	BZ	79	ARG
58	BZ	87	ASP
58	BZ	121	HIS
58	BZ	122	ARG
58	BZ	127	LYS
58	BZ	130	PRO
58	BZ	131	ARG
58	BZ	132	ASN
58	BZ	136	PHE
58	BZ	140	ASP
58	BZ	144	LEU
58	BZ	148	ASP
58	BZ	150	LEU
58	BZ	155	LEU
58	BZ	165	VAL
58	BZ	178	GLU
2	CB	15	VAL
2	CB	16	HIS
2	CB	17	PHE
2	CB	24	TRP
2	CB	32	ILE
2	CB	36	ARG
2	CB	42	ILE
2	CB	51	LEU
2	CB	67	THR
2	CB	74	LYS
2	CB	93	VAL
2	CB	97	TRP
2	CB	140	HIS
2	CB	144	ARG
2	CB	156	LYS
2	CB	170	GLU
2	CB	178	ARG
2	CB	187	LEU
2	CB	200	ILE
2	CB	204	ASN

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Mol	Chain	Res	Type
2	CB	208	ILE
2	CB	234	PRO
3	CC	3	ASN
3	CC	5	ILE
3	CC	14	ILE
3	CC	16	ARG
3	CC	20	SER
3	CC	21	ARG
3	CC	26	LYS
3	CC	46	GLU
3	CC	52	LEU
3	CC	79	ARG
3	CC	105	GLU
3	CC	107	GLN
3	CC	119	ARG
3	CC	120	VAL
3	CC	138	VAL
3	CC	167	TRP
3	CC	178	LEU
3	CC	188	LEU
4	CD	3	ARG
4	CD	10	ARG
4	CD	15	GLU
4	CD	24	GLU
4	CD	27	TYR
4	CD	33	MET
4	CD	36	ARG
4	CD	49	ARG
4	CD	59	ARG
4	CD	62	GLN
4	CD	86	LYS
4	CD	100	ARG
4	CD	127	THR
4	CD	131	ARG
4	CD	132	ARG
4	CD	135	LEU
4	CD	162	LEU
4	CD	209	ARG
5	CE	6	PHE
5	CE	10	MET
5	CE	12	LEU
5	CE	16	THR

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Mol	Chain	Res	Type
5	CE	18	ARG
5	CE	20	GLN
5	CE	38	GLN
5	CE	41	VAL
5	CE	68	GLU
5	CE	73	ASN
5	CE	79	GLU
5	CE	125	SER
5	CE	147	ASP
6	CF	14	LEU
6	CF	25	ILE
6	CF	27	GLN
6	CF	31	GLU
6	CF	32	ASN
6	CF	47	ARG
6	CF	57	GLN
6	CF	83	ASP
6	CF	86	ARG
6	CF	98	LEU
7	CG	24	THR
7	CG	51	GLN
7	CG	91	VAL
7	CG	104	LEU
7	CG	113	GLU
7	CG	114	ARG
7	CG	137	LYS
7	CG	151	TYR
8	CH	1	MET
8	CH	18	ARG
8	CH	52	ASP
8	CH	54	ASP
8	CH	56	LYS
8	CH	91	ARG
8	CH	102	ARG
8	CH	109	ILE
8	CH	112	LEU
8	CH	115	SER
8	CH	119	LEU
8	CH	127	LEU
9	CI	4	TYR
9	CI	10	ARG
9	CI	44	VAL

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Mol	Chain	Res	Type
9	CI	47	LEU
9	CI	75	ASP
9	CI	95	LYS
9	CI	112	LYS
9	CI	121	ARG
9	CI	128	ARG
10	CJ	9	ARG
10	CJ	22	LYS
10	CJ	40	LEU
10	CJ	49	VAL
10	CJ	55	LYS
10	CJ	67	THR
10	CJ	73	ASP
10	CJ	78	ASN
10	CJ	81	THR
10	CJ	96	ILE
10	CJ	97	GLU
11	CK	27	ASN
11	CK	29	ILE
11	CK	30	VAL
11	CK	38	ASN
11	CK	47	VAL
11	CK	57	THR
11	CK	84	VAL
11	CK	104	GLN
11	CK	106	LYS
11	CK	116	HIS
12	CL	20	LYS
12	CL	33	ARG
12	CL	41	ARG
12	CL	53	ARG
12	CL	55	VAL
12	CL	60	LEU
12	CL	83	VAL
12	CL	85	ILE
12	CL	89	ARG
12	CL	102	ARG
12	CL	106	ASP
12	CL	118	SER
13	CM	64	TRP
13	CM	65	LYS
13	CM	69	GLU

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Mol	Chain	Res	Type
13	CM	70	LEU
13	CM	71	ARG
13	CM	82	MET
13	CM	93	ARG
13	CM	101	GLN
13	CM	108	ARG
13	CM	115	LYS
13	CM	120	LYS
14	CN	13	THR
14	CN	14	PRO
14	CN	18	VAL
14	CN	21	TYR
14	CN	22	THR
14	CN	29	ARG
14	CN	41	ARG
15	CO	10	LYS
15	CO	13	GLN
15	CO	25	THR
15	CO	38	ARG
15	CO	39	LEU
15	CO	41	GLU
15	CO	66	LEU
15	CO	82	ILE
15	CO	88	ARG
16	CP	1	MET
16	CP	21	VAL
16	CP	23	ASP
16	CP	25	ARG
16	CP	43	LYS
16	CP	62	VAL
16	CP	69	THR
17	CQ	26	GLN
17	CQ	38	ARG
17	CQ	49	GLU
17	CQ	52	LYS
17	CQ	70	ARG
17	CQ	74	LEU
18	CR	29	PHE
18	CR	36	ASN
18	CR	37	VAL
18	CR	38	GLU
18	CR	44	LEU

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Mol	Chain	Res	Type
18	CR	46	GLU
18	CR	47	THR
18	CR	54	ARG
18	CR	59	SER
18	CR	76	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	10	PHE
19	CS	13	ASP
19	CS	15	LEU
19	CS	16	LEU
19	CS	29	ARG
19	CS	37	ARG
19	CS	41	VAL
19	CS	49	ILE
19	CS	63	THR
19	CS	65	ASN
19	CS	66	MET
20	CT	23	ARG
20	CT	26	ASN
20	CT	36	LEU
20	CT	45	GLN
20	CT	64	ASP
20	CT	74	LYS
20	CT	75	ASN
20	CT	100	ILE
21	CU	22	ARG
25	CZ	5	PHE
25	CZ	7	ARG
25	CZ	9	LYS
25	CZ	27	LEU
25	CZ	38	GLU
25	CZ	63	ILE
25	CZ	64	ASN
25	CZ	82	CYS
25	CZ	85	HIS
25	CZ	88	TYR
25	CZ	93	ILE
25	CZ	114	PRO
25	CZ	121	LEU
25	CZ	130	TYR
25	CZ	135	MET

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Mol	Chain	Res	Type
25	CZ	160	GLN
25	CZ	163	PHE
25	CZ	166	ASP
25	CZ	167	GLU
25	CZ	185	ASN
25	CZ	189	ARG
25	CZ	194	GLU
25	CZ	196	VAL
25	CZ	206	ILE
25	CZ	218	ASP
25	CZ	230	THR
25	CZ	272	MET
25	CZ	274	ARG
25	CZ	275	LYS
25	CZ	277	LEU
25	CZ	284	ASP
25	CZ	285	ASN
25	CZ	291	ARG
25	CZ	295	ARG
25	CZ	325	LYS
25	CZ	326	GLU
25	CZ	334	PHE
25	CZ	335	PHE
25	CZ	336	SER
25	CZ	345	ARG
25	CZ	347	THR
26	D0	14	ARG
26	D0	16	SER
26	D0	19	LYS
26	D0	20	ARG
26	D0	62	LEU
26	D0	75	LEU
26	D0	84	LEU
27	D1	13	ILE
27	D1	20	ARG
27	D1	21	ARG
27	D1	26	ARG
27	D1	27	GLU
27	D1	38	SER
27	D1	61	ARG
27	D1	75	GLU
27	D1	83	GLU

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Mol	Chain	Res	Type
27	D1	94	LEU
28	D2	12	GLU
28	D2	24	LEU
28	D2	25	VAL
28	D2	49	LYS
28	D2	51	ARG
28	D2	53	LEU
28	D2	57	ILE
28	D2	60	LEU
28	D2	69	ARG
29	D3	18	ASP
29	D3	35	ARG
29	D3	36	VAL
29	D3	38	GLU
29	D3	46	ASN
29	D3	48	GLU
30	D4	5	ILE
30	D4	9	LEU
30	D4	20	ASN
30	D4	32	TYR
30	D4	43	TYR
30	D4	47	GLN
31	D5	3	LYS
31	D5	11	THR
31	D5	25	LEU
31	D5	35	GLU
31	D5	49	CYS
31	D5	51	TYR
32	D6	7	ILE
32	D6	9	LEU
32	D6	12	GLU
32	D6	18	ARG
32	D6	19	ARG
32	D6	21	TYR
32	D6	23	THR
32	D6	26	ASN
32	D6	27	LYS
32	D6	29	ASN
32	D6	30	THR
32	D6	31	PRO
32	D6	41	PRO
32	D6	42	TRP

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Mol	Chain	Res	Type
32	D6	44	ARG
32	D6	45	LYS
32	D6	48	VAL
32	D6	53	LYS
33	D7	1	MET
33	D7	24	THR
33	D7	34	ARG
34	D8	30	ARG
34	D8	34	TRP
34	D8	35	GLN
34	D8	40	GLU
34	D8	41	ILE
34	D8	44	LYS
34	D8	47	LYS
34	D8	61	LEU
34	D8	64	TYR
35	D9	11	CYS
35	D9	29	ASN
35	D9	34	GLN
38	DC	11	LEU
38	DC	28	LEU
38	DC	55	ASP
38	DC	57	ASN
38	DC	81	GLU
38	DC	93	TYR
38	DC	210	ARG
38	DC	218	MET
39	DD	6	PHE
39	DD	10	THR
39	DD	24	ILE
39	DD	26	LYS
39	DD	27	THR
39	DD	28	GLU
39	DD	43	ARG
39	DD	44	ASN
39	DD	46	GLN
39	DD	95	LEU
39	DD	104	TYR
39	DD	106	ILE
39	DD	111	LEU
39	DD	112	GLN
39	DD	155	LEU

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Mol	Chain	Res	Type
39	DD	157	ARG
39	DD	166	GLN
39	DD	176	ARG
39	DD	192	THR
39	DD	200	ASP
39	DD	211	ARG
39	DD	217	ARG
39	DD	218	ARG
39	DD	221	VAL
39	DD	226	MET
39	DD	241	PRO
39	DD	246	PRO
39	DD	270	ILE
39	DD	275	LYS
39	DD	276	LYS
40	DE	17	ASP
40	DE	18	ASP
40	DE	25	VAL
40	DE	33	VAL
40	DE	54	GLN
40	DE	55	ASN
40	DE	56	PRO
40	DE	57	LYS
40	DE	62	PRO
40	DE	67	PHE
40	DE	76	ARG
40	DE	78	LEU
40	DE	79	ARG
40	DE	121	ASN
40	DE	144	ARG
40	DE	146	THR
40	DE	167	VAL
40	DE	175	VAL
40	DE	181	LEU
40	DE	188	VAL
40	DE	202	LYS
40	DE	203	LYS
41	DF	19	GLU
41	DF	23	ASP
41	DF	28	ILE
41	DF	72	ARG
41	DF	88	VAL

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Mol	Chain	Res	Type
41	DF	98	SER
41	DF	122	LYS
41	DF	125	LEU
41	DF	135	LYS
41	DF	142	TRP
41	DF	157	VAL
41	DF	160	ASN
41	DF	169	ASN
42	DG	11	TYR
42	DG	14	GLU
42	DG	16	ARG
42	DG	30	GLU
42	DG	39	ILE
42	DG	40	ASN
42	DG	45	GLU
42	DG	47	LYS
42	DG	52	ILE
42	DG	66	GLN
42	DG	67	LYS
42	DG	77	ILE
42	DG	82	LEU
42	DG	83	ARG
42	DG	87	PRO
42	DG	91	ARG
42	DG	93	THR
42	DG	95	ARG
42	DG	103	LEU
42	DG	107	LEU
42	DG	113	ARG
42	DG	114	ILE
42	DG	116	ASP
42	DG	133	LEU
42	DG	136	ARG
42	DG	139	LEU
42	DG	143	GLU
42	DG	150	ASP
42	DG	152	LEU
42	DG	153	ARG
42	DG	164	GLU
43	DH	43	VAL
43	DH	54	ARG
43	DH	57	ASP

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Mol	Chain	Res	Type
43	DH	83	TYR
43	DH	85	LYS
43	DH	104	GLU
43	DH	105	LEU
43	DH	111	HIS
43	DH	139	GLN
43	DH	152	ARG
43	DH	153	LYS
43	DH	157	TYR
43	DH	162	ILE
43	DH	163	TYR
46	DN	1	MET
46	DN	4	TYR
46	DN	19	GLU
46	DN	25	ARG
46	DN	32	THR
46	DN	38	HIS
46	DN	45	ASN
46	DN	48	MET
46	DN	56	ASN
46	DN	87	LEU
46	DN	96	GLU
46	DN	99	LEU
46	DN	119	ARG
46	DN	120	LEU
46	DN	127	ASP
46	DN	136	GLU
47	DO	1	MET
47	DO	8	LEU
47	DO	23	ARG
47	DO	24	VAL
47	DO	48	PRO
47	DO	69	ILE
47	DO	94	ARG
48	DP	6	LEU
48	DP	16	ARG
48	DP	32	THR
48	DP	39	LYS
48	DP	41	ARG
48	DP	42	SER
48	DP	45	LEU
48	DP	57	THR

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Mol	Chain	Res	Type
48	DP	61	ARG
48	DP	68	GLN
48	DP	70	GLN
48	DP	75	ILE
48	DP	85	LEU
48	DP	91	PHE
48	DP	112	LEU
48	DP	114	ILE
48	DP	115	LEU
48	DP	136	GLU
48	DP	149	GLU
49	DQ	1	MET
49	DQ	45	GLN
49	DQ	54	MET
49	DQ	55	VAL
49	DQ	56	ARG
49	DQ	58	PHE
49	DQ	59	ARG
49	DQ	79	LEU
49	DQ	104	PHE
49	DQ	139	GLU
50	DR	2	ARG
50	DR	4	LEU
50	DR	5	LYS
50	DR	10	LEU
50	DR	30	THR
50	DR	49	ASP
50	DR	70	LEU
50	DR	76	VAL
50	DR	79	LEU
50	DR	89	ASP
50	DR	94	TYR
50	DR	97	VAL
50	DR	99	LYS
50	DR	100	LEU
50	DR	111	LEU
51	DS	11	LYS
51	DS	12	PHE
51	DS	15	ARG
51	DS	18	ILE
51	DS	25	ARG
51	DS	29	PHE

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Mol	Chain	Res	Type
51	DS	36	TYR
51	DS	40	ILE
51	DS	76	LYS
51	DS	92	TYR
51	DS	97	ARG
51	DS	106	ARG
52	DT	11	GLU
52	DT	24	PRO
52	DT	29	ARG
52	DT	32	TYR
52	DT	38	ASN
52	DT	39	ARG
52	DT	41	ARG
52	DT	43	GLN
52	DT	44	ASP
52	DT	48	ILE
52	DT	49	VAL
52	DT	50	ILE
52	DT	53	ARG
52	DT	58	ASN
52	DT	65	LYS
52	DT	78	LEU
52	DT	82	LEU
52	DT	88	ILE
52	DT	99	LEU
52	DT	108	ARG
52	DT	115	ARG
52	DT	124	ASP
52	DT	128	GLU
53	DU	9	VAL
53	DU	66	ASN
53	DU	74	LEU
53	DU	78	THR
53	DU	92	ARG
53	DU	108	GLU
54	DV	2	PHE
54	DV	12	TYR
54	DV	16	PRO
54	DV	18	LEU
54	DV	19	LYS
54	DV	21	ARG
54	DV	26	ASP

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Mol	Chain	Res	Type
54	DV	35	LEU
54	DV	39	LEU
54	DV	68	LYS
54	DV	79	VAL
54	DV	82	ARG
54	DV	91	TYR
54	DV	95	LEU
54	DV	99	ILE
55	DW	8	ARG
55	DW	11	ARG
55	DW	14	PRO
55	DW	34	ASN
55	DW	107	LEU
56	DX	11	PRO
56	DX	28	PHE
56	DX	37	THR
56	DX	57	LEU
56	DX	68	ARG
56	DX	75	ASP
57	DY	2	ARG
57	DY	5	MET
57	DY	6	HIS
57	DY	7	VAL
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	90	LEU
57	DY	97	ARG
58	DZ	5	LEU
58	DZ	9	TYR
58	DZ	10	ARG
58	DZ	24	LEU
58	DZ	31	ARG
58	DZ	37	VAL
58	DZ	42	VAL
58	DZ	50	GLN
58	DZ	61	LEU
58	DZ	65	GLN
58	DZ	67	LEU

