



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 10:02 PM GMT

PDB ID : 4V8N
Title : The crystal structure of agmatidine tRNA-Ile2 bound to the 70S ribosome in the A and P site.
Authors : Voorhees, R.M.; Mandal, D.; Neubauer, C.; Koehrer, C.; RajBhandary, U.L.; Ramakrishnan, V.
Deposited on : 2013-02-13
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 ⓘ symbol.

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

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

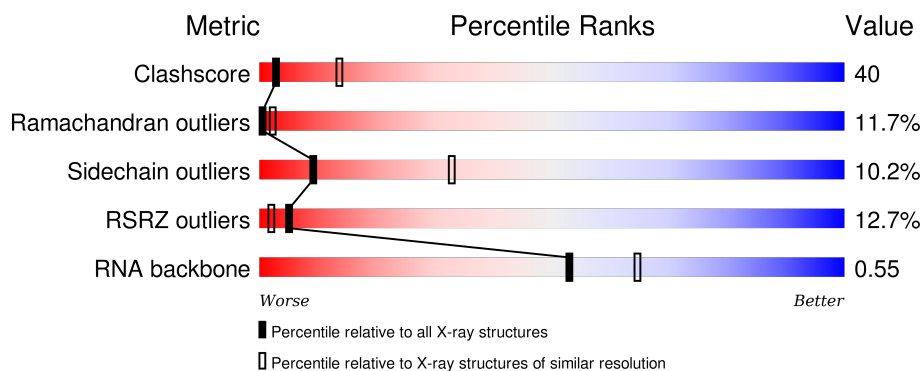
1 Overall quality at a glance ⓘ

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))
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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1522	<div> <div>7%</div> <div>24%</div> <div>63%</div> <div>11%</div> <div>..</div> </div>
1	CA	1522	<div> <div>7%</div> <div>23%</div> <div>64%</div> <div>11%</div> <div>..</div> </div>
2	AB	256	<div> <div>13%</div> <div>21%</div> <div>59%</div> <div>12%</div> <div>8%</div> </div>
2	CB	256	<div> <div>22%</div> <div>20%</div> <div>59%</div> <div>13%</div> <div>8%</div> </div>
3	AC	239	<div> <div>12%</div> <div>23%</div> <div>50%</div> <div>13%</div> <div>13%</div> </div>

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

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Mol	Chain	Length	Quality of chain
16	AP	88	
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	
20	CT	106	
21	AU	27	
21	CU	27	
22	AV	78	
22	AY	78	
22	CV	78	
22	CY	78	
23	AW	78	
23	CW	78	
24	AX	24	
24	CX	24	
25	B0	85	
25	D0	85	
26	B1	98	
26	D1	98	
27	B2	72	

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Mol	Chain	Length	Quality of chain
27	D2	72	
28	B3	60	
28	D3	60	
29	B4	71	
29	D4	71	
30	B5	60	
30	D5	60	
31	B6	54	
31	D6	54	
32	B7	49	
32	D7	49	
33	B8	65	
33	D8	65	
34	B9	37	
34	D9	37	
35	BA	2915	
35	DA	2915	
36	BB	122	
36	DB	122	
37	BC	229	
37	DC	229	
38	BD	276	
38	DD	276	
39	BE	206	
39	DE	206	

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Mol	Chain	Length	Quality of chain
40	BF	210	
40	DF	210	
41	BG	182	
41	DG	182	
42	BH	180	
42	DH	180	
43	BI	148	
43	DI	148	
44	BJ	173	
44	DJ	173	
45	BN	140	
45	DN	140	
46	BO	122	
46	DO	122	
47	BP	150	
47	DP	150	
48	BQ	141	
48	DQ	141	
49	BR	118	
49	DR	118	
50	BS	112	
50	DS	112	
51	BT	146	
51	DT	146	
52	BU	118	

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

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
22	AG9	AV	36	X	-	-	-
22	AG9	AY	36	X	-	X	-
22	AG9	CV	36	X	-	X	X
22	AG9	CY	36	X	-	-	X
58	ZN	AD	1000	-	-	X	-
58	ZN	CD	1000	-	-	X	-

2 Entry composition

There are 58 unique types of molecules in this entry. The entry contains 298096 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			
1	CA	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	235	Total	C	N	O	S	0	0	1
			1901	1213	342	341	5			
2	CB	235	Total	C	N	O	S	0	0	1
			1901	1213	342	341	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	207	Total	C	N	O	S	0	0	1
			1613	1016	315	281	1			
3	CC	207	Total	C	N	O	S	0	0	1
			1613	1016	315	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	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	4			
5	CE	151	Total	C	N	O	S	0	0	1
			1147	724	218	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	99	Total	C	N	O	S	0	0	1
			795	499	157	138	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CJ	99	Total	C	N	O	S	0	0	1
			795	499	157	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	125	Total	C	N	O	S	0	0	1
			971	611	196	163	1			
12	CL	125	Total	C	N	O	S	0	0	1
			971	611	196	163	1			

There are 8 discrepancies between the modelled and reference sequences:

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	119	Total	C	N	O	S	0	0	1
			938	579	194	163	2			
13	CM	119	Total	C	N	O	S	0	0	1
			938	579	194	163	2			

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

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	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			
16	CP	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	100	Total	C	N	O	S	0	0	1
			824	528	152	142	2			
17	CQ	100	Total	C	N	O	S	0	0	1
			824	528	152	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	79	Total	C	N	O	S	0	0	1
			630	403	115	110	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	CS	79	Total	C	N	O	S	0	0	1
			630	403	115	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	25	Total	C	N	O	0	0	1
			209	128	51	30			
21	CU	25	Total	C	N	O	0	0	1
			209	128	51	30			

- Molecule 22 is a RNA chain called E-SITE TRNA ILE2 AGMATIDINE OR P-SITE TRNA ILE2 AGMATIDINE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	78	Total	C	N	O	P	0	0	0
			1667	746	299	545	77			
22	AY	78	Total	C	N	O	P	0	0	0
			1667	746	299	545	77			
22	CV	78	Total	C	N	O	P	0	0	0
			1667	746	299	545	77			
22	CY	78	Total	C	N	O	P	0	0	0
			1667	746	299	545	77			

- Molecule 23 is a RNA chain called A-SITE TRNA ILE2 AGMATIDINE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AW	78	Total	C	N	O	P	0	0	0
			1659	741	295	546	77			
23	CW	78	Total	C	N	O	P	0	0	0
			1659	741	295	546	77			

- Molecule 24 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AX	12	Total	C	N	O	P	0	0	0
			257	118	54	74	11			
24	CX	12	Total	C	N	O	P	0	0	0
			257	118	54	74	11			

- Molecule 25 is a protein called 50S RIBOSOMAL PROTEIN L27.

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

- Molecule 26 is a protein called 50S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	B1	94	Total	C	N	O	S	0	0	1
			734	460	148	125	1			
26	D1	94	Total	C	N	O	S	0	0	1
			734	460	148	125	1			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B1	81	ARG	LYS	CONFLICT	UNP P60494
D1	81	ARG	LYS	CONFLICT	UNP P60494

- Molecule 27 is a protein called 50S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	B2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			
27	D2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			

- Molecule 28 is a protein called 50S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	B3	60	Total	C	N	O	S	0	0	1
			468	298	91	78	1			
28	D3	60	Total	C	N	O	S	0	0	1
			468	298	91	78	1			

- Molecule 29 is a protein called 50S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	B4	58	Total	C	N	O	S	0	0	1
			451	285	78	83	5			
29	D4	58	Total	C	N	O	S	0	0	1
			451	285	78	83	5			

- Molecule 30 is a protein called 50S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	B5	56	Total	C	N	O	S	0	0	1
			428	267	87	69	5			
30	D5	56	Total	C	N	O	S	0	0	1
			428	267	87	69	5			

- Molecule 31 is a protein called 50S RIBOSOMAL PROTEIN L33.

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

- Molecule 32 is a protein called 50S RIBOSOMAL PROTEIN L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	B7	48	Total	C	N	O	S	0	0	1
			410	251	103	54	2			
32	D7	48	Total	C	N	O	S	0	0	1
			410	251	103	54	2			

- Molecule 33 is a protein called 50S RIBOSOMAL PROTEIN L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	B8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			
33	D8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			

- Molecule 34 is a protein called 50S RIBOSOMAL PROTEIN L36.

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

- Molecule 35 is a RNA chain called 23S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BA	2848	Total	C	N	O	P	0	0	0
			61341	27300	11478	19716	2847			
35	DA	2848	Total	C	N	O	P	0	0	0
			61341	27300	11478	19716	2847			

- Molecule 36 is a RNA chain called 5S RIBOSOMAL RNA.

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

- Molecule 37 is a protein called 50S RIBOSOMAL PROTEIN L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BC	120	Total	C	N	O	S	0	0	0
			937	590	174	172	1			
37	DC	120	Total	C	N	O	S	0	0	0
			937	590	174	172	1			

- Molecule 38 is a protein called 50S RIBOSOMAL PROTEIN L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BD	272	Total	C	N	O	S	0	0	1
			2105	1329	417	356	3			
38	DD	272	Total	C	N	O	S	0	0	1
			2105	1329	417	356	3			

- Molecule 39 is a protein called 50S RIBOSOMAL PROTEIN L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BE	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	DE	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			

- Molecule 40 is a protein called 50S RIBOSOMAL PROTEIN L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BF	208	Total	C	N	O	S	0	0	1
			1624	1035	304	282	3			
40	DF	208	Total	C	N	O	S	0	0	1
			1624	1035	304	282	3			

- Molecule 41 is a protein called 50S RIBOSOMAL PROTEIN L5.

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

- Molecule 42 is a protein called 50S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BH	165	Total	C	N	O	S	0	0	1
			1260	800	234	225	1			
42	DH	165	Total	C	N	O	S	0	0	1
			1260	800	234	225	1			

- Molecule 43 is a protein called 50S RIBOSOMAL PROTEIN L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BI	146	Total	C	N	O	S	0	0	1
			1132	723	201	207	1			
43	DI	146	Total	C	N	O	S	0	0	1
			1132	723	201	207	1			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	BJ	131	Total	C	N	O	0	0	1
			651	390	131	130			
44	DJ	131	Total	C	N	O	0	0	1
			651	390	131	130			

- Molecule 45 is a protein called 50S RIBOSOMAL PROTEIN L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BN	139	Total	C	N	O	S	0	0	1
			1105	712	207	182	4			
45	DN	139	Total	C	N	O	S	0	0	1
			1105	712	207	182	4			

- Molecule 46 is a protein called 50S RIBOSOMAL PROTEIN L14.

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

- Molecule 47 is a protein called 50S RIBOSOMAL PROTEIN L15.

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

- Molecule 48 is a protein called 50S RIBOSOMAL PROTEIN L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BQ	141	Total	C	N	O	S	0	0	1
			1113	710	211	185	7			
48	DQ	141	Total	C	N	O	S	0	0	1
			1113	710	211	185	7			

- Molecule 49 is a protein called 50S RIBOSOMAL PROTEIN L17.

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
50	BS	99	Total	C	N	O	0	0	1
			771	486	155	130			
50	DS	99	Total	C	N	O	0	0	1
			771	486	155	130			

- Molecule 51 is a protein called 50S RIBOSOMAL PROTEIN L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	BT	136	Total	C	N	O	S	0	0	1
			1124	699	231	193	1			
51	DT	136	Total	C	N	O	S	0	0	1
			1124	699	231	193	1			

- Molecule 52 is a protein called 50S RIBOSOMAL PROTEIN L20.

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

- Molecule 53 is a protein called 50S RIBOSOMAL PROTEIN L21.

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

- Molecule 54 is a protein called 50S RIBOSOMAL PROTEIN L22.

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

- Molecule 55 is a protein called 50S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
55	BX	93	Total	C	N	O	0	0	1
			726	471	132	123			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
55	DX	93	Total	C	N	O	0	0	1
			726	471	132	123			

- Molecule 56 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	BY	101	Total	C	N	O	S	0	0	1
			776	500	149	123	4			
56	DY	101	Total	C	N	O	S	0	0	1
			776	500	149	123	4			

- Molecule 57 is a protein called 50S RIBOSOMAL PROTEIN L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	BZ	185	Total	C	N	O	S	0	0	1
			1468	936	262	268	2			
57	DZ	185	Total	C	N	O	S	0	0	1
			1468	936	262	268	2			

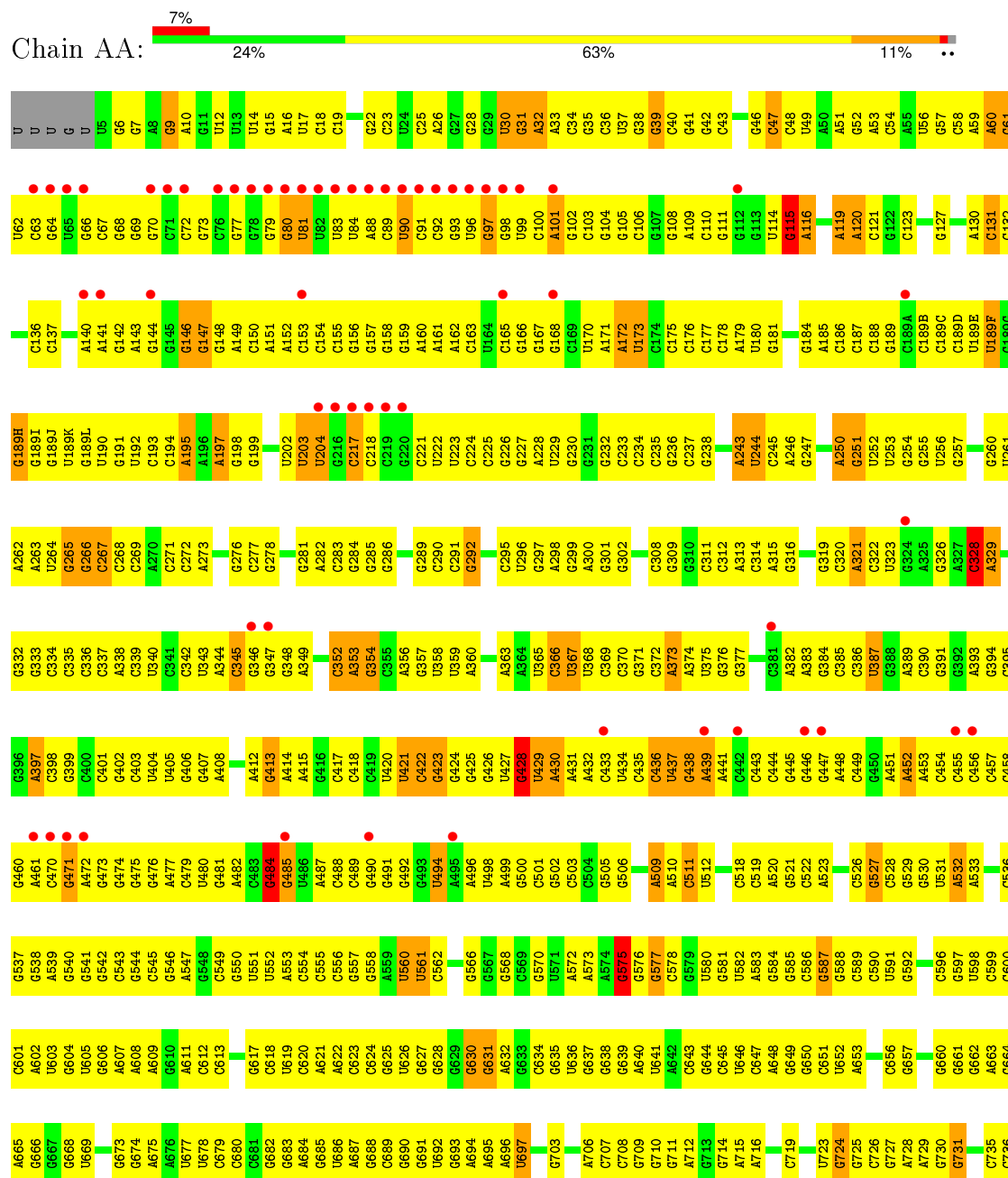
- Molecule 58 is ZINC ION (three-letter code: ZN) (formula: Zn).

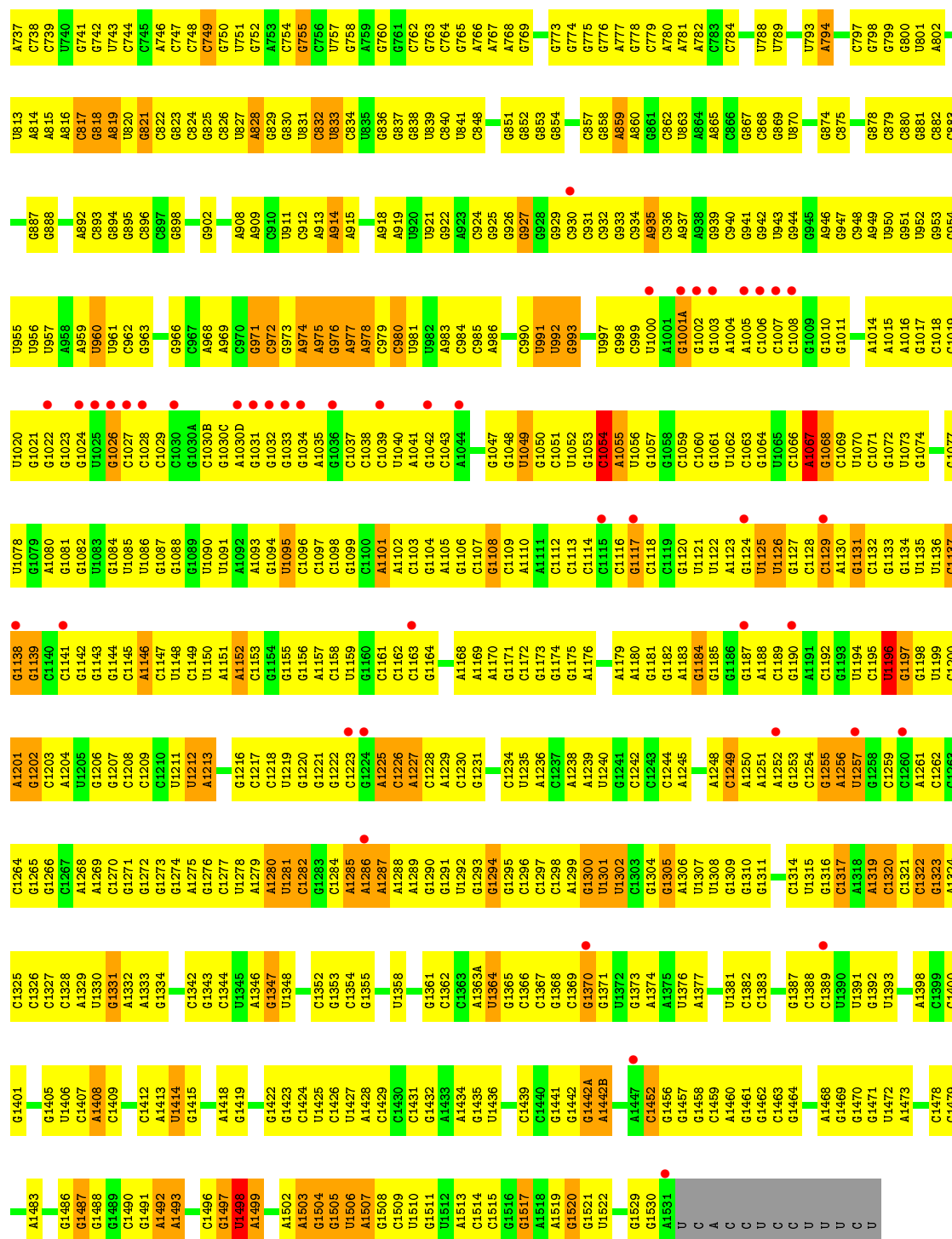
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	CN	1	Total	Zn	0	0
			1	1		
58	AD	1	Total	Zn	0	0
			1	1		
58	CD	1	Total	Zn	0	0
			1	1		
58	AN	1	Total	Zn	0	0
			1	1		

3 Residue-property plots

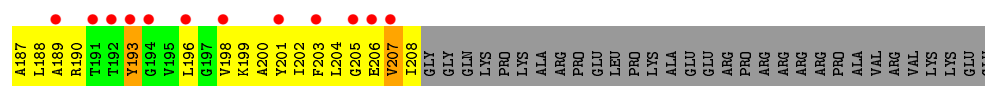
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according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

• Molecule 1: 16S rRNA

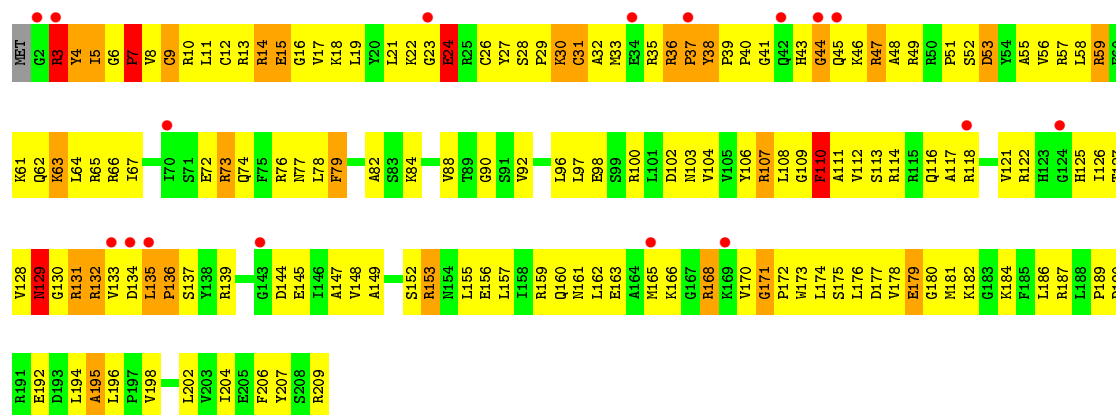




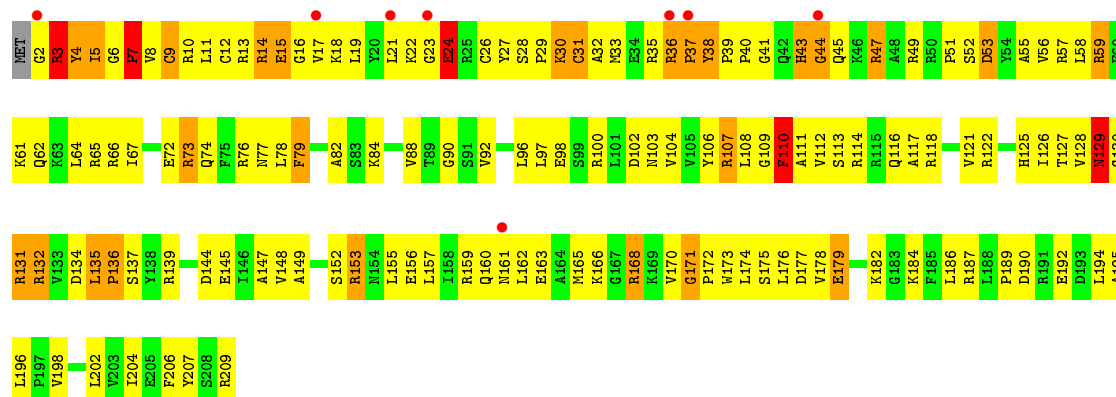
U1020	U957	A819	C748	U677	G610	C543	G475	G402	U264	G189J	U62
G1021	A958	U820	C749	U678	A611	G544	G476	C403	G265	U189K	C63
G1022	A959	G821	G750	C679	C612	C545	A477	U404	C266	U189L	
G1023	U960	C822	U751	C680	C613	G546	U480	U405	C267	U190	G66
G1024	U961	C823	G752			A547	U481	G406	C268	U191	C67
U1025	C962	C824	A753		U619		G481	G407	C342	U192	G68
G1026	G963	G825	C754		C620		U482	A408	U343	U193	G69
C1027		C826	G755		G685		C483	A412	C344	C194	
C1028	G966	U827	C756		A621		G484	G413	C345	A195	G70
C1029	C967	A828	U757		C622		G485	A148	A273	A196	C72
C1030	A968	G829	G758		C623		U486	A149	G346	A197	G73
G1030A	A969	G830	U759		C624		G487	G198	G276	G198	
C1030B	C970	U831	G760		U626		C488	G415	C277	G199	G76
G1030C	G971	C832	G761		G627		C489	C417	G278		G77
A1030D	C972	U833	G762		U628		G490	C418			G78
G1031	G973	C834	G763		G629		U560		G281	U202	G79
G1032	A974	U835	G764		G630		G491	U421	A282	U203	G80
G1033	A975	G836	G765		U631		G492	C422	G354	U204	U81
G1034	G976	U837	A766		G632		G493	G423	C355	G216	U82
A1035	A977	G838	A767		G633		U494	G424	A356	C217	U83
G1036	A978	U839	A768		G634		A495	G425	G357	C218	U84
C1037	C979	C840	G769		U635		U496	G426	U358		U88
C1038	C980	U841			U636		U498	U427	U359		C89
C1039	U981	C848			G637		G500	G428	C291	U221	C91
U1040	U982				G638		C501	U429	G292	U222	C92
A1041	A983				G639		G502	A430		C225	G93
G1042	C984				A640		C503	A431	U296	G226	U96
C1043	A985				U641		U504	A432	G297	G227	G97
A1044	A986				A642		G505	C433	A298	A228	G98
G1045					C643		U506	U434	U368	U229	U99
U1046	C990				G644		G507	C435	A300	G230	C100
G1047	U991				C645		A509	C436	C370	G231	A101
U1048	U992				U646		A510	U437	G371	U170	
U1049	G993				C647		U511	G438	C372	A171	G102
G1050	A994				A648		U512	A439	C373	A172	C103
C1051	C995				G649		C518	A441	A374	U173	G104
U1052	A996				C650		G519	C442	U375	C174	G105
G1053	U997				C651		A520	C443	G376	G175	
C1054					U652		G521	G444		C176	
G1055					A653		C522	G445	A382	C177	A109
A1056	U1000				G656		G523	G446	A383	C178	C110
G1057	A1001				U657		C526	A448	G384	U180	G111
C1058	G1001A				G660		G527	C449	C385	G181	U114
G1059	U1002				G661		C528	G450	C386	U182	G115
C1060	G1003				G662		G529	A451	U387	G183	A116
U1061	A1004				A663		C530	A452	C320	G184	
C1062	U1005				G664		U531	C453	A321	A185	A119
G1063	C1006				A665		C532	C454	C322	A186	A120
U1064	U1007				G666		A533	C455	U323	C187	G121
U1065	C1008				G667		U534	C456	G326	C188	G122
C1066	A1067				G668		A535	C457	A327	C189A	G123
G1068	G1010				U669		C536	G460	C328	C189B	G127
C1069	U1011				G670		G537	A461	A329	C189C	
A1014					U673		U538	C470	G332	U189D	A130
U1015	A1015				G674		A539	G471	G333	U189E	C131
A1016	G1017				A675		G540	A472	G334	U189F	C132
G1072	U1070				G676		A608	G473	C335	G189G	C136
U1073	G1074				A676		A609	G474	C336	U189I	C137



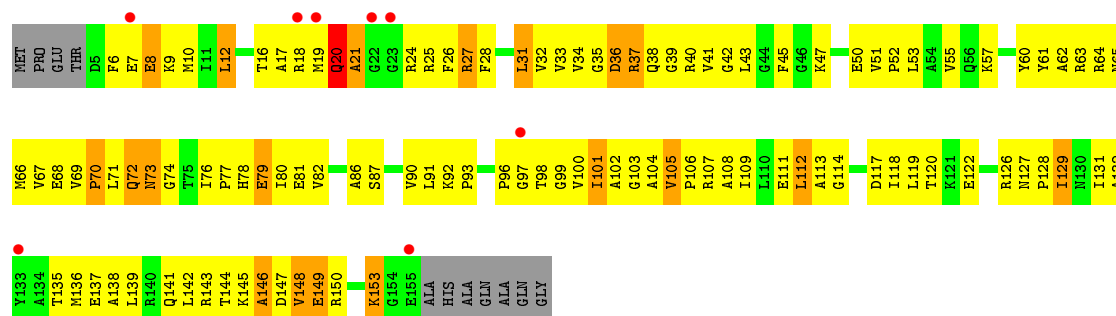
• Molecule 4: 30S RIBOSOMAL PROTEIN S4



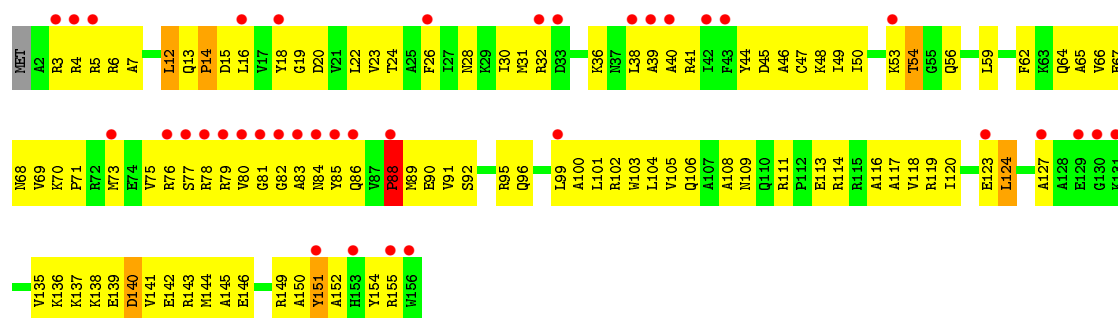
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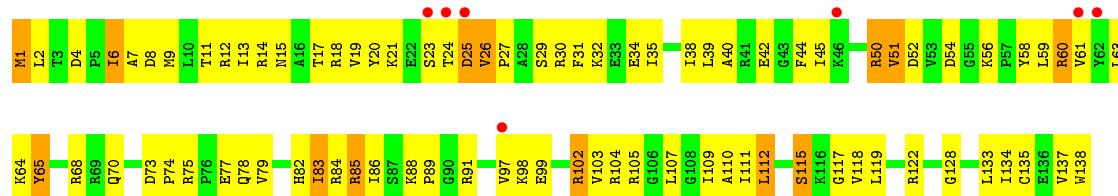
• Molecule 5: 30S RIBOSOMAL PROTEIN S5



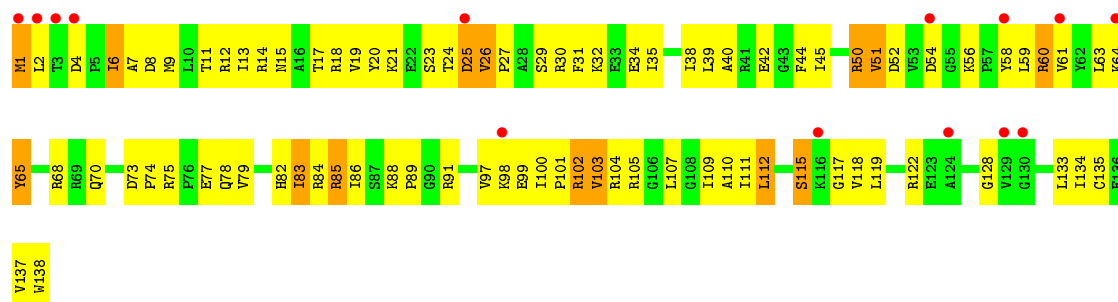
• Molecule 5: 30S RIBOSOMAL PROTEIN S5



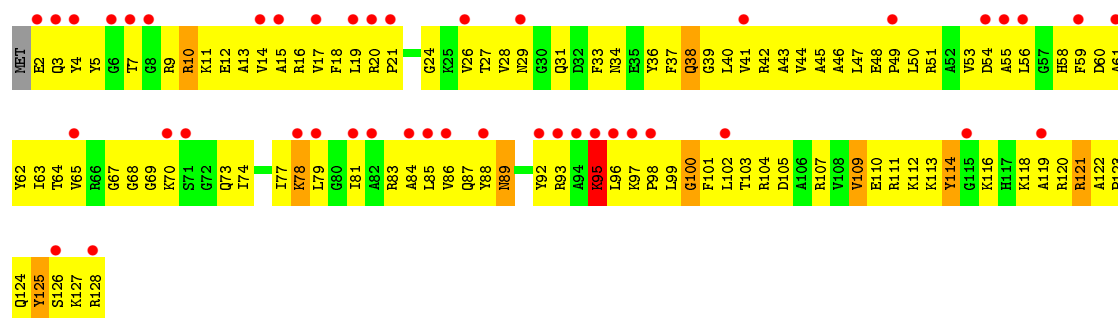
• Molecule 8: 30S RIBOSOMAL PROTEIN S8



• Molecule 8: 30S RIBOSOMAL PROTEIN S8

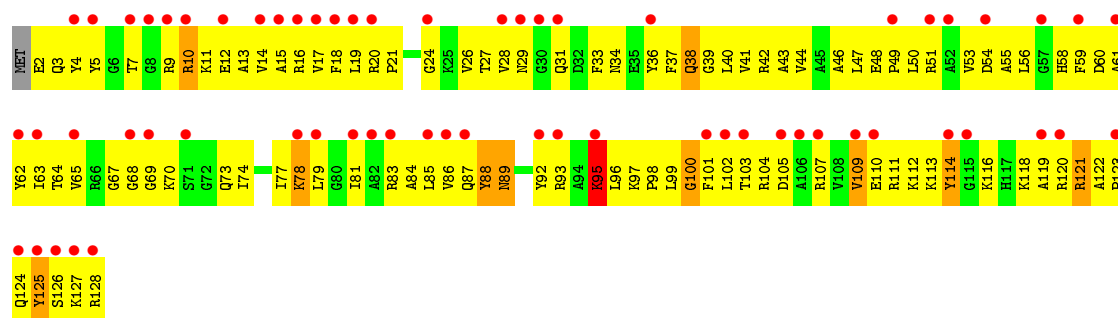


• Molecule 9: 30S RIBOSOMAL PROTEIN S9

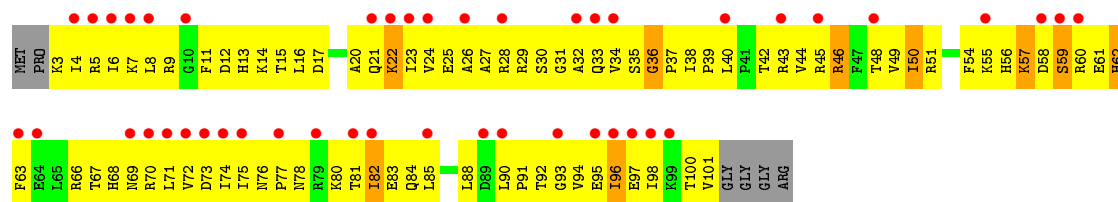


• Molecule 9: 30S RIBOSOMAL PROTEIN S9

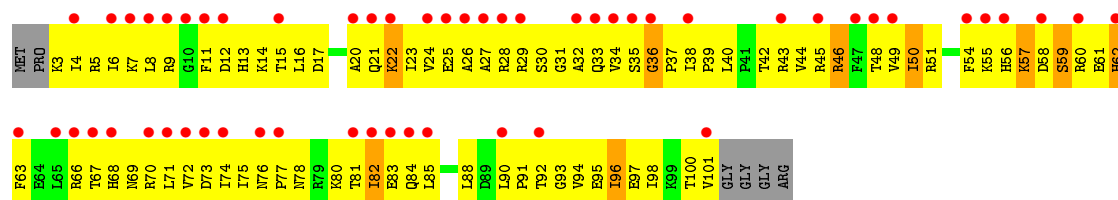




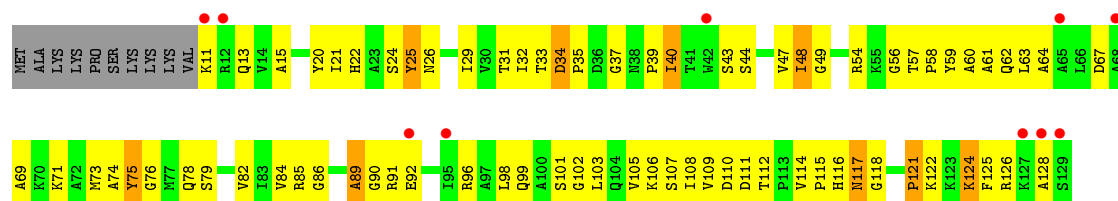
• Molecule 10: 30S RIBOSOMAL PROTEIN S10



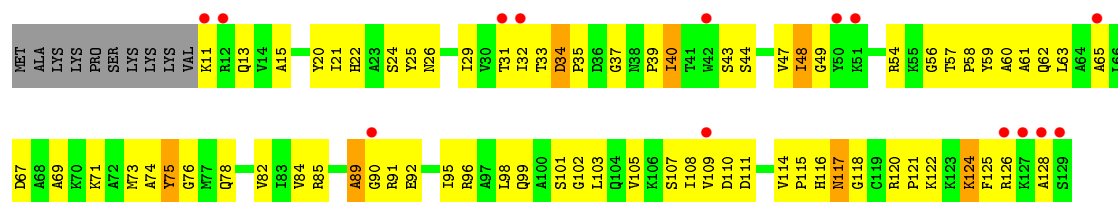
• Molecule 10: 30S RIBOSOMAL PROTEIN S10



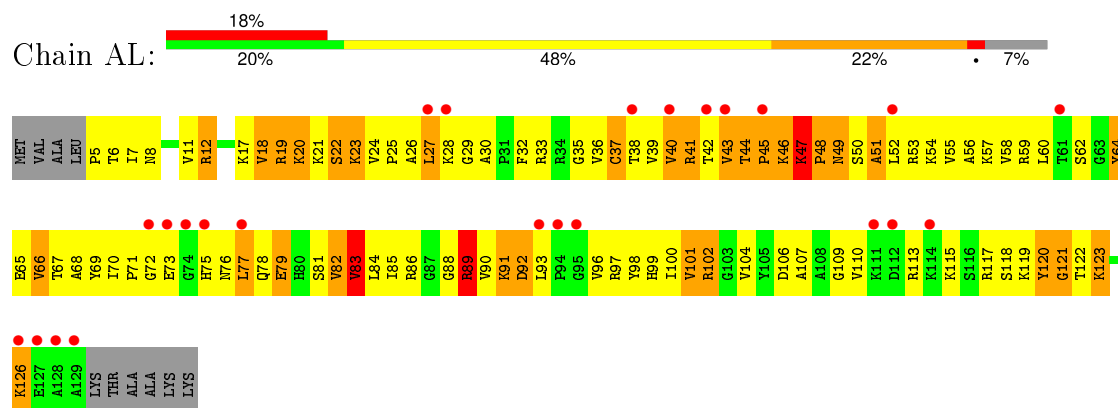
• Molecule 11: 30S RIBOSOMAL PROTEIN S11



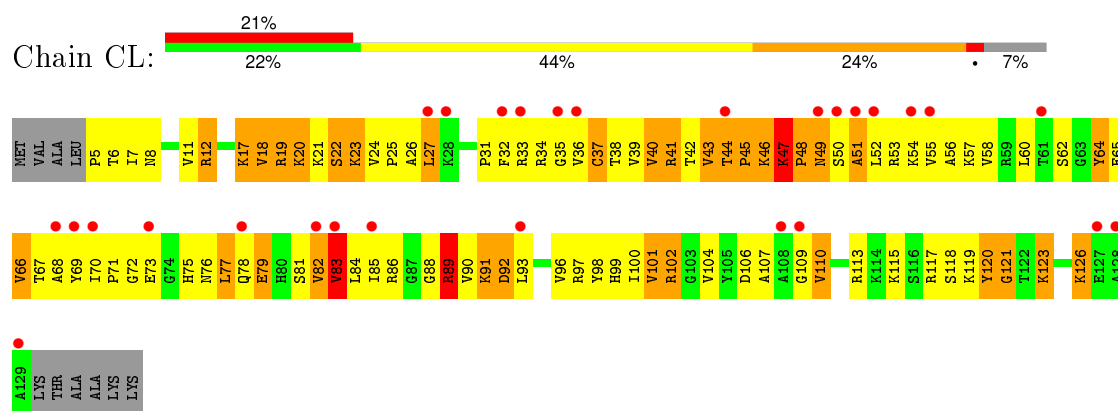
• Molecule 11: 30S RIBOSOMAL PROTEIN S11



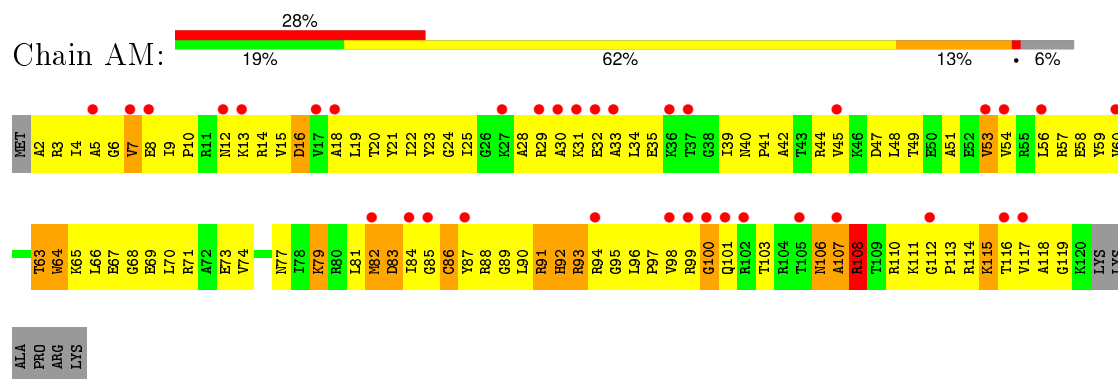
- Molecule 12: 30S RIBOSOMAL PROTEIN S12



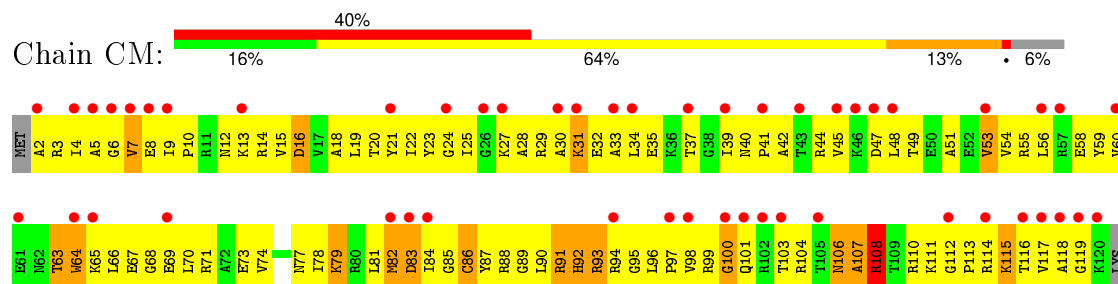
- Molecule 12: 30S RIBOSOMAL PROTEIN S12



- Molecule 13: 30S RIBOSOMAL PROTEIN S13

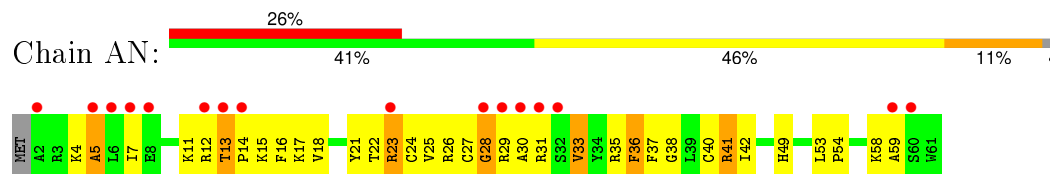


- Molecule 13: 30S RIBOSOMAL PROTEIN S13

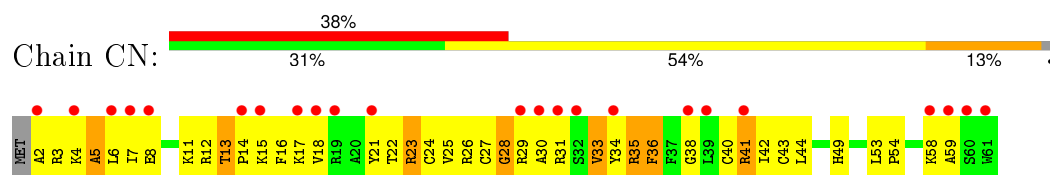


LYS
ALA
PRO
ARG
LYS

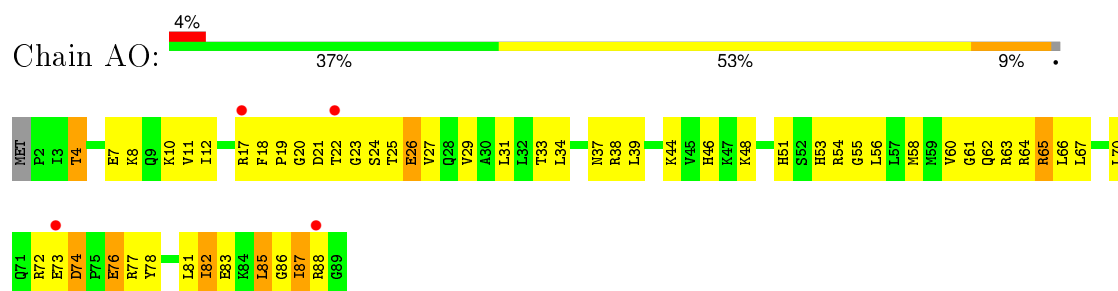
• Molecule 14: 30S RIBOSOMAL PROTEIN S14 TYPE Z



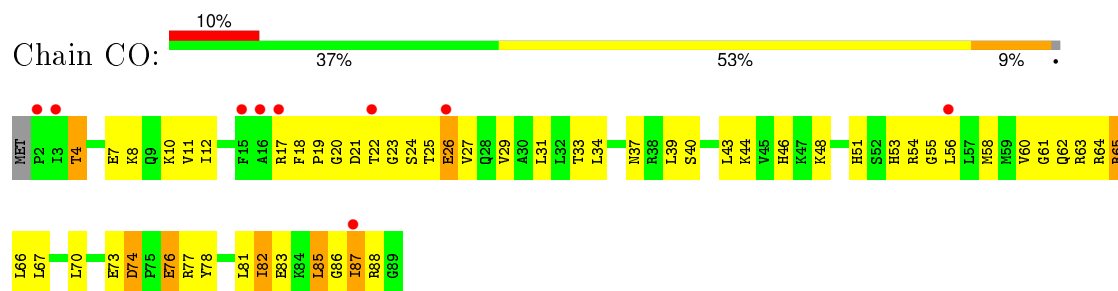
• Molecule 14: 30S RIBOSOMAL PROTEIN S14 TYPE Z



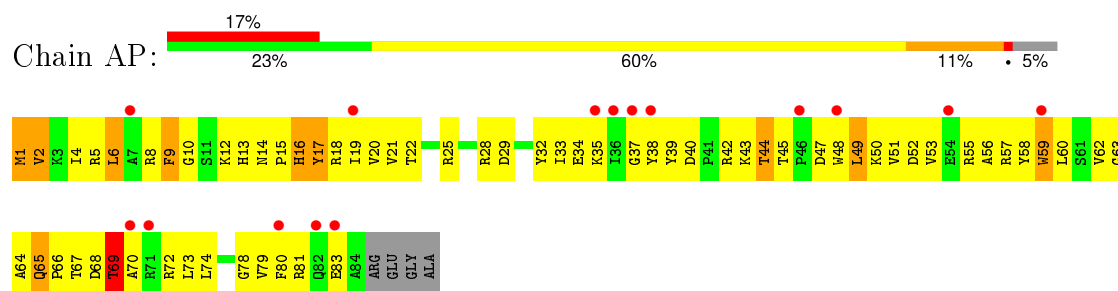
• Molecule 15: 30S RIBOSOMAL PROTEIN S15



• Molecule 15: 30S RIBOSOMAL PROTEIN S15

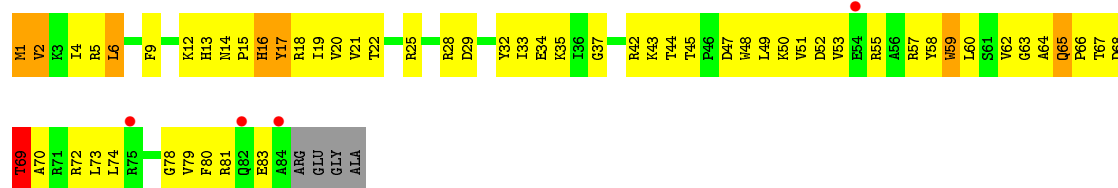


• Molecule 16: 30S RIBOSOMAL PROTEIN S16

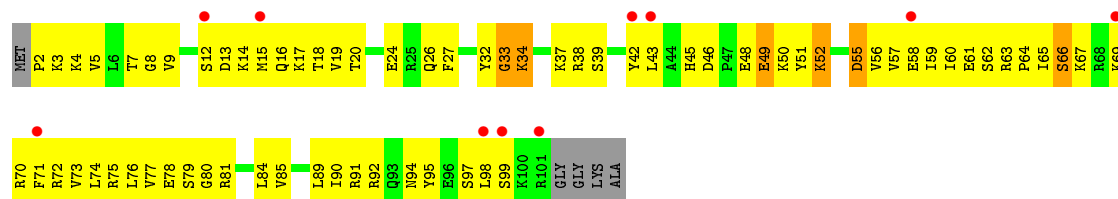


• Molecule 16: 30S RIBOSOMAL PROTEIN S16

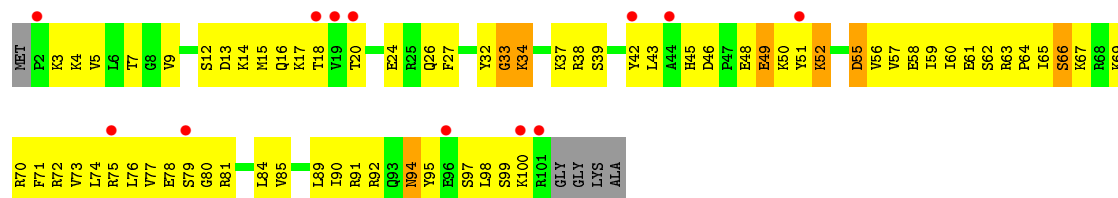




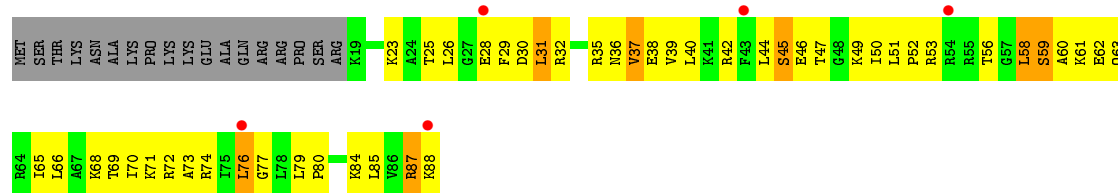
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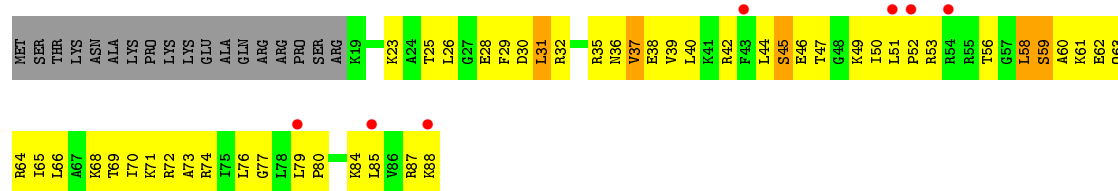
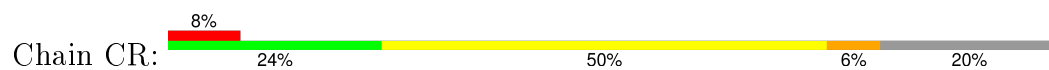
• Molecule 17: 30S RIBOSOMAL PROTEIN S17



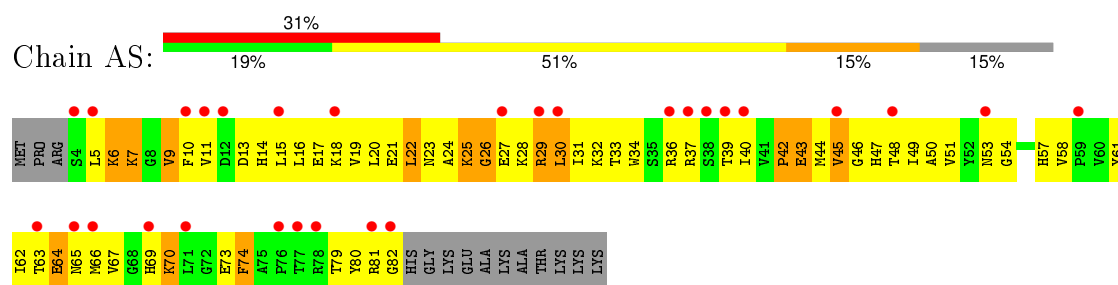
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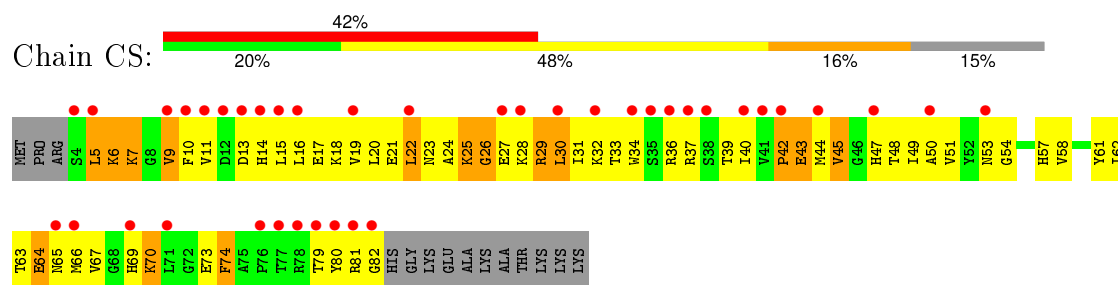
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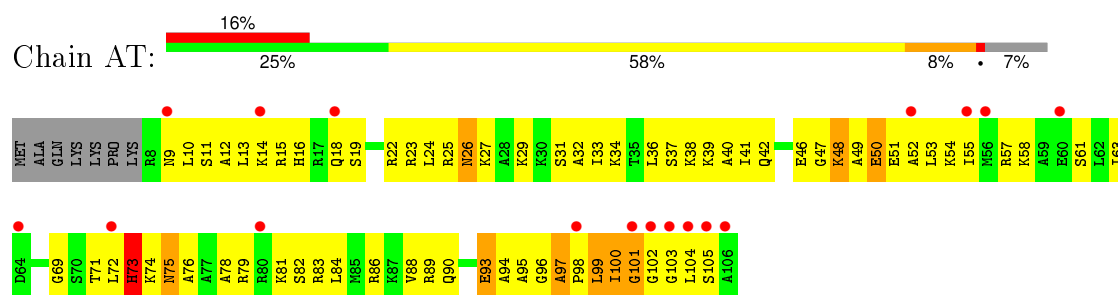
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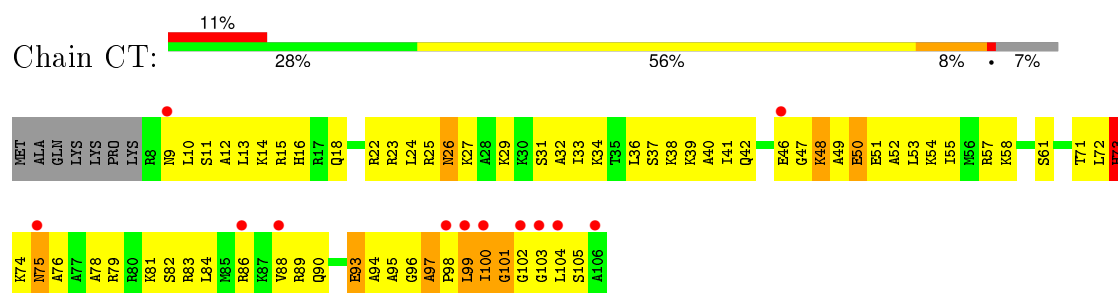
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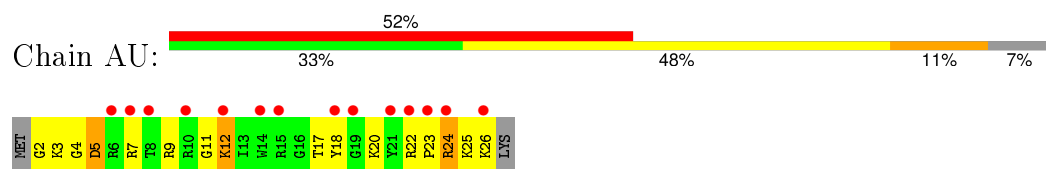
• Molecule 20: 30S RIBOSOMAL PROTEIN S20



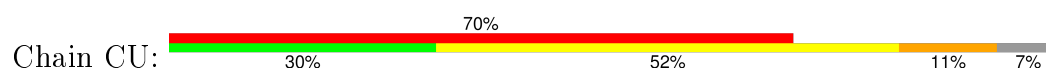
• Molecule 20: 30S RIBOSOMAL PROTEIN S20

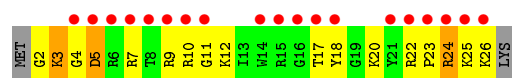


• Molecule 21: 30S RIBOSOMAL PROTEIN THX



• Molecule 21: 30S RIBOSOMAL PROTEIN THX

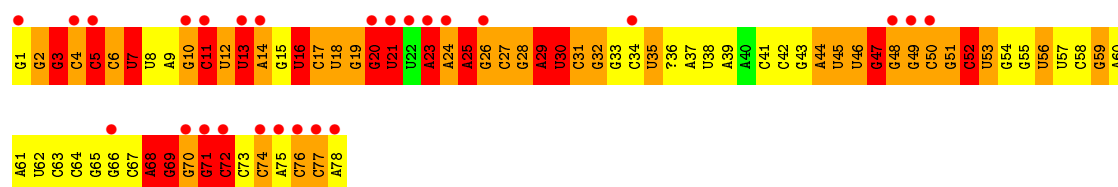




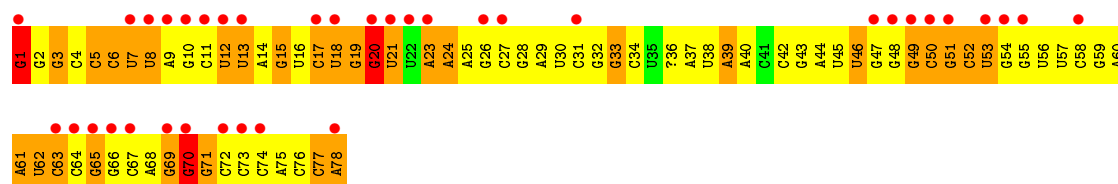
- Molecule 22: E-SITE TRNA ILE2 AGMATIDINE OR P-SITE TRNA ILE2 AGMATIDINE



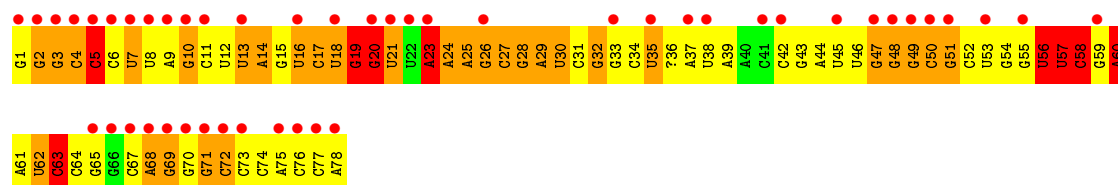
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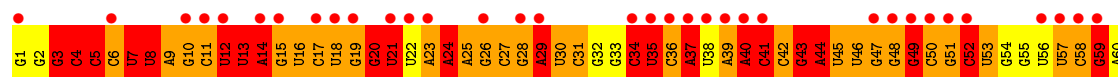
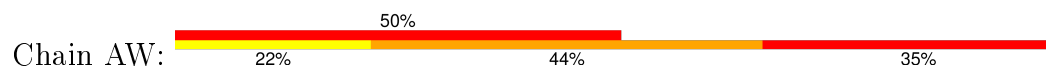
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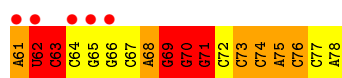


- Molecule 22: E-SITE TRNA ILE2 AGMATIDINE OR P-SITE TRNA ILE2 AGMATIDINE

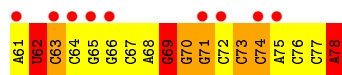
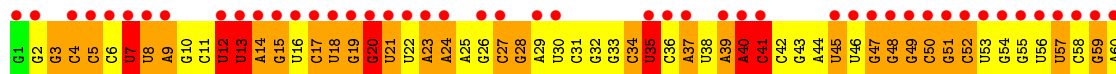
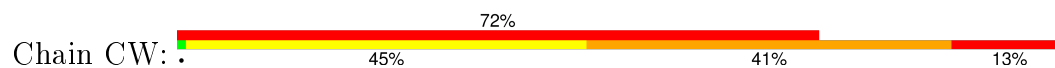


- Molecule 23: A-SITE TRNA ILE2 AGMATIDINE

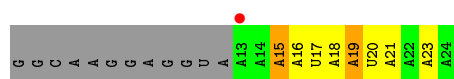




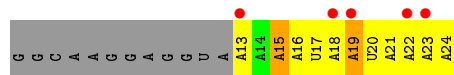
• Molecule 23: A-SITE TRNA ILE2 AGMATIDINE



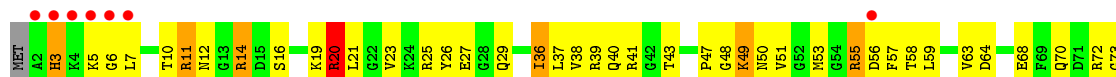
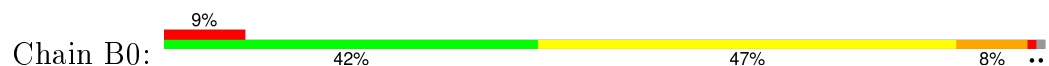
• Molecule 24: MRNA



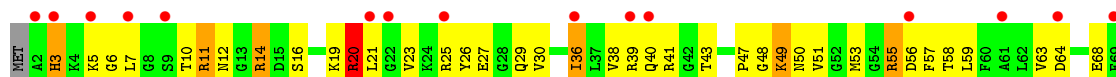
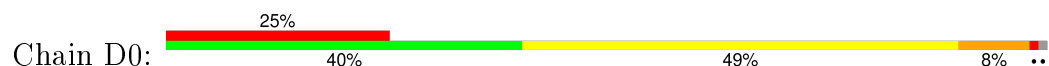
• Molecule 24: MRNA



• Molecule 25: 50S RIBOSOMAL PROTEIN L27

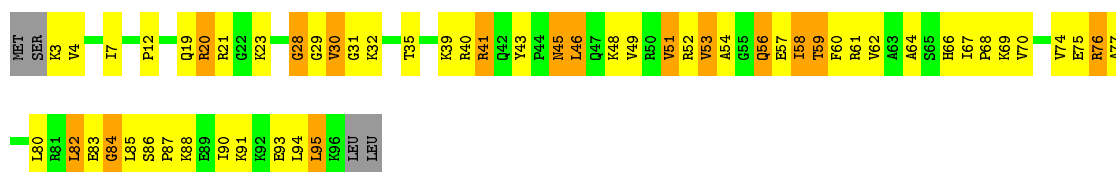


• Molecule 25: 50S RIBOSOMAL PROTEIN L27

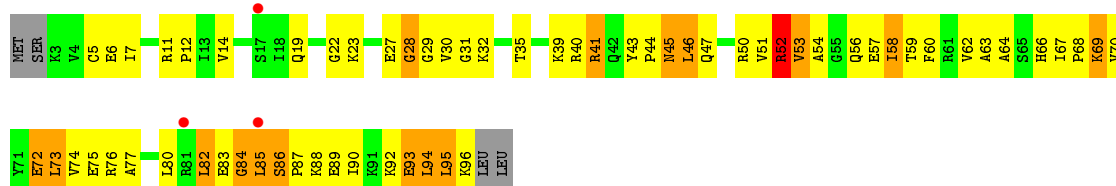


• Molecule 26: 50S RIBOSOMAL PROTEIN L28

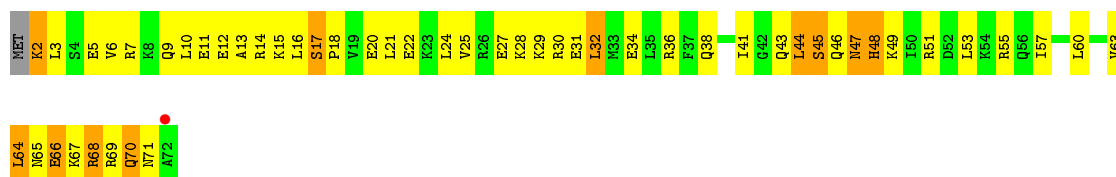




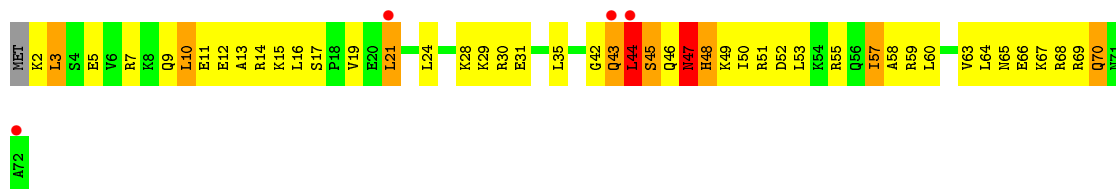
• Molecule 26: 50S RIBOSOMAL PROTEIN L28



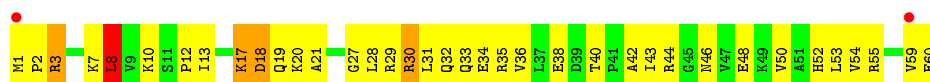
• Molecule 27: 50S RIBOSOMAL PROTEIN L29



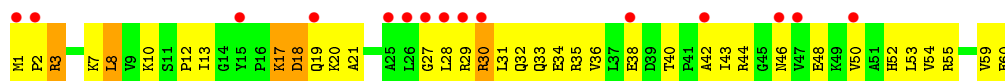
• Molecule 27: 50S RIBOSOMAL PROTEIN L29



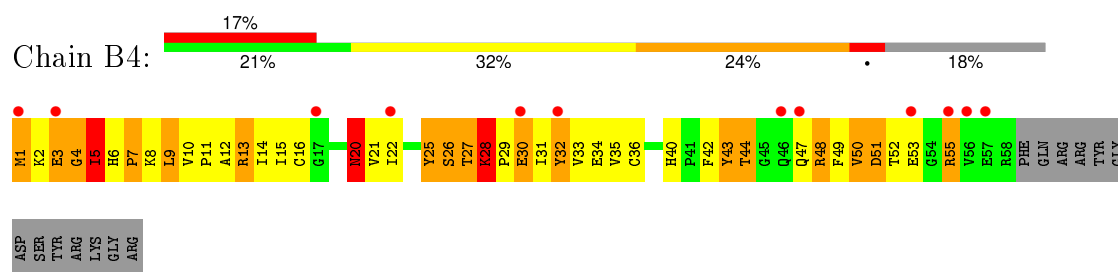
• Molecule 28: 50S RIBOSOMAL PROTEIN L30



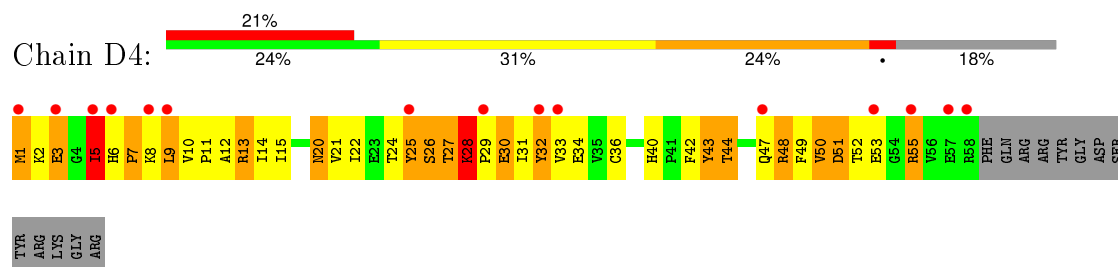
• Molecule 28: 50S RIBOSOMAL PROTEIN L30



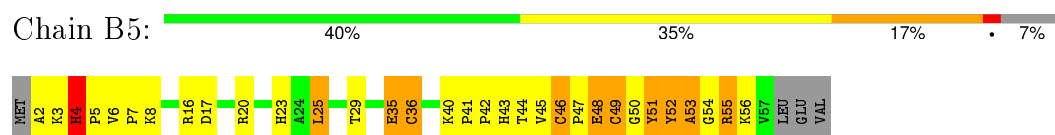
• Molecule 29: 50S RIBOSOMAL PROTEIN L31



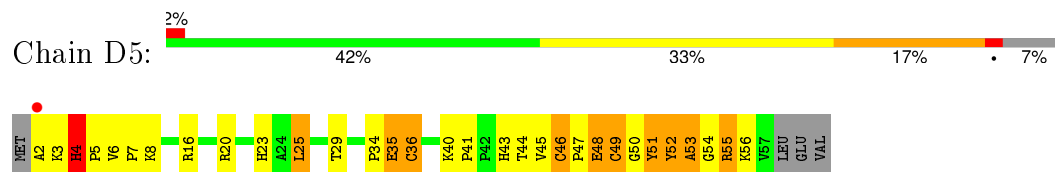
- Molecule 29: 50S RIBOSOMAL PROTEIN L31



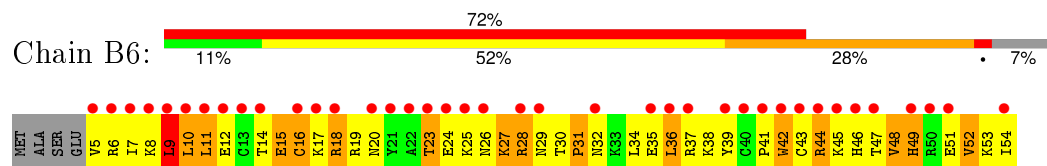
- Molecule 30: 50S RIBOSOMAL PROTEIN L32



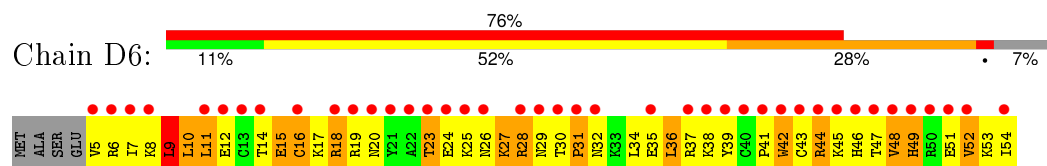
- Molecule 30: 50S RIBOSOMAL PROTEIN L32



- Molecule 31: 50S RIBOSOMAL PROTEIN L33

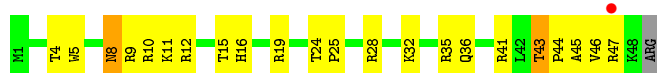


- Molecule 31: 50S RIBOSOMAL PROTEIN L33

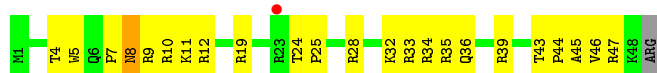


- Molecule 32: 50S RIBOSOMAL PROTEIN L34

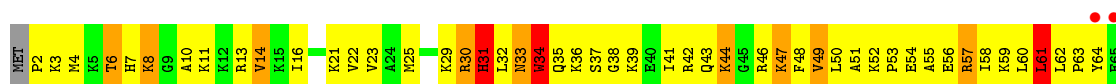




- Molecule 32: 50S RIBOSOMAL PROTEIN L34



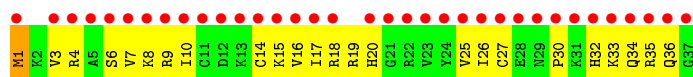
- Molecule 33: 50S RIBOSOMAL PROTEIN L35



- Molecule 33: 50S RIBOSOMAL PROTEIN L35



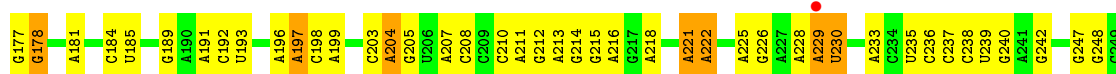
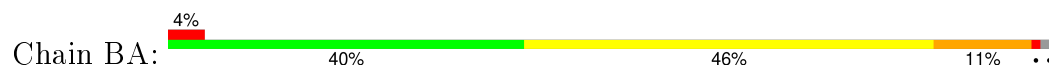
- Molecule 34: 50S RIBOSOMAL PROTEIN L36



- Molecule 34: 50S RIBOSOMAL PROTEIN L36

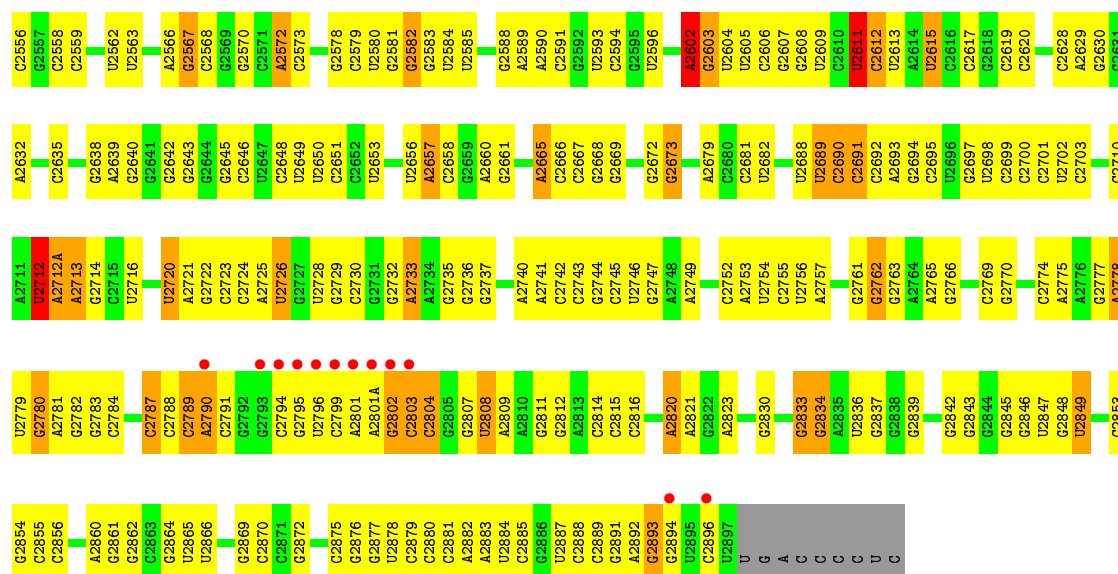


- Molecule 35: 23S RIBOSOMAL RNA



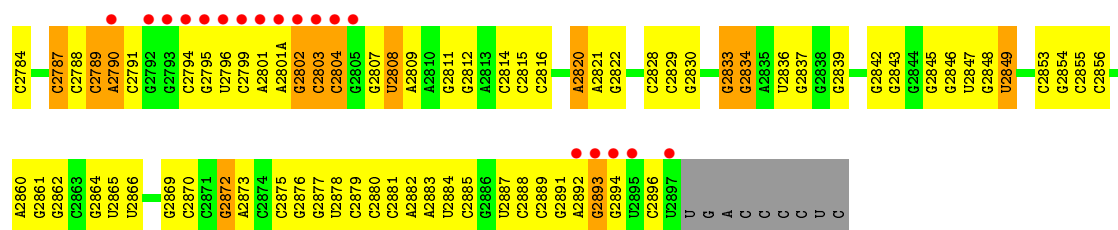
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C1270	U1175	G1039	C997	G829	G765	C673	A632	U555	U475	C364	U293	G252
G1271	G1176	C1040	C998	A830	A973	G674	A633	G556	G476	C365	U293	A257
A1272	U1177	G1041	A899	G831	G766	A675	A634	U557	A477	G372	C296	G258
U1273	G1178	C1042	A900	G832	U767	A676	C635	G558	A478	C297	C297	G259
A1274	C1179	G1043	A901	U833	G768	G680	C636	G559	A479	C298	A299	G266
U1275	G1180	G1044	C902	C834	G769	G681	A637	C560	A480	U387	U303	U269
A1278	A1181	A1045	C903	C838	G770	G686	U638	G563	A482	G388	G304	A270
G1279	G1182	G1047	C904	U839	G771	G686	U639	G570	A483	G389	U305	A271
G1280	U1183	A1048	C908	C840	U773	C682	C640	A571	A394	U395	U306	A271A
G1281	A1184	G1049	A909	A841	A774	C693	G642	A572	U396	G307	G307	C271B
A1286	U1185	C1050	A910	G842	G775	U694	A643	G573	G396	G308	G308	C271C
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U1291	G1190	G	A917	G848	A781	A705	G648	G577	G406	G406	G315	G271H
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U1293	U1205	G	U851	C850	A783	A707	C650	C580	G408	C316	U271J	U271K
U1300	G1208	G	G852	G853	G786	U708	A653	C581	C409	C410	G319	U271L
A1301	C1209	G	C854	G854	U787	G710	G654	C587	G411	G411	A320	G271M
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U1306	A1210	U	G928	C857	C790	G713	G654C	A590	G417	G323	G323	C271P
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G1311	G1212	A	G932	G859	G792	C720	C654E	G592	C510	C419	G329	G271R
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A1317	G1231	C	U943	G864	A802	A727	C654L	G598	G518	U434	G334	U
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G1345	A1243	A	G954	G881	C814	G744	A655	G613	A532	C455	G353	G274
U1348	G1244	A	G955	G882	C815	G745	G656	U614	G533	C456	G356	A275
A1349	U1245	A	G956	G883	C816	G746	U657	U614A	C535	A457	A357	A276
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A1359	G1250	U	C961	A877	A820	G752	C665	A621	G544	A467	G361	C281
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U1360	A1253	G	U963	C889	U822	C754	G669	G623	A547	G469	A363A	C285
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		A	C965	G892	A824	C756	G669	G625	A549	A472	G363B	C287
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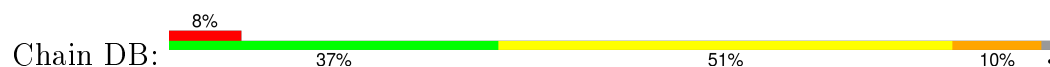
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G2782	G2717	G2640	C2558	C2482	G2406	A2329	C2264	C2185	G2125	A2060	G1981	U1898	A1803
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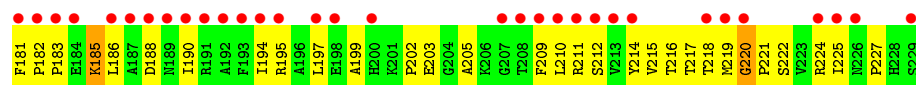
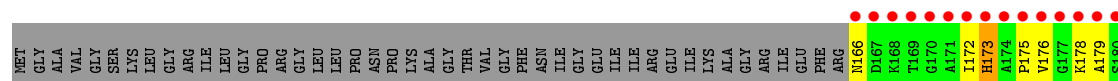
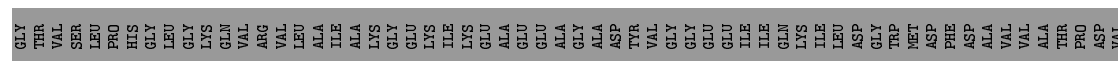
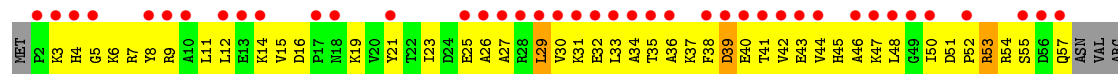
• Molecule 36: 5S RIBOSOMAL RNA



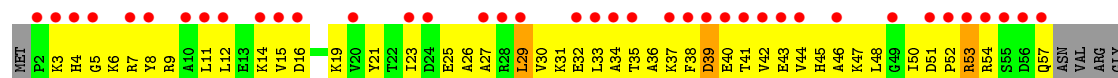
• Molecule 36: 5S RIBOSOMAL RNA



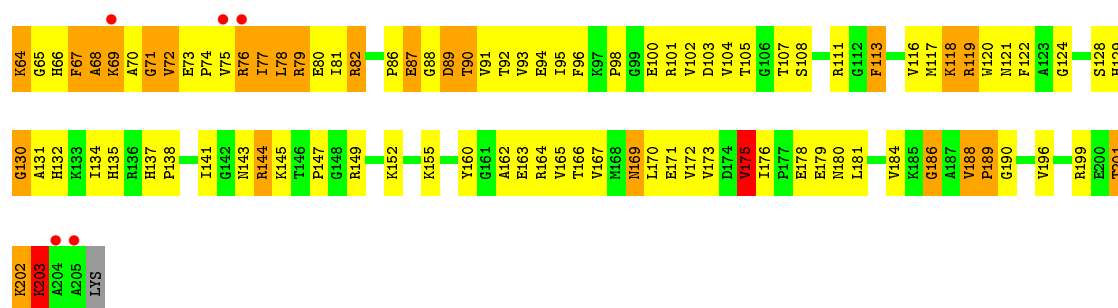
• Molecule 37: 50S RIBOSOMAL PROTEIN L1



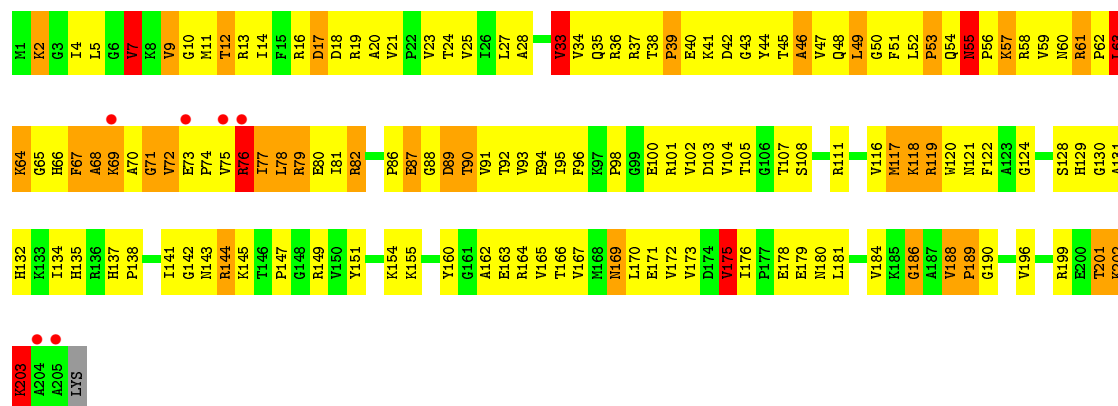
• Molecule 37: 50S RIBOSOMAL PROTEIN L1



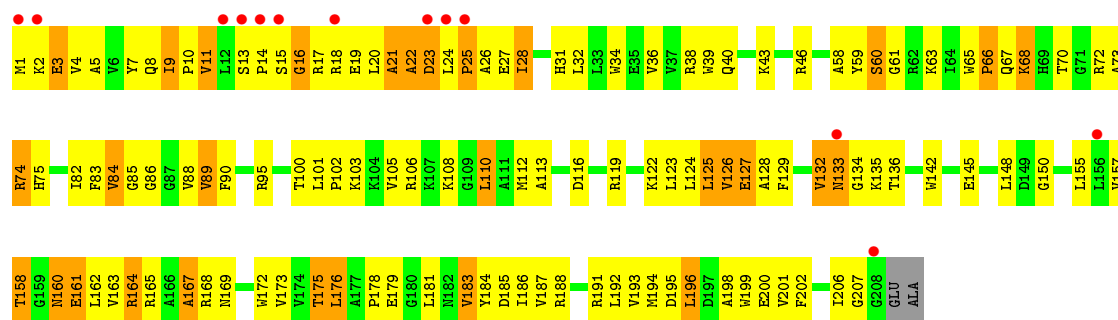




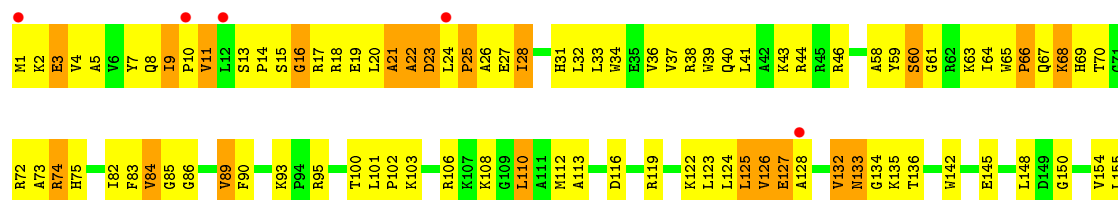
• Molecule 39: 50S RIBOSOMAL PROTEIN L3



• Molecule 40: 50S RIBOSOMAL PROTEIN L4

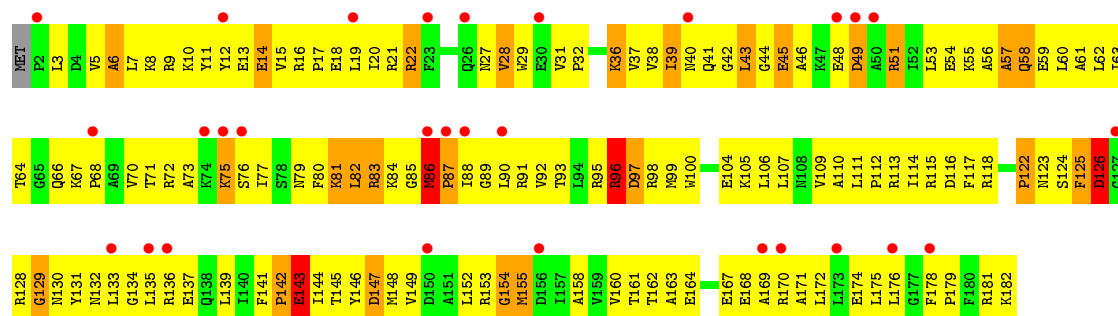


• Molecule 40: 50S RIBOSOMAL PROTEIN L4

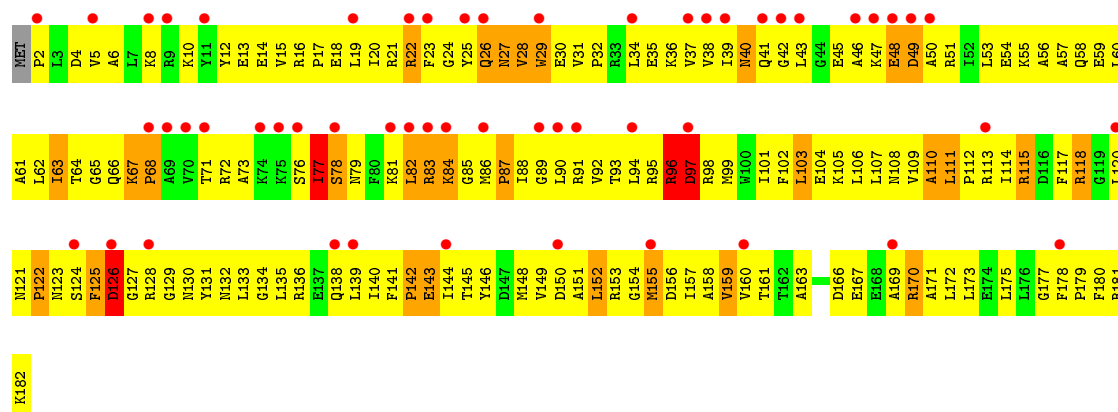




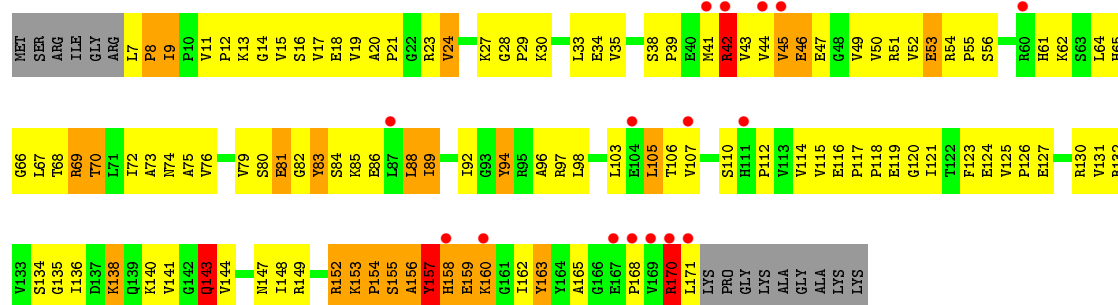
• Molecule 41: 50S RIBOSOMAL PROTEIN L5



• Molecule 41: 50S RIBOSOMAL PROTEIN L5

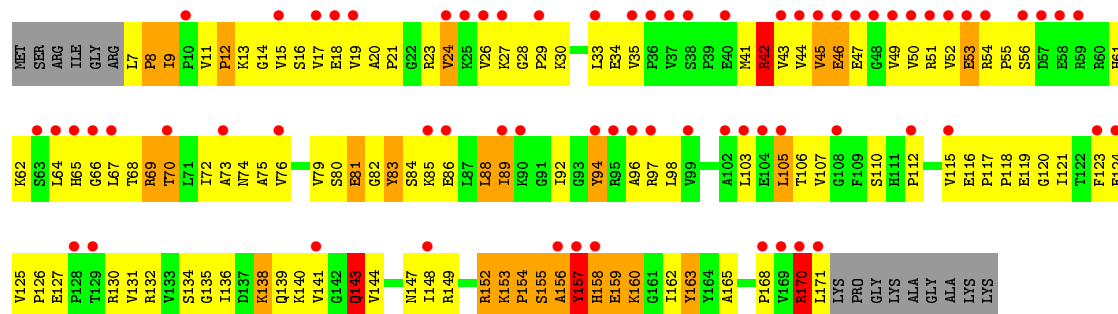


• Molecule 42: 50S RIBOSOMAL PROTEIN L6

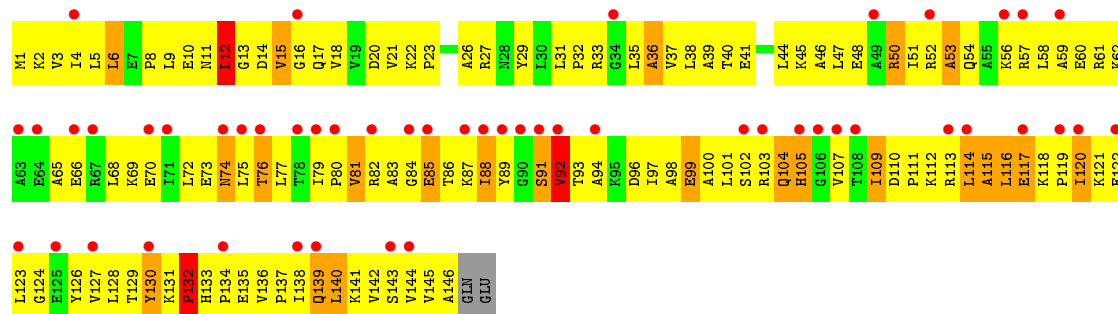


• Molecule 42: 50S RIBOSOMAL PROTEIN L6

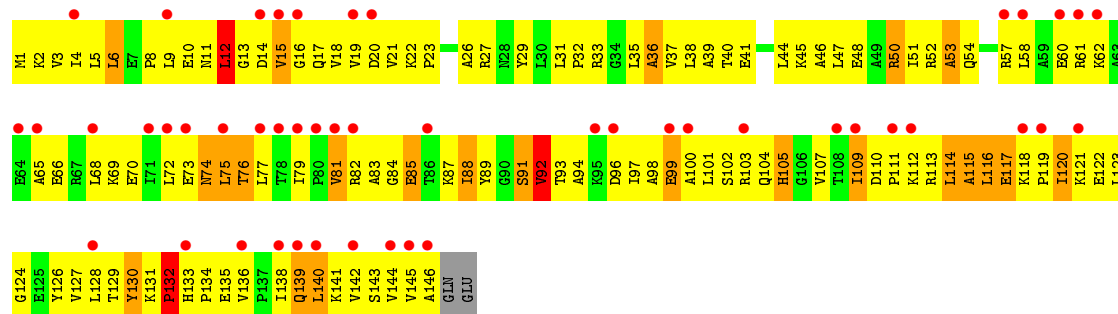




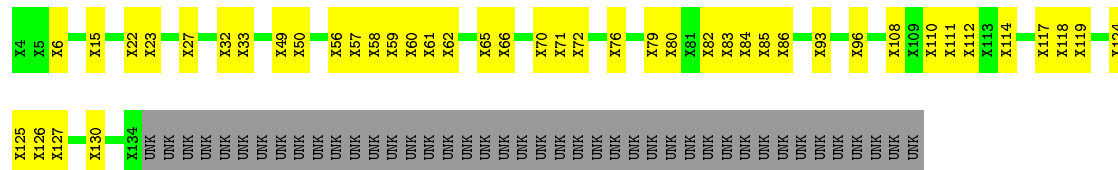
• Molecule 43: 50S RIBOSOMAL PROTEIN L9



• Molecule 43: 50S RIBOSOMAL PROTEIN L9

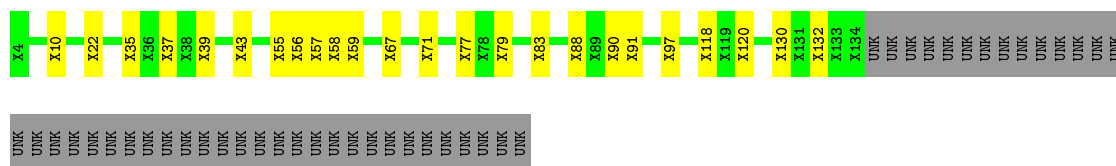


• Molecule 44: 50S RIBOSOMAL PROTEIN L10

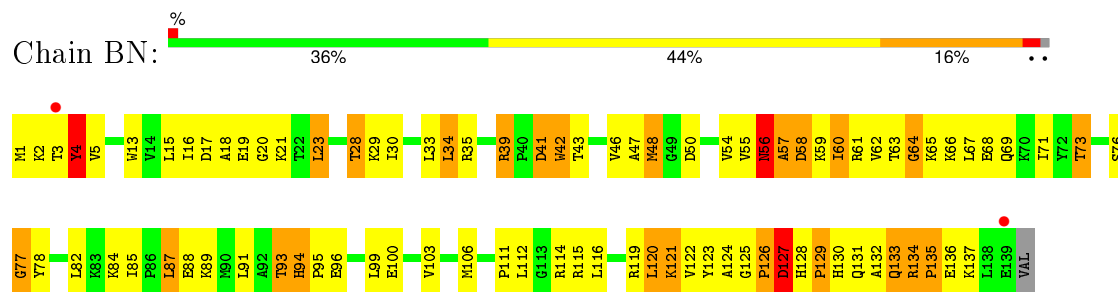


• Molecule 44: 50S RIBOSOMAL PROTEIN L10

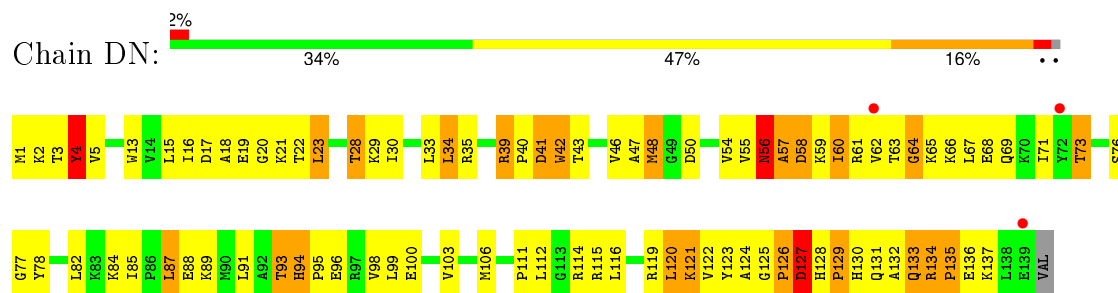




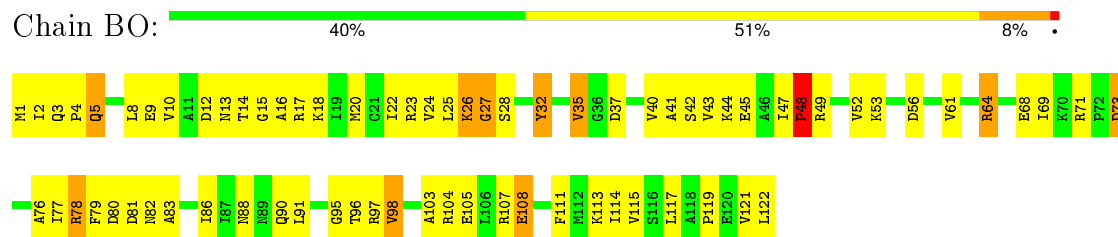
• Molecule 45: 50S RIBOSOMAL PROTEIN L13