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Mol	Chain	Res	Type
58	DZ	70	LEU
58	DZ	72	ARG
58	DZ	81	ARG
58	DZ	107	THR
58	DZ	121	HIS
58	DZ	122	ARG
58	DZ	123	ASP
58	DZ	127	LYS
58	DZ	135	GLU
58	DZ	136	PHE
58	DZ	140	ASP
58	DZ	150	LEU
58	DZ	168	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (325) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	40	HIS
2	AB	45	GLN
2	AB	76	GLN
2	AB	78	GLN
2	AB	94	ASN
2	AB	95	GLN
2	AB	204	ASN
3	AC	6	HIS
3	AC	28	GLN
3	AC	31	HIS
3	AC	118	GLN
3	AC	123	GLN
3	AC	139	GLN
4	AD	62	GLN
4	AD	74	GLN
4	AD	77	ASN
4	AD	129	ASN
4	AD	161	ASN
5	AE	20	GLN
5	AE	73	ASN
6	AF	27	GLN
6	AF	32	ASN
6	AF	64	GLN
6	AF	73	ASN
6	AF	84	ASN

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Mol	Chain	Res	Type
6	AF	94	GLN
6	AF	100	ASN
7	AG	13	GLN
7	AG	37	ASN
7	AG	86	GLN
8	AH	82	HIS
9	AI	31	GLN
9	AI	124	GLN
10	AJ	13	HIS
10	AJ	56	HIS
10	AJ	62	HIS
10	AJ	68	HIS
10	AJ	78	ASN
11	AK	27	ASN
11	AK	38	ASN
11	AK	93	GLN
11	AK	117	ASN
12	AL	8	ASN
12	AL	9	GLN
12	AL	49	ASN
12	AL	75	HIS
13	AM	12	ASN
13	AM	40	ASN
13	AM	77	ASN
13	AM	101	GLN
14	AN	49	HIS
15	AO	37	ASN
15	AO	46	HIS
15	AO	62	GLN
16	AP	76	GLN
17	AQ	16	GLN
18	AR	63	GLN
19	AS	14	HIS
19	AS	47	HIS
20	AT	9	ASN
20	AT	18	GLN
20	AT	26	ASN
20	AT	42	GLN
20	AT	45	GLN
20	AT	75	ASN
25	AZ	19	HIS
25	AZ	64	ASN

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Mol	Chain	Res	Type
25	AZ	67	HIS
25	AZ	98	GLN
25	AZ	115	GLN
25	AZ	125	GLN
25	AZ	185	ASN
25	AZ	193	ASN
25	AZ	273	HIS
25	AZ	285	ASN
25	AZ	341	GLN
25	AZ	367	ASN
26	B0	12	ASN
26	B0	29	GLN
26	B0	50	ASN
26	B0	70	GLN
27	B1	16	ASN
27	B1	45	ASN
28	B2	43	GLN
28	B2	46	GLN
28	B2	47	ASN
28	B2	56	GLN
28	B2	70	GLN
29	B3	19	GLN
29	B3	46	ASN
29	B3	52	HIS
30	B4	20	ASN
30	B4	40	HIS
30	B4	47	GLN
32	B6	26	ASN
35	B9	29	ASN
38	BC	57	ASN
39	BD	44	ASN
39	BD	58	HIS
39	BD	116	GLN
39	BD	126	GLN
39	BD	166	GLN
39	BD	186	HIS
39	BD	198	ASN
39	BD	233	HIS
39	BD	253	GLN
40	BE	48	GLN
40	BE	54	GLN
40	BE	55	ASN

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Mol	Chain	Res	Type
40	BE	121	ASN
40	BE	129	HIS
40	BE	169	ASN
40	BE	180	ASN
41	BF	29	ASN
41	BF	40	GLN
41	BF	69	HIS
41	BF	75	HIS
41	BF	133	ASN
41	BF	160	ASN
41	BF	204	ASN
42	BG	40	ASN
42	BG	79	ASN
43	BH	61	HIS
43	BH	74	ASN
43	BH	139	GLN
43	BH	147	ASN
46	BN	45	ASN
46	BN	56	ASN
46	BN	94	HIS
46	BN	131	GLN
47	BO	3	GLN
48	BP	13	ASN
48	BP	68	GLN
48	BP	81	GLN
48	BP	84	ASN
48	BP	128	HIS
49	BQ	45	GLN
49	BQ	141	GLN
50	BR	11	ASN
50	BR	23	ASN
50	BR	24	GLN
52	BT	38	ASN
52	BT	43	GLN
52	BT	58	ASN
52	BT	79	HIS
52	BT	90	GLN
52	BT	104	ASN
53	BU	49	HIS
53	BU	66	ASN
53	BU	117	GLN
54	BV	11	GLN

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Mol	Chain	Res	Type
55	BW	57	ASN
55	BW	61	ASN
55	BW	102	HIS
56	BX	41	ASN
56	BX	55	ASN
56	BX	82	GLN
56	BX	87	GLN
57	BY	6	HIS
58	BZ	30	ASN
58	BZ	75	ASN
58	BZ	118	GLN
58	BZ	132	ASN
2	CB	37	ASN
2	CB	40	HIS
2	CB	45	GLN
2	CB	76	GLN
2	CB	78	GLN
2	CB	95	GLN
2	CB	204	ASN
3	CC	6	HIS
3	CC	28	GLN
3	CC	31	HIS
3	CC	118	GLN
3	CC	123	GLN
3	CC	139	GLN
4	CD	62	GLN
4	CD	74	GLN
4	CD	77	ASN
4	CD	129	ASN
4	CD	161	ASN
5	CE	20	GLN
5	CE	73	ASN
6	CF	27	GLN
6	CF	32	ASN
6	CF	64	GLN
6	CF	73	ASN
6	CF	84	ASN
6	CF	94	GLN
6	CF	100	ASN
7	CG	13	GLN
7	CG	37	ASN
8	CH	82	HIS

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Mol	Chain	Res	Type
9	CI	31	GLN
9	CI	124	GLN
10	CJ	13	HIS
10	CJ	56	HIS
10	CJ	62	HIS
10	CJ	68	HIS
10	CJ	78	ASN
11	CK	27	ASN
11	CK	38	ASN
11	CK	93	GLN
11	CK	117	ASN
12	CL	8	ASN
12	CL	9	GLN
12	CL	49	ASN
12	CL	75	HIS
13	CM	12	ASN
13	CM	40	ASN
13	CM	77	ASN
13	CM	92	HIS
13	CM	101	GLN
14	CN	49	HIS
15	CO	37	ASN
15	CO	46	HIS
15	CO	62	GLN
16	CP	76	GLN
17	CQ	16	GLN
18	CR	63	GLN
19	CS	14	HIS
20	CT	9	ASN
20	CT	18	GLN
20	CT	26	ASN
20	CT	42	GLN
20	CT	45	GLN
20	CT	75	ASN
25	CZ	19	HIS
25	CZ	64	ASN
25	CZ	67	HIS
25	CZ	91	ASN
25	CZ	98	GLN
25	CZ	115	GLN
25	CZ	125	GLN
25	CZ	185	ASN

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Mol	Chain	Res	Type
25	CZ	193	ASN
25	CZ	285	ASN
25	CZ	341	GLN
25	CZ	367	ASN
26	D0	12	ASN
26	D0	29	GLN
26	D0	50	ASN
26	D0	70	GLN
27	D1	42	GLN
27	D1	45	ASN
28	D2	47	ASN
28	D2	56	GLN
28	D2	71	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
32	D6	26	ASN
34	D8	31	HIS
35	D9	29	ASN
38	DC	57	ASN
39	DD	44	ASN
39	DD	58	HIS
39	DD	116	GLN
39	DD	126	GLN
39	DD	166	GLN
39	DD	186	HIS
39	DD	198	ASN
39	DD	233	HIS
39	DD	253	GLN
40	DE	48	GLN
40	DE	54	GLN
40	DE	55	ASN
40	DE	121	ASN
40	DE	129	HIS
40	DE	135	HIS
40	DE	143	ASN
40	DE	169	ASN
41	DF	29	ASN
41	DF	40	GLN

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Mol	Chain	Res	Type
41	DF	69	HIS
41	DF	75	HIS
41	DF	133	ASN
41	DF	160	ASN
41	DF	204	ASN
42	DG	40	ASN
42	DG	41	GLN
42	DG	66	GLN
43	DH	61	HIS
43	DH	74	ASN
43	DH	139	GLN
43	DH	147	ASN
46	DN	45	ASN
46	DN	56	ASN
46	DN	94	HIS
46	DN	131	GLN
47	DO	3	GLN
48	DP	13	ASN
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	24	GLN
52	DT	38	ASN
52	DT	43	GLN
52	DT	58	ASN
52	DT	79	HIS
52	DT	90	GLN
52	DT	104	ASN
53	DU	49	HIS
53	DU	66	ASN
53	DU	117	GLN
54	DV	11	GLN
55	DW	57	ASN
55	DW	61	ASN
55	DW	102	HIS
56	DX	41	ASN
56	DX	55	ASN

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Mol	Chain	Res	Type
56	DX	82	GLN
56	DX	87	GLN
57	DY	6	HIS
58	DZ	30	ASN
58	DZ	75	ASN
58	DZ	118	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1509/1522 (99%)	227 (15%)	43 (2%)
1	CA	1509/1522 (99%)	222 (14%)	46 (3%)
22	AV	75/76 (98%)	22 (29%)	1 (1%)
22	AW	75/76 (98%)	21 (28%)	2 (2%)
22	CV	75/76 (98%)	23 (30%)	1 (1%)
22	CW	75/76 (98%)	21 (28%)	3 (4%)
23	AX	16/27 (59%)	6 (37%)	1 (6%)
23	CX	16/27 (59%)	5 (31%)	1 (6%)
24	AY	74/77 (96%)	25 (33%)	3 (4%)
24	CY	74/77 (96%)	25 (33%)	3 (4%)
36	BA	2900/2915 (99%)	494 (17%)	45 (1%)
36	DA	2900/2915 (99%)	492 (16%)	45 (1%)
37	BB	118/122 (96%)	22 (18%)	3 (2%)
37	DB	118/122 (96%)	22 (18%)	3 (2%)
All	All	9534/9630 (99%)	1627 (17%)	200 (2%)

All (1627) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	G
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	55	A
1	AA	58	C
1	AA	60	A
1	AA	61	G

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Mol	Chain	Res	Type
1	AA	63	C
1	AA	65	U
1	AA	79	G
1	AA	80	G
1	AA	81	U
1	AA	84	U
1	AA	89	C
1	AA	90	U
1	AA	101	A
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
1	AA	172	A
1	AA	173	U
1	AA	182	U
1	AA	189(I)	G
1	AA	195	A
1	AA	197	A
1	AA	198	G
1	AA	199	G
1	AA	202	U
1	AA	203	U
1	AA	204	U
1	AA	216	G
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	328	C
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	348	G

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Mol	Chain	Res	Type
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	397	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	422	C
1	AA	429	U
1	AA	430	A
1	AA	439	A
1	AA	452	A
1	AA	454	C
1	AA	471	G
1	AA	484	G
1	AA	485	G
1	AA	496	A
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	588	G
1	AA	632	A
1	AA	653	A
1	AA	665	A

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Mol	Chain	Res	Type
1	AA	688	G
1	AA	701	C
1	AA	702	A
1	AA	721	G
1	AA	722	A
1	AA	723	U
1	AA	731	G
1	AA	734	G
1	AA	748	C
1	AA	749	C
1	AA	755	G
1	AA	777	A
1	AA	787	A
1	AA	793	U
1	AA	794	A
1	AA	816	A
1	AA	817	C
1	AA	828	A
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	962	C
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	981	U
1	AA	982	U
1	AA	983	A

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Mol	Chain	Res	Type
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	996	A
1	AA	1004	A
1	AA	1026	G
1	AA	1030	C
1	AA	1050	G
1	AA	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	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1146	A
1	AA	1152	A
1	AA	1154	G
1	AA	1158	C
1	AA	1159	U
1	AA	1171	G
1	AA	1182	G
1	AA	1184	G
1	AA	1187	G
1	AA	1196	U
1	AA	1197	G
1	AA	1200	C
1	AA	1201	A
1	AA	1212	U
1	AA	1238	A
1	AA	1240	U
1	AA	1256	A
1	AA	1257	U

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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	1285	A
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	1335	C
1	AA	1336	C
1	AA	1346	A
1	AA	1347	G
1	AA	1353	G
1	AA	1363	C
1	AA	1363(A)	A
1	AA	1364	U
1	AA	1370	G
1	AA	1397	C
1	AA	1398	A
1	AA	1400	C
1	AA	1419	G
1	AA	1439	C
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1470	G
1	AA	1492	A
1	AA	1494	G
1	AA	1499	A
1	AA	1503	A
1	AA	1506	U
1	AA	1517	G
1	AA	1519	A

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Mol	Chain	Res	Type
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C
1	AA	1537	U
22	AV	2	C
22	AV	5	G
22	AV	7	A
22	AV	8	U
22	AV	16	U
22	AV	17	C
22	AV	18	G
22	AV	20	U
22	AV	21	A
22	AV	42	C
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	62	C
22	AV	63	G
22	AV	68	C
22	AV	74	C
22	AV	76	A
22	AW	4	C
22	AW	8	U
22	AW	9	A
22	AW	16	U
22	AW	17	C
22	AW	18	G
22	AW	19	G
22	AW	21	A
22	AW	39	U
22	AW	44	G
22	AW	45	U
22	AW	47	U
22	AW	48	C
22	AW	50	U
22	AW	56	C

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Mol	Chain	Res	Type
22	AW	57	G
22	AW	59	U
22	AW	61	C
22	AW	62	C
22	AW	73	A
22	AW	74	C
23	AX	12	A
23	AX	13	A
23	AX	16	A
23	AX	17	U
23	AX	22	U
23	AX	27	A
24	AY	3	G
24	AY	5	G
24	AY	8	4SU
24	AY	9	A
24	AY	12	U
24	AY	13	C
24	AY	16	H2U
24	AY	17	H2U
24	AY	18	G
24	AY	19	G
24	AY	20	H2U
24	AY	21	A
24	AY	25	C
24	AY	26	A
24	AY	41	C
24	AY	44	G
24	AY	45	U
24	AY	46	7MG
24	AY	47	U
24	AY	48	U
24	AY	56	C
24	AY	59	G
24	AY	62	U
24	AY	71	C
24	AY	73	G
36	BA	10	G
36	BA	45	C
36	BA	69	C
36	BA	71	A
36	BA	72	U

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Mol	Chain	Res	Type
36	BA	74	A
36	BA	75	G
36	BA	84	A
36	BA	85	G
36	BA	88	G
36	BA	90	U
36	BA	92	A
36	BA	94	C
36	BA	100	G
36	BA	102	G
36	BA	118	A
36	BA	119	A
36	BA	120	U
36	BA	129	C
36	BA	139(A)	G
36	BA	141	A
36	BA	146	G
36	BA	149	A
36	BA	156	U
36	BA	174	C
36	BA	181	A
36	BA	196	A
36	BA	197	A
36	BA	199	A
36	BA	200	U
36	BA	204	A
36	BA	205	G
36	BA	215	G
36	BA	216	A
36	BA	221	A
36	BA	222	A
36	BA	229	A
36	BA	233	A
36	BA	245	G
36	BA	248	G
36	BA	261	G
36	BA	268	C
36	BA	271(I)	G
36	BA	271(K)	U
36	BA	271(M)	G
36	BA	271(O)	C
36	BA	272(A)	U

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Mol	Chain	Res	Type
36	BA	272(B)	G
36	BA	272(I)	U
36	BA	276	A
36	BA	278	A
36	BA	288	C
36	BA	322	A
36	BA	324	A
36	BA	329	G
36	BA	330	A
36	BA	333	G
36	BA	338	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	386	G
36	BA	388	G
36	BA	396	G
36	BA	405	U
36	BA	406	G
36	BA	411	G
36	BA	428	A
36	BA	448	U
36	BA	451	C
36	BA	457	A
36	BA	458	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	509	C
36	BA	512	G
36	BA	513	A
36	BA	529	A
36	BA	530	G
36	BA	531	C
36	BA	532	A
36	BA	533	G

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Mol	Chain	Res	Type
36	BA	537	C
36	BA	556	G
36	BA	563	G
36	BA	573	G
36	BA	575	A
36	BA	586	A
36	BA	587	C
36	BA	588	U
36	BA	603	A
36	BA	604	G
36	BA	607	U
36	BA	613	G
36	BA	614(B)	G
36	BA	615	G
36	BA	622	G
36	BA	624	C
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(J)	A
36	BA	654(K)	C
36	BA	654(M)	C
36	BA	654(T)	C
36	BA	655	A
36	BA	656	G
36	BA	669	G
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	765	G
36	BA	776	G
36	BA	782	A
36	BA	784	A
36	BA	785	G
36	BA	790	C