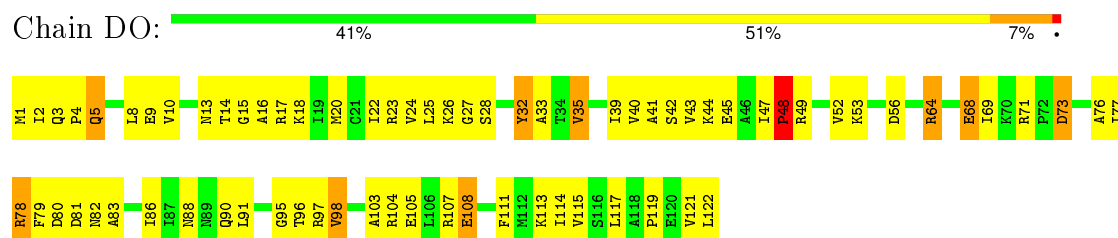
• Molecule 45: 50S RIBOSOMAL PROTEIN L13



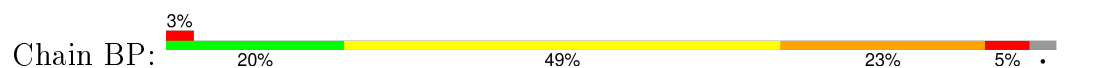
• Molecule 46: 50S RIBOSOMAL PROTEIN L14

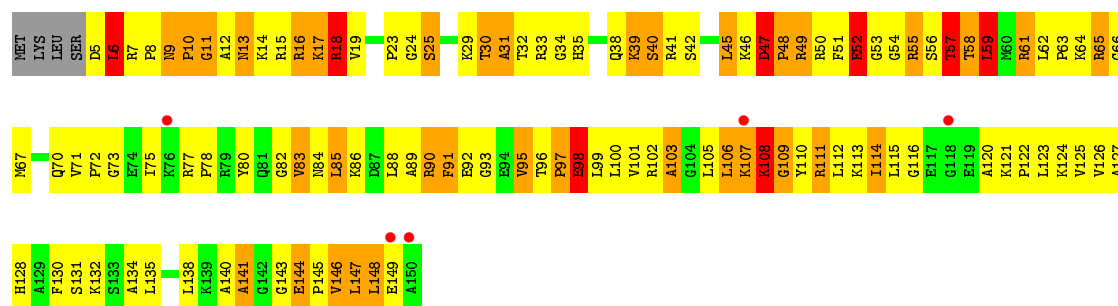


• Molecule 46: 50S RIBOSOMAL PROTEIN L14

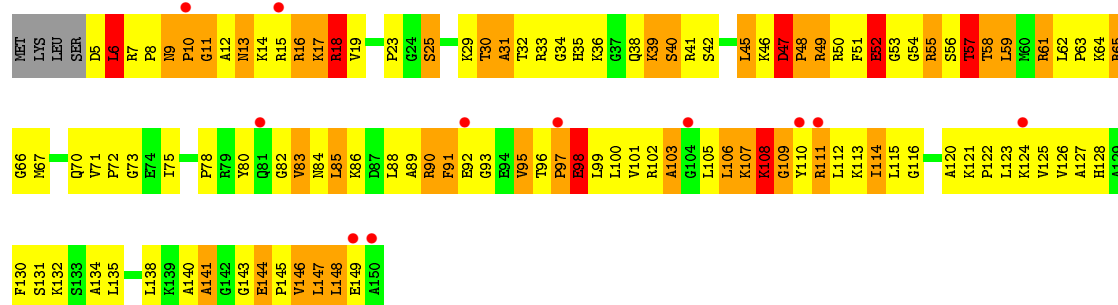
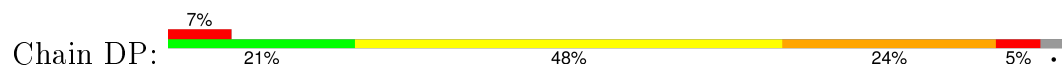


• Molecule 47: 50S RIBOSOMAL PROTEIN L15

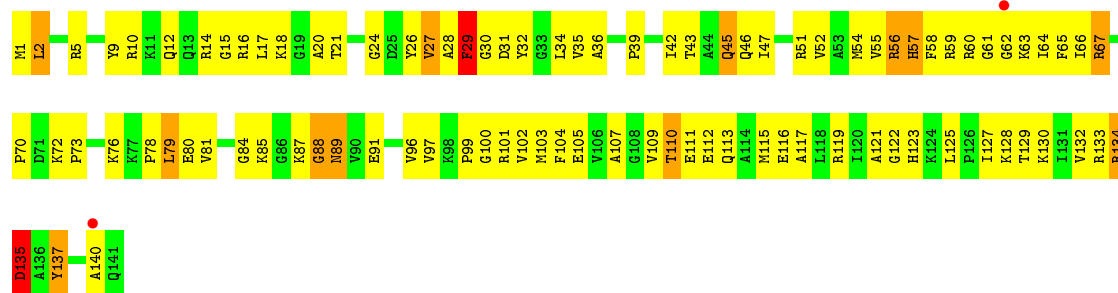




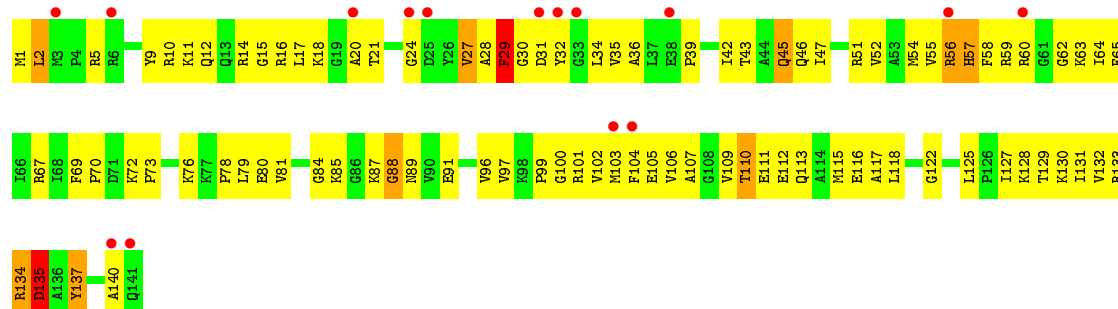
• Molecule 47: 50S RIBOSOMAL PROTEIN L15



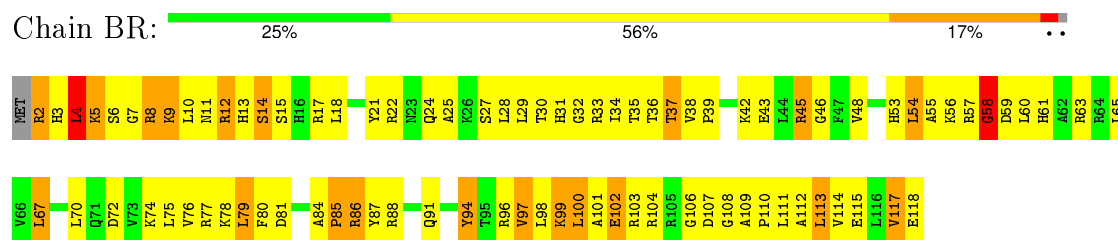
• Molecule 48: 50S RIBOSOMAL PROTEIN L16



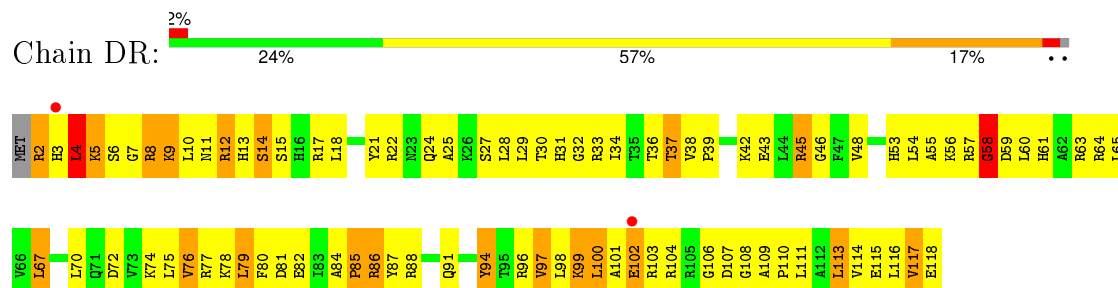
• Molecule 48: 50S RIBOSOMAL PROTEIN L16



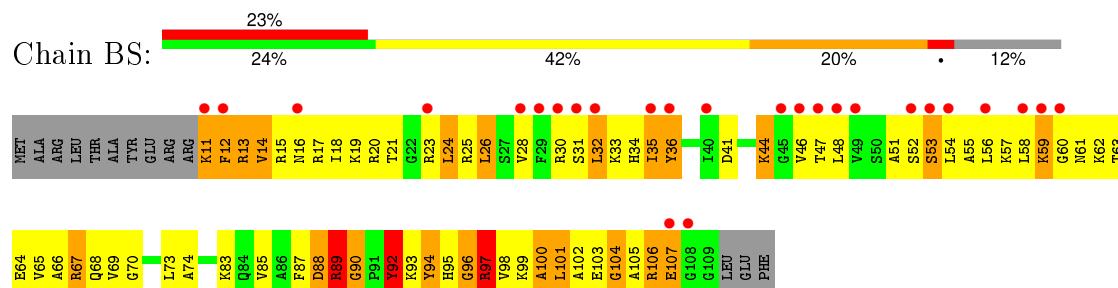
- Molecule 49: 50S RIBOSOMAL PROTEIN L17



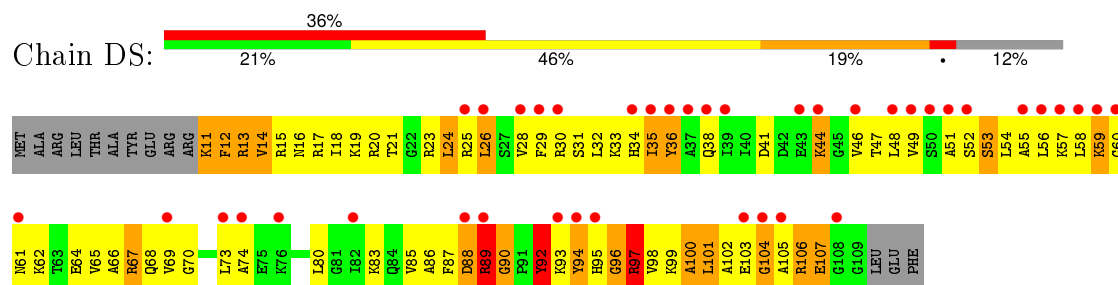
- Molecule 49: 50S RIBOSOMAL PROTEIN L17



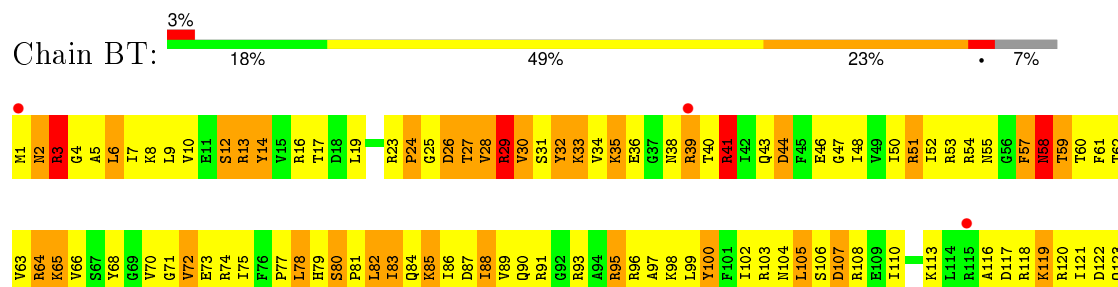
- Molecule 50: 50S RIBOSOMAL PROTEIN L18

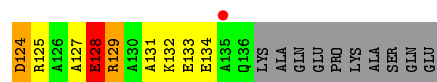


- Molecule 50: 50S RIBOSOMAL PROTEIN L18

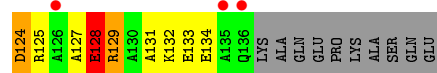
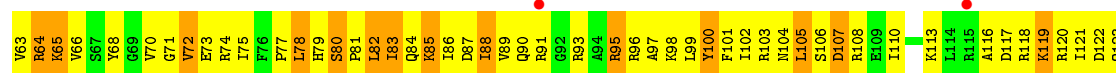
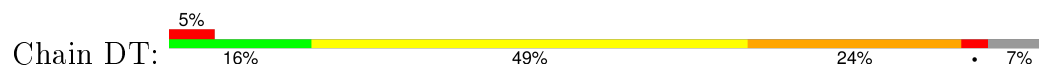


- Molecule 51: 50S RIBOSOMAL PROTEIN L19

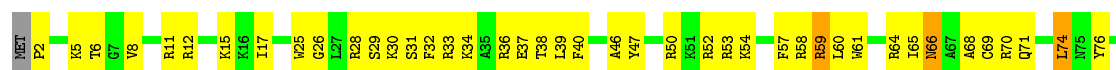




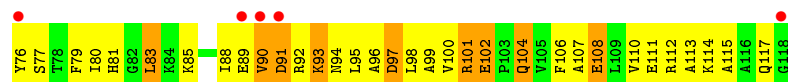
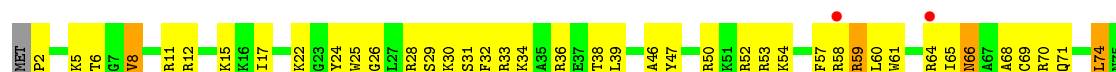
• Molecule 51: 50S RIBOSOMAL PROTEIN L19



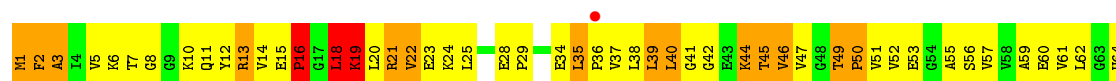
• Molecule 52: 50S RIBOSOMAL PROTEIN L20



• Molecule 52: 50S RIBOSOMAL PROTEIN L20

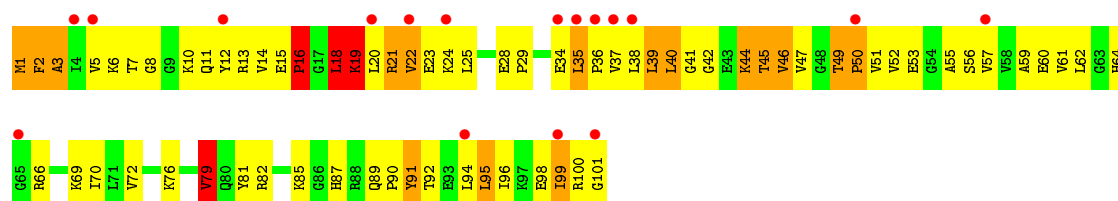


• Molecule 53: 50S RIBOSOMAL PROTEIN L21

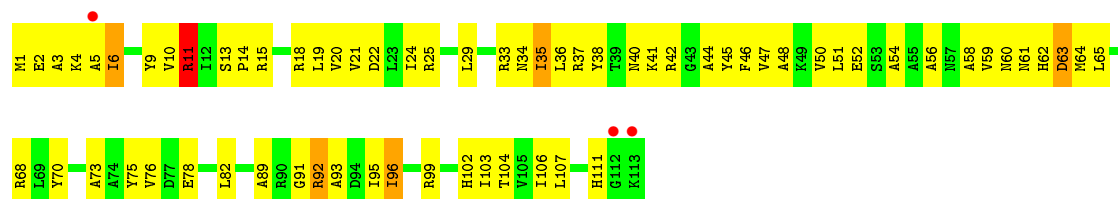
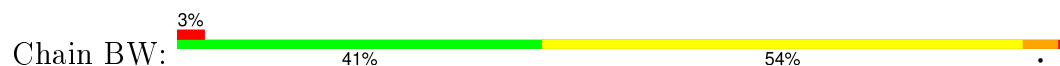


• Molecule 53: 50S RIBOSOMAL PROTEIN L21

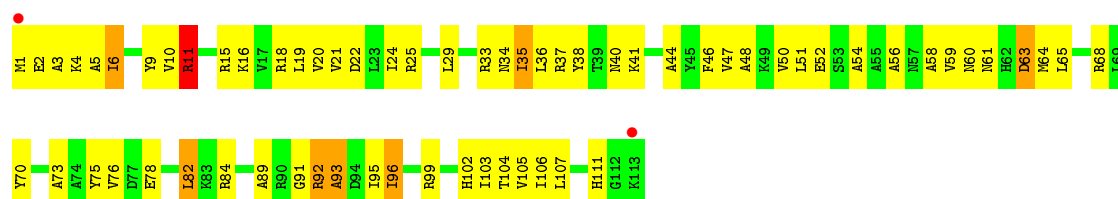
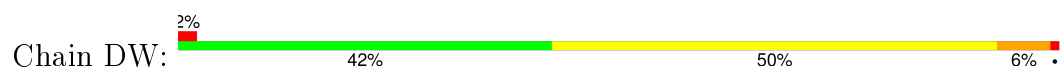




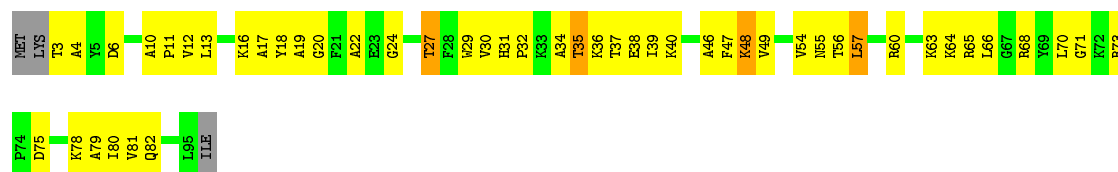
• Molecule 54: 50S RIBOSOMAL PROTEIN L22



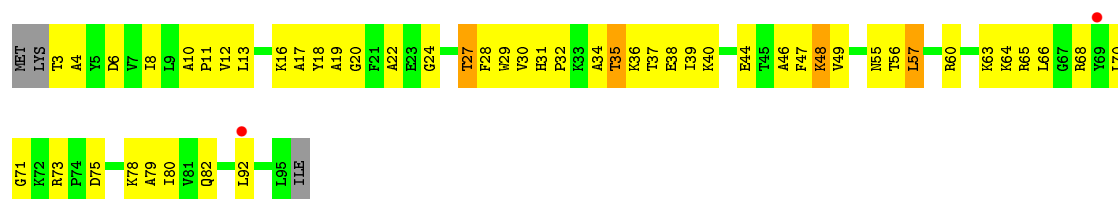
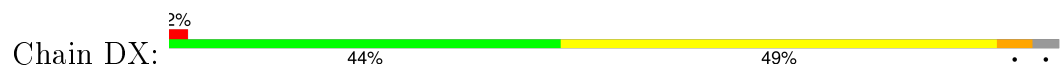
• Molecule 54: 50S RIBOSOMAL PROTEIN L22



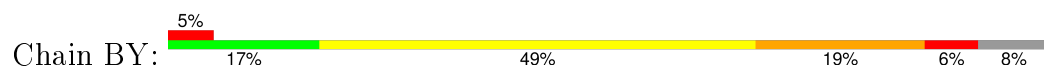
• Molecule 55: 50S RIBOSOMAL PROTEIN L23

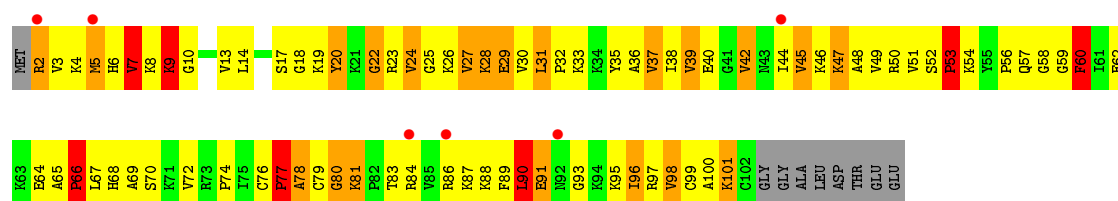


• Molecule 55: 50S RIBOSOMAL PROTEIN L23

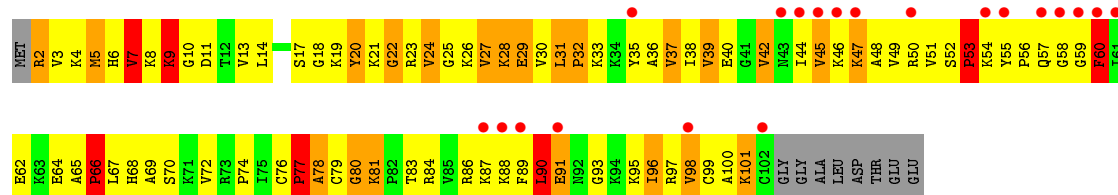
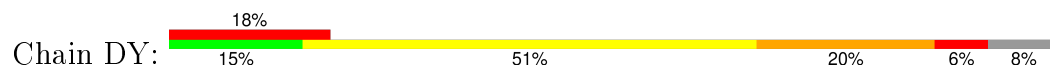


• Molecule 56: 50S RIBOSOMAL PROTEIN L24

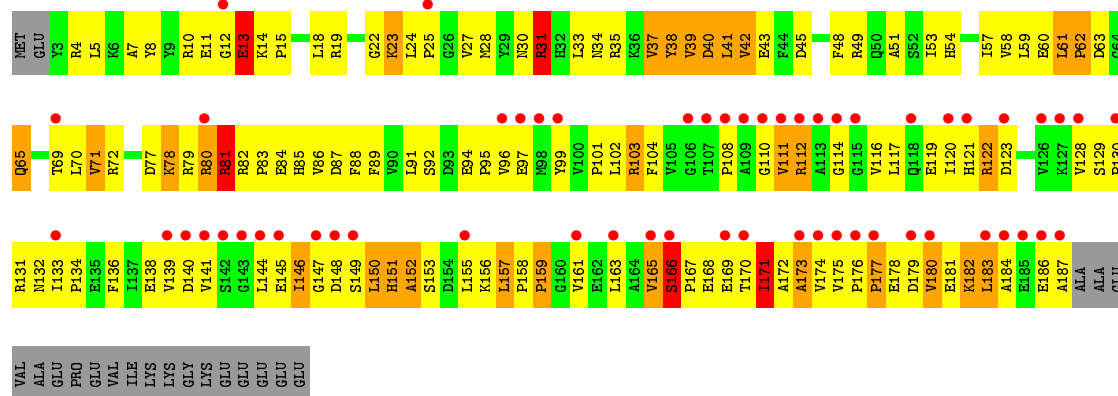




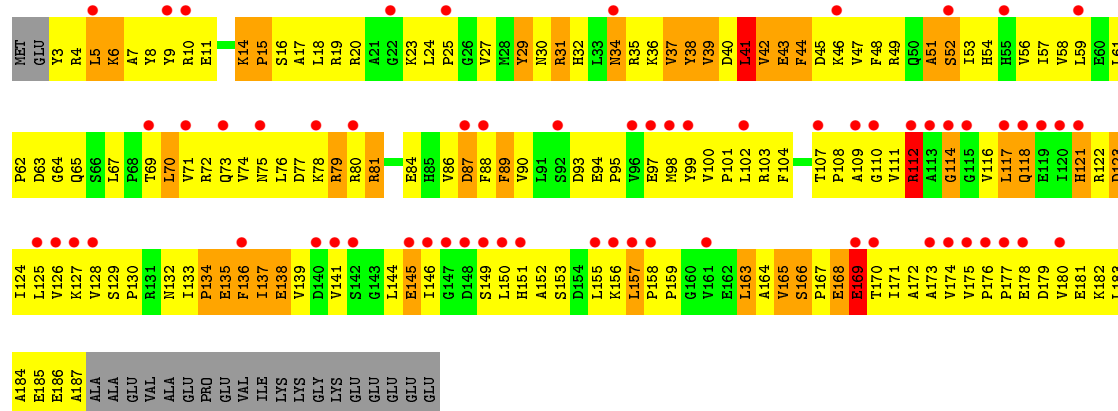
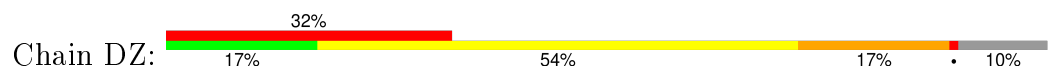
• Molecule 56: 50S RIBOSOMAL PROTEIN L24



• Molecule 57: 50S RIBOSOMAL PROTEIN L25



• Molecule 57: 50S RIBOSOMAL PROTEIN L25



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	211.90Å 450.79Å 625.61Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 3.10 49.95 – 3.10	Depositor EDS
% Data completeness (in resolution range)	98.1 (50.00-3.10) 97.6 (49.95-3.10)	Depositor EDS
R_{merge}	0.02	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.63 (at 3.12Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.250 , 0.280 0.274 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	DCC
Wilson B-factor (Å ²)	71.3	Xtriage
Anisotropy	0.237	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.29 , 92.1	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.42$, $\langle L^2 \rangle = 0.25$	Xtriage
Outliers	0 of 1045150 reflections	Xtriage
F_o, F_c correlation	0.88	EDS
Total number of atoms	298096	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 1.48% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.375 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: ZN, AG9

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	0.44	0/36190	0.70	7/56486 (0.0%)
1	CA	0.42	0/36190	0.70	7/56486 (0.0%)
2	AB	0.30	0/1936	0.58	0/2611
2	CB	0.31	0/1936	0.58	0/2611
3	AC	0.31	0/1637	0.56	0/2207
3	CC	0.31	0/1637	0.56	0/2207
4	AD	0.37	0/1733	0.61	0/2318
4	CD	0.36	0/1733	0.60	0/2318
5	AE	0.36	0/1163	0.62	0/1566
5	CE	0.36	0/1163	0.63	0/1566
6	AF	0.34	0/856	0.59	0/1154
6	CF	0.34	0/856	0.59	0/1154
7	AG	0.29	0/1276	0.52	0/1709
7	CG	0.30	0/1276	0.52	0/1709
8	AH	0.32	0/1136	0.60	0/1527
8	CH	0.33	0/1136	0.60	0/1527
9	AI	0.31	0/1027	0.54	0/1373
9	CI	0.31	0/1027	0.55	0/1373
10	AJ	0.33	0/808	0.58	0/1087
10	CJ	0.33	0/808	0.57	0/1087
11	AK	0.33	0/900	0.60	0/1213
11	CK	0.33	0/900	0.60	0/1213
12	AL	0.46	0/987	0.79	0/1322
12	CL	0.43	0/987	0.78	0/1322
13	AM	0.32	0/943	0.61	0/1256
13	CM	0.33	0/943	0.61	0/1256
14	AN	0.31	0/501	0.51	0/664
14	CN	0.33	0/501	0.51	0/664
15	AO	0.33	0/745	0.58	0/992
15	CO	0.35	0/745	0.58	0/992
16	AP	0.38	0/717	0.61	0/965
16	CP	0.37	0/717	0.60	0/965

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.39	0/837	0.63	0/1119
17	CQ	0.37	0/837	0.62	0/1119
18	AR	0.33	0/579	0.64	0/768
18	CR	0.32	0/579	0.64	0/768
19	AS	0.36	0/643	0.58	0/867
19	CS	0.37	0/643	0.58	0/867
20	AT	0.32	0/765	0.54	0/1007
20	CT	0.31	0/765	0.54	0/1007
21	AU	0.42	0/213	0.53	0/279
21	CU	0.43	0/213	0.53	0/279
22	AV	1.84	39/1830 (2.1%)	0.95	3/2849 (0.1%)
22	AY	1.92	52/1830 (2.8%)	0.98	2/2849 (0.1%)
22	CV	0.88	0/1830	0.88	3/2849 (0.1%)
22	CY	1.56	22/1830 (1.2%)	1.25	27/2849 (0.9%)
23	AW	2.12	62/1853 (3.3%)	1.06	9/2887 (0.3%)
23	CW	0.83	0/1853	0.99	8/2887 (0.3%)
24	AX	0.55	0/290	0.83	0/450
24	CX	0.81	0/290	0.81	0/450
25	B0	0.42	0/671	0.62	0/892
25	D0	0.38	0/671	0.62	0/892
26	B1	0.48	0/741	0.78	2/986 (0.2%)
26	D1	0.44	0/741	0.76	0/986
27	B2	0.43	0/600	0.74	0/793
27	D2	0.34	0/600	0.59	0/793
28	B3	0.43	0/473	0.66	1/636 (0.2%)
28	D3	0.40	0/473	0.67	0/636
29	B4	0.38	0/461	0.64	0/623
29	D4	0.38	0/461	0.64	0/623
30	B5	0.56	0/442	0.73	0/598
30	D5	0.48	0/442	0.72	0/598
31	B6	0.37	0/440	0.72	1/586 (0.2%)
31	D6	0.37	0/440	0.72	1/586 (0.2%)
32	B7	0.54	0/418	0.65	0/552
32	D7	0.51	0/418	0.66	0/552
33	B8	0.59	0/516	0.84	0/681
33	D8	0.52	0/516	0.84	0/681
34	B9	0.31	0/310	0.59	0/407
34	D9	0.32	0/310	0.58	0/407
35	BA	0.60	1/68704 (0.0%)	0.73	42/107260 (0.0%)
35	DA	0.51	0/68704	0.73	35/107260 (0.0%)
36	BB	0.41	0/2853	0.69	0/4451
36	DB	0.38	0/2853	0.69	0/4451
37	BC	0.30	0/956	0.53	0/1288

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
37	DC	0.31	0/956	0.53	0/1288
38	BD	0.50	0/2155	0.78	2/2907 (0.1%)
38	DD	0.46	0/2155	0.78	3/2907 (0.1%)
39	BE	0.50	0/1597	0.74	0/2155
39	DE	0.45	0/1597	0.74	0/2155
40	BF	0.46	0/1659	0.69	0/2246
40	DF	0.42	0/1659	0.68	0/2246
41	BG	0.35	0/1498	0.67	0/2013
41	DG	0.34	0/1498	0.67	0/2013
42	BH	0.36	0/1285	0.70	1/1741 (0.1%)
42	DH	0.37	0/1285	0.69	1/1741 (0.1%)
43	BI	0.36	0/1147	0.86	3/1553 (0.2%)
43	DI	0.35	0/1147	0.85	3/1553 (0.2%)
45	BN	0.43	0/1132	0.70	0/1527
45	DN	0.41	0/1132	0.69	0/1527
46	BO	0.46	0/943	0.67	0/1269
46	DO	0.45	0/943	0.69	0/1269
47	BP	0.47	0/1131	0.93	5/1504 (0.3%)
47	DP	0.42	0/1131	0.92	4/1504 (0.3%)
48	BQ	0.43	0/1134	0.59	0/1517
48	DQ	0.42	0/1134	0.59	0/1517
49	BR	0.45	0/974	0.78	2/1302 (0.2%)
49	DR	0.42	0/974	0.78	2/1302 (0.2%)
50	BS	0.36	0/779	0.63	0/1038
50	DS	0.36	0/779	0.64	0/1038
51	BT	0.44	0/1138	0.76	1/1521 (0.1%)
51	DT	0.44	0/1138	0.76	1/1521 (0.1%)
52	BU	0.50	0/975	0.69	0/1297
52	DU	0.45	0/975	0.67	0/1297
53	BV	0.40	0/790	0.70	0/1057
53	DV	0.38	0/790	0.69	0/1057
54	BW	0.52	0/907	0.73	0/1216
54	DW	0.45	0/907	0.73	0/1216
55	BX	0.46	0/740	0.69	0/995
55	DX	0.45	0/740	0.69	0/995
56	BY	0.46	0/789	0.72	1/1053 (0.1%)
56	DY	0.42	0/789	0.71	1/1053 (0.1%)
57	BZ	0.44	0/1500	0.68	0/2037
57	DZ	0.38	0/1500	0.64	0/2037
All	All	0.56	176/322506 (0.1%)	0.72	178/482452 (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	0	18
1	CA	0	19
22	AV	1	17
22	AY	1	19
22	CV	1	10
22	CY	1	17
23	AW	0	21
23	CW	0	11
35	BA	5	46
35	DA	4	41
All	All	13	219

All (176) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	CY	56	U	C2-N3	28.94	1.58	1.37
22	CY	57	U	C3'-O3'	17.68	1.67	1.42
22	CY	56	U	N3-C4	14.74	1.51	1.38
22	CY	56	U	N1-C2	13.32	1.50	1.38
22	CY	58	C	P-O5'	12.55	1.72	1.59
22	CY	57	U	O3'-P	11.55	1.75	1.61
22	CY	57	U	N1-C6	-11.24	1.27	1.38
23	AW	21	U	N1-C2	10.24	1.47	1.38
22	CY	56	U	N1-C6	9.85	1.46	1.38
22	CY	63	C	C4-C5	9.73	1.50	1.43
22	CY	60	A	C5-C6	-9.43	1.32	1.41
22	AY	72	C	C2-O2	9.37	1.32	1.24
23	AW	5	C	N1-C2	9.33	1.49	1.40
22	AV	4	C	N1-C2	9.23	1.49	1.40
22	AV	45	U	N1-C2	9.04	1.46	1.38
22	AY	74	C	N1-C2	8.93	1.49	1.40
22	AV	30	U	N1-C2	8.78	1.46	1.38
22	AV	21	U	N1-C2	8.68	1.46	1.38
23	AW	30	U	N1-C2	8.50	1.46	1.38
23	AW	21	U	N3-C4	8.42	1.46	1.38
22	CY	63	C	N1-C2	8.25	1.48	1.40
22	AY	76	C	N1-C2	8.16	1.48	1.40
22	AV	12	U	N1-C2	8.01	1.45	1.38
22	AV	74	C	N1-C2	7.86	1.48	1.40
22	AY	46	U	N1-C2	7.80	1.45	1.38
22	AV	16	U	N1-C6	7.72	1.45	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	AY	3	G	C2-N3	7.72	1.39	1.32
22	CY	60	A	C6-N6	-7.61	1.27	1.33
22	CY	57	U	N1-C2	7.53	1.45	1.38
23	AW	70	G	C2-N2	7.51	1.42	1.34
22	AY	13	U	N1-C2	7.45	1.45	1.38
22	AY	16	U	N3-C4	7.42	1.45	1.38
22	AV	6	C	N1-C2	7.38	1.47	1.40
22	AY	52	C	N1-C2	7.38	1.47	1.40
23	AW	12	U	C4-C5	7.31	1.50	1.43
22	AY	3	G	N9-C4	7.31	1.43	1.38
23	AW	46	U	N1-C2	7.29	1.45	1.38
22	CY	58	C	C5'-C4'	7.28	1.60	1.51
23	AW	16	U	N1-C6	7.23	1.44	1.38
23	AW	58	C	N1-C2	7.23	1.47	1.40
22	AY	12	U	N3-C4	7.19	1.45	1.38
22	AY	68	A	C2-N3	7.13	1.40	1.33
23	AW	13	U	N3-C4	7.11	1.44	1.38
23	AW	11	C	N1-C2	7.07	1.47	1.40
22	AV	11	C	C4-C5	7.07	1.48	1.43
23	AW	7	U	N1-C6	7.00	1.44	1.38
22	AY	12	U	C2-N3	6.94	1.42	1.37
22	AY	7	U	N1-C2	6.93	1.44	1.38
22	AY	69	G	C2-N2	6.88	1.41	1.34
22	AV	46	U	N1-C2	6.80	1.44	1.38
22	AV	21	U	C2-O2	6.76	1.28	1.22
22	AY	12	U	N1-C6	6.74	1.44	1.38
22	AV	26	G	C2-N2	6.74	1.41	1.34
22	AV	50	C	N1-C2	6.74	1.46	1.40
22	CY	56	U	C4-O4	6.67	1.28	1.23
22	AY	16	U	C4-C5	6.65	1.49	1.43
23	AW	12	U	N1-C2	6.63	1.44	1.38
23	AW	1	G	C6-O6	6.60	1.30	1.24
22	AY	72	C	N1-C2	6.56	1.46	1.40
23	AW	13	U	C4-C5	6.55	1.49	1.43
23	AW	59	G	C2-N2	6.52	1.41	1.34
22	AY	69	G	C2-N3	6.42	1.37	1.32
22	AV	16	U	N3-C4	6.42	1.44	1.38
22	AY	30	U	N1-C2	6.35	1.44	1.38
22	AV	7	U	C4-C5	6.33	1.49	1.43
22	AV	21	U	N3-C4	6.33	1.44	1.38
22	CY	63	C	C4-N4	6.33	1.39	1.33
23	AW	7	U	N1-C2	6.31	1.44	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	AV	16	U	C4-C5	6.31	1.49	1.43
23	AW	71	G	C2-N3	6.28	1.37	1.32
23	AW	36	C	N1-C2	6.27	1.46	1.40
22	AY	7	U	N1-C6	6.26	1.43	1.38
22	AY	21	U	N1-C2	6.22	1.44	1.38
22	AY	25	A	C5-C6	6.21	1.46	1.41
23	AW	1	G	C2-N3	6.21	1.37	1.32
22	AV	16	U	N1-C2	6.21	1.44	1.38
23	AW	53	U	N1-C2	6.19	1.44	1.38
23	AW	52	C	N1-C2	6.15	1.46	1.40
22	AY	31	C	C4-C5	6.15	1.47	1.43
22	AY	31	C	C2-N3	6.13	1.40	1.35
22	CY	56	U	C4'-O4'	6.13	1.53	1.45
22	AV	1	G	C2-N3	6.11	1.37	1.32
22	AV	1	G	C6-O6	6.11	1.29	1.24
23	AW	53	U	C2-O2	6.11	1.27	1.22
22	AV	52	C	N1-C2	6.08	1.46	1.40
23	AW	26	G	N1-C2	6.05	1.42	1.37
23	AW	13	U	C2-O2	6.02	1.27	1.22
22	AY	3	G	C5-C4	6.01	1.42	1.38
23	AW	63	C	P-OP2	6.01	1.59	1.49
23	AW	12	U	N1-C6	5.98	1.43	1.38
22	CY	62	U	N1-C2	5.97	1.44	1.38
22	AV	72	C	N1-C2	5.96	1.46	1.40
22	AV	46	U	N1-C6	5.93	1.43	1.38
22	AV	1	G	C5-C6	5.92	1.48	1.42
22	AV	52	C	C2-O2	5.91	1.29	1.24
22	AY	44	A	C5-C4	5.87	1.42	1.38
23	AW	4	C	N1-C2	5.86	1.46	1.40
22	AV	49	G	C6-O6	5.85	1.29	1.24
23	AW	13	U	C2-N3	5.84	1.41	1.37
22	AY	12	U	N1-C2	5.84	1.43	1.38
23	AW	1	G	N9-C4	5.82	1.42	1.38
22	AY	13	U	N1-C6	5.81	1.43	1.38
22	CY	57	U	C3'-C2'	5.80	1.59	1.52
23	AW	13	U	N1-C6	5.80	1.43	1.38
23	AW	58	C	C2-N3	5.80	1.40	1.35
22	AY	53	U	C2-O2	5.78	1.27	1.22
22	CY	63	C	O4'-C1'	5.78	1.49	1.41
23	AW	53	U	N1-C6	5.75	1.43	1.38
23	AW	59	G	C6-O6	5.75	1.29	1.24
22	AV	49	G	C2-N2	5.74	1.40	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	AY	74	C	C2-O2	5.73	1.29	1.24
22	AY	3	G	C2-N2	5.73	1.40	1.34
22	AY	44	A	N9-C8	5.72	1.42	1.37
22	AY	12	U	C2-O2	5.71	1.27	1.22
22	AY	53	U	N1-C2	5.69	1.43	1.38
22	AY	11	C	N1-C2	5.66	1.45	1.40
35	BA	2506	U	N1-C2	5.66	1.43	1.38
23	AW	21	U	C4-O4	5.65	1.28	1.23
22	AY	74	C	C4-C5	5.61	1.47	1.43
22	AY	45	U	N1-C2	5.61	1.43	1.38
22	AY	74	C	C4-N4	5.59	1.39	1.33
23	AW	59	G	N1-C2	5.58	1.42	1.37
22	AV	71	G	C5-C6	5.58	1.48	1.42
22	AV	21	U	C4-C5	5.57	1.48	1.43
22	AV	72	C	C2-O2	5.56	1.29	1.24
22	AY	6	C	N1-C2	5.55	1.45	1.40
23	AW	29	A	C2-N3	5.52	1.38	1.33
23	AW	76	C	N1-C2	5.52	1.45	1.40
22	AV	11	C	C5-C6	5.50	1.38	1.34
23	AW	52	C	C4-C5	5.50	1.47	1.43
22	AY	7	U	C2-N3	5.49	1.41	1.37
22	AV	76	C	N1-C2	5.48	1.45	1.40
23	AW	16	U	N1-C2	5.48	1.43	1.38
23	AW	53	U	C4-C5	5.48	1.48	1.43
23	AW	58	C	C2-O2	5.47	1.29	1.24
23	AW	5	C	N3-C4	5.47	1.37	1.33
23	AW	44	A	C2-N3	5.47	1.38	1.33
22	AY	21	U	N3-C4	5.47	1.43	1.38
23	AW	34	C	N1-C2	5.46	1.45	1.40
22	AY	7	U	C2-O2	5.46	1.27	1.22
23	AW	71	G	C2-N2	5.43	1.40	1.34
22	AY	21	U	N1-C6	5.42	1.42	1.38
23	AW	1	G	C5-C6	5.41	1.47	1.42
23	AW	11	C	C2-O2	5.39	1.29	1.24
23	AW	46	U	N3-C4	5.39	1.43	1.38
23	AW	70	G	N1-C2	5.36	1.42	1.37
23	AW	21	U	C2-O2	5.34	1.27	1.22
22	AV	1	G	C5-C4	5.32	1.42	1.38
22	AV	45	U	C2-O2	5.31	1.27	1.22
23	AW	25	A	C2-N3	5.30	1.38	1.33
22	AV	74	C	C2-O2	5.27	1.29	1.24
22	AY	29	A	C5-C4	5.26	1.42	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	AY	30	U	P-OP2	5.23	1.57	1.49
23	AW	24	A	C2-N3	5.21	1.38	1.33
22	AY	21	U	C4-C5	5.21	1.48	1.43
22	AV	5	C	N1-C2	5.20	1.45	1.40
23	AW	69	G	N9-C4	5.20	1.42	1.38
22	AV	59	G	C2-N3	5.18	1.36	1.32
22	AY	13	U	C2-O2	5.18	1.27	1.22
23	AW	16	U	C4-C5	5.17	1.48	1.43
22	CY	56	U	C2-O2	-5.17	1.17	1.22
22	AY	59	G	C6-O6	5.14	1.28	1.24
22	AY	71	G	C2-N2	5.14	1.39	1.34
23	AW	49	G	C2-N2	5.13	1.39	1.34
22	AV	58	C	C4-C5	5.13	1.47	1.43
23	AW	31	C	C4-C5	5.13	1.47	1.43
23	AW	59	G	C2-N3	5.10	1.36	1.32
22	AY	30	U	N1-C6	5.09	1.42	1.38
23	AW	63	C	P-OP1	5.08	1.57	1.49
23	AW	16	U	C2-N3	5.08	1.41	1.37
23	AW	6	C	C4-C5	5.06	1.47	1.43
23	AW	44	A	N9-C8	5.03	1.41	1.37
22	AY	13	U	N3-C4	5.02	1.43	1.38
22	AY	74	C	N3-C4	5.02	1.37	1.33
22	AV	46	U	C2-O2	5.01	1.26	1.22
22	CY	57	U	N3-C4	5.00	1.43	1.38

All (178) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	CY	56	U	C5-C6-N1	16.14	130.77	122.70
43	BI	50	ARG	NE-CZ-NH1	13.96	127.28	120.30
43	BI	50	ARG	NE-CZ-NH2	-13.50	113.55	120.30
43	DI	50	ARG	NE-CZ-NH2	-13.46	113.57	120.30
43	DI	50	ARG	NE-CZ-NH1	13.32	126.96	120.30
22	CY	56	U	O5'-P-OP1	-12.97	94.02	105.70
22	CY	56	U	N1-C2-O2	12.74	131.72	122.80
35	BA	2360	A	N9-C1'-C2'	-10.61	100.21	114.00
22	CY	56	U	C6-N1-C2	-10.04	114.97	121.00
35	BA	1992	G	C2'-C3'-O3'	10.03	131.57	109.50
35	DA	2360	A	N9-C1'-C2'	-9.98	101.02	112.00
35	DA	1992	G	C2'-C3'-O3'	9.96	131.42	109.50
23	CW	71	G	N9-C1'-C2'	-9.88	101.13	112.00
22	CY	63	C	N1-C1'-C2'	9.63	126.52	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	DA	331	A	C2'-C3'-O3'	9.63	130.68	109.50
35	BA	790	C	C2'-C3'-O3'	9.48	130.36	109.50
35	BA	331	A	C2'-C3'-O3'	9.42	130.23	109.50
35	DA	1786	A	N9-C1'-C2'	9.42	126.24	114.00
35	BA	1786	A	N9-C1'-C2'	9.30	126.09	114.00
23	AW	71	G	N9-C1'-C2'	-9.27	101.80	112.00
35	DA	1799	G	C2'-C3'-O3'	9.14	129.62	109.50
35	DA	790	C	C2'-C3'-O3'	9.03	129.38	109.50
35	BA	1653	G	C2'-C3'-O3'	8.97	129.24	109.50
35	BA	1799	G	C2'-C3'-O3'	8.85	128.98	109.50
22	CY	56	U	C5-C4-O4	8.85	131.21	125.90
35	BA	752	A	C2'-C3'-O3'	8.80	128.87	109.50
35	DA	752	A	C2'-C3'-O3'	8.72	128.69	109.50
35	DA	1653	G	C2'-C3'-O3'	8.61	128.44	109.50
1	AA	575	G	C2'-C3'-O3'	8.55	128.31	109.50
35	BA	1022	G	C2'-C3'-O3'	8.32	127.80	109.50
1	CA	575	G	C2'-C3'-O3'	8.18	127.49	109.50
35	BA	1820	U	C2'-C3'-O3'	8.02	127.13	109.50
35	DA	1820	U	C2'-C3'-O3'	7.97	127.04	109.50
47	DP	52	GLU	N-CA-C	7.96	132.50	111.00
23	CW	20	G	N9-C1'-C2'	7.96	124.35	114.00
35	DA	1022	G	C2'-C3'-O3'	7.93	126.95	109.50
47	BP	52	GLU	N-CA-C	7.91	132.35	111.00
35	DA	1652	A	C2'-C3'-O3'	7.90	126.87	109.50
22	CY	56	U	N3-C2-O2	-7.83	116.72	122.20
35	BA	1819	A	C2'-C3'-O3'	7.83	126.72	109.50
23	AW	20	G	N9-C1'-C2'	7.77	124.09	114.00
35	BA	1652	A	C2'-C3'-O3'	7.68	126.41	109.50
35	DA	1819	A	C2'-C3'-O3'	7.57	126.15	109.50
22	CY	58	C	P-O5'-C5'	7.44	132.80	120.90
47	BP	53	GLY	N-CA-C	-7.23	95.03	113.10
47	DP	53	GLY	N-CA-C	-7.16	95.19	113.10
22	CV	70	G	N9-C1'-C2'	-7.15	104.14	112.00
22	CY	56	U	C1'-O4'-C4'	7.10	115.58	109.90
1	AA	1067	A	C2'-C3'-O3'	7.03	124.96	109.50
1	CA	428	G	C2'-C3'-O3'	7.02	124.94	109.50
35	BA	49	A	C2'-C3'-O3'	7.01	124.92	109.50
1	CA	1067	A	C2'-C3'-O3'	6.94	124.80	113.70
43	DI	50	ARG	CD-NE-CZ	6.92	133.28	123.60
43	BI	50	ARG	CD-NE-CZ	6.90	133.26	123.60
1	AA	428	G	C2'-C3'-O3'	6.89	124.73	113.70
22	CY	56	U	N3-C4-C5	-6.87	110.48	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	115	G	C2'-C3'-O3'	6.81	124.60	113.70
26	B1	46	LEU	CA-CB-CG	6.81	130.97	115.30
1	CA	328	C	C2'-C3'-O3'	6.80	124.58	113.70
35	BA	272(B)	G	O4'-C1'-N9	6.77	113.62	108.20
1	CA	115	G	C2'-C3'-O3'	6.74	124.49	113.70
35	DA	272(B)	G	O4'-C1'-N9	6.63	113.51	108.20
22	AV	20	G	N9-C1'-C2'	6.58	122.55	114.00
35	BA	2225	A	C2'-C3'-O3'	6.52	124.13	113.70
22	CV	1	G	N9-C1'-C2'	6.47	122.42	114.00
35	DA	49	A	C2'-C3'-O3'	6.39	123.92	113.70
22	AV	70	G	N9-C1'-C2'	-6.37	104.99	112.00
22	CV	20	G	N9-C1'-C2'	6.33	122.23	114.00
22	CY	56	U	N1-C2-N3	-6.30	111.12	114.90
1	AA	328	C	C2'-C3'-O3'	6.25	123.70	113.70
35	DA	1970	A	C5'-C4'-O4'	6.25	116.60	109.10
47	BP	58	THR	N-CA-C	-6.24	94.16	111.00
35	DA	2603	G	N9-C1'-C2'	-6.23	105.15	112.00
22	CY	62	U	O4'-C1'-N1	6.22	113.18	108.20
22	CY	58	C	C5'-C4'-C3'	6.20	125.92	116.00
23	CW	40	A	C5'-C4'-O4'	6.20	116.54	109.10
35	BA	1970	A	C5'-C4'-O4'	6.10	116.42	109.10
35	DA	2225	A	C2'-C3'-O3'	6.08	123.43	113.70
47	DP	58	THR	N-CA-C	-6.06	94.63	111.00
56	DY	7	VAL	N-CA-C	5.92	126.99	111.00
22	CY	56	U	O4'-C4'-C3'	-5.91	98.09	104.00
22	CY	57	U	C4'-C3'-O3'	5.89	124.78	113.00
35	DA	2611	U	C5'-C4'-O4'	-5.88	102.05	109.10
22	CY	60	A	C5-C6-N6	-5.83	119.03	123.70
23	CW	7	U	N1-C1'-C2'	5.82	121.57	114.00
56	BY	7	VAL	N-CA-C	5.81	126.69	111.00
35	BA	387	U	C2'-C3'-O3'	5.78	122.95	113.70
26	B1	61	ARG	N-CA-C	-5.77	95.42	111.00
23	AW	42	C	C5'-C4'-C3'	-5.76	106.78	116.00
22	AY	25	A	N9-C1'-C2'	5.74	121.46	114.00
22	AV	26	G	C5'-C4'-C3'	-5.71	106.86	116.00
49	BR	58	GLY	N-CA-C	5.70	127.35	113.10
49	DR	58	GLY	N-CA-C	5.69	127.33	113.10
47	BP	54	GLY	N-CA-C	-5.68	98.89	113.10
35	BA	1970	A	C5'-C4'-C3'	5.68	125.09	116.00
35	BA	752	A	C4'-C3'-O3'	5.66	124.31	113.00
35	DA	1819	A	C4'-C3'-O3'	5.65	124.30	113.00
35	BA	2611	U	C5'-C4'-O4'	-5.65	102.32	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	DA	272(B)	G	C5'-C4'-C3'	5.64	125.03	116.00
23	CW	41	C	N1-C1'-C2'	5.64	121.33	114.00
35	BA	2603	G	N9-C1'-C2'	-5.62	105.82	112.00
35	DA	2603	G	C5'-C4'-O4'	5.62	115.85	109.10
23	AW	40	A	OP1-P-O3'	5.60	117.53	105.20
22	CY	57	U	C5-C6-N1	5.59	125.49	122.70
22	CY	23	A	N9-C1'-C2'	-5.57	105.87	112.00
35	BA	1820	U	C4'-C3'-O3'	5.57	124.13	113.00
35	DA	272	G	C2'-C3'-O3'	5.55	122.58	113.70
23	AW	40	A	C5'-C4'-O4'	5.55	115.76	109.10
47	DP	54	GLY	N-CA-C	-5.54	99.25	113.10
35	DA	74	A	C2'-C3'-O3'	5.54	122.56	113.70
1	CA	366	C	N1-C1'-C2'	5.53	121.19	114.00
35	BA	1053	C	N1-C1'-C2'	5.51	121.17	114.00
35	BA	272	G	C2'-C3'-O3'	5.51	122.52	113.70
35	DA	1053	C	N1-C1'-C2'	5.50	121.15	114.00
35	BA	1799	G	C4'-C3'-O3'	5.49	123.99	113.00
35	BA	272(B)	G	C5'-C4'-C3'	5.48	124.76	116.00
22	CY	56	U	C5'-C4'-O4'	-5.45	102.56	109.10
35	BA	1365	A	C5'-C4'-C3'	5.45	124.72	116.00
35	DA	752	A	C4'-C3'-O3'	5.44	123.88	113.00
35	DA	2602	A	N9-C1'-C2'	5.42	121.04	114.00
22	CY	60	A	O4'-C1'-N9	-5.42	103.87	108.20
35	BA	74	A	C2'-C3'-O3'	5.39	122.33	113.70
38	DD	244	ARG	C-N-CD	-5.39	108.75	120.60
35	DA	673	C	C5'-C4'-O4'	-5.38	102.65	109.10
35	DA	1970	A	C5'-C4'-C3'	5.36	124.58	116.00
35	BA	1819	A	C4'-C3'-O3'	5.36	123.72	113.00
38	DD	210	GLY	N-CA-C	-5.35	99.73	113.10
38	BD	210	GLY	N-CA-C	-5.34	99.75	113.10
35	BA	673	C	C5'-C4'-O4'	-5.33	102.70	109.10
1	CA	484	G	N9-C1'-C2'	5.32	120.92	114.00
35	BA	2602	A	N9-C1'-C2'	5.32	120.91	114.00
35	DA	1365	A	C5'-C4'-C3'	5.32	124.50	116.00
35	BA	1155	A	C5'-C4'-O4'	-5.30	102.75	109.10
35	DA	1820	U	C4'-C3'-O3'	5.29	123.58	113.00
49	DR	4	LEU	CA-CB-CG	5.29	127.45	115.30
38	BD	41	GLY	N-CA-C	-5.26	99.94	113.10
35	BA	494	G	C5'-C4'-C3'	-5.25	107.59	116.00
35	BA	587	C	OP2-P-O3'	5.25	116.74	105.20
31	B6	9	LEU	CA-CB-CG	5.24	127.34	115.30
35	DA	783	A	N9-C1'-C2'	-5.23	106.25	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	DA	2521	C	C5'-C4'-C3'	-5.22	107.64	116.00
35	BA	1819	A	C4'-C3'-C2'	5.22	107.82	102.60
35	BA	1970	A	C1'-O4'-C4'	-5.22	105.72	109.90
23	CW	7	U	C2'-C3'-O3'	5.22	122.05	113.70
49	BR	4	LEU	CA-CB-CG	5.21	127.29	115.30
35	DA	1970	A	C1'-O4'-C4'	-5.20	105.74	109.90
22	CY	56	U	O4'-C1'-N1	5.19	112.36	108.20
23	AW	41	C	N1-C1'-C2'	5.19	120.75	114.00
51	BT	29	ARG	N-CA-C	5.16	124.94	111.00
23	AW	7	U	C2'-C3'-O3'	5.15	121.95	113.70
38	DD	41	GLY	N-CA-C	-5.15	100.21	113.10
1	AA	1498	U	N1-C1'-C2'	5.15	120.70	114.00
35	BA	1781	C	N1-C1'-C2'	5.14	120.69	114.00
42	BH	158	HIS	N-CA-C	5.14	124.87	111.00
23	CW	40	A	C2'-C3'-O3'	5.13	121.90	113.70
22	AY	25	A	O4'-C1'-N9	5.12	112.30	108.20
31	D6	9	LEU	CA-CB-CG	5.12	127.07	115.30
42	DH	158	HIS	N-CA-C	5.12	124.81	111.00
23	AW	7	U	N1-C1'-C2'	5.10	120.63	114.00
35	BA	1698	A	N9-C1'-C2'	5.09	120.62	114.00
23	CW	78	A	C2'-C3'-O3'	5.09	121.84	113.70
22	CY	57	U	N1-C1'-C2'	5.09	120.62	114.00
22	CY	25	A	N9-C1'-C2'	5.09	120.61	114.00
28	B3	8	LEU	CA-CB-CG	5.08	126.99	115.30
1	AA	484	G	N9-C1'-C2'	5.08	120.60	114.00
35	BA	1493	C	N1-C1'-C2'	5.07	120.59	114.00
22	CY	63	C	C5'-C4'-O4'	5.07	115.18	109.10
35	BA	945	A	N9-C1'-C2'	5.07	120.59	114.00
22	CY	60	A	N1-C6-N6	5.07	121.64	118.60
35	BA	2521	C	C5'-C4'-C3'	-5.06	107.90	116.00
35	DA	587	C	OP2-P-O3'	5.04	116.30	105.20
51	DT	29	ARG	N-CA-C	5.04	124.62	111.00
47	BP	59	LEU	CA-CB-CG	5.03	126.86	115.30
22	CY	63	C	O4'-C1'-N1	5.02	112.21	108.20
35	BA	1616	A	N9-C1'-C2'	5.01	120.52	114.00
22	CY	68	A	O4'-C1'-N9	-5.01	104.19	108.20
35	DA	1820	U	C4'-C3'-C2'	5.01	107.61	102.60
23	AW	43	G	C5'-C4'-O4'	5.01	115.11	109.10

All (13) chirality outliers are listed below:

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Mol	Chain	Res	Type	Atom
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Mol	Chain	Res	Type	Atom
22	AV	36	AG9	C4
22	AY	36	AG9	C4
35	BA	752	A	C3'
35	BA	790	C	C3'
35	BA	1799	G	C3'
35	BA	1819	A	C3'
35	BA	1820	U	C3'
22	CV	36	AG9	C4
22	CY	36	AG9	C4
35	DA	752	A	C3'
35	DA	790	C	C3'
35	DA	1799	G	C3'
35	DA	1820	U	C3'

All (219) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1054	C	Sidechain
1	AA	1077	G	Sidechain
1	AA	1196	U	Sidechain
1	AA	1408	A	Sidechain
1	AA	1414	U	Sidechain
1	AA	1493	A	Sidechain
1	AA	1498	U	Sidechain
1	AA	265	G	Sidechain
1	AA	292	G	Sidechain
1	AA	387	U	Sidechain
1	AA	436	C	Sidechain
1	AA	484	G	Sidechain
1	AA	494	U	Sidechain
1	AA	587	G	Sidechain
1	AA	697	U	Sidechain
1	AA	832	C	Sidechain
1	AA	898	G	Sidechain
1	AA	97	G	Sidechain
22	AV	1	G	Sidechain
22	AV	20	G	Sidechain
22	AV	23	A	Sidechain
22	AV	27	C	Sidechain
22	AV	30	U	Sidechain
22	AV	44	A	Sidechain

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Mol	Chain	Res	Type	Group
22	AV	46	U	Sidechain
22	AV	52	C	Sidechain
22	AV	53	U	Sidechain
22	AV	58	C	Sidechain
22	AV	6	C	Sidechain
22	AV	61	A	Sidechain
22	AV	62	U	Sidechain
22	AV	68	A	Sidechain
22	AV	70	G	Sidechain
22	AV	71	G	Sidechain
22	AV	9	A	Sidechain
23	AW	10	G	Sidechain
23	AW	12	U	Sidechain
23	AW	13	U	Sidechain
23	AW	14	A	Sidechain
23	AW	15	G	Sidechain
23	AW	20	G	Sidechain
23	AW	27	C	Sidechain
23	AW	3	G	Sidechain
23	AW	35	U	Sidechain
23	AW	37	A	Sidechain
23	AW	43	G	Sidechain
23	AW	44	A	Sidechain
23	AW	5	C	Sidechain
23	AW	57	U	Sidechain
23	AW	61	A	Sidechain
23	AW	62	U	Sidechain
23	AW	68	A	Sidechain
23	AW	69	G	Sidechain
23	AW	7	U	Sidechain
23	AW	71	G	Sidechain
23	AW	8	U	Sidechain
22	AY	10	G	Sidechain
22	AY	11	C	Sidechain
22	AY	13	U	Sidechain
22	AY	16	U	Sidechain
22	AY	20	G	Sidechain
22	AY	23	A	Sidechain
22	AY	25	A	Sidechain
22	AY	26	G	Sidechain
22	AY	29	A	Sidechain
22	AY	47	G	Sidechain

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Mol	Chain	Res	Type	Group
22	AY	48	G	Sidechain
22	AY	5	C	Sidechain
22	AY	52	C	Sidechain
22	AY	68	A	Sidechain
22	AY	69	G	Sidechain
22	AY	70	G	Sidechain
22	AY	71	G	Sidechain
22	AY	72	C	Sidechain
22	AY	77	C	Sidechain
35	BA	1025	G	Sidechain
35	BA	1040	C	Sidechain
35	BA	1142	U	Sidechain
35	BA	125	G	Sidechain
35	BA	1300	U	Sidechain
35	BA	1379	A	Sidechain
35	BA	15	G	Sidechain
35	BA	1621	U	Sidechain
35	BA	1642	G	Sidechain
35	BA	1693	U	Sidechain
35	BA	1772	G	Sidechain
35	BA	1779	U	Sidechain
35	BA	178	G	Sidechain
35	BA	1940	U	Sidechain
35	BA	1952	A	Sidechain
35	BA	1955	U	Sidechain
35	BA	1992	G	Sidechain
35	BA	2010	G	Sidechain
35	BA	2050	C	Sidechain
35	BA	2053	G	Sidechain
35	BA	2059	A	Sidechain
35	BA	2360	A	Sidechain
35	BA	2447	G	Sidechain
35	BA	2464	C	Sidechain
35	BA	250	G	Sidechain
35	BA	2500	U	Sidechain
35	BA	2524	G	Sidechain
35	BA	2525	G	Sidechain
35	BA	2542	A	Sidechain
35	BA	2578	G	Sidechain
35	BA	2581	G	Sidechain
35	BA	2582	G	Sidechain
35	BA	2596	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	2603	G	Sidechain
35	BA	2665	A	Sidechain
35	BA	271(Q)	G	Sidechain
35	BA	2712	U	Sidechain
35	BA	463	G	Sidechain
35	BA	472	A	Sidechain
35	BA	607	U	Sidechain
35	BA	642	G	Sidechain
35	BA	670	A	Sidechain
35	BA	686	G	Sidechain
35	BA	743	G	Sidechain
35	BA	807	U	Sidechain
35	BA	959	A	Sidechain
1	CA	1054	C	Sidechain
1	CA	1077	G	Sidechain
1	CA	1196	U	Sidechain
1	CA	1403	C	Sidechain
1	CA	1420	C	Sidechain
1	CA	1458	G	Sidechain
1	CA	1493	A	Sidechain
1	CA	1494	G	Sidechain
1	CA	1528	U	Sidechain
1	CA	265	G	Sidechain
1	CA	436	C	Sidechain
1	CA	494	U	Sidechain
1	CA	587	G	Sidechain
1	CA	619	U	Sidechain
1	CA	692	U	Sidechain
1	CA	697	U	Sidechain
1	CA	832	C	Sidechain
1	CA	898	G	Sidechain
1	CA	97	G	Sidechain
22	CV	1	G	Sidechain
22	CV	20	G	Sidechain
22	CV	33	G	Sidechain
22	CV	39	A	Sidechain
22	CV	46	U	Sidechain
22	CV	52	C	Sidechain
22	CV	53	U	Sidechain
22	CV	6	C	Sidechain
22	CV	61	A	Sidechain
22	CV	70	G	Sidechain

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Mol	Chain	Res	Type	Group
23	CW	12	U	Sidechain
23	CW	13	U	Sidechain
23	CW	15	G	Sidechain
23	CW	20	G	Sidechain
23	CW	27	C	Sidechain
23	CW	35	U	Sidechain
23	CW	37	A	Sidechain
23	CW	57	U	Sidechain
23	CW	62	U	Sidechain
23	CW	69	G	Sidechain
23	CW	7	U	Sidechain
22	CY	10	G	Sidechain
22	CY	13	U	Sidechain
22	CY	16	U	Sidechain
22	CY	19	G	Sidechain
22	CY	20	G	Sidechain
22	CY	26	G	Sidechain
22	CY	29	A	Sidechain
22	CY	48	G	Sidechain
22	CY	5	C	Sidechain
22	CY	56	U	Sidechain
22	CY	57	U	Sidechain
22	CY	58	C	Sidechain
22	CY	60	A	Sidechain
22	CY	63	C	Sidechain
22	CY	69	G	Sidechain
22	CY	71	G	Sidechain
22	CY	72	C	Sidechain
35	DA	1142	U	Sidechain
35	DA	1300	U	Sidechain
35	DA	1379	A	Sidechain
35	DA	15	G	Sidechain
35	DA	1642	G	Sidechain
35	DA	1693	U	Sidechain
35	DA	1772	G	Sidechain
35	DA	1775	U	Sidechain
35	DA	1779	U	Sidechain
35	DA	178	G	Sidechain
35	DA	1940	U	Sidechain
35	DA	1952	A	Sidechain
35	DA	1955	U	Sidechain
35	DA	1992	G	Sidechain

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Mol	Chain	Res	Type	Group
35	DA	2009	G	Sidechain
35	DA	2010	G	Sidechain
35	DA	2059	A	Sidechain
35	DA	2336	A	Sidechain
35	DA	2360	A	Sidechain
35	DA	2447	G	Sidechain
35	DA	2464	C	Sidechain
35	DA	250	G	Sidechain
35	DA	2542	A	Sidechain
35	DA	2581	G	Sidechain
35	DA	2582	G	Sidechain
35	DA	2596	U	Sidechain
35	DA	2665	A	Sidechain
35	DA	271(Q)	G	Sidechain
35	DA	2712	U	Sidechain
35	DA	272(B)	G	Sidechain
35	DA	463	G	Sidechain
35	DA	472	A	Sidechain
35	DA	642	G	Sidechain
35	DA	670	A	Sidechain
35	DA	686	G	Sidechain
35	DA	688	U	Sidechain
35	DA	757	U	Sidechain
35	DA	760	G	Sidechain
35	DA	807	U	Sidechain
35	DA	938	G	Sidechain
35	DA	959	A	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32329	0	16318	1333	0
1	CA	32329	0	16318	1413	0
2	AB	1901	0	1951	265	0
2	CB	1901	0	1951	274	0
3	AC	1613	0	1677	225	0
3	CC	1613	0	1677	239	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	AD	1703	0	1765	227	1
4	CD	1703	0	1766	223	0
5	AE	1147	0	1207	149	0
5	CE	1147	0	1207	155	0
6	AF	843	0	857	81	0
6	CF	843	0	857	81	1
7	AG	1257	0	1296	124	0
7	CG	1257	0	1296	123	0
8	AH	1116	0	1177	123	0
8	CH	1116	0	1177	126	0
9	AI	1010	0	1035	154	0
9	CI	1010	0	1035	159	0
10	AJ	795	0	840	181	0
10	CJ	795	0	840	178	0
11	AK	885	0	904	85	0
11	CK	885	0	904	85	0
12	AL	971	0	1057	215	0
12	CL	971	0	1057	213	0
13	AM	938	0	991	131	0
13	CM	938	0	991	131	0
14	AN	492	0	531	47	0
14	CN	492	0	532	52	0
15	AO	734	0	771	57	0
15	CO	734	0	771	62	0
16	AP	701	0	720	83	0
16	CP	701	0	720	82	0
17	AQ	824	0	891	83	0
17	CQ	824	0	891	79	0
18	AR	574	0	644	72	0
18	CR	574	0	644	73	0
19	AS	630	0	652	87	0
19	CS	630	0	652	79	0
20	AT	763	0	861	90	0
20	CT	763	0	861	85	0
21	AU	209	0	221	22	0
21	CU	209	0	221	24	0
22	AV	1667	0	857	264	0
22	AY	1667	0	857	327	0
22	CV	1667	0	857	235	0
22	CY	1667	0	854	330	0
23	AW	1659	0	843	396	0
23	CW	1659	0	843	323	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
24	AX	257	0	132	12	0
24	CX	257	0	132	35	0
25	B0	662	0	688	69	0
25	D0	662	0	688	72	0
26	B1	734	0	808	71	0
26	D1	734	0	808	87	0
27	B2	598	0	653	72	0
27	D2	598	0	653	70	0
28	B3	468	0	523	35	0
28	D3	468	0	523	37	0
29	B4	451	0	449	97	0
29	D4	451	0	449	82	0
30	B5	428	0	445	73	0
30	D5	428	0	445	72	0
31	B6	433	0	461	85	0
31	D6	433	0	461	86	0
32	B7	410	0	454	23	0
32	D7	410	0	454	24	0
33	B8	508	0	576	110	0
33	D8	508	0	576	110	0
34	B9	307	0	338	28	0
34	D9	307	0	338	32	0
35	BA	61341	0	30928	1764	0
35	DA	61341	0	30928	1844	0
36	BB	2551	0	1295	93	0
36	DB	2551	0	1295	112	0
37	BC	937	0	957	113	0
37	DC	937	0	957	112	0
38	BD	2105	0	2182	267	0
38	DD	2105	0	2182	278	0
39	BE	1564	0	1629	236	0
39	DE	1564	0	1629	240	0
40	BF	1624	0	1677	169	0
40	DF	1624	0	1677	173	0
41	BG	1474	0	1534	248	0
41	DG	1474	0	1534	305	0
42	BH	1260	0	1326	154	0
42	DH	1260	0	1326	157	0
43	BI	1132	0	1218	204	0
43	DI	1132	0	1218	196	0
44	BJ	651	0	166	32	0
44	DJ	651	0	170	17	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
45	BN	1105	0	1180	145	0
45	DN	1105	0	1180	150	0
46	BO	933	0	996	116	0
46	DO	933	0	996	112	0
47	BP	1114	0	1187	284	0
47	DP	1114	0	1187	288	0
48	BQ	1113	0	1171	132	0
48	DQ	1113	0	1171	140	0
49	BR	960	0	1021	124	0
49	DR	960	0	1021	126	0
50	BS	771	0	832	153	0
50	DS	771	0	832	146	0
51	BT	1124	0	1181	251	0
51	DT	1124	0	1181	242	0
52	BU	958	0	1015	138	0
52	DU	958	0	1015	132	0
53	BV	779	0	852	151	0
53	DV	779	0	852	149	0
54	BW	896	0	953	70	0
54	DW	896	0	953	75	0
55	BX	726	0	778	52	0
55	DX	726	0	778	60	0
56	BY	776	0	870	175	0
56	DY	776	0	870	175	0
57	BZ	1468	0	1492	265	0
57	DZ	1468	0	1491	341	0
58	AD	1	0	0	2	0
58	AN	1	0	0	1	0
58	CD	1	0	0	2	0
58	CN	1	0	0	1	0
All	All	298096	0	201782	19801	1

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 40.

All (19801) 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)
22:CY:57:U:C6	57:DZ:182:LYS:HA	1.08	1.58
1:CA:1196:U:C4	24:CX:23:A:C5	1.96	1.53
22:CY:57:U:H6	57:DZ:182:LYS:CA	1.20	1.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1196:U:O4	24:CX:23:A:C4	1.70	1.45
22:CY:62:U:O2'	57:DZ:186:GLU:CB	1.68	1.39
1:CA:1196:U:O4	24:CX:23:A:C8	1.74	1.38
1:CA:1196:U:C4	24:CX:23:A:C4	2.14	1.33
23:AW:30:U:H2'	23:AW:31:C:C6	1.65	1.31
23:AW:70:G:H2'	23:AW:71:G:C8	1.66	1.30
1:CA:1196:U:O4	24:CX:23:A:N9	1.60	1.29
22:CY:56:U:H3'	57:DZ:182:LYS:O	1.26	1.29
22:CY:57:U:C6	57:DZ:182:LYS:CA	2.00	1.28
22:AY:57:U:C6	57:BZ:182:LYS:HA	1.67	1.28
22:CY:57:U:C2	57:DZ:184:ALA:HB2	1.74	1.22
22:CY:60:A:C2	57:DZ:186:GLU:HB2	1.75	1.22
22:AY:56:U:H2'	57:BZ:183:LEU:CB	1.70	1.21
22:CY:57:U:O5'	57:DZ:182:LYS:CB	1.88	1.20
39:DE:36:ARG:HH21	39:DE:88:GLY:HA2	1.04	1.20
23:CW:70:G:H2'	23:CW:71:G:C8	1.74	1.20
22:CY:57:U:C5	57:DZ:182:LYS:HA	1.77	1.19
22:CY:57:U:O2	57:DZ:184:ALA:HB2	1.42	1.18
22:CY:62:U:O2'	57:DZ:186:GLU:CG	1.92	1.18
23:CW:70:G:H2'	23:CW:71:G:H8	1.00	1.17
23:CW:30:U:H2'	23:CW:31:C:C6	1.80	1.16
35:DA:2876:G:H4'	51:DT:3:ARG:HE	1.11	1.16
22:CY:58:C:H5''	57:DZ:179:ASP:OD1	1.41	1.16
35:BA:1845:G:H2'	35:BA:1846:G:H5''	1.23	1.15
23:AW:40:A:C2	23:AW:41:C:H3'	1.82	1.14
35:DA:1845:G:H2'	35:DA:1846:G:H5''	1.24	1.14
22:AV:1:G:H1'	25:B0:5:LYS:HZ1	1.13	1.14
33:D8:62:LEU:HD13	35:DA:242:G:H5''	1.18	1.14
51:BT:83:ILE:HG13	51:BT:84:GLN:H	1.05	1.13
48:BQ:60:ARG:HA	57:BZ:179:ASP:HA	1.30	1.13
22:AV:14:A:H3'	22:AV:15:G:C8	1.83	1.13
36:DB:7:G:H3'	36:DB:8:U:H5''	1.30	1.13
22:AY:56:U:OP1	48:BQ:56:ARG:HD3	1.49	1.13
22:CV:14:A:H3'	22:CV:15:G:H8	1.12	1.13
30:B5:4:HIS:HB3	30:B5:5:PRO:HD3	1.27	1.13
22:CY:56:U:OP1	57:DZ:180:VAL:HG12	1.48	1.12
22:CY:57:U:O5'	57:DZ:182:LYS:HB2	1.45	1.12
51:DT:83:ILE:HG13	51:DT:84:GLN:H	1.02	1.12
35:BA:1590:U:H2'	35:BA:1591:G:H5''	1.27	1.12
35:DA:1899:G:N2	35:DA:1902:C:H41	1.45	1.12
22:AY:56:U:H3'	57:BZ:182:LYS:O	1.50	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1590:U:H2'	35:DA:1591:G:H5''	1.26	1.12
35:BA:1899:G:N2	35:BA:1902:C:H41	1.46	1.12
35:BA:2876:G:H4'	51:BT:3:ARG:HE	1.09	1.12
22:CY:56:U:C3'	57:DZ:182:LYS:O	1.98	1.12
31:B6:15:GLU:HG3	31:B6:47:THR:HG21	1.28	1.12
47:BP:30:THR:HG22	47:BP:31:ALA:H	1.14	1.12
23:AW:25:A:H2'	23:AW:26:G:C8	1.85	1.12
47:BP:55:ARG:HG2	47:BP:56:SER:H	1.10	1.12
1:CA:1196:U:O4	24:CX:23:A:C5	1.87	1.11
22:AV:5:C:H2'	22:AV:6:C:H6	1.13	1.11
22:CY:62:U:O2'	57:DZ:186:GLU:HB3	1.25	1.11
47:DP:23:PRO:HB2	47:DP:33:ARG:HD2	1.33	1.11
19:AS:65:ASN:HA	29:B4:48:ARG:HH12	1.02	1.11
56:BY:76:CYS:SG	56:BY:77:PRO:HD2	1.91	1.11
35:DA:1484:G:H2'	35:DA:1485:G:H5''	1.23	1.11
23:CW:68:A:H2'	23:CW:69:G:H5''	1.24	1.10
56:DY:76:CYS:SG	56:DY:77:PRO:HD2	1.90	1.10
35:DA:612:C:C2'	35:DA:613:G:H5''	1.81	1.10
35:BA:612:C:H2'	35:BA:613:G:H5''	1.11	1.10
1:CA:180:U:H2'	1:CA:181:G:H5''	1.33	1.10
23:AW:19:G:N2	23:AW:59:G:H2'	1.65	1.10
22:CY:60:A:C6	57:DZ:184:ALA:HA	1.83	1.10
23:AW:68:A:H2'	23:AW:69:G:H5''	1.22	1.10
33:B8:62:LEU:HD13	35:BA:242:G:H5''	1.22	1.10
39:BE:36:ARG:HH21	39:BE:88:GLY:HA2	1.02	1.10
42:BH:41:MET:HG3	42:BH:42:ARG:H	1.17	1.10
35:DA:612:C:H2'	35:DA:613:G:H5''	1.10	1.10
47:DP:30:THR:HG22	47:DP:31:ALA:H	1.13	1.10
47:DP:55:ARG:HG2	47:DP:56:SER:H	1.05	1.10
1:AA:1057:G:H5''	3:AC:154:SER:HB2	1.19	1.10
7:CG:113:GLU:HB2	7:CG:119:ARG:HG2	1.32	1.10
35:BA:1484:G:H2'	35:BA:1485:G:H5''	1.23	1.10
22:CY:20:G:H3'	22:CY:21:U:H5'	1.34	1.09
35:BA:612:C:C2'	35:BA:613:G:H5''	1.82	1.09
43:DI:97:ILE:O	43:DI:101:LEU:HB2	1.50	1.09
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.11	1.09
22:AV:25:A:H2'	22:AV:26:G:C8	1.86	1.09
7:AG:113:GLU:HB2	7:AG:119:ARG:HG2	1.33	1.09
31:D6:15:GLU:HG3	31:D6:47:THR:HG21	1.29	1.09
1:CA:1057:G:H5''	3:CC:154:SER:HB2	1.18	1.09
1:CA:1363(A):A:H4'	1:CA:1364:U:H5''	1.30	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:7:G:H3'	36:BB:8:U:H5''	1.31	1.09
22:AY:57:U:H3'	57:BZ:182:LYS:HB3	1.14	1.09
43:BI:97:ILE:O	43:BI:101:LEU:HB2	1.49	1.09
35:DA:2092:U:H4'	35:DA:2093:G:H5''	1.33	1.09
22:AY:11:C:H2'	22:AY:12:U:C6	1.88	1.09
22:AY:56:U:C2'	57:BZ:183:LEU:HB2	1.81	1.09
47:DP:59:LEU:HA	47:DP:61:ARG:NH1	1.68	1.09
23:CW:25:A:H2'	23:CW:26:G:C8	1.88	1.09
38:DD:44:ASN:HB3	38:DD:49:ILE:HA	1.28	1.09
35:BA:1915:U:C3'	35:BA:1916:A:H5''	1.81	1.09
1:AA:1363(A):A:H4'	1:AA:1364:U:H5''	1.31	1.09
35:DA:1747(A):G:H2'	35:DA:1748:G:H5''	1.35	1.08
12:CL:89:ARG:HB2	12:CL:89:ARG:HH11	1.18	1.08
47:BP:23:PRO:HB2	47:BP:33:ARG:HD2	1.29	1.08
47:BP:59:LEU:HA	47:BP:61:ARG:CZ	1.84	1.08
22:CY:62:U:O2'	57:DZ:186:GLU:HG2	1.53	1.08
35:DA:1899:G:H22	35:DA:1902:C:N4	1.52	1.08
22:AV:14:A:H3'	22:AV:15:G:H8	1.00	1.08
48:DQ:132:VAL:HG11	57:DZ:81:ARG:HH21	1.19	1.08
23:AW:40:A:H2'	23:AW:41:C:C5	1.89	1.07
23:CW:40:A:C2	23:CW:41:C:H3'	1.89	1.07
35:BA:874:G:H5''	57:BZ:175:VAL:HG11	1.30	1.07
22:CY:55:G:H5''	48:DQ:56:ARG:NH2	1.69	1.07
22:CY:57:U:C4'	57:DZ:182:LYS:HB3	1.64	1.07
42:BH:7:LEU:HD23	42:BH:69:ARG:HD2	1.32	1.07
30:D5:4:HIS:HB3	30:D5:5:PRO:HD3	1.31	1.07
35:DA:1915:U:C3'	35:DA:1916:A:H5''	1.83	1.07
8:CH:42:GLU:HG3	8:CH:109:ILE:HD12	1.34	1.07
22:CY:57:U:O2	57:DZ:184:ALA:CB	2.02	1.07
47:DP:59:LEU:HA	47:DP:61:ARG:CZ	1.84	1.07
1:AA:180:U:H2'	1:AA:181:G:H5''	1.36	1.07
26:D1:29:GLY:O	26:D1:30:VAL:HG22	1.55	1.07
40:DF:24:LEU:HB3	40:DF:25:PRO:HD2	1.36	1.07
38:BD:44:ASN:HB3	38:BD:49:ILE:HA	1.29	1.07
22:AY:20:G:H3'	22:AY:21:U:H5'	1.37	1.07
12:AL:89:ARG:HB2	12:AL:89:ARG:HH11	1.17	1.07
1:AA:1152:A:H5'	10:AJ:70:ARG:HH22	1.20	1.07
22:CY:49:G:H3'	22:CY:50:C:H5'	1.37	1.06
35:BA:1899:G:H22	35:BA:1902:C:N4	1.54	1.06
45:BN:133:GLN:HG2	45:BN:134:ARG:H	1.19	1.06
1:AA:1054:C:N4	22:AY:36:AG9:H1'	1.70	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:42:GLU:HG3	8:AH:109:ILE:HD12	1.35	1.06
41:BG:51:ARG:HA	41:BG:51:ARG:HE	1.16	1.06
35:DA:1915:U:H3'	35:DA:1916:A:H5''	1.10	1.05
23:AW:70:G:H2'	23:AW:71:G:H8	0.90	1.05
36:DB:20:C:H2'	36:DB:21:G:H5''	1.35	1.05
40:BF:24:LEU:HB3	40:BF:25:PRO:HD2	1.36	1.05
35:BA:548:A:H2'	35:BA:549:G:H5'	1.39	1.05
42:DH:7:LEU:HD23	42:DH:69:ARG:HD2	1.37	1.05
35:DA:145:G:H2'	35:DA:146:G:H5''	1.38	1.05
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.10	1.05
35:BA:2092:U:H4'	35:BA:2093:G:H5''	1.34	1.05
12:AL:89:ARG:NH1	12:AL:89:ARG:HB2	1.72	1.05
35:DA:2491:U:H5'	35:DA:2570:G:H5''	1.39	1.05
22:CV:20:G:H3'	22:CV:21:U:H5''	1.40	1.04
22:CV:5:C:H2'	22:CV:6:C:H6	1.15	1.04
35:BA:1915:U:H3'	35:BA:1916:A:H5''	1.10	1.04
43:DI:88:ILE:HD11	43:DI:142:VAL:HG13	1.37	1.04
35:BA:1747(A):G:H2'	35:BA:1748:G:H5''	1.36	1.04
17:AQ:9:VAL:HG12	17:AQ:56:VAL:HG22	1.39	1.04
22:AV:1:G:H1'	25:B0:5:LYS:NZ	1.73	1.04
36:BB:20:C:H2'	36:BB:21:G:H5''	1.35	1.04
1:CA:1152:A:H5'	10:CJ:70:ARG:HH22	1.19	1.04
42:DH:19:VAL:HG21	42:DH:44:VAL:HA	1.40	1.04
23:CW:19:G:N2	23:CW:59:G:H2'	1.71	1.04
41:BG:44:GLY:H	41:BG:88:ILE:HG21	1.18	1.03
4:CD:59:ARG:HA	4:CD:59:ARG:HE	1.24	1.03
22:AY:57:U:C5	57:BZ:182:LYS:HA	1.91	1.03
42:BH:43:VAL:HG11	42:BH:52:VAL:HG22	1.39	1.03
43:BI:88:ILE:HD11	43:BI:142:VAL:HG13	1.35	1.03
35:BA:1884:A:H2'	35:BA:1885:A:H5''	1.40	1.03
8:CH:51:VAL:HG11	8:CH:60:ARG:HD3	1.39	1.03
1:CA:1196:U:N3	24:CX:23:A:C2	2.25	1.03
42:DH:43:VAL:HG11	42:DH:52:VAL:HG22	1.38	1.03
22:CY:60:A:C5	57:DZ:184:ALA:HA	1.93	1.03
51:DT:13:ARG:CZ	51:DT:13:ARG:HA	1.88	1.03
23:CW:13:U:H3'	23:CW:13:U:H6	1.22	1.03
45:DN:133:GLN:HG2	45:DN:134:ARG:H	1.20	1.03
47:BP:59:LEU:HA	47:BP:61:ARG:NH1	1.72	1.03
47:BP:144:GLU:H	47:BP:145:PRO:HD3	1.20	1.03
53:DV:40:LEU:HD22	53:DV:46:VAL:HA	1.40	1.03
3:CC:108:ASN:HD21	3:CC:144:SER:HB2	1.23	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:33:G:C4	23:AW:34:C:H1'	1.94	1.02
22:CV:25:A:H2'	22:CV:26:G:C8	1.92	1.02
42:DH:41:MET:HG3	42:DH:42:ARG:H	1.18	1.02
35:DA:548:A:H2'	35:DA:549:G:H5'	1.39	1.02
22:CY:62:U:C2'	57:DZ:186:GLU:HG2	1.88	1.02
22:AY:63:C:H1'	57:BZ:186:GLU:HG2	1.41	1.02
35:DA:1884:A:H2'	35:DA:1885:A:H5''	1.39	1.02
35:BA:404:C:H4'	35:BA:405:U:H5'	1.42	1.02
35:BA:145:G:H2'	35:BA:146:G:H5''	1.37	1.02
12:CL:89:ARG:HB2	12:CL:89:ARG:NH1	1.73	1.02
47:BP:23:PRO:HD2	47:BP:33:ARG:CZ	1.89	1.02
36:DB:117:G:H5'	50:DS:55:ALA:HB1	1.41	1.02
22:CV:14:A:H3'	22:CV:15:G:C8	1.94	1.02
35:DA:1590:U:C2'	35:DA:1591:G:H5''	1.89	1.02
51:BT:13:ARG:HA	51:BT:13:ARG:CZ	1.90	1.02
23:AW:58:C:N4	35:BA:2169:A:H1'	1.74	1.02
12:AL:41:ARG:HH11	12:AL:41:ARG:HB3	1.23	1.02
10:CJ:84:GLN:O	10:CJ:88:LEU:HB3	1.60	1.02
5:CE:100:VAL:HG12	5:CE:118:ILE:HG22	1.41	1.02
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HG13	1.37	1.01
7:CG:77:SER:HA	7:CG:86:GLN:HA	1.41	1.01
46:DO:2:ILE:HD11	46:DO:82:ASN:HD22	1.25	1.01
38:BD:43:ARG:NH1	38:BD:44:ASN:HD21	1.57	1.01
22:AY:55:G:H5''	48:BQ:56:ARG:NH2	1.75	1.01
23:CW:40:A:H2'	23:CW:41:C:C5	1.96	1.01
23:AW:13:U:H3'	23:AW:13:U:H6	1.22	1.01
38:DD:43:ARG:NH1	38:DD:44:ASN:HD21	1.56	1.01
35:DA:1494:A:H2'	35:DA:1495:A:H5''	1.43	1.01
42:BH:19:VAL:HG21	42:BH:44:VAL:HA	1.41	1.01
3:AC:108:ASN:HD21	3:AC:144:SER:HB2	1.20	1.01
28:D3:27:GLY:HA3	28:D3:35:ARG:HH11	1.26	1.01
12:CL:71:PRO:O	12:CL:102:ARG:HD3	1.60	1.01
22:CY:31:C:H2'	22:CY:32:G:H5''	1.37	1.01
22:AY:57:U:H6	57:BZ:182:LYS:CA	1.73	1.01
22:AV:20:G:H3'	22:AV:21:U:H5''	1.41	1.01
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HG13	1.37	1.01
35:BA:1494:A:H2'	35:BA:1495:A:H5''	1.43	1.01
1:AA:979:C:H3'	1:AA:980:C:H5''	1.43	1.01
22:AV:5:C:H2'	22:AV:6:C:C6	1.96	1.01
35:DA:322:A:H3'	40:DF:169:ASN:HD21	1.24	1.01
35:BA:2310:A:O2'	35:BA:2311:A:H5'	1.61	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:134:PRO:HB2	57:DZ:137:ILE:HD11	1.39	1.01
35:BA:1590:U:C2'	35:BA:1591:G:H5''	1.89	1.00
45:BN:125:GLY:HA3	45:BN:126:PRO:O	1.61	1.00
39:DE:92:THR:O	39:DE:95:ILE:HG12	1.61	1.00
29:B4:35:VAL:HB	41:BG:113:ARG:HD2	1.43	1.00
35:BA:2491:U:H5'	35:BA:2570:G:H5''	1.41	1.00
10:AJ:84:GLN:O	10:AJ:88:LEU:HB3	1.62	1.00
2:AB:80:ILE:H	2:AB:80:ILE:HD12	1.21	1.00
5:AE:100:VAL:HG12	5:AE:118:ILE:HG22	1.43	1.00
1:CA:975:A:H4'	1:CA:976:G:H5''	1.42	1.00
22:CV:1:G:H1'	25:D0:5:LYS:HZ1	1.26	1.00
36:BB:80:U:H2'	36:BB:81:G:H21	1.24	1.00
8:AH:51:VAL:HG11	8:AH:60:ARG:HD3	1.40	1.00
22:CY:11:C:H2'	22:CY:12:U:C6	1.95	1.00
22:AY:49:G:H3'	22:AY:50:C:H5'	1.39	1.00
22:AY:57:U:C6	57:BZ:182:LYS:CA	2.44	1.00
2:CB:80:ILE:H	2:CB:80:ILE:HD12	1.23	1.00
39:BE:92:THR:O	39:BE:95:ILE:HG12	1.62	1.00
22:CY:56:U:OP1	57:DZ:180:VAL:CG1	2.09	1.00
22:AY:57:U:C6	57:BZ:183:LEU:N	2.29	1.00
40:BF:132:VAL:HG22	40:BF:133:ASN:H	1.25	0.99
47:DP:146:VAL:HG22	47:DP:147:LEU:H	1.25	0.99
17:CQ:9:VAL:HG12	17:CQ:56:VAL:HG22	1.42	0.99
12:CL:41:ARG:HH11	12:CL:41:ARG:HB3	1.23	0.99
33:D8:50:LEU:HD12	33:D8:51:ALA:H	1.26	0.99
57:BZ:61:LEU:HD23	57:BZ:61:LEU:H	1.26	0.99
35:DA:2310:A:O2'	35:DA:2311:A:H5'	1.62	0.99
22:CY:57:U:C2	57:DZ:184:ALA:CB	2.44	0.99
12:CL:54:LYS:HB3	12:CL:70:ILE:HD12	1.43	0.99
23:AW:16:U:H1'	23:AW:62:U:H4'	1.44	0.99
51:BT:85:LYS:NZ	51:BT:85:LYS:HB3	1.77	0.99
57:DZ:42:VAL:HG13	57:DZ:43:GLU:H	1.25	0.99
47:DP:144:GLU:H	47:DP:145:PRO:HD3	1.23	0.99
41:DG:42:GLY:HA2	41:DG:89:GLY:HA2	1.44	0.99
12:CL:47:LYS:HB3	12:CL:48:PRO:HD3	1.44	0.99
28:D3:8:LEU:HD13	28:D3:31:LEU:HD23	1.44	0.99
53:BV:40:LEU:HD22	53:BV:46:VAL:HA	1.45	0.99
23:CW:12:U:H3	23:CW:26:G:N2	1.60	0.99
8:AH:103:VAL:HG21	8:AH:110:ALA:HB2	1.45	0.99
40:DF:132:VAL:HG22	40:DF:133:ASN:H	1.24	0.99
22:AY:31:C:H2'	22:AY:32:G:H5''	1.43	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AY:57:U:O5'	57:BZ:182:LYS:HB2	1.63	0.99
1:AA:975:A:H4'	1:AA:976:G:H5''	1.43	0.99
35:BA:1348:G:H2'	35:BA:1349:A:H5''	1.43	0.99
47:BP:144:GLU:H	47:BP:145:PRO:CD	1.75	0.99
1:CA:1277:C:H2'	1:CA:1278:U:H5'	1.42	0.99
23:AW:15:G:N2	23:AW:23:A:H1'	1.78	0.99
33:B8:50:LEU:HD12	33:B8:51:ALA:H	1.27	0.99
1:CA:1053:G:H4'	1:CA:1054:C:C5'	1.93	0.99
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.45	0.99
43:BI:74:ASN:HD22	43:BI:74:ASN:H	1.10	0.99
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.45	0.99
47:DP:23:PRO:HD2	47:DP:33:ARG:CZ	1.92	0.98
53:BV:62:LEU:HD21	53:BV:95:LEU:HB2	1.43	0.98
1:CA:1196:U:O4	24:CX:23:A:N7	1.96	0.98
47:BP:23:PRO:HB2	47:BP:33:ARG:CD	1.93	0.98
47:DP:144:GLU:H	47:DP:145:PRO:CD	1.76	0.98
19:AS:65:ASN:HA	29:B4:48:ARG:NH1	1.77	0.98
39:DE:34:VAL:HG13	39:DE:48:GLN:HG2	1.46	0.98
1:AA:1053:G:H4'	1:AA:1054:C:C5'	1.91	0.98
53:DV:62:LEU:HD21	53:DV:95:LEU:HB2	1.45	0.98
1:CA:1196:U:C4	24:CX:23:A:C6	2.52	0.98
25:D0:10:THR:HG22	25:D0:11:ARG:H	1.26	0.98
53:DV:72:VAL:HG23	53:DV:85:LYS:HB3	1.45	0.98
1:CA:979:C:H3'	1:CA:980:C:H5''	1.44	0.98
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.45	0.98
47:BP:146:VAL:HG22	47:BP:147:LEU:H	1.26	0.98
16:AP:53:VAL:HG12	16:AP:79:VAL:HG22	1.46	0.98
1:AA:474:G:H2'	1:AA:475:G:C8	1.99	0.98
22:CY:57:U:C5'	57:DZ:182:LYS:HB3	1.93	0.98
22:CY:62:U:HO2'	57:DZ:186:GLU:HB3	1.27	0.98
35:BA:1845:G:C2'	35:BA:1846:G:H5''	1.93	0.98
35:BA:2523:G:H2'	35:BA:2524:G:H5''	1.45	0.97
35:BA:1915:U:H3'	35:BA:1916:A:C5'	1.94	0.97
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.42	0.97
22:CV:1:G:H1'	25:D0:5:LYS:NZ	1.78	0.97
41:DG:5:VAL:HG12	41:DG:6:ALA:H	1.29	0.97
53:BV:72:VAL:HG23	53:BV:85:LYS:HB3	1.44	0.97
56:DY:28:LYS:HA	56:DY:38:ILE:HG22	1.47	0.97
28:D3:27:GLY:HA3	28:D3:35:ARG:NH1	1.79	0.97
35:DA:2068:U:H3	35:DA:2430:A:H2	1.02	0.97
51:DT:83:ILE:HG13	51:DT:84:GLN:N	1.78	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DX:64:LYS:HZ2	55:DX:73:ARG:HH21	1.09	0.97
35:BA:322:A:H3'	40:BF:169:ASN:HD21	1.29	0.97
35:DA:404:C:H4'	35:DA:405:U:H5'	1.43	0.97
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.44	0.97
49:DR:10:LEU:HB3	49:DR:17:ARG:HD3	1.47	0.97
36:DB:80:U:H2'	36:DB:81:G:H21	1.24	0.97
12:AL:54:LYS:HB3	12:AL:70:ILE:HD12	1.44	0.97
4:AD:59:ARG:HA	4:AD:59:ARG:HE	1.26	0.97
46:BO:88:ASN:HD21	46:BO:90:GLN:HB2	1.27	0.97
1:CA:474:G:H2'	1:CA:475:G:C8	1.99	0.97
22:CY:58:C:H5''	57:DZ:179:ASP:CG	1.84	0.97
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.43	0.97
23:AW:68:A:C2'	23:AW:69:G:H5''	1.95	0.97
31:B6:35:GLU:HB3	31:B6:51:GLU:HB2	1.46	0.97
7:AG:77:SER:HA	7:AG:86:GLN:HA	1.44	0.97
23:CW:71:G:H2'	23:CW:72:C:H5'	1.47	0.97
35:DA:1845:G:C2'	35:DA:1846:G:H5''	1.95	0.97
35:DA:1747(A):G:C2'	35:DA:1748:G:H5''	1.94	0.97
8:CH:103:VAL:HG21	8:CH:110:ALA:HB2	1.43	0.97
41:DG:111:LEU:HB2	41:DG:112:PRO:HD3	1.46	0.96
46:DO:88:ASN:HD21	46:DO:90:GLN:HB2	1.28	0.96
15:CO:55:GLY:HA2	15:CO:58:MET:HE3	1.47	0.96
35:BA:1453:U:H5'	49:BR:63:ARG:HE	1.27	0.96
39:BE:77:ILE:HG22	39:BE:78:LEU:H	1.29	0.96
23:AW:12:U:H3	23:AW:26:G:H22	1.13	0.96
43:BI:69:LYS:HA	43:BI:136:VAL:HG11	1.44	0.96
35:BA:1022:G:H22	35:BA:1142(A):A:H2	0.99	0.96
49:BR:2:ARG:N	49:BR:2:ARG:HH11	1.63	0.96
51:DT:85:LYS:NZ	51:DT:85:LYS:HB3	1.78	0.96
35:BA:1747(A):G:C2'	35:BA:1748:G:H5''	1.93	0.96
57:BZ:153:SER:HB2	57:BZ:163:LEU:HD13	1.48	0.96
1:AA:447:G:H2'	1:AA:485:G:N2	1.78	0.96
35:DA:1915:U:H3'	35:DA:1916:A:C5'	1.94	0.96
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.48	0.96
35:DA:2562:U:H1'	46:DO:23:ARG:HH11	1.30	0.96
43:DI:69:LYS:HA	43:DI:136:VAL:HG11	1.48	0.96
45:DN:125:GLY:HA3	45:DN:126:PRO:O	1.63	0.96
46:BO:2:ILE:HD11	46:BO:82:ASN:HD22	1.28	0.96
35:BA:2681:C:H5	35:BA:2725:A:H62	1.12	0.96
35:DA:1798:U:H5'	38:DD:259:THR:HG22	1.45	0.96
35:DA:2523:G:H2'	35:DA:2524:G:H5''	1.45	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:12:U:H3	23:CW:26:G:H22	0.97	0.96
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.48	0.96
35:BA:1798:U:H5'	38:BD:259:THR:HG22	1.44	0.96
47:DP:38:GLN:HG3	47:DP:39:LYS:H	1.30	0.96
51:BT:65:LYS:HZ2	51:BT:65:LYS:HA	1.29	0.96
25:B0:10:THR:HG22	25:B0:11:ARG:H	1.28	0.96
35:BA:1771:C:HO2'	35:BA:1786:A:H8	1.09	0.96
12:AL:71:PRO:O	12:AL:102:ARG:HD3	1.64	0.96
23:CW:30:U:H2'	23:CW:31:C:H6	1.15	0.95
10:CJ:50:ILE:HD13	10:CJ:50:ILE:H	1.30	0.95
14:AN:40:CYS:HG	58:AN:1000:ZN:ZN	0.80	0.95
22:CV:5:C:H2'	22:CV:6:C:C6	2.00	0.95
13:CM:94:ARG:HG2	19:CS:82:GLY:N	1.81	0.95
1:AA:491:G:H2'	1:AA:492:G:H8	1.31	0.95
49:DR:2:ARG:HH11	49:DR:2:ARG:N	1.63	0.95
41:DG:170:ARG:HH22	41:DG:182:LYS:HE2	1.31	0.95
54:DW:92:ARG:HB3	54:DW:92:ARG:HH11	1.25	0.95
23:AW:30:U:H2'	23:AW:31:C:H6	0.98	0.95
23:CW:33:G:C4	23:CW:34:C:H1'	2.01	0.95
23:CW:38:U:H3	23:CW:39:A:H62	1.14	0.95
39:DE:77:ILE:HG22	39:DE:78:LEU:H	1.30	0.95
29:D4:12:ALA:HB1	29:D4:29:PRO:HA	1.48	0.95
4:AD:128:VAL:HG12	4:AD:129:ASN:H	1.31	0.95
43:DI:126:TYR:H	43:DI:140:LEU:HD22	1.32	0.95
35:BA:2068:U:H3	35:BA:2430:A:H2	1.01	0.95
25:B0:14:ARG:HH11	25:B0:14:ARG:HB2	1.31	0.95
22:AY:57:U:H6	57:BZ:182:LYS:HA	1.20	0.95
22:AV:70:G:H2'	22:AV:71:G:H8	1.30	0.95
35:DA:2681:C:H5	35:DA:2725:A:H62	1.09	0.95
13:CM:39:ILE:HD12	13:CM:56:LEU:HD23	1.49	0.95
23:CW:68:A:C2'	23:CW:69:G:H5''	1.96	0.95
29:D4:2:LYS:HB2	36:DB:40:U:O4	1.66	0.95
16:CP:53:VAL:HG12	16:CP:79:VAL:HG22	1.46	0.95
56:BY:28:LYS:HA	56:BY:38:ILE:HG22	1.47	0.95
54:BW:92:ARG:HH11	54:BW:92:ARG:HB3	1.27	0.95
43:BI:126:TYR:H	43:BI:140:LEU:HD22	1.32	0.95
51:BT:83:ILE:HG13	51:BT:84:GLN:N	1.79	0.94
50:DS:97:ARG:NH2	50:DS:98:VAL:HA	1.82	0.94
5:AE:148:VAL:HG21	8:AH:107:LEU:HD22	1.49	0.94
35:DA:1453:U:H5'	49:DR:63:ARG:HE	1.31	0.94
50:BS:97:ARG:NH2	50:BS:98:VAL:HA	1.81	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1494:A:C2'	35:BA:1495:A:H5''	1.97	0.94
35:DA:1348:G:H2'	35:DA:1349:A:H5''	1.46	0.94
22:AY:25:A:H2'	22:AY:26:G:C8	2.02	0.94
43:BI:109:ILE:HG22	43:BI:110:ASP:H	1.32	0.94
57:BZ:183:LEU:HD12	57:BZ:184:ALA:H	1.29	0.94
9:AI:9:ARG:HG2	9:AI:14:VAL:HG22	1.49	0.94
22:AV:11:C:H2'	22:AV:12:U:C6	2.03	0.94
33:B8:59:LYS:HB2	33:B8:59:LYS:NZ	1.80	0.94
1:CA:1377:A:H2'	7:CG:7:ALA:HB2	1.49	0.94
41:BG:44:GLY:N	41:BG:88:ILE:HG21	1.83	0.94
8:AH:122:ARG:NH1	8:AH:122:ARG:HB2	1.81	0.94
18:AR:37:VAL:HG23	18:AR:38:GLU:H	1.31	0.94
23:CW:15:G:N2	23:CW:23:A:H1'	1.82	0.94
1:CA:447:G:H2'	1:CA:485:G:N2	1.83	0.94
28:B3:27:GLY:HA3	28:B3:35:ARG:HH11	1.31	0.94
35:DA:483:A:H5''	56:DY:49:VAL:HG22	1.50	0.94
1:CA:1196:U:N3	24:CX:23:A:C4	2.33	0.94
22:AY:57:U:P	57:BZ:182:LYS:HB2	2.06	0.94
41:BG:51:ARG:NE	41:BG:51:ARG:HA	1.80	0.94
35:DA:1884:A:C2'	35:DA:1885:A:H5''	1.98	0.94
35:BA:145:G:C2'	35:BA:146:G:H5''	1.98	0.94
35:DA:1494:A:C2'	35:DA:1495:A:H5''	1.97	0.94
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.46	0.94
35:DA:914:C:H2'	35:DA:915:C:H5'	1.48	0.94
40:BF:28:ILE:HG21	40:BF:116:ASP:HB2	1.49	0.94
2:CB:233:SER:HB2	2:CB:234:PRO:HD2	1.50	0.94
26:D1:89:GLU:HA	26:D1:92:LYS:HB3	1.50	0.94
6:CF:69:GLU:O	6:CF:72:VAL:HG12	1.66	0.94
3:AC:14:ILE:HG12	3:AC:15:THR:H	1.31	0.94
23:AW:44:A:H2'	23:AW:45:U:O4'	1.65	0.94
39:BE:34:VAL:HG13	39:BE:48:GLN:HG2	1.47	0.94
45:DN:111:PRO:HA	45:DN:114:ARG:NH1	1.82	0.94
43:DI:74:ASN:HD22	43:DI:74:ASN:H	1.07	0.94
22:CY:62:U:C3'	57:DZ:186:GLU:HG2	1.98	0.94
23:AW:4:C:HO2'	23:AW:5:C:H5	1.16	0.94
47:DP:23:PRO:HB2	47:DP:33:ARG:CD	1.98	0.94
35:DA:1022:G:H22	35:DA:1142(A):A:H2	1.00	0.94
41:BG:152:LEU:HD23	41:BG:152:LEU:H	1.33	0.94
22:CY:19:G:N2	22:CY:59:G:H2'	1.83	0.93
13:AM:94:ARG:HG2	19:AS:82:GLY:N	1.82	0.93
52:DU:83:LEU:H	52:DU:83:LEU:HD22	1.30	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1689:A:H62	35:BA:1698:A:H2	1.15	0.93
22:CY:25:A:H2'	22:CY:26:G:C8	2.02	0.93
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.33	0.93
1:AA:1377:A:H2'	7:AG:7:ALA:HB2	1.50	0.93
48:DQ:34:LEU:HD11	48:DQ:129:THR:HB	1.49	0.93
35:BA:914:C:H2'	35:BA:915:C:H5'	1.51	0.93
1:CA:81:U:H3	1:CA:88:A:H62	1.17	0.93
4:CD:128:VAL:HG12	4:CD:129:ASN:H	1.32	0.93
18:CR:37:VAL:HG23	18:CR:38:GLU:H	1.31	0.93
49:BR:10:LEU:HB3	49:BR:17:ARG:HD3	1.47	0.93
52:BU:83:LEU:H	52:BU:83:LEU:HD22	1.32	0.93
8:CH:122:ARG:NH1	8:CH:122:ARG:HB2	1.82	0.93
1:CA:537:G:H5''	12:CL:113:ARG:HH12	1.32	0.93
22:CY:63:C:O2'	57:DZ:185:GLU:OE1	1.87	0.93
35:BA:2562:U:H1'	46:BO:23:ARG:HH11	1.34	0.93
45:DN:47:ALA:HB2	45:DN:112:LEU:HD11	1.48	0.93
22:CY:10:G:N2	22:CY:28:G:H1'	1.83	0.93
22:AY:56:U:H2'	57:BZ:183:LEU:HB2	0.97	0.93
30:B5:3:LYS:HE2	35:BA:2613:U:O2'	1.68	0.93
51:DT:65:LYS:HA	51:DT:65:LYS:HZ2	1.34	0.93
45:DN:111:PRO:HA	45:DN:114:ARG:HH12	1.32	0.93
10:AJ:50:ILE:H	10:AJ:50:ILE:HD13	1.30	0.93
57:DZ:54:HIS:HB3	57:DZ:101:PRO:HD3	1.50	0.93
35:BA:329:G:H1	56:BY:19:LYS:HE3	1.33	0.93
31:B6:37:ARG:HH21	35:BA:2286:A:H62	1.17	0.93
22:AV:30:U:H2'	22:AV:31:C:C6	2.03	0.93
57:DZ:102:LEU:HD21	57:DZ:124:ILE:HG12	1.49	0.93
31:D6:35:GLU:HB3	31:D6:51:GLU:HB2	1.48	0.93
35:DA:1537:G:H2'	35:DA:1538:G:H8	1.34	0.93
56:DY:28:LYS:HB3	56:DY:38:ILE:H	1.31	0.92
1:AA:475:G:H2'	1:AA:476:G:C8	2.04	0.92
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	1.50	0.92
9:CI:9:ARG:HG2	9:CI:14:VAL:HG22	1.51	0.92
3:CC:14:ILE:HG12	3:CC:15:THR:H	1.33	0.92
23:AW:27:C:H3'	23:AW:28:G:C8	2.04	0.92
56:DY:27:VAL:HA	56:DY:28:LYS:HZ1	1.34	0.92
42:BH:41:MET:CG	42:BH:42:ARG:H	1.82	0.92
1:AA:180:U:H2'	1:AA:181:G:C5'	1.99	0.92
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.68	0.92
22:CV:11:C:H2'	22:CV:12:U:C6	2.05	0.92
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.50	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:112:ARG:HD3	57:DZ:112:ARG:O	1.68	0.92
22:CY:56:U:C5'	57:DZ:180:VAL:HG12	1.99	0.92
23:AW:19:G:H21	23:AW:59:G:H2'	1.35	0.92
28:B3:27:GLY:HA3	28:B3:35:ARG:NH1	1.83	0.92
50:DS:35:ILE:HD11	50:DS:99:LYS:HE2	1.48	0.92
48:DQ:62:GLY:O	57:DZ:178:GLU:HB2	1.68	0.92
35:BA:1884:A:C2'	35:BA:1885:A:H5''	1.99	0.92
2:CB:80:ILE:HD11	2:CB:208:ILE:HG23	1.49	0.92
39:BE:101:ARG:HH11	39:BE:171:GLU:HB2	1.35	0.92
30:D5:3:LYS:HE2	35:DA:2613:U:O2'	1.69	0.92
47:BP:101:VAL:HB	47:BP:107:LYS:HA	1.50	0.92
53:DV:19:LYS:HG2	53:DV:94:LEU:HB2	1.50	0.92
35:DA:329:G:H1	56:DY:19:LYS:HE3	1.32	0.92
29:B4:12:ALA:HB1	29:B4:29:PRO:HA	1.48	0.92
52:BU:34:LYS:HA	52:BU:34:LYS:HE2	1.52	0.92
13:AM:39:ILE:HD12	13:AM:56:LEU:HD23	1.49	0.92
53:DV:15:GLU:HB3	53:DV:16:PRO:HD2	1.51	0.92
12:CL:70:ILE:HG12	12:CL:100:ILE:HD12	1.52	0.92
41:DG:67:LYS:HE3	41:DG:67:LYS:N	1.85	0.92
26:D1:51:VAL:HG21	26:D1:74:VAL:HG21	1.50	0.92
53:BV:15:GLU:HB3	53:BV:16:PRO:HD2	1.50	0.92
2:CB:44:LEU:H	2:CB:44:LEU:HD12	1.34	0.92
28:B3:8:LEU:HD13	28:B3:31:LEU:HD23	1.48	0.92
35:DA:2306:C:H4'	41:DG:136:ARG:NH2	1.84	0.92
22:AY:19:G:N2	22:AY:59:G:H2'	1.85	0.92
1:CA:180:U:H2'	1:CA:181:G:C5'	2.00	0.92
26:D1:52:ARG:HH22	35:DA:2218:U:H1'	1.34	0.92
55:BX:64:LYS:HZ2	55:BX:73:ARG:HH21	1.11	0.92
35:BA:271(M):G:H2'	35:BA:271(N):U:H5''	1.51	0.92
31:D6:12:GLU:HG2	31:D6:23:THR:HG22	1.52	0.92
1:CA:491:G:H2'	1:CA:492:G:H8	1.32	0.92
22:CV:12:U:H2'	22:CV:13:U:O4'	1.70	0.91
23:AW:12:U:H3	23:AW:26:G:N2	1.68	0.91
12:CL:35:GLY:HA3	12:CL:58:VAL:HG11	1.51	0.91
51:BT:28:VAL:HG22	51:BT:47:GLY:N	1.84	0.91
45:BN:47:ALA:HB2	45:BN:112:LEU:HD11	1.52	0.91
26:B1:45:ASN:HD21	35:BA:2090:G:H21	1.11	0.91
47:BP:38:GLN:HG3	47:BP:39:LYS:H	1.32	0.91
22:CY:20:G:N2	22:CY:58:C:N3	2.18	0.91
23:AW:15:G:H22	23:AW:23:A:H1'	1.34	0.91
53:BV:19:LYS:NZ	53:BV:20:LEU:H	1.66	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2801(A):A:H4'	35:BA:2802:G:H5'	1.51	0.91
8:CH:20:TYR:HE2	8:CH:75:ARG:HD2	1.33	0.91
41:BG:56:ALA:HB2	41:BG:153:ARG:HH11	1.32	0.91
55:DX:35:THR:O	55:DX:39:ILE:HG12	1.70	0.91
30:B5:20:ARG:HA	30:B5:23:HIS:ND1	1.85	0.91
1:AA:114:U:H2'	1:AA:115:G:C8	2.05	0.91
47:DP:115:LEU:HA	47:DP:134:ALA:HB2	1.52	0.91
35:DA:1484:G:C2'	35:DA:1485:G:H5''	2.00	0.91
12:AL:35:GLY:HA3	12:AL:58:VAL:HG11	1.51	0.91
53:DV:18:LEU:HD22	53:DV:19:LYS:H	1.36	0.91
53:BV:18:LEU:HD22	53:BV:19:LYS:H	1.34	0.91
56:BY:28:LYS:HB3	56:BY:38:ILE:H	1.34	0.91
53:DV:19:LYS:NZ	53:DV:20:LEU:H	1.67	0.91
23:CW:44:A:H2'	23:CW:45:U:O4'	1.71	0.91
35:DA:1689:A:H62	35:DA:1698:A:H2	1.16	0.91
27:D2:65:ASN:HB3	27:D2:69:ARG:HH12	1.36	0.91
47:BP:9:ASN:H	47:BP:10:PRO:HD2	1.34	0.91
42:DH:33:LEU:HD12	42:DH:75:ALA:HA	1.52	0.91
35:DA:145:G:C2'	35:DA:146:G:H5''	1.99	0.91
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HA	1.53	0.91
47:DP:9:ASN:H	47:DP:10:PRO:HD2	1.34	0.91
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.53	0.91
10:CJ:16:LEU:HD23	10:CJ:94:VAL:HG13	1.53	0.91
35:DA:1887:C:H2'	35:DA:1888:G:H5''	1.51	0.91
35:DA:322:A:H3'	40:DF:169:ASN:ND2	1.85	0.91
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.51	0.91
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.53	0.91
2:CB:172:ILE:H	2:CB:172:ILE:HD12	1.32	0.91
56:BY:27:VAL:HA	56:BY:28:LYS:HZ1	1.33	0.91
19:CS:20:LEU:HA	19:CS:23:ASN:HD22	1.36	0.91
15:AO:39:LEU:HD12	15:AO:56:LEU:HD13	1.52	0.91
47:BP:23:PRO:HD2	47:BP:33:ARG:NH2	1.85	0.90
12:AL:57:LYS:HA	12:AL:66:VAL:O	1.71	0.90
53:BV:19:LYS:HZ3	53:BV:20:LEU:N	1.68	0.90
2:AB:44:LEU:HD12	2:AB:44:LEU:H	1.35	0.90
23:AW:38:U:H3	23:AW:39:A:H62	1.12	0.90
35:DA:271(M):G:H2'	35:DA:271(N):U:H5''	1.53	0.90
43:BI:92:VAL:HG13	43:BI:97:ILE:HG13	1.54	0.90
57:DZ:74:VAL:HG12	57:DZ:86:VAL:HG12	1.53	0.90
31:B6:11:LEU:HD11	31:B6:26:ASN:HB2	1.54	0.90
22:AY:60:A:N1	57:BZ:186:GLU:HB2	1.86	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DO:35:VAL:HG11	46:DO:103:ALA:HB3	1.54	0.90
23:AW:13:U:C6	23:AW:13:U:H3'	2.04	0.90
51:BT:129:ARG:HH12	51:BT:131:ALA:HB2	1.36	0.90
53:DV:19:LYS:HZ3	53:DV:20:LEU:H	0.94	0.90
22:CY:20:G:H3'	22:CY:21:U:C5'	2.02	0.90
31:B6:12:GLU:HG2	31:B6:23:THR:HG22	1.52	0.90
35:BA:1484:G:C2'	35:BA:1485:G:H5''	1.99	0.90
23:CW:16:U:H1'	23:CW:62:U:H4'	1.52	0.90
31:D6:11:LEU:HD11	31:D6:26:ASN:HB2	1.53	0.90
35:DA:2392:A:H2	35:DA:2424:C:H42	1.16	0.90
27:B2:13:ALA:HA	27:B2:16:LEU:HD12	1.50	0.90
35:DA:2327:A:H2'	35:DA:2328:A:C8	2.07	0.90
41:DG:46:ALA:HB3	41:DG:82:LEU:HD11	1.53	0.90
23:CW:13:U:H3'	23:CW:13:U:C6	2.07	0.90
35:DA:2306:C:H4'	41:DG:136:ARG:HH22	1.37	0.90
1:AA:92:C:H2'	1:AA:93:G:C8	2.07	0.90
48:BQ:60:ARG:CA	57:BZ:179:ASP:HA	2.00	0.90
22:CV:30:U:H2'	22:CV:31:C:C6	2.06	0.90
33:B8:48:PHE:O	33:B8:49:VAL:HG13	1.72	0.90
47:DP:101:VAL:HB	47:DP:107:LYS:HA	1.51	0.90
53:BV:19:LYS:HZ3	53:BV:20:LEU:H	0.91	0.90
1:CA:475:G:H2'	1:CA:476:G:C8	2.07	0.90
35:BA:1537:G:H2'	35:BA:1538:G:H8	1.34	0.90
12:CL:75:HIS:HD2	12:CL:77:LEU:HB2	1.37	0.90
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	1.99	0.90
41:DG:122:PRO:HB3	41:DG:182:LYS:HA	1.53	0.90
35:DA:2801(A):A:H4'	35:DA:2802:G:H5'	1.51	0.90
47:BP:85:LEU:HD23	47:BP:85:LEU:H	1.37	0.90
56:DY:44:ILE:O	56:DY:62:GLU:HG3	1.71	0.90
55:BX:35:THR:O	55:BX:39:ILE:HG12	1.71	0.90
26:D1:23:LYS:HD2	26:D1:28:GLY:HA3	1.53	0.90
22:AY:52:C:H2'	22:AY:53:U:C6	2.07	0.90
23:AW:38:U:H3	23:AW:39:A:N6	1.70	0.89
12:CL:47:LYS:HB3	12:CL:48:PRO:CD	2.01	0.89
2:AB:136:VAL:O	2:AB:140:HIS:HB2	1.72	0.89
53:DV:21:ARG:HG2	53:DV:91:TYR:CD2	2.08	0.89
1:AA:537:G:H5''	12:AL:113:ARG:HH12	1.34	0.89
47:BP:48:PRO:HG2	47:BP:49:ARG:H	1.34	0.89
45:DN:15:LEU:HB2	45:DN:134:ARG:HB2	1.51	0.89
35:BA:2523:G:C2'	35:BA:2524:G:H5''	2.02	0.89
53:BV:21:ARG:HG2	53:BV:91:TYR:CD2	2.07	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:44:ILE:O	56:BY:62:GLU:HG3	1.70	0.89
23:AW:13:U:H2'	23:AW:14:A:H4'	1.55	0.89
43:BI:92:VAL:HG12	43:BI:120:ILE:HD13	1.54	0.89
50:BS:35:ILE:HD11	50:BS:99:LYS:HE2	1.51	0.89
48:BQ:34:LEU:HD11	48:BQ:129:THR:HB	1.51	0.89
1:CA:92:C:H2'	1:CA:93:G:C8	2.07	0.89
51:DT:129:ARG:HH12	51:DT:131:ALA:HB2	1.35	0.89
1:CA:1377:A:H2'	7:CG:7:ALA:CB	2.02	0.89
38:DD:30:GLU:HG3	38:DD:63:ARG:CZ	2.02	0.89
1:AA:266:G:H5''	1:AA:268:C:H41	1.37	0.89
57:BZ:179:ASP:O	57:BZ:182:LYS:HE2	1.71	0.89
22:AV:12:U:H2'	22:AV:13:U:O4'	1.72	0.89
47:DP:55:ARG:HG2	47:DP:56:SER:N	1.83	0.89
43:DI:109:ILE:HG22	43:DI:110:ASP:H	1.36	0.89
12:CL:45:PRO:HG2	12:CL:51:ALA:N	1.88	0.89
31:D6:37:ARG:HH21	35:DA:2286:A:H62	1.18	0.89
35:DA:991:C:H5'	35:DA:991:C:H6	1.36	0.89
40:DF:28:ILE:HG21	40:DF:116:ASP:HB2	1.52	0.89
39:BE:36:ARG:NH2	39:BE:88:GLY:HA2	1.86	0.89
2:AB:80:ILE:HD11	2:AB:208:ILE:HG23	1.52	0.89
50:BS:97:ARG:HH21	50:BS:98:VAL:HA	1.36	0.89
1:AA:81:U:H3	1:AA:88:A:H62	1.16	0.89
22:CY:56:U:H5'	57:DZ:180:VAL:HG12	1.54	0.89
22:AY:10:G:N2	22:AY:28:G:H1'	1.87	0.89
41:BG:46:ALA:HB3	41:BG:82:LEU:HD13	1.55	0.89
38:DD:43:ARG:HH11	38:DD:44:ASN:HD21	1.14	0.89
42:DH:41:MET:CG	42:DH:42:ARG:H	1.85	0.89
41:DG:63:ILE:HA	41:DG:143:GLU:CG	2.01	0.89
13:CM:91:ARG:HH21	13:CM:100:GLY:HA2	1.37	0.89
9:CI:127:LYS:NZ	22:CV:36:AG9:OP1	2.04	0.89
47:DP:48:PRO:HG2	47:DP:49:ARG:H	1.33	0.89
49:BR:10:LEU:HB3	49:BR:17:ARG:CD	2.03	0.89
2:AB:178:ARG:HH21	8:AH:68:ARG:HH22	1.19	0.89
2:CB:178:ARG:NH2	8:CH:68:ARG:HH22	1.69	0.89
45:BN:15:LEU:HB2	45:BN:134:ARG:HB2	1.53	0.89
39:BE:101:ARG:NH1	39:BE:171:GLU:HB2	1.88	0.89
39:BE:116:VAL:O	39:BE:117:MET:HB3	1.72	0.89
39:DE:116:VAL:O	39:DE:117:MET:HB3	1.72	0.89
43:BI:79:ILE:HG22	43:BI:81:VAL:HG12	1.54	0.89
51:BT:125:ARG:O	51:BT:128:GLU:HG3	1.73	0.89
52:DU:34:LYS:HE2	52:DU:34:LYS:HA	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:35:LYS:O	38:BD:37:LEU:N	2.06	0.89
50:BS:67:ARG:HB3	50:BS:67:ARG:HH11	1.38	0.89
22:AY:20:G:H3'	22:AY:21:U:C5'	2.02	0.88
51:DT:28:VAL:HG22	51:DT:47:GLY:N	1.88	0.88
28:D3:8:LEU:HB2	28:D3:28:LEU:HD13	1.54	0.88
50:DS:97:ARG:HH21	50:DS:98:VAL:HA	1.37	0.88
8:AH:20:TYR:HE2	8:AH:75:ARG:HD2	1.35	0.88
23:AW:31:C:H2'	23:AW:32:G:H8	1.37	0.88
23:AW:71:G:H2'	23:AW:72:C:H5'	1.54	0.88
1:AA:1377:A:H2'	7:AG:7:ALA:CB	2.03	0.88
25:D0:14:ARG:HB2	25:D0:14:ARG:HH11	1.38	0.88
19:AS:20:LEU:HA	19:AS:23:ASN:HD22	1.36	0.88
43:DI:92:VAL:HG12	43:DI:120:ILE:HD13	1.55	0.88
36:BB:7:G:C3'	36:BB:8:U:H5''	2.02	0.88
45:DN:2:LYS:HZ3	52:DU:95:LEU:HD21	1.37	0.88
53:BV:19:LYS:HG2	53:BV:94:LEU:HB2	1.53	0.88
45:BN:76:SER:O	45:BN:78:TYR:N	2.05	0.88
35:BA:881:G:H1	35:BA:895:U:H3	1.21	0.88
22:CY:60:A:N1	57:DZ:186:GLU:N	2.21	0.88
57:BZ:183:LEU:HG	57:BZ:186:GLU:OE2	1.73	0.88
51:DT:125:ARG:O	51:DT:128:GLU:HG3	1.73	0.88
47:BP:55:ARG:HG2	47:BP:56:SER:N	1.89	0.88
19:AS:45:VAL:HG12	19:AS:63:THR:HA	1.56	0.88
12:CL:57:LYS:HA	12:CL:66:VAL:O	1.73	0.88
30:D5:4:HIS:HB3	30:D5:5:PRO:CD	2.04	0.88
38:BD:43:ARG:HH11	38:BD:44:ASN:HD21	1.17	0.88
41:DG:63:ILE:HG21	41:DG:141:PHE:HB3	1.56	0.88
1:AA:1325:C:H4'	21:AU:17:THR:HG21	1.55	0.88
45:BN:111:PRO:HA	45:BN:114:ARG:NH1	1.86	0.88
49:DR:38:VAL:HB	49:DR:39:PRO:HD3	1.55	0.88
29:D4:13:ARG:HH11	29:D4:13:ARG:HB3	1.36	0.88
22:AV:30:U:H2'	22:AV:31:C:H6	1.35	0.88
35:DA:613:G:H8	35:DA:613:G:H5'	1.38	0.88
33:D8:59:LYS:HB2	33:D8:59:LYS:NZ	1.85	0.88
41:DG:101:ILE:HG22	41:DG:105:LYS:HE3	1.54	0.88
35:DA:2523:G:C2'	35:DA:2524:G:H5''	2.02	0.88
50:DS:34:HIS:HB3	50:DS:53:SER:HB3	1.54	0.88
1:CA:19:C:H5''	5:CE:86:ALA:CB	2.03	0.88
12:CL:83:VAL:HG13	12:CL:84:LEU:N	1.89	0.88
35:BA:483:A:H5''	56:BY:49:VAL:HG22	1.54	0.88
30:B5:4:HIS:HB3	30:B5:5:PRO:CD	2.01	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:96:ILE:HG22	56:BY:97:ARG:H	1.37	0.88
38:BD:30:GLU:HG3	38:BD:63:ARG:CZ	2.04	0.88
57:BZ:117:LEU:HD12	57:BZ:173:ALA:O	1.74	0.88
22:AV:10:G:N2	22:AV:28:G:H1'	1.88	0.88
56:DY:76:CYS:HB3	56:DY:96:ILE:HD11	1.55	0.88
23:CW:15:G:H22	23:CW:23:A:H1'	1.37	0.88
12:CL:83:VAL:HG13	12:CL:84:LEU:H	1.39	0.88
36:DB:20:C:C2'	36:DB:21:G:H5''	2.03	0.88
35:BA:1887:C:H2'	35:BA:1888:G:H5''	1.53	0.88
45:DN:43:THR:HB	45:DN:46:VAL:HG12	1.56	0.88
45:DN:76:SER:O	45:DN:78:TYR:N	2.06	0.88
51:DT:13:ARG:NH1	51:DT:13:ARG:HA	1.88	0.88
57:BZ:91:LEU:HD22	57:BZ:96:VAL:HG11	1.56	0.88
2:AB:91:PRO:HG2	2:AB:155:LEU:HD23	1.56	0.88
43:DI:79:ILE:HG22	43:DI:81:VAL:HG12	1.55	0.88
49:DR:10:LEU:HB3	49:DR:17:ARG:CD	2.04	0.88
41:BG:58:GLN:O	41:BG:62:LEU:HD13	1.73	0.88
22:CY:52:C:H2'	22:CY:53:U:C6	2.08	0.88
1:CA:1325:C:H4'	21:CU:17:THR:HG21	1.54	0.88
1:CA:736:C:H2'	1:CA:737:A:C8	2.09	0.88
27:D2:3:LEU:HD22	27:D2:7:ARG:NH1	1.89	0.88
2:CB:102:LEU:HD12	2:CB:102:LEU:H	1.39	0.88
23:AW:31:C:H2'	23:AW:32:G:C8	2.09	0.87
51:BT:28:VAL:HG22	51:BT:47:GLY:H	1.39	0.87
1:AA:736:C:H2'	1:AA:737:A:C8	2.10	0.87
1:AA:736:C:H2'	1:AA:737:A:H8	1.39	0.87
39:DE:101:ARG:NH1	39:DE:171:GLU:HB2	1.89	0.87
31:B6:19:ARG:HG2	35:BA:2400:G:H4'	1.56	0.87
29:B4:13:ARG:HB3	29:B4:13:ARG:HH11	1.36	0.87
47:DP:23:PRO:HD2	47:DP:33:ARG:NH2	1.88	0.87
33:D8:58:ILE:HG22	47:DP:49:ARG:HD2	1.56	0.87
2:CB:140:HIS:HA	2:CB:143:GLU:HG2	1.56	0.87
15:CO:39:LEU:HD12	15:CO:56:LEU:HD13	1.54	0.87
32:B7:8:ASN:HD22	32:B7:8:ASN:C	1.76	0.87
35:BA:1639:U:C2'	35:BA:1640:C:H5''	2.04	0.87
42:BH:33:LEU:HD12	42:BH:75:ALA:HA	1.54	0.87
35:BA:330:A:H2	35:BA:1210:A:H2'	1.39	0.87
39:DE:36:ARG:NH2	39:DE:88:GLY:HA2	1.88	0.87
33:B8:59:LYS:HD3	47:BP:50:ARG:HB3	1.57	0.87
56:BY:79:CYS:SG	56:BY:80:GLY:N	2.47	0.87
40:DF:25:PRO:HB3	40:DF:119:ARG:HD3	1.56	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:115:LEU:HA	47:BP:134:ALA:HB2	1.55	0.87
48:BQ:43:THR:OG1	48:BQ:46:GLN:HG3	1.75	0.87
35:BA:2392:A:H2	35:BA:2424:C:H42	1.19	0.87
37:BC:21:TYR:HB2	37:BC:225:ILE:HG22	1.56	0.87
22:CY:55:G:C2	22:CY:56:U:O2	2.28	0.87
23:AW:58:C:H42	35:BA:2169:A:H1'	1.38	0.87
12:AL:83:VAL:HG13	12:AL:84:LEU:N	1.88	0.87
30:B5:54:GLY:N	30:B5:55:ARG:HE	1.72	0.87
47:BP:16:ARG:HD3	47:BP:18:ARG:H	1.39	0.87
56:BY:76:CYS:HB3	56:BY:96:ILE:HD11	1.57	0.87
43:DI:113:ARG:HB3	43:DI:113:ARG:NH1	1.90	0.87
25:D0:5:LYS:HB3	25:D0:5:LYS:HZ2	1.39	0.87
33:D8:48:PHE:O	33:D8:49:VAL:HG13	1.73	0.87
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.38	0.87
56:DY:96:ILE:HG22	56:DY:97:ARG:H	1.37	0.87
35:BA:322:A:H3'	40:BF:169:ASN:ND2	1.89	0.87
47:BP:6:LEU:H	47:BP:6:LEU:HD23	1.38	0.87
3:AC:54:ARG:HH11	3:AC:56:ASP:HB2	1.40	0.87
23:AW:73:C:C3'	23:AW:74:C:H5''	2.04	0.87
22:AY:20:G:N2	22:AY:58:C:N3	2.22	0.87
22:AY:19:G:N1	22:AY:57:U:O2	2.06	0.87
23:CW:73:C:C3'	23:CW:74:C:H5''	2.05	0.87
36:DB:7:G:C3'	36:DB:8:U:H5''	2.03	0.87
22:CV:70:G:H2'	22:CV:71:G:H8	1.39	0.87
23:CW:61:A:C2'	23:CW:62:U:H5'	2.05	0.87
10:CJ:49:VAL:CG2	14:CN:41:ARG:HB2	2.05	0.87
5:CE:148:VAL:HG21	8:CH:107:LEU:HD22	1.57	0.87
41:DG:152:LEU:H	41:DG:152:LEU:HD23	1.39	0.87
41:BG:72:ARG:HD3	41:BG:86:MET:HA	1.55	0.87
36:BB:20:C:C2'	36:BB:21:G:H5''	2.04	0.87
33:D8:59:LYS:HD3	47:DP:50:ARG:HB3	1.54	0.87
51:BT:28:VAL:HB	51:BT:88:ILE:HG12	1.57	0.87
50:BS:34:HIS:HB3	50:BS:53:SER:HB3	1.53	0.87
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.57	0.87
12:CL:72:GLY:O	12:CL:73:GLU:HG3	1.75	0.87
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.39	0.87
10:CJ:30:SER:HA	10:CJ:80:LYS:HE2	1.56	0.86
1:CA:1277:C:C2'	1:CA:1278:U:H5'	2.05	0.86
2:AB:140:HIS:HA	2:AB:143:GLU:HG2	1.56	0.86
3:CC:54:ARG:HH11	3:CC:56:ASP:HB2	1.39	0.86
1:CA:114:U:H2'	1:CA:115:G:C8	2.10	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:19:C:H5''	5:AE:86:ALA:CB	2.05	0.86
22:CY:59:G:OP2	57:DZ:181:GLU:O	1.94	0.86
22:AY:20:G:H1	22:AY:58:C:H42	1.22	0.86
23:AW:10:G:H2'	23:AW:11:C:H6	1.40	0.86
23:CW:13:U:H2'	23:CW:14:A:C5'	2.05	0.86
2:CB:136:VAL:O	2:CB:140:HIS:HB2	1.73	0.86
22:CY:61:A:H2'	22:CY:62:U:H5'	1.57	0.86
47:DP:85:LEU:HD23	47:DP:85:LEU:H	1.38	0.86
5:CE:99:GLY:O	5:CE:117:ASP:HA	1.75	0.86
22:AV:17:C:H5''	22:AV:18:U:C6	2.10	0.86
23:AW:27:C:H3'	23:AW:28:G:H8	1.40	0.86
35:BA:613:G:H5'	35:BA:613:G:H8	1.40	0.86
12:AL:45:PRO:HG2	12:AL:51:ALA:N	1.89	0.86
57:DZ:40:ASP:OD1	57:DZ:42:VAL:HG12	1.76	0.86
28:B3:8:LEU:HB2	28:B3:28:LEU:HD13	1.57	0.86
2:AB:102:LEU:H	2:AB:102:LEU:HD12	1.38	0.86
40:BF:83:PHE:O	40:BF:84:VAL:HB	1.75	0.86
37:DC:21:TYR:HB2	37:DC:225:ILE:HG22	1.58	0.86
48:DQ:43:THR:HB	48:DQ:45:GLN:HE21	1.40	0.86
35:DA:1826:G:H4'	38:DD:242:ARG:NH2	1.89	0.86
35:BA:991:C:H6	35:BA:991:C:H5'	1.39	0.86
22:CY:57:U:C6	57:DZ:183:LEU:N	2.43	0.86
25:B0:5:LYS:HB3	25:B0:5:LYS:HZ2	1.39	0.86
51:DT:28:VAL:HB	51:DT:88:ILE:HG12	1.56	0.86
35:BA:2876:G:H4'	51:BT:3:ARG:NE	1.91	0.86
23:AW:20:G:H3'	23:AW:21:U:H5''	1.58	0.86
41:DG:105:LYS:HD3	41:DG:143:GLU:OE2	1.75	0.86
49:BR:38:VAL:HB	49:BR:39:PRO:HD3	1.56	0.86
38:BD:28:GLU:H	38:BD:29:PRO:HD2	1.41	0.86
3:CC:20:SER:HB2	3:CC:40:ARG:NH2	1.89	0.86
27:D2:46:GLN:HB2	27:D2:49:LYS:HE3	1.57	0.86
51:DT:88:ILE:HG22	51:DT:89:VAL:HG23	1.57	0.86
12:AL:75:HIS:HD2	12:AL:77:LEU:HB2	1.38	0.86
45:DN:57:ALA:H	45:DN:124:ALA:HA	1.39	0.86
1:AA:1277:C:C2'	1:AA:1278:U:H5'	2.06	0.86
47:DP:16:ARG:HD3	47:DP:18:ARG:H	1.41	0.86
56:BY:51:VAL:HG12	56:BY:53:PRO:HD2	1.55	0.86
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	1.57	0.86
57:DZ:19:ARG:HH12	57:DZ:84:GLU:HA	1.40	0.86
41:DG:67:LYS:H	41:DG:67:LYS:HE3	1.40	0.86
35:DA:2444:G:OP2	40:DF:68:LYS:HE2	1.76	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DY:51:VAL:HG12	56:DY:53:PRO:HD2	1.55	0.86
1:AA:1054:C:C4	22:AY:36:AG9:H1'	2.10	0.86
45:BN:57:ALA:H	45:BN:124:ALA:HA	1.40	0.86
51:BT:85:LYS:HB3	51:BT:85:LYS:HZ2	1.37	0.86
1:AA:1278:U:H5''	1:AA:1279:A:O4'	1.76	0.86
39:DE:4:ILE:HD13	39:DE:28:ALA:HB1	1.58	0.86
12:AL:70:ILE:HG12	12:AL:100:ILE:HD12	1.56	0.86
31:D6:19:ARG:HG2	35:DA:2400:G:H4'	1.58	0.86
1:CA:194:C:H2'	1:CA:195:A:H5''	1.58	0.86
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.55	0.86
45:DN:2:LYS:NZ	52:DU:95:LEU:HD21	1.90	0.86
23:CW:51:G:H1	23:CW:67:C:H42	1.24	0.86
26:B1:20:ARG:HG2	26:B1:20:ARG:HH11	1.39	0.86
22:CY:61:A:C2'	22:CY:62:U:H5'	2.06	0.85
23:AW:74:C:H2'	23:AW:74:C:O2	1.76	0.85
51:BT:13:ARG:HA	51:BT:13:ARG:NH1	1.90	0.85
23:AW:23:A:H3'	23:AW:48:G:O6	1.76	0.85
22:AY:61:A:H2'	22:AY:62:U:H5'	1.57	0.85
23:AW:11:C:H2'	23:AW:12:U:C6	2.11	0.85
51:DT:95:ARG:NH1	51:DT:95:ARG:HB3	1.91	0.85
57:DZ:104:PHE:HD1	57:DZ:139:VAL:HB	1.41	0.85
43:BI:113:ARG:NH1	43:BI:113:ARG:HB3	1.89	0.85
57:DZ:145:GLU:HG3	57:DZ:146:ILE:N	1.90	0.85
31:D6:23:THR:HG21	35:DA:2419:U:H5'	1.58	0.85
48:DQ:134:ARG:NH2	57:DZ:122:ARG:HE	1.73	0.85
9:AI:17:VAL:HA	9:AI:63:ILE:HG12	1.56	0.85
41:DG:31:VAL:HG22	41:DG:32:PRO:HD2	1.58	0.85
54:BW:10:VAL:O	54:BW:11:ARG:HB2	1.74	0.85
1:CA:383:A:H2'	1:CA:384:G:H5'	1.56	0.85
50:DS:67:ARG:HB3	50:DS:67:ARG:HH11	1.37	0.85
56:BY:10:GLY:HA2	56:BY:27:VAL:HG13	1.56	0.85
9:CI:17:VAL:HA	9:CI:63:ILE:HG12	1.57	0.85
12:AL:72:GLY:O	12:AL:73:GLU:HG3	1.76	0.85
22:CY:57:U:C5	57:DZ:181:GLU:O	2.29	0.85
23:CW:73:C:H2'	23:CW:74:C:H5''	1.58	0.85
46:BO:35:VAL:HG11	46:BO:103:ALA:HB3	1.55	0.85
30:D5:54:GLY:N	30:D5:55:ARG:HE	1.74	0.85
38:DD:35:LYS:O	38:DD:37:LEU:N	2.09	0.85
35:DA:330:A:H2	35:DA:1210:A:H2'	1.39	0.85
23:AW:25:A:C2'	23:AW:26:G:C8	2.58	0.85
23:AW:51:G:H1	23:AW:67:C:H42	1.24	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:10:LEU:HD22	49:BR:17:ARG:HD3	1.58	0.85
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.58	0.85
2:AB:15:VAL:HG21	2:AB:209:ARG:HH21	1.41	0.85
22:CY:57:U:O5'	57:DZ:182:LYS:HB3	1.69	0.85
23:AW:39:A:H2'	23:AW:41:C:OP1	1.77	0.85
33:B8:58:ILE:HG22	47:BP:49:ARG:HD2	1.58	0.85
19:CS:45:VAL:HG12	19:CS:63:THR:HA	1.56	0.85
30:D5:20:ARG:HA	30:D5:23:HIS:ND1	1.91	0.85
2:CB:15:VAL:HG21	2:CB:209:ARG:HH21	1.41	0.85
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.11	0.85
22:CY:55:G:H2'	22:CY:56:U:H1'	1.59	0.85
51:DT:80:SER:HB3	51:DT:81:PRO:HD3	1.58	0.85
35:DA:1902:C:O2'	38:DD:244:ARG:HB2	1.77	0.85
10:AJ:30:SER:HA	10:AJ:80:LYS:HE2	1.56	0.85
35:DA:545:C:H3'	35:DA:547:A:H5''	1.58	0.85
5:AE:76:ILE:HG12	5:AE:77:PRO:HD2	1.59	0.85
8:AH:86:ILE:HG21	8:AH:133:LEU:HD13	1.59	0.85
15:CO:82:ILE:HG12	15:CO:87:ILE:HG13	1.58	0.85
40:BF:25:PRO:HB3	40:BF:119:ARG:HD3	1.58	0.85
57:DZ:144:LEU:HD21	57:DZ:150:LEU:HD22	1.59	0.85
19:CS:16:LEU:HD12	19:CS:16:LEU:H	1.42	0.85
35:DA:881:G:H1	35:DA:895:U:H3	1.22	0.85
2:CB:91:PRO:HG2	2:CB:155:LEU:HD23	1.56	0.85
41:BG:130:ASN:ND2	41:BG:160:VAL:HG13	1.91	0.85
54:BW:1:MET:HE3	54:BW:2:GLU:H	1.42	0.85
10:AJ:16:LEU:HD23	10:AJ:94:VAL:HG13	1.55	0.85
51:BT:65:LYS:HA	51:BT:65:LYS:NZ	1.90	0.85
43:DI:74:ASN:ND2	43:DI:74:ASN:H	1.75	0.85
5:AE:99:GLY:O	5:AE:117:ASP:HA	1.77	0.85
1:CA:1401:G:H8	1:CA:1401:G:OP1	1.60	0.85
26:D1:45:ASN:HD21	26:D1:47:GLN:HE21	1.25	0.85
13:CM:23:TYR:O	13:CM:66:LEU:HA	1.77	0.85
1:AA:1057:G:C5'	3:AC:154:SER:HB2	2.07	0.84
45:DN:13:TRP:O	45:DN:135:PRO:HD2	1.77	0.84
29:D4:14:ILE:HA	29:D4:31:ILE:HB	1.59	0.84
26:B1:45:ASN:ND2	35:BA:2090:G:H21	1.75	0.84
47:DP:6:LEU:H	47:DP:6:LEU:HD23	1.41	0.84
48:BQ:43:THR:HB	48:BQ:45:GLN:HE21	1.42	0.84
37:BC:48:LEU:HD11	37:BC:172:ILE:HG22	1.58	0.84
38:DD:28:GLU:H	38:DD:29:PRO:HD2	1.40	0.84
26:B1:51:VAL:HG13	26:B1:58:ILE:HD11	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:149:ARG:HA	42:BH:162:ILE:HD11	1.58	0.84
22:CY:58:C:C5'	57:DZ:179:ASP:OD1	2.24	0.84
56:DY:10:GLY:HA2	56:DY:27:VAL:HG13	1.58	0.84
32:B7:12:ARG:HD3	32:B7:46:VAL:HG21	1.58	0.84
3:AC:18:TRP:HE3	3:AC:18:TRP:H	1.22	0.84
1:AA:383:A:H2'	1:AA:384:G:H5'	1.59	0.84
57:DZ:118:GLN:NE2	57:DZ:175:VAL:HG11	1.91	0.84
42:DH:149:ARG:HA	42:DH:162:ILE:HD11	1.58	0.84
4:AD:22:LYS:HG3	4:AD:26:CYS:SG	2.16	0.84
23:CW:13:U:H2'	23:CW:14:A:H4'	1.59	0.84
35:BA:676:A:H8	35:BA:2069:G:H21	1.25	0.84
35:BA:528:A:O2'	35:BA:529:A:H5'	1.77	0.84
23:CW:31:C:H2'	23:CW:32:G:H8	1.42	0.84
23:AW:61:A:C2'	23:AW:62:U:H5'	2.07	0.84
45:BN:43:THR:HB	45:BN:46:VAL:HG12	1.57	0.84
39:DE:101:ARG:HH11	39:DE:171:GLU:HB2	1.38	0.84
22:CY:35:U:H3'	22:CY:36:AG9:H15'	1.58	0.84
35:BA:2444:G:OP2	40:BF:68:LYS:HE2	1.77	0.84
22:AY:61:A:C2'	22:AY:62:U:H5'	2.06	0.84
22:AY:68:A:H2'	22:AY:69:G:O4'	1.77	0.84
35:BA:1902:C:O2'	38:BD:244:ARG:HB2	1.77	0.84
3:CC:119:ARG:HH21	3:CC:140:ARG:NH2	1.76	0.84
47:DP:47:ASP:HB3	47:DP:48:PRO:CA	2.08	0.84
1:CA:736:C:H2'	1:CA:737:A:H8	1.38	0.84
1:AA:373:A:H2'	1:AA:374:A:H8	1.40	0.84
14:CN:27:CYS:HG	58:CN:1000:ZN:ZN	0.87	0.84
1:CA:1196:U:N3	24:CX:23:A:N3	2.24	0.84
23:AW:10:G:H2'	23:AW:11:C:C6	2.11	0.84
19:AS:16:LEU:H	19:AS:16:LEU:HD12	1.42	0.84
23:CW:20:G:H3'	23:CW:21:U:H5''	1.59	0.84
1:CA:1256:A:H61	1:CA:1278:U:H1'	1.43	0.84
35:BA:1536:C:H2'	35:BA:1537:G:O4'	1.78	0.84
45:BN:111:PRO:HA	45:BN:114:ARG:HH12	1.39	0.84
7:CG:120:ILE:HD12	7:CG:120:ILE:H	1.42	0.84
35:DA:676:A:H2	35:DA:802:A:H61	1.25	0.84
53:DV:19:LYS:HZ3	53:DV:20:LEU:N	1.73	0.84
10:AJ:49:VAL:CG2	14:AN:41:ARG:HB2	2.07	0.84
35:BA:2327:A:H2'	35:BA:2328:A:C8	2.12	0.84
35:DA:612:C:H2'	35:DA:613:G:C5'	2.04	0.84
47:DP:58:THR:O	47:DP:61:ARG:NE	2.10	0.84
22:AY:35:U:H3'	22:AY:36:AG9:H15'	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:10:G:H2'	23:CW:11:C:C6	2.13	0.84
12:AL:83:VAL:HG13	12:AL:84:LEU:H	1.42	0.84
1:CA:1278:U:H5''	1:CA:1279:A:O4'	1.77	0.84
43:BI:74:ASN:HD22	43:BI:74:ASN:N	1.74	0.84
35:DA:1826:G:H4'	38:DD:242:ARG:HH21	1.41	0.84
35:DA:1047:G:H2'	35:DA:1110:G:N2	1.93	0.84
35:DA:1639:U:C2'	35:DA:1640:C:H5''	2.07	0.84
39:BE:36:ARG:HH21	39:BE:88:GLY:CA	1.90	0.84
13:CM:116:THR:CG2	22:CV:31:C:H4'	2.08	0.84
35:BA:197:A:H5'	35:BA:197:A:H8	1.41	0.84
2:CB:75:LYS:HA	2:CB:78:GLN:HE21	1.42	0.84
52:DU:108:GLU:HG3	53:DV:44:LYS:HD3	1.58	0.84
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.03	0.84
3:CC:18:TRP:HE3	3:CC:18:TRP:H	1.22	0.84
2:AB:121:LEU:HA	2:AB:124:SER:HB3	1.60	0.84
5:AE:42:GLY:HA3	5:AE:66:MET:HG2	1.60	0.84
4:CD:110:PHE:HD1	4:CD:110:PHE:H	1.25	0.84
22:CY:26:G:H2'	22:CY:27:C:C6	2.13	0.83
22:CY:68:A:H2'	22:CY:69:G:O4'	1.78	0.83
22:CV:10:G:N2	22:CV:28:G:H1'	1.93	0.83
1:CA:1057:G:C5'	3:CC:154:SER:HB2	2.07	0.83
43:BI:113:ARG:HH11	43:BI:113:ARG:HB3	1.42	0.83
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.03	0.83
41:DG:63:ILE:HA	41:DG:143:GLU:HG3	1.57	0.83
43:DI:74:ASN:HD22	43:DI:74:ASN:N	1.71	0.83
35:BA:1826:G:H4'	38:BD:242:ARG:NH2	1.93	0.83
22:CV:17:C:H5''	22:CV:18:U:C6	2.13	0.83
1:CA:373:A:H2'	1:CA:374:A:H8	1.42	0.83
1:AA:161:A:H2'	1:AA:162:A:H8	1.42	0.83
35:BA:2645:G:H3'	35:BA:2646:C:H5'	1.59	0.83
43:DI:92:VAL:HG13	43:DI:97:ILE:HG13	1.57	0.83
39:BE:4:ILE:HD13	39:BE:28:ALA:HB1	1.58	0.83
4:CD:126:ILE:HG22	4:CD:127:THR:N	1.94	0.83
35:DA:528:A:O2'	35:DA:529:A:H5'	1.78	0.83
2:AB:75:LYS:HA	2:AB:78:GLN:HE21	1.43	0.83
48:DQ:55:VAL:HG12	48:DQ:64:ILE:HD12	1.59	0.83
23:AW:70:G:C5	23:AW:71:G:C5	2.66	0.83
31:B6:23:THR:HG21	35:BA:2419:U:H5'	1.59	0.83
43:DI:77:LEU:HD22	43:DI:140:LEU:HA	1.60	0.83
52:DU:83:LEU:HD12	52:DU:88:ILE:HD12	1.60	0.83
53:BV:64:HIS:ND1	53:BV:92:THR:HG22	1.93	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:97:ASP:O	41:DG:101:ILE:HG13	1.77	0.83
50:DS:58:LEU:HD23	50:DS:65:VAL:HG13	1.61	0.83
23:CW:51:G:H1	23:CW:67:C:N4	1.77	0.83
57:DZ:118:GLN:HE21	57:DZ:175:VAL:HG11	1.41	0.83
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.60	0.83
7:CG:79:ARG:HG2	7:CG:81:GLY:H	1.43	0.83
17:AQ:57:VAL:HG12	17:AQ:76:LEU:HA	1.57	0.83
37:DC:48:LEU:HD11	37:DC:172:ILE:HG22	1.58	0.83
22:CY:24:A:N6	22:CY:48:G:N2	2.27	0.83
23:AW:10:G:O6	23:AW:27:C:H2'	1.78	0.83
47:DP:30:THR:CG2	47:DP:31:ALA:H	1.91	0.83
12:AL:48:PRO:C	12:AL:49:ASN:HD22	1.82	0.83
1:AA:194:C:H2'	1:AA:195:A:H5''	1.57	0.83
52:BU:108:GLU:HG3	53:BV:44:LYS:HD3	1.60	0.83
3:AC:20:SER:HB2	3:AC:40:ARG:NH2	1.91	0.83
4:CD:189:PRO:HB2	4:CD:194:LEU:HD21	1.60	0.83
5:CE:42:GLY:HA3	5:CE:66:MET:HG2	1.58	0.83
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.58	0.83
22:AY:26:G:H2'	22:AY:27:C:C6	2.12	0.83
1:AA:1256:A:H61	1:AA:1278:U:H1'	1.42	0.83
41:DG:4:ASP:HA	41:DG:8:LYS:HD3	1.58	0.83
1:CA:266:G:H5''	1:CA:268:C:H41	1.44	0.83
54:DW:10:VAL:O	54:DW:11:ARG:HB2	1.76	0.83
35:DA:197:A:H8	35:DA:197:A:H5'	1.44	0.83
3:AC:150:LYS:HG3	3:AC:169:ALA:HB2	1.60	0.83
22:AY:10:G:H2'	22:AY:11:C:C6	2.13	0.83
22:AV:70:G:H2'	22:AV:71:G:C8	2.13	0.83
23:AW:13:U:H2'	23:AW:14:A:C5'	2.09	0.83
56:BY:81:LYS:HD3	56:BY:97:ARG:HB3	1.60	0.83
35:BA:545:C:H3'	35:BA:547:A:H5''	1.58	0.83
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.59	0.83
22:AV:4:C:O2'	22:AV:5:C:H6	1.60	0.83
36:DB:6:C:O2'	50:DS:29:PHE:HE2	1.61	0.83
43:BI:77:LEU:HD22	43:BI:140:LEU:HA	1.60	0.83
12:CL:66:VAL:HG12	12:CL:67:THR:H	1.43	0.83
41:DG:109:VAL:HG21	41:DG:142:PRO:HB3	1.60	0.83
10:CJ:49:VAL:HG23	14:CN:41:ARG:HB2	1.61	0.83
1:AA:1116:C:H2'	1:AA:1117:G:H5''	1.60	0.83
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.43	0.83
25:D0:26:TYR:H	25:D0:29:GLN:NE2	1.76	0.83
32:D7:8:ASN:C	32:D7:8:ASN:HD22	1.77	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:30:THR:HG22	47:BP:31:ALA:N	1.93	0.83
23:AW:52:C:H2'	23:AW:53:U:C6	2.14	0.83
3:CC:77:ILE:HA	3:CC:84:ILE:HB	1.61	0.83
35:DA:1779:U:H5	35:DA:1784:A:N7	1.77	0.83
22:AY:11:C:H2'	22:AY:12:U:H6	1.41	0.83
23:CW:73:C:C2'	23:CW:74:C:H5''	2.08	0.83
23:CW:38:U:H3	23:CW:39:A:N6	1.75	0.83
1:CA:728:A:H2'	1:CA:729:A:C8	2.13	0.83
39:BE:111:ARG:HA	49:BR:2:ARG:HG3	1.61	0.83
41:BG:91:ARG:HD2	41:BG:92:VAL:N	1.93	0.83
35:DA:2317:C:C2'	35:DA:2318:G:H5'	2.09	0.83
7:AG:120:ILE:HD12	7:AG:120:ILE:H	1.42	0.83
48:BQ:55:VAL:HG12	48:BQ:64:ILE:HD12	1.61	0.83
38:BD:261:LYS:HZ1	38:BD:263:ARG:HH22	1.23	0.83
3:AC:206:GLU:HG2	3:AC:207:VAL:H	1.43	0.83
35:DA:2036:C:H6	35:DA:2036:C:H5'	1.44	0.83
35:DA:2158:A:H4'	35:DA:2159:G:H5'	1.61	0.83
4:AD:9:CYS:SG	4:AD:31:CYS:O	2.37	0.83
23:AW:51:G:H1	23:AW:67:C:N4	1.77	0.83
47:BP:58:THR:O	47:BP:61:ARG:NE	2.11	0.83
12:CL:56:ALA:O	12:CL:67:THR:HA	1.78	0.83
49:BR:2:ARG:HD3	49:BR:5:LYS:HE2	1.60	0.83
27:D2:2:LYS:HA	27:D2:5:GLU:OE1	1.79	0.83
29:B4:14:ILE:HA	29:B4:31:ILE:HB	1.61	0.83
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.60	0.83
40:DF:8:GLN:HB3	40:DF:126:VAL:HA	1.60	0.83
55:BX:12:VAL:HG21	55:BX:17:ALA:HB1	1.61	0.83
46:DO:107:ARG:NH1	51:DT:35:LYS:HD2	1.94	0.83
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.44	0.83
22:CY:31:C:C2'	22:CY:32:G:H5''	2.09	0.82
56:DY:81:LYS:HD3	56:DY:97:ARG:HB3	1.60	0.82
35:DA:2310:A:HO2'	35:DA:2311:A:H5'	1.40	0.82
52:BU:83:LEU:HD12	52:BU:88:ILE:HD12	1.61	0.82
29:D4:34:GLU:HB3	41:DG:113:ARG:HH11	1.41	0.82
13:AM:91:ARG:HH21	13:AM:100:GLY:HA2	1.42	0.82
35:BA:2103:C:H3'	35:BA:2104:G:H5''	1.61	0.82
35:BA:2580:U:H5'	39:BE:131:ALA:HB2	1.60	0.82
19:AS:43:GLU:O	19:AS:43:GLU:HG2	1.77	0.82
3:AC:134:ILE:HD11	3:AC:153:VAL:HG23	1.61	0.82
23:AW:45:U:H3'	23:AW:46:U:C6	2.13	0.82
22:CV:4:C:O2'	22:CV:5:C:H6	1.62	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:10:LEU:HD22	49:DR:17:ARG:HD3	1.59	0.82
35:DA:2132:U:H3	37:DC:6:LYS:HB2	1.44	0.82
7:AG:79:ARG:HG2	7:AG:81:GLY:H	1.44	0.82
22:CY:24:A:H62	22:CY:48:G:N2	1.77	0.82
46:DO:105:GLU:HA	46:DO:108:GLU:OE2	1.79	0.82
12:CL:36:VAL:N	12:CL:58:VAL:HG13	1.95	0.82
52:BU:70:ARG:HA	52:BU:74:LEU:O	1.78	0.82
29:B4:1:MET:SD	41:BG:98:ARG:HG3	2.19	0.82
5:CE:145:LYS:O	5:CE:149:GLU:HG2	1.79	0.82
15:AO:82:ILE:HG12	15:AO:87:ILE:HG13	1.61	0.82
1:CA:161:A:H2'	1:CA:162:A:H8	1.43	0.82
57:DZ:61:LEU:H	57:DZ:61:LEU:HD23	1.42	0.82
36:DB:104:U:O2'	57:DZ:72:ARG:HG2	1.78	0.82
18:AR:56:THR:HB	18:AR:58:LEU:HD13	1.60	0.82
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.59	0.82
1:AA:728:A:H2'	1:AA:729:A:C8	2.14	0.82
22:CY:60:A:H2	57:DZ:186:GLU:HB2	1.37	0.82
23:AW:73:C:H2'	23:AW:74:C:H5''	1.62	0.82
51:DT:28:VAL:HG22	51:DT:47:GLY:H	1.43	0.82
13:AM:23:TYR:O	13:AM:66:LEU:HA	1.80	0.82
35:BA:1047:G:H2'	35:BA:1110:G:N2	1.94	0.82
1:CA:1116:C:H2'	1:CA:1117:G:H5''	1.61	0.82
22:CY:10:G:H2'	22:CY:11:C:C6	2.15	0.82
23:AW:73:C:C2'	23:AW:74:C:H5''	2.09	0.82
23:CW:31:C:H2'	23:CW:32:G:C8	2.14	0.82
42:BH:7:LEU:HD23	42:BH:69:ARG:CD	2.08	0.82
1:AA:1054:C:N4	22:AY:36:AG9:C1'	2.41	0.82
12:CL:48:PRO:C	12:CL:49:ASN:HD22	1.82	0.82
41:BG:124:SER:HB2	41:BG:131:TYR:CE1	2.15	0.82
35:BA:2158:A:H4'	35:BA:2159:G:H5'	1.62	0.82
22:CY:63:C:H5'	57:DZ:186:GLU:HG3	1.61	0.82
23:AW:39:A:C5	23:AW:41:C:OP2	2.32	0.82
42:BH:41:MET:HG3	42:BH:42:ARG:N	1.95	0.82
47:DP:30:THR:HG22	47:DP:31:ALA:N	1.93	0.82
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.61	0.82
21:AU:12:LYS:HB3	21:AU:22:ARG:HD2	1.61	0.82
54:DW:78:GLU:OE2	54:DW:99:ARG:HD2	1.79	0.82
1:AA:439:A:H2'	1:AA:441:A:O4'	1.80	0.82
37:DC:53:ARG:HD3	37:DC:53:ARG:H	1.45	0.82
22:AV:20:G:C3'	22:AV:21:U:H5''	2.09	0.82
2:AB:178:ARG:NH2	8:AH:68:ARG:HH22	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:91:PRO:HG3	2:CB:154:LEU:HB2	1.61	0.82
1:CA:1479:C:H2'	1:CA:1480:G:H8	1.44	0.82
27:B2:55:ARG:HG3	27:B2:55:ARG:HH11	1.44	0.82
22:CY:57:U:P	57:DZ:182:LYS:HB2	2.19	0.82
35:BA:2313:C:H2'	35:BA:2314:C:H6	1.44	0.82
47:BP:61:ARG:H	47:BP:61:ARG:HD2	1.45	0.82
56:DY:79:CYS:SG	56:DY:80:GLY:N	2.53	0.82
38:DD:43:ARG:HH11	38:DD:44:ASN:ND2	1.78	0.82
49:DR:7:GLY:O	49:DR:8:ARG:HG2	1.80	0.82
53:DV:21:ARG:HG2	53:DV:91:TYR:HD2	1.44	0.82
2:CB:178:ARG:HH21	8:CH:68:ARG:HH22	1.26	0.82
27:D2:3:LEU:HD22	27:D2:7:ARG:HH12	1.45	0.82
18:CR:70:ILE:O	18:CR:74:ARG:HG3	1.80	0.82
46:BO:18:LYS:HB2	46:BO:45:GLU:HG2	1.62	0.82
54:DW:22:ASP:HA	54:DW:25:ARG:HH12	1.43	0.82
1:AA:67:C:H2'	1:AA:68:G:C8	2.15	0.82
35:DA:2876:G:H4'	51:DT:3:ARG:NE	1.92	0.82
4:CD:26:CYS:HG	4:CD:31:CYS:HG	1.14	0.82
45:BN:2:LYS:NZ	52:BU:95:LEU:HD21	1.94	0.82
26:B1:57:GLU:O	26:B1:58:ILE:HG12	1.80	0.82
3:AC:77:ILE:HA	3:AC:84:ILE:HB	1.62	0.82
54:BW:78:GLU:OE2	54:BW:99:ARG:HD2	1.80	0.82
39:DE:69:LYS:HE3	39:DE:90:THR:H	1.44	0.82
35:DA:2103:C:H3'	35:DA:2104:G:H5''	1.61	0.82
57:DZ:69:THR:HG22	57:DZ:90:VAL:HA	1.60	0.82
22:CV:20:G:C3'	22:CV:21:U:H5''	2.10	0.82
12:AL:36:VAL:N	12:AL:58:VAL:HG13	1.94	0.82
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.60	0.82
45:BN:13:TRP:O	45:BN:135:PRO:HD2	1.79	0.82
35:DA:1019:U:HO2'	35:DA:1021:A:H2	1.26	0.82
13:AM:2:ALA:HB3	13:AM:9:ILE:HG23	1.62	0.82
51:BT:95:ARG:NH1	51:BT:95:ARG:HB3	1.95	0.82
4:AD:110:PHE:H	4:AD:110:PHE:HD1	1.25	0.82
40:BF:8:GLN:HB3	40:BF:126:VAL:HA	1.60	0.82
22:CY:63:C:O5'	57:DZ:186:GLU:CD	2.10	0.81
31:B6:45:LYS:HG2	35:BA:2371:G:H4'	1.61	0.81
43:DI:140:LEU:HD21	43:DI:142:VAL:HG23	1.61	0.81
12:AL:47:LYS:HZ3	12:AL:48:PRO:HD3	1.44	0.81
3:AC:108:ASN:ND2	3:AC:144:SER:HB2	1.95	0.81
56:BY:28:LYS:NZ	56:BY:28:LYS:H	1.76	0.81
15:AO:33:THR:HG21	15:AO:85:LEU:HD21	1.60	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:156:U:H4'	35:DA:157:U:H5''	1.62	0.81
18:CR:56:THR:HB	18:CR:58:LEU:HD13	1.61	0.81
54:BW:22:ASP:HA	54:BW:25:ARG:HH12	1.45	0.81
35:BA:2893:G:H5'	35:BA:2894:G:H5'	1.60	0.81
3:CC:16:ARG:NH1	3:CC:16:ARG:HB2	1.95	0.81
19:CS:43:GLU:O	19:CS:43:GLU:HG2	1.77	0.81
23:CW:27:C:H3'	23:CW:28:G:C8	2.15	0.81
52:DU:70:ARG:HA	52:DU:74:LEU:O	1.79	0.81
51:BT:80:SER:HB3	51:BT:81:PRO:HD3	1.58	0.81
35:BA:1453:U:H5'	49:BR:63:ARG:NE	1.94	0.81
57:DZ:108:PRO:HB2	57:DZ:144:LEU:O	1.79	0.81
25:B0:26:TYR:H	25:B0:29:GLN:NE2	1.78	0.81
35:DA:1038:C:C3'	35:DA:1039:G:H5''	2.09	0.81
22:AV:27:C:H2'	22:AV:28:G:O4'	1.81	0.81
23:CW:23:A:H3'	23:CW:48:G:O6	1.80	0.81
52:DU:112:ARG:NH1	53:DV:46:VAL:HG11	1.96	0.81
57:BZ:61:LEU:CD2	57:BZ:61:LEU:H	1.92	0.81
1:AA:1442(A):G:H2'	51:BT:118:ARG:HH11	1.42	0.81
35:DA:1536:C:H2'	35:DA:1537:G:O4'	1.79	0.81
2:AB:17:PHE:HB3	2:AB:44:LEU:HD21	1.61	0.81
1:CA:1400:C:N4	22:CV:36:AG9:C4	2.43	0.81
2:AB:209:ARG:HH11	2:AB:239:VAL:HG11	1.45	0.81
3:CC:134:ILE:HD11	3:CC:153:VAL:HG23	1.60	0.81
38:DD:268:ARG:HH11	38:DD:268:ARG:HB3	1.46	0.81
35:DA:2645:G:H3'	35:DA:2646:C:H5'	1.62	0.81
53:DV:64:HIS:ND1	53:DV:92:THR:HG22	1.94	0.81
35:DA:2893:G:H5'	35:DA:2894:G:H5'	1.60	0.81
35:BA:2833:G:H3'	35:BA:2834:G:H5'	1.62	0.81
35:BA:1658:C:OP1	39:BE:132:HIS:ND1	2.13	0.81
1:CA:1498:U:H1'	1:CA:1499:A:N7	1.93	0.81
4:AD:88:VAL:O	4:AD:92:VAL:HG23	1.80	0.81
1:CA:1505:G:H5''	1:CA:1506:U:H5''	1.62	0.81
22:AY:57:U:C6	57:BZ:182:LYS:C	2.53	0.81
38:BD:44:ASN:CB	38:BD:49:ILE:HA	2.11	0.81
45:BN:133:GLN:HG2	45:BN:135:PRO:HD3	1.60	0.81
52:DU:92:ARG:NH2	53:DV:10:LYS:HG2	1.96	0.81
57:BZ:61:LEU:HD23	57:BZ:61:LEU:N	1.94	0.81
38:DD:30:GLU:HG3	38:DD:63:ARG:NE	1.96	0.81
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	1.61	0.81
21:CU:12:LYS:HB3	21:CU:22:ARG:HD2	1.61	0.81
35:BA:2146:C:H4'	35:BA:2147:G:C8	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1540:U:H3'	35:BA:1541:G:H3'	1.63	0.81
23:CW:39:A:H2'	23:CW:41:C:OP1	1.81	0.81
47:BP:47:ASP:HB3	47:BP:48:PRO:CA	2.09	0.81
57:BZ:175:VAL:HB	57:BZ:176:PRO:HD2	1.63	0.81
49:DR:11:ASN:O	49:DR:12:ARG:HG3	1.81	0.81
35:BA:1639:U:O2'	35:BA:1640:C:H5''	1.80	0.81
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.61	0.81
5:CE:7:GLU:HG2	5:CE:112:LEU:HB3	1.62	0.81
57:BZ:53:ILE:HA	57:BZ:71:VAL:HG23	1.61	0.81
39:DE:10:GLY:HA3	51:DT:8:LYS:NZ	1.96	0.81
43:DI:27:ARG:HG3	43:DI:27:ARG:HH11	1.45	0.81