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Mol	Chain	Res	Type
36	BA	791	C
36	BA	792	G
36	BA	805	G
36	BA	812	C
36	BA	819	A
36	BA	827	U
36	BA	828	U
36	BA	830	G
36	BA	848	G
36	BA	857	C
36	BA	859	G
36	BA	866	A
36	BA	878	A
36	BA	889	C
36	BA	890	A
36	BA	896	A
36	BA	897	C
36	BA	901	A
36	BA	910	A
36	BA	917	A
36	BA	926	A
36	BA	932	G
36	BA	941	A
36	BA	945	A
36	BA	946	G
36	BA	953	A
36	BA	958	U
36	BA	959	A
36	BA	961	C
36	BA	974	G
36	BA	975	C
36	BA	983	A
36	BA	991	C
36	BA	996	A
36	BA	1011	G
36	BA	1012	U
36	BA	1013	C
36	BA	1022	G
36	BA	1025	G
36	BA	1026	U
36	BA	1034	G
36	BA	1038	C

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Mol	Chain	Res	Type
36	BA	1039	G
36	BA	1045	A
36	BA	1046	A
36	BA	1047	G
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	1071	G
36	BA	1072	C
36	BA	1073	A
36	BA	1087	G
36	BA	1088	A
36	BA	1090	U
36	BA	1094	U
36	BA	1111	A
36	BA	1112	G
36	BA	1116	C
36	BA	1135	C
36	BA	1136	G
36	BA	1143	A
36	BA	1155	A
36	BA	1174	A
36	BA	1175	U
36	BA	1176	G
36	BA	1178	C
36	BA	1205	U
36	BA	1210	A
36	BA	1211	U
36	BA	1212	G
36	BA	1223	G
36	BA	1236	G
36	BA	1244	G
36	BA	1247	A
36	BA	1248	G
36	BA	1253	A
36	BA	1256	G

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Mol	Chain	Res	Type
36	BA	1265	A
36	BA	1271	G
36	BA	1272	A
36	BA	1273	U
36	BA	1294	U
36	BA	1300	U
36	BA	1301	A
36	BA	1302	A
36	BA	1314	C
36	BA	1319	G
36	BA	1332	G
36	BA	1349	A
36	BA	1359	A
36	BA	1365	A
36	BA	1368	G
36	BA	1379	A
36	BA	1380	G
36	BA	1384	A
36	BA	1385	G
36	BA	1386	C
36	BA	1396	U
36	BA	1407	C
36	BA	1416	G
36	BA	1417	C
36	BA	1427	A
36	BA	1428	C
36	BA	1437	C
36	BA	1445	A
36	BA	1449	A
36	BA	1450	G
36	BA	1455	G
36	BA	1458	C
36	BA	1460	A
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	1490	A
36	BA	1491	G

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Mol	Chain	Res	Type
36	BA	1493	C
36	BA	1494	A
36	BA	1495	A
36	BA	1496	A
36	BA	1497	U
36	BA	1502	C
36	BA	1505	C
36	BA	1509	C
36	BA	1509(A)	A
36	BA	1517	G
36	BA	1541	G
36	BA	1542	A
36	BA	1544	A
36	BA	1549	C
36	BA	1554	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	1603	A
36	BA	1608	A
36	BA	1616	A
36	BA	1617	C
36	BA	1618	A
36	BA	1634	A
36	BA	1635	G
36	BA	1640	C
36	BA	1648	C
36	BA	1651	G
36	BA	1654	A
36	BA	1666	G
36	BA	1674	G
36	BA	1698	A
36	BA	1699	G
36	BA	1721	G
36	BA	1722	A
36	BA	1739	U

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Mol	Chain	Res	Type
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	1791	A
36	BA	1799	G
36	BA	1800	C
36	BA	1801	G
36	BA	1816	G
36	BA	1820	U
36	BA	1821	A
36	BA	1835	G
36	BA	1847	A
36	BA	1858	G
36	BA	1865	G
36	BA	1877	A
36	BA	1878	G
36	BA	1881	C
36	BA	1885	A
36	BA	1888	G
36	BA	1889	A
36	BA	1900	A
36	BA	1906	G
36	BA	1929	G
36	BA	1930	G
36	BA	1936	A
36	BA	1938	A
36	BA	1948	G
36	BA	1955	U
36	BA	1960	A
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

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Mol	Chain	Res	Type
36	BA	1993	U
36	BA	1997	G
36	BA	2023	G
36	BA	2031	A
36	BA	2033	A
36	BA	2034	U
36	BA	2036	C
36	BA	2043	C
36	BA	2055	C
36	BA	2056	G
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	2116	G
36	BA	2117	A
36	BA	2118	U
36	BA	2127	G
36	BA	2129	C
36	BA	2131	G
36	BA	2132	U
36	BA	2133	G
36	BA	2146	C
36	BA	2148	G
36	BA	2157	G
36	BA	2159	G
36	BA	2160	G
36	BA	2172	U
36	BA	2173	A
36	BA	2174	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

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Mol	Chain	Res	Type
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	2288	A
36	BA	2305	A
36	BA	2306	C
36	BA	2307	G
36	BA	2308	G
36	BA	2313	C
36	BA	2319	G
36	BA	2320	A
36	BA	2334	G
36	BA	2336	A
36	BA	2343	C
36	BA	2347	C
36	BA	2350	C
36	BA	2361	A
36	BA	2383	G
36	BA	2385	C
36	BA	2392	A
36	BA	2400	G
36	BA	2402	C
36	BA	2403	C
36	BA	2406	U
36	BA	2423	U
36	BA	2425	A
36	BA	2429	G
36	BA	2430	A
36	BA	2431	U
36	BA	2434	A
36	BA	2439	A

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Mol	Chain	Res	Type
36	BA	2441	C
36	BA	2448	A
36	BA	2465	C
36	BA	2469	A
36	BA	2476	A
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	2543	G
36	BA	2554	U
36	BA	2566	A
36	BA	2567	G
36	BA	2581	G
36	BA	2582	G
36	BA	2586	C
36	BA	2602	A
36	BA	2604	U
36	BA	2609	U
36	BA	2611	U
36	BA	2612	C
36	BA	2615	U
36	BA	2630	G
36	BA	2636	U
36	BA	2646	C
36	BA	2660	A
36	BA	2673	G
36	BA	2690	C
36	BA	2702	U
36	BA	2712	U
36	BA	2712(A)	A
36	BA	2713	A
36	BA	2720	U
36	BA	2726	U
36	BA	2733	A
36	BA	2750	A
36	BA	2751	G
36	BA	2752	C
36	BA	2757	A
36	BA	2759	G

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Mol	Chain	Res	Type
36	BA	2761	G
36	BA	2762	G
36	BA	2764	A
36	BA	2765	A
36	BA	2766	G
36	BA	2778	A
36	BA	2779	U
36	BA	2780	G
36	BA	2781	A
36	BA	2790	A
36	BA	2791	C
36	BA	2792	G
36	BA	2794	C
36	BA	2799	C
36	BA	2802	G
36	BA	2803	C
36	BA	2808	U
36	BA	2820	A
36	BA	2821	A
36	BA	2823	A
36	BA	2833	G
36	BA	2834	G
36	BA	2849	U
36	BA	2863	C
36	BA	2872	G
36	BA	2880	C
36	BA	2894	G
37	BB	8	U
37	BB	13	A
37	BB	15	A
37	BB	16	G
37	BB	17	C
37	BB	21	G
37	BB	25	A
37	BB	27	C
37	BB	35	U
37	BB	41	U
37	BB	42	C
37	BB	43	C
37	BB	45	A
37	BB	53	A
37	BB	57	A

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Mol	Chain	Res	Type
37	BB	66	A
37	BB	67	G
37	BB	73	A
37	BB	81	G
37	BB	82	G
37	BB	88	C
37	BB	110	G
1	CA	7	G
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	55	A
1	CA	58	C
1	CA	60	A
1	CA	61	G
1	CA	63	C
1	CA	65	U
1	CA	79	G
1	CA	80	G
1	CA	81	U
1	CA	84	U
1	CA	89	C
1	CA	90	U
1	CA	101	A
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	173	U
1	CA	182	U
1	CA	189(I)	G
1	CA	195	A
1	CA	197	A

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Mol	Chain	Res	Type
1	CA	198	G
1	CA	199	G
1	CA	202	U
1	CA	203	U
1	CA	204	U
1	CA	216	G
1	CA	244	U
1	CA	246	A
1	CA	247	G
1	CA	251	G
1	CA	267	C
1	CA	275	G
1	CA	289	G
1	CA	321	A
1	CA	328	C
1	CA	332	G
1	CA	345	C
1	CA	346	G
1	CA	347	G
1	CA	348	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	369	C
1	CA	372	C
1	CA	373	A
1	CA	397	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	422	C
1	CA	429	U
1	CA	430	A
1	CA	439	A
1	CA	452	A
1	CA	454	C
1	CA	471	G
1	CA	484	G
1	CA	485	G
1	CA	496	A
1	CA	499	A

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Mol	Chain	Res	Type
1	CA	508	C
1	CA	509	A
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
1	CA	562	C
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	577	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	721	G
1	CA	722	A
1	CA	723	U
1	CA	731	G
1	CA	734	G
1	CA	748	C
1	CA	749	C
1	CA	755	G
1	CA	777	A
1	CA	787	A
1	CA	793	U
1	CA	794	A
1	CA	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	914	A
1	CA	926	G

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Mol	Chain	Res	Type
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	961	U
1	CA	962	C
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	974	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	981	U
1	CA	982	U
1	CA	983	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	996	A
1	CA	1004	A
1	CA	1026	G
1	CA	1030	C
1	CA	1050	G
1	CA	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	1129	C
1	CA	1130	A
1	CA	1131	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1146	A

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Mol	Chain	Res	Type
1	CA	1152	A
1	CA	1154	G
1	CA	1158	C
1	CA	1159	U
1	CA	1182	G
1	CA	1184	G
1	CA	1187	G
1	CA	1196	U
1	CA	1197	G
1	CA	1200	C
1	CA	1201	A
1	CA	1212	U
1	CA	1238	A
1	CA	1240	U
1	CA	1256	A
1	CA	1257	U
1	CA	1272	G
1	CA	1280	A
1	CA	1281	U
1	CA	1284	C
1	CA	1285	A
1	CA	1286	A
1	CA	1287	A
1	CA	1299	A
1	CA	1300	G
1	CA	1302	U
1	CA	1320	C
1	CA	1321	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1335	C
1	CA	1336	C
1	CA	1346	A
1	CA	1347	G
1	CA	1353	G
1	CA	1363	C
1	CA	1363(A)	A
1	CA	1364	U
1	CA	1370	G
1	CA	1398	A
1	CA	1400	C

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Mol	Chain	Res	Type
1	CA	1419	G
1	CA	1442(A)	G
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1487	G
1	CA	1492	A
1	CA	1494	G
1	CA	1497	G
1	CA	1499	A
1	CA	1503	A
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1524	C
1	CA	1529	G
1	CA	1530	G
1	CA	1533	C
22	CV	2	C
22	CV	5	G
22	CV	7	A
22	CV	8	U
22	CV	16	U
22	CV	17	C
22	CV	18	G
22	CV	20	U
22	CV	21	A
22	CV	23	A
22	CV	42	C
22	CV	44	G
22	CV	45	U
22	CV	46	G
22	CV	47	U
22	CV	48	C
22	CV	60	U
22	CV	61	C
22	CV	62	C
22	CV	63	G
22	CV	68	C
22	CV	74	C
22	CV	76	A

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Mol	Chain	Res	Type
22	CW	4	C
22	CW	8	U
22	CW	9	A
22	CW	16	U
22	CW	17	C
22	CW	18	G
22	CW	19	G
22	CW	21	A
22	CW	39	U
22	CW	44	G
22	CW	45	U
22	CW	47	U
22	CW	48	C
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	73	A
22	CW	74	C
23	CX	12	A
23	CX	13	A
23	CX	17	U
23	CX	22	U
23	CX	27	A
24	CY	3	G
24	CY	5	G
24	CY	8	4SU
24	CY	9	A
24	CY	12	U
24	CY	13	C
24	CY	16	H2U
24	CY	17	H2U
24	CY	18	G
24	CY	19	G
24	CY	20	H2U
24	CY	21	A
24	CY	25	C
24	CY	26	A
24	CY	41	C
24	CY	44	G

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Mol	Chain	Res	Type
24	CY	45	U
24	CY	46	7MG
24	CY	47	U
24	CY	48	U
24	CY	56	C
24	CY	59	G
24	CY	62	U
24	CY	71	C
24	CY	73	G
36	DA	10	G
36	DA	27	G
36	DA	45	C
36	DA	69	C
36	DA	71	A
36	DA	72	U
36	DA	74	A
36	DA	75	G
36	DA	84	A
36	DA	85	G
36	DA	88	G
36	DA	90	U
36	DA	92	A
36	DA	94	C
36	DA	100	G
36	DA	102	G
36	DA	118	A
36	DA	119	A
36	DA	120	U
36	DA	129	C
36	DA	139(A)	G
36	DA	141	A
36	DA	146	G
36	DA	149	A
36	DA	156	U
36	DA	174	C
36	DA	181	A
36	DA	182	A
36	DA	196	A
36	DA	197	A
36	DA	199	A
36	DA	200	U
36	DA	204	A

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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	229	A
36	DA	233	A
36	DA	245	G
36	DA	248	G
36	DA	261	G
36	DA	268	C
36	DA	271(I)	G
36	DA	271(K)	U
36	DA	271(M)	G
36	DA	271(O)	C
36	DA	272(A)	U
36	DA	272(B)	G
36	DA	272(I)	U
36	DA	276	A
36	DA	278	A
36	DA	288	C
36	DA	322	A
36	DA	324	A
36	DA	329	G
36	DA	330	A
36	DA	333	G
36	DA	338	G
36	DA	352	G
36	DA	353	G
36	DA	358	U
36	DA	362	U
36	DA	363	G
36	DA	363(F)	A
36	DA	386	G
36	DA	388	G
36	DA	396	G
36	DA	405	U
36	DA	406	G
36	DA	411	G
36	DA	428	A
36	DA	448	U
36	DA	451	C

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Mol	Chain	Res	Type
36	DA	457	A
36	DA	458	G
36	DA	470	A
36	DA	480	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	529	A
36	DA	530	G
36	DA	531	C
36	DA	532	A
36	DA	533	G
36	DA	537	C
36	DA	556	G
36	DA	563	G
36	DA	573	G
36	DA	575	A
36	DA	587	C
36	DA	588	U
36	DA	603	A
36	DA	604	G
36	DA	607	U
36	DA	613	G
36	DA	614(B)	G
36	DA	615	G
36	DA	622	G
36	DA	624	C
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(M)	C
36	DA	654(T)	C

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Mol	Chain	Res	Type
36	DA	655	A
36	DA	656	G
36	DA	669	G
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	765	G
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	889	C
36	DA	890	A
36	DA	896	A
36	DA	897	C
36	DA	901	A
36	DA	910	A
36	DA	917	A
36	DA	926	A
36	DA	932	G
36	DA	941	A
36	DA	945	A
36	DA	946	G
36	DA	953	A
36	DA	958	U

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Mol	Chain	Res	Type
36	DA	959	A
36	DA	961	C
36	DA	974	G
36	DA	975	C
36	DA	983	A
36	DA	991	C
36	DA	996	A
36	DA	1011	G
36	DA	1012	U
36	DA	1013	C
36	DA	1022	G
36	DA	1025	G
36	DA	1026	U
36	DA	1034	G
36	DA	1038	C
36	DA	1039	G
36	DA	1045	A
36	DA	1046	A
36	DA	1047	G
36	DA	1053	C
36	DA	1059	G
36	DA	1061	U
36	DA	1062	G
36	DA	1065	U
36	DA	1067	A
36	DA	1068	G
36	DA	1069	A
36	DA	1070	A
36	DA	1071	G
36	DA	1072	C
36	DA	1073	A
36	DA	1087	G
36	DA	1088	A
36	DA	1090	U
36	DA	1094	U
36	DA	1111	A
36	DA	1112	G
36	DA	1116	C
36	DA	1135	C
36	DA	1136	G
36	DA	1143	A
36	DA	1155	A

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Mol	Chain	Res	Type
36	DA	1174	A
36	DA	1175	U
36	DA	1176	G
36	DA	1178	C
36	DA	1205	U
36	DA	1210	A
36	DA	1211	U
36	DA	1212	G
36	DA	1223	G
36	DA	1236	G
36	DA	1244	G
36	DA	1247	A
36	DA	1248	G
36	DA	1253	A
36	DA	1256	G
36	DA	1265	A
36	DA	1271	G
36	DA	1272	A
36	DA	1273	U
36	DA	1294	U
36	DA	1300	U
36	DA	1301	A
36	DA	1302	A
36	DA	1314	C
36	DA	1319	G
36	DA	1332	G
36	DA	1349	A
36	DA	1359	A
36	DA	1365	A
36	DA	1368	G
36	DA	1379	A
36	DA	1380	G
36	DA	1384	A
36	DA	1385	G
36	DA	1386	C
36	DA	1396	U
36	DA	1407	C
36	DA	1416	G
36	DA	1417	C
36	DA	1427	A
36	DA	1428	C
36	DA	1437	C