3:CC:206:GLU:HG2	3:CC:207:VAL:H	1.44	0.81
22:CY:57:U:H6	57:DZ:182:LYS:CB	1.93	0.81
4:CD:9:CYS:SG	4:CD:31:CYS:O	2.38	0.81
51:DT:65:LYS:HA	51:DT:65:LYS:NZ	1.94	0.81
35:BA:2394:C:OP1	47:BP:63:PRO:HD2	1.80	0.81
56:DY:28:LYS:NZ	56:DY:28:LYS:H	1.79	0.81
39:DE:111:ARG:HA	49:DR:2:ARG:HG3	1.61	0.81
32:D7:12:ARG:HD3	32:D7:46:VAL:HG21	1.61	0.81
35:BA:1038:C:H3'	35:BA:1039:G:H5''	1.63	0.81
1:CA:67:C:H2'	1:CA:68:G:C8	2.15	0.81
4:CD:22:LYS:HG3	4:CD:26:CYS:SG	2.21	0.81
22:AV:53:U:H1'	22:AV:66:G:N2	1.96	0.81
31:B6:45:LYS:HE3	35:BA:2371:G:H5''	1.62	0.81
43:DI:113:ARG:HH11	43:DI:113:ARG:HB3	1.41	0.81
12:AL:56:ALA:O	12:AL:67:THR:HA	1.81	0.81
51:BT:88:ILE:HG22	51:BT:89:VAL:HG23	1.60	0.81
36:DB:80:U:H2'	36:DB:81:G:N2	1.96	0.81
2:CB:17:PHE:HB3	2:CB:44:LEU:HD21	1.62	0.81
50:BS:58:LEU:HD23	50:BS:65:VAL:HG13	1.63	0.81
30:B5:51:TYR:CE2	30:B5:52:TYR:HB2	2.16	0.81
48:DQ:43:THR:OG1	48:DQ:46:GLN:HG3	1.81	0.81
35:BA:1038:C:C3'	35:BA:1039:G:H5''	2.11	0.81
8:CH:86:ILE:HG21	8:CH:133:LEU:HD13	1.61	0.81
22:AY:30:U:H2'	22:AY:31:C:C6	2.16	0.81
53:DV:52:VAL:HG13	53:DV:55:ALA:HB3	1.62	0.81
39:BE:69:LYS:HE3	39:BE:90:THR:H	1.44	0.81
43:BI:100:ALA:HA	43:BI:103:ARG:HD2	1.63	0.81
36:BB:52:A:H62	50:BS:33:LYS:HG3	1.45	0.81
35:BA:2245:U:H5'	35:BA:2246:G:H5'	1.63	0.81
4:AD:126:ILE:HG22	4:AD:127:THR:N	1.96	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:37:VAL:HA	6:CF:65:VAL:HG12	1.62	0.81
22:CY:60:A:N7	57:DZ:184:ALA:HA	1.96	0.81
23:CW:4:C:HO2'	23:CW:5:C:H5	1.25	0.81
35:DA:676:A:H8	35:DA:2069:G:H21	1.26	0.81
20:CT:75:ASN:N	20:CT:75:ASN:HD22	1.77	0.81
3:AC:16:ARG:NH1	3:AC:16:ARG:HB2	1.94	0.81
35:DA:2146:C:H4'	35:DA:2147:G:C8	2.15	0.81
22:CY:56:U:H5'	57:DZ:180:VAL:CG1	2.11	0.81
23:AW:7:U:N3	23:AW:69:G:C5	2.49	0.81
23:CW:61:A:H2'	23:CW:62:U:H5'	1.63	0.81
41:BG:55:LYS:O	41:BG:59:GLU:HB2	1.80	0.81
3:AC:76:VAL:HG23	3:AC:77:ILE:H	1.46	0.81
57:DZ:72:ARG:HH21	57:DZ:89:PHE:HD2	1.24	0.81
35:BA:2317:C:C2'	35:BA:2318:G:H5'	2.10	0.81
7:AG:15:ASP:HB3	7:AG:19:GLY:N	1.96	0.81
35:DA:672:C:H2'	35:DA:673:C:H5'	1.62	0.81
2:CB:121:LEU:HA	2:CB:124:SER:HB3	1.61	0.81
39:BE:111:ARG:HA	49:BR:2:ARG:CG	2.11	0.80
35:BA:1464:C:HO2'	35:BA:1528:A:H8	0.82	0.80
35:DA:2811:G:OP1	39:DE:60:ASN:HB2	1.81	0.80
1:AA:343:U:O2'	1:AA:344:A:H2'	1.81	0.80
2:AB:42:ILE:HD13	2:AB:203:GLY:HA2	1.63	0.80
22:CY:10:G:H22	22:CY:28:G:H1'	1.47	0.80
22:AY:24:A:N6	22:AY:48:G:N2	2.29	0.80
42:DH:66:GLY:HA2	42:DH:69:ARG:HD3	1.63	0.80
52:BU:92:ARG:NH2	53:BV:10:LYS:HG2	1.97	0.80
47:BP:146:VAL:HG22	47:BP:147:LEU:N	1.96	0.80
49:BR:11:ASN:O	49:BR:12:ARG:HG3	1.80	0.80
7:AG:120:ILE:O	7:AG:124:LEU:HB2	1.81	0.80
57:DZ:155:LEU:O	57:DZ:157:LEU:HD23	1.82	0.80
19:CS:36:ARG:NH1	19:CS:53:ASN:HA	1.96	0.80
41:DG:76:SER:C	41:DG:78:SER:H	1.83	0.80
38:DD:10:THR:HG23	38:DD:13:ARG:HB3	1.63	0.80
42:BH:158:HIS:NE2	42:BH:170:ARG:HA	1.95	0.80
35:DA:2245:U:H5'	35:DA:2246:G:H5'	1.61	0.80
16:CP:18:ARG:HD3	16:CP:35:LYS:HD2	1.63	0.80
35:DA:2313:C:H2'	35:DA:2314:C:H6	1.46	0.80
35:DA:1348:G:C2'	35:DA:1349:A:H5''	2.11	0.80
2:AB:91:PRO:HG3	2:AB:154:LEU:HB2	1.62	0.80
3:CC:76:VAL:HG23	3:CC:77:ILE:H	1.46	0.80
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BS:13:ARG:HG3	50:BS:14:VAL:H	1.46	0.80
35:BA:2472:G:H5'	35:BA:2473:U:H5''	1.63	0.80
35:DA:603:A:H4'	35:DA:604:G:O5'	1.82	0.80
7:AG:85:TYR:HD2	7:AG:154:TYR:HE2	1.28	0.80
13:AM:34:LEU:HD13	13:AM:41:PRO:HG3	1.62	0.80
22:AY:23:A:H2'	22:AY:24:A:C8	2.16	0.80
23:CW:39:A:C5	23:CW:41:C:OP2	2.34	0.80
23:CW:10:G:H2'	23:CW:11:C:H6	1.44	0.80
38:BD:43:ARG:HH11	38:BD:44:ASN:ND2	1.79	0.80
45:BN:55:VAL:HG22	45:BN:126:PRO:HA	1.61	0.80
23:CW:19:G:H21	23:CW:59:G:H2'	1.42	0.80
12:CL:47:LYS:HZ3	12:CL:48:PRO:HD3	1.46	0.80
30:D5:51:TYR:CE2	30:D5:52:TYR:HB2	2.17	0.80
41:BG:130:ASN:HD21	41:BG:160:VAL:HG13	1.45	0.80
3:AC:40:ARG:HA	3:AC:55:VAL:HG11	1.62	0.80
39:BE:69:LYS:HZ1	39:BE:89:ASP:HA	1.44	0.80
2:CB:112:VAL:HA	2:CB:115:LEU:HB3	1.61	0.80
35:BA:2132:U:H3	37:BC:6:LYS:HB2	1.44	0.80
54:BW:5:ALA:HB2	54:BW:54:ALA:HB2	1.62	0.80
23:AW:13:U:H2'	23:AW:14:A:C4'	2.12	0.80
38:BD:43:ARG:NH1	38:BD:44:ASN:ND2	2.30	0.80
49:BR:7:GLY:O	49:BR:8:ARG:HG2	1.80	0.80
44:DJ:97:UNK:HA	44:DJ:132:UNK:HA	1.62	0.80
22:CY:49:G:C3'	22:CY:50:C:H5'	2.11	0.80
22:CY:58:C:H3'	57:DZ:182:LYS:HZ3	1.46	0.80
51:DT:80:SER:CB	51:DT:81:PRO:HD3	2.11	0.80
12:AL:66:VAL:HG12	12:AL:67:THR:H	1.43	0.80
43:BI:74:ASN:H	43:BI:74:ASN:ND2	1.78	0.80
35:BA:1464:C:O2'	35:BA:1528:A:H8	1.64	0.80
45:DN:62:VAL:HG22	45:DN:66:LYS:HB2	1.62	0.80
42:DH:153:LYS:H	42:DH:153:LYS:HD3	1.45	0.80
42:BH:153:LYS:H	42:BH:153:LYS:HD3	1.47	0.80
55:DX:12:VAL:HG21	55:DX:27:THR:HG23	1.62	0.80
1:CA:1123:A:H4'	10:CJ:36:GLY:HA3	1.63	0.80
31:B6:37:ARG:NH2	35:BA:2286:A:H62	1.80	0.80
29:B4:1:MET:HG3	41:BG:66:GLN:HG2	1.63	0.80
2:CB:209:ARG:HH11	2:CB:239:VAL:HG11	1.44	0.80
15:CO:33:THR:HG21	15:CO:85:LEU:HD21	1.62	0.80
42:DH:158:HIS:NE2	42:DH:170:ARG:HA	1.97	0.80
1:CA:673:G:H2'	1:CA:674:G:C8	2.17	0.80
37:BC:53:ARG:H	37:BC:53:ARG:HD3	1.44	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:64:C:H5''	37:BC:53:ARG:O	1.81	0.80
13:CM:34:LEU:HD13	13:CM:41:PRO:HG3	1.63	0.80
35:BA:1314:C:H5'	35:BA:1314:C:H6	1.47	0.80
35:BA:156:U:H4'	35:BA:157:U:H5''	1.61	0.80
22:AY:11:C:N4	22:AY:47:G:N2	2.30	0.80
1:AA:427:U:H3'	1:AA:428:G:H5''	1.63	0.80
23:AW:26:G:H2'	23:AW:27:C:C6	2.16	0.80
47:DP:146:VAL:HG22	47:DP:147:LEU:N	1.96	0.80
54:DW:92:ARG:NH1	54:DW:92:ARG:HB3	1.96	0.80
56:BY:28:LYS:HG2	56:BY:39:VAL:HG22	1.64	0.80
23:AW:17:C:H5''	23:AW:18:U:C6	2.17	0.80
46:BO:25:LEU:HD11	46:BO:40:VAL:HG23	1.64	0.80
35:BA:1779:U:H5	35:BA:1784:A:N7	1.77	0.80
23:AW:4:C:O2'	23:AW:5:C:H5	1.65	0.80
38:DD:43:ARG:NH1	38:DD:44:ASN:ND2	2.29	0.80
12:AL:38:THR:HG23	12:AL:39:VAL:HG23	1.64	0.80
8:CH:12:ARG:HH12	8:CH:27:PRO:HD3	1.46	0.80
22:CV:30:U:H2'	22:CV:31:C:H6	1.43	0.80
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.16	0.80
35:DA:1464:C:HO2'	35:DA:1528:A:H8	0.81	0.80
1:CA:1314:C:H5	19:CS:6:LYS:HE2	1.46	0.80
13:CM:54:VAL:O	13:CM:58:GLU:HG2	1.81	0.80
20:CT:18:GLN:O	20:CT:22:ARG:HG3	1.81	0.80
23:AW:4:C:H2'	23:AW:4:C:OP2	1.82	0.80
22:AV:52:C:H2'	22:AV:53:U:C6	2.16	0.80
52:BU:91:ASP:OD1	52:BU:96:ALA:HB2	1.80	0.80
35:DA:1453:U:H5'	49:DR:63:ARG:NE	1.97	0.80
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.12	0.80
40:BF:101:LEU:HD12	40:BF:102:PRO:HD2	1.64	0.80
35:DA:2712:U:O2'	35:DA:2713:A:H5'	1.82	0.80
38:DD:66:ASP:OD2	38:DD:69:ARG:HG2	1.82	0.80
38:DD:261:LYS:HZ1	38:DD:263:ARG:HH22	1.26	0.80
35:DA:2833:G:H3'	35:DA:2834:G:H5'	1.61	0.80
22:CY:20:G:H1	22:CY:58:C:N4	1.80	0.79
41:DG:139:LEU:HD12	41:DG:140:ILE:N	1.95	0.79
49:BR:10:LEU:HB3	49:BR:17:ARG:NE	1.97	0.79
57:DZ:145:GLU:HG3	57:DZ:146:ILE:H	1.45	0.79
31:D6:37:ARG:NH2	35:DA:2286:A:H62	1.80	0.79
20:AT:18:GLN:O	20:AT:22:ARG:HG3	1.82	0.79
2:AB:112:VAL:HA	2:AB:115:LEU:HB3	1.62	0.79
41:BG:73:ALA:HB3	41:BG:85:GLY:HA2	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.40	0.79
3:AC:119:ARG:HH21	3:AC:140:ARG:NH2	1.80	0.79
1:AA:735:C:H2'	1:AA:736:C:H6	1.45	0.79
46:BO:107:ARG:NH1	51:BT:35:LYS:HD2	1.97	0.79
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.17	0.79
1:CA:1515:C:H2'	1:CA:1516:G:C8	2.15	0.79
16:CP:22:THR:HA	16:CP:33:ILE:HG12	1.64	0.79
45:DN:39:ARG:HD3	45:DN:41:ASP:HB2	1.64	0.79
37:BC:7:ARG:HH22	37:BC:219:MET:HB3	1.47	0.79
38:BD:118:VAL:HG22	38:BD:119:ALA:H	1.45	0.79
41:DG:39:ILE:HG22	41:DG:157:ILE:HG12	1.63	0.79
23:AW:34:C:H5'	23:AW:35:U:OP1	1.82	0.79
35:BA:1348:G:C2'	35:BA:1349:A:H5''	2.12	0.79
41:DG:68:PRO:HA	41:DG:92:VAL:HB	1.63	0.79
39:DE:111:ARG:HA	49:DR:2:ARG:CG	2.12	0.79
35:DA:1697:G:H3'	35:DA:1698:A:H5''	1.64	0.79
6:CF:37:VAL:HG12	6:CF:38:GLU:H	1.46	0.79
35:DA:1464:C:O2'	35:DA:1528:A:H8	1.64	0.79
54:DW:1:MET:HE3	54:DW:2:GLU:H	1.47	0.79
38:BD:268:ARG:HB3	38:BD:268:ARG:HH11	1.46	0.79
35:DA:2580:U:H5'	39:DE:131:ALA:HB2	1.64	0.79
35:DA:1963:U:O2	35:DA:1963:U:H2'	1.82	0.79
35:DA:952:G:P	48:DQ:16:ARG:HH22	2.05	0.79
16:AP:18:ARG:HD3	16:AP:35:LYS:HD2	1.64	0.79
56:DY:31:LEU:HB2	56:DY:32:PRO:HA	1.65	0.79
53:BV:72:VAL:CG2	53:BV:85:LYS:HB3	2.11	0.79
35:BA:676:A:H2	35:BA:802:A:H61	1.26	0.79
4:CD:126:ILE:HG22	4:CD:127:THR:H	1.48	0.79
2:AB:18:GLY:H	2:AB:42:ILE:HG22	1.46	0.79
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.17	0.79
1:CA:1492:A:H1'	1:CA:1493:A:OP1	1.81	0.79
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.17	0.79
19:AS:6:LYS:HD2	19:AS:6:LYS:H	1.45	0.79
23:CW:17:C:H5''	23:CW:18:U:C6	2.17	0.79
31:D6:9:LEU:HD13	31:D6:9:LEU:O	1.83	0.79
43:BI:27:ARG:HG3	43:BI:27:ARG:HH11	1.47	0.79
35:DA:2394:C:OP1	47:DP:63:PRO:HD2	1.82	0.79
31:D6:45:LYS:HE3	35:DA:2371:G:H5''	1.62	0.79
23:CW:13:U:H2'	23:CW:14:A:C4'	2.12	0.79
35:DA:2315:G:H21	41:DG:128:ARG:NH1	1.80	0.79
3:CC:40:ARG:HA	3:CC:55:VAL:HG11	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:120:ILE:O	7:CG:124:LEU:HB2	1.82	0.79
35:DA:2472:G:H5'	35:DA:2473:U:H5''	1.63	0.79
1:CA:192:U:H2'	1:CA:193:C:C6	2.18	0.79
35:BA:603:A:H4'	35:BA:604:G:O5'	1.83	0.79
42:DH:121:ILE:HD11	42:DH:140:LYS:HB3	1.64	0.79
7:CG:20:ASP:HB3	7:CG:23:VAL:HG23	1.65	0.79
22:AY:20:G:H1	22:AY:58:C:N4	1.79	0.79
43:BI:140:LEU:HD21	43:BI:142:VAL:HG23	1.63	0.79
33:D8:50:LEU:HD12	33:D8:51:ALA:N	1.97	0.79
53:BV:52:VAL:HG13	53:BV:55:ALA:HB3	1.65	0.79
1:CA:735:C:H2'	1:CA:736:C:H6	1.45	0.79
30:B5:53:ALA:HB3	30:B5:55:ARG:NH2	1.98	0.79
50:DS:13:ARG:HG3	50:DS:14:VAL:H	1.46	0.79
6:AF:37:VAL:HG12	6:AF:38:GLU:H	1.47	0.79
49:BR:113:LEU:HD23	49:BR:113:LEU:O	1.83	0.79
23:CW:40:A:H4'	23:CW:40:A:OP2	1.82	0.79
56:DY:28:LYS:HG2	56:DY:39:VAL:HG22	1.65	0.79
12:CL:38:THR:HG23	12:CL:39:VAL:HG23	1.63	0.79
13:CM:2:ALA:HB3	13:CM:9:ILE:HG23	1.62	0.79
41:DG:5:VAL:HG12	41:DG:6:ALA:N	1.97	0.79
13:AM:81:LEU:HD22	13:AM:88:ARG:HD3	1.65	0.79
55:BX:12:VAL:HG21	55:BX:27:THR:HG23	1.65	0.79
7:AG:20:ASP:HB3	7:AG:23:VAL:HG23	1.64	0.79
41:DG:19:LEU:HB3	41:DG:25:TYR:HE2	1.47	0.79
1:CA:439:A:H2'	1:CA:441:A:O4'	1.82	0.79
1:AA:1321:C:C5'	1:AA:1322:C:H5''	2.13	0.79
19:AS:36:ARG:NH1	19:AS:53:ASN:HA	1.96	0.79
45:BN:62:VAL:HG22	45:BN:66:LYS:HB2	1.65	0.79
22:CY:17:C:H5''	22:CY:18:U:C6	2.18	0.79
48:DQ:55:VAL:HG23	57:DZ:180:VAL:HG13	1.65	0.79
56:DY:42:VAL:HG12	56:DY:65:ALA:HB3	1.65	0.79
23:CW:58:C:N4	35:DA:2169:A:H1'	1.98	0.79
38:BD:35:LYS:HB3	38:BD:35:LYS:HZ2	1.48	0.79
1:CA:345:C:H5'	1:CA:346:G:C4	2.18	0.79
2:CB:42:ILE:HD13	2:CB:203:GLY:HA2	1.64	0.79
40:BF:178:PRO:HB2	40:BF:201:VAL:HG11	1.64	0.79
46:DO:18:LYS:HB2	46:DO:45:GLU:HG2	1.64	0.79
22:CY:20:G:H1	22:CY:58:C:H42	1.30	0.79
22:CV:4:C:HO2'	22:CV:5:C:H6	0.81	0.79
57:DZ:39:VAL:HG21	57:DZ:44:PHE:HD2	1.47	0.79
15:AO:39:LEU:HD11	15:AO:56:LEU:HB2	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BV:21:ARG:HG2	53:BV:91:TYR:HD2	1.43	0.79
38:DD:35:LYS:N	38:DD:36:PRO:HD2	1.98	0.79
35:DA:1318:C:H3'	35:DA:1319:G:H5''	1.65	0.79
7:AG:84:ASN:HD21	23:AW:36:C:N4	1.81	0.79
1:CA:180:U:C2'	1:CA:181:G:H5''	2.13	0.79
1:AA:1123:A:H4'	10:AJ:36:GLY:HA3	1.63	0.79
52:DU:91:ASP:OD1	52:DU:96:ALA:HB2	1.83	0.79
36:BB:80:U:H2'	36:BB:81:G:N2	1.97	0.79
35:DA:2562:U:H1'	46:DO:23:ARG:NH1	1.96	0.79
54:BW:92:ARG:HB3	54:BW:92:ARG:NH1	1.97	0.79
41:BG:146:TYR:O	41:BG:149:VAL:HG12	1.83	0.79
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.63	0.79
35:BA:952:G:P	48:BQ:16:ARG:HH22	2.05	0.79
45:DN:133:GLN:HG2	45:DN:134:ARG:N	1.97	0.78
45:DN:133:GLN:HG2	45:DN:135:PRO:HD3	1.63	0.78
45:DN:55:VAL:HG22	45:DN:126:PRO:HA	1.63	0.78
52:BU:79:PHE:CE1	52:BU:83:LEU:HD21	2.18	0.78
35:DA:155:U:H2'	35:DA:156:U:H5''	1.65	0.78
38:DD:24:ILE:HG12	38:DD:25:THR:N	1.98	0.78
22:AY:20:G:N1	22:AY:58:C:N4	2.30	0.78
22:AV:5:C:O2	22:AV:70:G:N2	2.16	0.78
38:DD:44:ASN:CB	38:DD:49:ILE:HA	2.09	0.78
13:AM:95:GLY:HA2	13:AM:110:ARG:HH21	1.47	0.78
7:CG:85:TYR:HD2	7:CG:154:TYR:HE2	1.29	0.78
35:BA:1175:U:H4'	35:BA:1176:G:H5'	1.65	0.78
13:AM:13:LYS:HA	13:AM:44:ARG:HH11	1.46	0.78
46:DO:47:ILE:HG12	46:DO:48:PRO:HD2	1.65	0.78
35:DA:1658:C:OP1	39:DE:132:HIS:ND1	2.16	0.78
31:B6:10:LEU:H	31:B6:10:LEU:HD23	1.48	0.78
23:AW:35:U:OP2	23:AW:35:U:H3'	1.84	0.78
23:AW:40:A:H4'	23:AW:40:A:OP2	1.81	0.78
22:AY:56:U:C3'	57:BZ:182:LYS:O	2.30	0.78
43:BI:92:VAL:HB	43:BI:120:ILE:HB	1.65	0.78
1:CA:1152:A:H5'	10:CJ:70:ARG:NH2	1.98	0.78
35:BA:2068:U:N3	35:BA:2430:A:H2	1.80	0.78
47:BP:16:ARG:HB2	47:BP:16:ARG:NH1	1.99	0.78
35:BA:1826:G:H4'	38:BD:242:ARG:HH21	1.47	0.78
1:AA:345:C:H5'	1:AA:346:G:C4	2.17	0.78
35:DA:1528:A:N1	35:DA:1542:A:H2	1.81	0.78
3:AC:182:ILE:HG12	3:AC:203:PHE:HA	1.65	0.78
26:D1:44:PRO:HB2	26:D1:46:LEU:CD1	2.13	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D6:45:LYS:HG2	35:DA:2371:G:H4'	1.63	0.78
10:CJ:6:ILE:HD12	10:CJ:6:ILE:O	1.84	0.78
53:DV:51:VAL:HG12	53:DV:52:VAL:H	1.48	0.78
41:DG:64:THR:OG1	41:DG:94:LEU:HD11	1.83	0.78
12:AL:54:LYS:HD2	12:AL:54:LYS:H	1.48	0.78
5:AE:145:LYS:O	5:AE:149:GLU:HG2	1.82	0.78
4:AD:125:HIS:C	4:AD:126:ILE:HD12	2.04	0.78
39:DE:59:VAL:O	39:DE:62:PRO:HD2	1.83	0.78
1:CA:1321:C:C5'	1:CA:1322:C:H5''	2.14	0.78
19:CS:6:LYS:HD2	19:CS:6:LYS:H	1.48	0.78
6:AF:37:VAL:HA	6:AF:65:VAL:HG12	1.63	0.78
19:AS:48:THR:HG22	19:AS:61:TYR:HA	1.65	0.78
9:CI:26:VAL:HG22	9:CI:61:ALA:HB3	1.65	0.78
23:AW:34:C:H2'	23:AW:34:C:O2	1.82	0.78
22:AY:31:C:C2'	22:AY:32:G:H5''	2.14	0.78
22:AY:63:C:H1'	57:BZ:186:GLU:CG	2.14	0.78
43:DI:118:LYS:HG2	43:DI:119:PRO:HD2	1.66	0.78
45:BN:15:LEU:HD13	45:BN:16:ILE:N	1.99	0.78
53:BV:18:LEU:CD2	53:BV:19:LYS:H	1.96	0.78
53:DV:72:VAL:CG2	53:DV:85:LYS:HB3	2.14	0.78
29:D4:25:TYR:CE1	41:DG:5:VAL:HG22	2.19	0.78
39:DE:111:ARG:HG2	49:DR:2:ARG:CZ	2.13	0.78
56:BY:28:LYS:NZ	56:BY:28:LYS:N	2.31	0.78
38:BD:30:GLU:HG3	38:BD:63:ARG:NE	1.98	0.78
5:AE:7:GLU:HG2	5:AE:112:LEU:HB3	1.63	0.78
1:CA:343:U:O2'	1:CA:344:A:H2'	1.84	0.78
57:DZ:165:VAL:HG12	57:DZ:166:SER:N	1.99	0.78
54:DW:9:TYR:H	54:DW:102:HIS:CD2	2.01	0.78
22:CY:1:G:O2'	22:CY:2:G:H5'	1.84	0.78
40:DF:89:VAL:HG12	40:DF:90:PHE:N	1.99	0.78
13:CM:13:LYS:HA	13:CM:44:ARG:HH11	1.46	0.78
57:BZ:183:LEU:HD12	57:BZ:184:ALA:N	1.98	0.78
4:AD:30:LYS:C	4:AD:32:ALA:H	1.86	0.78
36:DB:6:C:HO2'	50:DS:29:PHE:HE2	1.28	0.78
22:CV:52:C:H2'	22:CV:53:U:C6	2.18	0.78
12:AL:54:LYS:HB2	12:AL:70:ILE:HB	1.66	0.78
57:BZ:171:ILE:HG13	57:BZ:172:ALA:N	1.99	0.78
35:BA:8:A:H2'	35:BA:9:U:C5	2.17	0.78
27:B2:47:ASN:HD22	35:BA:94(A):G:H21	1.31	0.78
22:CY:55:G:H2'	22:CY:56:U:C1'	2.12	0.78
35:DA:2875:C:H4'	51:DT:5:ALA:HB2	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DT:46:GLU:O	51:DT:65:LYS:HD2	1.84	0.78
47:BP:30:THR:CG2	47:BP:31:ALA:H	1.92	0.78
13:CM:95:GLY:HA2	13:CM:110:ARG:HH21	1.48	0.78
56:BY:42:VAL:HG12	56:BY:65:ALA:HB3	1.62	0.78
48:DQ:130:LYS:NZ	57:DZ:80:ARG:HD2	1.99	0.78
9:AI:16:ARG:O	9:AI:63:ILE:HG23	1.83	0.78
46:DO:25:LEU:HD11	46:DO:40:VAL:HG23	1.65	0.78
40:DF:83:PHE:O	40:DF:84:VAL:HB	1.82	0.78
35:BA:1598:C:H5'	55:BX:36:LYS:HB2	1.65	0.78
2:AB:162:ILE:HD11	2:AB:184:VAL:HG22	1.63	0.78
38:BD:10:THR:HG23	38:BD:13:ARG:HB3	1.66	0.78
23:AW:16:U:H1'	23:AW:62:U:C4'	2.13	0.78
42:DH:41:MET:HG3	42:DH:42:ARG:N	1.96	0.78
53:DV:46:VAL:HG22	53:DV:47:VAL:H	1.49	0.78
35:DA:544:G:H21	35:DA:547:A:H2'	1.49	0.78
39:BE:111:ARG:HG2	49:BR:2:ARG:CZ	2.13	0.78
57:DZ:151:HIS:HB3	57:DZ:170:THR:HA	1.63	0.78
35:DA:1038:C:H3'	35:DA:1039:G:H5''	1.63	0.78
54:DW:5:ALA:HB2	54:DW:54:ALA:HB2	1.64	0.78
48:BQ:12:GLN:HG2	48:BQ:73:PRO:HD2	1.65	0.78
47:DP:92:GLU:HG3	47:DP:93:GLY:H	1.49	0.78
37:DC:7:ARG:HH22	37:DC:219:MET:HB3	1.46	0.78
35:DA:953:A:O2'	35:DA:954:G:H5'	1.84	0.78
46:DO:2:ILE:CD1	46:DO:82:ASN:HD22	1.96	0.78
8:CH:4:ASP:HB2	8:CH:89:PRO:HG3	1.65	0.78
1:CA:1397:C:O2	24:CX:22:A:N7	2.17	0.78
19:CS:48:THR:HG22	19:CS:61:TYR:HA	1.66	0.78
43:BI:127:VAL:HG13	43:BI:139:GLN:HA	1.64	0.78
51:BT:91:ARG:HA	51:BT:117:ASP:H	1.49	0.78
13:CM:3:ARG:NH2	41:DG:113:ARG:HB2	1.99	0.78
39:BE:59:VAL:O	39:BE:62:PRO:HD2	1.83	0.78
8:AH:20:TYR:CE2	8:AH:75:ARG:HD2	2.19	0.78
5:CE:150:ARG:HA	5:CE:153:LYS:HE2	1.66	0.78
1:CA:1144:G:H21	1:CA:1146:A:H62	1.32	0.78
38:DD:118:VAL:HG22	38:DD:119:ALA:H	1.47	0.78
13:AM:54:VAL:O	13:AM:58:GLU:HG2	1.83	0.78
35:BA:1963:U:H2'	35:BA:1963:U:O2	1.82	0.78
20:AT:75:ASN:N	20:AT:75:ASN:HD22	1.78	0.78
35:DA:8:A:H2'	35:DA:9:U:C5	2.18	0.78
22:CV:53:U:H1'	22:CV:66:G:N2	2.00	0.77
33:B8:59:LYS:HB2	33:B8:59:LYS:HZ3	1.47	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:107:GLN:CD	3:AC:107:GLN:H	1.88	0.77
8:AH:12:ARG:HH12	8:AH:27:PRO:HD3	1.49	0.77
29:D4:2:LYS:HG3	36:DB:39:A:N1	2.00	0.77
1:CA:1256:A:N6	1:CA:1278:U:H1'	2.00	0.77
8:AH:122:ARG:HB2	8:AH:122:ARG:HH11	1.49	0.77
57:DZ:109:ALA:HB3	57:DZ:145:GLU:HB2	1.65	0.77
4:CD:88:VAL:O	4:CD:92:VAL:HG23	1.84	0.77
1:CA:1216:G:H5''	14:CN:5:ALA:HB2	1.66	0.77
42:BH:121:ILE:HD11	42:BH:140:LYS:HB3	1.66	0.77
2:CB:141:GLU:O	2:CB:145:LEU:HB2	1.84	0.77
23:CW:45:U:H3'	23:CW:46:U:C6	2.18	0.77
56:DY:8:LYS:HE2	56:DY:72:VAL:HG23	1.64	0.77
35:DA:1884:A:H2'	35:DA:1885:A:C5'	2.13	0.77
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.64	0.77
57:BZ:117:LEU:HA	57:BZ:174:VAL:HG22	1.63	0.77
38:BD:261:LYS:HZ1	38:BD:263:ARG:NH2	1.81	0.77
20:CT:89:ARG:HB2	20:CT:104:LEU:HD11	1.66	0.77
47:DP:89:ALA:HA	47:DP:121:LYS:HD3	1.66	0.77
23:CW:42:C:C2'	23:CW:43:G:H5'	2.14	0.77
4:CD:31:CYS:SG	4:CD:31:CYS:O	2.42	0.77
33:B8:6:THR:CG2	33:B8:63:PRO:HD3	2.14	0.77
1:AA:180:U:C2'	1:AA:181:G:H5''	2.14	0.77
35:BA:1884:A:H2'	35:BA:1885:A:C5'	2.14	0.77
53:DV:18:LEU:CD2	53:DV:19:LYS:H	1.97	0.77
39:BE:77:ILE:HG22	39:BE:78:LEU:N	2.00	0.77
2:CB:47:THR:O	2:CB:51:LEU:HG	1.84	0.77
27:D2:51:ARG:HD3	27:D2:55:ARG:NH1	1.99	0.77
35:BA:612:C:H2'	35:BA:613:G:C5'	2.05	0.77
40:DF:24:LEU:HB3	40:DF:25:PRO:CD	2.14	0.77
42:DH:7:LEU:HD23	42:DH:69:ARG:CD	2.13	0.77
25:D0:5:LYS:HB3	25:D0:5:LYS:NZ	2.00	0.77
47:DP:98:GLU:O	47:DP:101:VAL:HG22	1.85	0.77
41:DG:72:ARG:HG3	41:DG:87:PRO:HD2	1.66	0.77
3:CC:77:ILE:HG23	3:CC:84:ILE:HG21	1.66	0.77
3:CC:182:ILE:HG12	3:CC:203:PHE:HA	1.66	0.77
46:DO:111:PHE:HB3	46:DO:114:ILE:HD13	1.66	0.77
38:DD:176:ARG:HH11	38:DD:176:ARG:HG2	1.49	0.77
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.67	0.77
23:CW:4:C:H2'	23:CW:4:C:OP2	1.84	0.77
33:B8:50:LEU:HD12	33:B8:51:ALA:N	1.98	0.77
5:CE:76:ILE:CG1	5:CE:77:PRO:HD2	2.14	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D1:45:ASN:ND2	26:D1:47:GLN:HE21	1.82	0.77
18:AR:58:LEU:HD12	18:AR:58:LEU:H	1.49	0.77
35:DA:1540:U:H3'	35:DA:1541:G:H3'	1.64	0.77
39:DE:132:HIS:HA	39:DE:135:HIS:CE1	2.20	0.77
1:AA:1040:U:H2'	1:AA:1041:A:H8	1.47	0.77
35:BA:2036:C:H6	35:BA:2036:C:H5'	1.48	0.77
22:AY:26:G:H2'	22:AY:27:C:H6	1.48	0.77
51:DT:129:ARG:NH1	51:DT:131:ALA:HB2	1.99	0.77
35:DA:613:G:C8	35:DA:613:G:H5'	2.19	0.77
52:DU:92:ARG:O	52:DU:94:ASN:N	2.18	0.77
3:CC:108:ASN:ND2	3:CC:144:SER:HB2	1.98	0.77
46:BO:105:GLU:HA	46:BO:108:GLU:OE2	1.83	0.77
41:BG:64:THR:HG23	41:BG:66:GLN:H	1.49	0.77
9:CI:16:ARG:O	9:CI:63:ILE:HG23	1.83	0.77
4:CD:125:HIS:C	4:CD:126:ILE:HD12	2.05	0.77
35:BA:893:C:H2'	35:BA:894:C:C6	2.20	0.77
22:CY:58:C:C6	57:DZ:182:LYS:NZ	2.53	0.77
25:B0:5:LYS:HB3	25:B0:5:LYS:NZ	1.98	0.77
12:CL:75:HIS:CD2	12:CL:77:LEU:HB2	2.18	0.77
8:CH:103:VAL:CG2	8:CH:110:ALA:HB2	2.13	0.77
42:DH:7:LEU:HD22	42:DH:65:HIS:CE1	2.19	0.77
39:DE:2:LYS:HD3	39:DE:95:ILE:HG22	1.64	0.77
10:CJ:51:ARG:HG3	10:CJ:60:ARG:HA	1.67	0.77
13:CM:81:LEU:HD22	13:CM:88:ARG:HD3	1.65	0.77
29:B4:6:HIS:NE2	41:BG:67:LYS:HE2	2.00	0.77
8:AH:4:ASP:HB2	8:AH:89:PRO:HG3	1.67	0.77
7:CG:15:ASP:HB3	7:CG:19:GLY:N	1.99	0.77
4:CD:152:SER:O	4:CD:155:LEU:HG	1.85	0.77
35:DA:1175:U:H4'	35:DA:1176:G:H5'	1.64	0.77
3:CC:173:VAL:O	3:CC:175:LEU:HD12	1.82	0.77
35:DA:1681:G:O2'	35:DA:1762:A:H2'	1.84	0.77
22:CY:56:U:O5'	22:CY:56:U:H6	1.68	0.77
35:BA:1846:G:H5'	35:BA:1846:G:H8	1.49	0.77
22:AV:25:A:O2'	22:AV:26:G:H5'	1.84	0.77
23:CW:10:G:O6	23:CW:27:C:H2'	1.85	0.77
35:BA:2562:U:H1'	46:BO:23:ARG:NH1	1.99	0.77
39:DE:9:VAL:HG22	39:DE:25:VAL:HB	1.66	0.77
2:CB:18:GLY:H	2:CB:42:ILE:HG22	1.49	0.77
35:DA:1281:G:H5'	35:DA:1281:G:H8	1.50	0.77
43:DI:127:VAL:HG13	43:DI:139:GLN:HA	1.66	0.77
1:AA:542:G:H5'	4:AD:41:GLY:HA3	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:35:U:H3'	23:CW:35:U:OP2	1.84	0.77
35:BA:613:G:H5'	35:BA:613:G:C8	2.18	0.77
1:CA:1363(A):A:C4'	1:CA:1364:U:H5''	2.13	0.77
8:CH:51:VAL:CG1	8:CH:60:ARG:HB2	2.14	0.77
2:AB:71:VAL:HB	2:AB:164:VAL:HG12	1.66	0.77
40:DF:101:LEU:HD12	40:DF:102:PRO:HD2	1.64	0.77
35:BA:1681:G:O2'	35:BA:1762:A:H2'	1.84	0.77
35:DA:1314:C:H6	35:DA:1314:C:H5'	1.49	0.77
26:B1:86:SER:O	26:B1:90:ILE:HG12	1.85	0.77
35:DA:1598:C:H5'	55:DX:36:LYS:HB2	1.64	0.77
51:DT:91:ARG:HA	51:DT:117:ASP:H	1.49	0.77
8:CH:12:ARG:HH11	8:CH:26:VAL:HA	1.49	0.77
52:DU:90:VAL:O	52:DU:92:ARG:N	2.18	0.77
57:DZ:42:VAL:HG13	57:DZ:43:GLU:N	1.99	0.77
1:AA:458:C:H2'	1:AA:460:G:H8	1.49	0.77
15:CO:54:ARG:HD3	15:CO:58:MET:HE2	1.65	0.77
30:B5:48:GLU:O	30:B5:49:CYS:HB3	1.83	0.77
1:AA:382:A:H2'	1:AA:383:A:C8	2.20	0.77
1:AA:192:U:H2'	1:AA:193:C:C6	2.19	0.77
35:BA:2657:A:H2'	35:BA:2658:C:H5'	1.67	0.77
10:CJ:40:LEU:HB2	10:CJ:69:ASN:HB2	1.67	0.77
4:CD:162:LEU:O	4:CD:165:MET:HB2	1.85	0.77
35:BA:672:C:H2'	35:BA:673:C:H5'	1.65	0.77
22:CY:63:C:O5'	57:DZ:186:GLU:CG	2.33	0.76
56:DY:28:LYS:NZ	56:DY:28:LYS:N	2.32	0.76
43:DI:92:VAL:HB	43:DI:120:ILE:HB	1.66	0.76
12:AL:25:PRO:O	12:AL:27:LEU:HD22	1.84	0.76
10:AJ:6:ILE:O	10:AJ:6:ILE:HD12	1.85	0.76
12:CL:54:LYS:H	12:CL:54:LYS:HD2	1.48	0.76
51:BT:80:SER:CB	51:BT:81:PRO:HD3	2.15	0.76
46:DO:107:ARG:HH12	51:DT:35:LYS:HD2	1.49	0.76
35:BA:1528:A:N1	35:BA:1542:A:H2	1.82	0.76
40:DF:178:PRO:HB2	40:DF:201:VAL:HG11	1.65	0.76
43:DI:100:ALA:HA	43:DI:103:ARG:HD2	1.65	0.76
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.20	0.76
1:AA:1422:G:H4'	46:BO:49:ARG:NH1	2.00	0.76
43:DI:123:LEU:HA	43:DI:142:VAL:HG11	1.67	0.76
35:DA:1887:C:C2'	35:DA:1888:G:H5''	2.14	0.76
8:AH:51:VAL:CG1	8:AH:60:ARG:HB2	2.15	0.76
49:DR:2:ARG:HD2	49:DR:2:ARG:O	1.85	0.76
1:CA:1400:C:N4	22:CV:36:AG9:C5	2.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:438:G:H2'	1:AA:494:U:O4	1.86	0.76
18:CR:58:LEU:H	18:CR:58:LEU:HD12	1.49	0.76
1:CA:345:C:H5'	1:CA:346:G:C5	2.19	0.76
4:AD:152:SER:O	4:AD:155:LEU:HG	1.84	0.76
3:AC:173:VAL:O	3:AC:175:LEU:HD12	1.84	0.76
22:AY:1:G:O2'	22:AY:2:G:H5'	1.84	0.76
22:CY:17:C:H5''	22:CY:18:U:C5	2.21	0.76
22:AY:10:G:H22	22:AY:28:G:H1'	1.51	0.76
30:B5:3:LYS:HB3	35:BA:747:U:C5	2.20	0.76
35:BA:2875:C:H4'	51:BT:5:ALA:HB2	1.66	0.76
35:DA:587:C:C5	47:DP:33:ARG:HD3	2.20	0.76
42:BH:66:GLY:HA2	42:BH:69:ARG:HD3	1.65	0.76
12:CL:27:LEU:HG	12:CL:62:SER:OG	1.85	0.76
30:D5:3:LYS:HB3	35:DA:747:U:C5	2.20	0.76
8:AH:12:ARG:HH11	8:AH:26:VAL:HA	1.49	0.76
52:BU:112:ARG:NH1	53:BV:46:VAL:HG11	2.00	0.76
49:DR:10:LEU:HB3	49:DR:17:ARG:NE	2.01	0.76
51:DT:60:THR:HG22	51:DT:77:PRO:HA	1.68	0.76
43:BI:134:PRO:O	43:BI:135:GLU:HG2	1.85	0.76
43:BI:84:GLY:O	43:BI:85:GLU:HB2	1.86	0.76
10:AJ:31:GLY:HA3	10:AJ:78:ASN:ND2	2.01	0.76
47:DP:126:VAL:HA	47:DP:145:PRO:HB2	1.68	0.76
52:BU:90:VAL:O	52:BU:92:ARG:N	2.18	0.76
1:CA:458:C:H2'	1:CA:460:G:H8	1.48	0.76
38:DD:139:GLY:H	38:DD:165:ILE:HB	1.50	0.76
18:AR:70:ILE:O	18:AR:74:ARG:HG3	1.85	0.76
23:AW:11:C:H2'	23:AW:12:U:N1	2.00	0.76
35:DA:1190:G:H5'	47:DP:35:HIS:H	1.49	0.76
51:BT:129:ARG:NH1	51:BT:131:ALA:HB2	2.00	0.76
48:DQ:134:ARG:CZ	57:DZ:122:ARG:HE	1.98	0.76
38:DD:35:LYS:C	38:DD:35:LYS:HD2	2.06	0.76
39:DE:69:LYS:HZ1	39:DE:89:ASP:HA	1.48	0.76
1:AA:345:C:H5'	1:AA:346:G:C5	2.19	0.76
26:B1:80:LEU:HB2	26:B1:82:LEU:HD21	1.66	0.76
5:CE:68:GLU:O	5:CE:68:GLU:HG3	1.84	0.76
35:BA:284:U:H2'	35:BA:285:C:H6	1.50	0.76
18:CR:53:ARG:NH1	18:CR:60:ALA:HA	2.00	0.76
1:CA:959:A:H2'	1:CA:960:U:H4'	1.67	0.76
57:DZ:73:GLN:HB3	57:DZ:87:ASP:OD1	1.85	0.76
1:AA:1493:A:O2'	24:AX:19:A:H1'	1.86	0.76
22:CV:27:C:H2'	22:CV:28:G:O4'	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:32:PHE:HB3	12:CL:84:LEU:HD21	1.67	0.76
40:DF:24:LEU:O	40:DF:26:ALA:N	2.19	0.76
1:AA:1152:A:H5'	10:AJ:70:ARG:NH2	1.99	0.76
5:AE:150:ARG:HA	5:AE:153:LYS:HE2	1.66	0.76
1:CA:1129:C:H41	1:CA:1135:U:H3	1.34	0.76
2:CB:14:GLY:O	2:CB:15:VAL:HG13	1.86	0.76
35:DA:1639:U:O2'	35:DA:1640:C:H5''	1.85	0.76
36:DB:54:G:H21	41:DG:29:TRP:HE1	1.34	0.76
46:BO:47:ILE:HG12	46:BO:48:PRO:HD2	1.66	0.76
54:BW:9:TYR:H	54:BW:102:HIS:CD2	2.04	0.76
23:AW:70:G:C2'	23:AW:71:G:C8	2.59	0.76
22:AV:25:A:H2'	22:AV:26:G:H8	1.47	0.76
23:CW:27:C:H3'	23:CW:28:G:H8	1.49	0.76
10:CJ:6:ILE:HD11	10:CJ:72:VAL:HB	1.66	0.76
52:DU:101:ARG:HB3	52:DU:102:GLU:OE2	1.86	0.76
31:B6:37:ARG:HH21	35:BA:2286:A:N6	1.83	0.76
8:CH:20:TYR:CE2	8:CH:75:ARG:HD2	2.18	0.76
38:BD:35:LYS:HD2	38:BD:35:LYS:C	2.05	0.76
30:D5:48:GLU:O	30:D5:49:CYS:HB3	1.86	0.76
30:D5:53:ALA:HB3	30:D5:55:ARG:NH2	2.01	0.76
54:DW:4:LYS:HG2	54:DW:5:ALA:H	1.50	0.76
35:DA:2807:G:H2'	35:DA:2808:U:H5''	1.67	0.76
10:AJ:40:LEU:HB2	10:AJ:69:ASN:HB2	1.67	0.76
38:BD:24:ILE:HG12	38:BD:25:THR:N	2.00	0.76
1:CA:1060:C:C5	3:CC:2:GLY:HA2	2.21	0.76
35:BA:1318:C:H3'	35:BA:1319:G:H5''	1.66	0.76
31:B6:9:LEU:O	31:B6:9:LEU:HD13	1.86	0.76
35:BA:2189:U:H2'	35:BA:2190:G:H5''	1.67	0.76
23:AW:4:C:O2'	23:AW:5:C:C5	2.37	0.76
22:AY:49:G:C3'	22:AY:50:C:H5'	2.14	0.76
22:AY:57:U:O5'	57:BZ:183:LEU:N	2.19	0.76
47:DP:61:ARG:HD2	47:DP:61:ARG:H	1.50	0.76
45:DN:15:LEU:HD13	45:DN:16:ILE:N	2.00	0.76
3:CC:71:ALA:HA	3:CC:106:VAL:H	1.51	0.76
39:BE:2:LYS:HD3	39:BE:95:ILE:HG22	1.67	0.76
57:DZ:39:VAL:HG21	57:DZ:44:PHE:CD2	2.20	0.76
35:DA:2068:U:N3	35:DA:2430:A:H2	1.80	0.76
4:AD:128:VAL:HG12	4:AD:129:ASN:N	2.01	0.76
5:AE:76:ILE:CG1	5:AE:77:PRO:HD2	2.16	0.76
35:BA:155:U:H2'	35:BA:156:U:H5''	1.65	0.76
2:CB:71:VAL:HB	2:CB:164:VAL:HG12	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1208:C:H2'	1:CA:1209:C:C6	2.21	0.76
35:BA:2807:G:H2'	35:BA:2808:U:H5''	1.68	0.76
1:AA:959:A:H2'	1:AA:960:U:H4'	1.67	0.76
25:D0:84:LEU:H	25:D0:84:LEU:HD12	1.51	0.76
23:AW:42:C:H2'	23:AW:43:G:O4'	1.86	0.76
51:DT:91:ARG:HB3	51:DT:116:ALA:HA	1.68	0.76
35:DA:1899:G:O2'	35:DA:1900:A:H5''	1.86	0.76
1:AA:1208:C:H2'	1:AA:1209:C:C6	2.21	0.76
10:AJ:8:LEU:HD23	10:AJ:96:ILE:HG22	1.68	0.76
51:BT:28:VAL:HG22	51:BT:46:GLU:HA	1.68	0.76
51:BT:46:GLU:O	51:BT:65:LYS:HD2	1.84	0.76
1:AA:161:A:H2'	1:AA:162:A:C8	2.21	0.76
40:DF:9:ILE:HG22	40:DF:11:VAL:O	1.86	0.76
1:AA:1314:C:H5	19:AS:6:LYS:HE2	1.48	0.76
18:AR:53:ARG:NH1	18:AR:60:ALA:HA	2.00	0.76
47:BP:92:GLU:HG3	47:BP:93:GLY:H	1.51	0.76
33:D8:32:LEU:HD12	35:DA:2391:G:OP1	1.85	0.76
31:D6:10:LEU:H	31:D6:10:LEU:HD23	1.49	0.76
35:DA:1037:G:H1	35:DA:1118:C:H42	1.34	0.76
22:AY:6:C:H2'	22:AY:7:U:C6	2.20	0.76
43:BI:118:LYS:HG2	43:BI:119:PRO:HD2	1.67	0.76
9:CI:125:TYR:CE1	9:CI:127:LYS:HB2	2.20	0.76
38:DD:10:THR:HG23	38:DD:13:ARG:CB	2.16	0.76
33:B8:32:LEU:HD12	35:BA:2391:G:OP1	1.86	0.76
42:DH:54:ARG:HD2	42:DH:56:SER:O	1.85	0.76
25:B0:84:LEU:H	25:B0:84:LEU:HD12	1.49	0.76
38:BD:176:ARG:HG2	38:BD:176:ARG:HH11	1.50	0.76
11:AK:22:HIS:HB3	11:AK:29:ILE:HG23	1.68	0.76
1:AA:1432:G:OP1	51:BT:107:ASP:HB2	1.85	0.76
1:CA:1040:U:H2'	1:CA:1041:A:H8	1.48	0.76
22:CY:19:G:N1	22:CY:57:U:O2	2.18	0.75
22:AY:24:A:H62	22:AY:48:G:N2	1.83	0.75
1:CA:427:U:H3'	1:CA:428:G:H5''	1.68	0.75
23:AW:13:U:C6	23:AW:13:U:C3'	2.66	0.75
23:CW:25:A:C2'	23:CW:26:G:C8	2.66	0.75
53:BV:46:VAL:HG22	53:BV:47:VAL:H	1.49	0.75
39:DE:77:ILE:HG22	39:DE:78:LEU:N	2.01	0.75
29:D4:25:TYR:HE1	41:DG:5:VAL:HG22	1.51	0.75
4:AD:126:ILE:HG22	4:AD:127:THR:H	1.49	0.75
1:CA:1320:C:N4	19:CS:36:ARG:HG3	2.01	0.75
35:DA:2833:G:H3'	35:DA:2834:G:C5'	2.15	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2657:A:H2'	35:DA:2658:C:H5'	1.67	0.75
4:AD:162:LEU:O	4:AD:165:MET:HB2	1.86	0.75
2:AB:141:GLU:O	2:AB:145:LEU:HB2	1.85	0.75
38:BD:139:GLY:H	38:BD:165:ILE:HB	1.52	0.75
1:AA:434:U:H2'	1:AA:435:C:C6	2.21	0.75
38:BD:210:GLY:O	38:BD:212:SER:N	2.18	0.75
22:CY:19:G:C6	22:CY:59:G:N1	2.54	0.75
23:AW:33:G:N3	23:AW:34:C:H1'	2.00	0.75
22:AY:30:U:H2'	22:AY:31:C:H6	1.50	0.75
23:CW:34:C:O2	23:CW:34:C:H2'	1.84	0.75
33:D8:6:THR:CG2	33:D8:63:PRO:HD3	2.15	0.75
22:CV:25:A:O2'	22:CV:26:G:H5'	1.86	0.75
53:BV:51:VAL:HG12	53:BV:52:VAL:H	1.48	0.75
49:BR:2:ARG:O	49:BR:2:ARG:HD2	1.86	0.75
50:DS:35:ILE:HD11	50:DS:99:LYS:CE	2.16	0.75
27:B2:16:LEU:H	27:B2:67:LYS:NZ	1.84	0.75
35:BA:744:G:OP1	39:BE:132:HIS:HB3	1.86	0.75
11:CK:15:ALA:HB1	11:CK:78:GLN:HG3	1.68	0.75
1:AA:950:U:H2'	1:AA:951:G:H8	1.51	0.75
20:CT:82:SER:O	20:CT:86:ARG:HB2	1.87	0.75
22:CY:55:G:H5''	48:DQ:56:ARG:HH22	1.50	0.75
39:DE:36:ARG:HH21	39:DE:88:GLY:CA	1.92	0.75
52:BU:92:ARG:O	52:BU:94:ASN:N	2.19	0.75
35:BA:2811:G:OP1	39:BE:60:ASN:HB2	1.85	0.75
13:CM:95:GLY:HA2	13:CM:110:ARG:NH2	2.01	0.75
47:BP:16:ARG:HD3	47:BP:16:ARG:C	2.06	0.75
40:BF:9:ILE:HG22	40:BF:11:VAL:O	1.87	0.75
35:BA:2833:G:H3'	35:BA:2834:G:C5'	2.16	0.75
38:DD:261:LYS:HZ1	38:DD:263:ARG:NH2	1.84	0.75
20:AT:89:ARG:HB2	20:AT:104:LEU:HD11	1.66	0.75
42:DH:30:LYS:HB2	42:DH:79:VAL:HA	1.67	0.75
1:AA:1216:G:H5''	14:AN:5:ALA:HB2	1.67	0.75
22:AY:17:C:H5''	22:AY:18:U:C6	2.21	0.75
22:CY:19:G:H8	57:DZ:187:ALA:N	1.83	0.75
22:CY:20:G:N1	22:CY:58:C:N4	2.35	0.75
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.01	0.75
35:DA:1485:G:H1'	35:DA:1505:C:H42	1.52	0.75
23:CW:13:U:C3'	23:CW:13:U:H6	1.99	0.75
52:BU:101:ARG:HB3	52:BU:102:GLU:OE2	1.86	0.75
13:AM:88:ARG:HG2	13:AM:88:ARG:HH11	1.51	0.75
4:AD:127:THR:HA	4:AD:132:ARG:HA	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:40:GLU:HB2	37:BC:179:ALA:HB2	1.68	0.75
37:DC:40:GLU:HB2	37:DC:179:ALA:HB2	1.69	0.75
35:BA:365:C:H6	35:BA:365:C:H5'	1.50	0.75
20:CT:50:GLU:HA	20:CT:100:ILE:CG2	2.16	0.75
22:AV:24:A:C2	22:AV:25:A:C5	2.74	0.75
42:BH:7:LEU:HD22	42:BH:65:HIS:CE1	2.21	0.75
10:CJ:31:GLY:HA3	10:CJ:78:ASN:ND2	2.02	0.75
1:AA:405:U:H3'	1:AA:406:G:H5'	1.69	0.75
35:BA:2317:C:H2'	35:BA:2318:G:H5'	1.68	0.75
1:CA:1104:G:H4'	2:CB:111:ARG:NH1	2.02	0.75
55:DX:12:VAL:HG21	55:DX:17:ALA:HB1	1.68	0.75
57:DZ:165:VAL:HG12	57:DZ:166:SER:H	1.49	0.75
9:AI:26:VAL:HG22	9:AI:61:ALA:HB3	1.67	0.75
11:AK:15:ALA:HB1	11:AK:78:GLN:HG3	1.69	0.75
35:BA:1899:G:O2'	35:BA:1900:A:H5''	1.87	0.75
12:CL:25:PRO:O	12:CL:27:LEU:HD22	1.87	0.75
35:BA:1190:G:H5'	47:BP:35:HIS:H	1.52	0.75
47:BP:98:GLU:O	47:BP:101:VAL:HG22	1.87	0.75
3:CC:107:GLN:CD	3:CC:107:GLN:H	1.89	0.75
1:AA:1256:A:N6	1:AA:1278:U:H1'	1.99	0.75
41:DG:131:TYR:O	41:DG:159:VAL:HG12	1.86	0.75
4:AD:129:ASN:HD21	4:AD:145:GLU:N	1.84	0.75
13:AM:95:GLY:HA2	13:AM:110:ARG:NH2	2.00	0.75
3:CC:181:ASN:ND2	3:CC:205:GLY:H	1.85	0.75
38:BD:35:LYS:N	38:BD:36:PRO:HD2	1.99	0.75
47:DP:16:ARG:HD3	47:DP:16:ARG:C	2.06	0.75
7:AG:16:LEU:HD13	9:AI:42:ARG:HA	1.69	0.75
38:BD:16:MET:HE1	38:BD:208:LYS:HD3	1.69	0.75
37:DC:7:ARG:NH2	37:DC:219:MET:HB3	2.02	0.75
39:BE:24:THR:HG21	39:BE:188:VAL:HG12	1.68	0.75
22:AY:70:G:H2'	22:AY:71:G:C8	2.21	0.75
22:AV:31:C:H2'	22:AV:32:G:H8	1.52	0.75
40:DF:3:GLU:HA	40:DF:24:LEU:HG	1.68	0.75
12:AL:38:THR:HG23	12:AL:39:VAL:H	1.52	0.75
8:AH:103:VAL:CG2	8:AH:110:ALA:HB2	2.16	0.75
40:BF:3:GLU:HA	40:BF:24:LEU:HG	1.68	0.75
49:DR:2:ARG:HD3	49:DR:5:LYS:HE2	1.66	0.75
56:BY:28:LYS:HZ2	56:BY:28:LYS:H	1.35	0.75
41:BG:6:ALA:HB3	41:BG:104:GLU:OE2	1.86	0.75
35:BA:330:A:HO2'	35:BA:331:A:H8	1.33	0.75
46:DO:47:ILE:CG1	46:DO:48:PRO:HD2	2.17	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:11:LEU:HD22	37:BC:33:LEU:HA	1.68	0.75
35:DA:271(D):G:H1	35:DA:271(T):C:H42	1.35	0.75
1:CA:542:G:H5'	4:CD:41:GLY:HA3	1.69	0.75
22:CV:70:G:H2'	22:CV:71:G:C8	2.21	0.75
43:BI:92:VAL:HG13	43:BI:97:ILE:CG1	2.16	0.75
23:CW:26:G:H2'	23:CW:27:C:C6	2.21	0.75
12:AL:75:HIS:CD2	12:AL:77:LEU:HB2	2.20	0.75
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	1.66	0.75
35:BA:544:G:H21	35:BA:547:A:H2'	1.50	0.75
52:DU:79:PHE:CE1	52:DU:83:LEU:HD21	2.20	0.75
52:DU:112:ARG:HH12	53:DV:46:VAL:HG11	1.51	0.75
53:BV:24:LYS:HE2	53:BV:90:PRO:HB2	1.68	0.75
4:CD:128:VAL:HG12	4:CD:129:ASN:N	2.02	0.75
15:AO:54:ARG:HD3	15:AO:58:MET:HE2	1.68	0.75
1:AA:1129:C:H41	1:AA:1135:U:H3	1.35	0.75
38:DD:35:LYS:HZ2	38:DD:35:LYS:HB3	1.52	0.75
40:DF:8:GLN:CB	40:DF:126:VAL:HA	2.17	0.75
5:AE:68:GLU:O	5:AE:68:GLU:HG3	1.85	0.75
42:BH:9:ILE:HG23	42:BH:9:ILE:O	1.85	0.75
1:AA:1502:A:H5'	1:AA:1504:G:N7	2.02	0.75
7:CG:151:TYR:OH	11:CK:54:ARG:HD3	1.87	0.75
46:DO:77:ILE:HD13	51:DT:74:ARG:HD3	1.69	0.75
47:BP:48:PRO:O	47:BP:50:ARG:N	2.20	0.75
12:CL:89:ARG:HH12	12:CL:97:ARG:HG2	1.52	0.75
12:AL:27:LEU:HG	12:AL:62:SER:OG	1.87	0.75
47:BP:126:VAL:HA	47:BP:145:PRO:HB2	1.67	0.75
53:DV:39:LEU:HD12	53:DV:50:PRO:O	1.87	0.75
1:CA:458:C:H2'	1:CA:460:G:C8	2.21	0.75
23:CW:52:C:H2'	23:CW:53:U:C6	2.22	0.75
4:CD:127:THR:HA	4:CD:132:ARG:HA	1.69	0.75
26:D1:5:CYS:SG	26:D1:62:VAL:HG23	2.27	0.75
1:AA:1434:A:H2'	1:AA:1435:G:O4'	1.86	0.75
35:DA:893:C:H2'	35:DA:894:C:C6	2.22	0.75
35:DA:1434:A:H61	35:DA:1558:A:H62	1.34	0.75
2:AB:168:THR:HG23	2:AB:192:SER:OG	1.86	0.75
1:AA:475:G:H2'	1:AA:476:G:H8	1.51	0.74
49:BR:7:GLY:O	49:BR:8:ARG:NE	2.20	0.74
47:DP:7:ARG:CA	47:DP:7:ARG:HH11	2.00	0.74
31:D6:37:ARG:HH21	35:DA:2286:A:N6	1.83	0.74
35:BA:276:A:H5'	35:BA:277:C:H6	1.52	0.74
35:DA:2189:U:H2'	35:DA:2190:G:H5''	1.67	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:9:ILE:O	42:DH:9:ILE:HG23	1.87	0.74
27:B2:63:VAL:HA	27:B2:66:GLU:HG3	1.67	0.74
23:AW:45:U:H3'	23:AW:46:U:H6	1.49	0.74
43:BI:123:LEU:HA	43:BI:142:VAL:HG11	1.67	0.74
46:BO:77:ILE:HD13	51:BT:74:ARG:HD3	1.68	0.74
54:DW:92:ARG:HH11	54:DW:92:ARG:CB	1.99	0.74
3:AC:181:ASN:ND2	3:AC:205:GLY:H	1.85	0.74
41:BG:56:ALA:HB2	41:BG:153:ARG:NH1	2.01	0.74
35:DA:330:A:HO2'	35:DA:331:A:H8	1.36	0.74
3:CC:153:VAL:HG22	3:CC:198:VAL:HG22	1.69	0.74
19:CS:51:VAL:O	19:CS:58:VAL:HG22	1.86	0.74
1:AA:1104:G:H4'	2:AB:111:ARG:NH1	2.02	0.74
26:B1:41:ARG:HD3	26:B1:43:TYR:OH	1.87	0.74
35:DA:284:U:H2'	35:DA:285:C:H6	1.50	0.74
42:DH:83:TYR:HA	42:DH:135:GLY:H	1.52	0.74
35:BA:774:A:H2	35:BA:787:U:HO2'	1.35	0.74
51:DT:85:LYS:HZ2	51:DT:85:LYS:HB3	1.50	0.74
35:BA:1485:G:H1'	35:BA:1505:C:H42	1.52	0.74
53:BV:18:LEU:HD13	53:BV:19:LYS:N	2.03	0.74
45:DN:47:ALA:CB	45:DN:112:LEU:HD11	2.17	0.74
1:CA:382:A:H2'	1:CA:383:A:C8	2.22	0.74
9:AI:53:VAL:HG11	9:AI:85:LEU:HD22	1.69	0.74
35:DA:2317:C:H2'	35:DA:2318:G:H5'	1.67	0.74
39:DE:59:VAL:HG21	39:DE:63:LEU:HA	1.69	0.74
3:CC:81:GLY:O	3:CC:85:ARG:HB2	1.87	0.74
1:CA:339:C:H2'	1:CA:340:U:H6	1.53	0.74
1:CA:939:G:H5''	7:CG:102:ARG:NH2	2.02	0.74
38:BD:66:ASP:OD2	38:BD:69:ARG:HG2	1.87	0.74
51:DT:28:VAL:HG22	51:DT:46:GLU:HA	1.70	0.74
23:CW:13:U:C3'	23:CW:13:U:C6	2.66	0.74
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.22	0.74
33:D8:51:ALA:N	33:D8:53:PRO:HD2	2.03	0.74
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.53	0.74
57:DZ:101:PRO:O	57:DZ:102:LEU:HD23	1.87	0.74
9:AI:99:LEU:HB3	9:AI:101:PHE:HD1	1.52	0.74
1:CA:161:A:H2'	1:CA:162:A:C8	2.21	0.74
38:DD:21:PHE:HB3	38:DD:24:ILE:HD12	1.68	0.74
45:BN:39:ARG:HD3	45:BN:41:ASP:HB2	1.69	0.74
5:CE:80:ILE:HG22	8:CH:104:ARG:NH2	2.02	0.74
1:CA:1452:C:H4'	1:CA:1456:G:H5''	1.68	0.74
22:CY:76:C:H2'	22:CY:76:C:O2	1.85	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.68	0.74
23:AW:39:A:H3'	23:AW:40:A:O3'	1.88	0.74
45:BN:133:GLN:HG2	45:BN:134:ARG:N	1.96	0.74
41:DG:71:THR:HG22	41:DG:89:GLY:O	1.88	0.74
45:BN:2:LYS:HZ3	52:BU:95:LEU:HD21	1.53	0.74
3:AC:77:ILE:HG23	3:AC:84:ILE:HG21	1.68	0.74
40:BF:8:GLN:CB	40:BF:126:VAL:HA	2.16	0.74
39:BE:132:HIS:HA	39:BE:135:HIS:CE1	2.22	0.74
46:BO:107:ARG:HH12	51:BT:35:LYS:HD2	1.52	0.74
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.51	0.74
23:AW:36:C:O2	23:AW:36:C:H2'	1.87	0.74
1:AA:1040:U:H2'	1:AA:1041:A:C8	2.22	0.74
46:BO:47:ILE:CG1	46:BO:48:PRO:HD2	2.17	0.74
1:CA:339:C:H2'	1:CA:340:U:C6	2.23	0.74
3:AC:81:GLY:O	3:AC:85:ARG:HB2	1.86	0.74
1:AA:551:U:H2'	1:AA:552:U:C6	2.22	0.74
22:AY:76:C:O2	22:AY:76:C:H2'	1.85	0.74
35:DA:365:C:H5'	35:DA:365:C:H6	1.52	0.74
2:AB:95:GLN:NE2	2:AB:147:LYS:HE2	2.03	0.74
22:CY:60:A:H4'	22:CY:61:A:OP1	1.87	0.74
22:AY:71:G:C6	22:AY:72:C:C5	2.75	0.74
22:AV:15:G:H2'	22:AV:16:U:C6	2.23	0.74
23:AW:20:G:OP2	23:AW:21:U:H5	1.70	0.74
43:DI:88:ILE:HG22	43:DI:89:TYR:N	2.02	0.74
10:CJ:6:ILE:HG13	10:CJ:72:VAL:O	1.88	0.74
47:BP:97:PRO:O	47:BP:98:GLU:HB3	1.87	0.74
2:CB:76:GLN:O	2:CB:208:ILE:HG12	1.88	0.74
47:DP:16:ARG:NH1	47:DP:16:ARG:HB2	2.01	0.74
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.03	0.74
6:CF:37:VAL:HG12	6:CF:38:GLU:N	2.02	0.74
35:DA:672:C:O2'	35:DA:673:C:H5''	1.87	0.74
7:AG:84:ASN:HD21	23:AW:36:C:H42	1.36	0.74
35:BA:284:U:H2'	35:BA:285:C:C6	2.22	0.74
1:AA:1293:G:HO2'	1:AA:1294:G:H8	1.33	0.74
1:AA:939:G:H5''	7:AG:102:ARG:NH2	2.02	0.74
35:BA:296:C:O2'	35:BA:297:C:H5'	1.88	0.74
35:BA:1037:G:H1	35:BA:1118:C:H42	1.34	0.74
20:AT:82:SER:O	20:AT:86:ARG:HB2	1.86	0.74
26:B1:23:LYS:HD3	26:B1:28:GLY:HA3	1.69	0.74
22:AY:57:U:C5	57:BZ:182:LYS:CA	2.69	0.74
35:DA:1846:G:H8	35:DA:1846:G:H5'	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:16:U:O2	23:AW:62:U:H4'	1.87	0.74
1:AA:458:C:H2'	1:AA:460:G:C8	2.23	0.74
35:DA:1798:U:C5'	38:DD:259:THR:HG22	2.17	0.74
8:CH:122:ARG:HH11	8:CH:122:ARG:HB2	1.50	0.74
27:D2:45:SER:H	27:D2:46:GLN:NE2	1.86	0.74
1:AA:1320:C:N4	19:AS:36:ARG:HG3	2.02	0.74
46:DO:111:PHE:O	46:DO:115:VAL:HG23	1.88	0.74
47:BP:64:LYS:O	47:BP:66:GLY:N	2.18	0.74
35:DA:1014:U:C2'	35:DA:1015:G:H5''	2.18	0.74
11:AK:48:ILE:HG22	11:AK:49:GLY:H	1.52	0.74
1:AA:673:G:H2'	1:AA:674:G:C8	2.22	0.74
35:BA:1014:U:C2'	35:BA:1015:G:H5''	2.18	0.74
38:BD:181:GLU:HA	38:BD:272:ALA:HB3	1.70	0.74
17:AQ:12:SER:HB3	17:AQ:20:THR:HB	1.69	0.74
22:CY:26:G:H2'	22:CY:27:C:H6	1.50	0.74
48:BQ:60:ARG:HA	57:BZ:179:ASP:CA	2.15	0.74
43:BI:81:VAL:HG13	43:BI:143:SER:N	2.03	0.74
12:CL:58:VAL:O	12:CL:65:GLU:HA	1.88	0.74
35:BA:1887:C:C2'	35:BA:1888:G:H5''	2.16	0.74
3:AC:71:ALA:HA	3:AC:106:VAL:H	1.52	0.74
52:BU:90:VAL:HG22	53:BV:39:LEU:HG	1.70	0.74
4:CD:128:VAL:O	4:CD:130:GLY:N	2.21	0.74
35:BA:2103:C:C3'	35:BA:2104:G:H5''	2.17	0.74
47:DP:64:LYS:O	47:DP:66:GLY:N	2.18	0.74
1:CA:52:G:O2'	1:CA:53:A:H5'	1.88	0.74
11:CK:48:ILE:HG22	11:CK:49:GLY:H	1.51	0.74
43:DI:58:LEU:O	43:DI:58:LEU:HD23	1.88	0.74
35:BA:2876:G:C4'	51:BT:3:ARG:HE	1.96	0.74
12:AL:89:ARG:HA	12:AL:97:ARG:HA	1.70	0.74
40:BF:24:LEU:O	40:BF:26:ALA:N	2.20	0.74
13:CM:88:ARG:HH11	13:CM:88:ARG:HG2	1.52	0.74
2:CB:55:PHE:HA	2:CB:58:ILE:HB	1.69	0.74
2:AB:47:THR:O	2:AB:51:LEU:HG	1.86	0.74
57:BZ:141:VAL:HA	57:BZ:144:LEU:HD21	1.69	0.74
5:CE:150:ARG:O	5:CE:153:LYS:HG2	1.88	0.74
35:BA:1040:C:H42	35:BA:1115:G:H1	1.33	0.74
38:DD:24:ILE:O	38:DD:25:THR:O	2.05	0.74
38:BD:24:ILE:O	38:BD:25:THR:O	2.06	0.74
1:CA:1040:U:H2'	1:CA:1041:A:C8	2.22	0.74
1:AA:985:C:H2'	1:AA:986:A:C8	2.22	0.74
42:BH:30:LYS:HB2	42:BH:79:VAL:HA	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1747(A):G:H2'	35:DA:1748:G:C5'	2.16	0.74
12:CL:85:ILE:HD11	12:CL:98:TYR:HB2	1.69	0.74
12:AL:38:THR:HG23	12:AL:39:VAL:N	2.02	0.74
35:BA:1022:G:N2	35:BA:1142(A):A:H2	1.82	0.74
35:DA:1019:U:H3	35:DA:1142(A):A:H62	1.36	0.74
10:AJ:51:ARG:HG3	10:AJ:60:ARG:HA	1.68	0.74
35:DA:2103:C:C3'	35:DA:2104:G:H5''	2.18	0.74
1:AA:1060:C:C5	3:AC:2:GLY:HA2	2.23	0.74
57:BZ:22:GLY:O	57:BZ:41:LEU:HB2	1.87	0.74
35:BA:626:U:C2	47:BP:105:LEU:HG	2.23	0.74
42:DH:124:GLU:HB2	42:DH:132:ARG:HG2	1.69	0.74
23:AW:42:C:C2'	23:AW:43:G:H5'	2.18	0.73
12:CL:27:LEU:HG	12:CL:62:SER:CB	2.18	0.73
9:CI:114:TYR:H	9:CI:114:TYR:HD1	1.36	0.73
2:AB:14:GLY:O	2:AB:15:VAL:HG13	1.88	0.73
3:AC:101:LEU:HD23	3:AC:102:ASN:N	2.03	0.73
57:DZ:166:SER:H	57:DZ:167:PRO:HA	1.52	0.73
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	1.70	0.73
35:DA:284:U:H2'	35:DA:285:C:C6	2.23	0.73
35:BA:2712:U:O2'	35:BA:2713:A:H5'	1.88	0.73
35:DA:276:A:H5'	35:DA:277:C:H6	1.52	0.73
40:BF:66:PRO:O	40:BF:67:GLN:HB3	1.87	0.73
8:AH:11:THR:HG23	8:AH:14:ARG:NH1	2.02	0.73
5:AE:71:LEU:O	5:AE:72:GLN:HG3	1.87	0.73
9:CI:7:THR:H	9:CI:83:ARG:HD2	1.53	0.73
22:CY:56:U:O5'	57:DZ:180:VAL:O	2.05	0.73
23:AW:30:U:C2'	23:AW:31:C:C6	2.61	0.73
53:DV:18:LEU:HD13	53:DV:19:LYS:N	2.03	0.73
51:BT:70:VAL:HG12	51:BT:71:GLY:N	2.04	0.73
35:BA:1697:G:H3'	35:BA:1698:A:H5''	1.70	0.73
35:BA:330:A:C2	35:BA:1210:A:H2'	2.22	0.73
3:CC:101:LEU:HD23	3:CC:102:ASN:N	2.03	0.73
35:BA:197:A:C8	35:BA:197:A:H5'	2.23	0.73
9:AI:99:LEU:HB3	9:AI:101:PHE:CD1	2.23	0.73
35:DA:744:G:OP1	39:DE:132:HIS:HB3	1.89	0.73
35:BA:673:C:H6	35:BA:673:C:H5'	1.53	0.73
18:CR:53:ARG:HD2	18:CR:59:SER:O	1.87	0.73
22:AY:17:C:H5''	22:AY:18:U:C5	2.23	0.73
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.03	0.73
57:DZ:132:ASN:O	57:DZ:133:ILE:HD13	1.88	0.73
22:CY:19:G:C8	57:DZ:186:GLU:C	2.61	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2876:G:C4'	51:DT:3:ARG:HE	1.97	0.73
43:BI:132:PRO:HG2	43:BI:133:HIS:ND1	2.02	0.73
43:BI:88:ILE:HG22	43:BI:89:TYR:N	2.04	0.73
35:BA:1747(A):G:H2'	35:BA:1748:G:C5'	2.16	0.73
52:DU:92:ARG:HH22	53:DV:10:LYS:HG2	1.53	0.73
53:DV:24:LYS:HE2	53:DV:90:PRO:HB2	1.70	0.73
31:B6:5:VAL:HG22	31:B6:6:ARG:H	1.51	0.73
3:AC:181:ASN:ND2	3:AC:204:LEU:HB2	2.04	0.73
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	1.68	0.73
47:DP:7:ARG:O	47:DP:10:PRO:HD2	1.88	0.73
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.70	0.73
3:AC:153:VAL:HG22	3:AC:198:VAL:HG22	1.70	0.73
35:DA:673:C:H5'	35:DA:673:C:H6	1.53	0.73
37:DC:34:ALA:HB1	37:DC:40:GLU:HB2	1.70	0.73
41:BG:32:PRO:HB3	41:BG:163:ALA:HB2	1.70	0.73
47:BP:89:ALA:HA	47:BP:121:LYS:HD3	1.68	0.73
22:AY:60:A:H4'	22:AY:61:A:OP1	1.89	0.73
52:DU:90:VAL:HG22	53:DV:39:LEU:HG	1.69	0.73
12:CL:54:LYS:HB2	12:CL:70:ILE:HB	1.69	0.73
41:DG:101:ILE:HG22	41:DG:105:LYS:CE	2.18	0.73
51:DT:95:ARG:HB3	51:DT:95:ARG:HH11	1.53	0.73
9:CI:43:ALA:HA	9:CI:74:ILE:HD13	1.71	0.73
1:CA:985:C:H2'	1:CA:986:A:C8	2.23	0.73
37:DC:11:LEU:HD22	37:DC:33:LEU:HA	1.69	0.73
1:AA:52:G:O2'	1:AA:53:A:H5'	1.88	0.73
35:BA:389:G:H1	47:BP:71:VAL:HG12	1.54	0.73
22:CY:49:G:H3'	22:CY:50:C:C5'	2.18	0.73
22:AY:9:A:N3	22:AY:47:G:H2'	2.02	0.73
22:AY:55:G:H5''	48:BQ:56:ARG:CZ	2.18	0.73
22:AV:26:G:H2'	22:AV:27:C:C6	2.24	0.73
1:CA:475:G:H2'	1:CA:476:G:H8	1.53	0.73
29:B4:5:ILE:HG12	41:BG:67:LYS:HD3	1.69	0.73
37:BC:30:VAL:HG11	37:BC:42:VAL:HG22	1.71	0.73
22:AV:17:C:H5''	22:AV:18:U:H6	1.49	0.73
35:DA:1047:G:H2'	35:DA:1110:G:H22	1.52	0.73
9:CI:99:LEU:HB3	9:CI:101:PHE:CD1	2.23	0.73
1:CA:405:U:H3'	1:CA:406:G:H5'	1.69	0.73
26:D1:19:GLN:HA	26:D1:19:GLN:HE21	1.52	0.73
2:CB:95:GLN:NE2	2:CB:147:LYS:HE2	2.03	0.73
6:CF:35:ALA:HA	6:CF:67:MET:HB3	1.70	0.73
1:CA:1211:U:H5'	1:CA:1212:U:OP1	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:83:TYR:HA	42:BH:135:GLY:H	1.54	0.73
38:BD:108:PRO:HB3	38:BD:143:HIS:CE1	2.22	0.73
22:CV:24:A:C2	22:CV:25:A:C5	2.77	0.73
46:BO:2:ILE:CD1	46:BO:82:ASN:HD22	2.02	0.73
13:CM:96:LEU:HB3	13:CM:97:PRO:HD2	1.70	0.73
1:AA:738:C:H5''	6:AF:69:GLU:HB2	1.71	0.73
4:AD:122:ARG:HH12	4:AD:135:LEU:HD12	1.52	0.73
35:BA:2126:A:H4'	35:BA:2127:G:O5'	1.89	0.73
33:B8:39:LYS:HG2	33:B8:43:GLN:HE21	1.54	0.73
20:AT:50:GLU:HA	20:AT:100:ILE:CG2	2.18	0.73
57:DZ:45:ASP:O	57:DZ:49:ARG:HG2	1.87	0.73
1:CA:1410:G:H2'	1:CA:1411:C:C6	2.23	0.73
23:AW:33:G:H2'	23:AW:34:C:C1'	2.18	0.73
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.24	0.73
12:AL:32:PHE:HB3	12:AL:84:LEU:HD21	1.70	0.73
51:BT:28:VAL:HG13	51:BT:46:GLU:HA	1.70	0.73
39:BE:61:ARG:H	39:BE:62:PRO:HD2	1.54	0.73
35:DA:2524:G:H8	35:DA:2524:G:H5'	1.52	0.73
4:AD:128:VAL:O	4:AD:130:GLY:N	2.22	0.73
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.04	0.73
38:BD:10:THR:HG23	38:BD:13:ARG:CB	2.19	0.73
50:BS:20:ARG:HA	50:BS:20:ARG:NE	2.03	0.73
46:BO:111:PHE:O	46:BO:115:VAL:HG23	1.88	0.73
35:DA:2334:G:N3	50:DS:18:ILE:HD12	2.03	0.73
1:AA:1305:G:H5'	21:AU:4:GLY:HA3	1.69	0.73
22:AY:56:U:H3'	57:BZ:182:LYS:C	2.08	0.73
23:AW:25:A:H2'	23:AW:26:G:N7	2.03	0.73
23:AW:27:C:C3'	23:AW:28:G:H8	2.00	0.73
33:B8:51:ALA:N	33:B8:53:PRO:HD2	2.03	0.73
56:BY:8:LYS:HE2	56:BY:72:VAL:HG23	1.70	0.73
43:DI:134:PRO:O	43:DI:135:GLU:HG2	1.88	0.73
4:CD:59:ARG:HA	4:CD:59:ARG:NE	2.03	0.73
35:DA:2134:A:H61	35:DA:2157:G:H1'	1.53	0.73
38:DD:210:GLY:O	38:DD:212:SER:N	2.22	0.73
1:AA:674:G:H2'	1:AA:675:A:H8	1.54	0.73
1:AA:198:G:H2'	1:AA:199:G:H8	1.53	0.73
35:DA:626:U:C2	47:DP:105:LEU:HG	2.23	0.73
35:BA:1403:C:H5''	35:BA:1471:A:H1'	1.71	0.73
35:BA:1434:A:H61	35:BA:1558:A:H62	1.37	0.73
49:DR:113:LEU:O	49:DR:113:LEU:HD23	1.88	0.73
22:AY:19:G:H8	22:AY:19:G:OP1	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:48:PHE:O	33:B8:49:VAL:HG22	1.88	0.73
56:DY:28:LYS:HB3	56:DY:37:VAL:HB	1.70	0.73
12:CL:40:VAL:HG11	12:CL:77:LEU:O	1.89	0.73
53:DV:2:PHE:HB2	53:DV:42:GLY:HA2	1.71	0.73
53:BV:18:LEU:HD22	53:BV:19:LYS:N	2.03	0.73
47:BP:7:ARG:HH11	47:BP:7:ARG:CA	2.01	0.73
2:AB:55:PHE:HA	2:AB:58:ILE:HB	1.70	0.73
1:CA:92:C:H2'	1:CA:93:G:H8	1.50	0.73
38:DD:34:VAL:C	38:DD:36:PRO:HD2	2.09	0.73
35:BA:1314:C:C6	35:BA:1314:C:H5'	2.24	0.73
54:DW:65:LEU:HD23	54:DW:68:ARG:HD2	1.71	0.73
1:CA:404:U:H2'	1:CA:405:U:C6	2.24	0.73
1:AA:1228:C:P	13:AM:108:ARG:HH22	2.12	0.73
17:CQ:26:GLN:HG2	17:CQ:37:LYS:HG2	1.71	0.73
35:BA:2693:A:H2'	35:BA:2694:G:H8	1.53	0.73
42:BH:54:ARG:HD2	42:BH:56:SER:O	1.88	0.73
40:BF:89:VAL:HG12	40:BF:90:PHE:N	2.02	0.73
39:BE:9:VAL:HG22	39:BE:25:VAL:HB	1.69	0.73
35:DA:389:G:H1	47:DP:71:VAL:HG12	1.52	0.73
41:BG:48:GLU:O	41:BG:49:ASP:HB2	1.89	0.73
16:AP:67:THR:HG22	16:AP:68:ASP:N	2.04	0.73
23:CW:4:C:O2'	23:CW:5:C:C5	2.42	0.73
23:CW:72:C:H2'	23:CW:73:C:O4'	1.89	0.73
4:CD:30:LYS:C	4:CD:32:ALA:H	1.88	0.73
23:CW:11:C:H2'	23:CW:12:U:C6	2.23	0.73
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.23	0.73
40:BF:24:LEU:HB3	40:BF:25:PRO:CD	2.14	0.73
23:CW:20:G:OP2	23:CW:21:U:H5	1.72	0.73
9:CI:88:TYR:O	9:CI:89:ASN:HB2	1.89	0.73
35:DA:330:A:C2	35:DA:1210:A:H2'	2.22	0.73
35:DA:874:G:H5''	57:DZ:175:VAL:HG12	1.71	0.73
35:DA:1639:U:H2'	35:DA:1640:C:H5''	1.70	0.73
9:AI:125:TYR:CE1	9:AI:127:LYS:HB2	2.24	0.73
30:D5:40:LYS:HE2	30:D5:46:CYS:HB3	1.71	0.73
39:DE:24:THR:HG21	39:DE:188:VAL:HG12	1.69	0.73
18:AR:36:ASN:HB3	18:AR:39:VAL:CG2	2.19	0.73
22:CY:23:A:H2'	22:CY:24:A:C8	2.24	0.72
22:CY:6:C:H2'	22:CY:7:U:C6	2.24	0.72
11:CK:58:PRO:HA	11:CK:90:GLY:HA3	1.71	0.72
1:CA:1442(B):A:H2'	51:DT:118:ARG:NH1	2.04	0.72
10:CJ:37:PRO:HA	10:CJ:72:VAL:HG22	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:27:LYS:HB3	31:B6:30:THR:HG22	1.69	0.72
15:CO:39:LEU:HD11	15:CO:56:LEU:HB2	1.70	0.72
1:AA:438:G:H2'	1:AA:494:U:C4	2.24	0.72
35:BA:1038:C:H42	35:BA:1117:G:H1	1.36	0.72
1:CA:1314:C:OP2	19:CS:6:LYS:HG3	1.89	0.72
19:AS:6:LYS:CD	19:AS:6:LYS:H	2.01	0.72
1:CA:438:G:H2'	1:CA:494:U:O4	1.87	0.72
35:DA:2124:G:H5''	37:DC:175:PRO:HG3	1.71	0.72
38:DD:117:VAL:HG22	38:DD:118:VAL:H	1.54	0.72
35:BA:672:C:H2'	35:BA:673:C:C5'	2.19	0.72
11:CK:22:HIS:HB3	11:CK:29:ILE:HG23	1.69	0.72
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	1.70	0.72
1:CA:551:U:H2'	1:CA:552:U:C6	2.24	0.72
42:BH:124:GLU:HB2	42:BH:132:ARG:HG2	1.71	0.72
57:DZ:103:ARG:O	57:DZ:138:GLU:HA	1.89	0.72
22:AY:56:U:C6	57:BZ:182:LYS:O	2.42	0.72
23:CW:4:C:O2'	23:CW:5:C:H5	1.72	0.72
43:DI:84:GLY:O	43:DI:85:GLU:HB2	1.87	0.72
1:CA:738:C:H5''	6:CF:69:GLU:HB2	1.71	0.72
50:DS:30:ARG:HH22	50:DS:62:LYS:HD2	1.54	0.72
40:DF:188:ARG:HA	47:DP:7:ARG:HD3	1.71	0.72
36:BB:40:U:H3'	36:BB:41:U:C5'	2.20	0.72
35:BA:1639:U:H2'	35:BA:1640:C:H5''	1.71	0.72
1:AA:1144:G:H21	1:AA:1146:A:H62	1.33	0.72
16:AP:67:THR:HG22	16:AP:68:ASP:H	1.54	0.72
9:CI:112:LYS:HA	9:CI:119:ALA:HB2	1.70	0.72
10:CJ:23:ILE:HG23	10:CJ:85:LEU:HD22	1.71	0.72
35:DA:597:U:H4'	47:DP:15:ARG:HH11	1.54	0.72
22:CY:60:A:C2	57:DZ:186:GLU:CB	2.66	0.72
22:CY:58:C:H3'	57:DZ:182:LYS:NZ	2.02	0.72
23:AW:61:A:H2'	23:AW:62:U:H5'	1.71	0.72
31:D6:43:CYS:O	31:D6:44:ARG:HB2	1.88	0.72
12:AL:27:LEU:HG	12:AL:62:SER:CB	2.19	0.72
35:BA:548:A:C2'	35:BA:549:G:H5'	2.17	0.72
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.89	0.72
33:D8:48:PHE:O	33:D8:49:VAL:HG22	1.88	0.72
4:CD:129:ASN:HD21	4:CD:145:GLU:N	1.86	0.72
1:CA:1250:A:H4'	9:CI:68:GLY:H	1.52	0.72
48:DQ:63:LYS:HD2	57:DZ:175:VAL:HG21	1.71	0.72
35:DA:197:A:H5'	35:DA:197:A:C8	2.23	0.72
9:AI:55:ALA:HA	9:AI:58:HIS:HD2	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:404:U:H2'	1:AA:405:U:C6	2.24	0.72
45:BN:62:VAL:HG11	45:BN:67:LEU:HD21	1.72	0.72
38:BD:21:PHE:HB3	38:BD:24:ILE:HD12	1.72	0.72
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.04	0.72
1:CA:817:C:H1'	1:CA:819:A:H5'	1.72	0.72
54:BW:40:ASN:O	54:BW:41:LYS:HG2	1.90	0.72
39:BE:16:ARG:O	39:BE:17:ASP:HB2	1.90	0.72
35:DA:2206:G:N2	35:DA:2207:G:H5'	2.05	0.72
54:BW:29:LEU:HD21	54:BW:33:ARG:NH2	2.05	0.72
35:DA:212:G:O2'	35:DA:213:A:H5'	1.90	0.72
23:AW:72:C:H2'	23:AW:73:C:O4'	1.89	0.72
33:D8:6:THR:HA	33:D8:61:LEU:HD11	1.70	0.72
30:B5:3:LYS:HE2	35:BA:2613:U:C2'	2.19	0.72
43:BI:113:ARG:HH22	43:BI:132:PRO:HD3	1.53	0.72
12:AL:39:VAL:HB	12:AL:57:LYS:HZ2	1.54	0.72
2:AB:76:GLN:O	2:AB:208:ILE:HG12	1.89	0.72
12:CL:47:LYS:NZ	12:CL:48:PRO:HD3	2.05	0.72
54:BW:92:ARG:HH11	54:BW:92:ARG:CB	2.01	0.72
31:D6:12:GLU:HA	31:D6:23:THR:HA	1.71	0.72
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.03	0.72
35:DA:1038:C:H42	35:DA:1117:G:H1	1.36	0.72
1:AA:160:A:H1'	1:AA:344:A:C5	2.24	0.72
45:DN:62:VAL:HG11	45:DN:67:LEU:HD21	1.69	0.72
48:DQ:12:GLN:HG2	48:DQ:73:PRO:HD2	1.70	0.72
35:BA:597:U:H4'	47:BP:15:ARG:HH11	1.54	0.72
43:BI:58:LEU:O	43:BI:58:LEU:HD23	1.90	0.72
34:D9:4:ARG:HD2	34:D9:34:GLN:NE2	2.04	0.72
22:CY:10:G:H2'	22:CY:11:C:H6	1.53	0.72
23:AW:39:A:H3'	23:AW:41:C:P	2.29	0.72
22:CV:25:A:H2'	22:CV:26:G:H8	1.54	0.72
31:B6:43:CYS:O	31:B6:44:ARG:HB2	1.88	0.72
43:DI:132:PRO:HG2	43:DI:133:HIS:ND1	2.03	0.72
10:CJ:13:HIS:O	10:CJ:17:ASP:HB2	1.88	0.72
13:AM:91:ARG:HB2	13:AM:98:VAL:HG13	1.71	0.72
1:CA:950:U:H2'	1:CA:951:G:H8	1.53	0.72
35:BA:558:G:P	45:BN:111:PRO:HD2	2.29	0.72
8:CH:11:THR:HG23	8:CH:14:ARG:NH1	2.04	0.72
35:BA:528:A:C2	35:BA:2043:C:H4'	2.25	0.72
54:BW:4:LYS:HG2	54:BW:5:ALA:H	1.53	0.72
57:DZ:165:VAL:CG1	57:DZ:169:GLU:HB2	2.19	0.72
40:DF:103:LYS:HA	40:DF:106:ARG:HG3	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DS:20:ARG:HA	50:DS:20:ARG:NE	2.03	0.72
56:BY:59:GLY:O	56:BY:60:PHE:HB2	1.89	0.72
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	1.71	0.72
4:CD:57:ARG:HB3	4:CD:206:PHE:HB2	1.71	0.72
1:AA:853:G:O2'	1:AA:854:G:H5'	1.88	0.72
1:CA:1293:G:HO2'	1:CA:1294:G:H8	1.38	0.72
5:CE:73:ASN:HD22	5:CE:73:ASN:N	1.86	0.72
22:AY:20:G:C2	22:AY:58:C:N3	2.57	0.72
43:BI:77:LEU:HD23	43:BI:141:LYS:HG2	1.69	0.72
10:AJ:13:HIS:O	10:AJ:17:ASP:HB2	1.90	0.72
8:CH:51:VAL:HG11	8:CH:60:ARG:HB2	1.71	0.72
47:BP:101:VAL:HG12	47:BP:106:LEU:HB3	1.72	0.72
51:BT:62:THR:HG22	51:BT:75:ILE:HG12	1.72	0.72
57:DZ:102:LEU:HD11	57:DZ:124:ILE:HG23	1.70	0.72
47:DP:7:ARG:HA	47:DP:7:ARG:HH11	1.53	0.72
9:CI:53:VAL:HG11	9:CI:85:LEU:HD22	1.70	0.72
6:AF:37:VAL:HG12	6:AF:38:GLU:N	2.03	0.72
18:AR:53:ARG:HD2	18:AR:59:SER:O	1.90	0.72
2:AB:142:LEU:HD23	2:AB:142:LEU:O	1.90	0.72
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.72	0.72
56:BY:95:LYS:HG2	56:BY:101:LYS:H	1.54	0.72
35:DA:1786:A:C2	35:DA:2606:C:H1'	2.24	0.72
22:CY:11:C:H2'	22:CY:12:U:H6	1.51	0.72
31:B6:12:GLU:HA	31:B6:23:THR:HA	1.70	0.72
10:CJ:34:VAL:CG2	10:CJ:74:ILE:HG22	2.20	0.72
47:DP:48:PRO:O	47:DP:50:ARG:N	2.21	0.72
56:BY:28:LYS:HB3	56:BY:37:VAL:HB	1.72	0.72
1:CA:537:G:H5''	12:CL:113:ARG:NH1	2.04	0.72
31:D6:34:LEU:HD23	31:D6:51:GLU:HB3	1.72	0.72
47:BP:7:ARG:O	47:BP:10:PRO:HD2	1.89	0.72
1:AA:92:C:H2'	1:AA:93:G:H8	1.49	0.72
1:AA:735:C:H2'	1:AA:736:C:C6	2.24	0.72
9:CI:99:LEU:HB3	9:CI:101:PHE:HD1	1.52	0.72
35:BA:2134:A:H61	35:BA:2157:G:H1'	1.54	0.72
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.69	0.72
16:CP:43:LYS:HG3	16:CP:48:TRP:CG	2.24	0.72
1:CA:434:U:H2'	1:CA:435:C:C6	2.25	0.72
1:CA:853:G:O2'	1:CA:854:G:H5'	1.89	0.72
47:BP:47:ASP:HB3	47:BP:48:PRO:HA	1.72	0.72
23:AW:20:G:P	23:AW:21:U:H5	2.12	0.72
7:CG:113:GLU:CB	7:CG:119:ARG:HG2	2.17	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:51:ARG:HD3	41:BG:53:LEU:HD23	1.70	0.72
35:DA:548:A:C2'	35:DA:549:G:H5'	2.18	0.72
8:AH:12:ARG:NH1	8:AH:26:VAL:HA	2.05	0.72
8:AH:51:VAL:HG11	8:AH:60:ARG:HB2	1.71	0.72
47:DP:97:PRO:O	47:DP:98:GLU:HB3	1.88	0.72
35:DA:2302:G:H1'	41:DG:128:ARG:NE	2.05	0.72
39:BE:59:VAL:HG21	39:BE:63:LEU:HA	1.71	0.72
6:CF:69:GLU:H	6:CF:69:GLU:CD	1.93	0.72
13:AM:88:ARG:HA	13:AM:98:VAL:HG11	1.70	0.72
31:D6:5:VAL:HG22	31:D6:6:ARG:H	1.54	0.72
57:BZ:102:LEU:HD22	57:BZ:139:VAL:CG2	2.19	0.72
22:CV:17:C:H5''	22:CV:18:U:H6	1.51	0.72
4:CD:126:ILE:CG2	4:CD:127:THR:H	2.02	0.72
4:CD:122:ARG:HH12	4:CD:135:LEU:HD12	1.54	0.72
2:CB:114:ARG:HH11	2:CB:118:LEU:HD21	1.54	0.72
35:BA:2415:G:H4'	47:BP:67:MET:N	2.04	0.72
35:BA:2334:G:N3	50:BS:18:ILE:HD12	2.05	0.72
46:BO:111:PHE:HB3	46:BO:114:ILE:HD13	1.70	0.72
4:AD:57:ARG:HB3	4:AD:206:PHE:HB2	1.71	0.72
4:AD:79:PHE:CE2	4:AD:207:TYR:HB2	2.25	0.72
51:DT:51:ARG:HG3	51:DT:98:LYS:HG3	1.70	0.72
22:CY:55:G:H5''	48:DQ:56:ARG:CZ	2.19	0.72
23:AW:43:G:H2'	23:AW:44:A:H8	1.55	0.72
51:DT:129:ARG:HH12	51:DT:131:ALA:CB	2.01	0.72
46:DO:77:ILE:HD12	51:DT:73:GLU:O	1.90	0.72
56:BY:7:VAL:HG21	56:BY:8:LYS:NZ	2.04	0.72
1:AA:1363(A):A:C4'	1:AA:1364:U:H5''	2.15	0.72
8:CH:12:ARG:NH1	8:CH:27:PRO:HD3	2.04	0.72
51:BT:89:VAL:HG12	51:BT:91:ARG:HG3	1.72	0.72
50:BS:35:ILE:HD11	50:BS:99:LYS:CE	2.19	0.72
1:CA:735:C:H2'	1:CA:736:C:C6	2.25	0.72
5:CE:71:LEU:O	5:CE:72:GLN:HG3	1.89	0.72
35:BA:1542:A:H3'	35:BA:1542:A:H8	1.55	0.72
35:DA:672:C:H2'	35:DA:673:C:C5'	2.19	0.72
1:CA:1104:G:H2'	1:CA:1105:A:H8	1.55	0.72
37:BC:7:ARG:NH2	37:BC:219:MET:HB3	2.03	0.72
39:BE:10:GLY:HA3	51:BT:8:LYS:NZ	2.05	0.72
28:D3:52:HIS:CD2	36:DB:83:G:H4'	2.25	0.72
1:CA:32:A:H2'	1:CA:33:A:C8	2.23	0.72
35:DA:2761:G:H3'	35:DA:2762:G:H5''	1.71	0.72
33:D8:39:LYS:HG2	33:D8:43:GLN:HE21	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CY:63:C:C5'	57:DZ:186:GLU:HG3	2.20	0.72
23:AW:74:C:H5'	23:AW:74:C:C6	2.25	0.72
22:AY:49:G:H3'	22:AY:50:C:C5'	2.19	0.72
22:AV:19:G:H2'	22:AV:59:G:N2	2.05	0.72
35:BA:1899:G:H21	35:BA:1902:C:H5	1.37	0.72
33:B8:52:LYS:N	33:B8:53:PRO:HD2	2.05	0.72
43:DI:113:ARG:HH22	43:DI:132:PRO:HD3	1.54	0.72
43:DI:81:VAL:HG13	43:DI:143:SER:N	2.05	0.72
12:CL:32:PHE:CE1	12:CL:86:ARG:HG3	2.24	0.72
12:CL:89:ARG:HA	12:CL:97:ARG:HA	1.70	0.72
12:AL:40:VAL:HG11	12:AL:77:LEU:O	1.90	0.72
10:AJ:6:ILE:HG13	10:AJ:72:VAL:O	1.89	0.72
53:BV:38:LEU:C	53:BV:39:LEU:HD13	2.09	0.72
31:D6:27:LYS:HB3	31:D6:30:THR:HG22	1.71	0.72
56:DY:59:GLY:O	56:DY:60:PHE:HB2	1.89	0.72
1:CA:1515:C:H2'	1:CA:1516:G:H8	1.54	0.72
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.72	0.72
2:CB:168:THR:HG23	2:CB:192:SER:OG	1.90	0.72
27:B2:7:ARG:O	27:B2:11:GLU:HG3	1.89	0.72
2:CB:29:ALA:O	2:CB:32:ILE:HG22	1.90	0.72
49:BR:67:LEU:HD22	49:BR:76:VAL:HG21	1.72	0.72
22:CY:57:U:H1'	57:DZ:184:ALA:HB3	1.71	0.71
23:AW:3:G:C6	23:AW:4:C:C4	2.77	0.71
22:AY:23:A:H2'	22:AY:24:A:H8	1.54	0.71
23:CW:38:U:H2'	23:CW:39:A:C8	2.24	0.71
35:DA:1899:G:H21	35:DA:1902:C:H5	1.38	0.71
35:DA:1748:G:H5'	35:DA:1748:G:H8	1.55	0.71
1:AA:1492:A:OP1	12:AL:47:LYS:HA	1.90	0.71
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.25	0.71
10:CJ:8:LEU:HD23	10:CJ:96:ILE:HG22	1.70	0.71
52:BU:92:ARG:CZ	53:BV:11:GLN:H	2.03	0.71
3:CC:91:LEU:HD11	3:CC:101:LEU:HD12	1.72	0.71
1:AA:383:A:C2'	1:AA:384:G:H5'	2.20	0.71
35:DA:2894:G:N3	35:DA:2894:G:H2'	2.05	0.71
35:BA:2755:C:HO2'	35:BA:2756:U:H6	1.37	0.71
57:BZ:80:ARG:HH11	57:BZ:80:ARG:HA	1.55	0.71
35:DA:642:G:H21	35:DA:646:A:H2	1.37	0.71
5:AE:73:ASN:HD22	5:AE:73:ASN:N	1.87	0.71
22:CY:57:U:O2	22:CY:59:G:C5	2.43	0.71
22:AY:57:U:OP2	57:BZ:182:LYS:HB2	1.90	0.71
46:DO:68:GLU:HB3	46:DO:78:ARG:NH1	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:587:C:C5	47:BP:33:ARG:HD3	2.24	0.71
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.20	0.71
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.70	0.71
35:BA:2524:G:H8	35:BA:2524:G:H5'	1.54	0.71
47:BP:6:LEU:HD12	47:BP:8:PRO:HG2	1.72	0.71
5:CE:147:ASP:O	5:CE:150:ARG:HB3	1.89	0.71
1:CA:625:G:H4'	16:CP:16:HIS:CD2	2.25	0.71
37:BC:34:ALA:HB1	37:BC:40:GLU:HB2	1.71	0.71
9:CI:7:THR:HB	9:CI:83:ARG:HH11	1.55	0.71
35:DA:2693:A:H2'	35:DA:2694:G:H8	1.53	0.71
36:DB:49:C:H2'	36:DB:50:G:C8	2.24	0.71
38:DD:108:PRO:HB3	38:DD:143:HIS:CE1	2.25	0.71
22:AV:33:G:C5	22:AV:34:C:C5	2.79	0.71
9:AI:7:THR:H	9:AI:83:ARG:HD2	1.54	0.71
3:AC:131:ARG:NH1	5:AE:50:GLU:HG2	2.05	0.71
17:CQ:55:ASP:HA	17:CQ:79:SER:HA	1.72	0.71
35:DA:594:U:H2'	35:DA:595:C:C6	2.25	0.71
1:AA:817:C:H1'	1:AA:819:A:H5'	1.72	0.71
43:DI:92:VAL:HG13	43:DI:97:ILE:CG1	2.19	0.71
57:DZ:97:GLU:HB3	57:DZ:125:LEU:HD11	1.72	0.71
47:DP:115:LEU:HA	47:DP:134:ALA:CB	2.19	0.71
1:AA:537:G:H5''	12:AL:113:ARG:NH1	2.06	0.71
36:BB:40:U:H3'	36:BB:41:U:H5''	1.72	0.71
42:BH:136:ILE:HD12	42:BH:136:ILE:N	2.05	0.71
14:CN:24:CYS:HB3	14:CN:27:CYS:O	1.90	0.71
1:CA:674:G:H2'	1:CA:675:A:H8	1.54	0.71
7:CG:16:LEU:HD13	9:CI:42:ARG:HA	1.70	0.71
47:BP:71:VAL:CG1	47:BP:72:PRO:HD3	2.19	0.71
1:CA:1064:G:H21	1:CA:1190:G:H2'	1.55	0.71
35:BA:1281:G:H8	35:BA:1281:G:H5'	1.53	0.71
17:AQ:90:ILE:HG22	17:AQ:94:ASN:HD21	1.56	0.71
1:AA:1211:U:H5'	1:AA:1212:U:OP1	1.89	0.71
16:AP:43:LYS:HG3	16:AP:48:TRP:CG	2.24	0.71
23:AW:37:A:H2'	23:AW:38:U:O4'	1.90	0.71
22:AV:4:C:O2'	22:AV:5:C:C6	2.39	0.71
22:AV:1:G:C1'	25:B0:5:LYS:HZ1	1.99	0.71
51:DT:28:VAL:O	51:DT:29:ARG:HB2	1.89	0.71
51:BT:116:ALA:HB1	51:BT:121:ILE:HD11	1.72	0.71
29:D4:7:PRO:HD2	41:DG:65:GLY:O	1.89	0.71
47:DP:85:LEU:HA	47:DP:88:LEU:HD13	1.73	0.71
40:BF:188:ARG:HA	47:BP:7:ARG:HD3	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1400:C:H6	1:CA:1400:C:O5'	1.72	0.71
35:DA:2287:A:H62	35:DA:2344:U:H3	1.37	0.71
9:AI:88:TYR:O	9:AI:89:ASN:HB2	1.88	0.71
1:CA:383:A:C2'	1:CA:384:G:H5'	2.19	0.71
54:BW:65:LEU:HD23	54:BW:68:ARG:HD2	1.72	0.71
16:AP:2:VAL:HG23	16:AP:21:VAL:HG23	1.73	0.71
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.71	0.71
3:CC:139:GLN:HE21	3:CC:143:GLU:HG3	1.56	0.71
35:DA:2126:A:H4'	35:DA:2127:G:O5'	1.89	0.71
35:DA:1278:A:OP1	49:DR:36:THR:HG22	1.89	0.71
25:D0:43:THR:HG22	35:DA:2331:G:O2'	1.91	0.71
35:DA:997:G:O2'	35:DA:998:C:H5'	1.90	0.71
50:DS:36:TYR:HD2	50:DS:52:SER:HG	1.39	0.71
1:AA:1442(A):G:H3'	1:AA:1442(B):A:H5'	1.71	0.71
53:BV:49:THR:HB	53:BV:50:PRO:CD	2.21	0.71
57:DZ:144:LEU:O	57:DZ:174:VAL:HG21	1.91	0.71
1:CA:1228:C:H2'	1:CA:1229:A:H8	1.55	0.71
38:BD:34:VAL:C	38:BD:36:PRO:HD2	2.11	0.71
37:DC:30:VAL:HG11	37:DC:42:VAL:HG22	1.70	0.71
51:DT:34:VAL:HG12	51:DT:35:LYS:N	2.05	0.71
35:BA:2894:G:H2'	35:BA:2894:G:N3	2.04	0.71
54:DW:73:ALA:HB3	54:DW:106:ILE:HD11	1.71	0.71
17:AQ:26:GLN:HG2	17:AQ:37:LYS:HG2	1.73	0.71
1:AA:921:U:O2	5:AE:19:MET:HB2	1.91	0.71
35:BA:2121:G:H1	35:BA:2177:C:H42	1.37	0.71
6:AF:62:TRP:C	6:AF:63:TYR:HD1	1.94	0.71
35:DA:296:C:O2'	35:DA:297:C:H5'	1.90	0.71
56:DY:31:LEU:HD22	56:DY:31:LEU:N	2.06	0.71
43:DI:93:THR:HG23	43:DI:119:PRO:HB3	1.72	0.71
1:AA:177:C:O2'	1:AA:178:C:H5'	1.90	0.71
45:DN:126:PRO:O	45:DN:127:ASP:HB2	1.90	0.71
51:BT:28:VAL:O	51:BT:29:ARG:HB2	1.90	0.71
25:B0:14:ARG:HH11	25:B0:14:ARG:CB	2.02	0.71
35:BA:2287:A:H62	35:BA:2344:U:H3	1.36	0.71
47:DP:6:LEU:HD12	47:DP:8:PRO:HG2	1.72	0.71
37:DC:52:PRO:HG2	37:DC:53:ARG:HD3	1.72	0.71
2:CB:111:ARG:HH21	2:CB:114:ARG:HG2	1.55	0.71
1:CA:438:G:H2'	1:CA:494:U:C4	2.25	0.71
26:B1:82:LEU:HB3	26:B1:90:ILE:HD12	1.72	0.71
35:DA:2188:C:H2'	35:DA:2189:U:O4'	1.91	0.71
2:CB:22:LYS:HE2	2:CB:22:LYS:HA	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:198:G:H2'	1:CA:199:G:H8	1.54	0.71
1:AA:626:U:H5''	16:AP:38:TYR:CD2	2.26	0.71
3:AC:139:GLN:HE21	3:AC:143:GLU:HG3	1.55	0.71
35:DA:2219:G:O2'	35:DA:2220:G:H5'	1.90	0.71
35:DA:2121:G:H1	35:DA:2177:C:H42	1.36	0.71
57:BZ:11:GLU:HB2	57:BZ:13:GLU:OE1	1.91	0.71
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.72	0.71
22:AY:57:U:H6	57:BZ:183:LEU:N	1.84	0.71
23:CW:44:A:H2'	23:CW:45:U:C4'	2.20	0.71
51:DT:28:VAL:HG13	51:DT:46:GLU:HA	1.71	0.71
7:AG:111:ARG:HE	7:AG:123:GLU:HB2	1.55	0.71
40:DF:3:GLU:CA	40:DF:24:LEU:HG	2.20	0.71
35:BA:1019:U:H3	35:BA:1142(A):A:H62	1.37	0.71
53:BV:39:LEU:HD12	53:BV:50:PRO:O	1.90	0.71
13:CM:91:ARG:HB2	13:CM:98:VAL:HG13	1.72	0.71
3:CC:181:ASN:ND2	3:CC:204:LEU:HB2	2.05	0.71
33:D8:30:ARG:HE	33:D8:30:ARG:HA	1.55	0.71
35:BA:1047:G:H2'	35:BA:1110:G:H22	1.53	0.71
13:AM:40:ASN:HD21	13:AM:42:ALA:HB3	1.54	0.71
19:CS:6:LYS:CD	19:CS:6:LYS:H	2.03	0.71
38:BD:79:VAL:HG21	38:BD:111:LEU:HD11	1.73	0.71
1:CA:823:G:H21	8:CH:1:MET:HE3	1.56	0.71
39:BE:179:GLU:HB3	39:BE:181:LEU:CD2	2.21	0.71
40:BF:161:GLU:O	40:BF:165:ARG:HG3	1.91	0.71
22:CY:30:U:H2'	22:CY:31:C:C6	2.26	0.71
23:AW:43:G:H2'	23:AW:44:A:C8	2.26	0.71
35:DA:806:C:OP2	47:DP:39:LYS:HD2	1.91	0.71
33:B8:6:THR:HA	33:B8:61:LEU:HD11	1.72	0.71
43:BI:123:LEU:HD11	43:BI:144:VAL:CG2	2.21	0.71
12:AL:32:PHE:CE1	12:AL:86:ARG:HG3	2.26	0.71
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.04	0.71
47:DP:146:VAL:CG2	47:DP:147:LEU:H	1.99	0.71
41:DG:95:ARG:HG2	41:DG:95:ARG:HH11	1.56	0.71
1:CA:728:A:H2'	1:CA:729:A:H8	1.56	0.71
35:DA:558:G:P	45:DN:111:PRO:HD2	2.30	0.71
29:B4:5:ILE:N	29:B4:5:ILE:HD13	2.05	0.71
3:CC:54:ARG:NH1	3:CC:56:ASP:HB2	2.05	0.71
35:DA:528:A:C2	35:DA:2043:C:H4'	2.25	0.71
51:BT:34:VAL:HG12	51:BT:35:LYS:N	2.06	0.71
42:DH:170:ARG:H	42:DH:170:ARG:HD2	1.56	0.71
1:AA:136:C:H4'	16:AP:1:MET:HE2	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:79:PHE:CE2	4:CD:207:TYR:HB2	2.25	0.71
1:AA:833:U:H2'	1:AA:834:C:C6	2.26	0.71
35:DA:768:G:O2'	35:DA:1379:A:N6	2.23	0.71
22:CY:20:G:C2	22:CY:58:C:N3	2.58	0.71
23:AW:42:C:O2'	23:AW:43:G:H5'	1.91	0.71
23:AW:44:A:H2'	23:AW:45:U:C4'	2.21	0.71
39:DE:179:GLU:HB3	39:DE:181:LEU:CD2	2.20	0.71
22:AV:4:C:HO2'	22:AV:5:C:H6	0.78	0.71
12:AL:58:VAL:O	12:AL:65:GLU:HA	1.91	0.71
52:DU:68:ALA:O	52:DU:71:GLN:HB3	1.90	0.71
8:AH:12:ARG:NH1	8:AH:27:PRO:HD3	2.06	0.71
13:CM:88:ARG:HA	13:CM:98:VAL:HG11	1.72	0.71
42:DH:136:ILE:HD12	42:DH:136:ILE:N	2.06	0.71
9:CI:55:ALA:HA	9:CI:58:HIS:HD2	1.55	0.71
23:CW:64:C:H5''	37:DC:53:ARG:O	1.91	0.71
30:D5:40:LYS:CE	30:D5:46:CYS:HB3	2.21	0.71
16:CP:67:THR:HG22	16:CP:68:ASP:N	2.06	0.71
51:BT:60:THR:HG22	51:BT:77:PRO:HA	1.71	0.71
35:DA:2250:G:N2	48:DQ:84:GLY:HA3	2.06	0.71
11:AK:91:ARG:HD2	11:AK:92:GLU:N	2.05	0.71
17:CQ:12:SER:HB3	17:CQ:20:THR:HB	1.72	0.71
22:AV:30:U:C2	22:AV:31:C:C5	2.79	0.71
47:BP:48:PRO:HG2	47:BP:49:ARG:N	2.05	0.71
1:CA:177:C:O2'	1:CA:178:C:H5'	1.91	0.71
7:CG:111:ARG:HE	7:CG:123:GLU:HB2	1.55	0.71
43:DI:77:LEU:HD23	43:DI:141:LYS:HG2	1.72	0.71
35:BA:1748:G:H8	35:BA:1748:G:H5'	1.56	0.71
4:AD:129:ASN:HD21	4:AD:145:GLU:H	1.37	0.71
41:BG:57:ALA:HA	41:BG:90:LEU:HD21	1.73	0.71
29:B4:5:ILE:HD11	41:BG:67:LYS:HZ3	1.55	0.71
3:CC:70:VAL:O	3:CC:105:GLU:HA	1.90	0.71
1:AA:1314:C:OP2	19:AS:6:LYS:HG3	1.91	0.71
35:BA:893:C:H2'	35:BA:894:C:H6	1.56	0.71
40:BF:122:LYS:HA	40:BF:122:LYS:HE2	1.73	0.71
12:CL:36:VAL:H	12:CL:58:VAL:HG13	1.54	0.70
40:BF:3:GLU:CA	40:BF:24:LEU:HG	2.21	0.70
53:DV:38:LEU:C	53:DV:39:LEU:HD13	2.11	0.70
35:BA:1786:A:C2	35:BA:2606:C:H1'	2.26	0.70
50:DS:54:LEU:O	50:DS:54:LEU:HD13	1.91	0.70
35:BA:806:C:OP2	47:BP:39:LYS:HD2	1.90	0.70
2:AB:18:GLY:H	2:AB:42:ILE:CG2	2.04	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.72	0.70
2:AB:111:ARG:HH21	2:AB:114:ARG:HG2	1.56	0.70
40:BF:158:THR:HB	40:BF:195:ASP:HB2	1.74	0.70
40:BF:178:PRO:HG2	40:BF:179:GLU:OE1	1.90	0.70
2:CB:142:LEU:HD23	2:CB:142:LEU:O	1.90	0.70
27:B2:3:LEU:HD23	27:B2:3:LEU:O	1.90	0.70
1:AA:339:C:H2'	1:AA:340:U:C6	2.25	0.70
36:BB:11:C:H2'	36:BB:12:C:H5'	1.72	0.70
50:BS:106:ARG:HB3	50:BS:106:ARG:NH1	2.06	0.70
14:AN:7:ILE:O	14:AN:11:LYS:HG3	1.91	0.70
26:B1:49:VAL:HG11	26:B1:70:VAL:HG11	1.71	0.70
40:DF:122:LYS:HE2	40:DF:122:LYS:HA	1.72	0.70
1:AA:333:G:H4'	20:AT:16:HIS:CE1	2.26	0.70
22:AY:10:G:H2'	22:AY:11:C:H6	1.54	0.70
23:CW:70:G:C5	23:CW:71:G:C5	2.78	0.70
23:CW:33:G:N3	23:CW:34:C:H1'	2.06	0.70
43:BI:93:THR:HG23	43:BI:119:PRO:HB3	1.71	0.70
1:AA:1125:U:H3	10:AJ:5:ARG:HH21	1.39	0.70
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	1.91	0.70
13:CM:90:LEU:O	13:CM:91:ARG:HG2	1.91	0.70
26:D1:53:VAL:CG2	26:D1:74:VAL:HG13	2.21	0.70
36:BB:49:C:H2'	36:BB:50:G:C8	2.26	0.70
35:BA:2134:A:N6	35:BA:2157:G:H1'	2.06	0.70
16:CP:2:VAL:HG22	16:CP:64:ALA:HB1	1.71	0.70
13:CM:40:ASN:HD21	13:CM:42:ALA:HB3	1.56	0.70
35:BA:259:G:H21	35:BA:621:A:H8	1.40	0.70
35:DA:2415:G:H4'	47:DP:67:MET:N	2.06	0.70
1:AA:640:A:N3	8:AH:115:SER:HB3	2.06	0.70
8:AH:118:VAL:O	8:AH:119:LEU:HD23	1.92	0.70
35:BA:271(D):G:H1	35:BA:271(T):C:H42	1.36	0.70
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.71	0.70
1:CA:881:G:P	12:CL:12:ARG:HH22	2.14	0.70
7:CG:113:GLU:HB2	7:CG:119:ARG:CG	2.17	0.70
53:DV:18:LEU:HD22	53:DV:19:LYS:N	2.05	0.70
51:BT:91:ARG:HB3	51:BT:116:ALA:HA	1.71	0.70
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.92	0.70
4:AD:59:ARG:CA	4:AD:59:ARG:HE	2.04	0.70
9:AI:114:TYR:HD1	9:AI:114:TYR:H	1.37	0.70
3:CC:77:ILE:HG12	3:CC:84:ILE:HD12	1.71	0.70
1:AA:1423:G:H5'	46:BO:49:ARG:HH22	1.55	0.70
41:BG:32:PRO:HB2	41:BG:172:LEU:HD12	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:67:THR:HG22	16:CP:68:ASP:H	1.56	0.70
35:DA:1403:C:H5''	35:DA:1471:A:H1'	1.71	0.70
1:AA:823:G:H21	8:AH:1:MET:HE3	1.55	0.70
36:DB:94:C:H2'	36:DB:95:C:H6	1.56	0.70
18:CR:36:ASN:HB3	18:CR:39:VAL:CG2	2.21	0.70
42:DH:105:LEU:H	42:DH:105:LEU:HD23	1.57	0.70
56:BY:14:LEU:HD11	56:BY:22:GLY:HA2	1.73	0.70
10:AJ:23:ILE:HG23	10:AJ:85:LEU:HD22	1.73	0.70
22:AV:14:A:C3'	22:AV:15:G:H8	1.93	0.70
22:AV:3:G:H1	22:AV:72:C:H42	1.40	0.70
51:DT:116:ALA:HB1	51:DT:121:ILE:HD11	1.71	0.70
30:D5:3:LYS:HE2	35:DA:2613:U:C2'	2.21	0.70
1:CA:1152:A:H5''	10:CJ:13:HIS:HD2	1.56	0.70
22:CV:2:G:H2'	22:CV:2:G:N3	2.05	0.70
36:DB:40:U:H3'	36:DB:41:U:C5'	2.21	0.70
50:BS:54:LEU:HD13	50:BS:54:LEU:O	1.90	0.70
3:AC:54:ARG:NH1	3:AC:56:ASP:HB2	2.06	0.70
1:AA:1116:C:C2'	1:AA:1117:G:H5''	2.21	0.70
39:DE:16:ARG:O	39:DE:17:ASP:HB2	1.91	0.70
39:DE:61:ARG:H	39:DE:62:PRO:HD2	1.54	0.70
37:BC:52:PRO:HG2	37:BC:53:ARG:HD3	1.73	0.70
35:DA:1542:A:H3'	35:DA:1542:A:H8	1.56	0.70
35:DA:1173:G:H3'	35:DA:1174:A:H5'	1.73	0.70
11:AK:43:SER:HA	11:AK:47:VAL:HG21	1.73	0.70
2:CB:165:VAL:HG23	2:CB:166:ASP:H	1.57	0.70
11:CK:91:ARG:HD2	11:CK:92:GLU:N	2.05	0.70
34:B9:4:ARG:HD2	34:B9:34:GLN:NE2	2.06	0.70
43:BI:41:GLU:O	43:BI:45:LYS:HG2	1.91	0.70
1:CA:634:C:H2'	1:CA:635:G:H8	1.56	0.70
57:BZ:128:VAL:CG2	57:BZ:132:ASN:HB2	2.20	0.70
35:BA:768:G:O2'	35:BA:1379:A:N6	2.25	0.70
1:CA:1405:G:H2'	1:CA:1406:U:H6	1.56	0.70
30:B5:40:LYS:HE2	30:B5:46:CYS:HB3	1.73	0.70
39:DE:46:ALA:HB2	39:DE:82:ARG:HA	1.72	0.70
23:AW:5:C:C2	23:AW:72:C:N3	2.59	0.70
56:DY:7:VAL:HG21	56:DY:8:LYS:NZ	2.07	0.70
33:D8:49:VAL:HG12	35:DA:2360:A:OP1	1.91	0.70
49:DR:7:GLY:O	49:DR:8:ARG:NE	2.24	0.70
35:DA:1803:A:O2'	38:DD:259:THR:HG21	1.91	0.70
10:CJ:51:ARG:NE	10:CJ:61:GLU:HB2	2.06	0.70
4:CD:129:ASN:HD21	4:CD:145:GLU:H	1.39	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.74	0.70
38:DD:242:ARG:N	38:DD:242:ARG:HD2	2.06	0.70
1:CA:1141:C:H2'	1:CA:1142:G:C8	2.26	0.70
25:D0:26:TYR:O	25:D0:29:GLN:HB2	1.92	0.70
35:DA:1040:C:H42	35:DA:1115:G:H1	1.37	0.70
35:BA:1014:U:H2'	35:BA:1015:G:H5''	1.73	0.70
35:DA:2543:G:H2'	35:DA:2544:G:C8	2.26	0.70
15:CO:65:ARG:HG2	15:CO:65:ARG:HH11	1.55	0.70
22:AV:39:A:H2'	22:AV:40:A:C8	2.27	0.70
1:CA:833:U:H2'	1:CA:834:C:C6	2.26	0.70
48:DQ:56:ARG:HD3	57:DZ:180:VAL:HG11	1.73	0.70
23:AW:38:U:H2'	23:AW:39:A:C8	2.27	0.70
22:AY:6:C:N3	22:AY:69:G:O6	2.25	0.70
56:BY:81:LYS:HD3	56:BY:97:ARG:O	1.92	0.70
51:BT:129:ARG:HH12	51:BT:131:ALA:CB	2.02	0.70
1:CA:1228:C:P	13:CM:108:ARG:HH22	2.14	0.70
3:CC:76:VAL:HG23	3:CC:77:ILE:N	2.05	0.70
42:BH:170:ARG:H	42:BH:170:ARG:HD2	1.55	0.70
2:AB:114:ARG:HH11	2:AB:118:LEU:HD21	1.55	0.70
35:BA:2124:G:H5''	37:BC:175:PRO:HG3	1.72	0.70
16:AP:2:VAL:HG22	16:AP:64:ALA:HB1	1.73	0.70
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.56	0.70
22:AV:39:A:H2'	22:AV:40:A:H8	1.57	0.70
2:AB:29:ALA:O	2:AB:32:ILE:HG22	1.90	0.70
57:BZ:37:VAL:HG23	57:BZ:38:TYR:N	2.06	0.70
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.74	0.70
48:DQ:110:THR:HG23	48:DQ:113:GLN:OE1	1.91	0.70
48:DQ:76:LYS:HB3	48:DQ:91:GLU:HG3	1.73	0.70
22:CY:62:U:O3'	57:DZ:186:GLU:HG2	1.90	0.70
23:CW:42:C:O2'	23:CW:43:G:H5'	1.91	0.70
51:DT:70:VAL:HG12	51:DT:71:GLY:N	2.05	0.70
56:DY:28:LYS:O	56:DY:38:ILE:HB	1.90	0.70
56:DY:96:ILE:HG22	56:DY:97:ARG:N	2.06	0.70
53:DV:49:THR:HB	53:DV:50:PRO:CD	2.22	0.70
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.72	0.70
33:D8:59:LYS:HZ3	33:D8:59:LYS:HB2	1.54	0.70
6:AF:69:GLU:CD	6:AF:69:GLU:H	1.94	0.70
32:B7:45:ALA:O	32:B7:46:VAL:HG23	1.92	0.70
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.26	0.70
3:AC:76:VAL:HG23	3:AC:77:ILE:N	2.05	0.70
1:CA:254:G:H2'	1:CA:255:G:H8	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:43:ALA:HA	9:AI:74:ILE:HD13	1.70	0.70
35:DA:2134:A:N6	35:DA:2157:G:H1'	2.06	0.70
1:CA:1116:C:C2'	1:CA:1117:G:H5''	2.22	0.70
41:DG:29:TRP:HA	41:DG:29:TRP:CE3	2.27	0.70
19:AS:51:VAL:O	19:AS:58:VAL:HG22	1.91	0.70
35:BA:1173:G:H3'	35:BA:1174:A:H5'	1.73	0.70
1:CA:940:C:H2'	1:CA:941:G:H8	1.56	0.70
2:AB:22:LYS:HE2	2:AB:22:LYS:HA	1.73	0.70
54:DW:40:ASN:O	54:DW:41:LYS:HG2	1.91	0.70
2:AB:181:PHE:HD1	8:AH:70:GLN:HB3	1.57	0.70
48:DQ:1:MET:O	48:DQ:2:LEU:HB2	1.90	0.70
44:BJ:84:UNK:C	44:BJ:86:UNK:N	2.53	0.70
40:BF:123:LEU:HD12	40:BF:124:LEU:H	1.57	0.70
26:D1:6:GLU:O	26:D1:7:ILE:HD12	1.92	0.70
51:BT:30:VAL:CG2	51:BT:84:GLN:HG3	2.22	0.70
52:BU:92:ARG:HH22	53:BV:10:LYS:HG2	1.55	0.70
1:CA:474:G:H2'	1:CA:475:G:H8	1.57	0.70
31:D6:26:ASN:O	31:D6:27:LYS:HB2	1.91	0.70
13:CM:116:THR:HG22	22:CV:31:C:H4'	1.72	0.70
4:AD:126:ILE:CG2	4:AD:127:THR:H	2.03	0.70
40:BF:63:LYS:HZ2	40:BF:67:GLN:HB2	1.56	0.70
51:BT:51:ARG:HG3	51:BT:98:LYS:HG3	1.73	0.70
4:CD:74:GLN:HA	4:CD:77:ASN:HD22	1.57	0.70
1:CA:1444:C:H2'	1:CA:1445:C:C6	2.27	0.70
4:AD:177:ASP:OD1	4:AD:179:GLU:HB2	1.92	0.70
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.73	0.70
1:AA:17:U:H2'	1:AA:18:C:C6	2.27	0.70
22:AY:55:G:H5''	48:BQ:56:ARG:HH22	1.56	0.70
22:AY:57:U:H3'	57:BZ:182:LYS:CB	2.07	0.70
35:BA:2312:U:O3'	41:BG:71:THR:HG21	1.92	0.70
51:DT:85:LYS:HZ3	51:DT:85:LYS:HB3	1.55	0.70
56:BY:96:ILE:HG22	56:BY:97:ARG:N	2.06	0.70
12:AL:89:ARG:HH12	12:AL:97:ARG:HG2	1.56	0.70
8:CH:12:ARG:NH1	8:CH:26:VAL:HA	2.05	0.70
35:BA:1798:U:C5'	38:BD:259:THR:HG22	2.18	0.70
35:DA:2724:C:P	49:DR:2:ARG:HH22	2.15	0.70
47:BP:38:GLN:HG3	47:BP:39:LYS:N	2.07	0.70
47:BP:84:ASN:HA	47:BP:115:LEU:O	1.92	0.70
35:DA:2132:U:N3	37:DC:6:LYS:HB2	2.07	0.70
1:CA:136:C:H4'	16:CP:1:MET:HE2	1.73	0.70
10:CJ:9:ARG:HG2	10:CJ:69:ASN:OD1	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:53:ARG:HH11	18:CR:60:ALA:HA	1.57	0.70
1:AA:191:G:C4	20:AT:105:SER:HB3	2.27	0.70
54:BW:29:LEU:HD21	54:BW:33:ARG:HH21	1.56	0.70
1:AA:32:A:H2'	1:AA:33:A:C8	2.26	0.70
39:BE:46:ALA:HB2	39:BE:82:ARG:HA	1.74	0.70
22:CY:57:U:O4	22:CY:60:A:OP2	2.09	0.70
22:AY:11:C:H41	22:AY:47:G:N2	1.87	0.70
47:BP:55:ARG:CG	47:BP:56:SER:H	1.96	0.70
1:AA:1053:G:N7	1:AA:1200:C:H5''	2.07	0.70
35:BA:404:C:C4'	35:BA:405:U:H5'	2.21	0.70
33:D8:52:LYS:N	33:D8:53:PRO:HD2	2.07	0.70
52:BU:68:ALA:O	52:BU:71:GLN:HB3	1.91	0.70
57:DZ:110:GLY:HA3	57:DZ:174:VAL:HG11	1.74	0.70
50:DS:70:GLY:C	50:DS:101:LEU:HD23	2.13	0.70
45:BN:47:ALA:CB	45:BN:112:LEU:HD11	2.22	0.70
47:BP:7:ARG:HA	47:BP:7:ARG:HH11	1.55	0.70
38:BD:117:VAL:HG22	38:BD:118:VAL:H	1.56	0.70
1:CA:191:G:C4	20:CT:105:SER:HB3	2.27	0.70
35:DA:1014:U:H2'	35:DA:1015:G:H5''	1.74	0.70
9:AI:7:THR:HB	9:AI:83:ARG:HH11	1.55	0.70
6:AF:61:LEU:HD23	6:AF:63:TYR:OH	1.91	0.70
36:DB:92:C:H2'	36:DB:93:G:H8	1.57	0.70
1:CA:1296:C:H3'	1:CA:1297:C:C6	2.27	0.70
35:BA:953:A:O2'	35:BA:954:G:H5'	1.90	0.70
6:AF:35:ALA:HA	6:AF:67:MET:HB3	1.73	0.70
23:CW:74:C:C6	23:CW:74:C:H5'	2.27	0.69
31:B6:48:VAL:HG23	31:B6:49:HIS:H	1.57	0.69
56:DY:9:LYS:O	56:DY:28:LYS:NZ	2.25	0.69
48:DQ:132:VAL:CG1	57:DZ:81:ARG:HH21	2.02	0.69
30:D5:3:LYS:NZ	30:D5:5:PRO:HB2	2.06	0.69
12:AL:36:VAL:H	12:AL:58:VAL:HG13	1.54	0.69
55:DX:64:LYS:HZ3	55:DX:73:ARG:HE	1.39	0.69
10:CJ:51:ARG:HE	10:CJ:61:GLU:HB2	1.57	0.69
27:D2:51:ARG:HD3	27:D2:55:ARG:HH12	1.53	0.69
40:BF:103:LYS:HA	40:BF:106:ARG:HG3	1.73	0.69
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.57	0.69
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.71	0.69
1:AA:339:C:H2'	1:AA:340:U:H6	1.57	0.69
50:BS:89:ARG:HG2	50:BS:92:TYR:HA	1.72	0.69
11:CK:102:GLY:C	11:CK:103:LEU:HD22	2.12	0.69
48:BQ:110:THR:HG23	48:BQ:113:GLN:OE1	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:636:U:H2'	1:CA:637:G:C8	2.27	0.69
6:AF:19:LEU:HD23	6:AF:19:LEU:O	1.92	0.69
1:AA:444:C:H2'	1:AA:445:G:H8	1.55	0.69
52:DU:54:LYS:O	52:DU:58:ARG:HG3	1.92	0.69
48:BQ:62:GLY:O	57:BZ:178:GLU:HB2	1.92	0.69
4:CD:26:CYS:HA	4:CD:31:CYS:HB2	1.72	0.69
22:AV:3:G:N1	22:AV:4:C:C4	2.60	0.69
56:BY:8:LYS:HD2	56:BY:8:LYS:N	2.07	0.69
23:AW:20:G:C3'	23:AW:21:U:H5''	2.21	0.69
31:D6:48:VAL:HG23	31:D6:49:HIS:H	1.57	0.69
1:AA:1407:C:O2'	35:BA:1912:A:N1	2.23	0.69
40:DF:132:VAL:HG22	40:DF:133:ASN:N	2.05	0.69
41:DG:131:TYR:H	41:DG:159:VAL:HG13	1.55	0.69
57:BZ:153:SER:HB2	57:BZ:163:LEU:CD1	2.21	0.69
35:BA:481:G:OP2	56:BY:47:LYS:HD3	1.93	0.69
50:BS:70:GLY:C	50:BS:101:LEU:HD23	2.13	0.69
3:AC:77:ILE:HG12	3:AC:84:ILE:HD12	1.74	0.69
1:AA:939:G:H5''	7:AG:102:ARG:CZ	2.23	0.69
1:CA:545:C:H5''	4:CD:72:GLU:HG2	1.73	0.69
6:CF:19:LEU:HD23	6:CF:19:LEU:O	1.93	0.69
35:BA:2761:G:H3'	35:BA:2762:G:H5''	1.75	0.69
1:AA:1109:C:H2'	1:AA:1110:A:O4'	1.93	0.69
40:BF:167:ALA:HB1	40:BF:173:VAL:HG11	1.74	0.69
4:CD:177:ASP:OD1	4:CD:179:GLU:HB2	1.92	0.69
35:BA:1603:A:H5'	35:BA:1603:A:H8	1.56	0.69
46:DO:22:ILE:HD11	46:DO:42:SER:HB2	1.73	0.69
33:D8:2:PRO:HA	35:DA:591:C:O2	1.92	0.69
22:CV:63:C:H2'	22:CV:64:C:C6	2.27	0.69
1:AA:1054:C:C4	22:AY:36:AG9:C1'	2.75	0.69
38:BD:49:ILE:HD11	38:BD:52:ARG:HA	1.74	0.69
46:BO:68:GLU:HB3	46:BO:78:ARG:NH1	2.07	0.69
1:CA:1129:C:N4	1:CA:1135:U:H3	1.90	0.69
2:CB:20:GLU:O	2:CB:39:ILE:HG23	1.92	0.69
1:AA:155:C:H2'	1:AA:156:G:C8	2.27	0.69
35:BA:212:G:O2'	35:BA:213:A:H5'	1.92	0.69
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.72	0.69
22:CY:57:U:C5	22:CY:59:G:OP2	2.45	0.69
22:CY:57:U:C6	57:DZ:182:LYS:C	2.65	0.69
22:AY:19:G:C6	22:AY:60:A:N6	2.60	0.69
51:DT:89:VAL:HG12	51:DT:91:ARG:HG3	1.72	0.69
56:DY:81:LYS:HD3	56:DY:97:ARG:O	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG22	1.73	0.69
52:DU:92:ARG:CZ	53:DV:11:GLN:H	2.06	0.69
1:AA:979:C:H3'	1:AA:980:C:C5'	2.18	0.69
57:DZ:16:SER:HA	57:DZ:19:ARG:HD2	1.74	0.69
36:DB:40:U:H3'	36:DB:41:U:H5''	1.73	0.69
13:CM:81:LEU:HD13	13:CM:88:ARG:HB3	1.73	0.69
36:BB:50:G:P	50:BS:62:LYS:HB2	2.31	0.69
50:BS:30:ARG:HH22	50:BS:62:LYS:HD2	1.56	0.69
1:CA:160:A:H1'	1:CA:344:A:C5	2.27	0.69
40:DF:178:PRO:HG2	40:DF:179:GLU:OE1	1.93	0.69
1:CA:640:A:N3	8:CH:115:SER:HB3	2.06	0.69
1:AA:1296:C:H3'	1:AA:1297:C:C6	2.27	0.69
49:BR:117:VAL:O	49:BR:118:GLU:HB2	1.91	0.69
35:BA:1573:G:H2'	35:BA:1574:C:H5'	1.74	0.69
25:B0:70:GLN:NE2	25:B0:80:HIS:NE2	2.41	0.69
13:AM:6:GLY:C	13:AM:8:GLU:H	1.96	0.69
1:CA:1109:C:H2'	1:CA:1110:A:O4'	1.92	0.69
34:B9:36:GLN:HG2	35:BA:1124:C:O2'	1.92	0.69
54:DW:29:LEU:HD21	54:DW:33:ARG:NH2	2.06	0.69
12:CL:83:VAL:CG1	12:CL:84:LEU:N	2.56	0.69
45:BN:126:PRO:O	45:BN:127:ASP:HB2	1.92	0.69
40:DF:132:VAL:HG22	40:DF:133:ASN:ND2	2.08	0.69
1:AA:491:G:H2'	1:AA:492:G:C8	2.22	0.69
2:AB:140:HIS:CA	2:AB:143:GLU:HG2	2.22	0.69
1:AA:254:G:H2'	1:AA:255:G:H8	1.57	0.69
13:CM:5:ALA:HB1	13:CM:66:LEU:HD13	1.74	0.69
3:AC:88:ARG:HA	3:AC:91:LEU:HD12	1.75	0.69
35:DA:1658:C:OP1	39:DE:132:HIS:O	2.09	0.69
50:DS:106:ARG:HB3	50:DS:106:ARG:NH1	2.08	0.69
35:BA:32:C:O2'	35:BA:33:U:H5'	1.92	0.69
35:BA:2206:G:N2	35:BA:2207:G:H5'	2.07	0.69
48:BQ:76:LYS:HB3	48:BQ:91:GLU:HG3	1.72	0.69
47:BP:122:PRO:HA	47:BP:141:ALA:O	1.92	0.69
34:D9:3:VAL:HG21	35:DA:2539:C:H5'	1.74	0.69
57:DZ:70:LEU:HD11	57:DZ:98:MET:SD	2.33	0.69
4:CD:11:LEU:HD13	4:CD:66:ARG:HD3	1.75	0.69
22:AV:5:C:N3	22:AV:71:G:C6	2.61	0.69
22:CV:52:C:H2'	22:CV:53:U:H6	1.56	0.69
47:DP:38:GLN:HG3	47:DP:39:LYS:N	2.05	0.69
12:AL:47:LYS:HE2	12:AL:48:PRO:HB3	1.74	0.69
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:107:LEU:HD23	41:DG:111:LEU:HD11	1.74	0.69
39:BE:62:PRO:C	39:BE:64:LYS:H	1.96	0.69
1:CA:1400:C:C4	22:CV:36:AG9:C4	2.76	0.69
47:BP:115:LEU:HA	47:BP:134:ALA:CB	2.22	0.69
26:B1:53:VAL:HG22	26:B1:74:VAL:HG13	1.74	0.69
13:AM:5:ALA:HB1	13:AM:66:LEU:HD13	1.74	0.69
35:BA:2472:G:H3'	35:BA:2475:C:N4	2.08	0.69
54:DW:58:ALA:HB1	54:DW:64:MET:SD	2.33	0.69
42:BH:12:PRO:HD2	42:BH:15:VAL:HG21	1.75	0.69
2:AB:20:GLU:O	2:AB:39:ILE:HG23	1.92	0.69
6:CF:45:LEU:HD21	6:CF:57:GLN:OE1	1.92	0.69
1:CA:165:C:H2'	1:CA:166:G:H8	1.56	0.69
6:CF:60:PHE:C	6:CF:61:LEU:HD12	2.13	0.69
43:DI:41:GLU:O	43:DI:45:LYS:HG2	1.93	0.69
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.08	0.69
57:BZ:45:ASP:O	57:BZ:49:ARG:HG2	1.93	0.69
40:BF:108:LYS:HD2	40:BF:112:MET:CE	2.23	0.69
22:CY:43:G:O2'	22:CY:44:A:H5'	1.91	0.69
12:AL:83:VAL:CG1	12:AL:84:LEU:N	2.56	0.69
10:CJ:3:LYS:NZ	10:CJ:76:ASN:HA	2.07	0.69
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.74	0.69
47:DP:101:VAL:HG12	47:DP:106:LEU:HB3	1.73	0.69
53:BV:38:LEU:O	53:BV:39:LEU:HD13	1.92	0.69
29:D4:27:THR:O	29:D4:28:LYS:HB3	1.93	0.69
35:DA:2303:G:H4'	41:DG:125:PHE:O	1.92	0.69
5:AE:147:ASP:O	5:AE:150:ARG:HB3	1.93	0.69
35:DA:2328:A:H2'	35:DA:2329:G:C8	2.27	0.69
29:B4:28:LYS:HE3	29:B4:28:LYS:HA	1.74	0.69
41:BG:61:ALA:HB2	41:BG:67:LYS:HA	1.74	0.69
8:CH:11:THR:HG23	8:CH:14:ARG:HH12	1.57	0.69
35:BA:2132:U:N3	37:BC:6:LYS:HB2	2.06	0.69
54:BW:73:ALA:HB3	54:BW:106:ILE:HD11	1.73	0.69
35:BA:298:G:H5'	35:BA:299:A:OP1	1.91	0.69
1:AA:985:C:H2'	1:AA:986:A:H8	1.56	0.69
2:CB:95:GLN:HE21	2:CB:147:LYS:HE2	1.58	0.69
11:CK:43:SER:HA	11:CK:47:VAL:HG21	1.75	0.69
1:CA:155:C:H2'	1:CA:156:G:C8	2.28	0.69
35:BA:1278:A:OP1	49:BR:36:THR:HG22	1.92	0.69
35:BA:642:G:H21	35:BA:646:A:H2	1.40	0.69
35:DA:709:U:H3	35:DA:722:A:H61	1.38	0.69
35:BA:2543:G:H2'	35:BA:2544:G:C8	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:674:G:H1'	40:DF:74:ARG:HD2	1.74	0.69
35:DA:674:G:O2'	40:DF:74:ARG:HD3	1.92	0.69
1:CA:1196:U:C4	24:CX:23:A:N7	2.49	0.69
23:CW:39:A:H3'	23:CW:40:A:O3'	1.93	0.69
23:CW:42:C:H2'	23:CW:43:G:O4'	1.92	0.69
51:DT:62:THR:HG22	51:DT:75:ILE:HG12	1.75	0.69
19:AS:44:MET:HA	19:AS:44:MET:HE3	1.75	0.69
56:BY:81:LYS:HD2	56:BY:96:ILE:HG22	1.74	0.69
33:D8:10:ALA:O	33:D8:14:VAL:HG12	1.93	0.69
1:CA:1125:U:H3	10:CJ:5:ARG:HH21	1.40	0.69
10:CJ:33:GLN:O	10:CJ:75:ILE:HG12	1.92	0.69
25:D0:10:THR:HG22	25:D0:11:ARG:N	2.06	0.69
4:AD:129:ASN:ND2	4:AD:145:GLU:H	1.90	0.69
1:CA:491:G:H2'	1:CA:492:G:C8	2.23	0.69
55:BX:64:LYS:HZ2	55:BX:73:ARG:NH2	1.89	0.69
3:CC:20:SER:HB2	3:CC:40:ARG:HH22	1.56	0.69
42:DH:149:ARG:HA	42:DH:162:ILE:CD1	2.23	0.69
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.58	0.69
35:BA:154(A):C:H3'	35:BA:155:U:C5'	2.23	0.69
20:CT:26:ASN:HB2	20:CT:71:THR:HG23	1.72	0.69
20:CT:89:ARG:HD2	20:CT:104:LEU:HD11	1.72	0.69
35:DA:607:U:OP1	40:DF:102:PRO:HA	1.93	0.69
45:BN:48:MET:H	45:BN:48:MET:CE	2.05	0.69
35:DA:2761:G:C3'	35:DA:2762:G:H5''	2.22	0.69
38:DD:144:ALA:HB3	38:DD:192:THR:HG22	1.74	0.69
1:AA:1240:U:OP2	7:AG:116:ALA:HB2	1.91	0.69
48:BQ:1:MET:O	48:BQ:2:LEU:HB2	1.92	0.69
49:DR:117:VAL:O	49:DR:118:GLU:HB2	1.93	0.69
22:CV:39:A:H2'	22:CV:40:A:C8	2.28	0.69
1:CA:444:C:H2'	1:CA:445:G:H8	1.57	0.69
35:DA:843:G:O2'	35:DA:844:C:H5'	1.93	0.69
12:CL:20:LYS:H	12:CL:20:LYS:HD2	1.56	0.69
38:DD:181:GLU:HA	38:DD:272:ALA:HB3	1.72	0.69
22:AV:2:G:N3	22:AV:2:G:H2'	2.06	0.69
19:AS:63:THR:O	19:AS:66:MET:HG2	1.93	0.69
23:AW:58:C:C4	35:BA:2169:A:H1'	2.28	0.69
35:BA:2523:G:H2'	35:BA:2524:G:C5'	2.22	0.69
39:DE:119:ARG:HG2	39:DE:160:TYR:HB2	1.75	0.69
13:AM:90:LEU:O	13:AM:91:ARG:HG2	1.93	0.69
2:CB:67:THR:HG21	2:CB:155:LEU:HD21	1.74	0.69
4:CD:189:PRO:HB2	4:CD:194:LEU:CD2	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1104:G:H2'	1:AA:1105:A:H8	1.58	0.69
1:AA:636:U:H2'	1:AA:637:G:C8	2.28	0.69
35:BA:271(P):C:O2'	35:BA:271(Q):G:H5'	1.93	0.69
41:DG:161:THR:HG22	41:DG:163:ALA:H	1.56	0.69
34:D9:36:GLN:HG2	35:DA:1124:C:O2'	1.93	0.69
1:AA:692:U:OP1	11:AK:124:LYS:HE2	1.92	0.69
12:AL:20:LYS:HD2	12:AL:20:LYS:H	1.57	0.69
49:DR:100:LEU:HD22	49:DR:100:LEU:H	1.58	0.69
40:DF:167:ALA:HB1	40:DF:173:VAL:HG11	1.73	0.69
25:D0:48:GLY:H	25:D0:51:VAL:HB	1.57	0.69
23:CW:74:C:O2	23:CW:74:C:H2'	1.91	0.69
10:AJ:3:LYS:NZ	10:AJ:76:ASN:HA	2.07	0.69
4:AD:59:ARG:HA	4:AD:59:ARG:NE	2.05	0.69
41:BG:61:ALA:HA	41:BG:64:THR:HG22	1.74	0.69
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.27	0.69
20:AT:57:ARG:NH1	20:AT:102:GLY:HA3	2.08	0.69
35:BA:672:C:O2'	35:BA:673:C:H5''	1.92	0.69
2:AB:95:GLN:HE21	2:AB:147:LYS:HE2	1.57	0.69
8:AH:11:THR:HG23	8:AH:14:ARG:HH12	1.56	0.69
35:DA:2405:G:O2'	35:DA:2411:A:N6	2.26	0.69
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	1.92	0.69
35:DA:2178:C:H4'	37:DC:47:LYS:HD3	1.75	0.69
42:BH:68:THR:C	42:BH:70:THR:H	1.95	0.69
35:DA:2755:C:HO2'	35:DA:2756:U:H6	1.41	0.69
35:DA:271(P):C:O2'	35:DA:271(Q):G:H5'	1.92	0.69
3:CC:64:VAL:CG1	3:CC:66:VAL:HG23	2.24	0.69
11:CK:126:ARG:HB3	11:CK:126:ARG:NH1	2.08	0.69
11:AK:58:PRO:HA	11:AK:90:GLY:HA3	1.73	0.68
22:AY:11:C:H41	22:AY:47:G:H21	1.40	0.68
22:AY:69:G:C6	22:AY:70:G:C5	2.80	0.68
23:CW:34:C:H5'	23:CW:35:U:OP1	1.93	0.68
46:DO:105:GLU:O	46:DO:108:GLU:HG2	1.93	0.68
33:D8:13:ARG:O	33:D8:14:VAL:HB	1.93	0.68
53:BV:18:LEU:CG	53:BV:19:LYS:H	2.07	0.68
31:B6:26:ASN:O	31:B6:27:LYS:HB2	1.92	0.68
13:AM:81:LEU:HD13	13:AM:88:ARG:HB3	1.75	0.68
57:DZ:121:HIS:HB3	57:DZ:171:ILE:HG22	1.75	0.68
40:DF:158:THR:HB	40:DF:195:ASP:HB2	1.73	0.68
35:DA:2656:U:H3	35:DA:2665:A:H2	1.41	0.68
39:BE:24:THR:HG22	39:BE:186:GLY:HA2	1.75	0.68
20:AT:100:ILE:HG23	20:AT:100:ILE:O	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:298:G:H5'	35:DA:299:A:OP1	1.92	0.68
42:BH:105:LEU:HD23	42:BH:105:LEU:H	1.57	0.68
57:BZ:4:ARG:HD2	57:BZ:60:GLU:OE2	1.93	0.68
52:BU:54:LYS:O	52:BU:58:ARG:HG3	1.93	0.68
17:CQ:90:ILE:HG22	17:CQ:94:ASN:HD21	1.56	0.68
38:BD:70:TRP:CH2	38:BD:150:LYS:HA	2.27	0.68
35:DA:2679:A:H4'	39:DE:165:VAL:HG11	1.73	0.68
23:AW:49:G:H3'	23:AW:50:C:H5''	1.75	0.68
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.06	0.68
7:AG:113:GLU:CB	7:AG:119:ARG:HG2	2.19	0.68
47:DP:48:PRO:CG	47:DP:49:ARG:H	2.07	0.68
49:DR:55:ALA:HA	49:DR:80:PHE:CE1	2.28	0.68
22:AY:51:G:O2'	22:AY:52:C:H5'	1.93	0.68
29:B4:27:THR:O	29:B4:28:LYS:HB3	1.93	0.68
3:AC:20:SER:HB2	3:AC:40:ARG:HH22	1.58	0.68
45:DN:48:MET:CE	45:DN:48:MET:H	2.06	0.68
35:BA:2761:G:C3'	35:BA:2762:G:H5''	2.24	0.68
35:BA:709:U:H3	35:BA:722:A:H61	1.39	0.68
40:DF:63:LYS:NZ	40:DF:67:GLN:HB2	2.07	0.68
35:DA:2590:A:O2'	35:DA:2591:C:H5'	1.93	0.68
15:CO:17:ARG:HG2	15:CO:21:ASP:OD2	1.93	0.68
11:AK:54:ARG:O	11:AK:57:THR:HG22	1.94	0.68
22:AY:11:C:C2'	22:AY:12:U:C6	2.74	0.68
22:AY:29:A:O2'	22:AY:30:U:H5'	1.93	0.68
1:AA:963:G:H21	10:AJ:55:LYS:NZ	1.90	0.68
1:CA:963:G:H21	10:CJ:55:LYS:NZ	1.92	0.68
35:DA:481:G:H1'	35:DA:506:G:H21	1.59	0.68
27:D2:12:GLU:O	27:D2:16:LEU:HG	1.93	0.68
42:BH:149:ARG:HA	42:BH:162:ILE:CD1	2.24	0.68
3:AC:70:VAL:O	3:AC:105:GLU:HA	1.94	0.68
32:D7:45:ALA:O	32:D7:46:VAL:HG23	1.92	0.68
50:DS:13:ARG:CG	50:DS:14:VAL:H	2.06	0.68
18:AR:53:ARG:HH11	18:AR:60:ALA:HA	1.57	0.68
1:CA:985:C:H2'	1:CA:986:A:H8	1.56	0.68
38:BD:144:ALA:HB3	38:BD:192:THR:HG22	1.75	0.68
4:CD:61:LYS:HD2	4:CD:207:TYR:OH	1.93	0.68
1:AA:165:C:H2'	1:AA:166:G:H8	1.57	0.68
36:DB:11:C:H2'	36:DB:12:C:H5'	1.74	0.68
1:CA:1016:A:H2'	1:CA:1017:G:O4'	1.92	0.68
23:CW:45:U:H3'	23:CW:46:U:H6	1.56	0.68
56:DY:84:ARG:HG2	56:DY:84:ARG:HH11	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:98:ALA:HB1	43:BI:109:ILE:HB	1.76	0.68
35:DA:1914:C:H2'	35:DA:1915:U:C6	2.29	0.68
53:DV:39:LEU:O	53:DV:40:LEU:HB2	1.93	0.68
47:DP:47:ASP:HB3	47:DP:48:PRO:HA	1.74	0.68
29:D4:33:VAL:HG21	41:DG:109:VAL:HG22	1.76	0.68
10:AJ:51:ARG:NE	10:AJ:61:GLU:HB2	2.07	0.68
22:CV:31:C:H2'	22:CV:32:G:H8	1.59	0.68
51:DT:34:VAL:O	51:DT:35:LYS:HB3	1.94	0.68
16:CP:4:ILE:HB	16:CP:66:PRO:HB3	1.76	0.68
30:B5:40:LYS:CE	30:B5:46:CYS:HB3	2.23	0.68
25:D0:70:GLN:NE2	25:D0:80:HIS:NE2	2.41	0.68
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.28	0.68
1:AA:1064:G:H21	1:AA:1190:G:H2'	1.55	0.68
6:AF:91:VAL:HG11	18:AR:72:ARG:NH1	2.09	0.68
1:CA:17:U:H2'	1:CA:18:C:C6	2.28	0.68
35:BA:2074:U:H2'	35:BA:2075:U:C6	2.29	0.68
3:CC:162:GLN:HG2	24:CX:24:A:O4'	1.93	0.68
11:AK:20:TYR:HB2	11:AK:31:THR:HG22	1.75	0.68
7:CG:84:ASN:HD21	23:CW:36:C:N4	1.91	0.68
4:AD:74:GLN:HA	4:AD:77:ASN:HD22	1.58	0.68
35:DA:2111:C:H1'	35:DA:2118:U:O4'	1.93	0.68
35:BA:2691:C:H5'	35:BA:2691:C:H6	1.57	0.68
14:AN:24:CYS:HB3	14:AN:27:CYS:O	1.94	0.68
19:AS:40:ILE:HD13	19:AS:62:ILE:HD13	1.75	0.68
47:DP:59:LEU:CA	47:DP:61:ARG:NH1	2.53	0.68
7:AG:113:GLU:HB2	7:AG:119:ARG:CG	2.19	0.68
12:CL:47:LYS:HE2	12:CL:48:PRO:HB3	1.75	0.68
29:D4:28:LYS:HA	29:D4:28:LYS:HE3	1.74	0.68
31:B6:34:LEU:HD23	31:B6:51:GLU:HB3	1.74	0.68
35:BA:1803:A:O2'	38:BD:259:THR:HG21	1.93	0.68
35:BA:528:A:N1	35:BA:2042:A:H2'	2.08	0.68
50:BS:13:ARG:CG	50:BS:14:VAL:H	2.06	0.68
54:BW:5:ALA:O	54:BW:6:ILE:HB	1.93	0.68
20:AT:18:GLN:HE21	20:AT:22:ARG:NH1	1.92	0.68
16:AP:4:ILE:HB	16:AP:66:PRO:HB3	1.76	0.68
47:DP:71:VAL:CG1	47:DP:72:PRO:HD3	2.24	0.68
40:DF:67:GLN:O	40:DF:67:GLN:HG3	1.93	0.68
40:BF:202:PHE:O	40:BF:206:ILE:HG12	1.94	0.68
35:DA:89:G:H3'	35:DA:90:U:C5'	2.23	0.68
35:BA:1169:G:H1	35:BA:1180:C:H42	1.40	0.68
35:BA:813:U:H2'	35:BA:814:C:C6	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:286:C:H2'	35:BA:287:C:H6	1.56	0.68
1:CA:1240:U:OP2	7:CG:116:ALA:HB2	1.94	0.68
41:DG:57:ALA:HB2	41:DG:90:LEU:HD21	1.73	0.68
35:BA:674:G:O2'	40:BF:74:ARG:HD3	1.93	0.68
42:BH:98:LEU:HB2	42:BH:125:VAL:HG21	1.75	0.68
43:DI:47:LEU:O	43:DI:51:ILE:HG12	1.94	0.68
14:CN:7:ILE:O	14:CN:11:LYS:HG3	1.93	0.68
45:BN:3:THR:O	45:BN:5:VAL:N	2.27	0.68
23:CW:39:A:C4	23:CW:41:C:OP2	2.47	0.68
22:CV:26:G:H2'	22:CV:27:C:C6	2.29	0.68
30:B5:3:LYS:NZ	30:B5:5:PRO:O	2.25	0.68
35:DA:1484:G:H2'	35:DA:1485:G:C5'	2.14	0.68
43:DI:93:THR:H	43:DI:96:ASP:HB2	1.58	0.68
10:CJ:63:PHE:HD1	14:CN:58:LYS:HA	1.57	0.68
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.09	0.68
1:CA:19:C:H5''	5:CE:86:ALA:HB2	1.75	0.68
20:CT:57:ARG:NH1	20:CT:102:GLY:HA3	2.08	0.68
35:DA:1314:C:C6	35:DA:1314:C:H5'	2.28	0.68
10:AJ:9:ARG:HG2	10:AJ:69:ASN:OD1	1.92	0.68
38:BD:24:ILE:HD13	38:BD:25:THR:H	1.58	0.68
35:DA:893:C:H2'	35:DA:894:C:H6	1.58	0.68
13:AM:15:VAL:HG23	13:AM:16:ASP:H	1.58	0.68
40:DF:161:GLU:O	40:DF:165:ARG:HG3	1.93	0.68
22:CY:57:U:C5	57:DZ:182:LYS:CA	2.56	0.68
22:AY:32:G:C6	22:AY:43:G:C5	2.82	0.68
35:BA:1845:G:H2'	35:BA:1846:G:C5'	2.13	0.68
22:AV:4:C:C2	22:AV:5:C:C5	2.81	0.68
23:AW:27:C:C3'	23:AW:28:G:C8	2.76	0.68
35:DA:588:U:H2'	35:DA:589:C:C6	2.28	0.68
43:DI:94:ALA:O	43:DI:98:ALA:HB3	1.94	0.68
12:CL:32:PHE:HE1	12:CL:86:ARG:HG3	1.58	0.68
30:D5:4:HIS:CB	30:D5:5:PRO:HD3	2.18	0.68
12:AL:85:ILE:HD11	12:AL:98:TYR:HB2	1.76	0.68
40:BF:4:VAL:HA	40:BF:19:GLU:HB3	1.74	0.68
57:DZ:150:LEU:HD23	57:DZ:150:LEU:H	1.59	0.68
56:DY:46:LYS:H	56:DY:62:GLU:HB2	1.57	0.68
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.59	0.68
35:BA:2645:G:H3'	35:BA:2646:C:C5'	2.24	0.68
48:DQ:16:ARG:HG2	48:DQ:17:LEU:H	1.58	0.68
54:DW:5:ALA:O	54:DW:6:ILE:HB	1.94	0.68
42:DH:12:PRO:HD2	42:DH:15:VAL:HG21	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:61:LYS:HD2	4:AD:207:TYR:OH	1.93	0.68
57:BZ:131:ARG:HG3	57:BZ:132:ASN:H	1.59	0.68
4:AD:157:LEU:HG	4:AD:161:ASN:HD21	1.59	0.68
35:DA:518:G:H4'	54:DW:18:ARG:NH1	2.08	0.68
45:DN:120:LEU:CD2	45:DN:122:VAL:HG23	2.23	0.68
3:AC:64:VAL:CG1	3:AC:66:VAL:HG23	2.23	0.68
41:DG:134:GLY:C	41:DG:135:LEU:HD12	2.13	0.68
15:CO:4:THR:OG1	15:CO:7:GLU:HG3	1.94	0.68
23:CW:37:A:H2'	23:CW:38:U:O4'	1.94	0.68
22:AV:19:G:N2	22:AV:59:G:H2'	2.09	0.68
43:DI:140:LEU:O	43:DI:141:LYS:HD3	1.94	0.68
22:AY:35:U:C3'	22:AY:36:AG9:H15'	2.24	0.68
23:CW:49:G:H3'	23:CW:50:C:H5''	1.75	0.68
12:AL:32:PHE:HE1	12:AL:86:ARG:HG3	1.58	0.68
12:AL:46:LYS:HB2	12:AL:92:ASP:O	1.94	0.68
40:BF:3:GLU:O	40:BF:19:GLU:HB2	1.94	0.68
35:DA:545:C:C3'	35:DA:547:A:H5''	2.24	0.68
41:DG:118:ARG:HG3	41:DG:118:ARG:HH11	1.58	0.68
49:BR:55:ALA:HA	49:BR:80:PHE:CE1	2.29	0.68
57:BZ:171:ILE:HG13	57:BZ:172:ALA:H	1.59	0.68
4:AD:189:PRO:HB2	4:AD:194:LEU:CD2	2.22	0.68
35:DA:2712:U:H1'	35:DA:2712(A):A:C8	2.29	0.68
1:AA:1321:C:H5'	1:AA:1322:C:H5''	1.76	0.68
38:DD:70:TRP:CH2	38:DD:150:LYS:HA	2.28	0.68
1:AA:444:C:H2'	1:AA:445:G:C8	2.29	0.68
1:CA:1370:G:H5''	9:CI:12:GLU:HG3	1.75	0.68
46:DO:4:PRO:O	46:DO:5:GLN:HB2	1.94	0.68
35:BA:2219:G:O2'	35:BA:2220:G:H5'	1.94	0.68
35:DA:1573:G:H2'	35:DA:1574:C:H5'	1.76	0.68
47:DP:122:PRO:HA	47:DP:141:ALA:O	1.94	0.68
29:D4:5:ILE:N	29:D4:5:ILE:HD13	2.08	0.68
7:AG:53:LYS:O	7:AG:54:THR:HB	1.94	0.68
23:AW:35:U:H2'	23:AW:37:A:OP2	1.94	0.68
31:B6:48:VAL:O	31:B6:49:HIS:HB2	1.94	0.68
56:DY:8:LYS:HD2	56:DY:8:LYS:N	2.09	0.68
12:CL:38:THR:HG23	12:CL:39:VAL:N	2.08	0.68
33:D8:56:GLU:HA	33:D8:59:LYS:NZ	2.09	0.68
35:BA:997:G:O2'	35:BA:998:C:H5'	1.93	0.68
1:AA:474:G:H2'	1:AA:475:G:H8	1.57	0.68
1:CA:473:G:H2'	1:CA:474:G:H8	1.58	0.68
25:D0:14:ARG:CB	25:D0:14:ARG:HH11	2.06	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:16:ARG:HG2	48:BQ:17:LEU:H	1.59	0.68
35:BA:2656:U:H3	35:BA:2665:A:H2	1.40	0.68
38:BD:144:ALA:HB3	38:BD:192:THR:CG2	2.24	0.68
6:CF:62:TRP:C	6:CF:63:TYR:HD1	1.96	0.68
8:CH:97:VAL:HG21	8:CH:128:GLY:HA2	1.75	0.68
45:BN:96:GLU:OE1	45:BN:96:GLU:N	2.22	0.68
52:DU:85:LYS:HD3	52:DU:117:GLN:HE21	1.57	0.68
50:BS:41:ASP:OD2	50:BS:44:LYS:HG3	1.94	0.68
51:BT:54:ARG:HG2	51:BT:54:ARG:HH11	1.59	0.68
56:DY:88:LYS:HD3	56:DY:93:GLY:H	1.59	0.68
52:BU:85:LYS:HD3	52:BU:117:GLN:HE21	1.59	0.68
22:CY:62:U:C2'	57:DZ:186:GLU:CG	2.62	0.68
23:AW:39:A:C4	23:AW:41:C:OP2	2.46	0.68
23:AW:4:C:C2	23:AW:5:C:C4	2.82	0.68
22:AV:45:U:H2'	22:AV:46:U:C6	2.28	0.68
23:AW:12:U:N3	23:AW:26:G:N2	2.31	0.68
35:DA:1506:C:H2'	35:DA:1506:C:O2	1.94	0.68
43:BI:93:THR:H	43:BI:96:ASP:HB2	1.58	0.68
1:CA:963:G:H21	10:CJ:55:LYS:CD	2.07	0.68
23:CW:20:G:C3'	23:CW:21:U:H5''	2.23	0.68
45:DN:17:ASP:OD2	45:DN:56:ASN:HB3	1.94	0.68
33:D8:50:LEU:O	33:D8:51:ALA:HB3	1.93	0.68
51:BT:95:ARG:HB3	51:BT:95:ARG:HH11	1.58	0.68
53:BV:39:LEU:O	53:BV:40:LEU:HB2	1.93	0.68
53:BV:51:VAL:HG12	53:BV:52:VAL:N	2.08	0.68
2:CB:44:LEU:HD12	2:CB:44:LEU:N	2.06	0.68
26:B1:45:ASN:HD21	35:BA:2090:G:N2	1.89	0.68
2:CB:140:HIS:CA	2:CB:143:GLU:HG2	2.23	0.68
45:DN:62:VAL:CG2	45:DN:66:LYS:HB2	2.24	0.68
43:BI:115:ALA:HB3	43:BI:128:LEU:HB3	1.76	0.68
43:DI:115:ALA:HB3	43:DI:128:LEU:HB3	1.76	0.68
1:CA:939:G:H5''	7:CG:102:ARG:CZ	2.24	0.68
33:B8:39:LYS:HE2	33:B8:43:GLN:HE22	1.57	0.68
35:DA:389:G:N1	47:DP:71:VAL:HG12	2.08	0.68
54:DW:29:LEU:HD21	54:DW:33:ARG:HH21	1.58	0.68
35:DA:142:A:H5''	35:DA:142(A):C:H5	1.58	0.68
1:CA:1422:G:H2'	1:CA:1423:G:H8	1.59	0.68
1:CA:630:G:H2'	1:CA:631:G:H5''	1.75	0.68
49:BR:101:ALA:O	49:BR:102:GLU:HB2	1.92	0.68
35:BA:843:G:O2'	35:BA:844:C:H5'	1.93	0.68
8:CH:9:MET:O	8:CH:13:ILE:HG12	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:31:VAL:HG13	41:BG:31:VAL:O	1.94	0.68
1:CA:685:G:O2'	1:CA:686:U:H5'	1.94	0.68
1:AA:634:C:H2'	1:AA:635:G:H8	1.57	0.68
31:B6:15:GLU:HB2	31:B6:49:HIS:CE1	2.29	0.67
56:BY:76:CYS:HG	56:BY:77:PRO:HD2	1.58	0.67
56:DY:28:LYS:H	56:DY:28:LYS:HZ2	1.42	0.67
33:B8:62:LEU:N	33:B8:63:PRO:HD2	2.10	0.67
42:BH:41:MET:CG	42:BH:43:VAL:HG13	2.25	0.67
23:CW:16:U:H1'	23:CW:62:U:C4'	2.23	0.67
12:AL:47:LYS:NZ	12:AL:48:PRO:HD3	2.07	0.67
12:AL:93:LEU:O	12:AL:96:VAL:HB	1.93	0.67
35:DA:996:A:H4'	52:DU:92:ARG:NE	2.10	0.67
53:DV:51:VAL:HG12	53:DV:52:VAL:N	2.09	0.67
46:BO:88:ASN:ND2	46:BO:90:GLN:HB2	2.05	0.67
13:CM:91:ARG:NH2	13:CM:100:GLY:HA2	2.08	0.67
5:AE:150:ARG:O	5:AE:153:LYS:HG2	1.93	0.67
4:AD:96:LEU:HG	4:AD:139:ARG:HH22	1.59	0.67
19:AS:6:LYS:HG2	19:AS:7:LYS:HE3	1.75	0.67
20:CT:100:ILE:O	20:CT:100:ILE:HG23	1.93	0.67
35:BA:626:U:N3	47:BP:105:LEU:HG	2.09	0.67
35:DA:626:U:N3	47:DP:105:LEU:HG	2.09	0.67
33:D8:39:LYS:HE2	33:D8:43:GLN:HE22	1.57	0.67
51:BT:54:ARG:HA	51:BT:59:THR:HB	1.75	0.67
1:AA:56:U:H2'	1:AA:57:G:H8	1.59	0.67
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.93	0.67
15:AO:17:ARG:HG2	15:AO:21:ASP:OD2	1.94	0.67
11:AK:126:ARG:NH1	11:AK:126:ARG:HB3	2.10	0.67
1:CA:692:U:OP1	11:CK:124:LYS:HE2	1.93	0.67
22:CY:70:G:H2'	22:CY:71:G:C8	2.28	0.67
23:AW:29:A:O2'	23:AW:30:U:H5'	1.94	0.67
22:AY:12:U:C2	22:AY:26:G:N2	2.62	0.67
22:CV:19:G:N2	22:CV:59:G:H2'	2.10	0.67
38:DD:49:ILE:HD11	38:DD:52:ARG:HA	1.74	0.67
45:BN:17:ASP:OD2	45:BN:56:ASN:HB3	1.93	0.67
56:BY:31:LEU:HD22	56:BY:31:LEU:N	2.09	0.67
49:BR:8:ARG:O	49:BR:10:LEU:HG	1.94	0.67
53:DV:21:ARG:N	53:DV:21:ARG:HD3	2.09	0.67
57:BZ:150:LEU:O	57:BZ:171:ILE:HG23	1.95	0.67
55:BX:12:VAL:CG2	55:BX:17:ALA:HB1	2.23	0.67
39:DE:18:ASP:OD2	51:DT:39:ARG:HD2	1.94	0.67
39:DE:69:LYS:NZ	39:DE:89:ASP:HA	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DD:24:ILE:CD1	38:DD:25:THR:H	2.08	0.67
1:AA:1370:G:H5''	9:AI:12:GLU:HG3	1.76	0.67
56:DY:14:LEU:HD11	56:DY:22:GLY:HA2	1.76	0.67
49:BR:100:LEU:HD22	49:BR:100:LEU:H	1.59	0.67
1:AA:356:A:H1'	1:AA:368:U:O2'	1.94	0.67
9:AI:27:THR:HG23	9:AI:31:GLN:C	2.14	0.67
22:AV:6:C:N3	22:AV:69:G:O6	2.26	0.67
51:DT:88:ILE:HG22	51:DT:89:VAL:N	2.08	0.67
56:DY:29:GLU:N	56:DY:29:GLU:OE1	2.28	0.67
47:DP:55:ARG:CG	47:DP:56:SER:H	1.92	0.67
10:AJ:70:ARG:HG2	10:AJ:70:ARG:HH11	1.60	0.67
53:BV:2:PHE:HB2	53:BV:42:GLY:HA2	1.75	0.67
35:BA:881:G:H2'	35:BA:882:G:O4'	1.94	0.67
3:CC:88:ARG:HA	3:CC:91:LEU:HD12	1.74	0.67
51:DT:34:VAL:HG12	51:DT:35:LYS:H	1.58	0.67
20:CT:75:ASN:ND2	20:CT:75:ASN:N	2.41	0.67
35:BA:1173:G:H3'	35:BA:1174:A:C5'	2.25	0.67
33:B8:25:MET:HG3	47:BP:64:LYS:HB2	1.76	0.67
50:DS:19:LYS:HB3	50:DS:20:ARG:HH22	1.59	0.67
35:DA:1131:G:HO2'	35:DA:1132:A:H8	1.42	0.67
27:D2:28:LYS:HB3	27:D2:57:ILE:HD13	1.76	0.67
35:DA:2732:G:O2'	35:DA:2733:A:H5'	1.94	0.67
44:BJ:70:UNK:C	44:BJ:72:UNK:N	2.56	0.67
22:AV:12:U:H5''	22:AV:13:U:OP2	1.94	0.67
22:AV:55:G:O2'	22:AV:56:U:H5'	1.95	0.67
35:BA:1484:G:H2'	35:BA:1485:G:C5'	2.14	0.67
40:DF:3:GLU:O	40:DF:19:GLU:HB2	1.95	0.67
35:BA:1019:U:O2'	35:BA:1021:A:H2	1.76	0.67
2:AB:44:LEU:HD12	2:AB:44:LEU:N	2.08	0.67
1:AA:1129:C:N4	1:AA:1135:U:H3	1.92	0.67
2:CB:236:TYR:HA	2:CB:239:VAL:HG23	1.76	0.67
32:D7:11:LYS:HE2	35:DA:686:G:H5''	1.76	0.67
42:DH:153:LYS:H	42:DH:153:LYS:CD	2.07	0.67
35:DA:1542:A:N7	35:DA:1544:A:H5''	2.09	0.67
35:DA:2175:C:H4'	37:DC:219:MET:O	1.94	0.67
38:DD:79:VAL:HG21	38:DD:111:LEU:HD11	1.75	0.67
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.24	0.67
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.76	0.67
25:B0:48:GLY:H	25:B0:51:VAL:HB	1.59	0.67
50:DS:90:GLY:C	50:DS:92:TYR:H	1.98	0.67
4:CD:98:GLU:HG3	4:CD:103:ASN:HD21	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:89:G:H3'	35:BA:90:U:C5'	2.23	0.67
4:AD:98:GLU:HG3	4:AD:103:ASN:HD21	1.59	0.67
35:BA:594:U:H2'	35:BA:595:C:C6	2.28	0.67
48:DQ:57:HIS:NE2	48:DQ:116:GLU:HG3	2.09	0.67
49:BR:13:HIS:CE1	49:BR:15:SER:HB3	2.30	0.67
1:CA:1196:U:C2	24:CX:23:A:C2	2.82	0.67
23:CW:71:G:C2'	23:CW:72:C:H5'	2.23	0.67
35:BA:2313:C:H2'	35:BA:2314:C:C6	2.28	0.67
33:B8:49:VAL:HG12	35:BA:2360:A:OP1	1.95	0.67
1:AA:1152:A:H5''	10:AJ:13:HIS:HD2	1.58	0.67
51:BT:88:ILE:HG22	51:BT:89:VAL:N	2.09	0.67
41:DG:118:ARG:O	41:DG:181:ARG:HB2	1.95	0.67
27:B2:17:SER:H	27:B2:67:LYS:NZ	1.92	0.67
1:CA:1144:G:H21	1:CA:1146:A:N6	1.92	0.67
1:CA:1321:C:H5'	1:CA:1322:C:H5''	1.76	0.67
37:BC:7:ARG:HD2	37:BC:35:THR:O	1.94	0.67
35:BA:2712:U:H1'	35:BA:2712(A):A:C8	2.29	0.67
33:D8:37:SER:C	33:D8:39:LYS:H	1.96	0.67
35:DA:1518:U:H2'	35:DA:1519:G:O4'	1.95	0.67
35:DA:1169:G:H1	35:DA:1180:C:H42	1.40	0.67
1:AA:90:U:H4'	1:AA:91:C:H6	1.58	0.67
26:B1:59:THR:O	26:B1:91:LYS:HE3	1.93	0.67
35:DA:2691:C:H6	35:DA:2691:C:H5'	1.59	0.67
49:DR:84:ALA:HB3	49:DR:85:PRO:HD3	1.77	0.67
1:CA:90:U:H4'	1:CA:91:C:H6	1.58	0.67
23:AW:39:A:C2'	23:AW:41:C:OP1	2.43	0.67
4:AD:26:CYS:HA	4:AD:31:CYS:HB2	1.75	0.67
23:CW:25:A:H2'	23:CW:26:G:N7	2.09	0.67
40:DF:4:VAL:HA	40:DF:19:GLU:HB3	1.75	0.67
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB3	2.25	0.67
39:BE:68:ALA:O	39:BE:70:ALA:N	2.25	0.67
10:CJ:49:VAL:HG21	14:CN:41:ARG:HB2	1.76	0.67
10:AJ:51:ARG:HE	10:AJ:61:GLU:HB2	1.60	0.67
10:AJ:63:PHE:HD1	14:AN:58:LYS:HA	1.59	0.67
13:CM:23:TYR:CE2	13:CM:70:LEU:HD22	2.30	0.67
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.76	0.67
35:BA:1542:A:N7	35:BA:1544:A:H5''	2.09	0.67
39:DE:62:PRO:C	39:DE:64:LYS:H	1.97	0.67
42:BH:154:PRO:O	42:BH:156:ALA:N	2.28	0.67
38:BD:118:VAL:HG22	38:BD:119:ALA:N	2.09	0.67
38:DD:24:ILE:HD13	38:DD:25:THR:H	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:672:C:C2'	35:BA:673:C:H5''	2.25	0.67
35:BA:2189:U:C2'	35:BA:2190:G:H5''	2.25	0.67
35:BA:597:U:H4'	47:BP:15:ARG:NH1	2.09	0.67
5:AE:105:VAL:HB	5:AE:106:PRO:CD	2.25	0.67
1:CA:1015:A:H1'	1:CA:1218:C:O2'	1.95	0.67
7:CG:84:ASN:HD21	23:CW:36:C:H42	1.41	0.67
5:CE:61:TYR:O	5:CE:64:ARG:HB3	1.95	0.67
13:AM:112:GLY:O	13:AM:113:PRO:HG2	1.95	0.67
13:CM:15:VAL:HG23	13:CM:16:ASP:H	1.58	0.67
35:DA:32:C:O2'	35:DA:33:U:H5'	1.94	0.67
42:DH:68:THR:C	42:DH:70:THR:H	1.98	0.67
46:BO:4:PRO:O	46:BO:5:GLN:HB2	1.94	0.67
22:AY:19:G:H21	22:AY:59:G:H2'	1.59	0.67
35:BA:874:G:C5'	57:BZ:175:VAL:HG11	2.16	0.67
12:AL:46:LYS:HD3	12:AL:92:ASP:C	2.14	0.67
35:BA:1019:U:HO2'	35:BA:1021:A:H2	1.37	0.67
53:DV:89:GLN:OE1	53:DV:90:PRO:HD2	1.94	0.67
51:BT:16:ARG:HH12	51:BT:19:LEU:HD21	1.59	0.67
57:DZ:39:VAL:HG23	57:DZ:40:ASP:N	2.10	0.67
49:DR:8:ARG:O	49:DR:10:LEU:HG	1.94	0.67
29:B4:5:ILE:HD11	41:BG:67:LYS:NZ	2.09	0.67
5:CE:76:ILE:HD11	5:CE:142:LEU:CD1	2.24	0.67
1:CA:878:G:C5'	8:CH:89:PRO:HG2	2.25	0.67
9:CI:28:VAL:HA	9:CI:63:ILE:O	1.95	0.67
18:AR:56:THR:HB	18:AR:58:LEU:CD1	2.25	0.67
35:DA:154(A):C:H3'	35:DA:155:U:C5'	2.25	0.67
35:BA:1658:C:OP1	39:BE:132:HIS:O	2.12	0.67
35:BA:2111:C:H1'	35:BA:2118:U:O4'	1.95	0.67
45:BN:62:VAL:CG2	45:BN:66:LYS:HB2	2.25	0.67
38:BD:24:ILE:CD1	38:BD:25:THR:H	2.08	0.67
1:CA:997:U:H2'	1:CA:998:G:C8	2.30	0.67
35:DA:2463:C:O2'	35:DA:2464:C:H5'	1.95	0.67
41:DG:48:GLU:O	41:DG:49:ASP:HB2	1.93	0.67
3:CC:103:VAL:HG12	3:CC:104:GLN:N	2.10	0.67
6:CF:28:ARG:HG3	6:CF:28:ARG:HH11	1.58	0.67
51:DT:54:ARG:HA	51:DT:59:THR:HB	1.77	0.67
1:AA:630:G:H2'	1:AA:631:G:H5''	1.75	0.67
23:AW:49:G:H8	23:AW:49:G:OP1	1.78	0.67
33:B8:30:ARG:HA	33:B8:30:ARG:HE	1.59	0.67
33:B8:50:LEU:O	33:B8:51:ALA:HB3	1.94	0.67
56:BY:84:ARG:HH11	56:BY:84:ARG:HG2	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:779:U:OP1	38:BD:49:ILE:HG22	1.95	0.67
35:BA:545:C:C3'	35:BA:547:A:H5''	2.23	0.67
10:CJ:7:LYS:O	10:CJ:96:ILE:HA	1.94	0.67
41:BG:112:PRO:C	41:BG:113:ARG:HA	2.16	0.67
53:BV:47:VAL:HB	53:BV:49:THR:O	1.94	0.67
35:BA:2724:C:P	49:BR:2:ARG:HH22	2.18	0.67
56:BY:28:LYS:O	56:BY:38:ILE:HB	1.95	0.67
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.10	0.67
35:BA:1542:A:H5'	35:BA:1543:C:OP2	1.95	0.67
1:CA:1104:G:O2'	1:CA:1105:A:H5'	1.95	0.67
35:DA:1657:C:H2'	35:DA:1658:C:C6	2.28	0.67
27:B2:3:LEU:O	27:B2:7:ARG:HG3	1.94	0.67
1:CA:356:A:H1'	1:CA:368:U:O2'	1.95	0.67
57:BZ:81:ARG:NH1	57:BZ:81:ARG:HB3	2.09	0.67
55:DX:70:LEU:HD23	55:DX:71:GLY:N	2.09	0.67
6:AF:28:ARG:HH11	6:AF:28:ARG:HG3	1.60	0.67
34:B9:3:VAL:HG21	35:BA:2539:C:H5'	1.76	0.67
8:AH:9:MET:O	8:AH:13:ILE:HG12	1.95	0.67
6:AF:45:LEU:HD21	6:AF:57:GLN:OE1	1.95	0.67
48:DQ:10:ARG:HB2	48:DQ:10:ARG:HH11	1.60	0.67
27:B2:69:ARG:HG2	27:B2:69:ARG:HH11	1.60	0.67
11:CK:20:TYR:HB2	11:CK:31:THR:HG22	1.76	0.67
22:CY:69:G:C6	22:CY:70:G:C5	2.83	0.67
4:CD:26:CYS:HG	58:CD:1000:ZN:ZN	1.07	0.67
22:CV:55:G:O2'	22:CV:56:U:H5'	1.95	0.67
43:BI:94:ALA:O	43:BI:98:ALA:HB3	1.95	0.67
12:CL:37:CYS:HA	12:CL:58:VAL:HG22	1.77	0.67
4:CD:59:ARG:CA	4:CD:59:ARG:HE	2.03	0.67
35:BA:2491:U:H5'	35:BA:2570:G:C5'	2.23	0.67
40:BF:132:VAL:HG22	40:BF:133:ASN:ND2	2.10	0.67
56:BY:26:LYS:HG2	56:BY:27:VAL:H	1.59	0.67
4:CD:129:ASN:ND2	4:CD:145:GLU:H	1.93	0.67
41:BG:39:ILE:HG13	41:BG:92:VAL:HG12	1.74	0.67
1:CA:1281:U:H5'	1:CA:1282:C:C5	2.30	0.67
5:AE:76:ILE:HD11	5:AE:142:LEU:CD1	2.24	0.67
14:CN:40:CYS:HG	14:CN:43:CYS:HG	1.37	0.67
1:CA:1116:C:C3'	1:CA:1117:G:H5''	2.25	0.67
7:CG:22:LEU:HD23	7:CG:22:LEU:O	1.95	0.67
20:CT:50:GLU:HA	20:CT:100:ILE:HG21	1.77	0.67
1:AA:1502:A:H2	1:AA:1505:G:N1	1.93	0.67
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.14	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1444:C:H2'	1:CA:1445:C:H6	1.60	0.67
6:AF:45:LEU:HD23	6:AF:46:ARG:N	2.09	0.67
17:AQ:55:ASP:HA	17:AQ:79:SER:HA	1.76	0.67
46:DO:122:LEU:HD22	51:DT:43:GLN:NE2	2.10	0.67
3:AC:103:VAL:HG12	3:AC:104:GLN:N	2.10	0.67
35:DA:1188:U:O2'	35:DA:1189:A:H5'	1.95	0.67
22:CY:57:U:O4'	57:DZ:182:LYS:HB3	1.94	0.67
51:DT:30:VAL:CG2	51:DT:84:GLN:HG3	2.25	0.67
43:BI:123:LEU:HD11	43:BI:144:VAL:HG22	1.76	0.67
12:CL:35:GLY:CA	12:CL:58:VAL:HG11	2.25	0.67
41:BG:51:ARG:CA	41:BG:51:ARG:HE	2.02	0.67
35:DA:1887:C:C3'	35:DA:1888:G:H5''	2.25	0.67
42:BH:44:VAL:O	42:BH:46:GLU:N	2.28	0.67
22:CV:1:G:C1'	25:D0:5:LYS:HZ1	2.06	0.67
41:DG:63:ILE:HA	41:DG:143:GLU:HG2	1.77	0.67
57:DZ:121:HIS:HB2	57:DZ:171:ILE:HA	1.75	0.67
47:DP:84:ASN:HA	47:DP:115:LEU:O	1.94	0.67
22:CV:42:C:O2'	22:CV:43:G:H5'	1.95	0.67
26:B1:53:VAL:CG2	26:B1:74:VAL:HG13	2.25	0.67
38:BD:242:ARG:HD2	38:BD:242:ARG:N	2.10	0.67
57:DZ:155:LEU:H	57:DZ:155:LEU:HD23	1.60	0.67
35:DA:1542:A:H5'	35:DA:1543:C:OP2	1.95	0.67
20:CT:18:GLN:HE21	20:CT:22:ARG:NH1	1.92	0.67
46:DO:15:GLY:O	46:DO:47:ILE:HG22	1.95	0.67
37:DC:7:ARG:HD2	37:DC:35:THR:O	1.95	0.67
1:AA:1504:G:O2'	1:AA:1505:G:OP2	2.12	0.67
35:DA:276:A:H5'	35:DA:277:C:C6	2.30	0.67
1:AA:359:U:H2'	1:AA:360:A:C8	2.30	0.67
1:AA:545:C:H5''	4:AD:72:GLU:HG2	1.76	0.67
22:CY:60:A:C6	57:DZ:184:ALA:CA	2.64	0.66
11:CK:54:ARG:O	11:CK:57:THR:HG22	1.94	0.66
22:CV:15:G:H2'	22:CV:16:U:C6	2.30	0.66
23:AW:52:C:C2	23:AW:53:U:C5	2.83	0.66
23:AW:52:C:H2'	23:AW:53:U:H6	1.59	0.66
53:DV:39:LEU:HD12	53:DV:47:VAL:HG11	1.77	0.66
1:CA:979:C:H3'	1:CA:980:C:C5'	2.20	0.66
41:DG:152:LEU:N	41:DG:152:LEU:HD23	2.09	0.66
3:CC:23:TYR:HA	10:CJ:11:PHE:CE2	2.30	0.66
1:AA:1116:C:C3'	1:AA:1117:G:H5''	2.24	0.66
3:CC:182:ILE:HG23	3:CC:202:ILE:C	2.16	0.66
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.76	0.66
16:AP:21:VAL:HG12	16:AP:34:GLU:O	1.94	0.66
35:BA:2405:G:O2'	35:BA:2411:A:N6	2.27	0.66
50:BS:19:LYS:HB3	50:BS:20:ARG:HH22	1.60	0.66
28:B3:44:ARG:O	28:B3:48:GLU:HG2	1.95	0.66
41:DG:51:ARG:NE	41:DG:51:ARG:HA	2.11	0.66
35:DA:813:U:H2'	35:DA:814:C:C6	2.31	0.66
1:CA:1001(A):G:H2'	1:CA:1002:G:O4'	1.95	0.66
49:DR:67:LEU:HD22	49:DR:76:VAL:HG21	1.75	0.66
1:AA:997:U:H2'	1:AA:998:G:C8	2.30	0.66
6:AF:101:ALA:HA	18:AR:28:GLU:HG2	1.77	0.66
35:DA:1490:A:H5'	35:DA:1491:G:OP1	1.95	0.66
22:CY:71:G:C6	22:CY:72:C:C5	2.83	0.66
22:AY:55:G:H2'	22:AY:56:U:C1'	2.26	0.66
57:BZ:184:ALA:O	57:BZ:186:GLU:HG3	1.95	0.66
35:DA:1486:A:H61	35:DA:1504:C:H42	1.43	0.66
56:DY:2:ARG:N	56:DY:4:LYS:HE2	2.10	0.66
33:D8:13:ARG:HD2	47:DP:61:ARG:HD3	1.77	0.66
10:CJ:38:ILE:HG12	10:CJ:71:LEU:O	1.94	0.66
1:AA:1256:A:H61	1:AA:1278:U:C1'	2.08	0.66
56:BY:31:LEU:HB2	56:BY:32:PRO:HA	1.76	0.66
1:CA:942:G:H21	9:CI:124:GLN:NE2	1.93	0.66
57:BZ:111:VAL:O	57:BZ:111:VAL:HG12	1.96	0.66
9:AI:29:ASN:OD1	9:AI:64:THR:HG23	1.95	0.66
41:BG:124:SER:HB2	41:BG:131:TYR:HE1	1.57	0.66
5:CE:39:GLY:HA2	5:CE:69:VAL:HB	1.77	0.66
35:BA:607:U:OP1	40:BF:102:PRO:HA	1.94	0.66
2:CB:18:GLY:H	2:CB:42:ILE:CG2	2.07	0.66
4:CD:96:LEU:HG	4:CD:139:ARG:HH22	1.59	0.66
46:DO:114:ILE:HD12	46:DO:114:ILE:N	2.11	0.66
51:BT:107:ASP:CG	51:BT:108:ARG:H	1.99	0.66
35:BA:1014:U:H2'	35:BA:1015:G:C5'	2.26	0.66
57:BZ:24:LEU:HB2	57:BZ:41:LEU:HG	1.75	0.66
35:DA:597:U:H4'	47:DP:15:ARG:NH1	2.09	0.66
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.25	0.66
6:AF:8:ILE:HG22	6:AF:9:VAL:N	2.10	0.66
43:BI:47:LEU:O	43:BI:51:ILE:HG12	1.94	0.66
22:CY:78:A:N3	35:DA:2583:G:N2	2.41	0.66
40:DF:123:LEU:HD12	40:DF:124:LEU:H	1.59	0.66
35:BA:2679:A:H4'	39:BE:165:VAL:HG11	1.77	0.66
23:AW:71:G:C6	23:AW:72:C:C5	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1022:G:N2	35:DA:1142(A):A:H2	1.84	0.66
52:DU:90:VAL:CG2	53:DV:39:LEU:HG	2.24	0.66
53:BV:39:LEU:HD12	53:BV:47:VAL:HG11	1.76	0.66
22:AY:52:C:H2'	22:AY:53:U:H6	1.58	0.66
39:BE:118:LYS:H	39:BE:121:ASN:H	1.43	0.66
29:B4:26:SER:HB2	41:BG:143:GLU:CD	2.16	0.66
1:CA:69:G:H2'	1:CA:70:G:C8	2.31	0.66
35:DA:672:C:C2'	35:DA:673:C:H5''	2.26	0.66
20:AT:75:ASN:N	20:AT:75:ASN:ND2	2.43	0.66
33:B8:37:SER:C	33:B8:39:LYS:H	1.98	0.66
1:CA:880:C:H2'	1:CA:881:G:H8	1.60	0.66
1:CA:1422:G:H4'	46:DO:49:ARG:NH1	2.10	0.66
1:CA:37:U:O2'	1:CA:38:G:H5'	1.96	0.66
44:BJ:22:UNK:O	44:BJ:119:UNK:HA	1.95	0.66
35:BA:1188:U:O2'	35:BA:1189:A:H5'	1.94	0.66
26:D1:82:LEU:HD22	26:D1:82:LEU:N	2.11	0.66
44:BJ:59:UNK:O	44:BJ:61:UNK:N	2.29	0.66
1:CA:1194:U:H2'	1:CA:1195:C:H6	1.60	0.66
36:BB:92:C:H2'	36:BB:93:G:H8	1.59	0.66
23:CW:7:U:N3	23:CW:69:G:C5	2.63	0.66
41:BG:88:ILE:HG22	41:BG:89:GLY:N	2.09	0.66
56:DY:26:LYS:HG2	56:DY:27:VAL:H	1.59	0.66
43:BI:140:LEU:O	43:BI:141:LYS:HD3	1.94	0.66
1:CA:1275:A:H2'	1:CA:1276:G:H8	1.60	0.66
41:DG:105:LYS:HB3	41:DG:142:PRO:HG3	1.77	0.66
57:DZ:121:HIS:CB	57:DZ:171:ILE:HG22	2.24	0.66
47:BP:16:ARG:CZ	47:BP:18:ARG:HB2	2.25	0.66
3:CC:77:ILE:HG23	3:CC:84:ILE:CG2	2.25	0.66
35:DA:662:G:OP1	47:DP:18:ARG:HD2	1.95	0.66
8:CH:6:ILE:H	8:CH:6:ILE:HD12	1.60	0.66
26:B1:51:VAL:HG13	26:B1:58:ILE:CD1	2.25	0.66
4:CD:126:ILE:CG2	4:CD:127:THR:N	2.57	0.66
3:AC:91:LEU:HD11	3:AC:101:LEU:HD12	1.76	0.66
39:DE:57:LYS:C	39:DE:59:VAL:H	1.99	0.66
39:DE:68:ALA:O	39:DE:70:ALA:N	2.23	0.66
1:AA:348:G:C2'	1:AA:349:A:H5'	2.25	0.66
19:CS:6:LYS:HG2	19:CS:7:LYS:HE3	1.76	0.66
45:BN:62:VAL:HG13	45:BN:62:VAL:O	1.95	0.66
1:AA:940:C:H2'	1:AA:941:G:H8	1.60	0.66
35:DA:141:A:C8	35:DA:1408:C:O2'	2.48	0.66
40:DF:202:PHE:O	40:DF:206:ILE:HG12	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1719:G:C2'	35:BA:1720:U:H5'	2.25	0.66
57:DZ:10:ARG:HD2	57:DZ:36:LYS:HD3	1.76	0.66
1:AA:63:C:H42	1:AA:104:G:H1	1.43	0.66
35:BA:2590:A:O2'	35:BA:2591:C:H5'	1.95	0.66
56:BY:88:LYS:HD3	56:BY:93:GLY:H	1.60	0.66
39:DE:19:ARG:HA	46:DO:73:ASP:HA	1.76	0.66
35:DA:2012:G:H4'	54:DW:96:ILE:HD11	1.78	0.66
33:B8:2:PRO:HA	35:BA:591:C:O2	1.95	0.66
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.30	0.66
4:CD:9:CYS:HG	4:CD:31:CYS:HG	1.43	0.66
22:AV:63:C:H2'	22:AV:64:C:C6	2.30	0.66
12:CL:43:VAL:HG13	12:CL:55:VAL:HG21	1.77	0.66
1:CA:1054:C:O2'	1:CA:1055:A:OP2	2.14	0.66
35:DA:1019:U:O2'	35:DA:1021:A:H2	1.78	0.66
51:BT:29:ARG:HG2	51:BT:86:ILE:HG22	1.78	0.66
35:DA:1534:U:H2'	35:DA:1535:A:O4'	1.96	0.66
50:BS:99:LYS:O	50:BS:101:LEU:N	2.28	0.66
35:DA:881:G:H2'	35:DA:882:G:O4'	1.94	0.66
35:BA:1542:A:H3'	35:BA:1542:A:C8	2.30	0.66
7:AG:22:LEU:HD23	7:AG:22:LEU:O	1.95	0.66
38:DD:27:THR:HG23	38:DD:27:THR:O	1.95	0.66
35:DA:259:G:H21	35:DA:621:A:H8	1.43	0.66
1:CA:1457:G:H2'	1:CA:1458:G:H8	1.60	0.66
40:BF:63:LYS:NZ	40:BF:67:GLN:HB2	2.10	0.66
38:DD:144:ALA:HB3	38:DD:192:THR:CG2	2.25	0.66
8:AH:97:VAL:HG21	8:AH:128:GLY:HA2	1.76	0.66
4:CD:157:LEU:HG	4:CD:161:ASN:HD21	1.60	0.66
50:DS:41:ASP:OD2	50:DS:44:LYS:HG3	1.95	0.66
1:CA:397:A:H3'	1:CA:397:A:N3	2.10	0.66
48:BQ:10:ARG:HH11	48:BQ:10:ARG:HB2	1.60	0.66
35:BA:152:G:H1	35:BA:174:C:H42	1.43	0.66
4:CD:18:LYS:HE2	4:CD:31:CYS:HB3	1.76	0.66
30:B5:3:LYS:NZ	30:B5:5:PRO:HB2	2.10	0.66