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Mol	Chain	Res	Type
36	DA	1445	A
36	DA	1449	A
36	DA	1450	G
36	DA	1455	G
36	DA	1458	C
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	1490	A
36	DA	1491	G
36	DA	1493	C
36	DA	1494	A
36	DA	1495	A
36	DA	1496	A
36	DA	1497	U
36	DA	1502	C
36	DA	1505	C
36	DA	1509	C
36	DA	1509(A)	A
36	DA	1517	G
36	DA	1541	G
36	DA	1542	A
36	DA	1544	A
36	DA	1554	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

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Mol	Chain	Res	Type
36	DA	1618	A
36	DA	1634	A
36	DA	1640	C
36	DA	1648	C
36	DA	1651	G
36	DA	1653	G
36	DA	1654	A
36	DA	1666	G
36	DA	1674	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	1756	G
36	DA	1763	G
36	DA	1764	G
36	DA	1773	A
36	DA	1780	A
36	DA	1791	A
36	DA	1799	G
36	DA	1800	C
36	DA	1801	G
36	DA	1816	G
36	DA	1820	U
36	DA	1821	A
36	DA	1835	G
36	DA	1847	A
36	DA	1858	G
36	DA	1865	G
36	DA	1877	A
36	DA	1878	G
36	DA	1881	C
36	DA	1885	A
36	DA	1888	G
36	DA	1889	A
36	DA	1900	A
36	DA	1906	G
36	DA	1929	G
36	DA	1930	G

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Mol	Chain	Res	Type
36	DA	1936	A
36	DA	1938	A
36	DA	1948	G
36	DA	1955	U
36	DA	1960	A
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	1992	G
36	DA	1993	U
36	DA	1997	G
36	DA	2023	G
36	DA	2031	A
36	DA	2033	A
36	DA	2034	U
36	DA	2036	C
36	DA	2043	C
36	DA	2055	C
36	DA	2056	G
36	DA	2060	A
36	DA	2061	G
36	DA	2062	A
36	DA	2069	G
36	DA	2093	G
36	DA	2100	G
36	DA	2102	U
36	DA	2103	C
36	DA	2104	G
36	DA	2116	G
36	DA	2117	A
36	DA	2118	U
36	DA	2127	G
36	DA	2129	C
36	DA	2132	U
36	DA	2133	G
36	DA	2146	C
36	DA	2148	G

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Mol	Chain	Res	Type
36	DA	2157	G
36	DA	2159	G
36	DA	2160	G
36	DA	2172	U
36	DA	2173	A
36	DA	2174	C
36	DA	2180	U
36	DA	2185	C
36	DA	2186	G
36	DA	2187	G
36	DA	2189	U
36	DA	2190	G
36	DA	2192	G
36	DA	2193	G
36	DA	2198	A
36	DA	2199	A
36	DA	2200	C
36	DA	2207	G
36	DA	2208	A
36	DA	2218	U
36	DA	2219	G
36	DA	2225	A
36	DA	2238	G
36	DA	2239	G
36	DA	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	2308	G
36	DA	2313	C
36	DA	2319	G
36	DA	2320	A
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

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Mol	Chain	Res	Type
36	DA	2392	A
36	DA	2400	G
36	DA	2402	C
36	DA	2403	C
36	DA	2406	U
36	DA	2423	U
36	DA	2425	A
36	DA	2429	G
36	DA	2430	A
36	DA	2431	U
36	DA	2434	A
36	DA	2439	A
36	DA	2441	C
36	DA	2448	A
36	DA	2465	C
36	DA	2469	A
36	DA	2476	A
36	DA	2484	G
36	DA	2502	G
36	DA	2505	G
36	DA	2518	A
36	DA	2524	G
36	DA	2529	G
36	DA	2543	G
36	DA	2554	U
36	DA	2566	A
36	DA	2567	G
36	DA	2581	G
36	DA	2582	G
36	DA	2586	C
36	DA	2602	A
36	DA	2604	U
36	DA	2609	U
36	DA	2611	U
36	DA	2612	C
36	DA	2615	U
36	DA	2630	G
36	DA	2636	U
36	DA	2646	C
36	DA	2660	A
36	DA	2673	G
36	DA	2690	C

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Mol	Chain	Res	Type
36	DA	2702	U
36	DA	2712	U
36	DA	2712(A)	A
36	DA	2713	A
36	DA	2720	U
36	DA	2726	U
36	DA	2733	A
36	DA	2750	A
36	DA	2751	G
36	DA	2752	C
36	DA	2757	A
36	DA	2759	G
36	DA	2761	G
36	DA	2762	G
36	DA	2764	A
36	DA	2765	A
36	DA	2766	G
36	DA	2778	A
36	DA	2779	U
36	DA	2780	G
36	DA	2781	A
36	DA	2790	A
36	DA	2791	C
36	DA	2792	G
36	DA	2794	C
36	DA	2799	C
36	DA	2802	G
36	DA	2803	C
36	DA	2808	U
36	DA	2820	A
36	DA	2821	A
36	DA	2823	A
36	DA	2833	G
36	DA	2834	G
36	DA	2849	U
36	DA	2863	C
36	DA	2872	G
36	DA	2880	C
36	DA	2894	G
37	DB	8	U
37	DB	13	A
37	DB	15	A

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Mol	Chain	Res	Type
37	DB	16	G
37	DB	17	C
37	DB	21	G
37	DB	25	A
37	DB	27	C
37	DB	35	U
37	DB	41	U
37	DB	42	C
37	DB	43	C
37	DB	45	A
37	DB	53	A
37	DB	57	A
37	DB	66	A
37	DB	67	G
37	DB	73	A
37	DB	81	G
37	DB	82	G
37	DB	88	C
37	DB	110	G

All (200) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	30	U
1	AA	60	A
1	AA	79	G
1	AA	115	G
1	AA	119	A
1	AA	197	A
1	AA	202	U
1	AA	243	A
1	AA	250	A
1	AA	266	G
1	AA	274	A
1	AA	344	A
1	AA	351	G
1	AA	353	A
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	495	A
1	AA	508	C

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Mol	Chain	Res	Type
1	AA	534	U
1	AA	547	A
1	AA	560	U
1	AA	575	G
1	AA	576	G
1	AA	687	A
1	AA	748	C
1	AA	792	A
1	AA	982	U
1	AA	992	U
1	AA	1049	U
1	AA	1101	A
1	AA	1117	G
1	AA	1145	C
1	AA	1157	A
1	AA	1200	C
1	AA	1239	A
1	AA	1280	A
1	AA	1285	A
1	AA	1286	A
1	AA	1363(A)	A
1	AA	1399	C
1	AA	1442(A)	G
1	AA	1498	U
22	AV	59	U
22	AW	7	A
22	AW	44	G
23	AX	21	C
24	AY	16	H2U
24	AY	17	H2U
24	AY	20	H2U
36	BA	71	A
36	BA	83	G
36	BA	199	A
36	BA	221	A
36	BA	332	A
36	BA	387	U
36	BA	512	G
36	BA	587	C
36	BA	603	A
36	BA	614(C)	A
36	BA	752	A

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Mol	Chain	Res	Type
36	BA	790	C
36	BA	811	U
36	BA	856	C
36	BA	1052	C
36	BA	1060	U
36	BA	1068	G
36	BA	1069	A
36	BA	1210	A
36	BA	1300	U
36	BA	1301	A
36	BA	1378	A
36	BA	1427	A
36	BA	1541	G
36	BA	1558	A
36	BA	1653	G
36	BA	1799	G
36	BA	1819	A
36	BA	1820	U
36	BA	1948	G
36	BA	1960	A
36	BA	1970	A
36	BA	2033	A
36	BA	2126	A
36	BA	2131	G
36	BA	2145	C
36	BA	2160	G
36	BA	2422	A
36	BA	2581	G
36	BA	2610	C
36	BA	2689	U
36	BA	2750	A
36	BA	2756	U
36	BA	2762	G
36	BA	2779	U
37	BB	34	U
37	BB	56	G
37	BB	66	A
1	CA	30	U
1	CA	60	A
1	CA	79	G
1	CA	115	G
1	CA	119	A

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Mol	Chain	Res	Type
1	CA	197	A
1	CA	202	U
1	CA	243	A
1	CA	250	A
1	CA	266	G
1	CA	274	A
1	CA	344	A
1	CA	351	G
1	CA	353	A
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	563	A
1	CA	575	G
1	CA	576	G
1	CA	687	A
1	CA	748	C
1	CA	792	A
1	CA	961	U
1	CA	982	U
1	CA	992	U
1	CA	995	C
1	CA	1049	U
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	1280	A
1	CA	1285	A
1	CA	1286	A
1	CA	1363(A)	A
1	CA	1399	C
1	CA	1498	U
1	CA	1529	G
22	CV	59	U

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Mol	Chain	Res	Type
22	CW	7	A
22	CW	39	U
22	CW	44	G
23	CX	21	C
24	CY	16	H2U
24	CY	17	H2U
24	CY	20	H2U
36	DA	71	A
36	DA	83	G
36	DA	199	A
36	DA	221	A
36	DA	332	A
36	DA	387	U
36	DA	512	G
36	DA	587	C
36	DA	603	A
36	DA	614(C)	A
36	DA	752	A
36	DA	790	C
36	DA	811	U
36	DA	856	C
36	DA	1052	C
36	DA	1060	U
36	DA	1068	G
36	DA	1069	A
36	DA	1210	A
36	DA	1300	U
36	DA	1301	A
36	DA	1378	A
36	DA	1427	A
36	DA	1541	G
36	DA	1558	A
36	DA	1653	G
36	DA	1799	G
36	DA	1819	A
36	DA	1820	U
36	DA	1948	G
36	DA	1960	A
36	DA	1970	A
36	DA	2033	A
36	DA	2126	A
36	DA	2131	G

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Mol	Chain	Res	Type
36	DA	2145	C
36	DA	2160	G
36	DA	2422	A
36	DA	2581	G
36	DA	2610	C
36	DA	2689	U
36	DA	2750	A
36	DA	2756	U
36	DA	2762	G
36	DA	2779	U
37	DB	34	U
37	DB	56	G
37	DB	66	A

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

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	1.15	2 (11%)	23,30,33	1.88	4 (17%)
24	H2U	AY	17	24	17,21,22	1.10	2 (11%)	23,30,33	1.95	5 (21%)
24	H2U	AY	20	24	17,21,22	0.88	1 (5%)	23,30,33	1.92	4 (17%)
24	OMC	AY	32	24	13,22,23	0.76	0	20,31,34	1.02	2 (10%)
24	MIA	AY	37	24	21,31,32	0.96	0	26,44,47	1.66	4 (15%)
24	7MG	AY	46	24	19,26,27	1.68	3 (15%)	24,39,42	2.29	3 (12%)
24	5MU	AY	54	24	12,22,23	1.38	3 (25%)	14,32,35	4.53	3 (21%)
24	PSU	AY	55	24	13,21,22	1.16	2 (15%)	18,30,33	3.80	8 (44%)
24	4SU	AY	8	24	11,21,22	1.53	4 (36%)	13,30,33	2.30	1 (7%)
24	H2U	CY	16	24	17,21,22	1.15	2 (11%)	23,30,33	1.86	4 (17%)
24	H2U	CY	17	24	17,21,22	1.11	2 (11%)	23,30,33	1.95	5 (21%)
24	H2U	CY	20	24	17,21,22	0.87	1 (5%)	23,30,33	1.93	5 (21%)

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	0.73	0	20,31,34	1.03	2 (10%)
24	MIA	CY	37	24	21,31,32	1.08	2 (9%)	26,44,47	1.68	4 (15%)
24	7MG	CY	46	24	19,26,27	1.67	3 (15%)	24,39,42	2.28	3 (12%)
24	5MU	CY	54	24	12,22,23	1.40	3 (25%)	14,32,35	4.52	3 (21%)
24	PSU	CY	55	24	13,21,22	1.13	2 (15%)	18,30,33	3.72	8 (44%)
24	4SU	CY	8	24	11,21,22	1.46	3 (27%)	13,30,33	2.28	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	-	1/7/38/39	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	-	1/7/38/39	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 (35) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	CY	46	7MG	C8-N9	-5.04	1.38	1.45
24	AY	46	7MG	C8-N9	-4.99	1.38	1.45
24	CY	46	7MG	C8-N7	-2.77	1.30	1.43
24	AY	46	7MG	C8-N7	-2.75	1.30	1.43
24	CY	54	5MU	C6-C5	-2.18	1.34	1.40
24	CY	8	4SU	C6-C5	-2.13	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	AY	54	5MU	C6-C5	-2.12	1.34	1.40
24	AY	8	4SU	C6-C5	-2.09	1.33	1.38
24	CY	37	MIA	C8-N7	-2.07	1.30	1.34
24	CY	17	H2U	C1'-N1	2.05	1.50	1.45
24	AY	17	H2U	C1'-N1	2.07	1.50	1.45
24	AY	20	H2U	C6-N1	2.08	1.49	1.47
24	CY	20	H2U	C6-N1	2.15	1.49	1.47
24	AY	8	4SU	C4-S4	2.15	1.71	1.67
24	AY	8	4SU	C6-N1	2.19	1.38	1.35
24	CY	8	4SU	C6-N1	2.24	1.39	1.35
24	AY	16	H2U	C1'-N1	2.31	1.50	1.45
24	CY	16	H2U	C1'-N1	2.37	1.50	1.45
24	CY	55	PSU	C6-N1	2.37	1.39	1.34
24	AY	17	H2U	C6-N1	2.42	1.50	1.47
24	AY	54	5MU	C6-N1	2.44	1.38	1.35
24	AY	16	H2U	C6-N1	2.47	1.50	1.47
24	CY	16	H2U	C6-N1	2.47	1.50	1.47
24	AY	55	PSU	C6-N1	2.52	1.39	1.34
24	CY	54	5MU	C6-N1	2.55	1.38	1.35
24	CY	17	H2U	C6-N1	2.56	1.50	1.47
24	CY	55	PSU	C4-N3	2.62	1.38	1.33
24	CY	37	MIA	C2-S10	2.65	1.78	1.75
24	AY	55	PSU	C4-N3	2.66	1.38	1.33
24	AY	54	5MU	C4-N3	3.12	1.38	1.33
24	CY	8	4SU	C5-C4	3.15	1.42	1.38
24	CY	54	5MU	C4-N3	3.19	1.39	1.33
24	AY	8	4SU	C5-C4	3.41	1.42	1.38
24	CY	46	7MG	C6-N1	3.47	1.39	1.33
24	AY	46	7MG	C6-N1	3.83	1.40	1.33