56:DY:81:LYS:HD2	56:DY:96:ILE:HG22	1.76	0.66
53:DV:19:LYS:HE2	53:DV:19:LYS:HA	1.78	0.66
53:DV:38:LEU:O	53:DV:39:LEU:HD13	1.95	0.66
35:DA:2300:G:H1	35:DA:2316:C:H42	1.44	0.66
31:B6:7:ILE:HG12	31:B6:29:ASN:HD21	1.60	0.66
9:AI:28:VAL:HA	9:AI:63:ILE:O	1.95	0.66
35:BA:1113:U:H2'	35:BA:1114:G:C8	2.30	0.66
35:DA:1014:U:H2'	35:DA:1015:G:C5'	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D3:19:GLN:HE22	28:D3:52:HIS:HE1	1.43	0.66
1:CA:1064:G:N2	1:CA:1190:G:H2'	2.11	0.66
37:DC:185:LYS:HE3	37:DC:185:LYS:N	2.10	0.66
35:DA:2192:G:H2'	35:DA:2193:G:H5''	1.77	0.66
35:BA:518:G:H4'	54:BW:18:ARG:NH1	2.11	0.66
11:CK:34:ASP:N	11:CK:40:ILE:HD11	2.10	0.66
25:D0:36:ILE:HG23	35:DA:2354:G:O2'	1.95	0.66
22:AV:14:A:C6	22:AV:24:A:C5	2.83	0.66
51:DT:29:ARG:HG2	51:DT:86:ILE:HG22	1.78	0.66
1:AA:1054:C:O2'	1:AA:1055:A:OP2	2.10	0.66
42:DH:41:MET:CG	42:DH:43:VAL:HG13	2.25	0.66
1:CA:1256:A:H61	1:CA:1278:U:C1'	2.09	0.66
41:BG:68:PRO:HB2	41:BG:90:LEU:HG	1.78	0.66
19:CS:22:LEU:O	19:CS:26:GLY:HA2	1.96	0.66
35:BA:481:G:H1'	35:BA:506:G:H21	1.61	0.66
56:BY:46:LYS:H	56:BY:62:GLU:HB2	1.60	0.66
3:CC:58:GLU:HB2	3:CC:65:ALA:HB3	1.78	0.66
1:AA:1144:G:H21	1:AA:1146:A:N6	1.93	0.66
2:CB:15:VAL:CG2	2:CB:209:ARG:HH21	2.08	0.66
51:BT:34:VAL:O	51:BT:35:LYS:HB3	1.94	0.66
40:DF:89:VAL:HG12	40:DF:90:PHE:H	1.57	0.66
1:AA:191:G:H1'	20:AT:105:SER:HB3	1.76	0.66
1:CA:1452:C:H4'	1:CA:1456:G:C5'	2.24	0.66
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.78	0.66
21:CU:2:GLY:C	21:CU:4:GLY:H	1.99	0.66
35:BA:1532:C:H2'	35:BA:1533:G:O4'	1.96	0.66
7:CG:53:LYS:O	7:CG:54:THR:HB	1.94	0.66
39:BE:19:ARG:HA	46:BO:73:ASP:HA	1.78	0.66
1:AA:1001(A):G:H2'	1:AA:1002:G:O4'	1.95	0.66
38:DD:121:PRO:HB3	38:DD:135:PHE:HE2	1.60	0.66
1:AA:397:A:H3'	1:AA:397:A:N3	2.09	0.66
26:B1:29:GLY:HA3	35:BA:2396:G:O2'	1.95	0.66
57:BZ:72:ARG:NH2	57:BZ:97:GLU:O	2.29	0.66
35:DA:2749:A:H4'	42:DH:62:LYS:HB3	1.78	0.66
6:CF:8:ILE:HG22	6:CF:9:VAL:N	2.10	0.66
53:DV:5:VAL:HG23	53:DV:37:VAL:HG23	1.78	0.66
22:CY:20:G:C8	22:CY:59:G:N2	2.63	0.66
22:CY:57:U:C5'	57:DZ:182:LYS:CB	2.64	0.66
43:DI:98:ALA:HB1	43:DI:109:ILE:HB	1.78	0.66
35:BA:545:C:H2'	35:BA:547:A:H4'	1.77	0.66
46:BO:77:ILE:HD12	51:BT:73:GLU:O	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:996:A:H4'	52:BU:92:ARG:NE	2.11	0.66
55:DX:64:LYS:NZ	55:DX:73:ARG:HH21	1.90	0.66
39:BE:119:ARG:HG2	39:BE:160:TYR:HB2	1.76	0.66
35:DA:2523:G:H2'	35:DA:2524:G:C5'	2.23	0.66
26:D1:53:VAL:HG23	26:D1:74:VAL:HG13	1.78	0.66
53:BV:21:ARG:HB3	53:BV:91:TYR:HB2	1.78	0.66
13:CM:49:THR:O	13:CM:53:VAL:HG23	1.95	0.66
1:AA:1281:U:H5'	1:AA:1282:C:C5	2.31	0.66
9:CI:28:VAL:HG22	9:CI:63:ILE:HB	1.77	0.66
2:AB:236:TYR:HA	2:AB:239:VAL:HG23	1.77	0.66
35:BA:2328:A:H2'	35:BA:2329:G:C8	2.30	0.66
4:CD:104:VAL:O	4:CD:108:LEU:HB2	1.95	0.66
1:AA:194:C:C2'	1:AA:195:A:H5''	2.25	0.66
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.59	0.66
1:CA:1320:C:H42	19:CS:36:ARG:HG3	1.59	0.66
26:B1:82:LEU:N	26:B1:82:LEU:HD22	2.11	0.66
33:D8:25:MET:HG3	47:DP:64:LYS:HB2	1.78	0.66
40:DF:165:ARG:HH11	40:DF:165:ARG:HB3	1.60	0.66
13:CM:112:GLY:O	13:CM:113:PRO:HG2	1.96	0.66
45:DN:3:THR:O	45:DN:5:VAL:N	2.28	0.66
28:D3:44:ARG:O	28:D3:48:GLU:HG2	1.95	0.66
35:DA:706:A:C2	35:DA:707:G:H1'	2.31	0.66
35:BA:27:G:N2	35:BA:512:G:O2'	2.29	0.66
48:BQ:57:HIS:NE2	48:BQ:116:GLU:HG3	2.11	0.66
8:AH:91:ARG:HG2	8:AH:91:ARG:HH11	1.59	0.66
8:CH:118:VAL:O	8:CH:119:LEU:HD23	1.94	0.66
35:DA:2401:U:O2'	35:DA:2402:C:H5''	1.96	0.66
13:CM:6:GLY:C	13:CM:8:GLU:H	1.98	0.66
42:DH:98:LEU:HB2	42:DH:125:VAL:HG21	1.77	0.66
57:BZ:33:LEU:HD12	57:BZ:34:ASN:H	1.59	0.66
7:AG:143:ARG:CZ	23:AW:44:A:H5''	2.26	0.66
35:BA:2300:G:H1	35:BA:2316:C:H42	1.42	0.66
56:BY:7:VAL:CG2	56:BY:8:LYS:NZ	2.58	0.66
12:AL:53:ARG:O	12:AL:55:VAL:HG13	1.96	0.66
10:AJ:38:ILE:HG12	10:AJ:71:LEU:O	1.95	0.66
10:AJ:7:LYS:O	10:AJ:96:ILE:HA	1.95	0.66
47:DP:48:PRO:HG2	47:DP:49:ARG:N	2.07	0.66
31:D6:7:ILE:HG12	31:D6:29:ASN:HD21	1.60	0.66
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	1.95	0.66
32:B7:11:LYS:HE2	35:BA:686:G:H5''	1.78	0.66
27:D2:47:ASN:O	27:D2:49:LYS:N	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:16:ARG:HB2	3:CC:16:ARG:HH11	1.59	0.66
25:B0:26:TYR:O	25:B0:29:GLN:HB2	1.96	0.66
35:BA:2175:C:H4'	37:BC:219:MET:O	1.96	0.66
26:D1:44:PRO:HB2	26:D1:46:LEU:HD13	1.77	0.66
35:DA:1173:G:H3'	35:DA:1174:A:C5'	2.25	0.66
35:BA:272(J):C:O2'	35:BA:274:G:H5'	1.95	0.66
50:DS:89:ARG:HG2	50:DS:92:TYR:HA	1.77	0.66
56:BY:90:LEU:HG	56:BY:91:GLU:H	1.61	0.66
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.31	0.66
1:CA:991:U:O2	1:CA:993:G:H8	1.79	0.66
35:DA:152:G:H1	35:DA:174:C:H42	1.44	0.66
1:CA:359:U:H2'	1:CA:360:A:C8	2.30	0.66
5:AE:61:TYR:O	5:AE:64:ARG:HB3	1.95	0.66
1:AA:1033:G:C2'	1:AA:1034:G:H5'	2.26	0.66
56:DY:95:LYS:HG2	56:DY:101:LYS:H	1.59	0.66
1:CA:1033:G:H2'	1:CA:1034:G:H5'	1.78	0.66
28:D3:12:PRO:HB2	28:D3:20:LYS:HG2	1.77	0.66
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.31	0.66
41:BG:46:ALA:HB3	41:BG:82:LEU:CD1	2.26	0.66
51:BT:30:VAL:HG21	51:BT:84:GLN:HG3	1.78	0.66
35:DA:1899:G:N2	35:DA:1902:C:N4	2.24	0.66
42:BH:7:LEU:CD2	42:BH:69:ARG:HD2	2.19	0.66
43:DI:62:LYS:HD2	43:DI:133:HIS:HD2	1.59	0.66
8:AH:40:ALA:C	8:AH:42:GLU:H	1.99	0.66
10:CJ:70:ARG:HH11	10:CJ:70:ARG:HG2	1.60	0.66
35:DA:545:C:H2'	35:DA:547:A:H4'	1.76	0.66
13:AM:57:ARG:HH12	29:B4:34:GLU:HA	1.61	0.66
18:CR:37:VAL:HG23	18:CR:38:GLU:N	2.10	0.66
2:AB:233:SER:CB	2:AB:234:PRO:HD2	2.26	0.66
3:CC:134:ILE:HD11	3:CC:153:VAL:CG2	2.25	0.66
35:DA:2472:G:H3'	35:DA:2475:C:N4	2.10	0.66
5:CE:73:ASN:ND2	5:CE:73:ASN:N	2.43	0.66
33:D8:37:SER:C	33:D8:39:LYS:N	2.49	0.66
50:BS:88:ASP:CG	50:BS:89:ARG:H	1.97	0.66
18:CR:40:LEU:HD12	18:CR:40:LEU:H	1.60	0.66
51:DT:54:ARG:HH11	51:DT:54:ARG:HG2	1.61	0.66
55:BX:70:LEU:HD23	55:BX:71:GLY:N	2.10	0.66
27:B2:10:LEU:O	27:B2:14:ARG:HG3	1.96	0.66
11:AK:102:GLY:C	11:AK:103:LEU:HD22	2.16	0.66
1:AA:309:G:H1'	1:AA:608:A:C2	2.31	0.66
35:BA:2192:G:H2'	35:BA:2193:G:H5''	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1196:U:C5	24:CX:23:A:C5	2.82	0.65
23:AW:71:G:N1	23:AW:72:C:C6	2.64	0.65
23:CW:33:G:H2'	23:CW:34:C:C1'	2.25	0.65
22:CV:24:A:N6	22:CV:48:G:N2	2.43	0.65
23:AW:47:G:O2'	23:AW:48:G:H5'	1.95	0.65
12:CL:38:THR:HG23	12:CL:39:VAL:H	1.60	0.65
12:AL:40:VAL:CG2	12:AL:78:GLN:O	2.44	0.65
50:DS:52:SER:HB2	50:DS:55:ALA:HB3	1.78	0.65
41:BG:137:GLU:HG2	41:BG:152:LEU:HD12	1.78	0.65
47:BP:38:GLN:CG	47:BP:39:LYS:H	2.02	0.65
53:BV:21:ARG:HD3	53:BV:21:ARG:N	2.11	0.65
2:AB:15:VAL:CG2	2:AB:209:ARG:HH21	2.08	0.65
5:CE:42:GLY:CA	5:CE:66:MET:HG2	2.26	0.65
36:BB:31:C:H2'	36:BB:53:A:H61	1.61	0.65
16:CP:21:VAL:HG12	16:CP:34:GLU:O	1.96	0.65
16:AP:20:VAL:HG23	16:AP:34:GLU:O	1.95	0.65
41:DG:27:ASN:OD1	41:DG:29:TRP:HB2	1.96	0.65
36:DB:57:A:C4	41:DG:29:TRP:HB3	2.31	0.65
35:DA:621:A:H2'	35:DA:622:G:H5'	1.78	0.65
35:DA:622:G:O2'	35:DA:623:G:H5'	1.95	0.65
1:AA:1422:G:H4'	46:BO:49:ARG:HH12	1.61	0.65
5:AE:39:GLY:HA2	5:AE:69:VAL:HB	1.78	0.65
22:CV:39:A:H2'	22:CV:40:A:H8	1.60	0.65
57:DZ:27:VAL:HG23	57:DZ:36:LYS:HA	1.78	0.65
37:DC:182:PRO:HB2	37:DC:185:LYS:HD2	1.78	0.65
11:AK:34:ASP:N	11:AK:40:ILE:HD11	2.11	0.65
41:BG:118:ARG:H	41:BG:181:ARG:HH21	1.43	0.65
35:BA:2401:U:O2'	35:BA:2402:C:H5''	1.96	0.65
52:DU:28:ARG:HD3	52:DU:38:THR:OG1	1.96	0.65
1:AA:591:U:H2'	1:AA:592:G:C8	2.31	0.65
35:BA:2477:C:H6	35:BA:2477:C:H5'	1.61	0.65
35:BA:1518:U:H2'	35:BA:1519:G:O4'	1.95	0.65
22:AY:28:G:C2	22:AY:29:A:C5	2.85	0.65
22:AV:43:G:C6	22:AV:44:A:C5	2.84	0.65
33:D8:61:LEU:CD1	33:D8:62:LEU:H	2.09	0.65
23:AW:10:G:C4	23:AW:11:C:C5	2.84	0.65
23:AW:25:A:C3'	23:AW:26:G:C8	2.79	0.65
33:B8:56:GLU:HA	33:B8:59:LYS:NZ	2.11	0.65
33:B8:61:LEU:CD1	33:B8:62:LEU:H	2.09	0.65
12:AL:35:GLY:CA	12:AL:58:VAL:HG11	2.23	0.65
51:BT:27:THR:HG23	51:BT:28:VAL:N	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:39:LYS:HD2	47:BP:40:SER:H	1.61	0.65
3:CC:43:LEU:HD21	3:CC:91:LEU:HD21	1.77	0.65
47:DP:18:ARG:HH11	47:DP:18:ARG:HB3	1.61	0.65
35:DA:1113:U:H2'	35:DA:1114:G:C8	2.31	0.65
3:AC:43:LEU:HD21	3:AC:91:LEU:HD21	1.78	0.65
5:CE:105:VAL:HB	5:CE:106:PRO:CD	2.26	0.65
50:BS:90:GLY:C	50:BS:92:TYR:H	1.98	0.65
1:CA:1406:U:H2'	1:CA:1407:C:H6	1.60	0.65
41:DG:51:ARG:HE	41:DG:51:ARG:HA	1.61	0.65
26:D1:82:LEU:HD22	26:D1:82:LEU:H	1.61	0.65
1:CA:309:G:H1'	1:CA:608:A:C2	2.31	0.65
47:BP:80:TYR:CZ	47:BP:111:ARG:HD3	2.30	0.65
6:CF:76:ALA:HB1	6:CF:80:ARG:HH21	1.61	0.65
37:BC:185:LYS:N	37:BC:185:LYS:HE3	2.12	0.65
47:DP:80:TYR:CZ	47:DP:111:ARG:HD3	2.31	0.65
1:AA:1309:G:H2'	1:AA:1310:G:H8	1.61	0.65
1:AA:422:C:H1'	1:AA:423:G:N2	2.11	0.65
40:DF:164:ARG:HG2	40:DF:164:ARG:HH11	1.61	0.65
23:AW:70:G:C4	23:AW:71:G:C8	2.84	0.65
22:AV:12:U:O2	22:AV:13:U:H1'	1.96	0.65
33:D8:62:LEU:N	33:D8:63:PRO:HD2	2.10	0.65
47:BP:59:LEU:CA	47:BP:61:ARG:NH1	2.56	0.65
43:DI:126:TYR:H	43:DI:140:LEU:CD2	2.08	0.65
35:BA:1916:A:H5'	35:BA:1916:A:H8	1.61	0.65
40:BF:132:VAL:HG22	40:BF:133:ASN:N	2.06	0.65
51:BT:80:SER:HB3	51:BT:81:PRO:CD	2.26	0.65
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	1.96	0.65
1:CA:950:U:H2'	1:CA:951:G:C8	2.32	0.65
13:CM:116:THR:HG21	22:CV:31:C:H4'	1.79	0.65
22:CV:33:G:C5	22:CV:34:C:C5	2.85	0.65
53:DV:21:ARG:HB3	53:DV:91:TYR:HB2	1.77	0.65
13:AM:49:THR:O	13:AM:53:VAL:HG23	1.95	0.65
37:DC:44:VAL:HG13	37:DC:215:VAL:HG22	1.79	0.65
41:BG:122:PRO:HG2	41:BG:123:ASN:H	1.60	0.65
35:DA:528:A:N1	35:DA:2042:A:H2'	2.11	0.65
35:DA:2132:U:O4	37:DC:6:LYS:HB2	1.96	0.65
35:BA:2132:U:O4	37:BC:6:LYS:HB2	1.96	0.65
40:BF:89:VAL:HG12	40:BF:90:PHE:H	1.61	0.65
35:BA:2762:G:H2'	35:BA:2763:G:H5'	1.77	0.65
50:DS:106:ARG:HD2	50:DS:106:ARG:O	1.97	0.65
50:DS:88:ASP:CG	50:DS:89:ARG:H	1.99	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:157:LEU:HG	4:AD:161:ASN:ND2	2.12	0.65
41:DG:135:LEU:HD13	41:DG:155:MET:HG3	1.79	0.65
41:BG:116:ASP:O	41:BG:117:PHE:HB3	1.95	0.65
29:D4:53:GLU:OE1	29:D4:55:ARG:HG3	1.96	0.65
41:BG:107:LEU:HD11	41:BG:178:PHE:CE1	2.31	0.65
1:AA:685:G:O2'	1:AA:686:U:H5'	1.95	0.65
28:B3:12:PRO:HB2	28:B3:20:LYS:HG2	1.79	0.65
35:DA:286:C:H2'	35:DA:287:C:H6	1.61	0.65
7:CG:140:ASP:O	7:CG:144:MET:HG2	1.96	0.65
2:AB:132:LYS:HA	2:AB:135:GLN:HE21	1.62	0.65
57:DZ:127:LYS:HZ3	57:DZ:127:LYS:HB3	1.61	0.65
22:CY:29:A:O2'	22:CY:30:U:H5'	1.95	0.65
23:AW:33:G:H2'	23:AW:34:C:O4'	1.96	0.65
22:AY:63:C:O4'	57:BZ:186:GLU:HB3	1.95	0.65
23:CW:39:A:H3'	23:CW:41:C:P	2.36	0.65
46:DO:64:ARG:NH1	51:DT:70:VAL:HG21	2.12	0.65
51:DT:80:SER:HB3	51:DT:81:PRO:CD	2.24	0.65
23:AW:57:U:H2'	23:AW:59:G:OP2	1.97	0.65
12:CL:41:ARG:NH1	12:CL:41:ARG:HB3	2.05	0.65
12:CL:68:ALA:HB2	12:CL:85:ILE:HD11	1.79	0.65
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB3	2.25	0.65
53:DV:55:ALA:HA	53:DV:101:GLY:HA2	1.78	0.65
52:BU:112:ARG:HH12	53:BV:46:VAL:HG11	1.58	0.65
41:DG:45:GLU:OE1	41:DG:45:GLU:HA	1.97	0.65
41:DG:91:ARG:C	41:DG:91:ARG:HD2	2.16	0.65
39:DE:116:VAL:O	39:DE:117:MET:CB	2.44	0.65
27:D2:17:SER:O	27:D2:21:LEU:HB2	1.96	0.65
39:DE:101:ARG:HB2	39:DE:201:THR:HG21	1.78	0.65
2:CB:140:HIS:HA	2:CB:143:GLU:CG	2.25	0.65
35:DA:2132:U:C4	37:DC:6:LYS:HB2	2.32	0.65
16:CP:20:VAL:HG23	16:CP:34:GLU:O	1.96	0.65
42:DH:154:PRO:O	42:DH:156:ALA:N	2.29	0.65
3:AC:182:ILE:HG23	3:AC:202:ILE:C	2.17	0.65
1:CA:959:A:H3'	1:CA:960:U:H5''	1.78	0.65
1:AA:950:U:H2'	1:AA:951:G:C8	2.30	0.65
2:AB:167:PRO:HG2	2:AB:192:SER:OG	1.97	0.65
20:AT:53:LEU:HD12	20:AT:100:ILE:HG23	1.77	0.65
6:AF:10:LEU:N	6:AF:10:LEU:HD12	2.11	0.65
50:DS:26:LEU:O	50:DS:88:ASP:HB3	1.97	0.65
35:DA:2074:U:H2'	35:DA:2075:U:C6	2.31	0.65
35:DA:1935:G:H1'	35:DA:1964:G:N2	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:422:C:H1'	1:CA:423:G:N2	2.10	0.65
1:CA:1161:C:H2'	1:CA:1162:C:C6	2.31	0.65
50:BS:52:SER:HB2	50:BS:55:ALA:HB3	1.79	0.65
57:BZ:54:HIS:HB3	57:BZ:101:PRO:HD3	1.78	0.65
43:BI:72:LEU:O	43:BI:138:ILE:HD12	1.95	0.65
35:DA:1532:C:H2'	35:DA:1533:G:O4'	1.96	0.65
35:BA:1750:G:O2'	35:BA:1751:C:H5'	1.96	0.65
1:CA:1309:G:H2'	1:CA:1310:G:H8	1.62	0.65
35:BA:1887:C:C3'	35:BA:1888:G:H5''	2.26	0.65
52:DU:79:PHE:CD1	52:DU:83:LEU:HD21	2.31	0.65
35:DA:322:A:OP2	40:DF:169:ASN:HB2	1.96	0.65
57:DZ:19:ARG:HH12	57:DZ:84:GLU:CA	2.09	0.65
52:BU:90:VAL:CG2	53:BV:39:LEU:HG	2.27	0.65
56:BY:2:ARG:N	56:BY:4:LYS:HE2	2.12	0.65
49:BR:10:LEU:CD2	49:BR:17:ARG:HD3	2.27	0.65
10:AJ:49:VAL:HG21	14:AN:41:ARG:HB2	1.78	0.65
50:DS:99:LYS:O	50:DS:101:LEU:N	2.30	0.65
8:CH:20:TYR:HA	8:CH:65:TYR:CE2	2.32	0.65
35:BA:1534:U:H2'	35:BA:1535:A:O4'	1.96	0.65
30:B5:51:TYR:CG	30:B5:52:TYR:N	2.64	0.65
4:AD:104:VAL:O	4:AD:108:LEU:HB2	1.96	0.65
16:CP:2:VAL:HG23	16:CP:21:VAL:HG23	1.76	0.65
4:AD:152:SER:HA	4:AD:155:LEU:HG	1.78	0.65
35:DA:2189:U:C2'	35:DA:2190:G:H5''	2.25	0.65
35:DA:272(J):C:O2'	35:DA:274:G:H5'	1.96	0.65
6:CF:45:LEU:HD23	6:CF:46:ARG:N	2.11	0.65
56:DY:90:LEU:HG	56:DY:91:GLU:H	1.61	0.65
35:DA:142:A:H5'	35:DA:142(A):C:OP2	1.97	0.65
53:BV:81:TYR:C	53:BV:82:ARG:HD2	2.17	0.65
1:CA:1519:A:H2'	1:CA:1520:G:H5'	1.78	0.65
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.31	0.65
35:DA:1431:U:O2'	35:DA:1432:C:H5'	1.96	0.65
1:AA:762:C:H2'	1:AA:763:G:H8	1.60	0.65
38:DD:221:VAL:HG22	38:DD:226:MET:HE1	1.77	0.65
1:CA:1026:G:N3	1:CA:1026:G:H2'	2.12	0.65
35:BA:2178:C:H4'	37:BC:47:LYS:HD3	1.78	0.65
1:CA:502:G:OP1	12:CL:118:SER:HB3	1.97	0.65
23:AW:29:A:C6	23:AW:30:U:C4	2.84	0.65
51:DT:63:VAL:O	51:DT:73:GLU:HA	1.96	0.65
1:CA:1494:G:N3	1:CA:1494:G:H2'	2.11	0.65
35:DA:404:C:C4'	35:DA:405:U:H5'	2.22	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DD:58:HIS:HD2	38:DD:59:LYS:N	1.95	0.65
39:DE:118:LYS:H	39:DE:121:ASN:H	1.42	0.65
2:AB:67:THR:HG21	2:AB:155:LEU:HD21	1.76	0.65
1:CA:1401:G:C8	1:CA:1401:G:OP1	2.49	0.65
1:AA:390:C:H2'	1:AA:391:G:C8	2.32	0.65
3:AC:77:ILE:HG23	3:AC:84:ILE:CG2	2.27	0.65
51:BT:34:VAL:HG12	51:BT:35:LYS:H	1.59	0.65
38:DD:118:VAL:HG22	38:DD:119:ALA:N	2.10	0.65
1:AA:959:A:H3'	1:AA:960:U:H5''	1.79	0.65
38:BD:221:VAL:HG22	38:BD:226:MET:HE2	1.79	0.65
50:BS:19:LYS:HB3	50:BS:20:ARG:NH2	2.11	0.65
33:D8:37:SER:OG	33:D8:39:LYS:HB3	1.97	0.65
1:AA:833:U:H2'	1:AA:834:C:H6	1.60	0.65
50:BS:106:ARG:HH11	50:BS:106:ARG:C	2.00	0.65
49:BR:84:ALA:HB3	49:BR:85:PRO:HD3	1.79	0.65
22:CY:19:G:C6	22:CY:59:G:C2	2.84	0.65
4:AD:11:LEU:HD13	4:AD:66:ARG:HD3	1.76	0.65
19:AS:22:LEU:O	19:AS:26:GLY:HA2	1.95	0.65
56:DY:27:VAL:CA	56:DY:28:LYS:HZ1	2.08	0.65
7:CG:108:ALA:HA	7:CG:111:ARG:HD2	1.79	0.65
1:AA:1125:U:H3	10:AJ:5:ARG:NH2	1.95	0.65
40:BF:24:LEU:CB	40:BF:25:PRO:HD2	2.22	0.65
35:BA:545:C:H2'	35:BA:547:A:C4'	2.27	0.65
10:CJ:3:LYS:HB2	10:CJ:4:ILE:HD12	1.78	0.65
53:BV:55:ALA:HA	53:BV:101:GLY:HA2	1.79	0.65
39:BE:57:LYS:C	39:BE:59:VAL:H	1.99	0.65
39:BE:59:VAL:O	39:BE:60:ASN:CG	2.34	0.65
40:DF:36:VAL:O	40:DF:40:GLN:HG3	1.97	0.65
47:BP:85:LEU:HA	47:BP:88:LEU:HD13	1.77	0.65
2:CB:178:ARG:NH2	8:CH:68:ARG:NH2	2.44	0.65
2:AB:15:VAL:HG23	2:AB:16:HIS:CE1	2.32	0.65
25:B0:27:GLU:OE1	25:B0:27:GLU:N	2.28	0.65
3:AC:16:ARG:HH11	3:AC:16:ARG:HB2	1.58	0.65
35:DA:1542:A:C8	35:DA:1542:A:H3'	2.31	0.65
1:AA:1504:G:OP1	1:AA:1507:A:H4'	1.97	0.65
20:AT:50:GLU:HA	20:AT:100:ILE:HG21	1.79	0.65
57:DZ:103:ARG:HG3	57:DZ:103:ARG:HH11	1.62	0.65
12:AL:20:LYS:NZ	12:AL:20:LYS:HB3	2.11	0.65
23:CW:36:C:H2'	23:CW:36:C:O2	1.95	0.65
13:CM:112:GLY:HA2	13:CM:113:PRO:HG2	1.79	0.65
1:CA:908:A:H2'	1:CA:909:A:H8	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:69:VAL:HG22	7:CG:135:VAL:HG22	1.79	0.65
1:CA:298:A:H2'	1:CA:299:G:O4'	1.97	0.65
35:BA:782:A:H5'	35:BA:783:A:C2	2.31	0.65
29:B4:53:GLU:OE1	29:B4:55:ARG:HG3	1.96	0.65
22:CY:19:G:H22	22:CY:59:G:H2'	1.61	0.65
48:BQ:61:GLY:N	57:BZ:178:GLU:O	2.29	0.65
22:AV:23:A:H5'	22:AV:24:A:P	2.37	0.65
23:AW:9:A:C5	23:AW:47:G:C2	2.84	0.65
47:BP:48:PRO:CG	47:BP:49:ARG:H	2.07	0.65
43:DI:123:LEU:HD11	43:DI:144:VAL:CG2	2.26	0.65
13:AM:3:ARG:HB2	29:B4:34:GLU:CD	2.17	0.65
46:BO:64:ARG:NH1	51:BT:70:VAL:HG21	2.12	0.65
35:DA:2313:C:H2'	35:DA:2314:C:C6	2.29	0.65
12:AL:54:LYS:HD2	12:AL:54:LYS:N	2.11	0.65
25:B0:10:THR:HG22	25:B0:11:ARG:N	2.08	0.65
19:CS:63:THR:O	19:CS:66:MET:HG2	1.95	0.65
47:BP:16:ARG:CD	47:BP:18:ARG:H	2.10	0.65
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.26	0.65
57:DZ:118:GLN:HE21	57:DZ:175:VAL:CG1	2.09	0.65
1:CA:833:U:H2'	1:CA:834:C:H6	1.60	0.65
15:CO:29:VAL:HG11	15:CO:81:LEU:HD21	1.78	0.65
45:BN:120:LEU:CD2	45:BN:122:VAL:HG23	2.26	0.65
1:AA:1309:G:H2'	1:AA:1310:G:C8	2.32	0.65
1:AA:1194:U:H2'	1:AA:1195:C:H6	1.61	0.65
35:DA:796:C:H2'	35:DA:797:C:C6	2.31	0.65
53:DV:81:TYR:C	53:DV:82:ARG:HD2	2.17	0.65
5:AE:43:LEU:HD21	5:AE:132:ALA:HB1	1.79	0.65
36:BB:94:C:H2'	36:BB:95:C:H6	1.60	0.65
1:CA:693:G:C5	24:CX:13:A:O2'	2.49	0.65
35:BA:2463:C:O2'	35:BA:2464:C:H5'	1.95	0.65
1:AA:973:G:H3'	1:AA:974:A:H5''	1.78	0.65
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.79	0.65
46:BO:105:GLU:O	46:BO:108:GLU:HG2	1.96	0.65
35:DA:2315:G:H2'	35:DA:2316:C:C6	2.32	0.65
56:BY:29:GLU:N	56:BY:29:GLU:OE1	2.28	0.65
2:CB:233:SER:CB	2:CB:234:PRO:HD2	2.25	0.65
47:BP:16:ARG:HD3	47:BP:17:LYS:N	2.12	0.65
8:AH:6:ILE:H	8:AH:6:ILE:HD12	1.61	0.65
2:CB:235:SER:HG	2:CB:236:TYR:HD1	1.45	0.65
4:AD:173:TRP:CD2	4:AD:189:PRO:HB3	2.32	0.65
1:AA:728:A:H2'	1:AA:729:A:H8	1.57	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1761:C:H3'	35:DA:1762:A:H8	1.62	0.65
33:B8:33:ASN:ND2	33:B8:33:ASN:H	1.94	0.65
20:CT:53:LEU:HD12	20:CT:100:ILE:HG23	1.78	0.65
17:CQ:52:LYS:H	17:CQ:52:LYS:HD2	1.60	0.65
1:CA:165:C:H2'	1:CA:166:G:C8	2.32	0.65
1:CA:1033:G:C2'	1:CA:1034:G:H5'	2.27	0.65
22:CV:76:C:H2'	22:CV:77:C:C5'	2.26	0.65
49:DR:13:HIS:CE1	49:DR:15:SER:HB3	2.32	0.65
1:AA:862:C:O2'	1:AA:863:U:H5'	1.97	0.65
35:BA:1607:C:H4'	35:BA:1608:A:O5'	1.97	0.65
23:AW:68:A:C4	23:AW:69:G:H8	2.14	0.65
43:DI:88:ILE:CD1	43:DI:142:VAL:HG13	2.23	0.65
43:DI:83:ALA:HB2	43:DI:88:ILE:HG23	1.78	0.65
31:D6:15:GLU:HB2	31:D6:49:HIS:CE1	2.32	0.65
43:BI:83:ALA:HB2	43:BI:88:ILE:HG23	1.78	0.65
12:CL:90:VAL:O	12:CL:92:ASP:N	2.30	0.65
8:CH:40:ALA:C	8:CH:42:GLU:H	2.00	0.65
1:AA:178:C:O2'	1:AA:179:A:H5'	1.96	0.65
10:AJ:96:ILE:HD13	10:AJ:96:ILE:N	2.12	0.65
57:DZ:16:SER:O	57:DZ:20:ARG:HB2	1.97	0.65
15:CO:85:LEU:O	15:CO:85:LEU:HD23	1.97	0.65
3:AC:58:GLU:HB2	3:AC:65:ALA:HB3	1.79	0.65
39:BE:18:ASP:OD2	51:BT:39:ARG:HD2	1.97	0.65
38:DD:24:ILE:CG1	38:DD:25:THR:N	2.59	0.65
46:DO:114:ILE:HD12	46:DO:114:ILE:H	1.60	0.65
1:CA:539:A:H2'	1:CA:540:G:C8	2.32	0.65
35:DA:2784:C:H1'	39:DE:37:ARG:HH12	1.62	0.65
15:CO:65:ARG:NH1	15:CO:65:ARG:HG2	2.08	0.65
12:CL:20:LYS:NZ	12:CL:20:LYS:HB3	2.12	0.65
11:AK:109:VAL:HG13	18:AR:85:LEU:O	1.96	0.65
6:CF:10:LEU:HD12	6:CF:10:LEU:N	2.12	0.65
1:AA:1033:G:H2'	1:AA:1034:G:H5'	1.78	0.65
37:BC:182:PRO:HB2	37:BC:185:LYS:HD2	1.79	0.65
38:BD:121:PRO:HB3	38:BD:135:PHE:HE2	1.62	0.65
8:CH:91:ARG:HH11	8:CH:91:ARG:HG2	1.62	0.65
35:DA:2781:A:H5''	35:DA:2782:G:H5'	1.79	0.65
46:BO:122:LEU:HD22	51:BT:43:GLN:NE2	2.12	0.65
1:AA:37:U:O2'	1:AA:38:G:H5'	1.96	0.65
1:CA:596:C:H2'	1:CA:597:G:H8	1.61	0.65
37:BC:216:THR:HB	37:BC:222:SER:HB3	1.79	0.65
35:BA:1427:A:H4'	35:BA:1428:C:O5'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:65:ARG:HH11	15:AO:65:ARG:HG2	1.60	0.65
23:AW:70:G:C6	23:AW:71:G:C6	2.85	0.64
22:AY:43:G:O2'	22:AY:44:A:H5'	1.98	0.64
47:DP:39:LYS:HD2	47:DP:40:SER:H	1.62	0.64
43:BI:62:LYS:HD2	43:BI:133:HIS:HD2	1.63	0.64
12:CL:46:LYS:HB2	12:CL:92:ASP:O	1.97	0.64
1:CA:973:G:H3'	1:CA:974:A:H5''	1.78	0.64
1:CA:1125:U:H3	10:CJ:5:ARG:NH2	1.95	0.64
51:BT:27:THR:OG1	51:BT:28:VAL:N	2.30	0.64
49:DR:10:LEU:CB	49:DR:17:ARG:HD3	2.26	0.64
2:AB:91:PRO:CG	2:AB:155:LEU:HD23	2.26	0.64
2:AB:102:LEU:N	2:AB:102:LEU:HD12	2.12	0.64
47:DP:16:ARG:CZ	47:DP:18:ARG:HB2	2.27	0.64
47:DP:16:ARG:HD3	47:DP:17:LYS:N	2.12	0.64
35:BA:2132:U:C4	37:BC:6:LYS:HB2	2.32	0.64
35:BA:389:G:N1	47:BP:71:VAL:HG12	2.11	0.64
50:DS:19:LYS:HB3	50:DS:20:ARG:NH2	2.11	0.64
1:AA:1064:G:N2	1:AA:1190:G:H2'	2.11	0.64
1:CA:1309:G:H2'	1:CA:1310:G:C8	2.32	0.64
35:DA:315:G:H2'	35:DA:316:C:C6	2.32	0.64
1:AA:650:G:O2'	1:AA:651:C:H5'	1.97	0.64
1:AA:218:C:H5'	1:AA:470:C:H42	1.62	0.64
36:DB:31:C:H2'	36:DB:53:A:H61	1.61	0.64
35:DA:2777:G:H5''	35:DA:2778:A:C5'	2.26	0.64
1:CA:762:C:H2'	1:CA:763:G:H8	1.62	0.64
1:AA:991:U:O2	1:AA:993:G:H8	1.80	0.64
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.32	0.64
22:AV:71:G:N2	22:AV:72:C:C2	2.66	0.64
35:DA:2092:U:C4'	35:DA:2093:G:H5''	2.20	0.64
17:AQ:9:VAL:HG11	17:AQ:84:LEU:CD1	2.27	0.64
1:AA:472:A:H2'	1:AA:473:G:O4'	1.98	0.64
3:AC:14:ILE:HG12	3:AC:15:THR:N	2.10	0.64
1:CA:390:C:H2'	1:CA:391:G:C8	2.32	0.64
35:DA:1038:C:H2'	35:DA:1039:G:H5''	1.79	0.64
35:DA:2143:C:H2'	35:DA:2144:U:O4'	1.98	0.64
40:DF:66:PRO:O	40:DF:67:GLN:HB3	1.95	0.64
1:AA:298:A:H2'	1:AA:299:G:O4'	1.96	0.64
9:CI:46:ALA:HA	9:CI:78:LYS:HB2	1.79	0.64
35:DA:1570:A:H2'	35:DA:1571:A:C8	2.32	0.64
52:BU:28:ARG:HD3	52:BU:38:THR:OG1	1.97	0.64
35:DA:1719:G:C2'	35:DA:1720:U:H5'	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:596:C:H2'	1:AA:597:G:H8	1.61	0.64
49:DR:101:ALA:O	49:DR:102:GLU:HB2	1.96	0.64
39:BE:203:LYS:O	39:BE:203:LYS:HD2	1.97	0.64
1:AA:1026:G:N3	1:AA:1026:G:H2'	2.12	0.64
23:AW:39:A:H5''	23:AW:40:A:OP2	1.98	0.64
22:AV:15:G:H2'	22:AV:16:U:H6	1.62	0.64
22:AV:52:C:H2'	22:AV:53:U:H6	1.57	0.64
4:AD:18:LYS:HE2	4:AD:31:CYS:HB3	1.79	0.64
47:DP:29:LYS:N	47:DP:29:LYS:HD2	2.12	0.64
35:BA:1914:C:H2'	35:BA:1915:U:C6	2.32	0.64
3:AC:107:GLN:NE2	3:AC:107:GLN:H	1.96	0.64
2:CB:208:ILE:HA	2:CB:211:ILE:HD12	1.80	0.64
53:BV:18:LEU:HD13	53:BV:19:LYS:H	1.61	0.64
53:BV:89:GLN:OE1	53:BV:90:PRO:HD2	1.97	0.64
41:DG:141:PHE:HD1	41:DG:142:PRO:HD2	1.63	0.64
35:DA:914:C:C2'	35:DA:915:C:H5'	2.26	0.64
57:DZ:151:HIS:HA	57:DZ:171:ILE:HG13	1.80	0.64
39:BE:101:ARG:HB3	39:BE:169:ASN:HD22	1.62	0.64
35:DA:2645:G:H3'	35:DA:2646:C:C5'	2.26	0.64
1:CA:1502:A:H2	1:CA:1505:G:N1	1.95	0.64
41:DG:29:TRP:HA	41:DG:29:TRP:HE3	1.60	0.64
1:CA:444:C:H2'	1:CA:445:G:C8	2.31	0.64
1:AA:424:G:O2'	1:AA:425:G:H5'	1.97	0.64
15:AO:65:ARG:NH1	15:AO:65:ARG:HG2	2.13	0.64
6:AF:76:ALA:HB1	6:AF:80:ARG:HH21	1.62	0.64
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.32	0.64
35:BA:796:C:H2'	35:BA:797:C:C6	2.32	0.64
22:AY:70:G:H2'	22:AY:71:G:H8	1.62	0.64
22:CV:19:G:H2'	22:CV:59:G:N2	2.12	0.64
35:DA:1902:C:H4'	38:DD:244:ARG:HA	1.79	0.64
56:BY:76:CYS:SG	56:BY:77:PRO:CD	2.79	0.64
1:CA:178:C:O2'	1:CA:179:A:H5'	1.97	0.64
31:D6:48:VAL:O	31:D6:49:HIS:HB2	1.95	0.64
12:CL:53:ARG:O	12:CL:55:VAL:HG13	1.98	0.64
12:AL:22:SER:C	12:AL:24:VAL:H	2.01	0.64
12:CL:54:LYS:N	12:CL:54:LYS:HD2	2.12	0.64
46:BO:64:ARG:HG2	46:BO:79:PHE:CG	2.33	0.64
53:BV:15:GLU:HB3	53:BV:16:PRO:CD	2.27	0.64
47:DP:7:ARG:NH1	47:DP:7:ARG:HB3	2.12	0.64
22:CV:45:U:H2'	22:CV:46:U:C6	2.32	0.64
2:AB:140:HIS:HA	2:AB:143:GLU:CG	2.25	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:147:ASP:HA	5:CE:150:ARG:NH1	2.13	0.64
35:DA:1038:C:C2'	35:DA:1039:G:H5''	2.27	0.64
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.27	0.64
5:AE:69:VAL:O	5:AE:71:LEU:HG	1.98	0.64
35:BA:2845:G:O2'	35:BA:2846:G:H5'	1.98	0.64
39:DE:24:THR:HG22	39:DE:186:GLY:HA2	1.78	0.64
35:DA:594:U:H2'	35:DA:595:C:H6	1.62	0.64
13:AM:112:GLY:HA2	13:AM:113:PRO:HG2	1.78	0.64
8:AH:98:LYS:HG3	8:AH:99:GLU:HG3	1.80	0.64
35:BA:633:A:H2'	35:BA:634:C:H5'	1.78	0.64
35:BA:2584:U:C2'	35:BA:2585:U:H5'	2.27	0.64
20:CT:12:ALA:O	20:CT:15:ARG:HB2	1.98	0.64
46:DO:13:ASN:ND2	46:DO:97:ARG:HB2	2.12	0.64
57:BZ:103:ARG:HB2	57:BZ:103:ARG:HH11	1.62	0.64
1:AA:711:G:O2'	1:AA:712:A:H5'	1.96	0.64
22:CY:57:U:O2	57:DZ:184:ALA:HB3	1.96	0.64
22:AY:69:G:C4	22:AY:70:G:C8	2.86	0.64
22:AV:24:A:N6	22:AV:48:G:N2	2.44	0.64
51:DT:27:THR:O	51:DT:28:VAL:HB	1.96	0.64
12:AL:43:VAL:O	12:AL:52:LEU:HD23	1.98	0.64
1:CA:1054:C:O2'	1:CA:1055:A:H5'	1.98	0.64
57:DZ:18:LEU:HB3	57:DZ:23:LYS:O	1.98	0.64
56:BY:39:VAL:HG12	56:BY:40:GLU:H	1.63	0.64
53:DV:21:ARG:CG	53:DV:91:TYR:HD2	2.10	0.64
35:BA:662:G:OP1	47:BP:18:ARG:HD2	1.96	0.64
27:D2:48:HIS:CD2	35:DA:96:G:H4'	2.33	0.64
1:CA:194:C:C2'	1:CA:195:A:H5''	2.26	0.64
1:AA:1134:G:N2	1:AA:1141:C:H1'	2.13	0.64
3:AC:23:TYR:HA	10:AJ:11:PHE:CE2	2.32	0.64
51:DT:35:LYS:O	51:DT:36:GLU:HB3	1.97	0.64
18:CR:56:THR:HB	18:CR:58:LEU:CD1	2.26	0.64
35:BA:2143:C:H2'	35:BA:2144:U:O4'	1.98	0.64
45:DN:62:VAL:HG13	45:DN:62:VAL:O	1.98	0.64
57:BZ:24:LEU:HD21	57:BZ:86:VAL:HG23	1.78	0.64
26:D1:19:GLN:NE2	26:D1:19:GLN:HA	2.11	0.64
5:CE:64:ARG:HH11	5:CE:64:ARG:HG3	1.62	0.64
35:BA:2012:G:H4'	54:BW:96:ILE:HD11	1.79	0.64
37:BC:16:ASP:HB3	37:BC:19:LYS:HB3	1.79	0.64
38:BD:186:HIS:HD2	38:BD:188:GLU:HB2	1.61	0.64
1:AA:328:C:H4'	1:AA:329:A:H5'	1.78	0.64
57:BZ:138:GLU:HB2	57:BZ:156:LYS:HB3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:8:VAL:O	4:AD:10:ARG:N	2.31	0.64
30:B5:2:ALA:N	35:BA:2015:A:H1'	2.12	0.64
35:DA:587:C:H2'	47:DP:33:ARG:NH2	2.13	0.64
19:AS:24:ALA:O	19:AS:25:LYS:HB2	1.98	0.64
1:AA:175:C:O2'	1:AA:176:C:H5'	1.97	0.64
12:AL:43:VAL:HG13	12:AL:55:VAL:HG21	1.79	0.64
10:AJ:3:LYS:HB2	10:AJ:4:ILE:HD12	1.79	0.64
1:CA:1152:A:C5'	10:CJ:70:ARG:HH22	2.04	0.64
53:DV:18:LEU:HD13	53:DV:19:LYS:H	1.62	0.64
35:DA:545:C:H2'	35:DA:547:A:C4'	2.27	0.64
53:BV:19:LYS:HE2	53:BV:19:LYS:HA	1.80	0.64
41:DG:60:LEU:O	41:DG:64:THR:HG22	1.98	0.64
35:BA:2632:A:H2	39:BE:61:ARG:HD2	1.62	0.64
56:BY:9:LYS:O	56:BY:28:LYS:NZ	2.29	0.64
57:BZ:102:LEU:HD22	57:BZ:139:VAL:HG21	1.78	0.64
38:DD:32:SER:O	38:DD:36:PRO:HG3	1.97	0.64
1:CA:620:C:H2'	1:CA:621:A:O4'	1.98	0.64
18:AR:58:LEU:CD1	18:AR:58:LEU:H	2.11	0.64
35:BA:1761:C:H3'	35:BA:1762:A:H8	1.61	0.64
35:DA:2807:G:C2'	35:DA:2808:U:H5''	2.27	0.64
1:AA:1392:G:N2	1:AA:1502:A:H8	1.95	0.64
1:AA:198:G:H2'	1:AA:199:G:C8	2.33	0.64
1:AA:797:C:OP1	11:AK:124:LYS:HE3	1.98	0.64
5:CE:57:LYS:HE2	5:CE:61:TYR:HE2	1.63	0.64
1:AA:630:G:H2'	1:AA:631:G:C5'	2.28	0.64
35:BA:2584:U:H2'	35:BA:2585:U:H5'	1.80	0.64
31:B6:52:VAL:HG22	31:B6:53:LYS:N	2.13	0.64
39:BE:93:VAL:HG12	39:BE:175:VAL:HG23	1.79	0.64
35:DA:1750:G:O2'	35:DA:1751:C:H5'	1.96	0.64
39:DE:203:LYS:HD2	39:DE:203:LYS:O	1.97	0.64
35:BA:1490:A:H5'	35:BA:1491:G:OP1	1.96	0.64
23:AW:7:U:O2	23:AW:69:G:C4	2.51	0.64
22:AY:4:C:N4	22:AY:72:C:H5	1.96	0.64
46:DO:78:ARG:NE	51:DT:73:GLU:OE1	2.30	0.64
7:AG:108:ALA:HA	7:AG:111:ARG:HD2	1.80	0.64
41:DG:63:ILE:CG2	41:DG:141:PHE:HB3	2.27	0.64
35:BA:322:A:OP2	40:BF:169:ASN:HB2	1.97	0.64
47:BP:7:ARG:HB3	47:BP:7:ARG:NH1	2.12	0.64
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.33	0.64
35:BA:330:A:O2'	35:BA:331:A:H8	1.81	0.64
3:CC:19:GLU:HA	3:CC:54:ARG:HH12	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:112:VAL:HG12	4:CD:116:GLN:OE1	1.98	0.64
3:CC:138:VAL:HG22	3:CC:151:VAL:HG23	1.79	0.64
1:AA:620:C:H2'	1:AA:621:A:O4'	1.97	0.64
37:BC:40:GLU:OE2	37:BC:219:MET:HB2	1.97	0.64
16:AP:68:ASP:C	16:AP:70:ALA:H	2.01	0.64
2:CB:167:PRO:HG2	2:CB:192:SER:OG	1.97	0.64
35:BA:674:G:H1'	40:BF:74:ARG:HD2	1.80	0.64
1:CA:797:C:OP1	11:CK:124:LYS:HE3	1.97	0.64
11:AK:59:TYR:O	11:AK:62:GLN:HB3	1.98	0.64
57:DZ:48:PHE:HE2	57:DZ:71:VAL:HG11	1.63	0.64
4:AD:90:GLY:HA2	4:AD:204:ILE:HD11	1.80	0.64
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.79	0.64
23:CW:27:C:C3'	23:CW:28:G:H8	2.11	0.64
23:CW:47:G:O2'	23:CW:48:G:H5'	1.98	0.64
41:DG:111:LEU:HB2	41:DG:112:PRO:CD	2.25	0.64
41:DG:120:LEU:HB2	41:DG:180:PHE:CD1	2.33	0.64
56:BY:28:LYS:N	56:BY:28:LYS:HZ2	1.92	0.64
53:BV:21:ARG:CG	53:BV:91:TYR:HD2	2.11	0.64
22:AV:17:C:H5''	22:AV:18:U:C5	2.32	0.64
9:AI:28:VAL:HG22	9:AI:63:ILE:HB	1.79	0.64
9:CI:29:ASN:OD1	9:CI:64:THR:HG23	1.98	0.64
4:AD:132:ARG:C	4:AD:132:ARG:HD2	2.17	0.64
35:DA:2632:A:H2	39:DE:61:ARG:HD2	1.62	0.64
35:BA:621:A:H2'	35:BA:622:G:H5'	1.79	0.64
37:DC:40:GLU:OE2	37:DC:219:MET:HB2	1.98	0.64
38:DD:117:VAL:HG21	38:DD:128:GLY:O	1.98	0.64
33:D8:33:ASN:H	33:D8:33:ASN:ND2	1.96	0.64
33:B8:37:SER:OG	33:B8:39:LYS:HB3	1.98	0.64
21:AU:2:GLY:C	21:AU:4:GLY:H	2.00	0.64
18:AR:40:LEU:H	18:AR:40:LEU:HD12	1.63	0.64
48:BQ:134:ARG:HA	48:BQ:137:TYR:CD2	2.33	0.64
4:AD:65:ARG:HD2	4:AD:72:GLU:HA	1.80	0.64
35:DA:1427:A:H4'	35:DA:1428:C:O5'	1.97	0.64
35:BA:654(S):G:H3'	35:BA:654(T):C:C5'	2.28	0.64
5:CE:93:PRO:HG2	8:CH:105:ARG:HH21	1.63	0.64
9:CI:2:GLU:O	9:CI:3:GLN:HG3	1.98	0.64
1:CA:63:C:H42	1:CA:104:G:H1	1.44	0.64
17:CQ:63:ARG:HG2	17:CQ:64:PRO:HD2	1.80	0.64
38:BD:45:ASN:ND2	38:BD:50:THR:HG21	2.13	0.64
35:BA:2196:C:O2'	35:BA:2197:U:H5'	1.98	0.64
22:AY:28:G:H2'	22:AY:28:G:N3	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:587:C:O2'	35:DA:588:U:OP2	2.16	0.64
1:CA:148:G:H2'	1:CA:149:A:H8	1.63	0.64
7:CG:108:ALA:O	7:CG:119:ARG:HD2	1.98	0.64
35:BA:1506:C:O2	35:BA:1506:C:H2'	1.95	0.64
43:BI:81:VAL:HG13	43:BI:143:SER:H	1.63	0.64
10:AJ:81:THR:C	10:AJ:83:GLU:H	2.01	0.64
33:D8:58:ILE:CG2	47:DP:49:ARG:HD2	2.26	0.64
41:DG:6:ALA:HB3	41:DG:104:GLU:OE1	1.98	0.64
41:DG:5:VAL:CG1	41:DG:6:ALA:H	2.08	0.64
49:DR:10:LEU:CD2	49:DR:17:ARG:HD3	2.27	0.64
1:CA:472:A:H2'	1:CA:473:G:O4'	1.98	0.64
39:BE:34:VAL:CG1	39:BE:48:GLN:HG2	2.27	0.64
52:BU:31:SER:C	52:BU:33:ARG:H	2.01	0.64
35:DA:481:G:OP2	56:DY:47:LYS:HD3	1.98	0.64
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	1.98	0.64
4:CD:132:ARG:C	4:CD:132:ARG:HD2	2.18	0.64
39:BE:69:LYS:NZ	39:BE:89:ASP:HA	2.11	0.64
45:BN:67:LEU:O	45:BN:68:GLU:HB2	1.98	0.64
2:CB:137:ARG:HD3	2:CB:138:LEU:HG	1.79	0.64
1:CA:191:G:H1'	20:CT:105:SER:HB3	1.78	0.64
35:BA:2807:G:C3'	35:BA:2808:U:H5''	2.28	0.64
2:AB:166:ASP:CB	2:AB:169:LYS:HB2	2.28	0.64
50:BS:89:ARG:HB3	50:BS:92:TYR:HB3	1.79	0.64
5:AE:64:ARG:HG3	5:AE:64:ARG:HH11	1.62	0.64
12:AL:18:VAL:O	12:AL:19:ARG:HB2	1.98	0.64
1:AA:1470:G:O2'	1:AA:1471:G:H5'	1.97	0.64
1:CA:711:G:O2'	1:CA:712:A:H5'	1.98	0.64
20:AT:51:GLU:HA	20:AT:54:LYS:NZ	2.13	0.64
35:DA:719:C:O2'	35:DA:720:C:H5'	1.98	0.64
35:BA:2223:G:H2'	35:BA:2224:G:H5'	1.80	0.64
5:CE:141:GLN:HA	5:CE:143:ARG:NH2	2.12	0.64
1:CA:1112:C:O2	3:CC:179:ARG:HG2	1.98	0.64
1:CA:650:G:O2'	1:CA:651:C:H5'	1.98	0.64
2:CB:194:PRO:O	2:CB:196:LEU:N	2.31	0.64
37:DC:195:ARG:HH11	37:DC:195:ARG:HG3	1.62	0.64
17:AQ:52:LYS:HD2	17:AQ:52:LYS:H	1.62	0.64
35:DA:2830:G:N3	35:DA:2883:A:H2	1.96	0.64
7:AG:69:VAL:HG22	7:AG:135:VAL:HG22	1.79	0.64
51:DT:16:ARG:HH12	51:DT:19:LEU:HD21	1.62	0.64
12:CL:22:SER:C	12:CL:24:VAL:H	2.01	0.64
1:AA:148:G:H2'	1:AA:149:A:H8	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1885:A:H8	35:BA:1885:A:H5'	1.62	0.64
1:AA:1275:A:H2'	1:AA:1276:G:H8	1.62	0.64
56:BY:45:VAL:HA	56:BY:62:GLU:HB2	1.79	0.64
47:BP:18:ARG:HH11	47:BP:18:ARG:HB3	1.63	0.64
15:CO:82:ILE:HD11	15:CO:87:ILE:O	1.97	0.64
48:DQ:63:LYS:HE2	57:DZ:118:GLN:HE22	1.62	0.64
15:AO:82:ILE:HD11	15:AO:87:ILE:O	1.98	0.64
1:AA:404:U:H2'	1:AA:405:U:H6	1.63	0.64
2:CB:114:ARG:O	2:CB:118:LEU:HG	1.98	0.64
49:BR:98:LEU:HB2	49:BR:113:LEU:HD21	1.79	0.64
35:BA:61:G:H1	35:BA:94:C:H42	1.44	0.64
4:CD:152:SER:HA	4:CD:155:LEU:HG	1.79	0.64
5:AE:50:GLU:HB3	5:AE:53:LEU:HD12	1.80	0.64
35:DA:1405:U:H2'	35:DA:1406:U:C6	2.33	0.64
7:AG:73:MET:HA	7:AG:91:VAL:HG23	1.80	0.64
35:DA:1607:C:H4'	35:DA:1608:A:O5'	1.98	0.64
2:AB:194:PRO:O	2:AB:196:LEU:N	2.31	0.64
28:B3:19:GLN:HE22	28:B3:52:HIS:HE1	1.45	0.64
46:BO:22:ILE:HD11	46:BO:42:SER:HB2	1.78	0.64
15:AO:4:THR:OG1	15:AO:7:GLU:HG3	1.97	0.64
1:AA:489:C:H6	1:AA:489:C:O5'	1.79	0.64
37:BC:195:ARG:HH11	37:BC:195:ARG:HG3	1.62	0.64
1:AA:521:G:O2'	1:AA:522:C:H5'	1.98	0.64
35:DA:203:C:H3'	35:DA:204:A:H5''	1.80	0.64
11:CK:74:ALA:C	11:CK:76:GLY:H	2.00	0.64
2:CB:132:LYS:HA	2:CB:135:GLN:HE21	1.63	0.64
23:AW:33:G:H2'	23:AW:34:C:C4'	2.28	0.63
23:AW:33:G:N2	23:AW:40:A:H62	1.97	0.63
23:AW:3:G:C6	23:AW:4:C:N4	2.66	0.63
22:AY:70:G:C4	22:AY:71:G:C8	2.86	0.63
23:CW:4:C:O2'	23:CW:5:C:OP2	2.15	0.63
30:B5:4:HIS:CB	30:B5:5:PRO:HD3	2.16	0.63
43:BI:93:THR:O	43:BI:97:ILE:N	2.30	0.63
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.62	0.63
2:AB:77:ALA:HA	2:AB:80:ILE:HD13	1.80	0.63
51:BT:28:VAL:HG22	51:BT:46:GLU:CA	2.28	0.63
35:BA:1771:C:H1'	35:BA:1786:A:C8	2.34	0.63
3:AC:19:GLU:HA	3:AC:54:ARG:HH12	1.63	0.63
5:CE:69:VAL:O	5:CE:71:LEU:HG	1.98	0.63
3:CC:134:ILE:HG23	3:CC:151:VAL:HB	1.80	0.63
1:CA:1504:G:O2'	1:CA:1505:G:OP2	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2807:G:C3'	35:DA:2808:U:H5''	2.28	0.63
2:AB:137:ARG:HD3	2:AB:138:LEU:HG	1.80	0.63
35:BA:276:A:H5'	35:BA:277:C:C6	2.31	0.63
1:AA:1005:A:H8	1:AA:1006:C:O4'	1.80	0.63
1:AA:105:G:H2'	1:AA:106:C:C6	2.34	0.63
35:BA:2464:C:O2'	35:BA:2465:C:H6	1.81	0.63
3:AC:82:GLU:O	3:AC:86:VAL:HG22	1.99	0.63
1:AA:189(D):C:H1'	1:AA:189(H):G:N2	2.12	0.63
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.32	0.63
34:B9:18:ARG:CD	35:BA:1034:G:H5'	2.27	0.63
45:BN:89:LYS:NZ	45:BN:89:LYS:HB3	2.13	0.63
36:DB:73:A:H61	57:DZ:29:TYR:HE2	1.45	0.63
40:DF:108:LYS:HD2	40:DF:112:MET:CE	2.27	0.63
39:DE:93:VAL:HG12	39:DE:175:VAL:HG23	1.78	0.63
1:CA:56:U:H2'	1:CA:57:G:H8	1.62	0.63
40:BF:7:TYR:HD2	40:BF:16:GLY:H	1.45	0.63
35:DA:654(S):G:H3'	35:DA:654(T):C:C5'	2.28	0.63
12:CL:91:LYS:O	12:CL:91:LYS:HG3	1.97	0.63
47:BP:13:ASN:HD22	47:BP:13:ASN:C	2.01	0.63
11:CK:67:ASP:OD1	11:CK:71:LYS:HE3	1.99	0.63
51:DT:107:ASP:CG	51:DT:108:ARG:H	2.02	0.63
1:CA:1418:A:H2	35:DA:1948:G:N3	1.95	0.63
22:AY:30:U:C2	22:AY:31:C:C5	2.86	0.63
22:AY:9:A:C5	22:AY:47:G:C6	2.87	0.63
23:CW:44:A:H2'	23:CW:45:U:H5''	1.80	0.63
22:AV:31:C:H2'	22:AV:32:G:C8	2.34	0.63
35:BA:2315:G:H2'	35:BA:2316:C:C6	2.34	0.63
22:CV:4:C:O2'	22:CV:5:C:C6	2.42	0.63
51:DT:27:THR:HG23	51:DT:28:VAL:N	2.13	0.63
51:DT:32:TYR:CD2	51:DT:81:PRO:HB2	2.34	0.63
23:AW:13:U:C6	23:AW:14:A:H5''	2.34	0.63
35:DA:1916:A:H5'	35:DA:1916:A:H8	1.63	0.63
13:AM:91:ARG:NH2	13:AM:100:GLY:HA2	2.12	0.63
9:AI:114:TYR:CD1	9:AI:114:TYR:N	2.64	0.63
57:DZ:117:LEU:HD12	57:DZ:174:VAL:HG22	1.80	0.63
47:BP:114:ILE:HD12	47:BP:115:LEU:N	2.13	0.63
52:DU:31:SER:HB3	52:DU:34:LYS:HB2	1.80	0.63
50:BS:67:ARG:HB3	50:BS:67:ARG:NH1	2.12	0.63
35:DA:2134:A:H1'	35:DA:2159:G:N2	2.13	0.63
3:AC:134:ILE:HG23	3:AC:151:VAL:HB	1.80	0.63
20:AT:23:ARG:HA	20:AT:26:ASN:HD21	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:404:U:H2'	1:CA:405:U:H6	1.61	0.63
49:DR:98:LEU:HB2	49:DR:113:LEU:HD21	1.79	0.63
1:CA:707:C:O2'	1:CA:708:C:H5'	1.98	0.63
1:AA:16:A:N1	1:AA:919:A:H2	1.96	0.63
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.13	0.63
50:DS:106:ARG:C	50:DS:106:ARG:HH11	2.00	0.63
31:B6:42:TRP:CE3	31:B6:42:TRP:HA	2.33	0.63
4:CD:157:LEU:HG	4:CD:161:ASN:ND2	2.13	0.63
46:BO:121:VAL:O	46:BO:122:LEU:HD23	1.98	0.63
9:CI:27:THR:HG23	9:CI:31:GLN:C	2.18	0.63
35:BA:2250:G:N2	48:BQ:84:GLY:HA3	2.12	0.63
35:DA:633:A:H2'	35:DA:634:C:H5'	1.78	0.63
11:AK:74:ALA:C	11:AK:76:GLY:H	2.01	0.63
35:BA:141:A:C8	35:BA:1408:C:O2'	2.51	0.63
35:BA:332:A:H4'	35:BA:333:G:OP1	1.98	0.63
22:AY:12:U:N3	22:AY:26:G:N1	2.46	0.63
22:AY:57:U:O5'	57:BZ:182:LYS:CB	2.42	0.63
33:B8:58:ILE:CG2	47:BP:49:ARG:HD2	2.27	0.63
35:BA:588:U:H2'	35:BA:589:C:C6	2.33	0.63
40:DF:24:LEU:CB	40:DF:25:PRO:HD2	2.22	0.63
12:AL:68:ALA:HB2	12:AL:85:ILE:HD11	1.78	0.63
10:CJ:35:SER:O	10:CJ:72:VAL:HG13	1.98	0.63
47:BP:107:LYS:C	47:BP:109:GLY:H	2.01	0.63
35:DA:1885:A:H5'	35:DA:1885:A:H8	1.64	0.63
46:BO:104:ARG:NE	51:BT:33:LYS:HD2	2.12	0.63
51:BT:27:THR:O	51:BT:28:VAL:HB	1.97	0.63
27:D2:46:GLN:HB3	35:DA:95:G:H4'	1.79	0.63
30:D5:51:TYR:CG	30:D5:52:TYR:N	2.66	0.63
7:CG:62:PHE:HD1	7:CG:124:LEU:HD21	1.62	0.63
35:BA:1541:G:H4'	35:BA:1542:A:C5'	2.28	0.63
54:DW:64:MET:O	54:DW:65:LEU:HB3	1.99	0.63
1:AA:376:G:H2'	1:AA:377:G:H8	1.63	0.63
1:CA:708:C:H2'	1:CA:709:G:H8	1.64	0.63
35:DA:1771:C:H1'	35:DA:1786:A:C8	2.33	0.63
31:D6:42:TRP:HA	31:D6:42:TRP:CE3	2.31	0.63
1:CA:198:G:H2'	1:CA:199:G:C8	2.34	0.63
1:CA:637:G:H2'	1:CA:638:G:H8	1.63	0.63
44:BJ:66:UNK:C	44:BJ:72:UNK:HA	2.29	0.63
35:BA:1719:G:O2'	35:BA:1720:U:H5'	1.97	0.63
45:DN:4:TYR:HB2	52:DU:64:ARG:HH12	1.61	0.63
1:AA:1112:C:O2	3:AC:179:ARG:HG2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BV:5:VAL:HG23	53:BV:37:VAL:HG23	1.81	0.63
3:CC:69:HIS:CD2	3:CC:69:HIS:N	2.67	0.63
1:AA:617:G:H4'	16:AP:44:THR:O	1.98	0.63
40:DF:7:TYR:HD2	40:DF:16:GLY:H	1.46	0.63
56:BY:7:VAL:HG21	56:BY:8:LYS:HZ2	1.62	0.63
1:AA:1054:C:O2'	1:AA:1055:A:H5'	1.98	0.63
12:AL:37:CYS:HA	12:AL:58:VAL:HG22	1.80	0.63
12:AL:40:VAL:HG21	12:AL:78:GLN:O	1.98	0.63
42:DH:17:VAL:O	42:DH:45:VAL:HG22	1.98	0.63
39:DE:91:VAL:HG13	39:DE:95:ILE:HG13	1.80	0.63
46:BO:2:ILE:HD11	46:BO:82:ASN:ND2	2.09	0.63
51:BT:63:VAL:O	51:BT:73:GLU:HA	1.98	0.63
31:B6:5:VAL:HG13	31:B6:7:ILE:H	1.63	0.63
18:AR:56:THR:CB	18:AR:58:LEU:HD13	2.29	0.63
35:BA:2134:A:H1'	35:BA:2159:G:N2	2.13	0.63
39:DE:87:GLU:OE1	39:DE:89:ASP:N	2.31	0.63
1:CA:56:U:H2'	1:CA:57:G:C8	2.33	0.63
35:DA:2273:A:H2'	35:DA:2274:A:C8	2.34	0.63
35:DA:1603:A:H5'	35:DA:1603:A:H8	1.64	0.63
7:AG:140:ASP:O	7:AG:144:MET:HG2	1.99	0.63
1:CA:218:C:H5'	1:CA:470:C:H42	1.62	0.63
1:CA:105:G:H2'	1:CA:106:C:C6	2.34	0.63
47:BP:29:LYS:HD2	47:BP:29:LYS:N	2.13	0.63
41:DG:148:MET:O	41:DG:148:MET:HG2	1.98	0.63
23:CW:43:G:H2'	23:CW:44:A:C8	2.33	0.63
22:AV:20:G:N2	22:AV:58:C:C2	2.66	0.63
30:D5:2:ALA:N	35:DA:2015:A:H1'	2.13	0.63
35:BA:1019:U:O2'	35:BA:1021:A:C2	2.49	0.63
52:DU:88:ILE:C	52:DU:90:VAL:H	1.99	0.63
46:DO:88:ASN:ND2	46:DO:90:GLN:HB2	2.08	0.63
18:AR:37:VAL:HG23	18:AR:38:GLU:N	2.09	0.63
49:BR:10:LEU:CB	49:BR:17:ARG:HD3	2.26	0.63
39:BE:101:ARG:HB2	39:BE:201:THR:HG21	1.80	0.63
29:B4:10:VAL:HG13	29:B4:11:PRO:HD2	1.81	0.63
4:CD:173:TRP:CD2	4:CD:189:PRO:HB3	2.33	0.63
39:DE:59:VAL:O	39:DE:60:ASN:CG	2.36	0.63
1:CA:1321:C:C3'	1:CA:1322:C:H5''	2.28	0.63
1:CA:1107:C:H3'	1:CA:1108:G:H5''	1.81	0.63
2:AB:114:ARG:O	2:AB:118:LEU:HG	1.98	0.63
1:AA:190:U:H2'	1:AA:191:G:H8	1.63	0.63
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1280:G:H2'	35:BA:1281:G:H5''	1.80	0.63
35:DA:2638:G:P	39:DE:82:ARG:HH21	2.21	0.63
1:AA:56:U:H2'	1:AA:57:G:C8	2.32	0.63
40:DF:192:LEU:CD2	40:DF:194:MET:HG3	2.28	0.63
35:BA:634:C:H2'	35:BA:635:C:C6	2.34	0.63
35:BA:142:A:H5''	35:BA:142(A):C:H5	1.62	0.63
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	1.99	0.63
5:CE:43:LEU:HD21	5:CE:132:ALA:HB1	1.79	0.63
1:AA:202:U:H3'	1:AA:203:U:C5	2.34	0.63
1:CA:862:C:O2'	1:CA:863:U:H5'	1.98	0.63
35:BA:2784:C:H1'	39:BE:37:ARG:HH12	1.64	0.63
1:CA:591:U:H2'	1:CA:592:G:C8	2.33	0.63
27:B2:53:LEU:O	27:B2:57:ILE:HG12	1.97	0.63
22:CV:49:G:H3'	22:CV:50:C:C5'	2.29	0.63
51:DT:80:SER:CB	51:DT:81:PRO:CD	2.77	0.63
56:DY:7:VAL:CG2	56:DY:8:LYS:NZ	2.61	0.63
43:BI:124:GLY:O	43:BI:142:VAL:HB	1.99	0.63
53:DV:47:VAL:HB	53:DV:49:THR:O	1.97	0.63
52:BU:92:ARG:NH1	53:BV:11:GLN:O	2.31	0.63
2:CB:44:LEU:H	2:CB:44:LEU:CD1	2.09	0.63
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.80	0.63
2:AB:44:LEU:CD1	2:AB:44:LEU:H	2.10	0.63
56:DY:45:VAL:HA	56:DY:62:GLU:HB2	1.80	0.63
2:AB:171:ALA:HA	2:AB:174:VAL:HG23	1.80	0.63
2:AB:178:ARG:HH21	8:AH:68:ARG:NH2	1.93	0.63
57:BZ:116:VAL:O	57:BZ:174:VAL:HA	1.99	0.63
9:AI:97:LYS:HA	9:AI:102:LEU:HD12	1.81	0.63
35:BA:622:G:O2'	35:BA:623:G:H5'	1.99	0.63
1:AA:1320:C:H42	19:AS:36:ARG:HG3	1.61	0.63
38:BD:24:ILE:CG1	38:BD:25:THR:N	2.61	0.63
35:BA:2807:G:C2'	35:BA:2808:U:H5''	2.28	0.63
47:DP:112:LEU:HD22	47:DP:113:LYS:H	1.63	0.63
36:DB:49:C:H2'	36:DB:50:G:H8	1.63	0.63
1:AA:165:C:H2'	1:AA:166:G:C8	2.32	0.63
38:DD:218:ARG:HH11	38:DD:218:ARG:HG3	1.64	0.63
35:DA:1614:A:N1	54:DW:91:GLY:HA2	2.13	0.63
34:D9:18:ARG:CD	35:DA:1034:G:H5'	2.29	0.63
3:AC:69:HIS:N	3:AC:69:HIS:CD2	2.67	0.63
22:AY:70:G:H2'	22:AY:71:G:O4'	1.98	0.63
4:AD:13:ARG:O	4:AD:16:GLY:N	2.32	0.63
4:AD:17:VAL:O	4:AD:19:LEU:HD12	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DT:88:ILE:HG22	51:DT:89:VAL:H	1.63	0.63
31:B6:23:THR:HG21	35:BA:2419:U:C5'	2.28	0.63
12:CL:46:LYS:HD3	12:CL:92:ASP:C	2.18	0.63
12:CL:43:VAL:HG13	12:CL:55:VAL:CG2	2.28	0.63
23:CW:20:G:P	23:CW:21:U:H5	2.21	0.63
51:BT:28:VAL:O	51:BT:29:ARG:HD3	1.99	0.63
5:CE:51:VAL:HB	5:CE:52:PRO:CD	2.25	0.63
16:AP:74:LEU:O	16:AP:79:VAL:HG23	1.98	0.63
35:DA:1803:A:H4'	38:DD:259:THR:CG2	2.28	0.63
9:AI:15:ALA:HB2	9:AI:65:VAL:HG23	1.81	0.63
38:BD:58:HIS:CD2	38:BD:59:LYS:N	2.67	0.63
50:DS:67:ARG:HB3	50:DS:67:ARG:NH1	2.12	0.63
1:CA:1395:C:H5''	1:CA:1402:C:H4'	1.81	0.63
3:AC:134:ILE:HD11	3:AC:153:VAL:CG2	2.27	0.63
1:AA:69:G:H2'	1:AA:70:G:C8	2.33	0.63
1:AA:1107:C:H3'	1:AA:1108:G:H5''	1.80	0.63
16:AP:59:TRP:O	16:AP:64:ALA:HB3	1.99	0.63
5:AE:72:GLN:C	5:AE:74:GLY:H	2.02	0.63
56:BY:95:LYS:HG2	56:BY:101:LYS:N	2.14	0.63
35:DA:2762:G:H2'	35:DA:2763:G:H5'	1.80	0.63
45:DN:96:GLU:N	45:DN:96:GLU:OE1	2.25	0.63
1:CA:630:G:H2'	1:CA:631:G:C5'	2.27	0.63
1:AA:762:C:H2'	1:AA:763:G:C8	2.34	0.63
46:DO:96:THR:O	46:DO:97:ARG:HG2	1.99	0.63
51:DT:102:ILE:O	51:DT:106:SER:HB3	1.98	0.63
2:CB:11:LEU:HD12	2:CB:217:ARG:NH2	2.13	0.63
35:BA:2777:G:H4'	35:BA:2778:A:H5'	1.81	0.63
24:AX:20:U:H2'	24:AX:21:A:C8	2.33	0.63
15:AO:29:VAL:HG11	15:AO:81:LEU:HD21	1.79	0.63
41:BG:27:ASN:C	41:BG:29:TRP:H	2.02	0.63
35:DA:2653:U:O2'	42:DH:110:SER:HB2	1.98	0.63
12:AL:91:LYS:HG3	12:AL:91:LYS:O	1.98	0.63
50:DS:74:ALA:HB1	50:DS:103:GLU:CB	2.29	0.63
10:CJ:90:LEU:N	10:CJ:91:PRO:CD	2.61	0.63
5:CE:50:GLU:HB3	5:CE:53:LEU:HD12	1.81	0.63
22:CV:20:G:H4'	22:CV:21:U:OP2	1.99	0.63
51:DT:29:ARG:HB3	51:DT:85:LYS:HA	1.81	0.63
33:B8:10:ALA:O	33:B8:14:VAL:HG12	1.99	0.63
43:DI:124:GLY:O	43:DI:142:VAL:HB	1.99	0.63
43:DI:93:THR:O	43:DI:97:ILE:N	2.31	0.63
43:BI:126:TYR:H	43:BI:140:LEU:CD2	2.08	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DN:57:ALA:N	45:DN:124:ALA:HA	2.11	0.63
17:CQ:9:VAL:HG11	17:CQ:84:LEU:CD1	2.29	0.63
47:DP:50:ARG:HG2	47:DP:50:ARG:HH11	1.64	0.63
51:BT:65:LYS:HE3	51:BT:66:VAL:H	1.64	0.63
38:DD:58:HIS:CD2	38:DD:59:LYS:N	2.67	0.63
48:DQ:130:LYS:HZ3	57:DZ:80:ARG:HD2	1.63	0.63
30:D5:53:ALA:HB3	30:D5:55:ARG:HH21	1.63	0.63
42:DH:149:ARG:CA	42:DH:162:ILE:HD11	2.28	0.63
5:AE:42:GLY:CA	5:AE:66:MET:HG2	2.28	0.63
9:CI:97:LYS:HA	9:CI:102:LEU:HD12	1.80	0.63
13:AM:23:TYR:CE2	13:AM:70:LEU:HD22	2.32	0.63
35:DA:1541:G:H4'	35:DA:1542:A:C5'	2.28	0.63
2:CB:18:GLY:O	2:CB:19:HIS:HB2	1.99	0.63
35:BA:1761:C:H3'	35:BA:1762:A:C8	2.34	0.63
35:BA:2808:U:O2'	35:BA:2809:A:H5'	1.99	0.63
18:CR:25:THR:O	18:CR:25:THR:HG22	1.99	0.63
35:BA:286:C:H2'	35:BA:287:C:C6	2.33	0.63
51:DT:57:PHE:O	51:DT:59:THR:N	2.31	0.63
1:AA:600:C:OP2	8:AH:97:VAL:HG12	1.99	0.63
1:CA:424:G:O2'	1:CA:425:G:H5'	1.97	0.63
35:DA:963:U:H2'	35:DA:964:C:H6	1.63	0.63
38:DD:45:ASN:ND2	38:DD:50:THR:HG21	2.14	0.63
35:DA:2377:A:H2'	35:DA:2378:A:C8	2.34	0.63
9:AI:46:ALA:HA	9:AI:78:LYS:HB2	1.81	0.63
1:CA:821:G:H2'	1:CA:822:C:H6	1.64	0.63
52:DU:12:ARG:HA	52:DU:15:LYS:HE2	1.80	0.63
1:AA:1452:C:H4'	1:AA:1456:G:H5''	1.81	0.63
23:AW:71:G:C2'	23:AW:72:C:H5'	2.28	0.63
22:AY:24:A:C2	22:AY:25:A:C8	2.86	0.63
43:BI:109:ILE:HG22	43:BI:110:ASP:N	2.10	0.63
43:BI:114:LEU:O	43:BI:131:LYS:HE3	1.99	0.63
8:CH:51:VAL:HG11	8:CH:60:ARG:CD	2.24	0.63
35:DA:1019:U:H3	35:DA:1142(A):A:N6	1.97	0.63
53:DV:45:THR:O	53:DV:46:VAL:HG12	1.98	0.63
2:AB:80:ILE:CD1	2:AB:80:ILE:H	1.99	0.63
2:AB:219:VAL:O	2:AB:223:ILE:HG13	1.99	0.63
41:DG:112:PRO:C	41:DG:113:ARG:HA	2.18	0.63
41:BG:152:LEU:HD23	41:BG:152:LEU:N	2.10	0.63
50:DS:54:LEU:HD22	50:DS:58:LEU:H	1.63	0.63
37:BC:44:VAL:HG13	37:BC:215:VAL:HG22	1.80	0.63
35:DA:61:G:H1	35:DA:94:C:H42	1.47	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1133:G:H22	1:AA:1143:G:H1'	1.64	0.63
41:DG:31:VAL:CG2	41:DG:32:PRO:HD2	2.28	0.63
1:CA:1502:A:H2	1:CA:1505:G:N2	1.96	0.63
35:DA:672:C:C2'	35:DA:673:C:C5'	2.76	0.63
35:DA:1318:C:C3'	35:DA:1319:G:H5''	2.28	0.63
46:BO:15:GLY:O	46:BO:47:ILE:HG22	1.99	0.63
51:BT:100:TYR:HD2	51:BT:103:ARG:NH2	1.96	0.63
35:DA:1786:A:H2	35:DA:2606:C:H1'	1.63	0.63
31:B6:42:TRP:HA	31:B6:42:TRP:HE3	1.64	0.63
46:DO:121:VAL:O	46:DO:122:LEU:HD23	1.99	0.63
35:DA:2777:G:H4'	35:DA:2778:A:H5'	1.80	0.63
35:DA:1719:G:O2'	35:DA:1720:U:H5'	1.99	0.63
35:BA:2749:A:H4'	42:BH:62:LYS:HB3	1.79	0.63
35:BA:2781:A:H5''	35:BA:2782:G:H5'	1.80	0.63
38:DD:186:HIS:HD2	38:DD:188:GLU:HB2	1.64	0.63
20:AT:12:ALA:O	20:AT:15:ARG:HB2	1.98	0.63
22:CY:6:C:N3	22:CY:69:G:O6	2.31	0.62
22:AY:58:C:OP2	57:BZ:182:LYS:HD3	1.99	0.62
41:BG:42:GLY:HA2	41:BG:89:GLY:HA2	1.79	0.62
46:DO:104:ARG:HE	51:DT:33:LYS:CE	2.12	0.62
56:DY:2:ARG:HD3	56:DY:3:VAL:HG23	1.80	0.62
23:CW:11:C:H2'	23:CW:12:U:N1	2.13	0.62
1:CA:521:G:O2'	1:CA:522:C:H5'	1.98	0.62
12:CL:39:VAL:HB	12:CL:57:LYS:HZ2	1.64	0.62
12:CL:93:LEU:O	12:CL:96:VAL:HB	1.99	0.62
12:AL:22:SER:O	12:AL:24:VAL:N	2.32	0.62
23:CW:58:C:H42	35:DA:2169:A:H1'	1.63	0.62
53:DV:18:LEU:CG	53:DV:19:LYS:H	2.07	0.62
52:BU:88:ILE:C	52:BU:90:VAL:H	2.00	0.62
41:DG:107:LEU:HD13	41:DG:177:GLY:O	1.98	0.62
3:CC:14:ILE:HG12	3:CC:15:THR:N	2.11	0.62
35:DA:1204:A:N1	35:DA:1241:A:H2	1.96	0.62
35:DA:2327:A:H2'	35:DA:2328:A:H8	1.60	0.62
38:BD:31:LYS:O	38:BD:33:LEU:N	2.32	0.62
38:BD:58:HIS:HD2	38:BD:59:LYS:N	1.95	0.62
3:CC:58:GLU:HB2	3:CC:65:ALA:CB	2.29	0.62
2:CB:210:SER:O	2:CB:214:ILE:HG12	1.99	0.62
54:BW:64:MET:O	54:BW:65:LEU:HB3	1.98	0.62
7:AG:20:ASP:HB3	7:AG:23:VAL:CG2	2.29	0.62
1:AA:1096:C:O2'	1:AA:1097:C:H5'	1.99	0.62
1:AA:942:G:H21	9:AI:124:GLN:NE2	1.97	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BO:114:ILE:HD12	46:BO:114:ILE:N	2.14	0.62
11:CK:34:ASP:HB2	11:CK:35:PRO:CD	2.29	0.62
6:CF:6:VAL:HG13	6:CF:90:VAL:HG22	1.81	0.62
41:BG:27:ASN:O	41:BG:29:TRP:N	2.32	0.62
17:AQ:63:ARG:HG2	17:AQ:64:PRO:HD2	1.81	0.62
11:CK:59:TYR:O	11:CK:62:GLN:HB3	1.99	0.62
35:BA:315:G:H2'	35:BA:316:C:C6	2.34	0.62
2:CB:213:LEU:O	2:CB:213:LEU:HD23	1.97	0.62
35:BA:963:U:H2'	35:BA:964:C:H6	1.63	0.62
35:DA:2477:C:H5'	35:DA:2477:C:H6	1.63	0.62
35:BA:1523:U:H2'	35:BA:1524:G:H8	1.64	0.62
35:BA:1431:U:O2'	35:BA:1432:C:H5'	1.99	0.62
22:CY:57:U:H2'	57:DZ:182:LYS:NZ	2.14	0.62
4:CD:13:ARG:O	4:CD:16:GLY:N	2.31	0.62
43:BI:130:TYR:HD1	43:BI:131:LYS:H	1.48	0.62
10:AJ:4:ILE:N	10:AJ:4:ILE:HD12	2.14	0.62
45:BN:57:ALA:N	45:BN:124:ALA:HA	2.10	0.62
10:CJ:8:LEU:HD13	10:CJ:20:ALA:HB2	1.80	0.62
42:BH:17:VAL:O	42:BH:45:VAL:HG22	1.99	0.62
2:CB:80:ILE:CD1	2:CB:208:ILE:HG23	2.25	0.62
39:BE:61:ARG:C	39:BE:63:LEU:H	2.03	0.62
5:AE:147:ASP:HA	5:AE:150:ARG:NH1	2.14	0.62
38:BD:32:SER:O	38:BD:36:PRO:HG3	1.99	0.62
57:BZ:145:GLU:OE1	57:BZ:146:ILE:HG12	1.98	0.62
7:CG:26:PHE:HB2	7:CG:62:PHE:HZ	1.64	0.62
1:CA:69:G:H2'	1:CA:70:G:H8	1.63	0.62
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.79	0.62
54:DW:6:ILE:HG12	54:DW:104:THR:OG1	1.99	0.62
35:DA:1281:G:C8	35:DA:1281:G:H5'	2.33	0.62
35:DA:2845:G:O2'	35:DA:2846:G:H5'	1.99	0.62
6:AF:26:ILE:O	6:AF:30:LEU:HG	1.99	0.62
1:AA:157:G:H2'	1:AA:158:G:H8	1.64	0.62
41:BG:16:ARG:HD3	41:BG:31:VAL:HG21	1.80	0.62
22:CV:77:C:H5'	22:CV:77:C:H6	1.63	0.62
1:CA:1432:G:OP2	51:DT:108:ARG:HD3	1.99	0.62
3:CC:82:GLU:O	3:CC:86:VAL:HG22	1.99	0.62
5:AE:141:GLN:HA	5:AE:143:ARG:NH2	2.14	0.62
35:DA:102:G:H4'	35:DA:102:G:OP1	1.99	0.62
13:AM:25:ILE:HD11	13:AM:60:VAL:HG11	1.80	0.62
25:B0:43:THR:HG22	35:BA:2331:G:O2'	1.99	0.62
1:AA:142:G:H2'	1:AA:143:A:C8	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:51:GLU:HA	20:CT:54:LYS:NZ	2.15	0.62
22:CY:63:C:C5'	57:DZ:186:GLU:CG	2.77	0.62
22:AY:57:U:H6	57:BZ:182:LYS:C	1.96	0.62
22:AY:9:A:C6	22:AY:47:G:C6	2.87	0.62
4:CD:17:VAL:O	4:CD:19:LEU:HD12	1.99	0.62
22:AV:4:C:N1	22:AV:5:C:C5	2.67	0.62
35:BA:613:G:H8	35:BA:613:G:C5'	2.12	0.62
23:CW:49:G:H8	23:CW:49:G:OP1	1.83	0.62
12:AL:86:ARG:NH2	12:AL:99:HIS:ND1	2.48	0.62
10:CJ:96:ILE:N	10:CJ:96:ILE:HD13	2.14	0.62
47:DP:107:LYS:C	47:DP:109:GLY:H	2.02	0.62
47:DP:114:ILE:HD12	47:DP:115:LEU:N	2.15	0.62
35:BA:1204:A:N1	35:BA:1241:A:H2	1.97	0.62
19:CS:24:ALA:O	19:CS:25:LYS:HB2	1.98	0.62
50:BS:54:LEU:CD2	50:BS:58:LEU:H	2.12	0.62
50:BS:34:HIS:CE1	50:BS:54:LEU:HB3	2.34	0.62
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.33	0.62
48:DQ:134:ARG:HA	48:DQ:137:TYR:CD2	2.34	0.62
9:AI:20:ARG:HG3	9:AI:20:ARG:HH11	1.64	0.62
1:CA:624:C:H2'	1:CA:625:G:H8	1.64	0.62
9:AI:95:LYS:HD3	9:AI:96:LEU:N	2.14	0.62
7:AG:62:PHE:HD1	7:AG:124:LEU:HD21	1.64	0.62
4:AD:117:ALA:O	4:AD:121:VAL:HG23	1.99	0.62
4:AD:102:ASP:HA	4:AD:121:VAL:HG21	1.81	0.62
42:BH:156:ALA:O	42:BH:157:TYR:C	2.38	0.62
45:DN:67:LEU:O	45:DN:68:GLU:HB2	1.99	0.62
23:AW:17:C:H5''	23:AW:18:U:C5	2.34	0.62
11:AK:124:LYS:HZ3	11:AK:125:PHE:HE1	1.47	0.62
8:CH:98:LYS:HG3	8:CH:99:GLU:HG3	1.81	0.62
11:CK:109:VAL:HG13	18:CR:85:LEU:O	1.98	0.62
35:BA:2223:G:C2'	35:BA:2224:G:H5'	2.29	0.62
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.35	0.62
35:BA:1286:A:O2'	35:BA:1288:U:OP2	2.12	0.62
1:CA:1030(D):A:H2'	1:CA:1031:G:H5'	1.81	0.62
43:DI:29:TYR:C	43:DI:32:PRO:HD2	2.20	0.62
35:BA:1405:U:H2'	35:BA:1406:U:C6	2.34	0.62
35:DA:2439:A:H5'	35:DA:2439:A:C8	2.34	0.62
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.00	0.62
43:BI:29:TYR:C	43:BI:32:PRO:HD2	2.20	0.62
22:CY:57:U:C5	57:DZ:183:LEU:N	2.67	0.62
23:AW:3:G:H1	23:AW:73:C:H42	1.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:49:G:H3'	22:AV:50:C:C5'	2.28	0.62
1:AA:180:U:C2'	1:AA:181:G:C5'	2.76	0.62
10:AJ:35:SER:O	10:AJ:72:VAL:HG13	2.00	0.62
10:CJ:4:ILE:N	10:CJ:4:ILE:HD12	2.15	0.62
52:DU:47:TYR:HA	52:DU:50:ARG:NH1	2.15	0.62
47:DP:50:ARG:NH1	47:DP:50:ARG:HG2	2.14	0.62
51:BT:88:ILE:HG22	51:BT:89:VAL:H	1.65	0.62
35:BA:1803:A:H4'	38:BD:259:THR:CG2	2.29	0.62
50:DS:95:HIS:CG	50:DS:96:GLY:H	2.17	0.62
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.81	0.62
41:BG:154:GLY:O	41:BG:155:MET:HB3	1.99	0.62
22:CV:30:U:O2'	22:CV:31:C:H5'	1.99	0.62
35:BA:991:C:C6	35:BA:991:C:H5'	2.30	0.62
1:CA:1133:G:H22	1:CA:1143:G:H1'	1.64	0.62
1:CA:190:U:H2'	1:CA:191:G:H8	1.64	0.62
4:CD:65:ARG:HD2	4:CD:72:GLU:HA	1.80	0.62
31:D6:42:TRP:HA	31:D6:42:TRP:HE3	1.62	0.62
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.13	0.62
35:BA:2777:G:H5''	35:BA:2778:A:C5'	2.30	0.62
45:BN:73:THR:HG21	45:BN:82:LEU:HD11	1.80	0.62
9:AI:2:GLU:O	9:AI:3:GLN:HG3	1.99	0.62
35:BA:271(E):U:H2'	35:BA:271(F):C:C6	2.35	0.62
27:B2:12:GLU:O	27:B2:15:LYS:HG2	1.98	0.62
35:DA:1270:C:H5''	35:DA:1271:G:O5'	1.99	0.62
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.34	0.62
26:D1:22:GLY:O	26:D1:32:LYS:HE3	1.98	0.62
9:CI:77:ILE:O	9:CI:81:ILE:HG12	2.00	0.62
1:CA:142:G:H2'	1:CA:143:A:C8	2.34	0.62
22:CY:27:C:H2'	22:CY:28:G:H8	1.63	0.62
22:CY:56:U:C5'	57:DZ:180:VAL:CG1	2.75	0.62
23:AW:40:A:H2	23:AW:42:C:OP2	1.82	0.62
22:AY:73:C:H2'	22:AY:74:C:O4'	2.00	0.62
46:DO:64:ARG:HG2	46:DO:79:PHE:CG	2.35	0.62
51:DT:28:VAL:HG22	51:DT:46:GLU:CA	2.29	0.62
35:BA:1899:G:N2	35:BA:1902:C:N4	2.26	0.62
33:B8:13:ARG:O	33:B8:14:VAL:HB	1.98	0.62
35:DA:2360:A:O2'	35:DA:2361:A:O4'	2.17	0.62
57:DZ:42:VAL:CG1	57:DZ:43:GLU:H	2.07	0.62
52:BU:79:PHE:CD1	52:BU:83:LEU:HD21	2.33	0.62
5:AE:148:VAL:HG21	8:AH:107:LEU:CD2	2.26	0.62
57:BZ:152:ALA:CA	57:BZ:167:PRO:HB2	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:102:LEU:HD12	2:CB:102:LEU:N	2.14	0.62
35:DA:330:A:O2'	35:DA:331:A:H8	1.82	0.62
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.14	0.62
39:DE:61:ARG:C	39:DE:63:LEU:H	2.01	0.62
2:AB:18:GLY:O	2:AB:19:HIS:HB2	1.99	0.62
1:CA:348:G:C2'	1:CA:349:A:H5'	2.29	0.62
22:CY:1:G:C2'	22:CY:2:G:H5'	2.30	0.62
4:CD:162:LEU:O	4:CD:162:LEU:HD23	1.99	0.62
38:BD:27:THR:HG23	38:BD:27:THR:O	1.99	0.62
35:DA:1015:G:O2'	35:DA:1016:G:H5'	2.00	0.62
47:BP:71:VAL:HG13	47:BP:72:PRO:HD3	1.80	0.62
16:CP:68:ASP:C	16:CP:70:ALA:H	2.01	0.62
57:BZ:42:VAL:HG13	57:BZ:43:GLU:H	1.64	0.62
34:D9:3:VAL:HG21	35:DA:2539:C:C5'	2.29	0.62
3:CC:162:GLN:HG2	24:CX:24:A:C4'	2.29	0.62
11:CK:124:LYS:HZ3	11:CK:125:PHE:HE1	1.44	0.62
35:DA:634:C:H2'	35:DA:635:C:C6	2.34	0.62
37:DC:216:THR:HB	37:DC:222:SER:HB3	1.81	0.62
6:CF:101:ALA:HA	18:CR:28:GLU:HG2	1.79	0.62
1:AA:502:G:OP1	12:AL:118:SER:HB3	2.00	0.62
35:DA:469:G:C2'	35:DA:470:A:H5''	2.30	0.62
35:BA:1221:C:H2'	35:BA:1221(A):C:H6	1.65	0.62
27:B2:68:ARG:CG	27:B2:68:ARG:HH11	2.12	0.62
5:CE:40:ARG:HH11	5:CE:40:ARG:HG2	1.64	0.62
22:AY:58:C:C2	22:AY:59:G:C8	2.87	0.62
22:AY:63:C:C2	57:BZ:186:GLU:OE1	2.52	0.62
48:DQ:132:VAL:HG11	57:DZ:81:ARG:NH2	2.02	0.62
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.14	0.62
10:AJ:8:LEU:HD13	10:AJ:20:ALA:HB2	1.82	0.62
47:BP:144:GLU:N	47:BP:145:PRO:CD	2.54	0.62
1:AA:473:G:H2'	1:AA:474:G:H8	1.63	0.62
35:DA:2312:U:H2'	35:DA:2313:C:H5''	1.81	0.62
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.81	0.62
50:DS:34:HIS:CE1	50:DS:54:LEU:HB3	2.35	0.62
32:B7:8:ASN:C	32:B7:8:ASN:ND2	2.51	0.62
47:DP:16:ARG:CD	47:DP:18:ARG:H	2.11	0.62
2:AB:210:SER:O	2:AB:214:ILE:HG12	2.00	0.62
2:CB:15:VAL:HG23	2:CB:16:HIS:CE1	2.34	0.62
1:AA:382:A:H2'	1:AA:383:A:H8	1.65	0.62
25:D0:27:GLU:N	25:D0:27:GLU:OE1	2.30	0.62
7:AG:26:PHE:HB2	7:AG:62:PHE:HZ	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:138:VAL:HG22	3:AC:151:VAL:HG23	1.80	0.62
3:CC:182:ILE:HG23	3:CC:202:ILE:O	1.99	0.62
4:AD:162:LEU:HD23	4:AD:162:LEU:O	1.99	0.62
1:AA:434:U:H2'	1:AA:435:C:H6	1.65	0.62
35:DA:1434:A:H61	35:DA:1558:A:N6	1.97	0.62
38:BD:181:GLU:HA	38:BD:272:ALA:CB	2.29	0.62
46:BO:114:ILE:HD12	46:BO:114:ILE:H	1.65	0.62
51:DT:100:TYR:HD2	51:DT:103:ARG:NH2	1.98	0.62
1:CA:1005:A:H8	1:CA:1006:C:O4'	1.80	0.62
35:DA:2464:C:O2'	35:DA:2465:C:H6	1.82	0.62
1:CA:908:A:H2'	1:CA:909:A:C8	2.34	0.62
35:DA:2223:G:H2'	35:DA:2224:G:H5'	1.82	0.62
35:DA:2869:G:H2'	35:DA:2870:C:C6	2.35	0.62
35:DA:1523:U:H2'	35:DA:1524:G:H8	1.64	0.62
48:DQ:36:ALA:HB2	48:DQ:103:MET:SD	2.40	0.62
1:CA:189(I):G:H2'	1:CA:189(J):G:H8	1.64	0.62
39:BE:107:THR:HA	39:BE:163:GLU:O	1.99	0.62
35:BA:570:G:H2'	35:BA:2030:A:C5	2.35	0.62
35:BA:1578:U:H2'	35:BA:1579:A:H5'	1.81	0.62
1:CA:489:C:O5'	1:CA:489:C:H6	1.81	0.62
44:DJ:67:UNK:HA	44:DJ:71:UNK:O	1.99	0.62
22:CY:56:U:C2'	57:DZ:182:LYS:O	2.47	0.62
23:AW:30:U:C4	23:AW:31:C:N4	2.68	0.62
23:CW:33:G:H2'	23:CW:34:C:C4'	2.29	0.62
35:BA:2312:U:H2'	35:BA:2313:C:H5''	1.80	0.62