All (69) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	55	PSU	N1-C2-N3	-12.87	120.12	128.33
24	CY	55	PSU	N1-C2-N3	-12.54	120.33	128.33
24	CY	54	5MU	C5-C4-N3	-8.99	115.13	125.14
24	AY	54	5MU	C5-C4-N3	-8.97	115.16	125.14
24	AY	8	4SU	C5-C4-N3	-8.14	115.66	123.63
24	CY	8	4SU	C5-C4-N3	-8.02	115.78	123.63
24	AY	46	7MG	C5-C6-N1	-7.78	111.50	123.46
24	CY	46	7MG	C5-C6-N1	-7.74	111.56	123.46
24	AY	20	H2U	C4-N3-C2	-5.26	121.45	125.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	CY	20	H2U	C4-N3-C2	-5.24	121.46	125.79
24	AY	17	H2U	C4-N3-C2	-4.76	121.86	125.79
24	CY	17	H2U	C4-N3-C2	-4.74	121.88	125.79
24	AY	16	H2U	C4-N3-C2	-4.59	122.00	125.79
24	CY	16	H2U	C4-N3-C2	-4.48	122.09	125.79
24	CY	55	PSU	C5-C6-N1	-2.91	120.28	124.39
24	AY	37	MIA	C5-C6-N1	-2.90	117.49	120.48
24	AY	55	PSU	C5-C6-N1	-2.83	120.39	124.39
24	CY	37	MIA	C5-C6-N1	-2.74	117.66	120.48
24	CY	16	H2U	O2-C2-N1	-2.34	120.24	123.30
24	CY	20	H2U	O2-C2-N1	-2.31	120.28	123.30
24	CY	32	OMC	CM2-O2'-C2'	-2.30	108.08	114.59
24	AY	55	PSU	C5-C1'-C2'	-2.30	111.43	115.52
24	AY	17	H2U	O2-C2-N1	-2.30	120.30	123.30
24	CY	17	H2U	O2-C2-N1	-2.29	120.30	123.30
24	AY	32	OMC	CM2-O2'-C2'	-2.29	108.12	114.59
24	CY	55	PSU	C5-C1'-C2'	-2.29	111.45	115.52
24	AY	16	H2U	O2-C2-N1	-2.25	120.36	123.30
24	AY	20	H2U	O2-C2-N1	-2.15	120.49	123.30
24	CY	20	H2U	O3'-C3'-C2'	2.02	118.38	111.83
24	AY	37	MIA	C2-N1-C6	2.02	119.28	113.35
24	CY	37	MIA	C5-C6-N6	2.03	123.80	120.47
24	AY	54	5MU	C5M-C5-C6	2.08	122.81	118.62
24	CY	54	5MU	C5M-C5-C6	2.12	122.89	118.62
24	CY	46	7MG	CM7-N7-C8	2.28	126.98	120.52
24	AY	46	7MG	CM7-N7-C8	2.28	127.00	120.52
24	CY	55	PSU	O3'-C3'-C4'	2.48	118.49	111.05
24	AY	55	PSU	O3'-C3'-C4'	2.52	118.61	111.05
24	CY	17	H2U	O3'-C3'-C2'	2.57	120.19	111.83
24	AY	17	H2U	O3'-C3'-C2'	2.60	120.29	111.83
24	CY	37	MIA	C12-N6-C6	2.72	126.81	123.42
24	CY	55	PSU	O4'-C1'-C2'	2.76	107.55	104.73
24	AY	55	PSU	O4'-C1'-C2'	2.78	107.56	104.73
24	AY	55	PSU	O3'-C3'-C2'	2.79	120.91	111.83
24	AY	37	MIA	C12-N6-C6	2.80	126.90	123.42
24	CY	55	PSU	O3'-C3'-C2'	2.85	121.10	111.83
24	AY	32	OMC	C2-N3-C4	3.14	120.05	115.61
24	CY	32	OMC	C2-N3-C4	3.16	120.07	115.61
24	AY	55	PSU	C6-N1-C2	3.50	121.09	115.47
24	CY	55	PSU	C6-N1-C2	3.51	121.11	115.47
24	AY	20	H2U	N3-C2-N1	3.94	120.53	116.60
24	CY	20	H2U	N3-C2-N1	4.05	120.64	116.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	17	H2U	C5-C4-N3	4.12	120.59	116.71
24	CY	17	H2U	C5-C4-N3	4.16	120.62	116.71
24	CY	20	H2U	C5-C4-N3	4.20	120.66	116.71
24	AY	20	H2U	C5-C4-N3	4.21	120.67	116.71
24	CY	16	H2U	C5-C4-N3	4.39	120.84	116.71
24	AY	16	H2U	C5-C4-N3	4.42	120.87	116.71
24	CY	17	H2U	N3-C2-N1	4.45	121.05	116.60
24	AY	17	H2U	N3-C2-N1	4.50	121.10	116.60
24	CY	16	H2U	N3-C2-N1	4.51	121.11	116.60
24	AY	16	H2U	N3-C2-N1	4.57	121.17	116.60
24	AY	37	MIA	C11-S10-C2	6.03	106.13	102.26
24	CY	37	MIA	C11-S10-C2	6.34	106.32	102.26
24	CY	55	PSU	C4-N3-C2	6.48	120.84	115.25
24	AY	46	7MG	C6-N1-C2	6.70	125.24	115.94
24	AY	55	PSU	C4-N3-C2	6.71	121.05	115.25
24	CY	46	7MG	C6-N1-C2	6.75	125.31	115.94
24	CY	54	5MU	C4-N3-C2	14.05	127.39	115.25
24	AY	54	5MU	C4-N3-C2	14.09	127.43	115.25

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	AY	17	H2U	P-O5'-C5'-C4'
24	CY	17	H2U	P-O5'-C5'-C4'

There are no ring outliers.

14 monomers are involved in 19 short contacts:

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

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	CY	54	5MU	1	0
24	CY	55	PSU	1	0
24	CY	8	4SU	1	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	1.61	4 (17%)	30,47,47	1.45	4 (13%)
61	KIR	AZ	502	-	55,59,59	3.69	21 (38%)	53,84,84	1.68	13 (24%)
60	GDP	CZ	501	-	23,30,30	1.51	4 (17%)	30,47,47	1.92	5 (16%)
61	KIR	CZ	502	-	55,59,59	3.69	23 (41%)	53,84,84	1.71	13 (24%)

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 (52) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	CZ	502	KIR	O18-C17	-14.40	1.22	1.44
61	AZ	502	KIR	O18-C17	-14.12	1.23	1.44
61	AZ	502	KIR	O30-C30	-11.98	1.17	1.42
61	CZ	502	KIR	O30-C30	-11.66	1.18	1.42
61	CZ	502	KIR	O34-C33	-11.06	1.29	1.44
61	AZ	502	KIR	O34-C33	-11.01	1.29	1.44
60	CZ	501	GDP	C6-C5	-2.71	1.35	1.41
60	AZ	501	GDP	C8-N7	-2.07	1.30	1.34
61	CZ	502	KIR	C44-C21	2.00	1.54	1.50
60	AZ	501	GDP	C2-N1	2.07	1.39	1.35
61	CZ	502	KIR	C9-C8	2.07	1.41	1.34
61	CZ	502	KIR	C16-C17	2.11	1.57	1.53
61	CZ	502	KIR	O20-C20	2.17	1.46	1.42
61	CZ	502	KIR	C6-N1	2.18	1.39	1.34
60	CZ	501	GDP	O4'-C1'	2.27	1.44	1.41
61	AZ	502	KIR	C6-N1	2.31	1.39	1.34
60	AZ	501	GDP	O4'-C1'	2.36	1.44	1.41
61	AZ	502	KIR	C16-C17	2.37	1.58	1.53
61	AZ	502	KIR	C44-C21	2.40	1.55	1.50
61	CZ	502	KIR	C20-C21	2.52	1.55	1.51
61	CZ	502	KIR	C29-C30	2.57	1.58	1.53
61	AZ	502	KIR	C20-C21	2.57	1.55	1.51
61	CZ	502	KIR	O34-C29	2.63	1.48	1.43
61	AZ	502	KIR	C29-C30	2.63	1.58	1.53
60	CZ	501	GDP	C2-N1	2.78	1.40	1.35
61	AZ	502	KIR	O34-C29	3.03	1.49	1.43
61	CZ	502	KIR	C42-C19	3.16	1.60	1.53
61	AZ	502	KIR	C8-C7	3.40	1.56	1.47
61	CZ	502	KIR	C32-C31	3.45	1.60	1.55
61	CZ	502	KIR	C5-C4	3.49	1.45	1.39
61	CZ	502	KIR	C8-C7	3.58	1.57	1.47
61	CZ	502	KIR	C37-C38	3.63	1.39	1.32
61	AZ	502	KIR	C42-C19	3.65	1.61	1.53
61	AZ	502	KIR	C5-C4	3.67	1.46	1.39
61	CZ	502	KIR	O29-C29	3.70	1.48	1.40
61	CZ	502	KIR	C19-C17	3.72	1.64	1.54
61	AZ	502	KIR	O29-C29	3.74	1.48	1.40
61	CZ	502	KIR	C2-N1	3.82	1.40	1.33
61	AZ	502	KIR	C2-N1	3.83	1.40	1.33
61	AZ	502	KIR	C19-C17	3.85	1.64	1.54
61	AZ	502	KIR	C37-C38	3.91	1.39	1.32
61	AZ	502	KIR	C32-C31	3.97	1.61	1.55
60	CZ	501	GDP	C6-N1	4.38	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	AZ	502	KIR	C27-N26	4.49	1.43	1.33
61	CZ	502	KIR	C27-N26	4.71	1.43	1.33
61	AZ	502	KIR	C22-C21	4.79	1.38	1.34
61	CZ	502	KIR	C19-C20	5.02	1.62	1.53
61	AZ	502	KIR	C19-C20	5.08	1.62	1.53
60	AZ	501	GDP	C6-N1	5.14	1.42	1.33
61	CZ	502	KIR	C22-C21	5.28	1.38	1.34
61	AZ	502	KIR	C45-C28	5.34	1.61	1.54
61	CZ	502	KIR	C45-C28	6.19	1.62	1.54

All (35) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
61	AZ	502	KIR	O29-C29-O34	-5.14	101.68	110.18
61	CZ	502	KIR	O29-C29-O34	-5.07	101.79	110.18
60	CZ	501	GDP	N3-C2-N1	-4.81	120.11	127.44
60	CZ	501	GDP	C5-C6-N1	-4.48	117.46	123.59
60	CZ	501	GDP	PA-O3A-PB	-4.35	118.08	132.67
60	CZ	501	GDP	C4-C5-N7	-3.84	105.94	109.48
60	AZ	501	GDP	PA-O3A-PB	-3.83	119.82	132.67
61	CZ	502	KIR	C48-C32-C47	-3.81	101.43	107.74
61	AZ	502	KIR	C48-C32-C47	-3.49	101.95	107.74
60	AZ	501	GDP	N3-C2-N1	-3.49	122.13	127.44
61	CZ	502	KIR	C11-C10-C9	-3.31	116.07	123.39
60	AZ	501	GDP	C5-C6-N1	-3.26	119.12	123.59
61	AZ	502	KIR	C11-C10-C9	-3.22	116.28	123.39
61	AZ	502	KIR	C23-C22-C21	-2.77	124.48	127.39
61	CZ	502	KIR	C23-C22-C21	-2.63	124.62	127.39
61	CZ	502	KIR	C5-C6-N1	-2.61	120.92	123.90
60	AZ	501	GDP	C4-C5-N7	-2.48	107.19	109.48
61	AZ	502	KIR	C5-C6-N1	-2.42	121.14	123.90
61	AZ	502	KIR	C29-C30-C31	-2.18	107.59	110.76
61	CZ	502	KIR	C29-C30-C31	-2.13	107.66	110.76
61	AZ	502	KIR	O4-C4-C3	-2.10	119.65	121.84
61	CZ	502	KIR	O7-C7-C3	-2.03	115.05	120.41
61	CZ	502	KIR	O4-C4-C3	-2.03	119.73	121.84
61	AZ	502	KIR	O7-C7-C3	-2.01	115.10	120.41
61	AZ	502	KIR	C48-C32-C31	2.24	113.05	109.19
61	CZ	502	KIR	C48-C32-C31	2.39	113.31	109.19
61	CZ	502	KIR	O18-C17-C16	2.47	109.24	104.21
61	AZ	502	KIR	O18-C17-C16	2.48	109.26	104.21
61	CZ	502	KIR	C44-C21-C20	2.54	120.03	115.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
61	AZ	502	KIR	C44-C21-C20	2.61	120.15	115.58
60	CZ	501	GDP	C6-N1-C2	2.61	119.57	115.94
61	AZ	502	KIR	C6-N1-C2	2.76	123.59	116.57
61	CZ	502	KIR	C6-N1-C2	2.84	123.79	116.57
61	AZ	502	KIR	C45-C28-C27	4.35	112.62	108.29
61	CZ	502	KIR	C45-C28-C27	4.72	112.99	108.29

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 45 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	AZ	501	GDP	15	0
61	AZ	502	KIR	13	0
60	CZ	501	GDP	8	0
61	CZ	502	KIR	9	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^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1510/1522 (99%)	-0.28	21 (1%) 78 60	44, 78, 160, 200	0
1	CA	1510/1522 (99%)	-0.05	33 (2%) 65 42	37, 73, 161, 200	0
2	AB	234/256 (91%)	-0.08	6 (2%) 59 35	58, 88, 152, 164	0
2	CB	234/256 (91%)	-0.17	3 (1%) 79 62	54, 86, 151, 164	0
3	AC	206/239 (86%)	-0.29	1 (0%) 91 83	52, 75, 101, 110	0
3	CC	206/239 (86%)	-0.28	0 100 100	46, 70, 100, 109	0
4	AD	208/209 (99%)	0.14	10 (4%) 34 15	71, 97, 124, 132	0
4	CD	208/209 (99%)	0.07	4 (1%) 70 48	67, 96, 123, 131	0
5	AE	150/162 (92%)	-0.33	0 100 100	53, 65, 89, 110	0
5	CE	150/162 (92%)	-0.34	0 100 100	49, 63, 88, 109	0
6	AF	101/101 (100%)	0.07	1 (0%) 84 69	71, 99, 115, 122	0
6	CF	101/101 (100%)	-0.13	1 (0%) 84 69	68, 97, 114, 121	0
7	AG	155/156 (99%)	0.21	9 (5%) 26 11	66, 89, 113, 130	0
7	CG	155/156 (99%)	-0.09	2 (1%) 79 62	59, 86, 112, 129	0
8	AH	138/138 (100%)	-0.27	1 (0%) 89 78	54, 70, 87, 95	0
8	CH	138/138 (100%)	-0.28	0 100 100	52, 67, 87, 94	0
9	AI	127/128 (99%)	0.69	19 (14%) 3 1	62, 96, 128, 139	0
9	CI	127/128 (99%)	0.26	3 (2%) 62 39	54, 93, 127, 139	0
10	AJ	98/105 (93%)	0.85	22 (22%) 1 0	59, 99, 141, 145	0
10	CJ	98/105 (93%)	0.39	6 (6%) 25 10	54, 95, 140, 144	0
11	AK	119/129 (92%)	0.07	7 (5%) 26 11	55, 73, 107, 134	0
11	CK	119/129 (92%)	-0.02	4 (3%) 49 24	51, 68, 108, 133	0
12	AL	124/131 (94%)	0.04	5 (4%) 42 20	55, 70, 94, 132	0
12	CL	124/131 (94%)	-0.10	1 (0%) 87 75	51, 68, 93, 132	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	124/126 (98%)	0.38	14 (11%) 7 2	71, 97, 124, 152	0
13	CM	124/126 (98%)	0.15	7 (5%) 28 11	67, 95, 123, 152	0
14	AN	60/61 (98%)	-0.15	1 (1%) 73 52	57, 72, 93, 96	0
14	CN	60/61 (98%)	0.01	1 (1%) 73 52	49, 66, 91, 96	0
15	AO	88/89 (98%)	-0.06	0 100 100	57, 75, 99, 105	0
15	CO	88/89 (98%)	-0.02	0 100 100	56, 74, 98, 104	0
16	AP	83/88 (94%)	0.44	4 (4%) 34 15	74, 91, 109, 135	0
16	CP	83/88 (94%)	0.41	2 (2%) 62 39	72, 89, 108, 136	0
17	AQ	99/105 (94%)	0.02	3 (3%) 54 29	60, 79, 95, 108	0
17	CQ	99/105 (94%)	-0.04	0 100 100	57, 78, 93, 107	0
18	AR	70/88 (79%)	-0.02	3 (4%) 39 18	58, 82, 106, 119	0
18	CR	70/88 (79%)	-0.28	1 (1%) 78 60	56, 79, 105, 118	0
19	AS	78/93 (83%)	0.46	5 (6%) 23 9	75, 99, 137, 139	0
19	CS	78/93 (83%)	0.49	6 (7%) 16 5	71, 99, 136, 139	0
20	AT	99/106 (93%)	0.47	6 (6%) 25 10	75, 97, 131, 135	0
20	CT	99/106 (93%)	0.47	5 (5%) 32 13	71, 96, 132, 135	0
21	AU	24/27 (88%)	0.83	3 (12%) 5 2	66, 84, 103, 115	0
21	CU	24/27 (88%)	0.41	1 (4%) 40 19	64, 78, 99, 115	0
22	AV	76/76 (100%)	-0.27	1 (1%) 79 62	56, 91, 128, 148	0
22	AW	76/76 (100%)	0.83	11 (14%) 3 1	103, 172, 200, 200	0
22	CV	76/76 (100%)	-0.20	1 (1%) 79 62	50, 89, 128, 147	0
22	CW	76/76 (100%)	0.75	12 (15%) 3 1	100, 172, 200, 200	0
23	AX	17/27 (62%)	0.63	2 (11%) 6 2	50, 97, 156, 157	0
23	CX	17/27 (62%)	0.58	1 (5%) 26 11	45, 95, 156, 157	0
24	AY	68/77 (88%)	0.07	1 (1%) 76 58	61, 140, 171, 190	0
24	CY	68/77 (88%)	0.02	4 (5%) 26 11	57, 140, 170, 190	0
25	AZ	385/405 (95%)	1.83	140 (36%) 0 0	116, 142, 165, 183	0
25	CZ	385/405 (95%)	0.47	26 (6%) 20 7	113, 141, 165, 183	0
26	B0	84/85 (98%)	0.66	9 (10%) 8 3	77, 91, 118, 131	0
26	D0	84/85 (98%)	0.59	7 (8%) 14 5	76, 90, 119, 131	0
27	B1	93/98 (94%)	0.46	7 (7%) 17 6	74, 95, 134, 143	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
27	D1	93/98 (94%)	0.27	2 (2%) 65 42	56, 76, 130, 142	0
28	B2	71/72 (98%)	0.49	5 (7%) 19 7	110, 133, 148, 157	0
28	D2	71/72 (98%)	1.45	22 (30%) 1 0	134, 154, 174, 175	0
29	B3	59/60 (98%)	0.70	3 (5%) 32 13	81, 99, 120, 142	0
29	D3	59/60 (98%)	0.58	3 (5%) 32 13	80, 97, 120, 142	0
30	B4	44/71 (61%)	0.24	5 (11%) 7 2	124, 149, 160, 163	0
30	D4	44/71 (61%)	0.41	4 (9%) 11 4	123, 147, 158, 163	0
31	B5	59/60 (98%)	0.34	5 (8%) 13 4	73, 105, 158, 176	0
31	D5	59/60 (98%)	0.17	4 (6%) 20 7	72, 104, 158, 176	0
32	B6	50/54 (92%)	0.86	7 (14%) 4 2	74, 106, 116, 125	0
32	D6	50/54 (92%)	0.90	8 (16%) 3 1	73, 104, 115, 123	0
33	B7	48/49 (97%)	0.47	1 (2%) 67 44	70, 79, 119, 139	0
33	D7	48/49 (97%)	0.62	2 (4%) 40 19	68, 78, 119, 140	0
34	B8	63/65 (96%)	0.53	3 (4%) 34 15	80, 90, 104, 131	0
34	D8	63/65 (96%)	0.45	3 (4%) 34 15	78, 88, 104, 131	0
35	B9	37/37 (100%)	0.68	3 (8%) 15 5	76, 90, 104, 108	0
35	D9	37/37 (100%)	0.32	3 (8%) 15 5	76, 90, 104, 107	0
36	BA	2901/2915 (99%)	-0.08	78 (2%) 58 34	49, 95, 190, 200	0
36	DA	2901/2915 (99%)	0.00	76 (2%) 59 35	46, 93, 190, 200	0
37	BB	119/122 (97%)	-0.45	0 100 100	78, 108, 134, 157	0
37	DB	119/122 (97%)	-0.36	0 100 100	75, 107, 133, 157	0
38	BC	228/229 (99%)	0.75	34 (14%) 3 1	69, 99, 177, 187	0
38	DC	228/229 (99%)	0.36	21 (9%) 11 4	67, 97, 177, 187	0
39	BD	275/276 (99%)	-0.13	3 (1%) 82 66	50, 68, 98, 123	0
39	DD	275/276 (99%)	-0.14	2 (0%) 89 78	47, 66, 97, 123	0
40	BE	204/206 (99%)	0.31	13 (6%) 23 9	64, 93, 141, 152	0
40	DE	204/206 (99%)	0.28	8 (3%) 43 21	64, 93, 141, 152	0
41	BF	207/210 (98%)	0.81	28 (13%) 4 2	73, 128, 176, 184	0
41	DF	207/210 (98%)	0.73	29 (14%) 4 2	71, 127, 176, 184	0
42	BG	181/182 (99%)	0.28	11 (6%) 25 10	97, 125, 147, 157	0
42	DG	181/182 (99%)	0.10	10 (5%) 29 12	75, 96, 125, 146	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
43	BH	159/180 (88%)	0.83	26 (16%) 2 1	106, 142, 163, 165	0
43	DH	159/180 (88%)	1.22	37 (23%) 1 0	106, 142, 163, 165	0
44	BJ	0/173	-	-	-	-
44	DJ	0/173	-	-	-	-
45	BK	0/147	-	-	-	-
45	DK	0/147	-	-	-	-
46	BN	138/140 (98%)	0.23	2 (1%) 78 60	78, 104, 145, 148	0
46	DN	138/140 (98%)	0.20	3 (2%) 65 42	77, 104, 144, 147	0
47	BO	122/122 (100%)	-0.14	1 (0%) 87 75	58, 76, 90, 97	0
47	DO	122/122 (100%)	-0.04	0 100 100	57, 76, 89, 97	0
48	BP	146/150 (97%)	0.99	25 (17%) 2 1	73, 121, 146, 162	0
48	DP	146/150 (97%)	1.01	27 (18%) 2 1	72, 120, 145, 162	0
49	BQ	141/141 (100%)	0.05	2 (1%) 78 60	61, 78, 107, 138	0
49	DQ	141/141 (100%)	0.08	4 (2%) 56 32	60, 77, 107, 139	0
50	BR	117/118 (99%)	0.35	4 (3%) 49 24	76, 98, 114, 129	0
50	DR	117/118 (99%)	0.34	3 (2%) 59 35	75, 98, 115, 129	0
51	BS	98/112 (87%)	0.91	19 (19%) 1 1	89, 112, 137, 141	0
51	DS	98/112 (87%)	0.50	5 (5%) 32 13	88, 111, 136, 140	0
52	BT	137/146 (93%)	0.16	9 (6%) 22 8	74, 97, 155, 179	0
52	DT	137/146 (93%)	0.26	13 (9%) 10 4	73, 97, 154, 179	0
53	BU	117/118 (99%)	0.17	4 (3%) 49 24	81, 98, 125, 142	0
53	DU	117/118 (99%)	0.16	2 (1%) 73 52	78, 97, 125, 142	0
54	BV	101/101 (100%)	0.59	9 (8%) 12 4	79, 130, 146, 150	0
54	DV	101/101 (100%)	0.54	10 (9%) 9 3	79, 129, 146, 150	0
55	BW	113/113 (100%)	0.51	8 (7%) 19 7	85, 100, 133, 165	0
55	DW	113/113 (100%)	0.42	9 (7%) 15 5	82, 100, 133, 165	0
56	BX	92/96 (95%)	0.52	5 (5%) 29 12	83, 109, 125, 134	0
56	DX	92/96 (95%)	0.44	8 (8%) 13 4	83, 108, 124, 134	0
57	BY	100/110 (90%)	1.88	39 (39%) 0 0	127, 146, 179, 187	0
57	DY	100/110 (90%)	1.83	40 (40%) 0 0	126, 146, 179, 187	0
58	BZ	176/206 (85%)	0.12	5 (2%) 56 32	75, 103, 135, 144	0
58	DZ	176/206 (85%)	0.08	9 (5%) 32 13	64, 94, 140, 150	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
All	All	21994/23368 (94%)	0.16	1167 (5%) 30 13	37, 93, 162, 200	0

All (1167) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
49	DQ	141	GLN	14.5
49	BQ	141	GLN	12.9
38	BC	1	PRO	11.9
43	DH	170	ARG	11.9
53	DU	118	GLY	11.4
42	DG	2	PRO	11.3
57	BY	2	ARG	10.9
58	BZ	113	ALA	10.0
1	AA	89	C	9.9
25	CZ	42	VAL	9.9
42	BG	2	PRO	9.7
36	DA	654(K)	C	9.5
13	AM	123	ALA	9.2
57	DY	2	ARG	9.0
25	AZ	183	HIS	8.9
41	DF	24	LEU	8.9
41	DF	20	LEU	8.8
25	AZ	203	LEU	8.7
57	DY	52	SER	8.3
25	AZ	213	PRO	8.3
11	CK	129	SER	8.2
36	DA	654(C)	G	8.2
42	DG	48	GLU	8.2
58	BZ	114	GLY	8.1
25	AZ	36	ALA	8.1
25	AZ	141	VAL	8.1
38	BC	77	ILE	7.9
38	DC	94	VAL	7.8
57	BY	51	VAL	7.6
36	DA	654(H)	G	7.6
36	DA	654(J)	A	7.5
57	DY	55	TYR	7.5
26	D0	3	HIS	7.5
36	BA	352	G	7.4
36	BA	2802	G	7.4
43	DH	169	VAL	7.4
1	CA	89	C	7.4

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Mol	Chain	Res	Type	RSRZ
25	AZ	212	THR	7.3
22	AW	34	G	7.3
28	D2	9	GLN	7.3
38	DC	1	PRO	7.3
25	AZ	250	GLY	7.3
36	DA	2802	G	7.2
38	DC	109	ASP	7.1
20	CT	106	ALA	7.1
38	BC	105	ASP	7.1
1	AA	88	A	7.0
36	BA	654(K)	C	6.9
58	BZ	112	ARG	6.9
25	AZ	202	LEU	6.9
36	DA	1077	A	6.9
38	BC	76	ALA	6.9
1	CA	1026	G	6.9
29	B3	1	MET	6.8
32	B6	26	ASN	6.8
41	DF	8	GLN	6.8
25	AZ	199	ILE	6.8
36	DA	1066	U	6.8
38	BC	106	GLY	6.8
36	DA	654(I)	C	6.8
19	CS	81	ARG	6.6
36	DA	654(G)	C	6.6
28	D2	42	GLY	6.5
36	BA	654(E)	G	6.5
36	DA	654(L)	G	6.5
52	BT	1	MET	6.5
36	BA	1066	U	6.5
57	BY	79	CYS	6.5
32	D6	42	TRP	6.4
11	AK	129	SER	6.4
57	BY	52	SER	6.4
51	BS	83	LYS	6.4
32	B6	42	TRP	6.3
38	DC	105	ASP	6.3
36	BA	654(J)	A	6.3
31	B5	59	GLU	6.2
25	AZ	1	ALA	6.2
54	BV	36	PRO	6.2
25	AZ	29	ALA	6.2

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Mol	Chain	Res	Type	RSRZ
57	BY	75	ILE	6.2
25	AZ	280	GLY	6.2
40	BE	204	ALA	6.2
19	AS	81	ARG	6.2
1	AA	82	U	6.2
2	AB	7	VAL	6.1
39	BD	276	LYS	6.1
13	CM	124	PRO	6.1
28	D2	16	LEU	6.1
41	BF	194	MET	6.1
57	BY	55	TYR	6.1
25	AZ	196	VAL	6.0
36	DA	654(F)	C	6.0
36	DA	654(S)	G	6.0
1	AA	80	G	5.9
36	DA	2799	C	5.9
57	DY	51	VAL	5.9
38	BC	97	GLU	5.9
28	D2	71	ASN	5.8
41	BF	207	GLY	5.8
39	DD	276	LYS	5.8
57	DY	56	PRO	5.8
1	CA	88	A	5.8
25	AZ	247	VAL	5.8
36	DA	2796	U	5.8
14	AN	2	ALA	5.8
26	D0	4	LYS	5.8
25	AZ	146	LEU	5.7
35	B9	37	GLY	5.7
48	DP	17	LYS	5.7
58	DZ	113	ALA	5.6
25	AZ	249	VAL	5.6
53	BU	118	GLY	5.6
38	BC	115	ALA	5.6
25	AZ	132	VAL	5.5
36	BA	1077	A	5.4
25	AZ	216	ASP	5.4
1	CA	1447	A	5.4
54	BV	101	GLY	5.4
36	BA	654(L)	G	5.4
25	AZ	110	ASP	5.4
55	DW	113	LYS	5.4

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Mol	Chain	Res	Type	RSRZ
40	DE	204	ALA	5.3
28	B2	72	ALA	5.3
25	AZ	71	GLU	5.3
38	DC	95	GLY	5.3
26	B0	6	GLY	5.3
1	CA	1036	G	5.3
25	AZ	266	VAL	5.3
14	CN	2	ALA	5.2
28	D2	43	GLN	5.2
29	D3	1	MET	5.2
52	DT	136	GLN	5.2
42	BG	48	GLU	5.2
25	AZ	195	TRP	5.2
25	AZ	126	VAL	5.2
25	CZ	63	ILE	5.2
26	D0	2	ALA	5.1
36	BA	654(C)	G	5.1
38	BC	109	ASP	5.1
25	AZ	186	PRO	5.1
36	BA	654(G)	C	5.1
46	BN	10	GLU	5.1
25	AZ	233	GLY	5.1
25	AZ	147	LEU	5.1
31	B5	60	VAL	5.1
41	DF	12	LEU	5.1
41	DF	124	LEU	5.1
25	CZ	41	ASN	5.1
33	D7	47	ARG	5.0
36	BA	2804	C	5.0
25	AZ	33	TYR	5.0
25	AZ	101	GLY	5.0
13	AM	122	LYS	5.0
54	DV	101	GLY	5.0
12	AL	128	ALA	5.0
9	AI	19	LEU	5.0
10	AJ	23	ILE	5.0
25	AZ	83	PRO	4.9
46	BN	8	GLN	4.9
41	BF	11	VAL	4.9
48	DP	149	GLU	4.9
36	BA	275	G	4.9
42	BG	49	ASP	4.9

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Mol	Chain	Res	Type	RSRZ
51	BS	59	LYS	4.9
10	AJ	85	LEU	4.9
36	DA	654(T)	C	4.9
25	AZ	217	VAL	4.9
13	CM	125	ARG	4.9
43	DH	52	VAL	4.8
57	DY	61	ILE	4.8
43	BH	170	ARG	4.8
25	AZ	105	VAL	4.8
52	DT	39	ARG	4.7
34	D8	64	TYR	4.7
43	BH	169	VAL	4.7
41	BF	24	LEU	4.7
36	DA	2207	G	4.7
41	DF	1	MET	4.7
12	CL	128	ALA	4.7
33	D7	48	LYS	4.7
57	BY	54	LYS	4.7
57	DY	85	VAL	4.7
10	AJ	91	PRO	4.7
7	AG	81	GLY	4.6
36	BA	2896	C	4.6
36	BA	1509	C	4.6
38	BC	94	VAL	4.6
36	DA	654(E)	G	4.6
36	DA	277	C	4.6
1	CA	81	U	4.6
43	DH	161	GLY	4.6
51	BS	60	GLY	4.6
36	BA	156	U	4.6
20	CT	9	ASN	4.6
57	BY	35	TYR	4.5
4	CD	209	ARG	4.5
57	BY	3	VAL	4.5
36	BA	2796	U	4.5
36	DA	654(V)	A	4.5
1	AA	1036	G	4.5
36	DA	2795	G	4.5
48	BP	5	ASP	4.5
38	DC	107	TRP	4.5
25	AZ	130	TYR	4.5
57	BY	28	LYS	4.5

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Mol	Chain	Res	Type	RSRZ
1	AA	81	U	4.5
13	AM	125	ARG	4.5
25	CZ	86	ALA	4.5
57	DY	6	HIS	4.5
13	CM	122	LYS	4.5
25	AZ	143	ASP	4.4
20	AT	104	LEU	4.4
20	CT	104	LEU	4.4
36	BA	1174	A	4.4
35	B9	1	MET	4.4
25	AZ	335	PHE	4.4
36	BA	654	A	4.4
25	AZ	2	LYS	4.4
57	DY	91	GLU	4.4
6	CF	101	ALA	4.3
36	DA	2801	A	4.3
38	DC	86	ALA	4.3
25	AZ	200	TRP	4.3
27	B1	81	LYS	4.3
1	CA	76	C	4.3
36	BA	654(S)	G	4.3
43	DH	13	LYS	4.3
38	BC	107	TRP	4.3
40	DE	10	GLY	4.3
28	D2	41	ILE	4.3
23	CX	27	A	4.3
25	AZ	206	ILE	4.3
49	BQ	140	ALA	4.3
48	DP	82	GLY	4.3
25	AZ	290	LEU	4.3
58	DZ	153	SER	4.2
25	CZ	112	PRO	4.2
52	BT	135	ALA	4.2
42	DG	50	ALA	4.2
25	AZ	72	THR	4.2
36	DA	352	G	4.2
57	DY	79	CYS	4.2
36	DA	614(B)	G	4.2
57	DY	53	PRO	4.2
36	DA	2894	G	4.2
48	DP	150	ALA	4.1
52	DT	132	LYS	4.1

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Mol	Chain	Res	Type	RSRZ
55	DW	5	ALA	4.1
4	AD	209	ARG	4.1
58	DZ	144	LEU	4.1
57	DY	92	ASN	4.1
23	AX	27	A	4.1
36	DA	275	G	4.1
41	DF	11	VAL	4.1
25	AZ	294	SER	4.1
40	DE	76	ARG	4.1
55	DW	74	ALA	4.1
41	BF	124	LEU	4.1
57	BY	86	ARG	4.1
57	DY	38	ILE	4.1
22	AW	44	G	4.1
51	DS	54	LEU	4.1
25	AZ	276	THR	4.0
41	BF	129	PHE	4.0
21	CU	25	LYS	4.0
22	AW	3	C	4.0
36	DA	1087	G	4.0
36	BA	277	C	4.0
1	CA	1030(A)	G	4.0
1	AA	1030(B)	C	4.0
29	B3	2	PRO	4.0
51	BS	80	LEU	4.0
19	CS	43	GLU	4.0
38	DC	79	LYS	4.0
25	AZ	37	ALA	4.0
36	BA	654(H)	G	4.0
57	BY	53	PRO	4.0
50	BR	105	ARG	4.0
25	AZ	41	ASN	4.0
25	AZ	260	PRO	3.9
25	AZ	252	GLU	3.9
36	DA	1174	A	3.9
25	AZ	16	THR	3.9
25	AZ	140	MET	3.9
38	DC	108	MET	3.9
36	BA	654(I)	C	3.9
36	BA	229	A	3.9
25	AZ	142	ASP	3.9
32	D6	54	ILE	3.9

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Mol	Chain	Res	Type	RSRZ
41	DF	25	PRO	3.9
36	DA	2896	C	3.9
36	BA	654(V)	A	3.9
28	D2	38	GLN	3.9
36	DA	271(K)	U	3.9
19	CS	12	ASP	3.9
22	CW	34	G	3.9
25	AZ	134	PHE	3.9
38	BC	101	GLN	3.9
58	DZ	148	ASP	3.9
36	DA	1093	G	3.9
25	AZ	232	THR	3.9
36	BA	2801	A	3.9
43	BH	88	LEU	3.9
42	DG	86	MET	3.8
28	D2	68	ARG	3.8
43	BH	53	GLU	3.8
22	AW	6	G	3.8
57	BY	36	ALA	3.8
38	BC	70	LYS	3.8
57	BY	17	SER	3.8
22	CW	21	A	3.8
58	DZ	115	GLY	3.8
51	BS	68	GLN	3.8
25	AZ	68	VAL	3.8
36	DA	1509(A)	A	3.8
13	AM	121	LYS	3.8
25	AZ	185	ASN	3.8
10	AJ	4	ILE	3.8
9	AI	4	TYR	3.8
25	CZ	108	ALA	3.8
41	BF	1	MET	3.8
41	BF	134	GLY	3.8
40	BE	53	PRO	3.8
25	AZ	32	THR	3.8
57	BY	91	GLU	3.8
48	BP	110	TYR	3.8
4	AD	112	VAL	3.7
27	B1	82	LEU	3.7
42	BG	28	VAL	3.7
1	AA	1447	A	3.7
41	DF	10	PRO	3.7