22:CV:5:C:N3	22:CV:71:G:C6	2.67	0.62
12:AL:90:VAL:O	12:AL:92:ASP:N	2.32	0.62
1:AA:1152:A:C5'	10:AJ:70:ARG:HH22	2.04	0.62
10:AJ:31:GLY:HA3	10:AJ:78:ASN:HD22	1.65	0.62
45:BN:57:ALA:O	45:BN:58:ASP:O	2.17	0.62
42:DH:44:VAL:O	42:DH:46:GLU:N	2.31	0.62
52:BU:95:LEU:C	52:BU:97:ASP:H	2.02	0.62
16:CP:74:LEU:O	16:CP:79:VAL:HG23	1.99	0.62
1:AA:19:C:H5''	5:AE:86:ALA:HB2	1.79	0.62
9:AI:17:VAL:HG22	9:AI:63:ILE:HD13	1.81	0.62
9:CI:20:ARG:HH11	9:CI:20:ARG:HG3	1.64	0.62
2:CB:91:PRO:CG	2:CB:155:LEU:HD23	2.26	0.62
25:B0:25:ARG:HA	25:B0:29:GLN:HE22	1.64	0.62
35:BA:1658:C:OP1	39:BE:132:HIS:CE1	2.53	0.62
21:CU:23:PRO:C	21:CU:25:LYS:H	2.03	0.62
2:AB:189:ASP:C	2:AB:191:ASP:H	2.03	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DI:127:VAL:HG22	43:DI:139:GLN:HB3	1.81	0.62
1:AA:539:A:H2'	1:AA:540:G:C8	2.34	0.62
1:CA:542:G:H2'	1:CA:543:C:H6	1.65	0.62
2:CB:166:ASP:CB	2:CB:169:LYS:HB2	2.29	0.62
14:AN:4:LYS:O	14:AN:7:ILE:HG12	1.99	0.62
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.30	0.62
39:BE:44:TYR:O	39:BE:45:THR:HB	2.00	0.62
57:BZ:81:ARG:HH11	57:BZ:81:ARG:CB	2.13	0.62
7:CG:50:ILE:O	7:CG:54:THR:HG22	2.00	0.62
57:BZ:72:ARG:HH11	57:BZ:72:ARG:HG3	1.63	0.62
8:AH:91:ARG:HH12	17:AQ:33:GLY:HA3	1.64	0.62
1:CA:762:C:H2'	1:CA:763:G:C8	2.35	0.62
35:DA:774:A:H2	35:DA:787:U:HO2'	1.45	0.62
35:BA:1614:A:N1	54:BW:91:GLY:HA2	2.15	0.62
35:DA:108:U:H2'	35:DA:109:G:C8	2.35	0.62
35:BA:2732:G:O2'	35:BA:2733:A:H5'	1.99	0.62
22:CY:73:C:H2'	22:CY:74:C:O4'	1.99	0.62
7:AG:151:TYR:OH	11:AK:54:ARG:HD3	2.00	0.62
23:CW:71:G:C6	23:CW:72:C:C5	2.87	0.62
23:CW:33:G:N2	23:CW:40:A:H62	1.97	0.62
4:CD:18:LYS:HB2	4:CD:33:MET:HG2	1.80	0.62
4:AD:33:MET:O	4:AD:37:PRO:HG3	1.99	0.62
43:DI:120:ILE:HG22	43:DI:121:LYS:N	2.15	0.62
12:AL:23:LYS:O	12:AL:24:VAL:HG23	2.00	0.62
35:DA:1493:C:O2	35:DA:1493:C:H2'	1.99	0.62
29:D4:10:VAL:HG13	29:D4:11:PRO:HD2	1.81	0.62
31:D6:23:THR:HG21	35:DA:2419:U:C5'	2.28	0.62
40:BF:32:LEU:C	40:BF:32:LEU:HD23	2.20	0.62
50:BS:54:LEU:HD22	50:BS:58:LEU:H	1.65	0.62
30:B5:53:ALA:HB3	30:B5:55:ARG:HH21	1.61	0.62
35:BA:1541:G:H5''	35:BA:1542:A:O5'	2.00	0.62
35:DA:2632:A:O2'	39:DE:61:ARG:NH2	2.32	0.62
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.34	0.62
42:DH:9:ILE:HD11	42:DH:76:VAL:HG21	1.82	0.62
9:CI:79:LEU:O	9:CI:79:LEU:HD13	1.99	0.62
28:D3:52:HIS:CG	36:DB:83:G:H4'	2.35	0.62
34:B9:3:VAL:HG21	35:BA:2539:C:C5'	2.30	0.62
15:AO:61:GLY:O	15:AO:65:ARG:HD3	1.98	0.62
40:BF:7:TYR:HB3	40:BF:16:GLY:N	2.15	0.62
35:BA:1221:C:H5'	35:BA:1221:C:H6	1.65	0.62
57:DZ:156:LYS:O	57:DZ:158:PRO:HD3	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1818:U:H2'	38:DD:157:ARG:HG3	1.82	0.62
35:BA:2155:G:H2'	35:BA:2156:G:O4'	2.00	0.62
40:BF:164:ARG:HH11	40:BF:164:ARG:HG2	1.64	0.62
1:CA:1023:G:H2'	1:CA:1023:G:N3	2.15	0.62
35:DA:1856:G:H2'	35:DA:1857:G:H5'	1.81	0.62
22:CY:11:C:N4	22:CY:47:G:N2	2.48	0.62
57:BZ:183:LEU:CD1	57:BZ:184:ALA:H	2.10	0.62
22:AV:23:A:N3	22:AV:23:A:H2'	2.14	0.62
53:BV:45:THR:O	53:BV:46:VAL:HG12	2.00	0.62
41:DG:64:THR:HG23	41:DG:66:GLN:H	1.65	0.62
10:AJ:50:ILE:HA	10:AJ:60:ARG:CB	2.30	0.62
28:B3:8:LEU:HA	28:B3:54:VAL:HG22	1.82	0.62
22:CV:43:G:C6	22:CV:44:A:C5	2.88	0.62
50:BS:54:LEU:HD22	50:BS:57:LYS:HA	1.81	0.62
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.17	0.62
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.63	0.62
26:D1:45:ASN:HD21	26:D1:47:GLN:NE2	1.96	0.62
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.18	0.62
53:DV:25:LEU:H	53:DV:92:THR:HG21	1.65	0.62
16:CP:59:TRP:O	16:CP:64:ALA:HB3	2.00	0.62
1:AA:1104:G:O2'	1:AA:1105:A:H5'	1.98	0.62
22:AY:76:C:OP1	25:B0:3:HIS:ND1	2.33	0.62
47:BP:112:LEU:HD22	47:BP:113:LYS:H	1.64	0.62
33:B8:37:SER:C	33:B8:39:LYS:N	2.50	0.62
6:AF:60:PHE:O	6:AF:61:LEU:HD12	2.00	0.62
46:BO:13:ASN:ND2	46:BO:97:ARG:HB2	2.14	0.62
1:AA:1005:A:H2'	1:AA:1006:C:H5'	1.82	0.62
14:CN:4:LYS:O	14:CN:7:ILE:HG12	2.00	0.62
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.00	0.62
44:BJ:22:UNK:CB	44:BJ:119:UNK:HA	2.30	0.62
26:D1:80:LEU:HB3	26:D1:82:LEU:CD1	2.29	0.62
35:BA:142:A:H5'	35:BA:142(A):C:OP2	2.00	0.62
40:BF:192:LEU:CD2	40:BF:194:MET:HG3	2.30	0.62
35:DA:1856:G:C2'	35:DA:1857:G:H5'	2.29	0.62
35:DA:27:G:N2	35:DA:512:G:O2'	2.33	0.62
35:DA:2292:C:O2'	35:DA:2293:C:H5'	1.99	0.62
1:AA:511:C:H1'	4:AD:43:HIS:HE2	1.65	0.62
37:DC:16:ASP:HB3	37:DC:19:LYS:HB3	1.80	0.62
4:CD:196:LEU:HD12	4:CD:196:LEU:H	1.65	0.62
55:BX:66:LEU:HD23	55:BX:66:LEU:O	2.00	0.62
13:CM:106:ASN:O	13:CM:107:ALA:HB2	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:218:ARG:HG3	38:BD:218:ARG:HH11	1.65	0.62
23:AW:4:C:O2'	23:AW:5:C:OP2	2.17	0.62
35:BA:2360:A:O2'	35:BA:2361:A:O4'	2.18	0.62
33:D8:14:VAL:CG2	33:D8:22:VAL:HG13	2.30	0.62
43:DI:123:LEU:HD11	43:DI:144:VAL:HG22	1.82	0.62
12:CL:40:VAL:CG2	12:CL:78:GLN:O	2.48	0.62
52:DU:95:LEU:C	52:DU:97:ASP:H	2.02	0.62
3:CC:71:ALA:HB2	3:CC:106:VAL:HB	1.82	0.62
33:D8:51:ALA:C	33:D8:53:PRO:HD2	2.20	0.62
35:DA:915:C:O2'	35:DA:916:G:H5'	2.00	0.62
10:CJ:50:ILE:HA	10:CJ:60:ARG:CB	2.29	0.62
35:DA:1348:G:H2'	35:DA:1349:A:C5'	2.26	0.62
10:AJ:50:ILE:HA	10:AJ:60:ARG:HB3	1.82	0.62
35:BA:1312:U:OP2	55:BX:63:LYS:HD2	2.00	0.62
35:DA:1697:G:H3'	35:DA:1698:A:C5'	2.27	0.62
39:DE:101:ARG:HB3	39:DE:169:ASN:HD22	1.65	0.62
15:CO:82:ILE:O	15:CO:82:ILE:HD13	2.00	0.62
21:AU:23:PRO:C	21:AU:25:LYS:H	2.04	0.62
35:BA:1038:C:C2'	35:BA:1039:G:H5''	2.29	0.62
35:BA:672:C:C2'	35:BA:673:C:C5'	2.78	0.62
48:BQ:130:LYS:NZ	57:BZ:80:ARG:NH1	2.48	0.62
16:AP:43:LYS:C	16:AP:45:THR:H	2.04	0.62
50:BS:106:ARG:O	50:BS:106:ARG:HD2	1.99	0.62
35:DA:2537:U:H2'	35:DA:2538:C:C6	2.35	0.62
13:AM:15:VAL:HG23	13:AM:16:ASP:N	2.14	0.62
11:CK:32:ILE:O	11:CK:40:ILE:HG12	1.99	0.62
1:CA:422:C:H1'	1:CA:423:G:H22	1.65	0.62
35:BA:2464:C:HO2'	35:BA:2465:C:H6	1.45	0.62
31:B6:52:VAL:HG22	31:B6:53:LYS:H	1.65	0.62
1:CA:243:A:H4'	1:CA:244:U:O5'	2.00	0.62
1:CA:73:G:H22	1:CA:96:U:H3	1.47	0.62
43:DI:8:PRO:HA	43:DI:14:ASP:H	1.64	0.62
35:DA:535:C:O2'	35:DA:536:A:H5'	2.00	0.62
35:BA:203:C:H3'	35:BA:204:A:H5''	1.80	0.62
35:BA:1856:G:C2'	35:BA:1857:G:H5'	2.29	0.62
35:DA:2584:U:C2'	35:DA:2585:U:H5'	2.30	0.62
16:CP:72:ARG:HH21	16:CP:73:LEU:HD21	1.63	0.62
42:DH:106:THR:HG22	42:DH:112:PRO:HB3	1.82	0.62
11:CK:56:GLY:O	11:CK:89:ALA:HB3	1.99	0.62
50:BS:83:LYS:HE3	50:BS:105:ALA:HB3	1.82	0.62
35:BA:2343:C:HO2'	35:BA:2373:G:HO2'	1.46	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:58:C:C4	41:BG:84:LYS:HE2	2.35	0.61
22:CV:3:G:H1	22:CV:72:C:H42	1.47	0.61
22:CV:47:G:O2'	22:CV:48:G:H5'	1.99	0.61
22:CV:4:C:C2	22:CV:5:C:C5	2.88	0.61
33:B8:13:ARG:HD2	47:BP:61:ARG:HD3	1.82	0.61
56:DY:27:VAL:HG12	56:DY:29:GLU:OE1	1.99	0.61
23:AW:20:G:P	23:AW:21:U:C5	2.92	0.61
35:BA:1486:A:H61	35:BA:1504:C:H42	1.47	0.61
43:DI:130:TYR:HD1	43:DI:131:LYS:H	1.47	0.61
1:AA:908:A:H2'	1:AA:909:A:H8	1.65	0.61
10:CJ:81:THR:C	10:CJ:83:GLU:H	2.02	0.61
3:CC:107:GLN:NE2	3:CC:107:GLN:H	1.97	0.61
35:BA:1493:C:O2	35:BA:1493:C:H2'	2.00	0.61
13:AM:3:ARG:HD3	29:B4:34:GLU:OE1	2.00	0.61
41:BG:112:PRO:C	41:BG:113:ARG:HG2	2.20	0.61
40:BF:133:ASN:HD22	40:BF:133:ASN:H	1.48	0.61
41:DG:45:GLU:C	41:DG:88:ILE:HG13	2.20	0.61
50:DS:54:LEU:CD2	50:DS:58:LEU:H	2.13	0.61
1:CA:1134:G:N2	1:CA:1141:C:H1'	2.14	0.61
5:AE:98:THR:HB	5:AE:117:ASP:HB3	1.81	0.61
42:BH:149:ARG:CA	42:BH:162:ILE:HD11	2.30	0.61
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.00	0.61
7:AG:79:ARG:HG3	7:AG:83:ALA:O	2.00	0.61
55:DX:12:VAL:CG2	55:DX:17:ALA:HB1	2.28	0.61
20:CT:23:ARG:HA	20:CT:26:ASN:HD21	1.65	0.61
24:CX:20:U:H2'	24:CX:21:A:C8	2.35	0.61
37:DC:34:ALA:HB1	37:DC:40:GLU:CB	2.29	0.61
1:AA:1502:A:H2	1:AA:1505:G:H1	1.48	0.61
57:BZ:85:HIS:ND1	57:BZ:86:VAL:N	2.48	0.61
35:DA:1771:C:HO2'	35:DA:1786:A:H8	1.48	0.61
35:DA:2747:G:O6	35:DA:2755:C:H5''	2.00	0.61
1:AA:358:U:H2'	1:AA:359:U:H6	1.64	0.61
1:AA:308:C:H2'	1:AA:309:G:H8	1.65	0.61
1:CA:1169:A:H2'	1:CA:1170:A:H8	1.65	0.61
52:DU:106:PHE:O	52:DU:110:VAL:HG23	2.00	0.61
40:BF:46:ARG:HH11	40:BF:46:ARG:HG3	1.65	0.61
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.35	0.61
7:CG:73:MET:HA	7:CG:91:VAL:HG23	1.82	0.61
35:DA:2114:A:H2'	35:DA:2115:G:O4'	2.00	0.61
2:AB:11:LEU:HD12	2:AB:217:ARG:NH2	2.15	0.61
1:CA:511:C:H1'	4:CD:43:HIS:HE2	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1131:G:HO2'	35:BA:1132:A:H8	1.47	0.61
35:BA:706:A:C2	35:BA:707:G:H1'	2.35	0.61
45:DN:30:ILE:HG22	45:DN:34:LEU:CD2	2.30	0.61
23:AW:71:G:N1	23:AW:72:C:C5	2.67	0.61
4:CD:8:VAL:O	4:CD:10:ARG:N	2.33	0.61
46:DO:104:ARG:NE	51:DT:33:LYS:HD2	2.15	0.61
51:DT:23:ARG:HG2	51:DT:120:ARG:NH1	2.14	0.61
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.14	0.61
10:CJ:31:GLY:HA3	10:CJ:78:ASN:HD22	1.65	0.61
35:DA:2361:A:H2'	35:DA:2362:G:H5'	1.82	0.61
51:BT:25:GLY:O	51:BT:26:ASP:HB2	1.99	0.61
35:BA:914:C:C2'	35:BA:915:C:H5'	2.28	0.61
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.82	0.61
19:CS:40:ILE:HD13	19:CS:62:ILE:HD13	1.81	0.61
2:AB:51:LEU:HD23	2:AB:201:ILE:HD12	1.82	0.61
29:B4:7:PRO:HG2	41:BG:62:LEU:HD12	1.82	0.61
9:CI:17:VAL:HG22	9:CI:63:ILE:HD13	1.81	0.61
35:DA:882:G:H2'	35:DA:883:G:H8	1.66	0.61
25:D0:25:ARG:HA	25:D0:29:GLN:HE22	1.64	0.61
35:BA:1049:C:H2'	35:BA:1050:A:H8	1.64	0.61
1:AA:708:C:H2'	1:AA:709:G:H8	1.65	0.61
45:BN:48:MET:H	45:BN:48:MET:HE3	1.64	0.61
4:AD:79:PHE:HD1	4:AD:79:PHE:C	2.03	0.61
35:BA:2638:G:P	39:BE:82:ARG:HH21	2.22	0.61
48:BQ:109:VAL:HG12	48:BQ:113:GLN:OE1	2.00	0.61
6:CF:60:PHE:O	6:CF:61:LEU:HD12	1.98	0.61
27:B2:64:LEU:HD22	27:B2:64:LEU:O	1.99	0.61
35:BA:2830:G:N3	35:BA:2883:A:H2	1.97	0.61
1:CA:1425:U:O2'	1:CA:1426:C:H5'	2.01	0.61
35:BA:2107:C:H5'	37:BC:3:LYS:HE3	1.82	0.61
48:BQ:24:GLY:O	48:BQ:102:VAL:HG23	2.00	0.61
4:AD:49:ARG:HE	4:AD:49:ARG:HA	1.65	0.61
31:D6:52:VAL:HG22	31:D6:53:LYS:N	2.14	0.61
44:BJ:60:UNK:C	44:BJ:62:UNK:H	2.13	0.61
52:BU:47:TYR:HA	52:BU:50:ARG:NH1	2.16	0.61
15:CO:11:VAL:HG21	15:CO:34:LEU:HD22	1.80	0.61
23:CW:29:A:O2'	23:CW:30:U:H5'	2.00	0.61
23:CW:40:A:H2	23:CW:42:C:OP2	1.83	0.61
51:DT:27:THR:OG1	51:DT:28:VAL:N	2.32	0.61
23:AW:47:G:C2'	23:AW:48:G:H5'	2.29	0.61
47:BP:50:ARG:HH11	47:BP:50:ARG:HG2	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:51:ARG:HD3	41:BG:53:LEU:CD2	2.29	0.61
47:DP:144:GLU:N	47:DP:145:PRO:HD3	2.06	0.61
56:BY:31:LEU:HD23	56:BY:36:ALA:O	2.01	0.61
49:BR:7:GLY:O	49:BR:8:ARG:CG	2.48	0.61
1:AA:255:G:H1'	17:AQ:16:GLN:NE2	2.15	0.61
37:BC:26:ALA:O	37:BC:30:VAL:HG23	2.00	0.61
27:D2:47:ASN:ND2	35:DA:94(A):G:H21	1.96	0.61
39:BE:87:GLU:OE1	39:BE:89:ASP:N	2.32	0.61
4:AD:122:ARG:NH1	4:AD:135:LEU:HD12	2.16	0.61
51:BT:38:ASN:ND2	51:BT:40:THR:OG1	2.33	0.61
42:BH:155:SER:O	42:BH:157:TYR:N	2.34	0.61
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.36	0.61
54:DW:4:LYS:HG2	54:DW:5:ALA:N	2.16	0.61
1:AA:707:C:O2'	1:AA:708:C:H5'	2.00	0.61
33:B8:29:LYS:HD3	33:B8:44:LYS:HG2	1.82	0.61
49:BR:103:ARG:NH1	49:BR:110:PRO:HB3	2.16	0.61
4:CD:79:PHE:HD1	4:CD:79:PHE:C	2.04	0.61
5:AE:73:ASN:ND2	5:AE:73:ASN:N	2.43	0.61
38:DD:142:VAL:HG23	38:DD:192:THR:O	1.99	0.61
50:DS:28:VAL:O	50:DS:89:ARG:HD2	1.99	0.61
1:AA:1370:G:C5'	9:AI:12:GLU:HG3	2.31	0.61
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.29	0.61
1:CA:243:A:O2'	1:CA:244:U:OP2	2.19	0.61
46:DO:14:THR:O	46:DO:52:VAL:HG23	2.00	0.61
35:DA:2839:G:H5'	49:DR:46:GLY:HA2	1.82	0.61
35:BA:845:G:H8	35:BA:845:G:OP2	1.82	0.61
11:AK:67:ASP:OD1	11:AK:71:LYS:HE3	2.00	0.61
1:CA:1388:C:H2'	1:CA:1389:C:C6	2.34	0.61
13:CM:25:ILE:HD11	13:CM:60:VAL:HG11	1.81	0.61
54:BW:95:ILE:O	54:BW:95:ILE:HG13	2.01	0.61
43:BI:8:PRO:HA	43:BI:14:ASP:H	1.65	0.61
35:BA:2468:G:H22	35:BA:2481:G:H2'	1.66	0.61
23:AW:70:G:C5	23:AW:71:G:C6	2.88	0.61
22:AY:57:U:C5	22:AY:59:G:OP2	2.53	0.61
23:CW:3:G:C6	23:CW:4:C:C4	2.89	0.61
4:CD:33:MET:O	4:CD:37:PRO:HG3	2.01	0.61
22:AV:19:G:H21	22:AV:59:G:H2'	1.65	0.61
46:DO:79:PHE:HB3	51:DT:70:VAL:HG11	1.82	0.61
56:DY:39:VAL:HG12	56:DY:40:GLU:H	1.64	0.61
12:AL:38:THR:CG2	12:AL:39:VAL:H	2.14	0.61
42:DH:41:MET:CG	42:DH:42:ARG:N	2.57	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:135:GLU:O	57:DZ:137:ILE:HG12	2.00	0.61
36:DB:45:A:H1'	41:DG:95:ARG:NH2	2.16	0.61
56:BY:27:VAL:CA	56:BY:28:LYS:HZ1	2.09	0.61
31:D6:5:VAL:HG12	31:D6:8:LYS:HB2	1.82	0.61
2:AB:164:VAL:O	2:AB:186:ALA:HB1	2.01	0.61
9:AI:17:VAL:HG13	9:AI:63:ILE:HD11	1.83	0.61
35:DA:1049:C:H2'	35:DA:1050:A:H8	1.66	0.61
7:CG:79:ARG:HG3	7:CG:83:ALA:O	1.99	0.61
2:CB:121:LEU:HA	2:CB:124:SER:CB	2.29	0.61
2:CB:164:VAL:O	2:CB:186:ALA:HB1	2.00	0.61
2:CB:166:ASP:CG	2:CB:169:LYS:HB2	2.20	0.61
45:BN:4:TYR:HB2	52:BU:64:ARG:HH12	1.64	0.61
1:CA:1370:G:C5'	9:CI:12:GLU:HG3	2.30	0.61
35:DA:142:A:H8	35:DA:1595:G:H21	1.48	0.61
9:AI:27:THR:HG23	9:AI:31:GLN:O	2.00	0.61
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.15	0.61
47:BP:108:LYS:HD2	47:BP:108:LYS:N	2.16	0.61
35:DA:654(S):G:H3'	35:DA:654(T):C:H5''	1.83	0.61
40:DF:7:TYR:HB3	40:DF:16:GLY:N	2.16	0.61
1:AA:530:G:O6	24:AX:21:A:H1'	1.99	0.61
1:AA:1452:C:H4'	1:AA:1456:G:C5'	2.30	0.61
35:DA:2853:C:H2'	35:DA:2854:G:H8	1.65	0.61
42:DH:117:PRO:HB3	42:DH:123:PHE:CZ	2.35	0.61
43:DI:104:GLN:HG2	43:DI:105:HIS:CD2	2.34	0.61
29:B4:43:TYR:HD2	29:B4:44:THR:HG23	1.65	0.61
22:AY:63:C:C1'	57:BZ:186:GLU:HG2	2.25	0.61
22:CV:12:U:H5''	22:CV:13:U:OP2	2.00	0.61
23:AW:11:C:N3	23:AW:27:C:O2	2.33	0.61
56:DY:31:LEU:HD23	56:DY:36:ALA:O	1.99	0.61
43:DI:114:LEU:O	43:DI:131:LYS:HE3	2.00	0.61
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.83	0.61
57:DZ:81:ARG:NH1	57:DZ:81:ARG:HB3	2.15	0.61
53:BV:25:LEU:H	53:BV:92:THR:HG21	1.65	0.61
29:D4:14:ILE:HG23	29:D4:31:ILE:CG2	2.31	0.61
41:DG:104:GLU:C	41:DG:106:LEU:H	2.04	0.61
22:CV:36:AG9:H1A	22:CV:37:A:O4'	2.00	0.61
57:BZ:108:PRO:HB3	57:BZ:144:LEU:HB2	1.82	0.61
3:CC:23:TYR:HA	10:CJ:11:PHE:CD2	2.36	0.61
3:CC:36:ASP:OD1	3:CC:57:ILE:HD12	2.00	0.61
5:CE:42:GLY:HA2	5:CE:65:ASN:O	2.00	0.61
35:BA:1038:C:H2'	35:BA:1039:G:H5''	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:35:LYS:O	51:BT:36:GLU:HB3	1.98	0.61
55:DX:27:THR:HB	55:DX:80:ILE:HG22	1.82	0.61
35:BA:607:U:H3	35:BA:621:A:H2	1.46	0.61
35:DA:2472:G:C5'	35:DA:2473:U:H5''	2.30	0.61
9:CI:105:ASP:HB3	9:CI:107:ARG:HD3	1.82	0.61
1:AA:1346:A:H5''	9:AI:120:ARG:HH12	1.64	0.61
1:AA:637:G:H2'	1:AA:638:G:H8	1.65	0.61
49:DR:103:ARG:NH1	49:DR:110:PRO:HB3	2.15	0.61
1:CA:1346:A:H5''	9:CI:120:ARG:HH12	1.65	0.61
8:CH:29:SER:HB3	8:CH:32:LYS:HG3	1.83	0.61
37:DC:39:ASP:HB3	37:DC:178:LYS:HE3	1.81	0.61
12:AL:8:ASN:ND2	17:AQ:34:LYS:HE2	2.16	0.61
41:DG:145:THR:OG1	41:DG:146:TYR:N	2.33	0.61
1:CA:1427:U:H2'	1:CA:1428:A:C8	2.35	0.61
1:CA:151:A:C2'	1:CA:152:A:H5'	2.31	0.61
1:AA:73:G:H22	1:AA:96:U:H3	1.49	0.61
22:AV:77:C:H5'	22:AV:77:C:H6	1.66	0.61
1:AA:1030(D):A:H2'	1:AA:1031:G:H5'	1.81	0.61
4:AD:196:LEU:HD12	4:AD:196:LEU:H	1.65	0.61
15:AO:11:VAL:HG21	15:AO:34:LEU:HD22	1.83	0.61
35:BA:2179:C:H4'	35:BA:2179:C:OP2	1.99	0.61
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.35	0.61
7:CG:13:GLN:O	7:CG:24:THR:HG21	2.01	0.61
18:AR:25:THR:O	18:AR:25:THR:HG22	1.99	0.61
10:AJ:26:ALA:HA	10:AJ:29:ARG:NH2	2.15	0.61
51:DT:91:ARG:CB	51:DT:116:ALA:HA	2.30	0.61
51:BT:3:ARG:HB3	51:BT:6:LEU:HB2	1.83	0.61
56:DY:7:VAL:CG2	56:DY:8:LYS:HZ3	2.13	0.61
7:CG:113:GLU:HB3	7:CG:118:VAL:HG23	1.83	0.61
31:D6:15:GLU:HG2	31:D6:16:CYS:O	1.99	0.61
43:BI:88:ILE:CD1	43:BI:142:VAL:HG13	2.21	0.61
12:AL:90:VAL:C	12:AL:92:ASP:H	2.04	0.61
51:BT:65:LYS:CE	51:BT:66:VAL:H	2.14	0.61
51:BT:89:VAL:HG11	51:BT:91:ARG:HE	1.66	0.61
41:DG:107:LEU:HA	41:DG:111:LEU:CD1	2.31	0.61
43:DI:73:GLU:HG3	43:DI:74:ASN:N	2.15	0.61
4:CD:129:ASN:N	4:CD:129:ASN:HD22	1.97	0.61
47:BP:17:LYS:HG2	47:BP:17:LYS:O	2.01	0.61
3:AC:58:GLU:HB2	3:AC:65:ALA:CB	2.30	0.61
9:CI:95:LYS:HD3	9:CI:96:LEU:N	2.15	0.61
25:B0:25:ARG:HG2	25:B0:25:ARG:HH11	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:17:C:H5''	23:CW:18:U:C5	2.35	0.61
2:CB:189:ASP:C	2:CB:191:ASP:H	2.02	0.61
38:DD:165:ILE:HD13	38:DD:175:LEU:CD2	2.31	0.61
38:BD:165:ILE:HD13	38:BD:175:LEU:CD2	2.30	0.61
40:BF:67:GLN:HG3	40:BF:67:GLN:O	2.00	0.61
33:D8:43:GLN:O	33:D8:44:LYS:HD2	2.01	0.61
1:AA:624:C:H2'	1:AA:625:G:H8	1.66	0.61
50:BS:89:ARG:O	50:BS:92:TYR:HB3	1.99	0.61
57:BZ:131:ARG:HG3	57:BZ:132:ASN:N	2.15	0.61
35:DA:142:A:C8	35:DA:1408:C:H1'	2.35	0.61
53:DV:79:VAL:HG13	53:DV:79:VAL:O	2.01	0.61
37:BC:39:ASP:HB3	37:BC:178:LYS:HE3	1.82	0.61
22:AV:76:C:H2'	22:AV:77:C:C5'	2.31	0.61
35:BA:2853:C:H2'	35:BA:2854:G:C8	2.36	0.61
52:BU:106:PHE:O	52:BU:110:VAL:HG23	2.01	0.61
35:DA:2196:C:O2'	35:DA:2197:U:H5'	2.00	0.61
1:AA:1023:G:N3	1:AA:1023:G:H2'	2.16	0.61
38:BD:270:ILE:O	38:BD:271:ILE:HG23	2.00	0.61
47:DP:13:ASN:C	47:DP:13:ASN:HD22	2.04	0.61
51:DT:104:ASN:O	51:DT:105:LEU:C	2.39	0.61
35:DA:2107:C:H5'	37:DC:3:LYS:HE3	1.82	0.61
1:CA:328:C:H4'	1:CA:329:A:H5'	1.83	0.61
22:CY:9:A:N3	22:CY:47:G:H2'	2.15	0.61
31:B6:15:GLU:HG2	31:B6:16:CYS:O	2.01	0.61
23:AW:8:U:N3	23:AW:24:A:N6	2.48	0.61
51:BT:23:ARG:HG2	51:BT:120:ARG:NH1	2.15	0.61
51:BT:32:TYR:CD2	51:BT:81:PRO:HB2	2.36	0.61
36:DB:42:C:H4'	41:DG:67:LYS:NZ	2.16	0.61
50:BS:95:HIS:CG	50:BS:96:GLY:H	2.18	0.61
47:DP:18:ARG:O	47:DP:18:ARG:NH1	2.33	0.61
56:DY:54:LYS:O	56:DY:56:PRO:HD2	2.01	0.61
2:AB:121:LEU:HA	2:AB:124:SER:CB	2.29	0.61
15:AO:33:THR:CG2	15:AO:85:LEU:HD21	2.29	0.61
35:BA:1318:C:C3'	35:BA:1319:G:H5''	2.30	0.61
1:AA:1293:G:O2'	1:AA:1294:G:H8	1.84	0.61
1:AA:939:G:H2'	1:AA:940:C:C6	2.35	0.61
35:BA:1037:G:H1	35:BA:1118:C:N4	1.98	0.61
26:D1:19:GLN:O	26:D1:35:THR:HG22	2.00	0.61
1:CA:554:C:H2'	1:CA:555:C:C6	2.36	0.61
6:AF:3:ARG:HH11	6:AF:3:ARG:HG3	1.65	0.61
1:AA:1109:C:O2'	1:AA:1110:A:H5'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:54:GLU:O	41:DG:57:ALA:HB3	2.00	0.61
35:DA:1188:U:C2'	35:DA:1189:A:H5'	2.30	0.61
6:CF:26:ILE:O	6:CF:30:LEU:HG	2.00	0.61
5:AE:57:LYS:HE2	5:AE:61:TYR:HE2	1.64	0.61
35:DA:332:A:H4'	35:DA:333:G:OP1	1.99	0.61
5:AE:40:ARG:HH11	5:AE:40:ARG:HG2	1.66	0.61
49:BR:30:THR:HA	49:BR:78:LYS:NZ	2.15	0.61
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.00	0.61
1:CA:202:U:H3'	1:CA:203:U:C5	2.35	0.61
22:AY:23:A:C2	22:AY:50:C:C2	2.89	0.61
22:AY:7:U:H4'	22:AY:8:U:OP2	2.00	0.61
22:AV:14:A:N7	22:AV:24:A:C6	2.69	0.61
22:AV:71:G:N2	22:AV:72:C:N1	2.49	0.61
35:DA:587:C:C4	47:DP:33:ARG:HD3	2.35	0.61
43:DI:109:ILE:HG22	43:DI:110:ASP:N	2.14	0.61
12:AL:25:PRO:C	12:AL:27:LEU:H	2.04	0.61
41:BG:111:LEU:HB2	41:BG:112:PRO:HD3	1.81	0.61
51:BT:85:LYS:HZ3	51:BT:85:LYS:HB3	1.64	0.61
51:BT:87:ASP:O	51:BT:87:ASP:OD1	2.17	0.61
31:B6:6:ARG:HD2	31:B6:6:ARG:N	2.16	0.61
35:DA:1537:G:H2'	35:DA:1538:G:C8	2.26	0.61
52:BU:31:SER:HB3	52:BU:34:LYS:HB2	1.82	0.61
18:CR:56:THR:CB	18:CR:58:LEU:HD13	2.30	0.61
1:AA:1106:G:H2'	1:AA:1107:C:C6	2.35	0.61
54:DW:65:LEU:HD23	54:DW:68:ARG:CD	2.30	0.61
16:AP:2:VAL:CG2	16:AP:21:VAL:HG23	2.31	0.61
43:DI:72:LEU:O	43:DI:138:ILE:HD12	2.00	0.61
18:CR:53:ARG:NH1	18:CR:60:ALA:CA	2.63	0.61
41:BG:172:LEU:O	41:BG:172:LEU:HD23	2.01	0.61
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.16	0.61
1:AA:299:G:H2'	1:AA:300:A:C8	2.35	0.61
35:BA:1856:G:H2'	35:BA:1857:G:H5'	1.82	0.61
35:BA:2114:A:H2'	35:BA:2115:G:O4'	2.00	0.61
35:DA:1996:C:H5	46:DO:32:TYR:HH	1.48	0.61
35:BA:2653:U:O2'	42:BH:110:SER:HB2	2.01	0.61
35:DA:271(E):U:H2'	35:DA:271(F):C:C6	2.35	0.61
1:CA:932:C:H5'	7:CG:4:ARG:HG3	1.83	0.61
1:CA:757:U:H2'	1:CA:758:G:O4'	2.01	0.61
45:DN:89:LYS:HB3	45:DN:89:LYS:NZ	2.15	0.61
2:AB:213:LEU:HD23	2:AB:213:LEU:O	2.00	0.61
41:DG:138:GLN:NE2	41:DG:149:VAL:HG23	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2155:G:H2'	35:DA:2156:G:O4'	2.01	0.61
15:AO:74:ASP:OD2	15:AO:77:ARG:HG2	2.01	0.61
23:CW:70:G:C2'	23:CW:71:G:C8	2.68	0.61
22:AV:69:G:C4	22:AV:70:G:C8	2.88	0.61
41:BG:82:LEU:C	41:BG:83:ARG:HG3	2.20	0.61
33:B8:4:MET:HB3	33:B8:61:LEU:HD22	1.83	0.61
17:AQ:9:VAL:HG11	17:AQ:84:LEU:HD12	1.81	0.61
1:CA:1152:A:H5''	10:CJ:13:HIS:CD2	2.35	0.61
9:CI:15:ALA:HB2	9:CI:65:VAL:HG23	1.81	0.61
15:CO:53:HIS:O	15:CO:56:LEU:HB3	2.00	0.61
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.65	0.61
4:AD:92:VAL:O	4:AD:96:LEU:HD13	2.01	0.61
35:DA:2147:G:H2'	35:DA:2148:G:O4'	2.01	0.61
35:DA:2579:C:O2'	39:DE:131:ALA:HB3	2.01	0.61
35:DA:1657:C:H2'	35:DA:1658:C:H6	1.66	0.61
35:DA:1761:C:H3'	35:DA:1762:A:C8	2.35	0.61
35:DA:2808:U:O2'	35:DA:2809:A:H5'	2.01	0.61
1:CA:1293:G:O2'	1:CA:1294:G:H8	1.84	0.61
35:BA:102:G:OP1	35:BA:102:G:H4'	2.00	0.61
50:BS:88:ASP:OD1	50:BS:89:ARG:N	2.33	0.61
42:BH:68:THR:C	42:BH:70:THR:N	2.54	0.61
56:DY:89:PHE:C	56:DY:90:LEU:HD23	2.21	0.61
35:DA:2777:G:C4'	35:DA:2778:A:H5'	2.31	0.61
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.35	0.61
35:DA:1221:C:H6	35:DA:1221:C:H5'	1.66	0.61
1:AA:189(E):U:O2'	1:AA:189(F):U:H5'	2.01	0.61
35:DA:1991:U:H2'	35:DA:1992:G:H5''	1.81	0.61
50:DS:83:LYS:HE3	50:DS:105:ALA:HB3	1.83	0.61
40:DF:65:TRP:HZ3	40:DF:73:ALA:O	1.84	0.61
35:DA:1372:U:H2'	35:DA:1373:A:C8	2.35	0.61
7:CG:146:GLU:O	7:CG:149:ARG:HB2	2.01	0.61
35:DA:2790:A:N3	35:DA:2790:A:H2'	2.16	0.61
35:BA:2790:A:H2'	35:BA:2790:A:N3	2.15	0.61
35:DA:1216:G:N2	35:DA:1234:U:H1'	2.14	0.61
35:BA:2377:A:H2'	35:BA:2378:A:C8	2.35	0.61
22:CY:29:A:C2'	22:CY:30:U:H5'	2.30	0.61
22:CY:56:U:OP1	48:DQ:56:ARG:HD3	2.00	0.61
1:CA:1196:U:N3	24:CX:23:A:C6	2.67	0.61
23:AW:7:U:C2	23:AW:69:G:C5	2.89	0.61
23:AW:74:C:O2	23:AW:74:C:C2'	2.48	0.61
22:AY:20:G:C8	22:AY:59:G:N2	2.69	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1845:G:H2'	35:DA:1846:G:C5'	2.16	0.61
33:D8:61:LEU:C	33:D8:63:PRO:HD2	2.21	0.61
4:AD:18:LYS:HB2	4:AD:33:MET:HG2	1.82	0.61
51:DT:28:VAL:O	51:DT:29:ARG:HD3	2.00	0.61
23:AW:14:A:C2	23:AW:24:A:C4	2.89	0.61
23:AW:51:G:N1	23:AW:67:C:N4	2.49	0.61
23:AW:61:A:O2'	23:AW:62:U:H5'	2.01	0.61
19:AS:22:LEU:HD12	19:AS:47:HIS:CE1	2.36	0.61
43:DI:126:TYR:N	43:DI:140:LEU:HD22	2.12	0.61
43:DI:81:VAL:HG13	43:DI:143:SER:H	1.66	0.61
43:BI:109:ILE:N	43:BI:109:ILE:HD12	2.16	0.61
43:BI:88:ILE:HG22	43:BI:89:TYR:H	1.65	0.61
40:DF:22:ALA:HB1	40:DF:26:ALA:HB2	1.82	0.61
40:BF:22:ALA:HB1	40:BF:26:ALA:HB2	1.81	0.61
3:AC:119:ARG:HG3	3:AC:119:ARG:HH11	1.66	0.61
2:CB:77:ALA:HA	2:CB:80:ILE:HD13	1.82	0.61
47:DP:47:ASP:HB3	47:DP:48:PRO:C	2.20	0.61
35:BA:1786:A:H2	35:BA:2606:C:H1'	1.65	0.61
57:DZ:110:GLY:N	57:DZ:145:GLU:HA	2.15	0.61
36:BB:49:C:H2'	36:BB:50:G:H8	1.65	0.61
27:D2:46:GLN:O	27:D2:49:LYS:HG3	2.01	0.61
30:D5:51:TYR:CZ	30:D5:52:TYR:HD2	2.19	0.61
22:CV:17:C:H5''	22:CV:18:U:C5	2.36	0.61
3:AC:43:LEU:O	3:AC:47:LEU:HB3	2.01	0.61
19:CS:36:ARG:HH12	19:CS:53:ASN:HA	1.66	0.61
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.01	0.61
27:B2:47:ASN:HD22	35:BA:94(A):G:N2	1.98	0.61
4:CD:148:VAL:HG12	4:CD:152:SER:HB2	1.83	0.61
20:AT:57:ARG:HB2	20:AT:57:ARG:NH1	2.15	0.61
51:BT:102:ILE:O	51:BT:106:SER:HB3	2.00	0.61
9:AI:105:ASP:HB3	9:AI:107:ARG:HD3	1.81	0.61
48:DQ:2:LEU:O	48:DQ:70:PRO:HG2	1.99	0.61
50:DS:89:ARG:O	50:DS:92:TYR:HB3	2.00	0.61
25:D0:49:LYS:H	25:D0:80:HIS:HD1	1.49	0.61
45:DN:120:LEU:HD21	45:DN:122:VAL:HG23	1.82	0.61
15:AO:64:ARG:HG3	15:AO:64:ARG:HH11	1.66	0.61
43:DI:8:PRO:CB	43:DI:14:ASP:H	2.14	0.61
35:DA:2853:C:H2'	35:DA:2854:G:C8	2.36	0.61
4:CD:90:GLY:HA2	4:CD:204:ILE:HD11	1.81	0.61
35:BA:1818:U:O4	38:BD:154:LYS:HE3	2.01	0.61
1:AA:746:A:O2'	1:AA:747:C:H5'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:117:PRO:HB3	42:BH:123:PHE:CZ	2.36	0.61
35:BA:922:U:H2'	35:BA:923:C:C6	2.36	0.61
13:AM:79:LYS:HB3	13:AM:79:LYS:NZ	2.16	0.61
45:DN:73:THR:HG21	45:DN:82:LEU:HD11	1.83	0.61
57:BZ:31:ARG:NH1	57:BZ:31:ARG:HB2	2.16	0.61
35:DA:1578:U:H2'	35:DA:1579:A:H5'	1.82	0.61
1:CA:867:G:H2'	1:CA:868:C:H6	1.65	0.61
35:DA:669:G:H2'	35:DA:669:G:N3	2.16	0.61
56:DY:20:TYR:N	56:DY:20:TYR:CD1	2.68	0.61
25:D0:56:ASP:O	25:D0:57:PHE:HB2	2.00	0.61
38:BD:65:ILE:HD11	38:BD:67:PHE:CE2	2.36	0.61
35:DA:1882:C:H5'	35:DA:1883:G:OP2	2.00	0.61
48:DQ:59:ARG:HA	57:DZ:180:VAL:HG23	1.83	0.60
23:AW:73:C:H3'	23:AW:74:C:H5''	1.82	0.60
22:AY:57:U:C3'	57:BZ:182:LYS:HB3	2.09	0.60
22:AY:60:A:C6	57:BZ:186:GLU:HB2	2.35	0.60
22:AV:67:C:H2'	22:AV:68:A:H8	1.66	0.60
51:DT:28:VAL:O	51:DT:29:ARG:CB	2.49	0.60
38:DD:44:ASN:HB2	38:DD:48:ARG:O	2.01	0.60
12:CL:90:VAL:C	12:CL:92:ASP:H	2.03	0.60
1:AA:908:A:H2'	1:AA:909:A:C8	2.36	0.60
35:BA:1019:U:H3	35:BA:1142(A):A:N6	1.98	0.60
57:DZ:24:LEU:HD23	57:DZ:25:PRO:N	2.16	0.60
1:AA:484:G:H4'	1:AA:485:G:O5'	2.01	0.60
40:BF:185:ASP:HA	40:BF:188:ARG:HD3	1.82	0.60
15:AO:39:LEU:CD1	15:AO:56:LEU:HB2	2.31	0.60
35:DA:991:C:H5'	35:DA:991:C:C6	2.27	0.60
30:B5:51:TYR:CZ	30:B5:52:TYR:HD2	2.17	0.60
18:CR:58:LEU:CD1	18:CR:58:LEU:H	2.12	0.60
4:AD:122:ARG:HD2	4:AD:134:ASP:O	2.01	0.60
1:CA:1320:C:H5'	19:CS:70:LYS:HG2	1.82	0.60
35:BA:2472:G:C5'	35:BA:2473:U:H5''	2.29	0.60
42:DH:153:LYS:N	42:DH:153:LYS:HD3	2.14	0.60
1:AA:1320:C:H5'	19:AS:70:LYS:HG2	1.82	0.60
35:DA:1280:G:H2'	35:DA:1281:G:H5''	1.82	0.60
1:AA:542:G:H2'	1:AA:543:C:H6	1.66	0.60
40:DF:198:ALA:O	40:DF:201:VAL:HG12	2.01	0.60
1:CA:940:C:H2'	1:CA:941:G:C8	2.36	0.60
1:CA:984:C:H2'	1:CA:985:C:C6	2.36	0.60
57:DZ:103:ARG:CB	57:DZ:136:PHE:HB2	2.31	0.60
11:AK:21:ILE:N	11:AK:21:ILE:HD12	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DO:3:GLN:HB2	46:DO:4:PRO:HD2	1.82	0.60
50:BS:36:TYR:HD2	50:BS:52:SER:HG	1.48	0.60
35:DA:1523:U:H2'	35:DA:1524:G:C8	2.36	0.60
41:BG:134:GLY:C	41:BG:135:LEU:HD12	2.21	0.60
9:AI:77:ILE:O	9:AI:81:ILE:HG12	2.01	0.60
7:CG:32:ARG:HH11	7:CG:32:ARG:HG2	1.66	0.60
22:CY:56:U:OP1	57:DZ:180:VAL:HG11	2.00	0.60
22:AY:57:U:H6	57:BZ:183:LEU:H	1.45	0.60
23:CW:39:A:C2'	23:CW:41:C:OP1	2.48	0.60
22:AV:12:U:N3	22:AV:25:A:C2	2.66	0.60
41:BG:46:ALA:HB2	41:BG:88:ILE:HD11	1.82	0.60
51:DT:89:VAL:HG11	51:DT:91:ARG:HE	1.66	0.60
43:BI:66:GLU:OE2	43:BI:134:PRO:HD2	2.01	0.60
12:CL:43:VAL:O	12:CL:52:LEU:HD23	2.01	0.60
35:DA:1019:U:O2'	35:DA:1021:A:C2	2.49	0.60
56:BY:2:ARG:HD3	56:BY:3:VAL:HG23	1.83	0.60
31:D6:5:VAL:HG13	31:D6:7:ILE:H	1.67	0.60
48:BQ:34:LEU:HD11	48:BQ:129:THR:CB	2.29	0.60
5:AE:108:ALA:O	5:AE:112:LEU:HG	2.01	0.60
1:CA:1479:C:H2'	1:CA:1480:G:C8	2.33	0.60
19:CS:31:ILE:HG23	19:CS:49:ILE:HA	1.81	0.60
35:DA:1541:G:H5''	35:DA:1542:A:O5'	2.00	0.60
3:AC:182:ILE:HG23	3:AC:202:ILE:O	2.00	0.60
18:AR:53:ARG:NH1	18:AR:60:ALA:CA	2.63	0.60
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.35	0.60
16:CP:43:LYS:O	16:CP:45:THR:N	2.33	0.60
35:DA:90:U:H1'	35:DA:92:A:H8	1.67	0.60
35:BA:1188:U:C2'	35:BA:1189:A:H5'	2.31	0.60
35:BA:1722:A:C2	35:BA:1740:G:H8	2.19	0.60
47:BP:108:LYS:C	47:BP:110:TYR:H	2.05	0.60
57:DZ:29:TYR:HB3	57:DZ:34:ASN:ND2	2.16	0.60
1:CA:189(D):C:H1'	1:CA:189(H):G:N2	2.15	0.60
35:BA:2022:U:O2'	35:BA:2617:C:H5'	2.00	0.60
7:AG:13:GLN:O	7:AG:24:THR:HG21	2.01	0.60
1:CA:1226:C:H4'	1:CA:1227:A:OP1	2.01	0.60
5:CE:126:ARG:HH11	5:CE:126:ARG:HG3	1.65	0.60
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.05	0.60
23:CW:43:G:H2'	23:CW:44:A:H8	1.66	0.60
22:AV:47:G:O2'	22:AV:48:G:H5'	2.01	0.60
23:AW:14:A:N1	23:AW:24:A:C5	2.68	0.60
56:DY:76:CYS:SG	56:DY:77:PRO:CD	2.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:85:G:OP1	56:DY:9:LYS:HA	2.02	0.60
12:CL:22:SER:O	12:CL:24:VAL:N	2.33	0.60
52:DU:102:GLU:HG3	53:DV:2:PHE:CZ	2.36	0.60
51:BT:80:SER:CB	51:BT:81:PRO:CD	2.79	0.60
43:BI:73:GLU:HG3	43:BI:74:ASN:N	2.16	0.60
10:CJ:50:ILE:CD1	10:CJ:50:ILE:H	2.07	0.60
50:DS:54:LEU:HD22	50:DS:57:LYS:HA	1.83	0.60
27:B2:16:LEU:H	27:B2:67:LYS:HZ1	1.47	0.60
2:AB:178:ARG:NH2	8:AH:68:ARG:NH2	2.47	0.60
5:CE:76:ILE:HG12	5:CE:77:PRO:CD	2.28	0.60
37:DC:26:ALA:O	37:DC:30:VAL:HG23	2.01	0.60
35:DA:1111:A:O2'	35:DA:1112:G:H4'	2.01	0.60
1:CA:1393:U:H5'	1:CA:1502:A:OP1	2.01	0.60
7:CG:20:ASP:HB3	7:CG:23:VAL:CG2	2.30	0.60
49:BR:98:LEU:O	49:BR:113:LEU:HD22	2.02	0.60
1:CA:403:C:O2'	1:CA:404:U:H5'	2.01	0.60
41:BG:145:THR:OG1	41:BG:146:TYR:N	2.34	0.60
43:BI:127:VAL:HG22	43:BI:139:GLN:HB3	1.83	0.60
33:D8:29:LYS:HD3	33:D8:44:LYS:HG2	1.83	0.60
13:AM:112:GLY:HA2	13:AM:113:PRO:CG	2.32	0.60
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.01	0.60
1:AA:189(I):G:H2'	1:AA:189(J):G:H8	1.66	0.60
35:DA:1339:G:H21	35:DA:1603:A:H1'	1.66	0.60
35:DA:570:G:H2'	35:DA:2030:A:C5	2.36	0.60
34:B9:9:ARG:CZ	34:B9:16:VAL:HG23	2.30	0.60
35:BA:304:G:H2'	35:BA:305:U:C6	2.36	0.60
18:AR:31:LEU:H	18:AR:31:LEU:HD23	1.65	0.60
22:CY:23:A:H2'	22:CY:24:A:H8	1.64	0.60
35:DA:1590:U:H2'	35:DA:1591:G:C5'	2.18	0.60
47:BP:57:THR:HB	47:BP:59:LEU:H	1.66	0.60
33:B8:13:ARG:HB3	47:BP:63:PRO:HB3	1.83	0.60
47:DP:146:VAL:HG13	47:DP:147:LEU:N	2.15	0.60
46:BO:104:ARG:HE	51:BT:33:LYS:CE	2.13	0.60
51:BT:28:VAL:O	51:BT:29:ARG:CB	2.49	0.60
28:D3:7:LYS:HB2	28:D3:34:GLU:HG2	1.83	0.60
29:D4:25:TYR:CE2	41:DG:2:PRO:HA	2.35	0.60
35:BA:2632:A:O2'	39:BE:61:ARG:NH2	2.34	0.60
2:AB:235:SER:HG	2:AB:236:TYR:HD1	1.47	0.60
54:BW:65:LEU:HD23	54:BW:68:ARG:CD	2.31	0.60
5:AE:42:GLY:HA2	5:AE:65:ASN:O	2.01	0.60
1:CA:1502:A:H2	1:CA:1505:G:H1	1.47	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:34:ALA:HB1	37:BC:40:GLU:CB	2.30	0.60
1:AA:1342:C:O2'	1:AA:1343:G:H5'	2.00	0.60
33:B8:43:GLN:O	33:B8:44:LYS:HD2	2.00	0.60
15:CO:61:GLY:O	15:CO:65:ARG:HD3	2.02	0.60
57:BZ:38:TYR:O	57:BZ:38:TYR:CD1	2.54	0.60
1:AA:16:A:O2'	1:AA:17:U:H5'	2.01	0.60
49:BR:86:ARG:HB3	49:BR:118:GLU:OE2	2.01	0.60
56:BY:89:PHE:C	56:BY:90:LEU:HD23	2.21	0.60
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.37	0.60
35:DA:2584:U:H2'	35:DA:2585:U:H5'	1.83	0.60
1:AA:272:C:H2'	1:AA:273:A:H8	1.66	0.60
1:AA:243:A:H4'	1:AA:244:U:O5'	2.00	0.60
46:DO:43:VAL:HG21	46:DO:56:ASP:HB2	1.82	0.60
35:DA:523:C:C2'	35:DA:524:U:H5'	2.31	0.60
35:DA:908:C:O2'	35:DA:909:A:H5'	2.01	0.60
26:B1:56:GLN:HB3	26:B1:87:PRO:HB3	1.82	0.60
18:AR:46:GLU:HA	18:AR:46:GLU:OE1	2.01	0.60
42:BH:20:ALA:HB1	42:BH:21:PRO:CD	2.31	0.60
35:DA:1775:U:H2'	35:DA:1776:G:H5'	1.84	0.60
48:DQ:59:ARG:HA	57:DZ:180:VAL:CG2	2.32	0.60
22:CV:14:A:C6	22:CV:24:A:C5	2.90	0.60
33:B8:51:ALA:C	33:B8:53:PRO:HD2	2.21	0.60
1:CA:179:A:O2'	1:CA:180:U:H5'	2.02	0.60
47:BP:23:PRO:CD	47:BP:33:ARG:CZ	2.75	0.60
2:AB:80:ILE:CD1	2:AB:208:ILE:HG23	2.28	0.60
51:BT:27:THR:HG23	51:BT:28:VAL:H	1.66	0.60
28:D3:8:LEU:HA	28:D3:54:VAL:HG22	1.82	0.60
48:DQ:34:LEU:HD11	48:DQ:129:THR:CB	2.28	0.60
35:BA:1652:A:O2'	35:BA:1653:G:H5'	2.02	0.60
56:BY:47:LYS:O	56:BY:48:ALA:HB3	2.01	0.60
22:CY:52:C:H2'	22:CY:53:U:H6	1.64	0.60
27:D2:46:GLN:CB	27:D2:49:LYS:HE3	2.31	0.60
41:DG:15:VAL:HA	41:DG:18:GLU:HB3	1.82	0.60
41:DG:18:GLU:O	41:DG:22:ARG:HB2	2.02	0.60
35:DA:2122:U:H2'	35:DA:2123:G:C8	2.37	0.60
1:AA:1423:G:H5'	46:BO:49:ARG:NH2	2.15	0.60
42:DH:11:VAL:HG21	42:DH:50:VAL:HG23	1.84	0.60
50:DS:17:ARG:HA	50:DS:20:ARG:NH1	2.17	0.60
16:CP:43:LYS:HG3	16:CP:48:TRP:CD2	2.36	0.60
48:BQ:132:VAL:HG11	57:BZ:81:ARG:HE	1.66	0.60
12:AL:7:ILE:HD11	17:AQ:32:TYR:HB3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:76:C:H2'	22:CV:77:C:H5'	1.82	0.60
35:BA:2481:G:HO2'	35:BA:2482:G:P	2.25	0.60
38:BD:95:LEU:O	38:BD:95:LEU:HD12	2.00	0.60
7:AG:146:GLU:O	7:AG:149:ARG:HB2	2.01	0.60
49:DR:30:THR:HA	49:DR:78:LYS:NZ	2.16	0.60
48:DQ:24:GLY:O	48:DQ:102:VAL:HG23	2.01	0.60
45:BN:30:ILE:HG22	45:BN:34:LEU:CD2	2.32	0.60
35:DA:2179:C:H4'	35:DA:2179:C:OP2	2.01	0.60
42:BH:16:SER:HB2	42:BH:27:LYS:HB2	1.84	0.60
41:BG:71:THR:HB	41:BG:89:GLY:C	2.22	0.60
23:AW:53:U:C4	23:AW:54:G:N7	2.70	0.60
47:BP:47:ASP:HB3	47:BP:48:PRO:C	2.22	0.60
47:BP:59:LEU:HA	47:BP:61:ARG:NE	2.16	0.60
43:BI:88:ILE:HD11	43:BI:142:VAL:CG1	2.23	0.60
12:CL:41:ARG:NE	12:CL:43:VAL:HG12	2.16	0.60
29:D4:2:LYS:O	29:D4:3:GLU:HB2	2.02	0.60
38:BD:34:VAL:HG23	38:BD:35:LYS:H	1.67	0.60
57:BZ:171:ILE:CG1	57:BZ:172:ALA:N	2.65	0.60
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.34	0.60
1:CA:255:G:H1'	17:CQ:16:GLN:NE2	2.16	0.60
57:DZ:4:ARG:O	57:DZ:5:LEU:HB2	2.00	0.60
39:BE:132:HIS:O	39:BE:135:HIS:NE2	2.35	0.60
42:DH:156:ALA:O	42:DH:157:TYR:C	2.40	0.60
1:CA:1456:G:H2'	1:CA:1457:G:H5'	1.82	0.60
35:DA:910:A:H62	48:DQ:12:GLN:HA	1.66	0.60
50:BS:26:LEU:O	50:BS:88:ASP:HB3	2.01	0.60
50:BS:88:ASP:CG	50:BS:89:ARG:N	2.53	0.60
1:CA:157:G:H2'	1:CA:158:G:H8	1.66	0.60
38:DD:181:GLU:HA	38:DD:272:ALA:CB	2.31	0.60
11:CK:24:SER:O	11:CK:26:ASN:N	2.35	0.60
35:BA:594:U:H2'	35:BA:595:C:H6	1.65	0.60
37:BC:178:LYS:HB2	37:BC:181:PHE:CD1	2.36	0.60
2:AB:132:LYS:HA	2:AB:135:GLN:NE2	2.16	0.60
13:CM:83:ASP:CG	13:CM:84:ILE:H	2.05	0.60
40:BF:39:TRP:O	40:BF:43:LYS:HG2	2.01	0.60
34:D9:9:ARG:CZ	34:D9:16:VAL:HG23	2.31	0.60
7:CG:75:VAL:HG12	7:CG:88:PRO:HB3	1.83	0.60
35:DA:922:U:H2'	35:DA:923:C:C6	2.36	0.60
1:CA:775:G:O2'	1:CA:776:G:H5'	2.02	0.60
7:AG:32:ARG:HG2	7:AG:32:ARG:HH11	1.66	0.60
4:AD:187:ARG:HH11	4:AD:187:ARG:HG2	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1261:A:H61	1:AA:1274:G:H1'	1.66	0.60
16:AP:72:ARG:HH21	16:AP:73:LEU:HD21	1.67	0.60
22:CY:55:G:C4	57:DZ:183:LEU:HD13	2.37	0.60
7:AG:143:ARG:NH1	23:AW:44:A:H5''	2.17	0.60
22:AV:30:U:O2'	22:AV:31:C:H5'	2.02	0.60
33:D8:4:MET:HB3	33:D8:61:LEU:HD22	1.83	0.60
30:B5:4:HIS:HD2	35:BA:2056:G:H1	1.48	0.60
51:DT:116:ALA:HB1	51:DT:121:ILE:CD1	2.31	0.60
31:B6:15:GLU:HG2	31:B6:16:CYS:N	2.16	0.60
3:AC:155:GLY:O	3:AC:156:ARG:HB2	2.01	0.60
23:CW:16:U:O2	23:CW:62:U:H4'	2.02	0.60
1:AA:147:G:H2'	1:AA:148:G:C8	2.37	0.60
12:AL:41:ARG:NH1	12:AL:41:ARG:HB3	2.05	0.60
41:DG:43:LEU:HD11	41:DG:153:ARG:CB	2.31	0.60
41:DG:59:GLU:HA	41:DG:62:LEU:HD13	1.84	0.60
5:AE:51:VAL:HB	5:AE:52:PRO:CD	2.24	0.60
31:B6:5:VAL:HG12	31:B6:8:LYS:HB2	1.82	0.60
15:CO:54:ARG:HD3	15:CO:58:MET:CE	2.32	0.60
10:CJ:50:ILE:HA	10:CJ:60:ARG:HB3	1.81	0.60
9:AI:114:TYR:N	9:AI:114:TYR:HD1	2.00	0.60
42:DH:33:LEU:HD21	42:DH:136:ILE:HG22	1.83	0.60
57:BZ:139:VAL:HG12	57:BZ:141:VAL:HG23	1.83	0.60
41:BG:141:PHE:O	41:BG:144:ILE:HG22	2.00	0.60
22:CY:51:G:O2'	22:CY:52:C:H5'	2.00	0.60
9:CI:17:VAL:HG13	9:CI:63:ILE:HD11	1.84	0.60
35:DA:2317:C:O2'	35:DA:2318:G:H5'	2.02	0.60
35:BA:2147:G:H2'	35:BA:2148:G:O4'	2.01	0.60
1:CA:674:G:H2'	1:CA:675:A:C8	2.35	0.60
35:BA:158:U:H3'	35:BA:158:U:O2	2.01	0.60
38:BD:117:VAL:HG21	38:BD:128:GLY:O	2.02	0.60
36:DB:56:G:H4'	36:DB:57:A:C8	2.37	0.60
19:AS:49:ILE:O	19:AS:51:VAL:HG23	2.02	0.60
1:CA:939:G:H2'	1:CA:940:C:C6	2.35	0.60
21:AU:2:GLY:O	21:AU:4:GLY:N	2.34	0.60
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.31	0.60
1:CA:637:G:H2'	1:CA:638:G:C8	2.37	0.60
13:CM:15:VAL:HG23	13:CM:16:ASP:N	2.16	0.60
35:BA:654(S):G:H3'	35:BA:654(T):C:H5''	1.83	0.60
27:B2:32:LEU:HD12	27:B2:36:ARG:NH1	2.17	0.60
31:D6:52:VAL:HG22	31:D6:53:LYS:H	1.66	0.60
35:BA:2853:C:H2'	35:BA:2854:G:H8	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2292:C:O2'	35:BA:2293:C:H5'	2.00	0.60
35:DA:2087:G:O2'	35:DA:2088:G:H5'	2.01	0.60
42:DH:20:ALA:HB1	42:DH:21:PRO:CD	2.30	0.60
42:DH:16:SER:HB2	42:DH:27:LYS:HB2	1.83	0.60
52:BU:12:ARG:HA	52:BU:15:LYS:HE2	1.83	0.60
15:CO:74:ASP:OD2	15:CO:77:ARG:HG2	2.01	0.60
43:BI:104:GLN:HG2	43:BI:105:HIS:CD2	2.36	0.60
35:BA:469:G:C2'	35:BA:470:A:H5''	2.31	0.60
35:DA:1709:U:H2'	35:DA:1710:C:C6	2.36	0.60
12:CL:18:VAL:O	12:CL:19:ARG:HB2	1.99	0.60
20:CT:42:GLN:HE21	20:CT:42:GLN:HA	1.67	0.60
1:AA:696:A:O2'	1:AA:697:U:H5'	2.00	0.60
1:AA:1255:G:H2'	1:AA:1255:G:N3	2.15	0.60
23:AW:41:C:OP2	23:AW:41:C:O4'	2.20	0.60
22:AY:12:U:N3	22:AY:26:G:N2	2.49	0.60
43:DI:91:SER:HB2	43:DI:119:PRO:HB2	1.84	0.60
7:AG:108:ALA:O	7:AG:119:ARG:HD2	2.02	0.60
30:D5:3:LYS:HB3	35:DA:747:U:C4	2.36	0.60
13:CM:7:VAL:HG11	41:DG:139:LEU:HD11	1.84	0.60
55:DX:64:LYS:HZ2	55:DX:73:ARG:NH2	1.91	0.60
26:D1:60:PHE:HZ	26:D1:94:LEU:HD12	1.66	0.60
35:DA:581:C:OP1	52:DU:33:ARG:HG3	2.02	0.60
57:BZ:152:ALA:CB	57:BZ:167:PRO:HB2	2.32	0.60
35:BA:330:A:O2'	35:BA:331:A:C8	2.52	0.60
30:B5:54:GLY:C	30:B5:55:ARG:NE	2.55	0.60
1:CA:1095:U:P	1:CA:1108:G:H1	2.25	0.60
40:BF:198:ALA:O	40:BF:201:VAL:HG12	2.00	0.60
4:CD:92:VAL:O	4:CD:96:LEU:HD13	2.02	0.60
31:D6:10:LEU:H	31:D6:10:LEU:CD2	2.15	0.60
38:BD:142:VAL:HG23	38:BD:192:THR:O	2.01	0.60
40:BF:165:ARG:HH11	40:BF:165:ARG:HB3	1.65	0.60
25:B0:49:LYS:H	25:B0:80:HIS:HD1	1.48	0.60
7:AG:50:ILE:O	7:AG:54:THR:HG22	2.01	0.60
15:AO:27:VAL:O	15:AO:31:LEU:HD23	2.02	0.60
8:AH:77:GLU:HG2	8:AH:78:GLN:H	1.67	0.60
1:CA:358:U:H2'	1:CA:359:U:H6	1.65	0.60
57:DZ:53:ILE:HG22	57:DZ:71:VAL:O	2.01	0.60
35:BA:1523:U:H2'	35:BA:1524:G:C8	2.36	0.60
35:BA:2031:A:C6	35:BA:2498:C:H1'	2.36	0.60
35:DA:2031:A:C6	35:DA:2498:C:H1'	2.37	0.60
34:B9:10:ILE:HD12	34:B9:32:HIS:HB3	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1991:U:H2'	35:BA:1992:G:H5'	1.84	0.60
39:BE:38:THR:C	39:BE:40:GLU:H	2.05	0.60
22:CY:60:A:N1	57:DZ:186:GLU:HB2	2.16	0.60
23:AW:29:A:C5	23:AW:30:U:C5	2.90	0.60
22:AV:7:U:N3	22:AV:69:G:C2	2.70	0.60
31:B6:15:GLU:HG3	31:B6:47:THR:CG2	2.19	0.60
1:CA:175:C:O2'	1:CA:176:C:H5'	2.00	0.60
35:BA:587:C:H2'	47:BP:33:ARG:NH2	2.17	0.60
46:BO:78:ARG:NE	51:BT:73:GLU:OE1	2.34	0.60
52:BU:74:LEU:CD1	52:BU:74:LEU:H	2.14	0.60
41:DG:107:LEU:HA	41:DG:111:LEU:HD12	1.84	0.60
35:DA:2722:G:H2'	35:DA:2723:C:H6	1.66	0.60
35:DA:2722:G:H2'	35:DA:2723:C:C6	2.37	0.60
52:BU:31:SER:O	52:BU:33:ARG:N	2.34	0.60
53:DV:15:GLU:HB3	53:DV:16:PRO:CD	2.28	0.60
8:AH:65:TYR:N	8:AH:65:TYR:CD1	2.70	0.60
35:BA:882:G:H2'	35:BA:883:G:H8	1.67	0.60
48:DQ:130:LYS:HZ2	57:DZ:80:ARG:HD2	1.66	0.60
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.02	0.60
4:CD:173:TRP:O	4:CD:186:LEU:HB2	2.01	0.60
35:BA:1111:A:O2'	35:BA:1112:G:H4'	2.01	0.60
1:AA:151:A:C2'	1:AA:152:A:H5'	2.32	0.60
16:CP:18:ARG:HG3	16:CP:35:LYS:HE3	1.84	0.60
19:AS:36:ARG:HH12	19:AS:53:ASN:HA	1.66	0.60
37:BC:8:TYR:CE1	37:BC:221:PRO:HB3	2.36	0.60
42:DH:11:VAL:CG2	42:DH:50:VAL:HG23	2.31	0.60
2:AB:166:ASP:CG	2:AB:169:LYS:HB2	2.22	0.60
1:AA:1292:U:O2'	1:AA:1293:G:H5'	2.02	0.60
1:CA:1292:U:O2'	1:CA:1293:G:H5'	2.02	0.60
16:AP:43:LYS:HG3	16:AP:48:TRP:CD2	2.37	0.60
35:BA:1603:A:C8	35:BA:1603:A:H5'	2.36	0.60
20:AT:51:GLU:HA	20:AT:54:LYS:HZ1	1.67	0.60
45:BN:93:THR:O	45:BN:94:HIS:HB2	2.02	0.60
35:DA:2223:G:C2'	35:DA:2224:G:H5'	2.31	0.60
8:AH:54:ASP:C	8:AH:56:LYS:H	2.04	0.60
35:BA:1570:A:H2'	35:BA:1571:A:C8	2.37	0.60
50:BS:74:ALA:HB1	50:BS:103:GLU:CB	2.32	0.60
18:CR:31:LEU:HD23	18:CR:31:LEU:H	1.66	0.60
13:AM:106:ASN:O	13:AM:107:ALA:HB2	2.01	0.60
22:CY:32:G:C6	22:CY:43:G:C5	2.90	0.60
23:AW:39:A:C3'	23:AW:41:C:OP1	2.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:12:U:C2	23:AW:26:G:N2	2.68	0.60
23:AW:9:A:C8	23:AW:47:G:N2	2.70	0.60
56:BY:7:VAL:C	56:BY:8:LYS:HD2	2.23	0.60
43:BI:91:SER:HB2	43:BI:119:PRO:HB2	1.83	0.60
3:CC:119:ARG:HG3	3:CC:119:ARG:HH11	1.67	0.60
47:DP:47:ASP:HB3	47:DP:48:PRO:O	2.02	0.60
36:DB:45:A:H8	41:DG:95:ARG:HE	1.50	0.60
9:CI:114:TYR:N	9:CI:114:TYR:HD1	2.00	0.60
35:DA:2681:C:H5	35:DA:2725:A:N6	1.91	0.60
1:CA:1250:A:H4'	9:CI:68:GLY:N	2.16	0.60
35:DA:1244:G:C2'	35:DA:1245:G:H5'	2.32	0.60
2:AB:17:PHE:HB2	2:AB:44:LEU:HD11	1.83	0.60
22:AY:52:C:N3	22:AY:53:U:C4	2.70	0.60
48:DQ:43:THR:HG1	48:DQ:46:GLN:HG3	1.67	0.60
3:CC:43:LEU:O	3:CC:47:LEU:HB3	2.02	0.60
1:AA:1134:G:H22	1:AA:1141:C:H1'	1.66	0.60
26:B1:52:ARG:NH2	35:BA:2218:U:H1'	2.16	0.60
38:BD:210:GLY:O	38:BD:211:ARG:HB3	2.02	0.60
1:AA:674:G:H2'	1:AA:675:A:C8	2.35	0.60
22:AV:33:G:H2'	22:AV:34:C:H6	1.67	0.60
46:BO:96:THR:O	46:BO:97:ARG:HG2	2.01	0.60
1:CA:1005:A:H2'	1:CA:1006:C:H5'	1.83	0.60
35:BA:287:C:H2'	35:BA:288:C:C6	2.37	0.60
51:BT:57:PHE:O	51:BT:59:THR:N	2.34	0.60
35:DA:2192:G:C2'	35:DA:2193:G:H5''	2.32	0.60
1:AA:422:C:H1'	1:AA:423:G:H22	1.67	0.60
35:DA:1722:A:C2	35:DA:1740:G:H8	2.20	0.60
3:CC:131:ARG:NH1	5:CE:50:GLU:HG2	2.17	0.60
5:CE:36:ASP:OD1	5:CE:38:GLN:N	2.34	0.60
57:BZ:31:ARG:HH11	57:BZ:31:ARG:HB2	1.67	0.60
20:AT:31:SER:HA	20:AT:34:LYS:HD2	1.84	0.60
35:BA:1372:U:H2'	35:BA:1373:A:C8	2.36	0.60
13:AM:30:ALA:C	13:AM:32:GLU:H	2.05	0.60
1:AA:882:C:O2'	1:AA:883:C:H5'	2.02	0.60
35:BA:908:C:O2'	35:BA:909:A:H5'	2.02	0.60
22:AY:11:C:C2'	22:AY:12:U:H6	2.11	0.59
22:AY:27:C:H2'	22:AY:28:G:H8	1.67	0.59
41:BG:46:ALA:HB2	41:BG:88:ILE:CD1	2.32	0.59
4:AD:9:CYS:HG	58:AD:1000:ZN:ZN	1.14	0.59
23:AW:11:C:C2'	23:AW:12:U:C6	2.85	0.59
47:BP:62:LEU:HD23	47:BP:63:PRO:N	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:61:LEU:C	33:B8:63:PRO:HD2	2.22	0.59
43:DI:69:LYS:HA	43:DI:136:VAL:CG1	2.29	0.59
31:D6:15:GLU:HG2	31:D6:16:CYS:N	2.15	0.59
12:AL:58:VAL:O	12:AL:60:LEU:HD22	2.01	0.59
1:CA:963:G:H21	10:CJ:55:LYS:HZ3	1.48	0.59
47:BP:146:VAL:HG13	47:BP:147:LEU:N	2.17	0.59
41:DG:142:PRO:HG2	41:DG:143:GLU:H	1.66	0.59
41:DG:36:LYS:O	41:DG:159:VAL:HA	2.02	0.59
2:CB:219:VAL:O	2:CB:223:ILE:HG13	2.01	0.59
57:DZ:99:TYR:HA	57:DZ:125:LEU:HA	1.83	0.59
57:DZ:108:PRO:HG2	57:DZ:111:VAL:HG23	1.84	0.59
1:CA:1134:G:H22	1:CA:1141:C:H1'	1.67	0.59
25:D0:25:ARG:HH11	25:D0:25:ARG:HG2	1.66	0.59
1:CA:1502:A:H2	1:CA:1505:G:C2	2.20	0.59
39:DE:70:ALA:O	39:DE:72:VAL:N	2.34	0.59
42:DH:155:SER:O	42:DH:157:TYR:N	2.35	0.59
1:AA:1095:U:P	1:AA:1108:G:H1	2.25	0.59
31:B6:10:LEU:CD2	31:B6:10:LEU:H	2.14	0.59
54:DW:6:ILE:HA	54:DW:103:ILE:O	2.01	0.59
25:D0:40:GLN:NE2	25:D0:43:THR:HA	2.17	0.59
57:BZ:40:ASP:OD2	57:BZ:42:VAL:HG12	2.02	0.59
38:DD:182:LEU:H	38:DD:272:ALA:HB3	1.66	0.59
6:AF:45:LEU:C	6:AF:45:LEU:HD23	2.22	0.59
35:BA:142:A:C8	35:BA:1408:C:H1'	2.37	0.59
38:DD:46:GLN:N	38:DD:46:GLN:OE1	2.36	0.59
35:DA:536:A:OP1	52:DU:53:ARG:NH1	2.35	0.59
18:AR:30:ASP:C	18:AR:32:ARG:H	2.06	0.59
10:CJ:26:ALA:HA	10:CJ:29:ARG:NH2	2.16	0.59
25:B0:36:ILE:HG23	35:BA:2354:G:O2'	2.02	0.59
1:CA:577:G:O2'	1:CA:578:C:H5'	2.02	0.59
34:D9:7:VAL:HG12	34:D9:25:VAL:HG21	1.84	0.59
22:CY:70:G:H2'	22:CY:71:G:O4'	2.02	0.59
22:CY:55:G:C5'	48:DQ:56:ARG:NH2	2.58	0.59
41:BG:85:GLY:O	41:BG:86:MET:HB3	2.01	0.59
46:DO:64:ARG:O	46:DO:82:ASN:HA	2.02	0.59
23:AW:27:C:H5''	23:AW:28:G:OP1	2.02	0.59
12:CL:25:PRO:C	12:CL:27:LEU:H	2.05	0.59
12:CL:38:THR:CG2	12:CL:57:LYS:HB2	2.32	0.59
30:D5:4:HIS:HD2	35:DA:2056:G:H1	1.50	0.59
40:BF:125:LEU:H	40:BF:125:LEU:HD23	1.67	0.59
1:AA:1442(A):G:H2'	51:BT:118:ARG:NH1	2.15	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:36:LYS:HE2	41:DG:95:ARG:HH12	1.66	0.59
49:DR:7:GLY:O	49:DR:8:ARG:CG	2.48	0.59
56:BY:27:VAL:HG12	56:BY:29:GLU:OE1	2.02	0.59
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.16	0.59
6:AF:15:ASP:OD2	4:CD:27:TYR:OH	2.20	0.59
4:CD:102:ASP:HA	4:CD:121:VAL:HG21	1.84	0.59
4:AD:173:TRP:O	4:AD:186:LEU:HB2	2.02	0.59
3:AC:75:VAL:O	3:AC:83:ARG:HG2	2.02	0.59
5:CE:72:GLN:C	5:CE:74:GLY:H	2.03	0.59
35:BA:2579:C:O2'	39:BE:131:ALA:HB3	2.02	0.59
35:DA:158:U:H3'	35:DA:158:U:O2	2.02	0.59
37:BC:41:THR:O	37:BC:217:THR:HA	2.02	0.59
16:AP:18:ARG:HG3	16:AP:35:LYS:HE3	1.85	0.59
38:DD:24:ILE:CG1	38:DD:25:THR:H	2.15	0.59
47:DP:123:LEU:HD12	47:DP:123:LEU:O	2.02	0.59
47:BP:112:LEU:C	47:BP:112:LEU:HD13	2.22	0.59
35:DA:2693:A:H2'	35:DA:2694:G:C8	2.36	0.59
9:AI:79:LEU:O	9:AI:79:LEU:HD13	2.02	0.59
15:CO:64:ARG:HH11	15:CO:64:ARG:HG3	1.66	0.59
1:CA:1109:C:O2'	1:CA:1110:A:H5'	2.01	0.59
1:CA:445:G:O2'	1:CA:446:G:H5'	2.01	0.59
42:BH:105:LEU:CD2	42:BH:105:LEU:H	2.16	0.59
26:D1:80:LEU:HB3	26:D1:82:LEU:HD13	1.84	0.59
35:DA:2012:G:O3'	54:DW:96:ILE:HG13	2.02	0.59
27:B2:12:GLU:HA	27:B2:15:LYS:HE2	1.83	0.59
46:DO:43:VAL:HG23	46:DO:56:ASP:O	2.02	0.59
35:DA:924:C:O2'	35:DA:925:C:H5'	2.01	0.59
13:CM:79:LYS:NZ	13:CM:79:LYS:HB3	2.17	0.59
35:BA:2869:G:H2'	35:BA:2870:C:C6	2.37	0.59
1:CA:746:A:O2'	1:CA:747:C:H5'	2.02	0.59
16:AP:12:LYS:O	16:AP:13:HIS:HB2	2.03	0.59
35:BA:669:G:N3	35:BA:669:G:H2'	2.15	0.59
22:AY:16:U:H6	22:AY:16:U:O5'	1.84	0.59
1:AA:932:C:H5'	7:AG:4:ARG:HG3	1.83	0.59
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.85	0.59
22:CY:19:G:OP1	22:CY:19:G:H8	1.85	0.59
23:AW:39:A:C6	23:AW:41:C:OP2	2.55	0.59
22:AY:11:C:N4	22:AY:47:G:H21	1.96	0.59
22:AY:71:G:N1	22:AY:72:C:C5	2.70	0.59
22:AV:23:A:N6	22:AV:48:G:H2'	2.18	0.59
22:AV:3:G:H1	22:AV:72:C:N4	1.98	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DI:91:SER:CB	43:DI:119:PRO:HB2	2.33	0.59
43:BI:109:ILE:CG2	43:BI:114:LEU:HD11	2.31	0.59
43:BI:120:ILE:HG22	43:BI:121:LYS:N	2.17	0.59
43:BI:69:LYS:HA	43:BI:136:VAL:CG1	2.25	0.59
12:CL:50:SER:O	12:CL:51:ALA:HB2	2.02	0.59
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.84	0.59
47:BP:144:GLU:N	47:BP:145:PRO:HD3	2.04	0.59
1:AA:979:C:C3'	1:AA:980:C:H5''	2.25	0.59
51:BT:29:ARG:HB3	51:BT:85:LYS:HA	1.84	0.59
35:BA:2811:G:O2'	35:BA:2812:G:H5'	2.01	0.59
31:D6:6:ARG:HD2	31:D6:6:ARG:N	2.16	0.59
40:BF:36:VAL:O	40:BF:40:GLN:HG3	2.01	0.59
27:B2:17:SER:H	27:B2:67:LYS:HZ2	1.51	0.59
13:CM:119:GLY:N	22:CV:31:C:OP1	2.35	0.59
35:BA:558:G:OP1	45:BN:111:PRO:HD2	2.01	0.59
5:AE:76:ILE:HD11	5:AE:142:LEU:HD11	1.85	0.59
5:CE:69:VAL:O	5:CE:71:LEU:N	2.35	0.59
38:BD:261:LYS:NZ	38:BD:263:ARG:NH2	2.51	0.59
1:AA:347:G:N2	1:AA:348:G:H1'	2.17	0.59
1:AA:984:C:H2'	1:AA:985:C:C6	2.38	0.59
57:DZ:103:ARG:HB3	57:DZ:136:PHE:HB2	1.84	0.59
34:D9:10:ILE:HD12	34:D9:32:HIS:CB	2.32	0.59
4:CD:79:PHE:C	4:CD:79:PHE:CD1	2.76	0.59
49:DR:86:ARG:HB3	49:DR:118:GLU:OE2	2.01	0.59
11:CK:126:ARG:HH11	11:CK:126:ARG:HB3	1.66	0.59
4:AD:47:ARG:NE	4:AD:49:ARG:NH2	2.50	0.59
35:BA:2803:C:H2'	35:BA:2804:C:C6	2.37	0.59
1:CA:1285:A:H1'	1:CA:1286:A:OP2	2.02	0.59
11:AK:56:GLY:O	11:AK:89:ALA:HB3	2.01	0.59
35:BA:523:C:C2'	35:BA:524:U:H5'	2.32	0.59
22:CY:56:U:C5'	57:DZ:180:VAL:O	2.50	0.59
23:CW:3:G:N2	23:CW:74:C:C6	2.70	0.59
22:AV:15:G:C2	22:AV:61:A:C2	2.90	0.59
30:B5:3:LYS:HE2	35:BA:2613:U:H2'	1.83	0.59
19:AS:11:VAL:HG22	19:AS:16:LEU:HD11	1.84	0.59
35:BA:1503:U:O2'	35:BA:1504:C:H5'	2.03	0.59
7:AG:113:GLU:HB3	7:AG:118:VAL:HG23	1.84	0.59
43:BI:91:SER:CB	43:BI:119:PRO:HB2	2.32	0.59
12:AL:43:VAL:HG13	12:AL:55:VAL:CG2	2.32	0.59
1:AA:490:G:H2'	1:AA:491:G:H8	1.67	0.59
4:AD:129:ASN:N	4:AD:129:ASN:HD22	1.98	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:581:C:OP1	52:BU:33:ARG:HG3	2.02	0.59
2:CB:17:PHE:HB2	2:CB:44:LEU:HD11	1.85	0.59
15:AO:53:HIS:O	15:AO:56:LEU:HB3	2.01	0.59
42:BH:33:LEU:HD21	42:BH:136:ILE:HG22	1.83	0.59
9:CI:5:TYR:HA	9:CI:17:VAL:O	2.03	0.59
15:AO:82:ILE:O	15:AO:82:ILE:HD13	2.02	0.59
18:AR:58:LEU:HB3	18:AR:62:GLU:HB2	1.83	0.59
18:CR:58:LEU:HB3	18:CR:62:GLU:HB2	1.84	0.59
35:BA:2317:C:O2'	35:BA:2318:G:H5'	2.03	0.59
55:DX:56:THR:HG22	55:DX:79:ALA:HB2	1.83	0.59
35:DA:607:U:H3	35:DA:621:A:H2	1.46	0.59
1:AA:1216:G:H5''	14:AN:5:ALA:CB	2.32	0.59
22:CY:76:C:O2	22:CY:76:C:C2'	2.49	0.59
1:AA:554:C:H2'	1:AA:555:C:C6	2.37	0.59
4:CD:61:LYS:CE	4:CD:62:GLN:HE21	2.14	0.59
16:CP:43:LYS:C	16:CP:45:THR:H	2.04	0.59
35:BA:1281:G:C8	35:BA:1281:G:H5'	2.37	0.59
1:CA:16:A:O2'	1:CA:17:U:H5'	2.01	0.59
35:BA:712:G:O2'	35:BA:713:G:H5'	2.03	0.59
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.37	0.59
35:BA:719:C:O2'	35:BA:720:C:H5'	2.03	0.59
1:CA:301:G:H2'	1:CA:302:G:H8	1.68	0.59
35:DA:1312:U:OP2	55:DX:63:LYS:HD2	2.01	0.59
46:DO:113:LYS:O	46:DO:117:LEU:HD12	2.02	0.59
15:AO:62:GLN:O	15:AO:66:LEU:HD13	2.03	0.59
45:BN:69:GLN:O	45:BN:71:ILE:HG13	2.02	0.59
39:DE:38:THR:C	39:DE:40:GLU:H	2.05	0.59
22:CY:19:G:N1	22:CY:59:G:C2	2.71	0.59
22:CY:24:A:N6	22:CY:48:G:H22	1.98	0.59
22:CY:7:U:H3'	22:CY:8:U:H5'	1.84	0.59
22:AY:31:C:N3	22:AY:43:G:N2	2.51	0.59
22:AY:4:C:O2'	22:AY:5:C:OP2	2.19	0.59
22:CV:19:G:H21	22:CV:59:G:H2'	1.66	0.59
56:DY:28:LYS:N	56:DY:28:LYS:HZ1	2.00	0.59
43:DI:88:ILE:HG22	43:DI:89:TYR:H	1.65	0.59
23:CW:47:G:C2'	23:CW:48:G:H5'	2.31	0.59
12:CL:90:VAL:HG22	12:CL:99:HIS:HE2	1.66	0.59
12:AL:39:VAL:HB	12:AL:57:LYS:NZ	2.17	0.59
35:BA:547:A:H1'	35:BA:548:A:N7	2.17	0.59
41:DG:4:ASP:HA	41:DG:8:LYS:CD	2.32	0.59
49:BR:58:GLY:HA2	49:BR:80:PHE:HE1	1.65	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:129:ASN:ND2	4:AD:145:GLU:N	2.49	0.59
8:CH:122:ARG:HH11	8:CH:122:ARG:CB	2.16	0.59
50:DS:35:ILE:CD1	50:DS:99:LYS:HE2	2.30	0.59
48:DQ:62:GLY:O	57:DZ:178:GLU:CB	2.47	0.59
42:BH:136:ILE:HD12	42:BH:136:ILE:H	1.67	0.59
37:BC:225:ILE:HD12	37:BC:225:ILE:O	2.03	0.59
23:CW:51:G:N1	23:CW:67:C:N4	2.50	0.59
2:CB:155:LEU:HD12	2:CB:157:ARG:O	2.02	0.59
14:CN:27:CYS:O	14:CN:29:ARG:N	2.31	0.59
4:CD:122:ARG:NH1	4:CD:135:LEU:HD12	2.16	0.59
4:CD:126:ILE:HD12	4:CD:126:ILE:N	2.17	0.59
54:BW:6:ILE:HA	54:BW:103:ILE:O	2.02	0.59
33:B8:43:GLN:C	33:B8:44:LYS:HD2	2.23	0.59
1:CA:376:G:H2'	1:CA:377:G:H8	1.68	0.59
35:DA:2445:G:OP1	40:DF:74:ARG:NH2	2.35	0.59
35:DA:286:C:H2'	35:DA:287:C:C6	2.38	0.59
1:CA:299:G:H2'	1:CA:300:A:C8	2.37	0.59
1:AA:651:C:O2'	1:AA:652:U:H5'	2.03	0.59
18:CR:30:ASP:C	18:CR:32:ARG:H	2.05	0.59
55:DX:29:TRP:CZ3	55:DX:78:LYS:HB3	2.38	0.59
35:DA:2257:U:O2'	35:DA:2258:C:H5'	2.02	0.59
30:D5:16:ARG:HG2	30:D5:16:ARG:HH11	1.66	0.59
13:AM:118:ALA:HB1	13:AM:119:GLY:N	2.17	0.59
56:BY:20:TYR:CD1	56:BY:20:TYR:N	2.71	0.59
55:DX:66:LEU:O	55:DX:66:LEU:HD23	2.02	0.59
35:BA:2439:A:C8	35:BA:2439:A:H5'	2.37	0.59
7:AG:77:SER:OG	23:AW:35:U:H5''	2.03	0.59
22:CV:67:C:H2'	22:CV:68:A:H8	1.67	0.59
51:DT:30:VAL:HG21	51:DT:84:GLN:HG3	1.83	0.59
35:BA:1902:C:H4'	38:BD:244:ARG:HA	1.84	0.59
23:AW:28:G:C8	23:AW:28:G:OP2	2.54	0.59
35:BA:2361:A:H2'	35:BA:2362:G:H5'	1.83	0.59
35:BA:1505:C:H2'	35:BA:1506:C:O4'	2.02	0.59
1:CA:1056:U:O2'	1:CA:1057:G:H5'	2.02	0.59
43:BI:69:LYS:CA	43:BI:136:VAL:HG11	2.25	0.59
30:D5:3:LYS:NZ	30:D5:5:PRO:O	2.28	0.59
10:AJ:80:LYS:HB3	10:AJ:80:LYS:HZ3	1.67	0.59
39:BE:111:ARG:HA	49:BR:2:ARG:HG2	1.83	0.59
2:AB:233:SER:HB2	2:AB:234:PRO:CD	2.30	0.59
8:CH:65:TYR:N	8:CH:65:TYR:CD1	2.71	0.59
47:BP:9:ASN:N	47:BP:10:PRO:HD2	2.10	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DF:185:ASP:HA	40:DF:188:ARG:HD3	1.85	0.59
35:BA:1210:A:H8	35:BA:1210:A:H5'	1.68	0.59
5:CE:139:LEU:HA	5:CE:142:LEU:CD1	2.33	0.59
3:CC:75:VAL:O	3:CC:83:ARG:HG2	2.03	0.59
48:DQ:28:ALA:O	48:DQ:29:PHE:CD1	2.56	0.59
29:B4:14:ILE:HG23	29:B4:31:ILE:CG2	2.32	0.59
1:AA:403:C:O2'	1:AA:404:U:H5'	2.02	0.59
26:D1:46:LEU:HA	26:D1:63:ALA:HA	1.84	0.59
37:DC:41:THR:O	37:DC:217:THR:HA	2.03	0.59
1:CA:1216:G:H5''	14:CN:5:ALA:CB	2.32	0.59
22:AY:76:C:C2'	22:AY:76:C:O2	2.50	0.59
37:DC:33:LEU:HD13	37:DC:221:PRO:HG2	1.84	0.59
4:AD:61:LYS:CE	4:AD:62:GLN:HE21	2.15	0.59
1:CA:6:G:H4'	1:CA:298:A:H4'	1.83	0.59
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.02	0.59
43:BI:8:PRO:CB	43:BI:14:ASP:H	2.15	0.59
40:DF:39:TRP:O	40:DF:43:LYS:HG2	2.02	0.59
20:AT:42:GLN:HE21	20:AT:42:GLN:HA	1.67	0.59
1:AA:663:A:O2'	1:AA:664:G:H5'	2.03	0.59
1:CA:1181:G:O2'	1:CA:1184:G:H5'	2.01	0.59
1:CA:189(E):U:O2'	1:CA:189(F):U:H5'	2.02	0.59
1:AA:580:U:H2'	1:AA:581:G:O4'	2.02	0.59
22:CY:30:U:H2'	22:CY:31:C:H6	1.64	0.59
51:DT:27:THR:HG23	51:DT:28:VAL:H	1.68	0.59
56:DY:84:ARG:NH1	56:DY:84:ARG:HG2	2.18	0.59
23:AW:20:G:H5'	23:AW:21:U:H5''	1.85	0.59
3:CC:155:GLY:O	3:CC:156:ARG:HB2	2.03	0.59
39:BE:91:VAL:HG13	39:BE:95:ILE:HG13	1.82	0.59
47:DP:102:ARG:HH11	47:DP:102:ARG:HB2	1.66	0.59
53:BV:18:LEU:CD1	53:BV:19:LYS:H	2.15	0.59
41:DG:131:TYR:CE1	41:DG:133:LEU:HD23	2.37	0.59
41:DG:63:ILE:HG21	41:DG:141:PHE:CB	2.31	0.59
41:DG:72:ARG:CG	41:DG:87:PRO:HD2	2.32	0.59
41:DG:95:ARG:O	41:DG:96:ARG:O	2.21	0.59
50:BS:96:GLY:O	50:BS:98:VAL:N	2.30	0.59
35:DA:558:G:OP1	45:DN:111:PRO:HD2	2.03	0.59
4:CD:128:VAL:CG1	4:CD:129:ASN:H	2.12	0.59
35:DA:500:G:N2	35:DA:502:A:H3'	2.18	0.59
2:AB:12:GLU:C	2:AB:14:GLY:H	2.06	0.59
3:AC:23:TYR:HA	10:AJ:11:PHE:CD2	2.37	0.59
3:AC:40:ARG:HG2	3:AC:55:VAL:HG11	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:85:LEU:HD23	15:AO:85:LEU:O	2.01	0.59
1:CA:1498:U:H1'	1:CA:1499:A:C8	2.38	0.59
35:DA:2811:G:O2'	35:DA:2812:G:H5'	2.03	0.59
42:BH:153:LYS:H	42:BH:153:LYS:CD	2.09	0.59
35:BA:8:A:H2'	35:BA:9:U:C6	2.37	0.59
35:BA:2656:U:H2'	35:BA:2657:A:H5''	1.84	0.59
1:AA:959:A:H2'	1:AA:960:U:C4'	2.32	0.59
51:BT:51:ARG:HG2	51:BT:52:ILE:N	2.17	0.59
1:AA:637:G:H2'	1:AA:638:G:C8	2.38	0.59
2:AB:181:PHE:CD1	8:AH:70:GLN:HB3	2.37	0.59
1:CA:308:C:H2'	1:CA:309:G:H8	1.68	0.59
35:DA:2779:U:H4'	35:DA:2780:G:H5'	1.83	0.59
40:BF:65:TRP:HZ3	40:BF:73:ALA:O	1.85	0.59
35:BA:2303:G:O2'	41:BG:132:ASN:HB2	2.03	0.59
1:CA:366:C:O2'	1:CA:394:G:N2	2.35	0.59
42:BH:24:VAL:HG11	42:BH:72:ILE:HD11	1.85	0.59
35:DA:1192:G:O2'	35:DA:1193:G:H5'	2.03	0.59
13:CM:30:ALA:C	13:CM:32:GLU:H	2.06	0.59
4:CD:49:ARG:HE	4:CD:49:ARG:HA	1.66	0.59
38:DD:270:ILE:O	38:DD:271:ILE:HG23	2.01	0.59
1:CA:696:A:O2'	1:CA:697:U:H5'	2.02	0.59
23:CW:35:U:H2'	23:CW:37:A:OP2	2.02	0.59
35:DA:2875:C:O2'	51:DT:5:ALA:HB3	2.02	0.59
35:BA:2312:U:C2'	35:BA:2313:C:H5''	2.33	0.59
12:AL:43:VAL:HG23	12:AL:44:THR:N	2.17	0.59
52:DU:65:ILE:HD11	52:DU:96:ALA:HB3	1.84	0.59
52:DU:112:ARG:HH12	53:DV:46:VAL:CG1	2.16	0.59
53:DV:87:HIS:NE2	53:DV:89:GLN:HG2	2.18	0.59
1:CA:979:C:C3'	1:CA:980:C:H5''	2.26	0.59
1:AA:456:C:H2'	1:AA:457:C:C6	2.38	0.59
35:DA:2562:U:C1'	46:DO:23:ARG:HH11	2.10	0.59
56:BY:39:VAL:HG12	56:BY:40:GLU:N	2.17	0.59
1:CA:484:G:H4'	1:CA:485:G:O5'	2.02	0.59
35:BA:1244:G:C2'	35:BA:1245:G:H5'	2.33	0.59
19:CS:44:MET:HA	19:CS:44:MET:HE3	1.85	0.59
39:BE:116:VAL:O	39:BE:117:MET:CB	2.44	0.59
48:BQ:43:THR:HG1	48:BQ:46:GLN:HG3	1.65	0.59
23:CW:53:U:C4	23:CW:54:G:N7	2.70	0.59
1:CA:382:A:H2'	1:CA:383:A:H8	1.66	0.59
5:AE:139:LEU:HA	5:AE:142:LEU:CD1	2.32	0.59
5:CE:108:ALA:O	5:CE:112:LEU:HG	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:69:G:H2'	1:AA:70:G:H8	1.68	0.59
39:DE:55:ASN:O	39:DE:57:LYS:N	2.36	0.59
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.68	0.59
35:BA:158:U:H2'	35:BA:171:G:O4'	2.03	0.59
35:BA:2122:U:H2'	35:BA:2123:G:C8	2.37	0.59
35:BA:1176:G:O2'	35:BA:1177:A:H5'	2.03	0.59
39:DE:132:HIS:O	39:DE:135:HIS:NE2	2.35	0.59
4:CD:96:LEU:CG	4:CD:139:ARG:HH22	2.15	0.59
11:CK:15:ALA:CB	11:CK:78:GLN:HE21	2.15	0.59
37:DC:8:TYR:CE1	37:DC:221:PRO:HB3	2.38	0.59
48:DQ:109:VAL:HG12	48:DQ:113:GLN:OE1	2.02	0.59
1:AA:6:G:H4'	1:AA:298:A:H4'	1.84	0.59
35:DA:108:U:H2'	35:DA:109:G:H8	1.68	0.59
35:DA:947:G:N2	35:DA:971:C:C2	2.71	0.59
1:CA:272:C:H2'	1:CA:273:A:H8	1.66	0.59
35:BA:108:U:H2'	35:BA:109:G:C8	2.38	0.59