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Mol	Chain	Res	Type	RSRZ
31	B5	52	TYR	3.7
43	DH	17	VAL	3.7
36	BA	155	U	3.7
25	AZ	304	LEU	3.7
42	DG	49	ASP	3.7
25	AZ	75	ARG	3.7
57	DY	84	ARG	3.7
38	BC	95	GLY	3.7
31	B5	58	LEU	3.7
51	BS	54	LEU	3.7
42	BG	82	LEU	3.7
58	DZ	114	GLY	3.6
25	AZ	296	GLU	3.6
36	DA	654	A	3.6
1	CA	1030(B)	C	3.6
32	D6	26	ASN	3.6
38	DC	97	GLU	3.6
43	BH	131	VAL	3.6
43	DH	53	GLU	3.6
22	AW	5	G	3.6
36	BA	1063	G	3.6
25	AZ	131	ILE	3.6
25	AZ	268	THR	3.6
52	DT	135	ALA	3.6
19	AS	9	VAL	3.6
48	DP	126	VAL	3.6
36	BA	271(L)	U	3.6
41	BF	18	ARG	3.6
1	CA	1038	C	3.6
40	BE	76	ARG	3.6
48	BP	149	GLU	3.6
54	BV	1	MET	3.6
13	AM	124	PRO	3.6
24	AY	44	G	3.6
36	BA	2799	C	3.6
36	DA	654(M)	C	3.6
36	DA	2801(A)	A	3.6
26	D0	6	GLY	3.6
34	B8	64	TYR	3.6
57	DY	54	LYS	3.6
40	BE	54	GLN	3.6
40	BE	68	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
25	AZ	179	LEU	3.6
25	CZ	141	VAL	3.6
9	AI	8	GLY	3.6
48	BP	82	GLY	3.5
1	CA	78	G	3.5
36	BA	614(B)	G	3.5
36	BA	2805	G	3.5
13	AM	7	VAL	3.5
36	BA	888	C	3.5
10	AJ	77	PRO	3.5
54	BV	46	VAL	3.5
25	AZ	28	THR	3.5
25	AZ	307	PRO	3.5
10	AJ	73	ASP	3.5
10	AJ	89	ASP	3.5
25	AZ	171	ILE	3.5
43	BH	148	ILE	3.5
43	BH	21	PRO	3.5
36	DA	1079	C	3.5
26	B0	7	LEU	3.5
56	DX	85	PRO	3.5
25	AZ	215	ARG	3.5
36	BA	1534	U	3.5
25	AZ	336	SER	3.5
22	CW	47	U	3.5
20	CT	85	MET	3.5
36	BA	654(F)	C	3.5
52	BT	132	LYS	3.5
57	BY	19	LYS	3.5
25	AZ	184	ARG	3.5
1	AA	723	U	3.5
55	BW	112	GLY	3.5
43	DH	81	GLU	3.5
36	BA	508	G	3.5
36	DA	229	A	3.4
48	DP	127	ALA	3.4
57	DY	3	VAL	3.4
52	BT	136	GLN	3.4
25	AZ	103	ILE	3.4
22	CW	7	A	3.4
25	CZ	85	HIS	3.4
52	BT	27	THR	3.4

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Mol	Chain	Res	Type	RSRZ
28	D2	57	ILE	3.4
4	AD	23	GLY	3.4
22	CW	5	G	3.4
13	CM	84	ILE	3.4
25	AZ	398	GLY	3.4
57	DY	5	MET	3.4
57	DY	86	ARG	3.4
2	AB	132	LYS	3.4
43	DH	33	LEU	3.4
52	DT	27	THR	3.4
4	AD	154	ASN	3.4
36	BA	1104	C	3.4
28	B2	13	ALA	3.4
13	AM	117	VAL	3.4
36	BA	157	U	3.4
58	DZ	162	GLU	3.4
27	D1	85	LEU	3.4
32	D6	46	HIS	3.4
20	CT	100	ILE	3.3
54	DV	54	GLY	3.3
25	CZ	370	PHE	3.3
42	BG	84	LYS	3.3
25	AZ	102	ALA	3.3
25	CZ	110	ASP	3.3
31	D5	59	GLU	3.3
36	BA	1087	G	3.3
51	DS	23	ARG	3.3
1	CA	1129	C	3.3
36	DA	1080	C	3.3
55	BW	1	MET	3.3
26	B0	5	LYS	3.3
10	CJ	34	VAL	3.3
32	D6	23	THR	3.3
32	B6	36	LEU	3.3
36	DA	1509	C	3.3
57	BY	65	ALA	3.3
7	CG	156	TRP	3.3
10	AJ	34	VAL	3.3
41	BF	2	LYS	3.3
51	BS	34	HIS	3.3
25	AZ	154	VAL	3.3
41	DF	9	ILE	3.3

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Mol	Chain	Res	Type	RSRZ
1	AA	78	G	3.3
26	D0	85	ALA	3.3
43	BH	136	ILE	3.3
26	B0	4	LYS	3.3
57	BY	45	VAL	3.3
10	AJ	33	GLN	3.3
25	AZ	320	VAL	3.3
36	BA	271(J)	C	3.3
19	AS	43	GLU	3.3
25	AZ	194	GLU	3.3
48	BP	88	LEU	3.3
36	DA	2897	U	3.2
25	AZ	39	ASN	3.2
54	DV	36	PRO	3.2
55	DW	82	LEU	3.2
25	AZ	107	SER	3.2
28	D2	6	VAL	3.2
36	BA	1740	G	3.2
57	DY	83	THR	3.2
25	AZ	165	GLY	3.2
41	DF	23	ASP	3.2
51	DS	68	GLN	3.2
48	BP	112	LEU	3.2
55	BW	113	LYS	3.2
57	BY	44	ILE	3.2
22	CW	6	G	3.2
34	D8	48	PHE	3.2
54	BV	35	LEU	3.2
36	BA	1847	A	3.2
9	AI	6	GLY	3.2
54	BV	48	GLY	3.2
54	DV	20	LEU	3.2
48	BP	27	HIS	3.2
1	CA	1001(A)	G	3.2
41	DF	14	PRO	3.2
51	BS	90	GLY	3.2
25	CZ	326	GLU	3.1
51	DS	107	GLU	3.1
25	AZ	87	ASP	3.1
46	DN	62	VAL	3.1
38	BC	86	ALA	3.1
7	AG	82	GLY	3.1

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Mol	Chain	Res	Type	RSRZ
57	DY	45	VAL	3.1
56	BX	5	TYR	3.1
25	AZ	129	PRO	3.1
48	DP	98	GLU	3.1
32	D6	37	ARG	3.1
55	DW	112	GLY	3.1
19	AS	12	ASP	3.1
16	CP	83	GLU	3.1
1	CA	1030(D)	A	3.1
9	AI	63	ILE	3.1
38	BC	69	GLY	3.1
9	CI	88	TYR	3.1
35	D9	28	GLU	3.1
36	DA	888	C	3.1
38	DC	78	ALA	3.1
41	BF	133	ASN	3.1
26	B0	3	HIS	3.1
28	D2	48	HIS	3.1
36	DA	2792	G	3.1
57	BY	89	PHE	3.1
57	DY	88	LYS	3.1
25	AZ	7	ARG	3.1
28	D2	5	GLU	3.1
48	BP	150	ALA	3.1
28	D2	64	LEU	3.1
41	BF	8	GLN	3.1
51	BS	23	ARG	3.1
38	DC	121	GLY	3.1
43	BH	168	PRO	3.1
31	D5	60	VAL	3.0
18	AR	23	LYS	3.0
36	BA	2792	G	3.0
58	DZ	112	ARG	3.0
36	BA	1420	U	3.0
41	BF	23	ASP	3.0
32	B6	37	ARG	3.0
49	DQ	140	ALA	3.0
40	BE	151	TYR	3.0
26	D0	5	LYS	3.0
36	DA	271(J)	C	3.0
1	CA	82	U	3.0
48	DP	103	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
40	BE	69	LYS	3.0
11	CK	127	LYS	3.0
1	CA	1031	G	3.0
28	D2	53	LEU	3.0
34	B8	2	PRO	3.0
54	DV	46	VAL	3.0
9	AI	88	TYR	3.0
10	AJ	20	ALA	3.0
40	BE	59	VAL	3.0
38	BC	129	ARG	3.0
25	AZ	322	VAL	3.0
38	BC	81	GLU	3.0
40	DE	88	GLY	3.0
1	CA	92	C	3.0
48	DP	35	HIS	3.0
46	DN	33	LEU	3.0
7	AG	156	TRP	3.0
43	DH	32	GLU	3.0
41	BF	12	LEU	3.0
36	DA	1091	G	2.9
42	BG	81	LYS	2.9
52	DT	1	MET	2.9
57	BY	58	GLY	2.9
36	DA	271(L)	U	2.9
25	AZ	3	GLY	2.9
40	BE	66	HIS	2.9
13	AM	43	THR	2.9
28	D2	49	LYS	2.9
36	BA	405	U	2.9
25	AZ	63	ILE	2.9
25	AZ	73	ALA	2.9
57	BY	46	LYS	2.9
43	DH	155	SER	2.9
24	CY	19	G	2.9
25	AZ	180	GLU	2.9
50	BR	2	ARG	2.9
57	BY	64	GLU	2.9
35	D9	1	MET	2.9
36	DA	1078	U	2.9
28	D2	60	LEU	2.9
1	CA	91	C	2.9
23	AX	18	G	2.9

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Mol	Chain	Res	Type	RSRZ
36	DA	654(Q)	C	2.9
53	BU	19	LYS	2.9
57	DY	34	LYS	2.9
25	CZ	65	THR	2.9
25	AZ	264	ARG	2.9
36	DA	654(D)	G	2.9
38	BC	68	LEU	2.9
22	AW	47	U	2.9
25	AZ	192	GLU	2.9
41	BF	25	PRO	2.9
43	BH	101	ARG	2.9
52	DT	115	ARG	2.9
48	BP	83	VAL	2.9
52	BT	134	GLU	2.9
36	DA	654(A)	G	2.9
43	DH	113	VAL	2.9
21	AU	24	ARG	2.9
35	D9	37	GLY	2.9
25	AZ	193	ASN	2.8
1	CA	1030(C)	G	2.8
36	BA	2795	G	2.8
38	BC	113	VAL	2.8
10	CJ	80	LYS	2.8
36	BA	1535	A	2.8
22	CV	17	C	2.8
41	DF	49	ALA	2.8
36	BA	2897	U	2.8
38	BC	145	VAL	2.8
43	DH	44	VAL	2.8
57	DY	15	VAL	2.8
10	AJ	35	SER	2.8
36	BA	1076	C	2.8
38	BC	73	ARG	2.8
43	BH	89	ILE	2.8
28	D2	4	SER	2.8
48	DP	25	SER	2.8
56	DX	84	ALA	2.8
1	AA	204	U	2.8
4	AD	110	PHE	2.8
30	D4	42	PHE	2.8
43	DH	137	ASP	2.8
25	CZ	372	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
41	DF	193	VAL	2.8
7	CG	78	ARG	2.8
18	CR	88	LYS	2.8
40	DE	69	LYS	2.8
25	CZ	199	ILE	2.8
43	DH	148	ILE	2.8
43	DH	168	PRO	2.8
48	BP	114	ILE	2.8
36	BA	654(D)	G	2.8
25	CZ	111	GLY	2.8
40	BE	128	SER	2.8
48	BP	77	ARG	2.8
41	DF	21	ALA	2.8
54	DV	37	VAL	2.8
57	BY	39	VAL	2.8
21	AU	9	ARG	2.8
25	AZ	337	GLY	2.8
43	BH	155	SER	2.8
48	DP	91	PHE	2.8
38	BC	79	LYS	2.8
43	DH	35	VAL	2.8
48	BP	7	ARG	2.8
52	DT	91	ARG	2.8
25	AZ	164	PRO	2.8
43	DH	101	ARG	2.8
24	CY	44	G	2.8
25	AZ	5	PHE	2.7
38	BC	103	ILE	2.7
11	AK	11	LYS	2.7
36	DA	1420	U	2.7
43	DH	26	VAL	2.7
1	CA	1029	C	2.7
2	CB	122	PHE	2.7
51	BS	35	ILE	2.7
2	CB	128	GLU	2.7
43	DH	51	ARG	2.7
25	AZ	168	VAL	2.7
41	DF	166	ALA	2.7
36	DA	157	U	2.7
57	DY	22	GLY	2.7
53	BU	6	THR	2.7
52	BT	137	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
7	AG	5	ARG	2.7
57	BY	60	PHE	2.7
25	AZ	400	VAL	2.7
25	AZ	269	GLY	2.7
57	DY	28	LYS	2.7
22	CW	44	G	2.7
42	BG	50	ALA	2.7
56	DX	60	ARG	2.7
13	AM	19	LEU	2.7
41	BF	181	LEU	2.7
57	BY	88	LYS	2.7
38	DC	76	ALA	2.7
57	DY	82	PRO	2.7
36	DA	1176	G	2.7
38	BC	102	LYS	2.7
9	AI	128	ARG	2.7
25	AZ	150	VAL	2.7
36	DA	2804	C	2.7
25	AZ	255	ILE	2.7
36	DA	1048	A	2.7
41	DF	7	TYR	2.7
25	AZ	109	ALA	2.7
25	AZ	153	GLU	2.7
25	AZ	235	GLY	2.7
27	B1	74	VAL	2.7
43	DH	43	VAL	2.7
25	AZ	176	LEU	2.7
43	BH	123	PHE	2.7
38	BC	121	GLY	2.7
19	AS	13	ASP	2.7
25	AZ	344	PHE	2.6
48	DP	107	LYS	2.6
22	AW	21	A	2.6
25	AZ	310	ILE	2.6
52	BT	93	ARG	2.6
18	AR	88	LYS	2.6
36	DA	654(N)	G	2.6
43	DH	159	GLU	2.6
57	DY	89	PHE	2.6
4	AD	47	ARG	2.6
36	BA	2790	A	2.6
48	DP	94	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
50	BR	80	PHE	2.6
30	D4	4	GLY	2.6
1	CA	1037	C	2.6
7	AG	80	VAL	2.6
9	AI	82	ALA	2.6
1	CA	204	U	2.6
34	D8	15	LYS	2.6
49	DQ	63	LYS	2.6
11	AK	76	GLY	2.6
17	AQ	2	PRO	2.6
36	DA	1541	G	2.6
41	BF	20	LEU	2.6
25	AZ	287	GLY	2.6
36	BA	1073	A	2.6
43	BH	158	HIS	2.6
48	DP	102	ARG	2.6
48	BP	51	PHE	2.6
41	DF	207	GLY	2.6
7	AG	2	ALA	2.6
57	BY	56	PRO	2.6
48	BP	90	ARG	2.6
52	DT	134	GLU	2.6
41	DF	131	GLY	2.6
41	DF	134	GLY	2.6
57	BY	61	ILE	2.6
55	BW	111	HIS	2.6
36	BA	158	U	2.6
51	BS	53	SER	2.6
10	AJ	26	ALA	2.6
51	BS	33	LYS	2.6
57	DY	67	LEU	2.6
4	AD	152	SER	2.6
55	BW	73	ALA	2.6
36	DA	2793	G	2.6
25	AZ	11	HIS	2.6
9	AI	16	ARG	2.6
25	AZ	275	LYS	2.6
57	DY	39	VAL	2.6
38	DC	104	LEU	2.6
48	DP	138	LEU	2.6
42	BG	75	LYS	2.6
52	DT	137	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
20	AT	36	LEU	2.5
48	DP	88	LEU	2.5
51	BS	107	GLU	2.6
38	DC	149	ILE	2.5
48	BP	76	LYS	2.5
3	AC	207	VAL	2.5
9	AI	7	THR	2.5
28	B2	19	VAL	2.5
36	BA	1173	G	2.5
30	B4	34	GLU	2.5
50	DR	118	GLU	2.5
38	DC	82	LYS	2.5
57	BY	63	LYS	2.5
1	CA	80	G	2.5
41	DF	172	TRP	2.5
25	AZ	136	ASN	2.5
36	BA	1065	U	2.5
36	DA	271(N)	U	2.5
48	BP	84	ASN	2.5
25	AZ	30	ALA	2.5
48	DP	148	LEU	2.5
36	BA	1079	C	2.5
13	CM	117	VAL	2.5
57	DY	58	GLY	2.5
12	AL	127	GLU	2.5
32	B6	20	ASN	2.5
48	DP	51	PHE	2.5
52	DT	3	ARG	2.5
25	AZ	26	THR	2.5
25	CZ	236	THR	2.5
11	CK	128	ALA	2.5
43	BH	52	VAL	2.5
51	BS	75	GLU	2.5
31	D5	58	LEU	2.5
36	DA	2173	A	2.5
40	DE	77	ILE	2.5
24	CY	18	G	2.5
57	BY	69	ALA	2.5
38	BC	111	ASP	2.5
48	DP	37	GLY	2.5
1	AA	1257	U	2.5
41	BF	28	ILE	2.5

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Mol	Chain	Res	Type	RSRZ
31	D5	24	ALA	2.5
40	DE	68	ALA	2.5
1	AA	77	G	2.5
27	D1	81	LYS	2.5
41	DF	133	ASN	2.5
36	BA	271(K)	U	2.5
52	BT	36	GLU	2.5
25	AZ	309	SER	2.5
8	AH	1	MET	2.5
47	BO	122	LEU	2.5
28	D2	8	LYS	2.5
1	CA	1001	A	2.5
25	AZ	135	MET	2.5
36	BA	654(R)	C	2.5
25	AZ	285	ASN	2.5
28	D2	69	ARG	2.5
27	B1	32	LYS	2.5
43	DH	87	LEU	2.5
41	BF	130	ALA	2.4
43	DH	29	PRO	2.4
39	BD	32	SER	2.4
25	AZ	34	VAL	2.4
41	BF	193	VAL	2.4
40	DE	151	TYR	2.4
48	DP	110	TYR	2.4
57	BY	57	GLN	2.4
22	CW	45	U	2.4
25	AZ	9	LYS	2.4
20	AT	88	VAL	2.4
43	DH	24	VAL	2.4
43	DH	49	VAL	2.4
58	BZ	165	VAL	2.4
1	AA	1129	C	2.4
20	AT	93	GLU	2.4
25	AZ	316	PHE	2.4
41	BF	158	THR	2.4
43	DH	88	LEU	2.4
54	BV	40	LEU	2.4
9	AI	90	PRO	2.4
24	CY	15	A	2.4
56	BX	85	PRO	2.4
55	BW	6	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
38	BC	78	ALA	2.4
57	BY	80	GLY	2.4
57	DY	66	PRO	2.4
1	AA	1026	G	2.4
43	DH	85	LYS	2.4
10	AJ	6	ILE	2.4
42	DG	25	TYR	2.4
11	AK	98	LEU	2.4
25	AZ	352	VAL	2.4
25	CZ	272	MET	2.4
10	AJ	55	LYS	2.4
28	B2	68	ARG	2.4
1	CA	980	C	2.4
4	CD	23	GLY	2.4
9	CI	64	THR	2.4
26	B0	71	ASP	2.4
43	DH	122	THR	2.4
12	AL	64	TYR	2.4
25	AZ	77	TYR	2.4
57	DY	62	GLU	2.4
25	AZ	334	PHE	2.4
43	DH	90	LYS	2.4
32	D6	12	GLU	2.4
43	BH	81	GLU	2.4
1	AA	980	C	2.4
42	BG	25	TYR	2.4
51	BS	39	ILE	2.4
4	AD	161	ASN	2.4
2	CB	137	ARG	2.4
41	DF	18	ARG	2.4
13	CM	7	VAL	2.4
57	BY	12	THR	2.4
55	DW	1	MET	2.4
25	AZ	325	LYS	2.4
29	B3	10	LYS	2.4
36	BA	2893	G	2.4
36	DA	1173	G	2.4
42	BG	47	LYS	2.4
43	DH	34	GLU	2.4
57	BY	71	LYS	2.4
10	CJ	21	GLN	2.4
32	B6	21	TYR	2.4

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Mol	Chain	Res	Type	RSRZ
16	AP	83	GLU	2.4
41	BF	172	TRP	2.4
50	DR	2	ARG	2.4
57	BY	47	LYS	2.4
48	BP	95	VAL	2.4
10	AJ	99	LYS	2.3
16	AP	41	PRO	2.3
25	AZ	13	ASN	2.3
43	BH	124	GLU	2.3
54	DV	53	GLU	2.3
1	CA	1027	C	2.3
25	CZ	183	HIS	2.3
26	B0	84	LEU	2.3
36	DA	1535	A	2.3
25	AZ	198	LYS	2.3
1	CA	77	G	2.3
26	B0	22	GLY	2.3
30	B4	6	HIS	2.3
50	DR	3	HIS	2.3
57	DY	30	VAL	2.3
36	BA	34	C	2.3
36	DA	1069	A	2.3
9	AI	18	PHE	2.3
25	AZ	239	THR	2.3
43	DH	31	GLY	2.3
48	BP	53	GLY	2.3
57	DY	20	TYR	2.3
10	CJ	25	GLU	2.3
25	AZ	21	ASP	2.3
25	AZ	265	THR	2.3
30	B4	42	PHE	2.3
34	B8	48	PHE	2.3
57	DY	75	ILE	2.3
38	DC	77	ILE	2.3
25	AZ	230	THR	2.3
36	DA	1177	A	2.3
25	AZ	278	GLN	2.3
25	AZ	405	GLU	2.3
52	DT	36	GLU	2.3
11	AK	12	ARG	2.3
25	AZ	228	VAL	2.3
25	AZ	137	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
48	DP	84	ASN	2.3
41	DF	126	VAL	2.3
21	AU	23	PRO	2.3
11	AK	77	MET	2.3
17	AQ	72	ARG	2.3
57	DY	59	GLY	2.3
36	BA	2894	G	2.3
40	BE	74	PRO	2.3
25	AZ	88	TYR	2.3
41	BF	152	GLU	2.3
28	D2	40	SER	2.3
1	AA	1002	G	2.3
56	BX	90	GLU	2.3
2	AB	135	GLN	2.3
4	AD	21	LEU	2.3
38	BC	110	PHE	2.3
55	BW	64	MET	2.3
13	AM	2	ALA	2.3
53	DU	19	LYS	2.3
38	DC	129	ARG	2.3
41	BF	14	PRO	2.3
25	AZ	98	GLN	2.3
25	CZ	344	PHE	2.3
41	BF	162	LEU	2.3
4	CD	152	SER	2.3
43	BH	151	ILE	2.3
30	B4	13	ARG	2.2
43	DH	42	ARG	2.2
43	DH	54	ARG	2.2
43	BH	86	GLU	2.2
25	CZ	33	TYR	2.2
36	BA	1072	C	2.2
38	DC	101	GLN	2.2
41	DF	33	LEU	2.2
56	DX	88	LYS	2.2
56	DX	80	ILE	2.2
36	BA	2801(A)	A	2.2
36	DA	654(U)	A	2.2
43	DH	58	GLU	2.2
43	DH	138	LYS	2.2
22	CW	48	C	2.2
57	DY	65	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
2	AB	133	LYS	2.2
16	CP	1	MET	2.2
42	DG	26	GLN	2.2
55	DW	6	ILE	2.2
55	DW	103	ILE	2.2
29	D3	10	LYS	2.2
36	DA	156	U	2.2
36	DA	1175	U	2.2
48	DP	7	ARG	2.2
36	DA	1847	A	2.2
48	DP	87	ASP	2.2
57	DY	96	ILE	2.2
13	CM	121	LYS	2.2
25	CZ	69	GLU	2.2
46	DN	118	LYS	2.2
51	DS	77	ALA	2.2
22	AV	44	G	2.2
4	CD	35	ARG	2.2
12	AL	19	ARG	2.2
1	AA	92	C	2.2
22	AW	45	U	2.2
36	BA	1505	C	2.2
25	CZ	252	GLU	2.2
30	D4	47	GLN	2.2
13	AM	102	ARG	2.2
28	D2	10	LEU	2.2
10	AJ	19	SER	2.2
38	BC	93	TYR	2.2
22	AW	4	C	2.2
28	B2	71	ASN	2.2
36	BA	2172	U	2.2
48	BP	10	PRO	2.2
48	BP	127	ALA	2.2
10	AJ	3	LYS	2.2
10	AJ	98	ILE	2.2
16	AP	19	ILE	2.2
42	DG	28	VAL	2.2
43	BH	26	VAL	2.2
51	BS	27	SER	2.2
58	BZ	168	GLU	2.2
1	AA	90	U	2.2
22	AW	17	C	2.2

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Mol	Chain	Res	Type	RSRZ
25	AZ	177	LEU	2.2
48	DP	125	VAL	2.2
25	AZ	115	GLN	2.2
25	CZ	347	THR	2.2
36	BA	1084	A	2.2
32	B6	31	PRO	2.2
19	CS	10	PHE	2.2
43	BH	57	ASP	2.2
13	AM	60	VAL	2.2
25	AZ	242	ILE	2.2
36	BA	1089	G	2.2
48	DP	15	ARG	2.2
31	B5	34	PRO	2.2
32	D6	20	ASN	2.2
38	BC	117	PRO	2.2
57	BY	43	ASN	2.2
2	AB	128	GLU	2.2
43	BH	149	ARG	2.2
51	BS	30	ARG	2.2
39	DD	275	LYS	2.2
42	DG	81	LYS	2.2
48	DP	81	GLN	2.2
26	D0	74	ARG	2.2
36	BA	271(N)	U	2.1
36	DA	1073	A	2.1
40	BE	116	VAL	2.2
55	DW	22	ASP	2.2
30	B4	47	GLN	2.1
41	BF	21	ALA	2.1
29	D3	2	PRO	2.1
43	BH	97	ARG	2.1
38	BC	149	ILE	2.1
50	BR	3	HIS	2.1
36	DA	2189	U	2.1
2	AB	96	ARG	2.1
27	B1	31	GLY	2.1
9	AI	27	THR	2.1
25	AZ	106	VAL	2.1
41	BF	15	SER	2.1
55	BW	100	THR	2.1
9	AI	20	ARG	2.1
10	AJ	90	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
36	DA	1740	G	2.1
51	BS	26	LEU	2.1
49	DQ	80	GLU	2.1
57	BY	66	PRO	2.1
25	AZ	370	PHE	2.1
38	DC	136	LEU	2.1
11	CK	11	LYS	2.1
12	AL	21	LYS	2.1
39	BD	35	LYS	2.1
1	CA	79	G	2.1
56	DX	83	VAL	2.1
17	AQ	45	HIS	2.1
54	BV	32	THR	2.1
56	DX	3	THR	2.1
20	AT	106	ALA	2.1
36	DA	1075	C	2.1
41	DF	2	LYS	2.1
25	AZ	84	GLY	2.1
43	BH	167	GLU	2.1
48	BP	15	ARG	2.1
22	CW	71	G	2.1
36	BA	1062	G	2.1
36	BA	1176	G	2.1
38	BC	126	LYS	2.1
57	BY	31	LEU	2.1
6	AF	101	ALA	2.1
18	AR	24	ALA	2.1
4	AD	133	VAL	2.1
1	CA	1257	U	2.1
1	CA	1446	U	2.1
36	DA	2172	U	2.1
25	AZ	236	THR	2.1
1	CA	1002	G	2.1
7	AG	79	ARG	2.1
10	AJ	28	ARG	2.1
13	AM	84	ILE	2.1
22	CW	46	G	2.1
48	DP	71	VAL	2.1
36	BA	1088	A	2.1
36	BA	1043	C	2.1
36	BA	2794	C	2.1
9	AI	96	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
41	DF	162	LEU	2.1
25	AZ	274	ARG	2.1
57	DY	12	THR	2.1
57	DY	63	LYS	2.1
19	CS	29	ARG	2.1
36	DA	2179	C	2.1
25	AZ	226	GLU	2.1
20	AT	87	LYS	2.1
9	AI	101	PHE	2.1
38	BC	104	LEU	2.1
51	BS	87	PHE	2.1
48	BP	65	ARG	2.1
25	AZ	85	HIS	2.1
48	BP	132	LYS	2.1
48	BP	137	LYS	2.1
1	CA	841	U	2.1
36	BA	353	G	2.1
36	BA	2207	G	2.1
36	BA	2793	G	2.1
10	AJ	100	THR	2.1
25	CZ	87	ASP	2.1
42	DG	3	LEU	2.1
54	BV	94	LEU	2.1
58	DZ	82	ARG	2.1
7	AG	85	TYR	2.1
10	AJ	7	LYS	2.1
10	CJ	55	LYS	2.1
10	CJ	83	GLU	2.1
56	DX	26	TYR	2.1
25	CZ	238	ALA	2.1
38	DC	117	PRO	2.1
52	DT	131	ALA	2.1
22	CW	20	U	2.0
1	AA	91	C	2.0
36	BA	884	C	2.0
36	DA	2803	C	2.0
1	CA	1003	G	2.0
33	B7	48	LYS	2.0
56	BX	48	LYS	2.0
30	D4	30	GLU	2.0
43	BH	43	VAL	2.0
9	AI	87	GLN	2.0

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Mol	Chain	Res	Type	RSRZ
28	D2	37	PHE	2.0
13	AM	31	LYS	2.0
36	BA	278	A	2.0
36	BA	1026	U	2.0
36	DA	155	U	2.0
1	AA	1027	C	2.0
53	BU	94	ASN	2.0
54	DV	67	GLY	2.0
36	DA	321	G	2.0
9	CI	58	HIS	2.0
27	B1	73	LEU	2.0
54	DV	25	LEU	2.0
9	AI	17	VAL	2.0
25	AZ	65	THR	2.0
56	BX	24	GLY	2.0
25	AZ	211	PRO	2.0
27	B1	21	ARG	2.0
41	BF	205	ARG	2.0
43	BH	72	ILE	2.0
25	AZ	248	LYS	2.0
43	DH	123	PHE	2.0
36	DA	1063	G	2.0
41	DF	13	SER	2.0
48	BP	11	GLY	2.0
9	AI	94	ALA	2.0
22	AW	16	U	2.0
26	B0	85	ALA	2.0
7	AG	62	PHE	2.0
25	CZ	83	PRO	2.0
38	BC	39	GLU	2.0
19	CS	13	ASP	2.0
35	B9	16	VAL	2.0
11	AK	31	THR	2.0
16	AP	1	MET	2.0
40	BE	4	ILE	2.0
41	DF	194	MET	2.0
57	BY	38	ILE	2.0
54	DV	40	LEU	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^{th} 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^2)	Q<0.9
24	MIA	CY	37	29/30	0.93	0.28	-	60,80,107,108	0
24	5MU	AY	54	21/22	0.92	0.20	-	143,153,153,156	0
24	H2U	CY	20	20/21	0.79	0.38	-	185,186,187,187	0
24	MIA	AY	37	29/30	0.94	0.26	-	63,84,108,108	0
24	7MG	AY	46	24/25	0.65	0.39	-	166,169,171,171	0
24	4SU	CY	8	20/21	0.85	0.24	-	140,141,142,142	0
24	PSU	AY	55	20/21	0.80	0.19	-	157,166,168,168	0
24	7MG	CY	46	24/25	0.84	0.23	-	166,168,170,170	0
24	OMC	AY	32	21/22	0.92	0.29	-	98,106,112,113	0
24	H2U	AY	20	20/21	0.74	0.34	-	186,186,188,188	0
24	5MU	CY	54	21/22	0.89	0.15	-	142,153,154,156	0
24	PSU	CY	55	20/21	0.79	0.18	-	158,166,168,168	0
24	H2U	CY	17	20/21	0.80	0.58	-	194,195,195,195	0
24	OMC	CY	32	21/22	0.90	0.17	-	96,103,108,109	0
24	H2U	AY	16	20/21	0.58	0.66	-	181,191,192,193	0
24	H2U	AY	17	20/21	0.80	0.54	-	194,195,195,195	0
24	H2U	CY	16	20/21	0.56	0.70	-	181,191,191,193	0
24	4SU	AY	8	20/21	0.76	0.30	-	140,143,144,144	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^{th} 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^2)	Q<0.9
61	KIR	AZ	502	57/57	0.74	0.57	1.45	139,147,150,150	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
59	ZN	CD	301	1/1	0.99	0.31	1.30	85,85,85,85	0
61	KIR	CZ	502	57/57	0.84	0.34	0.89	139,145,150,151	0
59	ZN	AD	301	1/1	0.99	0.29	0.64	99,99,99,99	0
60	GDP	CZ	501	28/28	0.81	0.25	0.04	141,145,153,153	0
59	ZN	AN	101	1/1	0.99	0.16	-0.12	84,84,84,84	0
59	ZN	D4	101	1/1	0.99	0.14	-0.60	129,129,129,129	0
60	GDP	AZ	501	28/28	0.83	0.23	-0.67	151,157,158,158	0
59	ZN	D9	101	1/1	0.97	0.10	-0.73	133,133,133,133	0
59	ZN	CN	101	1/1	1.00	0.17	-0.93	63,63,63,63	0
59	ZN	B4	101	1/1	0.88	0.08	-1.02	200,200,200,200	0
59	ZN	B9	101	1/1	0.94	0.14	-1.31	200,200,200,200	0

6.5 Other polymers

There are no such residues in this entry.