1:AA:775:G:O2'	1:AA:776:G:H5'	2.03	0.59
25:B0:56:ASP:O	25:B0:57:PHE:HB2	2.03	0.59
48:DQ:21:THR:HG21	48:DQ:101:ARG:HB2	1.84	0.59
35:BA:1882:C:H5'	35:BA:1883:G:OP2	2.02	0.59
35:DA:304:G:H2'	35:DA:305:U:C6	2.37	0.59
23:AW:44:A:H2'	23:AW:45:U:H5''	1.84	0.59
23:AW:3:G:H1	23:AW:73:C:N4	2.00	0.59
22:AY:29:A:C4	22:AY:30:U:C5	2.91	0.59
23:CW:69:G:N2	23:CW:70:G:C4	2.71	0.59
41:BG:46:ALA:O	41:BG:82:LEU:HD11	2.03	0.59
22:CV:23:A:N6	22:CV:48:G:H2'	2.18	0.59
33:B8:52:LYS:N	33:B8:53:PRO:CD	2.65	0.59
35:DA:613:G:H8	35:DA:613:G:C5'	2.12	0.59
7:AG:111:ARG:NE	7:AG:123:GLU:HB2	2.17	0.59
23:CW:26:G:C5	23:CW:27:C:C4	2.91	0.59
10:AJ:6:ILE:HD11	10:AJ:72:VAL:CB	2.33	0.59
35:BA:1022:G:N2	35:BA:1142(A):A:C2	2.63	0.59
52:DU:92:ARG:NH1	53:DV:11:GLN:O	2.35	0.59
40:DF:132:VAL:HG22	40:DF:133:ASN:HD22	1.67	0.59
41:DG:120:LEU:N	41:DG:179:PRO:O	2.36	0.59
50:BS:95:HIS:CG	50:BS:96:GLY:N	2.71	0.59
57:DZ:117:LEU:HD12	57:DZ:174:VAL:CG2	2.33	0.59
47:BP:6:LEU:CD2	47:BP:6:LEU:H	2.14	0.59
52:DU:31:SER:C	52:DU:33:ARG:H	2.04	0.59
30:D5:53:ALA:C	30:D5:55:ARG:HE	2.06	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.35	0.59
35:BA:1657:C:H2'	35:BA:1658:C:C6	2.38	0.59
1:CA:1502:A:H2	1:CA:1505:G:H22	1.50	0.59
39:DE:10:GLY:HA3	51:DT:8:LYS:HZ2	1.67	0.59
20:CT:57:ARG:NH1	20:CT:57:ARG:HB2	2.18	0.59
35:DA:8:A:H2'	35:DA:9:U:C6	2.37	0.59
35:DA:1037:G:H1	35:DA:1118:C:N4	1.98	0.59
11:AK:15:ALA:CB	11:AK:78:GLN:HE21	2.15	0.59
35:DA:631:A:OP1	47:DP:64:LYS:HE2	2.03	0.59
1:CA:554:C:H2'	1:CA:555:C:H6	1.68	0.59
9:AI:112:LYS:HE3	9:AI:116:LYS:O	2.02	0.59
2:AB:41:ILE:HD12	2:AB:41:ILE:N	2.18	0.59
50:DS:88:ASP:CG	50:DS:89:ARG:N	2.56	0.59
35:BA:90:U:H1'	35:BA:92:A:H8	1.67	0.59
5:CE:60:TYR:HE1	5:CE:64:ARG:HH21	1.50	0.59
1:AA:880:C:H2'	1:AA:881:G:H8	1.67	0.59
1:AA:243:A:O2'	1:AA:244:U:OP2	2.19	0.59
1:AA:556:C:O2'	1:AA:557:G:H5'	2.03	0.59
38:DD:62:TYR:CE2	38:DD:64:ILE:HA	2.38	0.59
35:DA:2468:G:H22	35:DA:2481:G:H2'	1.66	0.59
51:BT:104:ASN:O	51:BT:105:LEU:C	2.39	0.59
3:AC:127:ARG:HH11	3:AC:127:ARG:HG2	1.67	0.59
16:AP:52:ASP:OD2	16:AP:55:ARG:HG3	2.03	0.59
35:DA:128:C:H2'	35:DA:129:C:H6	1.68	0.59
1:CA:233:C:H2'	1:CA:234:C:H6	1.68	0.59
35:BA:1996:C:H5	46:BO:32:TYR:HH	1.50	0.59
48:DQ:55:VAL:CG2	57:DZ:180:VAL:HG13	2.33	0.59
22:AY:58:C:OP2	57:BZ:182:LYS:NZ	2.30	0.59
22:AV:10:G:C2	22:AV:28:G:H1'	2.37	0.59
22:CV:14:A:N6	22:CV:15:G:C2	2.71	0.59
22:CV:3:G:N1	22:CV:4:C:C4	2.71	0.59
33:B8:61:LEU:HD12	33:B8:62:LEU:H	1.68	0.59
12:CL:81:SER:OG	12:CL:106:ASP:HB3	2.03	0.59
12:CL:58:VAL:O	12:CL:60:LEU:HD22	2.03	0.59
40:DF:133:ASN:HD22	40:DF:133:ASN:H	1.48	0.59
39:DE:52:LEU:O	39:DE:74:PRO:HA	2.02	0.59
46:DO:88:ASN:ND2	46:DO:90:GLN:H	2.00	0.59
39:BE:59:VAL:HG13	39:BE:60:ASN:N	2.18	0.59
39:BE:101:ARG:HB3	39:BE:169:ASN:ND2	2.18	0.59
2:CB:187:LEU:HD13	2:CB:187:LEU:O	2.02	0.59
40:DF:32:LEU:C	40:DF:32:LEU:HD23	2.22	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:22:LEU:HD12	19:CS:47:HIS:CE1	2.37	0.59
13:CM:118:ALA:HB1	13:CM:119:GLY:N	2.18	0.59
35:DA:158:U:H2'	35:DA:171:G:O4'	2.03	0.59
39:DE:10:GLY:HA3	51:DT:8:LYS:HZ3	1.65	0.59
35:BA:156:U:H4'	35:BA:157:U:C5'	2.32	0.59
1:CA:1409:C:O2	35:DA:1913:A:N6	2.36	0.59
43:BI:115:ALA:CB	43:BI:128:LEU:HB3	2.32	0.59
38:BD:182:LEU:H	38:BD:272:ALA:HB3	1.67	0.59
35:BA:675:A:OP1	40:BF:63:LYS:HE2	2.03	0.59
50:BS:17:ARG:HA	50:BS:20:ARG:NH1	2.18	0.59
25:D0:81:VAL:O	25:D0:83:PRO:HD3	2.03	0.59
49:DR:85:PRO:O	49:DR:87:TYR:N	2.35	0.59
37:DC:178:LYS:HB2	37:DC:181:PHE:CD1	2.37	0.59
56:DY:95:LYS:HG2	56:DY:101:LYS:N	2.18	0.59
12:CL:8:ASN:ND2	17:CQ:34:LYS:HE2	2.18	0.59
1:CA:764:C:O2'	1:CA:765:G:H5'	2.03	0.59
28:B3:52:HIS:CG	36:BB:83:G:H4'	2.38	0.59
35:BA:2779:U:H4'	35:BA:2780:G:H5'	1.85	0.59
4:CD:47:ARG:NE	4:CD:49:ARG:NH2	2.50	0.59
35:DA:418:G:O2'	35:DA:419:C:H5'	2.03	0.59
35:BA:2839:G:H5'	49:BR:46:GLY:HA2	1.85	0.59
1:AA:757:U:H2'	1:AA:758:G:O4'	2.03	0.59
45:DN:93:THR:O	45:DN:94:HIS:HB2	2.03	0.59
27:B2:45:SER:H	27:B2:46:GLN:NE2	2.00	0.59
55:BX:29:TRP:CZ3	55:BX:78:LYS:HB3	2.38	0.59
1:AA:233:C:H2'	1:AA:234:C:H6	1.66	0.59
22:AY:57:U:O4'	57:BZ:183:LEU:C	2.41	0.58
11:CK:57:THR:HG23	11:CK:60:ALA:H	1.68	0.58
51:DT:3:ARG:HB3	51:DT:6:LEU:HB2	1.85	0.58
51:DT:87:ASP:OD1	51:DT:87:ASP:O	2.21	0.58
7:CG:111:ARG:NE	7:CG:123:GLU:HB2	2.17	0.58
43:DI:69:LYS:CA	43:DI:136:VAL:HG11	2.30	0.58
38:BD:44:ASN:HB2	38:BD:48:ARG:O	2.03	0.58
12:AL:36:VAL:N	12:AL:58:VAL:CG1	2.66	0.58
12:AL:75:HIS:C	12:AL:77:LEU:H	2.07	0.58
3:AC:71:ALA:HB2	3:AC:106:VAL:HB	1.84	0.58
46:BO:79:PHE:HB3	51:BT:70:VAL:HG11	1.85	0.58
29:D4:1:MET:H2	36:DB:43:C:H5'	1.67	0.58
35:BA:1348:G:H2'	35:BA:1349:A:C5'	2.27	0.58
39:DE:34:VAL:CG1	39:DE:48:GLN:HG2	2.27	0.58
39:BE:52:LEU:O	39:BE:74:PRO:HA	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:2:ARG:O	56:BY:4:LYS:N	2.34	0.58
1:AA:114:U:H2'	1:AA:115:G:H8	1.63	0.58
36:BB:50:G:OP1	50:BS:62:LYS:HB2	2.03	0.58
35:BA:557:U:H2'	35:BA:558:G:H8	1.67	0.58
32:B7:12:ARG:HG3	35:BA:686:G:O6	2.02	0.58
5:CE:76:ILE:HD11	5:CE:142:LEU:HD11	1.85	0.58
37:DC:225:ILE:O	37:DC:225:ILE:HD12	2.03	0.58
23:CW:52:C:H2'	23:CW:53:U:H6	1.68	0.58
13:AM:23:TYR:HD2	13:AM:67:GLU:HA	1.68	0.58
1:AA:197:A:C5	1:AA:221:C:H4'	2.38	0.58
7:AG:16:LEU:HD11	9:AI:42:ARG:HG3	1.84	0.58
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.38	0.58
7:CG:16:LEU:HD11	9:CI:42:ARG:HG3	1.85	0.58
1:AA:191:G:H1'	20:AT:105:SER:CB	2.33	0.58
35:BA:274:G:H3'	35:BA:274:G:N3	2.18	0.58
35:BA:2415:G:H4'	47:BP:67:MET:H	1.68	0.58
42:BH:80:SER:O	42:BH:81:GLU:HB2	2.03	0.58
35:BA:2693:A:H2'	35:BA:2694:G:C8	2.35	0.58
6:CF:3:ARG:HD3	6:CF:64:GLN:NE2	2.17	0.58
4:CD:98:GLU:HG3	4:CD:103:ASN:ND2	2.17	0.58
4:AD:98:GLU:HG3	4:AD:103:ASN:ND2	2.17	0.58
47:DP:108:LYS:HD2	47:DP:108:LYS:N	2.17	0.58
35:BA:2777:G:C4'	35:BA:2778:A:H5'	2.32	0.58
35:BA:1709:U:H2'	35:BA:1710:C:C6	2.38	0.58
35:BA:1358:G:O2'	35:BA:1359:A:H5''	2.03	0.58
25:B0:19:LYS:O	25:B0:21:LEU:HG	2.03	0.58
35:DA:792:G:H5''	35:DA:793:A:H5'	1.85	0.58
35:DA:848:G:H2'	35:DA:849:A:C8	2.38	0.58
35:BA:654(A):G:C2'	35:BA:654(B):C:H5'	2.33	0.58
1:AA:679:C:O2'	1:AA:680:C:H5'	2.03	0.58
8:CH:63:LEU:H	8:CH:63:LEU:HD22	1.68	0.58
34:B9:7:VAL:HG12	34:B9:25:VAL:HG21	1.83	0.58
1:AA:1131:G:H2'	1:AA:1132:C:C6	2.37	0.58
19:CS:69:HIS:HB2	19:CS:74:PHE:HE2	1.68	0.58
57:BZ:27:VAL:HG22	57:BZ:28:MET:H	1.68	0.58
1:CA:1507:A:H2'	1:CA:1508:G:O4'	2.03	0.58
23:AW:68:A:C3'	23:AW:69:G:H5''	2.32	0.58
22:AY:56:U:O5'	22:AY:56:U:H6	1.85	0.58
22:AY:6:C:H2'	22:AY:7:U:C5	2.38	0.58
41:BG:71:THR:N	41:BG:89:GLY:O	2.34	0.58
4:AD:30:LYS:O	4:AD:32:ALA:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DY:2:ARG:O	56:DY:4:LYS:N	2.33	0.58
1:CA:147:G:H2'	1:CA:148:G:C8	2.39	0.58
57:DZ:75:ASN:O	57:DZ:84:GLU:HB2	2.03	0.58
52:BU:83:LEU:CD2	52:BU:83:LEU:H	2.12	0.58
35:DA:2312:U:C2'	35:DA:2313:C:H5''	2.33	0.58
39:BE:51:PHE:CD1	39:BE:52:LEU:N	2.71	0.58
8:AH:122:ARG:HH11	8:AH:122:ARG:CB	2.15	0.58
33:D8:30:ARG:NE	33:D8:30:ARG:HA	2.18	0.58
2:AB:187:LEU:HD13	2:AB:187:LEU:O	2.02	0.58
35:DA:2392:A:H2	35:DA:2424:C:N4	1.96	0.58
57:BZ:110:GLY:HA3	57:BZ:146:ILE:HG23	1.84	0.58
56:BY:54:LYS:O	56:BY:56:PRO:HD2	2.03	0.58
38:DD:31:LYS:O	38:DD:33:LEU:N	2.37	0.58
38:DD:34:VAL:HG23	38:DD:35:LYS:H	1.67	0.58
54:BW:58:ALA:HB1	54:BW:64:MET:SD	2.42	0.58
26:B1:51:VAL:HG21	26:B1:74:VAL:HG21	1.85	0.58
26:B1:51:VAL:HG22	26:B1:53:VAL:HG23	1.84	0.58
42:BH:148:ILE:O	42:BH:162:ILE:HD11	2.03	0.58
38:BD:263:ARG:NH1	38:BD:263:ARG:HB2	2.17	0.58
42:BH:156:ALA:O	42:BH:158:HIS:N	2.36	0.58
35:DA:1449:A:H5'	35:DA:1450:G:OP2	2.02	0.58
2:AB:112:VAL:C	2:AB:114:ARG:H	2.05	0.58
1:CA:1490:C:H2'	1:CA:1491:G:H5'	1.84	0.58
35:DA:1658:C:OP1	39:DE:132:HIS:CE1	2.56	0.58
1:CA:959:A:H2'	1:CA:960:U:C4'	2.33	0.58
37:BC:33:LEU:HD13	37:BC:221:PRO:HG2	1.84	0.58
1:CA:1190:G:P	3:CC:5:ILE:HD12	2.43	0.58
1:AA:638:G:O2'	1:AA:639:G:H5'	2.03	0.58
8:CH:17:THR:HB	8:CH:78:GLN:OE1	2.03	0.58
47:DP:108:LYS:C	47:DP:110:TYR:H	2.06	0.58
43:DI:33:ARG:HB2	43:DI:35:LEU:HG	1.85	0.58
35:DA:782:A:H5'	35:DA:783:A:C2	2.38	0.58
43:BI:38:LEU:HB3	43:BI:40:THR:HG23	1.86	0.58
35:DA:143:G:H1'	55:DX:37:THR:HG21	1.85	0.58
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.38	0.58
35:DA:176:G:O2'	35:DA:177:G:H5'	2.03	0.58
35:BA:535:C:O2'	35:BA:536:A:H5'	2.02	0.58
35:BA:2795:G:H2'	35:BA:2795:G:N3	2.18	0.58
22:CY:56:U:H2'	57:DZ:183:LEU:HA	1.84	0.58
22:AY:25:A:O2'	22:AY:26:G:H5'	2.04	0.58
22:AY:57:U:O4	22:AY:60:A:OP2	2.21	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DT:70:VAL:HG12	51:DT:71:GLY:O	2.03	0.58
56:BY:84:ARG:HD2	56:BY:97:ARG:CD	2.33	0.58
56:DY:66:PRO:O	56:DY:67:LEU:HB3	2.03	0.58
47:DP:62:LEU:HD23	47:DP:63:PRO:N	2.18	0.58
43:DI:81:VAL:N	43:DI:143:SER:HB2	2.17	0.58
35:DA:779:U:OP1	38:DD:49:ILE:HG22	2.03	0.58
12:CL:86:ARG:NH2	12:CL:99:HIS:ND1	2.51	0.58
12:AL:50:SER:O	12:AL:51:ALA:HB2	2.02	0.58
53:DV:18:LEU:CD1	53:DV:19:LYS:H	2.16	0.58
46:BO:64:ARG:O	46:BO:82:ASN:HA	2.03	0.58
51:BT:116:ALA:HB1	51:BT:121:ILE:CD1	2.32	0.58
51:BT:64:ARG:HD2	51:BT:73:GLU:HG2	1.85	0.58
39:BE:55:ASN:O	39:BE:57:LYS:N	2.36	0.58
39:BE:70:ALA:O	39:BE:72:VAL:N	2.36	0.58
42:DH:24:VAL:HG11	42:DH:72:ILE:HD11	1.85	0.58
22:AY:52:C:C4	22:AY:53:U:C4	2.92	0.58
36:BB:50:G:OP2	50:BS:62:LYS:HG3	2.04	0.58
38:BD:30:GLU:CD	38:BD:63:ARG:HE	2.07	0.58
57:BZ:108:PRO:HB3	57:BZ:144:LEU:HD23	1.85	0.58
47:BP:16:ARG:HH11	47:BP:16:ARG:HB2	1.67	0.58
32:D7:8:ASN:ND2	32:D7:8:ASN:C	2.51	0.58
39:DE:69:LYS:HE3	39:DE:90:THR:OG1	2.02	0.58
19:CS:49:ILE:O	19:CS:51:VAL:HG23	2.03	0.58
2:CB:112:VAL:C	2:CB:114:ARG:H	2.05	0.58
20:CT:26:ASN:HA	20:CT:29:LYS:HG2	1.85	0.58
38:BD:79:VAL:HG21	38:BD:111:LEU:CD1	2.32	0.58
49:DR:98:LEU:HB2	49:DR:113:LEU:CD2	2.32	0.58
34:D9:4:ARG:HD2	34:D9:34:GLN:HE21	1.67	0.58
33:D8:29:LYS:O	33:D8:29:LYS:HG3	2.03	0.58
50:DS:89:ARG:HB3	50:DS:92:TYR:HB3	1.83	0.58
42:BH:68:THR:O	42:BH:70:THR:N	2.36	0.58
35:BA:27:G:H22	35:BA:512:G:C2'	2.16	0.58
1:AA:584:G:H2'	1:AA:585:G:C8	2.38	0.58
36:DB:73:A:N6	57:DZ:29:TYR:HE2	2.00	0.58
53:BV:5:VAL:HG23	53:BV:37:VAL:O	2.03	0.58
1:AA:1463:C:O2'	1:AA:1464:G:H5'	2.03	0.58
35:DA:2136:C:H2'	35:DA:2137:C:C6	2.38	0.58
35:BA:1816:G:H8	38:BD:62:TYR:CZ	2.21	0.58
42:BH:106:THR:HG22	42:BH:112:PRO:HB3	1.85	0.58
3:CC:167:TRP:O	3:CC:168:ALA:HB3	2.04	0.58
39:DE:107:THR:HA	39:DE:163:GLU:O	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2022:U:O2'	35:DA:2617:C:H5'	2.02	0.58
57:BZ:157:LEU:H	57:BZ:157:LEU:HD23	1.67	0.58
35:DA:2520:C:H6	35:DA:2520:C:O5'	1.85	0.58
3:CC:127:ARG:HG2	3:CC:127:ARG:HH11	1.67	0.58
1:CA:1255:G:H2'	1:CA:1255:G:N3	2.17	0.58
11:AK:13:GLN:NE2	11:AK:75:TYR:HA	2.18	0.58
22:CY:19:G:C6	57:DZ:184:ALA:C	2.76	0.58
22:CY:4:C:N4	22:CY:72:C:H5	2.02	0.58
22:CY:70:G:C4	22:CY:71:G:C8	2.92	0.58
23:CW:39:A:H5''	23:CW:40:A:OP2	2.03	0.58
22:AV:10:G:N2	22:AV:28:G:C1'	2.63	0.58
22:AV:71:G:N3	22:AV:71:G:H2'	2.18	0.58
51:DT:25:GLY:O	51:DT:26:ASP:HB2	2.03	0.58
47:BP:50:ARG:HG2	47:BP:50:ARG:NH1	2.16	0.58
56:DY:39:VAL:HG12	56:DY:40:GLU:N	2.19	0.58
33:B8:6:THR:HG22	33:B8:63:PRO:HD3	1.85	0.58
1:AA:1056:U:O2'	1:AA:1057:G:H5'	2.02	0.58
8:CH:109:ILE:HG22	8:CH:137:VAL:O	2.03	0.58
12:AL:41:ARG:NE	12:AL:43:VAL:HG12	2.18	0.58
12:AL:60:LEU:HB2	12:AL:64:TYR:O	2.03	0.58
12:AL:81:SER:OG	12:AL:106:ASP:HB3	2.03	0.58
3:CC:155:GLY:O	3:CC:196:LEU:HD13	2.02	0.58
10:CJ:95:GLU:HG3	10:CJ:96:ILE:N	2.18	0.58
42:DH:19:VAL:CG2	42:DH:44:VAL:HA	2.27	0.58
40:BF:132:VAL:HG22	40:BF:133:ASN:HD22	1.68	0.58
51:BT:46:GLU:OE2	51:BT:88:ILE:HG13	2.03	0.58
31:B6:27:LYS:HB3	31:B6:30:THR:CG2	2.33	0.58
57:DZ:145:GLU:CG	57:DZ:146:ILE:N	2.64	0.58
42:DH:136:ILE:HD12	42:DH:136:ILE:H	1.66	0.58
2:AB:155:LEU:HD12	2:AB:157:ARG:O	2.02	0.58
41:BG:142:PRO:HG2	41:BG:143:GLU:H	1.67	0.58
29:B4:5:ILE:CD1	41:BG:67:LYS:HZ3	2.16	0.58
5:CE:98:THR:HB	5:CE:117:ASP:HB3	1.84	0.58
8:CH:8:ASP:O	8:CH:11:THR:N	2.37	0.58
23:CW:52:C:C2	23:CW:53:U:C5	2.91	0.58
6:CF:37:VAL:CG1	6:CF:38:GLU:H	2.17	0.58
35:DA:1176:G:O2'	35:DA:1177:A:H5'	2.03	0.58
35:BA:2189:U:C3'	35:BA:2190:G:H5''	2.33	0.58
1:CA:532:A:H61	3:CC:193:TYR:CB	2.16	0.58
35:BA:1434:A:H61	35:BA:1558:A:N6	2.00	0.58
1:CA:552:U:O2'	1:CA:553:A:H5'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:105:LEU:CD2	42:DH:105:LEU:H	2.16	0.58
13:AM:6:GLY:O	13:AM:8:GLU:N	2.36	0.58
45:DN:120:LEU:HD23	45:DN:121:LYS:N	2.18	0.58
45:DN:3:THR:O	45:DN:4:TYR:CD1	2.56	0.58
43:BI:33:ARG:HB2	43:BI:35:LEU:HG	1.86	0.58
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.03	0.58
34:B9:10:ILE:HD12	34:B9:32:HIS:CB	2.33	0.58
3:AC:8:ILE:C	3:AC:10:PHE:H	2.07	0.58
1:AA:648:A:H2'	1:AA:649:G:C8	2.39	0.58
35:BA:225:A:H2'	35:BA:226:G:H5'	1.86	0.58
35:BA:207:A:H2'	35:BA:208:C:O4'	2.04	0.58
18:CR:46:GLU:HA	18:CR:46:GLU:OE1	2.02	0.58
44:DJ:118:UNK:C	44:DJ:120:UNK:H	2.17	0.58
22:CY:24:A:C2	22:CY:25:A:C8	2.91	0.58
22:AY:56:U:H2'	57:BZ:183:LEU:CG	2.32	0.58
23:CW:68:A:C3'	23:CW:69:G:H5''	2.33	0.58
23:CW:44:A:H2'	23:CW:45:U:C5'	2.34	0.58
22:CV:6:C:N3	22:CV:69:G:O6	2.36	0.58
23:AW:55:G:H2'	23:AW:56:U:C6	2.39	0.58
35:DA:1505:C:H2'	35:DA:1506:C:O4'	2.03	0.58
33:D8:13:ARG:HB3	47:DP:63:PRO:HB3	1.84	0.58
35:DA:1914:C:P	35:DA:1914:C:H3'	2.44	0.58
10:AJ:6:ILE:O	10:AJ:71:LEU:HD12	2.03	0.58
53:DV:39:LEU:HA	53:DV:47:VAL:CG1	2.34	0.58
57:DZ:44:PHE:CZ	57:DZ:86:VAL:HG21	2.38	0.58
36:DB:45:A:H1'	41:DG:95:ARG:HH21	1.67	0.58
35:DA:1652:A:H3'	35:DA:1653:G:C8	2.38	0.58
39:BE:65:GLY:HA2	39:BE:70:ALA:CB	2.33	0.58
35:BA:1537:G:H2'	35:BA:1538:G:C8	2.27	0.58
56:BY:44:ILE:N	56:BY:62:GLU:OE1	2.35	0.58
48:BQ:42:ILE:HD13	48:BQ:97:VAL:CG2	2.33	0.58
27:D2:46:GLN:HG2	27:D2:49:LYS:NZ	2.18	0.58
30:D5:54:GLY:C	30:D5:55:ARG:NE	2.57	0.58
3:AC:40:ARG:HG2	3:AC:55:VAL:CG1	2.33	0.58
54:BW:22:ASP:HA	54:BW:25:ARG:NH1	2.17	0.58
39:DE:65:GLY:HA2	39:DE:70:ALA:CB	2.33	0.58
35:BA:2472:G:H3'	35:BA:2475:C:H42	1.68	0.58
19:AS:31:ILE:CG2	19:AS:49:ILE:HA	2.34	0.58
1:AA:943:U:C2'	1:AA:944:G:H5'	2.34	0.58
37:BC:11:LEU:HB3	37:BC:33:LEU:HD22	1.85	0.58
35:BA:1015:G:O2'	35:BA:1016:G:H5'	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:128:VAL:CG2	57:DZ:132:ASN:HB2	2.33	0.58
21:CU:2:GLY:O	21:CU:4:GLY:N	2.36	0.58
1:CA:874:G:H2'	1:CA:875:C:C6	2.38	0.58
6:CF:45:LEU:HD23	6:CF:45:LEU:C	2.24	0.58
11:AK:24:SER:O	11:AK:26:ASN:N	2.36	0.58
1:CA:600:C:OP2	8:CH:97:VAL:HG12	2.03	0.58
45:BN:120:LEU:HD21	45:BN:122:VAL:HG23	1.85	0.58
51:BT:57:PHE:CG	51:BT:58:ASN:N	2.63	0.58
13:CM:112:GLY:HA2	13:CM:113:PRO:CG	2.34	0.58
1:AA:1427:U:H2'	1:AA:1428:A:H8	1.68	0.58
36:DB:30:C:H2'	36:DB:31:C:O4'	2.04	0.58
2:CB:194:PRO:HG2	2:CB:195:ASP:OD1	2.03	0.58
1:CA:1523:G:H2'	1:CA:1524:C:H6	1.69	0.58
35:BA:1810:A:H2'	35:BA:1811:G:O4'	2.04	0.58
57:BZ:7:ALA:O	57:BZ:62:PRO:HD3	2.03	0.58
35:BA:1467:C:O2'	35:BA:1468:C:H5'	2.03	0.58
2:AB:56:ARG:HG2	2:AB:56:ARG:HH11	1.69	0.58
8:CH:54:ASP:C	8:CH:56:LYS:H	2.04	0.58
26:B1:19:GLN:HB2	26:B1:35:THR:HG23	1.84	0.58
39:DE:105:THR:HG21	39:DE:164:ARG:NH1	2.19	0.58
35:DA:1810:A:H2'	35:DA:1811:G:O4'	2.04	0.58
35:BA:2506:U:H4'	35:BA:2507:C:OP1	2.04	0.58
1:CA:731:G:OP1	1:CA:766:A:H1'	2.04	0.58
13:AM:116:THR:O	13:AM:116:THR:HG22	2.03	0.58
48:BQ:28:ALA:O	48:BQ:29:PHE:CD1	2.56	0.58
47:DP:38:GLN:CG	47:DP:39:LYS:H	2.00	0.58
56:DY:28:LYS:HB3	56:DY:38:ILE:N	2.13	0.58
1:AA:1054:C:O2'	1:AA:1055:A:C5'	2.52	0.58
23:CW:13:U:H2'	23:CW:14:A:H5"	1.83	0.58
35:BA:1915:U:C2'	35:BA:1916:A:H5"	2.33	0.58
12:CL:85:ILE:HG13	12:CL:98:TYR:HB3	1.85	0.58
40:BF:20:LEU:HD12	40:BF:199:TRP:CZ3	2.38	0.58
1:AA:1442(A):G:C3'	1:AA:1442(B):A:H5'	2.33	0.58
43:DI:74:ASN:ND2	43:DI:74:ASN:N	2.43	0.58
2:CB:171:ALA:HA	2:CB:174:VAL:HG23	1.84	0.58
41:BG:133:LEU:HD12	41:BG:133:LEU:C	2.24	0.58
35:DA:2158:A:H4'	35:DA:2159:G:C5'	2.32	0.58
20:AT:26:ASN:HA	20:AT:29:LYS:HG2	1.84	0.58
1:CA:1490:C:C2'	1:CA:1491:G:H5'	2.34	0.58
36:DB:94:C:H2'	36:DB:95:C:C6	2.37	0.58
50:DS:88:ASP:OD1	50:DS:89:ARG:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:110:LEU:HA	40:BF:183:VAL:HG12	1.86	0.58
35:DA:142:A:H5''	35:DA:142(A):C:C5	2.38	0.58
35:DA:1131:G:O2'	35:DA:1132:A:H8	1.84	0.58
35:BA:2537:U:H2'	35:BA:2538:C:C6	2.37	0.58
35:DA:2152:G:H2'	35:DA:2153:G:C8	2.39	0.58
7:CG:44:TYR:O	7:CG:48:LYS:HG3	2.03	0.58
1:AA:930:C:O2'	1:AA:931:C:H5'	2.04	0.58
49:DR:31:HIS:C	49:DR:33:ARG:H	2.06	0.58
1:CA:556:C:O2'	1:CA:557:G:H5'	2.03	0.58
38:DD:94:LEU:HB2	38:DD:104:TYR:HE1	1.69	0.58
39:BE:105:THR:HG21	39:BE:164:ARG:NH1	2.18	0.58
42:BH:88:LEU:HD12	42:BH:130:ARG:HG2	1.84	0.58
1:CA:924:C:H2'	1:CA:925:G:C8	2.38	0.58
43:BI:145:VAL:HG23	43:BI:146:ALA:N	2.18	0.58
33:D8:23:VAL:CG1	33:D8:46:ARG:HB3	2.33	0.58
35:BA:2257:U:O2'	35:BA:2258:C:H5'	2.03	0.58
35:DA:2795:G:N3	35:DA:2795:G:H2'	2.17	0.58
1:CA:1131:G:H2'	1:CA:1132:C:C6	2.38	0.58
23:AW:42:C:C5	23:AW:43:G:C8	2.92	0.58
23:CW:33:G:H2'	23:CW:34:C:O4'	2.02	0.58
22:CV:69:G:C4	22:CV:70:G:C8	2.92	0.58
33:B8:14:VAL:CG2	33:B8:22:VAL:HG13	2.34	0.58
19:AS:62:ILE:HD12	19:AS:66:MET:CE	2.33	0.58
56:BY:84:ARG:NH1	56:BY:84:ARG:HG2	2.18	0.58
47:DP:57:THR:HB	47:DP:59:LEU:H	1.68	0.58
43:DI:66:GLU:OE2	43:DI:134:PRO:HD2	2.04	0.58
1:CA:1057:G:H5''	3:CC:154:SER:CB	2.12	0.58
12:CL:89:ARG:HD3	12:CL:90:VAL:N	2.18	0.58
40:BF:18:ARG:HH21	40:BF:20:LEU:HD11	1.68	0.58
45:DN:57:ALA:O	45:DN:58:ASP:O	2.21	0.58
1:CA:1367:C:H4'	10:CJ:48:THR:HG21	1.85	0.58
17:CQ:9:VAL:HG11	17:CQ:84:LEU:HD12	1.85	0.58
33:D8:59:LYS:HZ2	33:D8:59:LYS:HB2	1.67	0.58
51:BT:91:ARG:CB	51:BT:116:ALA:HA	2.33	0.58
12:CL:49:ASN:HD22	12:CL:49:ASN:N	2.00	0.58
49:DR:2:ARG:HD3	49:DR:5:LYS:CE	2.33	0.58
49:DR:58:GLY:HA2	49:DR:80:PHE:HE1	1.68	0.58
7:CG:5:ARG:C	7:CG:7:ALA:H	2.07	0.58
45:DN:43:THR:HB	45:DN:46:VAL:CG1	2.32	0.58
19:CS:62:ILE:HD12	19:CS:66:MET:CE	2.34	0.58
2:AB:17:PHE:HD2	2:AB:44:LEU:HD11	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:26:ALA:CB	37:BC:225:ILE:HG21	2.34	0.58
2:CB:12:GLU:C	2:CB:14:GLY:H	2.07	0.58
26:B1:51:VAL:HG13	26:B1:58:ILE:CG1	2.33	0.58
9:CI:33:PHE:CE1	9:CI:37:PHE:HD2	2.22	0.58
39:DE:59:VAL:HG13	39:DE:60:ASN:N	2.18	0.58
1:AA:136:C:C4'	16:AP:1:MET:HE2	2.32	0.58
40:DF:84:VAL:HG12	40:DF:85:GLY:N	2.19	0.58
4:AD:148:VAL:HG12	4:AD:152:SER:HB2	1.85	0.58
35:BA:2188:C:H2'	35:BA:2189:U:O4'	2.03	0.58
35:DA:2189:U:C3'	35:DA:2190:G:H5''	2.34	0.58
42:DH:9:ILE:HD12	42:DH:50:VAL:HB	1.86	0.58
5:AE:69:VAL:O	5:AE:71:LEU:N	2.36	0.58
57:DZ:46:LYS:O	57:DZ:49:ARG:HB2	2.04	0.58
34:D9:10:ILE:HD12	34:D9:32:HIS:HB3	1.85	0.58
22:AV:34:C:H2'	22:AV:34:C:O2	2.03	0.58
18:CR:36:ASN:HB3	18:CR:39:VAL:HB	1.86	0.58
25:D0:47:PRO:HB3	25:D0:51:VAL:O	2.03	0.58
35:DA:2401:U:C2'	35:DA:2402:C:H5''	2.34	0.58
35:BA:2401:U:C2'	35:BA:2402:C:H5''	2.33	0.58
8:CH:91:ARG:HH12	17:CQ:33:GLY:HA3	1.69	0.58
39:DE:93:VAL:CG1	39:DE:175:VAL:HG23	2.33	0.58
35:DA:962:G:O2'	35:DA:963:U:H5'	2.02	0.58
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.39	0.58
1:CA:930:C:O2'	1:CA:931:C:H5'	2.03	0.58
35:DA:1970:A:H5''	35:DA:1971:A:OP1	2.04	0.58
57:BZ:57:ILE:HG22	57:BZ:58:VAL:N	2.17	0.58
3:CC:8:ILE:C	3:CC:10:PHE:H	2.07	0.58
55:DX:24:GLY:O	55:DX:82:GLN:HA	2.04	0.58
2:CB:35:GLU:O	2:CB:35:GLU:HG2	2.04	0.58
35:DA:2506:U:H4'	35:DA:2507:C:OP1	2.04	0.58
22:CY:25:A:H2'	22:CY:26:G:H8	1.67	0.58
22:CY:28:G:H2'	22:CY:28:G:N3	2.18	0.58
22:AY:24:A:N6	22:AY:48:G:H22	2.02	0.58
41:BG:43:LEU:HB2	41:BG:88:ILE:CG2	2.34	0.58
22:CV:7:U:H3'	22:CV:8:U:H5'	1.86	0.58
23:AW:10:G:C6	23:AW:27:C:H2'	2.38	0.58
19:AS:16:LEU:O	19:AS:20:LEU:N	2.23	0.58
43:DI:101:LEU:O	43:DI:107:VAL:HB	2.04	0.58
43:BI:91:SER:O	43:BI:92:VAL:HG23	2.04	0.58
12:CL:75:HIS:C	12:CL:77:LEU:H	2.07	0.58
1:AA:179:A:O2'	1:AA:180:U:H5'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DB:20:C:C3'	36:DB:21:G:H5''	2.33	0.58
1:CA:963:G:N2	10:CJ:55:LYS:HZ3	2.02	0.58
36:BB:20:C:C3'	36:BB:21:G:H5''	2.34	0.58
45:DN:58:ASP:OD1	45:DN:124:ALA:HB1	2.04	0.58
35:DA:547:A:H1'	35:DA:548:A:N7	2.19	0.58
33:D8:52:LYS:N	33:D8:53:PRO:CD	2.66	0.58
3:AC:181:ASN:HD21	3:AC:204:LEU:HB2	1.69	0.58
57:DZ:149:SER:CB	57:DZ:173:ALA:HA	2.34	0.58
2:AB:55:PHE:CD1	2:AB:58:ILE:HD12	2.39	0.58
1:CA:943:U:C2'	1:CA:944:G:H5'	2.34	0.58
22:CV:31:C:H2'	22:CV:32:G:C8	2.39	0.58
35:BA:482:A:H4'	56:BY:47:LYS:HG2	1.86	0.58
30:B5:53:ALA:C	30:B5:55:ARG:HE	2.07	0.58
47:BP:18:ARG:O	47:BP:18:ARG:NH1	2.36	0.58
38:BD:28:GLU:H	38:BD:29:PRO:CD	2.16	0.58
1:CA:1129:C:H5''	1:CA:1139:G:O6	2.04	0.58
13:CM:23:TYR:HD2	13:CM:67:GLU:HA	1.68	0.58
13:CM:69:GLU:HA	13:CM:70:LEU:N	2.19	0.58
1:CA:1505:G:H4'	1:CA:1506:U:H5'	1.84	0.58
1:CA:136:C:C4'	16:CP:1:MET:HE2	2.34	0.58
42:DH:154:PRO:HB3	42:DH:163:TYR:CZ	2.39	0.58
35:DA:2206:G:H21	35:DA:2207:G:H5'	1.66	0.58
16:AP:43:LYS:O	16:AP:45:THR:N	2.33	0.58
41:DG:51:ARG:CZ	41:DG:53:LEU:HD21	2.34	0.58
7:CG:47:CYS:O	7:CG:50:ILE:HB	2.04	0.58
1:AA:1169:A:H2'	1:AA:1170:A:H8	1.66	0.58
1:CA:821:G:H2'	1:CA:822:C:C6	2.38	0.58
35:BA:1430:C:H2'	35:BA:1431:U:C6	2.39	0.58
22:AV:76:C:H2'	22:AV:77:C:H5'	1.85	0.58
1:AA:1285:A:H1'	1:AA:1286:A:OP2	2.02	0.58
35:BA:1181:C:O2'	35:BA:1182:A:H5'	2.04	0.58
1:AA:731:G:OP1	1:AA:766:A:H1'	2.02	0.58
25:D0:19:LYS:O	25:D0:21:LEU:HG	2.03	0.58
20:CT:31:SER:HA	20:CT:34:LYS:HD2	1.86	0.58
1:CA:560:U:O2'	1:CA:561:U:OP2	2.19	0.58
35:DA:1286:A:O2'	35:DA:1288:U:OP2	2.19	0.58
23:AW:72:C:H2'	23:AW:73:C:C6	2.39	0.58
22:AY:71:G:C6	22:AY:72:C:C4	2.91	0.58
57:BZ:183:LEU:CG	57:BZ:186:GLU:OE2	2.48	0.58
41:BG:88:ILE:CG2	41:BG:89:GLY:N	2.66	0.58
4:AD:30:LYS:C	4:AD:32:ALA:N	2.56	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:803:U:C2'	35:DA:804:A:H5'	2.33	0.58
47:DP:40:SER:O	47:DP:41:ARG:NE	2.33	0.58
35:DA:1486:A:H61	35:DA:1504:C:N4	2.02	0.58
35:DA:1503:U:O2'	35:DA:1504:C:H5'	2.03	0.58
56:DY:26:LYS:O	56:DY:28:LYS:HE3	2.04	0.58
10:AJ:8:LEU:O	10:AJ:16:LEU:HD21	2.04	0.58
1:CA:1054:C:O2'	1:CA:1055:A:C5'	2.52	0.58
57:DZ:6:LYS:N	57:DZ:6:LYS:HD3	2.19	0.58
35:BA:2681:C:H5	35:BA:2725:A:N6	1.93	0.58
26:D1:73:LEU:HD12	26:D1:94:LEU:HB3	1.86	0.58
3:AC:7:PRO:O	3:AC:11:ARG:HG2	2.03	0.58
49:BR:9:LYS:O	49:BR:10:LEU:HD23	2.03	0.58
2:CB:17:PHE:HD2	2:CB:44:LEU:HD11	1.68	0.58
41:BG:91:ARG:C	41:BG:91:ARG:HD2	2.24	0.58
3:CC:39:ILE:O	3:CC:43:LEU:HG	2.04	0.58
56:DY:53:PRO:O	56:DY:54:LYS:HG3	2.04	0.58
1:AA:1128:C:H5'	9:AI:16:ARG:HH12	1.68	0.58
5:AE:76:ILE:HG12	5:AE:77:PRO:CD	2.30	0.58
41:BG:125:PHE:HB3	41:BG:130:ASN:O	2.04	0.58
22:CY:35:U:H5'	22:CY:36:AG9:OP1	2.04	0.58
35:BA:621:A:H2'	35:BA:622:G:C5'	2.34	0.58
35:DA:1174:A:OP2	35:DA:1175:U:H5''	2.04	0.58
47:BP:123:LEU:O	47:BP:123:LEU:HD12	2.02	0.58
5:CE:82:VAL:HG21	5:CE:138:ALA:HA	1.85	0.58
1:CA:1457:G:H2'	1:CA:1458:G:C8	2.39	0.58
35:DA:274:G:N3	35:DA:274:G:H3'	2.18	0.58
47:DP:112:LEU:C	47:DP:112:LEU:HD13	2.23	0.58
4:AD:79:PHE:C	4:AD:79:PHE:CD1	2.75	0.58
8:CH:77:GLU:HG2	8:CH:78:GLN:H	1.67	0.58
35:BA:1332:G:H21	35:BA:1610:A:H8	1.49	0.58
39:BE:93:VAL:CG1	39:BE:175:VAL:HG23	2.33	0.58
38:DD:95:LEU:O	38:DD:95:LEU:HD12	2.04	0.58
7:AG:75:VAL:HG12	7:AG:88:PRO:HB3	1.86	0.58
7:AG:92:SER:O	7:AG:96:GLN:HG3	2.04	0.58
35:BA:1396:U:H2'	35:BA:1396:U:O2	2.03	0.58
1:CA:643:C:H5'	8:CH:31:PHE:CD1	2.39	0.58
35:BA:2087:G:O2'	35:BA:2088:G:H5'	2.04	0.58
1:AA:952:U:H2'	1:AA:953:G:H8	1.69	0.58
1:AA:867:G:H2'	1:AA:868:C:H6	1.68	0.58
1:CA:663:A:O2'	1:CA:664:G:H5'	2.04	0.58
1:CA:679:C:O2'	1:CA:680:C:H5'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:39:PRO:O	4:CD:44:GLY:HA3	2.04	0.58
22:CY:43:G:C2	22:CY:44:A:C4	2.92	0.58
22:CY:69:G:C4	22:CY:70:G:C8	2.91	0.58
22:AY:12:U:N3	22:AY:26:G:C2	2.72	0.58
22:AY:7:U:H3'	22:AY:8:U:H5'	1.85	0.58
51:DT:6:LEU:HD23	51:DT:9:LEU:HB2	1.86	0.58
22:AV:15:G:C8	22:AV:16:U:H5	2.22	0.58
22:CV:20:G:N2	22:CV:58:C:C2	2.72	0.58
47:BP:47:ASP:HB3	47:BP:48:PRO:O	2.03	0.58
19:AS:44:MET:HB3	19:AS:62:ILE:HG12	1.86	0.58
56:BY:7:VAL:HB	56:BY:8:LYS:HD2	1.85	0.58
56:DY:28:LYS:N	56:DY:28:LYS:HZ2	2.00	0.58
1:AA:972:C:OP2	10:AJ:57:LYS:HE2	2.03	0.58
3:AC:155:GLY:O	3:AC:196:LEU:HD13	2.04	0.58
1:AA:1152:A:H5''	10:AJ:13:HIS:CD2	2.38	0.58
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.19	0.58
36:DB:40:U:O2	36:DB:43:C:H5''	2.03	0.58
53:BV:46:VAL:HG13	53:BV:47:VAL:N	2.17	0.58
35:DA:2724:C:P	49:DR:2:ARG:NH2	2.77	0.58
50:DS:95:HIS:CG	50:DS:96:GLY:N	2.72	0.58
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.04	0.58
2:CB:56:ARG:HH11	2:CB:56:ARG:HG2	1.69	0.58
15:AO:54:ARG:HD3	15:AO:58:MET:CE	2.33	0.58
1:CA:1342:C:O2'	1:CA:1343:G:H5'	2.03	0.58
36:BB:50:G:OP2	50:BS:62:LYS:HB2	2.04	0.58
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.04	0.58
3:CC:47:LEU:HD21	3:CC:68:VAL:HG11	1.86	0.58
48:DQ:134:ARG:NH2	57:DZ:122:ARG:NE	2.49	0.58
3:AC:36:ASP:OD1	3:AC:57:ILE:HD12	2.03	0.58
2:AB:18:GLY:N	2:AB:42:ILE:HG22	2.17	0.58
1:CA:1107:C:C3'	1:CA:1108:G:H5''	2.34	0.58
54:BW:6:ILE:HG12	54:BW:104:THR:OG1	2.04	0.58
54:DW:9:TYR:H	54:DW:102:HIS:HD2	1.50	0.58
2:AB:142:LEU:HA	2:AB:145:LEU:HB2	1.86	0.58
9:AI:127:LYS:O	9:AI:127:LYS:HG2	2.04	0.58
35:BA:2206:G:H21	35:BA:2207:G:H5'	1.69	0.58
1:CA:167:G:H2'	1:CA:168:G:H8	1.68	0.58
1:AA:1190:G:P	3:AC:5:ILE:HD12	2.44	0.58
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.86	0.58
11:AK:126:ARG:HH11	11:AK:126:ARG:HB3	1.68	0.58
43:BI:68:LEU:HD23	43:BI:68:LEU:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1818:U:O4	38:DD:154:LYS:HE3	2.03	0.58
1:AA:1181:G:O2'	1:AA:1184:G:H5'	2.03	0.58
4:AD:160:GLN:O	4:AD:163:GLU:HB3	2.04	0.58
7:CG:64:GLN:HG3	7:CG:68:ASN:ND2	2.18	0.58
35:BA:1935:G:H1'	35:BA:1964:G:N2	2.19	0.58
20:AT:84:LEU:O	20:AT:88:VAL:HG23	2.04	0.58
29:D4:22:ILE:HD12	29:D4:22:ILE:N	2.19	0.58
25:D0:53:MET:HG3	25:D0:59:LEU:HD23	1.85	0.58
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.39	0.58
1:CA:580:U:H2'	1:CA:581:G:O4'	2.03	0.58
1:AA:22:G:H2'	1:AA:23:C:C6	2.39	0.58
22:CY:11:C:C2'	22:CY:12:U:C6	2.82	0.57
23:AW:4:C:H2'	23:AW:4:C:P	2.44	0.57
22:AY:43:G:C2	22:AY:44:A:C4	2.92	0.57
22:AY:60:A:N1	57:BZ:186:GLU:CB	2.65	0.57
22:AV:12:U:C2	22:AV:26:G:N2	2.72	0.57
22:AV:8:U:C2	22:AV:15:G:O6	2.57	0.57
33:D8:61:LEU:HD12	33:D8:62:LEU:H	1.70	0.57
30:B5:4:HIS:O	35:BA:2056:G:N2	2.37	0.57
51:DT:64:ARG:HD2	51:DT:73:GLU:HG2	1.84	0.57
35:BA:1914:C:H3'	35:BA:1914:C:P	2.44	0.57
23:CW:57:U:H2'	23:CW:59:G:OP2	2.03	0.57
46:BO:77:ILE:HD13	51:BT:74:ARG:CD	2.34	0.57
56:BY:26:LYS:O	56:BY:28:LYS:HE3	2.03	0.57
50:DS:96:GLY:O	50:DS:98:VAL:N	2.31	0.57
39:DE:101:ARG:HB3	39:DE:169:ASN:ND2	2.19	0.57
3:CC:95:THR:HG22	3:CC:97:LYS:HB2	1.85	0.57
9:AI:63:ILE:HG22	9:AI:64:THR:N	2.18	0.57
35:DA:330:A:O2'	35:DA:331:A:C8	2.54	0.57
1:AA:373:A:O2'	1:AA:374:A:H5'	2.04	0.57
5:CE:41:VAL:CG1	5:CE:113:ALA:HA	2.34	0.57
54:DW:22:ASP:HA	54:DW:25:ARG:NH1	2.15	0.57
4:AD:96:LEU:CG	4:AD:139:ARG:HH22	2.16	0.57
35:BA:1039:G:C6	35:BA:1040:C:N4	2.71	0.57
42:DH:156:ALA:O	42:DH:158:HIS:N	2.37	0.57
1:AA:1107:C:C3'	1:AA:1108:G:H5''	2.34	0.57
42:BH:9:ILE:HD11	42:BH:76:VAL:HG21	1.86	0.57
41:BG:48:GLU:O	41:BG:49:ASP:CB	2.52	0.57
1:CA:824:C:H4'	8:CH:1:MET:H2	1.68	0.57
45:DN:54:VAL:HB	45:DN:122:VAL:HG22	1.85	0.57
11:CK:99:GLN:HG2	11:CK:105:VAL:HG11	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:764:C:O2'	1:AA:765:G:H5'	2.04	0.57
35:BA:1332:G:N2	35:BA:1609:A:HO2'	2.02	0.57
35:DA:1332:G:H21	35:DA:1610:A:H8	1.49	0.57
38:DD:65:ILE:HD11	38:DD:67:PHE:CE2	2.39	0.57
35:BA:2152:G:H2'	35:BA:2153:G:C8	2.39	0.57
35:BA:536:A:OP1	52:BU:53:ARG:NH1	2.37	0.57
26:B1:19:GLN:O	26:B1:35:THR:HG22	2.03	0.57
35:DA:221:A:H4'	35:DA:222:A:O5'	2.04	0.57
35:BA:221:A:H4'	35:BA:222:A:O5'	2.04	0.57
8:AH:63:LEU:H	8:AH:63:LEU:HD22	1.69	0.57
35:DA:78:A:H2'	35:DA:79:G:H8	1.69	0.57
22:AY:45:U:C4	22:AY:46:U:C4	2.91	0.57
23:CW:29:A:C6	23:CW:30:U:C4	2.92	0.57
23:CW:42:C:H2'	23:CW:43:G:H5'	1.87	0.57
22:AV:23:A:O3'	22:AV:24:A:H8	1.87	0.57
22:AV:19:G:C2'	22:AV:59:G:N2	2.67	0.57
41:BG:85:GLY:O	41:BG:87:PRO:HD3	2.04	0.57
22:CV:12:U:H3'	22:CV:13:U:H5''	1.84	0.57
35:DA:942:G:OP1	47:DP:35:HIS:HB3	2.04	0.57
56:DY:76:CYS:HB3	56:DY:96:ILE:CD1	2.32	0.57
12:AL:76:ASN:OD1	12:AL:107:ALA:HA	2.04	0.57
35:BA:548:A:C2	35:BA:549:G:H4'	2.39	0.57
52:DU:74:LEU:H	52:DU:74:LEU:CD1	2.17	0.57
39:BE:75:VAL:O	39:BE:77:ILE:N	2.32	0.57
35:BA:2722:G:H2'	35:BA:2723:C:C6	2.39	0.57
1:AA:447:G:H2'	1:AA:485:G:H22	1.64	0.57
13:CM:81:LEU:HB3	13:CM:88:ARG:HB2	1.87	0.57
35:BA:85:G:OP1	56:BY:9:LYS:HA	2.03	0.57
35:BA:2562:U:C1'	46:BO:23:ARG:HH11	2.13	0.57
22:AY:53:U:C2	22:AY:54:G:C8	2.92	0.57
48:DQ:42:ILE:HD13	48:DQ:97:VAL:CG2	2.34	0.57
2:CB:15:VAL:HG21	2:CB:209:ARG:NH2	2.15	0.57
35:DA:155:U:C2'	35:DA:156:U:H5''	2.34	0.57
35:DA:1038:C:H3'	35:DA:1039:G:C5'	2.33	0.57
35:BA:1039:G:H2'	35:BA:1040:C:C6	2.39	0.57
1:CA:1514:C:O2'	1:CA:1515:C:H5'	2.04	0.57
36:DB:87:G:C3'	36:DB:88:C:H5''	2.34	0.57
1:AA:1321:C:H5'	1:AA:1322:C:C5'	2.34	0.57
35:DA:2174:C:H1'	37:DC:219:MET:HE1	1.86	0.57
2:CB:165:VAL:HG23	2:CB:166:ASP:N	2.19	0.57
1:CA:1406:U:H2'	1:CA:1407:C:C6	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:3:ARG:HH11	6:CF:3:ARG:HG3	1.67	0.57
3:CC:64:VAL:HG12	3:CC:66:VAL:HG23	1.85	0.57
41:DG:55:LYS:C	41:DG:57:ALA:H	2.08	0.57
48:DQ:57:HIS:NE2	48:DQ:116:GLU:CG	2.67	0.57
46:BO:3:GLN:HB2	46:BO:4:PRO:HD2	1.85	0.57
2:AB:194:PRO:HG2	2:AB:195:ASP:OD1	2.04	0.57
2:CB:132:LYS:HA	2:CB:135:GLN:NE2	2.18	0.57
35:DA:107:C:H2'	35:DA:108:U:H6	1.69	0.57
4:CD:43:HIS:O	4:CD:45:GLN:N	2.32	0.57
4:AD:47:ARG:HE	4:AD:49:ARG:NH2	2.02	0.57
35:BA:1270:C:H5''	35:BA:1271:G:O5'	2.05	0.57
1:AA:1239:A:H62	1:AA:1299:A:N6	2.02	0.57
15:CO:62:GLN:O	15:CO:66:LEU:HD13	2.03	0.57
35:BA:1192:G:O2'	35:BA:1193:G:H5'	2.04	0.57
1:AA:229:U:O2'	1:AA:230:G:H5'	2.04	0.57
41:DG:77:ILE:O	41:DG:79:ASN:N	2.36	0.57
54:DW:95:ILE:O	54:DW:95:ILE:HG13	2.02	0.57
23:AW:30:U:C2'	23:AW:31:C:H6	1.92	0.57
22:AY:11:C:C2	22:AY:12:U:C5	2.92	0.57
22:CV:15:G:H2'	22:CV:16:U:H6	1.68	0.57
22:CV:3:G:H2'	22:CV:4:C:C5'	2.35	0.57
22:CV:53:U:H2'	22:CV:54:G:C8	2.38	0.57
35:BA:2875:C:O2'	51:BT:5:ALA:HB3	2.04	0.57
51:BT:2:ASN:O	51:BT:4:GLY:N	2.37	0.57
33:B8:59:LYS:HB2	33:B8:59:LYS:HZ2	1.65	0.57
36:BB:7:G:H3'	36:BB:8:U:C5'	2.21	0.57
43:BI:83:ALA:CB	43:BI:88:ILE:HG23	2.35	0.57
40:DF:18:ARG:HH21	40:DF:20:LEU:HD11	1.69	0.57
45:DN:15:LEU:O	45:DN:136:GLU:HA	2.04	0.57
1:CA:456:C:H2'	1:CA:457:C:C6	2.39	0.57
39:DE:111:ARG:HA	49:DR:2:ARG:HG2	1.86	0.57
13:AM:86:CYS:HA	19:AS:73:GLU:O	2.04	0.57
45:BN:46:VAL:O	45:BN:47:ALA:HB3	2.03	0.57
19:CS:16:LEU:O	19:CS:20:LEU:N	2.23	0.57
13:CM:116:THR:O	13:CM:116:THR:HG22	2.04	0.57
30:D5:45:VAL:HG11	30:D5:55:ARG:HG2	1.87	0.57
4:CD:121:VAL:HA	4:CD:126:ILE:HD13	1.87	0.57
4:AD:126:ILE:HD12	4:AD:126:ILE:N	2.19	0.57
5:CE:102:ALA:HB2	5:CE:120:THR:OG1	2.03	0.57
38:DD:79:VAL:HG21	38:DD:111:LEU:CD1	2.34	0.57
1:AA:922:G:H4'	5:AE:20:GLN:HA	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:874:G:H2'	1:AA:875:C:C6	2.38	0.57
1:AA:1296:C:H3'	1:AA:1297:C:C5	2.38	0.57
1:AA:1112:C:H1'	3:AC:179:ARG:HD3	1.86	0.57
35:BA:527:C:OP2	35:BA:2779:U:H5	1.87	0.57
35:DA:1150:C:O2'	35:DA:1151:G:H5'	2.04	0.57
1:AA:577:G:O2'	1:AA:578:C:H5'	2.05	0.57
35:DA:845:G:OP2	35:DA:845:G:H8	1.88	0.57
35:BA:947:G:N2	35:BA:971:C:C2	2.72	0.57
52:DU:26:GLY:O	52:DU:30:LYS:HG2	2.05	0.57
36:DB:65:C:N4	36:DB:109:C:H2'	2.19	0.57
11:AK:57:THR:HG23	11:AK:60:ALA:H	1.67	0.57
51:BT:6:LEU:HD23	51:BT:9:LEU:HB2	1.84	0.57
12:CL:40:VAL:HG21	12:CL:78:GLN:O	2.03	0.57
30:D5:3:LYS:HE2	35:DA:2613:U:H2'	1.85	0.57
52:DU:74:LEU:HD13	52:DU:74:LEU:H	1.69	0.57
52:BU:101:ARG:HH11	52:BU:101:ARG:CB	2.18	0.57
41:DG:120:LEU:HB2	41:DG:180:PHE:CE1	2.39	0.57
47:BP:10:PRO:O	47:BP:11:GLY:C	2.42	0.57
50:BS:56:LEU:O	50:BS:56:LEU:HD23	2.04	0.57
2:CB:102:LEU:CD1	2:CB:102:LEU:H	2.14	0.57
3:CC:40:ARG:HG2	3:CC:55:VAL:CG1	2.33	0.57
42:DH:148:ILE:O	42:DH:162:ILE:HD11	2.05	0.57
5:AE:41:VAL:CG1	5:AE:113:ALA:HA	2.34	0.57
57:DZ:61:LEU:H	57:DZ:61:LEU:CD2	2.15	0.57
16:CP:2:VAL:CG2	16:CP:21:VAL:HG23	2.34	0.57
35:BA:2132:U:H3	37:BC:6:LYS:CB	2.16	0.57
42:BH:153:LYS:N	42:BH:153:LYS:HD3	2.17	0.57
35:DA:2713:A:H3'	35:DA:2714:G:C5'	2.35	0.57
1:CA:1511:G:O2'	1:CA:1512:U:H5'	2.04	0.57
46:DO:10:VAL:HG21	46:DO:16:ALA:O	2.04	0.57
38:BD:24:ILE:CG1	38:BD:25:THR:H	2.16	0.57
51:BT:106:SER:O	51:BT:107:ASP:CB	2.52	0.57
37:DC:11:LEU:HB3	37:DC:33:LEU:HD22	1.85	0.57
40:BF:123:LEU:HD12	40:BF:124:LEU:N	2.18	0.57
3:AC:64:VAL:HG12	3:AC:66:VAL:HG23	1.85	0.57
35:DA:142:A:H1'	35:DA:1408:C:O4'	2.03	0.57
35:DA:2778:A:H4'	35:DA:2779:U:OP1	2.04	0.57
35:DA:2222:G:O2'	35:DA:2223:G:H5'	2.05	0.57
52:BU:46:ALA:O	52:BU:50:ARG:HB2	2.04	0.57
1:CA:723:U:H5''	1:CA:724:G:OP2	2.03	0.57
27:B2:2:LYS:HE2	27:B2:6:VAL:HG23	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:160:GLN:O	4:CD:163:GLU:HB3	2.04	0.57
36:BB:56:G:H4'	36:BB:57:A:C8	2.40	0.57
35:DA:830:G:H4'	35:DA:831:G:OP2	2.04	0.57
2:AB:35:GLU:HG2	2:AB:35:GLU:O	2.05	0.57
42:DH:88:LEU:HD12	42:DH:130:ARG:HG2	1.86	0.57
29:B4:2:LYS:O	29:B4:3:GLU:HB2	2.03	0.57
22:CY:62:U:O2'	57:DZ:186:GLU:HB2	1.95	0.57
22:AY:12:U:C4	22:AY:26:G:N1	2.70	0.57
22:AY:56:U:O2	57:BZ:183:LEU:HD23	2.04	0.57
4:CD:30:LYS:C	4:CD:32:ALA:N	2.58	0.57
22:AV:11:C:C6	22:AV:12:U:C5	2.92	0.57
22:AV:8:U:H1'	22:AV:50:C:O2	2.04	0.57
41:BG:83:ARG:NH1	41:BG:84:LYS:HE3	2.19	0.57
1:CA:1442(B):A:H2'	51:DT:118:ARG:HH12	1.68	0.57
57:DZ:81:ARG:CB	57:DZ:81:ARG:HH11	2.17	0.57
40:DF:20:LEU:HD12	40:DF:199:TRP:CZ3	2.40	0.57
35:BA:544:G:N2	35:BA:547:A:H2'	2.20	0.57
10:CJ:80:LYS:HB3	10:CJ:80:LYS:NZ	2.20	0.57
53:DV:49:THR:HB	53:DV:50:PRO:HD2	1.86	0.57
52:BU:101:ARG:O	52:BU:102:GLU:HG2	2.05	0.57
52:BU:95:LEU:CD1	53:BV:11:GLN:HE21	2.18	0.57
1:AA:1367:C:H4'	10:AJ:48:THR:HG21	1.85	0.57
31:B6:11:LEU:HD11	31:B6:26:ASN:CB	2.31	0.57
35:BA:2811:G:C2'	35:BA:2812:G:H5'	2.35	0.57
39:BE:60:ASN:OD1	39:BE:61:ARG:N	2.37	0.57
35:BA:1803:A:H4'	38:BD:259:THR:HG23	1.87	0.57
35:BA:1652:A:H3'	35:BA:1653:G:C8	2.39	0.57
49:BR:7:GLY:C	49:BR:8:ARG:HE	2.07	0.57
1:CA:490:G:H2'	1:CA:491:G:H8	1.69	0.57
19:CS:20:LEU:HA	19:CS:23:ASN:ND2	2.13	0.57
29:B4:1:MET:CG	41:BG:98:ARG:HG3	2.35	0.57
2:AB:102:LEU:CD1	2:AB:102:LEU:H	2.13	0.57
3:CC:95:THR:CG2	3:CC:97:LYS:HB2	2.34	0.57
9:AI:5:TYR:HA	9:AI:17:VAL:O	2.04	0.57
8:AH:86:ILE:HB	8:AH:133:LEU:HD22	1.86	0.57
1:AA:373:A:H2'	1:AA:374:A:C8	2.31	0.57
3:AC:39:ILE:O	3:AC:43:LEU:HG	2.05	0.57
13:AM:69:GLU:HA	13:AM:70:LEU:N	2.20	0.57
35:BA:2158:A:H4'	35:BA:2159:G:C5'	2.33	0.57
39:DE:60:ASN:OD1	39:DE:61:ARG:N	2.37	0.57
9:CI:10:ARG:NH1	9:CI:105:ASP:HB2	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2177:C:H1'	37:DC:45:HIS:HB3	1.86	0.57
1:CA:881:G:OP2	12:CL:12:ARG:NH2	2.36	0.57
39:DE:46:ALA:CB	39:DE:82:ARG:HA	2.35	0.57
1:CA:153:C:H2'	1:CA:154:C:C6	2.39	0.57
1:CA:865:A:C2	1:CA:918:A:H4'	2.40	0.57
35:DA:90:U:H1'	35:DA:92:A:C8	2.39	0.57
53:DV:34:GLU:O	53:DV:36:PRO:HD2	2.04	0.57
35:BA:445:C:OP1	52:BU:2:PRO:HA	2.05	0.57
44:BJ:32:UNK:O	44:BJ:33:UNK:CB	2.52	0.57
1:CA:648:A:H2'	1:CA:649:G:C8	2.39	0.57
49:BR:31:HIS:C	49:BR:33:ARG:H	2.08	0.57
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.05	0.57
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.39	0.57
29:B4:51:ASP:OD1	29:B4:52:THR:HG23	2.05	0.57
57:BZ:179:ASP:N	57:BZ:182:LYS:HE2	2.19	0.57
22:AV:69:G:C6	22:AV:70:G:C5	2.93	0.57
33:D8:4:MET:CB	33:D8:61:LEU:HD22	2.34	0.57
51:DT:65:LYS:HE3	51:DT:66:VAL:H	1.68	0.57
46:DO:77:ILE:HD13	51:DT:74:ARG:CD	2.35	0.57
35:BA:1899:G:N2	35:BA:1902:C:C5	2.72	0.57
35:BA:1899:G:H22	35:BA:1902:C:H41	0.70	0.57
56:DY:28:LYS:HG2	56:DY:39:VAL:CG2	2.34	0.57
56:DY:2:ARG:NE	56:DY:3:VAL:HG23	2.20	0.57
23:AW:20:G:OP1	23:AW:21:U:C5	2.58	0.57
33:D8:14:VAL:HG21	33:D8:22:VAL:HG13	1.86	0.57
12:CL:60:LEU:HB2	12:CL:64:TYR:O	2.05	0.57
12:AL:38:THR:CG2	12:AL:57:LYS:HB2	2.35	0.57
10:CJ:6:ILE:O	10:CJ:71:LEU:HD12	2.04	0.57
10:CJ:6:ILE:HD11	10:CJ:72:VAL:CB	2.33	0.57
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB3	1.85	0.57
33:D8:48:PHE:O	33:D8:49:VAL:CG1	2.49	0.57
41:DG:131:TYR:HE1	41:DG:133:LEU:HD23	1.69	0.57
41:DG:140:ILE:HD12	41:DG:141:PHE:N	2.19	0.57
31:D6:11:LEU:HD11	31:D6:26:ASN:CB	2.30	0.57
57:DZ:110:GLY:HA2	57:DZ:146:ILE:HG23	1.87	0.57
2:CB:51:LEU:HD23	2:CB:201:ILE:HD12	1.84	0.57
19:CS:18:LYS:O	19:CS:22:LEU:HB2	2.05	0.57
47:BP:85:LEU:CD2	47:BP:85:LEU:H	2.15	0.57
29:B4:5:ILE:O	41:BG:67:LYS:HD3	2.04	0.57
15:CO:39:LEU:HD13	15:CO:39:LEU:C	2.25	0.57
23:CW:55:G:H2'	23:CW:56:U:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:348:G:O2'	1:AA:349:A:H5'	2.03	0.57
42:BH:154:PRO:HB3	42:BH:163:TYR:CZ	2.39	0.57
2:AB:112:VAL:O	2:AB:116:GLU:HG2	2.04	0.57
27:B2:47:ASN:ND2	35:BA:94(A):G:N3	2.52	0.57
35:DA:2656:U:H2'	35:DA:2657:A:H5''	1.86	0.57
39:BE:10:GLY:HA3	51:BT:8:LYS:HZ3	1.70	0.57
35:BA:2177:C:H1'	37:BC:45:HIS:HB3	1.86	0.57
1:CA:638:G:O2'	1:CA:639:G:H5'	2.04	0.57
35:DA:674:G:H1'	40:DF:74:ARG:CD	2.33	0.57
35:DA:675:A:OP1	40:DF:63:LYS:HE2	2.05	0.57
42:BH:97:ARG:HG2	42:BH:98:LEU:N	2.19	0.57
43:DI:47:LEU:HD12	43:DI:50:ARG:NH2	2.19	0.57
8:CH:13:ILE:O	8:CH:17:THR:HG23	2.04	0.57
37:BC:47:LYS:HB3	37:BC:212:SER:HB3	1.87	0.57
12:CL:7:ILE:HD11	17:CQ:32:TYR:HB3	1.87	0.57
35:DA:2291:U:H2'	35:DA:2292:C:C6	2.40	0.57
4:AD:49:ARG:HA	4:AD:49:ARG:NE	2.19	0.57
35:DA:2803:C:H2'	35:DA:2804:C:C6	2.39	0.57
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.05	0.57
1:AA:1317:C:OP2	14:AN:17:LYS:HG2	2.05	0.57
35:DA:445:C:OP1	52:DU:2:PRO:HA	2.04	0.57
6:AF:52:ILE:O	6:AF:53:ALA:HB3	2.05	0.57
37:DC:190:ILE:O	37:DC:194:ILE:HG12	2.05	0.57
35:DA:207:A:H2'	35:DA:208:C:O4'	2.04	0.57
8:AH:39:LEU:O	8:AH:45:ILE:HG12	2.05	0.57
13:CM:65:LYS:HB3	29:D4:44:THR:HG21	1.86	0.57
22:CY:45:U:C4	22:CY:46:U:C4	2.93	0.57
22:AV:13:U:C2	22:AV:25:A:N1	2.73	0.57
35:DA:1486:A:N6	35:DA:1504:C:H42	2.02	0.57
56:DY:7:VAL:HB	56:DY:8:LYS:HD2	1.87	0.57
1:CA:180:U:C2'	1:CA:181:G:C5'	2.77	0.57
23:CW:28:G:OP2	23:CW:28:G:C8	2.58	0.57
12:CL:24:VAL:HG13	12:CL:98:TYR:HE2	1.70	0.57
12:CL:43:VAL:HG23	12:CL:44:THR:N	2.20	0.57
1:AA:179:A:H2'	1:AA:180:U:H6	1.70	0.57
10:AJ:95:GLU:HG3	10:AJ:96:ILE:N	2.20	0.57
8:AH:109:ILE:HG22	8:AH:137:VAL:O	2.04	0.57
35:DA:2491:U:O2'	35:DA:2492:U:H5'	2.04	0.57
47:BP:102:ARG:HH11	47:BP:102:ARG:HB2	1.69	0.57
52:DU:102:GLU:HG3	53:DV:2:PHE:CE1	2.39	0.57
26:D1:93:GLU:O	26:D1:94:LEU:C	2.42	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DD:30:GLU:CD	38:DD:63:ARG:HE	2.08	0.57
8:CH:68:ARG:HG2	8:CH:68:ARG:HH11	1.70	0.57
47:BP:16:ARG:HD3	47:BP:18:ARG:N	2.15	0.57
15:CO:33:THR:CG2	15:CO:85:LEU:HD21	2.31	0.57
26:D1:45:ASN:O	26:D1:45:ASN:ND2	2.38	0.57
35:DA:2132:U:H3	37:DC:6:LYS:CB	2.17	0.57
35:DA:171:G:H2'	35:DA:172:C:O4'	2.04	0.57
2:CB:124:SER:OG	2:CB:125:PRO:HD2	2.05	0.57
38:DD:210:GLY:O	38:DD:211:ARG:HB3	2.04	0.57
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.37	0.57
38:DD:261:LYS:NZ	38:DD:263:ARG:NH2	2.51	0.57
35:BA:2123:G:O2'	35:BA:2124:G:H5'	2.05	0.57
38:BD:117:VAL:HG22	38:BD:118:VAL:N	2.20	0.57
57:DZ:165:VAL:CG1	57:DZ:166:SER:H	2.14	0.57
1:AA:542:G:H5'	4:AD:41:GLY:CA	2.35	0.57
1:CA:539:A:H2'	1:CA:540:G:H8	1.69	0.57
41:BG:161:THR:CG2	41:BG:162:THR:N	2.68	0.57
47:DP:71:VAL:HG13	47:DP:72:PRO:HD3	1.86	0.57
27:B2:7:ARG:CZ	35:BA:102:G:OP2	2.52	0.57
6:AF:3:ARG:HD3	6:AF:64:GLN:NE2	2.20	0.57
1:CA:750:G:N3	15:CO:23:GLY:HA3	2.20	0.57
35:BA:27:G:H22	35:BA:512:G:H2'	1.69	0.57
35:BA:28:A:N6	35:BA:512:G:H1'	2.19	0.57
1:AA:130:A:C8	17:AQ:63:ARG:HG3	2.39	0.57
43:BI:8:PRO:HB3	43:BI:14:ASP:H	1.69	0.57
3:AC:167:TRP:O	3:AC:168:ALA:HB3	2.05	0.57
35:DA:2263:C:O2'	35:DA:2264:C:H5'	2.05	0.57
35:DA:898:C:H2'	35:DA:899:A:H5'	1.86	0.57
1:CA:22:G:H2'	1:CA:23:C:C6	2.40	0.57
55:DX:3:THR:O	55:DX:4:ALA:HB3	2.05	0.57
35:DA:708:C:H42	35:DA:723:G:H1	1.53	0.57
35:DA:225:A:H2'	35:DA:226:G:H5'	1.86	0.57
35:DA:1358:G:O2'	35:DA:1359:A:H5''	2.03	0.57
35:BA:2136:C:H2'	35:BA:2137:C:C6	2.39	0.57
4:CD:187:ARG:HH11	4:CD:187:ARG:HG2	1.68	0.57
7:AG:44:TYR:O	7:AG:48:LYS:HG3	2.04	0.57
54:DW:37:ARG:NH1	54:DW:38:TYR:CZ	2.72	0.57
23:AW:40:A:H2'	23:AW:41:C:H5	1.62	0.57
22:AV:53:U:H2'	22:AV:54:G:C8	2.40	0.57
22:CV:53:U:H2'	22:CV:54:G:H8	1.70	0.57
47:BP:59:LEU:HD23	47:BP:59:LEU:O	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.69	0.57
35:DA:548:A:C2	35:DA:549:G:H4'	2.39	0.57
57:DZ:23:LYS:HA	57:DZ:40:ASP:HA	1.85	0.57
49:DR:9:LYS:O	49:DR:10:LEU:HD23	2.04	0.57
56:BY:36:ALA:HA	56:BY:69:ALA:N	2.20	0.57
26:D1:64:ALA:HA	26:D1:67:ILE:HD11	1.87	0.57
35:DA:1568:G:H21	38:DD:58:HIS:HE1	1.52	0.57
2:CB:102:LEU:HD23	2:CB:182:ILE:HD12	1.87	0.57
1:AA:1129:C:H5''	1:AA:1139:G:O6	2.04	0.57
30:D5:51:TYR:CZ	30:D5:52:TYR:HB2	2.40	0.57
38:DD:35:LYS:NZ	38:DD:35:LYS:HB3	2.19	0.57
26:D1:45:ASN:HD22	26:D1:45:ASN:C	2.07	0.57
35:DA:2892:A:C8	35:DA:2893:G:H1'	2.40	0.57
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.87	0.57
35:DA:2123:G:O2'	35:DA:2124:G:H5'	2.04	0.57
43:DI:115:ALA:CB	43:DI:128:LEU:HB3	2.34	0.57
1:AA:959:A:C2'	1:AA:960:U:H4'	2.35	0.57
25:B0:84:LEU:N	25:B0:84:LEU:HD12	2.19	0.57
42:BH:11:VAL:CG2	42:BH:50:VAL:HG23	2.34	0.57
47:BP:71:VAL:HG12	47:BP:72:PRO:HD3	1.85	0.57
1:AA:376:G:OP1	16:AP:6:LEU:HB2	2.04	0.57
1:CA:584:G:H2'	1:CA:585:G:C8	2.40	0.57
45:BN:3:THR:O	45:BN:4:TYR:CD1	2.58	0.57
51:BT:54:ARG:HG2	51:BT:54:ARG:NH1	2.19	0.57
1:CA:90:U:H4'	1:CA:91:C:C6	2.39	0.57
40:DF:123:LEU:HD12	40:DF:124:LEU:N	2.20	0.57
48:BQ:10:ARG:CB	48:BQ:10:ARG:NH1	2.68	0.57
6:CF:76:ALA:HB1	6:CF:80:ARG:NH2	2.19	0.57
12:CL:7:ILE:HG23	12:CL:8:ASN:N	2.20	0.57
35:DA:1720:U:H2'	35:DA:1721:G:O4'	2.05	0.57
1:AA:1498:U:H1'	1:AA:1499:A:N7	2.20	0.57
53:BV:34:GLU:O	53:BV:36:PRO:HD2	2.04	0.57
35:DA:27:G:H22	35:DA:512:G:C2'	2.17	0.57
49:BR:30:THR:HA	49:BR:78:LYS:HZ3	1.69	0.57
35:DA:1221:C:H2'	35:DA:1221(A):C:H6	1.68	0.57
35:DA:1816:G:H8	38:DD:62:TYR:CZ	2.22	0.57
5:CE:10:MET:HA	5:CE:32:VAL:HG22	1.87	0.57
6:CF:52:ILE:O	6:CF:53:ALA:HB3	2.04	0.57
41:DG:47:LYS:HE3	41:DG:81:LYS:HD2	1.86	0.57
1:CA:1091:U:H2'	1:CA:1093:A:OP2	2.04	0.57
38:DD:148:GLU:HB2	38:DD:151:LYS:HD2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:271(H):G:O2'	35:DA:271(I):G:H8	1.87	0.57
35:DA:1181:C:O2'	35:DA:1182:A:H5'	2.05	0.57
40:DF:46:ARG:HG3	40:DF:46:ARG:HH11	1.70	0.57
35:BA:1216:G:N2	35:BA:1234:U:H1'	2.19	0.57
28:B3:59:VAL:HG12	28:B3:60:GLU:N	2.19	0.57
35:BA:1510:G:H2'	35:BA:1511:C:C6	2.39	0.57
20:CT:84:LEU:O	20:CT:88:VAL:HG23	2.05	0.57
22:CY:28:G:C2	22:CY:29:A:C5	2.93	0.57
51:DT:12:SER:O	51:DT:13:ARG:NE	2.38	0.57
51:DT:2:ASN:O	51:DT:4:GLY:N	2.38	0.57
22:AV:3:G:N2	22:AV:4:C:C2	2.72	0.57
4:AD:11:LEU:C	4:AD:13:ARG:N	2.57	0.57
4:AD:31:CYS:O	4:AD:32:ALA:HB3	2.04	0.57
46:DO:2:ILE:HD11	46:DO:82:ASN:ND2	2.08	0.57
23:AW:26:G:C5	23:AW:27:C:C4	2.92	0.57
33:B8:48:PHE:O	33:B8:49:VAL:CG1	2.49	0.57
43:DI:109:ILE:CG2	43:DI:114:LEU:HD11	2.34	0.57
43:BI:81:VAL:N	43:BI:143:SER:HB2	2.19	0.57
12:AL:25:PRO:HD2	12:AL:98:TYR:OH	2.04	0.57
52:DU:74:LEU:HD21	52:DU:79:PHE:HB2	1.87	0.57
35:BA:996:A:H4'	52:BU:92:ARG:HE	1.69	0.57
49:BR:2:ARG:HD3	49:BR:5:LYS:CE	2.33	0.57
26:D1:88:LYS:CD	26:D1:89:GLU:HG3	2.34	0.57
3:CC:14:ILE:HG23	3:CC:15:THR:N	2.20	0.57
1:AA:267:C:OP2	17:AQ:67:LYS:HD2	2.05	0.57
38:BD:35:LYS:NZ	38:BD:35:LYS:HB3	2.18	0.57
37:BC:215:VAL:HG23	37:BC:225:ILE:HD11	1.86	0.57
47:DP:16:ARG:HB2	47:DP:16:ARG:HH11	1.68	0.57
26:B1:20:ARG:HG2	26:B1:20:ARG:NH1	2.14	0.57
9:CI:21:PRO:HA	9:CI:58:HIS:O	2.05	0.57
35:DA:855:G:H2'	35:DA:856:C:C6	2.40	0.57
57:DZ:5:LEU:HD13	57:DZ:47:VAL:HG21	1.87	0.57
57:BZ:53:ILE:HG22	57:BZ:71:VAL:HB	1.86	0.57
1:CA:1321:C:H5'	1:CA:1322:C:C5'	2.35	0.57
54:BW:4:LYS:HG2	54:BW:5:ALA:N	2.18	0.57
35:BA:1174:A:OP2	35:BA:1175:U:H5''	2.04	0.57
1:CA:708:C:H2'	1:CA:709:G:C8	2.39	0.57
2:CB:41:ILE:N	2:CB:41:ILE:HD12	2.19	0.57
1:AA:824:C:H2'	1:AA:825:G:C8	2.40	0.57
57:BZ:128:VAL:HG22	57:BZ:132:ASN:HB2	1.84	0.57
1:AA:445:G:O2'	1:AA:446:G:H5'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:153:C:H2'	1:AA:154:C:C6	2.40	0.57
50:DS:93:LYS:HG3	50:DS:93:LYS:O	2.04	0.57
45:DN:3:THR:C	45:DN:4:TYR:CD1	2.78	0.57
35:BA:2192:G:C2'	35:BA:2193:G:H5''	2.33	0.57
50:BS:36:TYR:N	50:BS:36:TYR:CD1	2.72	0.57
9:CI:27:THR:HG23	9:CI:31:GLN:O	2.04	0.57
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.19	0.57
1:CA:1329:A:N7	21:CU:7:ARG:NH2	2.53	0.57
29:D4:43:TYR:HD2	29:D4:44:THR:HG23	1.69	0.57
40:DF:148:LEU:HD21	40:DF:191:ARG:HH11	1.69	0.57
35:DA:2271:G:H2'	35:DA:2272:U:C6	2.40	0.57
5:CE:81:GLU:HG2	5:CE:90:VAL:HG22	1.87	0.57
1:CA:952:U:H2'	1:CA:953:G:H8	1.69	0.57
1:CA:1239:A:H62	1:CA:1299:A:N6	2.02	0.57
51:DT:38:ASN:ND2	51:DT:40:THR:OG1	2.37	0.57
35:BA:1970:A:H5''	35:BA:1971:A:OP1	2.05	0.57
12:CL:126:LYS:HE2	12:CL:126:LYS:HA	1.87	0.57
1:CA:716:A:N3	11:CK:118:GLY:HA2	2.19	0.57
16:CP:12:LYS:O	16:CP:13:HIS:HB2	2.04	0.57
4:CD:13:ARG:O	4:CD:15:GLU:N	2.38	0.57
56:DY:4:LYS:HG3	56:DY:5:MET:H	1.69	0.57
1:AA:1051:C:H2'	1:AA:1052:U:H6	1.69	0.57
43:BI:101:LEU:O	43:BI:107:VAL:HB	2.05	0.57
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB3	1.85	0.57
10:AJ:80:LYS:HB3	10:AJ:80:LYS:NZ	2.19	0.57
53:DV:2:PHE:CB	53:DV:42:GLY:HA2	2.34	0.57
35:BA:1697:G:H3'	35:BA:1698:A:C5'	2.33	0.57
7:AG:5:ARG:C	7:AG:7:ALA:H	2.07	0.57
19:CS:44:MET:HB3	19:CS:62:ILE:HG12	1.86	0.57
47:BP:88:LEU:N	47:BP:88:LEU:HD12	2.20	0.57
37:DC:26:ALA:CB	37:DC:225:ILE:HG21	2.34	0.57
35:DA:1210:A:H5''	35:DA:1212:G:O4'	2.05	0.57
57:DZ:116:VAL:O	57:DZ:118:GLN:N	2.38	0.57
7:CG:62:PHE:CD1	7:CG:124:LEU:HD21	2.40	0.57
4:CD:23:GLY:O	4:CD:27:TYR:CD1	2.57	0.57
35:BA:157:U:H5'	35:BA:158:U:OP1	2.05	0.57
26:D1:44:PRO:HB2	26:D1:46:LEU:HD12	1.86	0.57
20:CT:104:LEU:HD23	20:CT:105:SER:N	2.19	0.57
1:AA:539:A:H2'	1:AA:540:G:H8	1.70	0.57
2:CB:98:LEU:O	2:CB:101:MET:HG2	2.04	0.57
8:AH:8:ASP:O	8:AH:11:THR:N	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:36:ASN:HB3	18:AR:39:VAL:HG21	1.86	0.57
4:CD:79:PHE:HE2	4:CD:207:TYR:HB2	1.70	0.57
35:BA:2747:G:O6	35:BA:2755:C:H5''	2.05	0.57
35:DA:2784:C:H1'	39:DE:37:ARG:NH1	2.20	0.57
41:BG:16:ARG:O	41:BG:20:ILE:HG13	2.04	0.57
1:AA:90:U:H4'	1:AA:91:C:C6	2.39	0.57
53:DV:5:VAL:HG23	53:DV:37:VAL:O	2.05	0.57
1:CA:130:A:C8	17:CQ:63:ARG:HG3	2.40	0.57
43:DI:8:PRO:HB3	43:DI:14:ASP:H	1.69	0.57
35:DA:523:C:H2'	35:DA:524:U:H5'	1.87	0.57
42:BH:20:ALA:HB3	42:BH:23:ARG:HB2	1.87	0.57
1:AA:366:C:O2'	1:AA:394:G:N2	2.37	0.57
46:BO:113:LYS:O	46:BO:117:LEU:HD12	2.05	0.57
44:BJ:23:UNK:HA	44:BJ:117:UNK:O	2.05	0.57
48:BQ:21:THR:HG21	48:BQ:101:ARG:HB2	1.85	0.57
36:DB:111:G:C2'	36:DB:112:U:H5'	2.35	0.57
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.38	0.57
1:AA:723:U:H5''	1:AA:724:G:OP2	2.04	0.57
22:CY:63:C:H2'	22:CY:64:C:C6	2.40	0.56
23:AW:35:U:N3	23:AW:37:A:H5''	2.20	0.56
22:AY:57:U:O2	22:AY:59:G:C5	2.58	0.56
22:AY:19:G:OP2	57:BZ:187:ALA:N	2.38	0.56
23:CW:73:C:H3'	23:CW:74:C:H5''	1.84	0.56
22:AV:7:U:H3'	22:AV:8:U:H5'	1.87	0.56
56:BY:76:CYS:HB3	56:BY:96:ILE:CD1	2.32	0.56
56:BY:7:VAL:CG2	56:BY:8:LYS:HZ3	2.18	0.56
23:AW:19:G:C6	23:AW:59:G:C6	2.93	0.56
22:AY:35:U:H5'	22:AY:36:AG9:OP1	2.04	0.56
10:AJ:33:GLN:H	10:AJ:75:ILE:HD11	1.70	0.56
40:BF:20:LEU:HD12	40:BF:199:TRP:HZ3	1.70	0.56
23:CW:20:G:H5'	23:CW:21:U:H5''	1.88	0.56
51:BT:122:ASP:C	51:BT:124:ASP:H	2.09	0.56
39:DE:51:PHE:N	39:DE:74:PRO:HG2	2.20	0.56
41:DG:91:ARG:HD2	41:DG:92:VAL:N	2.20	0.56
35:BA:915:C:O2'	35:BA:916:G:H5'	2.05	0.56
35:BA:2287:A:N6	35:BA:2344:U:H3	2.01	0.56
47:DP:85:LEU:HD12	47:DP:120:ALA:HA	1.85	0.56
47:DP:6:LEU:H	47:DP:6:LEU:CD2	2.17	0.56
19:CS:11:VAL:HG22	19:CS:16:LEU:HD11	1.86	0.56
1:CA:1340:A:O2'	22:CV:34:C:H5'	2.05	0.56
35:BA:1210:A:H5''	35:BA:1212:G:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:84:VAL:HG12	40:BF:85:GLY:N	2.18	0.56
3:CC:40:ARG:HG2	3:CC:55:VAL:HG11	1.85	0.56
8:CH:6:ILE:HD12	8:CH:6:ILE:N	2.19	0.56
2:CB:67:THR:CG2	2:CB:155:LEU:HD21	2.35	0.56
14:CN:24:CYS:SG	14:CN:27:CYS:SG	3.03	0.56
1:CA:267:C:OP2	17:CQ:67:LYS:HD2	2.05	0.56
9:AI:93:ARG:HG3	9:AI:97:LYS:HB2	1.87	0.56
32:D7:8:ASN:ND2	32:D7:11:LYS:H	2.03	0.56
38:DD:16:MET:HE1	38:DD:208:LYS:HD3	1.86	0.56
39:DE:81:ILE:O	39:DE:81:ILE:HG22	2.05	0.56
41:DG:57:ALA:CB	41:DG:90:LEU:HD21	2.35	0.56
56:DY:88:LYS:HE2	56:DY:93:GLY:HA3	1.87	0.56
1:AA:91:C:O2	1:AA:91:C:H2'	2.05	0.56
42:DH:68:THR:C	42:DH:70:THR:N	2.57	0.56
48:DQ:10:ARG:NH1	48:DQ:10:ARG:CB	2.68	0.56
35:DA:2777:G:H5''	35:DA:2778:A:H5'	1.87	0.56
1:CA:1112:C:H1'	3:CC:179:ARG:HD3	1.85	0.56
35:BA:142:A:H8	35:BA:1595:G:H21	1.51	0.56
1:AA:1072:G:H21	2:AB:107:THR:HG21	1.70	0.56
35:DA:2106:G:H2'	35:DA:2107:C:O4'	2.05	0.56
35:BA:304:G:H2'	35:BA:305:U:H6	1.69	0.56
35:DA:972:G:OP2	35:DA:974:G:H5''	2.04	0.56
43:DI:38:LEU:HB3	43:DI:40:THR:HG23	1.87	0.56
1:AA:123:C:OP1	1:AA:312:C:H5'	2.05	0.56
35:BA:2062:A:HO2'	35:BA:2063:C:P	2.27	0.56
35:DA:492:A:H2'	35:DA:493:G:O4'	2.05	0.56
1:CA:227:G:H2'	1:CA:228:A:C8	2.40	0.56
22:CY:60:A:H2	57:DZ:186:GLU:CB	2.10	0.56
22:AY:25:A:C2	22:AY:26:G:C5	2.93	0.56
22:AY:58:C:H2'	22:AY:59:G:H8	1.71	0.56
48:BQ:61:GLY:O	57:BZ:177:PRO:HB2	2.06	0.56
23:CW:35:U:N3	23:CW:37:A:H5''	2.20	0.56
22:AV:14:A:N6	22:AV:15:G:C2	2.73	0.56
22:CV:23:A:N3	22:CV:23:A:H2'	2.20	0.56
31:B6:48:VAL:O	31:B6:49:HIS:CB	2.53	0.56
33:D8:13:ARG:O	33:D8:13:ARG:HG3	2.03	0.56
23:CW:14:A:C2	23:CW:24:A:C4	2.93	0.56
12:AL:90:VAL:HG22	12:AL:99:HIS:HE2	1.70	0.56
8:CH:50:ARG:HA	8:CH:59:LEU:HD23	1.87	0.56
45:DN:58:ASP:C	45:DN:60:ILE:H	2.09	0.56
52:BU:112:ARG:CZ	53:BV:46:VAL:HG11	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.41	0.56
3:CC:7:PRO:O	3:CC:11:ARG:HG2	2.04	0.56
29:B4:12:ALA:CB	29:B4:29:PRO:HA	2.29	0.56
47:BP:85:LEU:HD12	47:BP:120:ALA:HA	1.87	0.56
56:DY:47:LYS:O	56:DY:48:ALA:HB3	2.05	0.56
15:CO:39:LEU:CD1	15:CO:56:LEU:HB2	2.34	0.56
37:DC:215:VAL:HG23	37:DC:225:ILE:HD11	1.87	0.56
9:CI:84:ALA:O	9:CI:87:GLN:HB3	2.05	0.56
30:D5:51:TYR:N	30:D5:55:ARG:HD3	2.20	0.56
9:AI:33:PHE:CE1	9:AI:37:PHE:HD2	2.23	0.56
35:BA:2892:A:C8	35:BA:2893:G:H1'	2.39	0.56
35:BA:1038:C:H3'	35:BA:1039:G:C5'	2.35	0.56
7:AG:15:ASP:OD1	7:AG:16:LEU:N	2.37	0.56
51:BT:34:VAL:O	51:BT:35:LYS:CB	2.53	0.56
2:AB:116:GLU:HA	2:AB:119:GLU:CB	2.35	0.56
41:DG:19:LEU:C	41:DG:21:ARG:N	2.57	0.56
38:DD:117:VAL:HG22	38:DD:118:VAL:N	2.18	0.56
1:AA:554:C:H2'	1:AA:555:C:H6	1.69	0.56
23:AW:76:C:H4'	26:B1:23:LYS:HB2	1.87	0.56
39:BE:9:VAL:HG13	39:BE:25:VAL:O	2.05	0.56
5:AE:102:ALA:HB2	5:AE:120:THR:OG1	2.05	0.56
6:AF:6:VAL:HG13	6:AF:90:VAL:HG22	1.85	0.56
1:AA:167:G:H2'	1:AA:168:G:H8	1.69	0.56
35:BA:1720:U:H2'	35:BA:1721:G:O4'	2.06	0.56
11:AK:32:ILE:O	11:AK:40:ILE:HG12	2.05	0.56
42:DH:20:ALA:HB1	42:DH:21:PRO:HD2	1.87	0.56
1:CA:1522:U:O2'	1:CA:1523:G:H5'	2.06	0.56
1:AA:821:G:H2'	1:AA:822:C:H6	1.69	0.56
35:BA:2753:A:O2'	35:BA:2754:U:H5'	2.05	0.56
35:BA:271(H):G:O2'	35:BA:271(I):G:H8	1.87	0.56
8:CH:112:LEU:HD23	8:CH:112:LEU:N	2.20	0.56
7:CG:92:SER:O	7:CG:96:GLN:HG3	2.05	0.56
35:BA:1775:U:H2'	35:BA:1776:G:H5'	1.87	0.56
1:AA:1234:C:H2'	1:AA:1235:U:C6	2.40	0.56
20:CT:46:GLU:HG2	20:CT:46:GLU:O	2.05	0.56
46:BO:43:VAL:HG23	46:BO:56:ASP:O	2.05	0.56
22:CY:70:G:H2'	22:CY:71:G:H8	1.69	0.56
4:CD:26:CYS:CA	4:CD:31:CYS:HB2	2.35	0.56
22:AV:70:G:C2	22:AV:71:G:C8	2.93	0.56
41:BG:85:GLY:O	41:BG:86:MET:CB	2.54	0.56
22:CV:5:C:C6	22:CV:6:C:H5	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:15:G:C8	22:CV:16:U:H5	2.23	0.56
51:DT:91:ARG:O	51:DT:117:ASP:HB2	2.05	0.56
35:DA:1899:G:N2	35:DA:1902:C:C5	2.73	0.56
23:AW:15:G:H2'	23:AW:61:A:N1	2.21	0.56
56:DY:2:ARG:CD	56:DY:3:VAL:HG23	2.35	0.56
1:CA:148:G:H2'	1:CA:149:A:C8	2.40	0.56
43:DI:91:SER:O	43:DI:92:VAL:HG23	2.04	0.56
40:DF:125:LEU:HD23	40:DF:125:LEU:H	1.69	0.56
10:AJ:8:LEU:HB3	10:AJ:16:LEU:HD21	1.87	0.56
40:BF:21:ALA:C	40:BF:23:ASP:H	2.08	0.56
10:CJ:3:LYS:HZ3	10:CJ:77:PRO:HD2	1.71	0.56
52:DU:112:ARG:CZ	53:DV:46:VAL:HG11	2.35	0.56
12:CL:48:PRO:C	12:CL:49:ASN:ND2	2.57	0.56
29:D4:15:ILE:N	29:D4:31:ILE:O	2.37	0.56
35:DA:1652:A:O2'	35:DA:1653:G:H5'	2.06	0.56
46:BO:88:ASN:ND2	46:BO:90:GLN:H	2.02	0.56
8:AH:122:ARG:CZ	8:AH:122:ARG:HB2	2.35	0.56
26:D1:88:LYS:HD3	26:D1:89:GLU:HG3	1.87	0.56
8:CH:122:ARG:CZ	8:CH:122:ARG:HB2	2.35	0.56
40:BF:34:TRP:CZ2	47:BP:12:ALA:HB2	2.40	0.56
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.05	0.56
35:DA:481:G:H1'	35:DA:506:G:N2	2.21	0.56
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.71	0.56
2:CB:178:ARG:HH21	8:CH:68:ARG:NH2	2.01	0.56
36:BB:40:U:O2	36:BB:43:C:H5''	2.05	0.56
30:B5:51:TYR:CZ	30:B5:52:TYR:HB2	2.40	0.56
27:D2:48:HIS:HA	27:D2:51:ARG:HG2	1.86	0.56
47:DP:17:LYS:O	47:DP:17:LYS:HG2	2.05	0.56
56:BY:51:VAL:HG12	56:BY:53:PRO:CD	2.32	0.56
1:CA:1128:C:H5'	9:CI:16:ARG:HH12	1.69	0.56
35:DA:1210:A:H5'	35:DA:1210:A:H8	1.69	0.56
4:CD:23:GLY:O	4:CD:27:TYR:HD1	1.88	0.56
4:CD:114:ARG:O	4:CD:117:ALA:HB3	2.05	0.56
9:AI:53:VAL:HB	9:AI:92:TYR:HE2	1.70	0.56
3:CC:150:LYS:HG3	3:CC:169:ALA:CB	2.35	0.56
50:BS:31:SER:O	50:BS:33:LYS:N	2.37	0.56
35:DA:2811:G:C2'	35:DA:2812:G:H5'	2.35	0.56
39:DE:57:LYS:HZ3	39:DE:63:LEU:HG	1.71	0.56
40:BF:101:LEU:O	40:BF:106:ARG:NH1	2.39	0.56
35:BA:910:A:H62	48:BQ:12:GLN:HA	1.68	0.56
35:DA:621:A:H2'	35:DA:622:G:C5'	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1392:G:H21	1:AA:1502:A:H8	1.51	0.56
1:AA:1392:G:N2	1:AA:1502:A:C8	2.71	0.56
1:AA:1393:U:H5'	1:AA:1502:A:OP1	2.06	0.56
35:BA:631:A:OP1	47:BP:64:LYS:HE2	2.04	0.56
1:AA:376:G:H2'	1:AA:377:G:C8	2.39	0.56
39:DE:21:VAL:HG23	39:DE:23:VAL:HG13	1.85	0.56
9:CI:112:LYS:HE3	9:CI:116:LYS:O	2.05	0.56
51:DT:51:ARG:HG2	51:DT:52:ILE:N	2.20	0.56
57:BZ:80:ARG:CA	57:BZ:80:ARG:HH11	2.16	0.56
39:BE:179:GLU:O	39:BE:180:ASN:HB2	2.06	0.56
39:DE:44:TYR:O	39:DE:45:THR:HB	2.03	0.56
41:DG:160:VAL:HG12	41:DG:161:THR:N	2.20	0.56
11:AK:99:GLN:HG2	11:AK:105:VAL:HG11	1.87	0.56
45:BN:3:THR:C	45:BN:5:VAL:H	2.09	0.56
7:AG:47:CYS:O	7:AG:50:ILE:HB	2.05	0.56
45:BN:120:LEU:HD23	45:BN:121:LYS:N	2.20	0.56
11:CK:124:LYS:NZ	11:CK:125:PHE:HE1	2.03	0.56
13:CM:15:VAL:HG12	13:CM:45:VAL:HG22	1.86	0.56
35:BA:1721:G:C6	35:BA:1739:U:H5'	2.40	0.56
9:CI:2:GLU:HG2	9:CI:2:GLU:O	2.04	0.56
51:DT:106:SER:O	51:DT:107:ASP:CB	2.53	0.56
43:BI:35:LEU:O	43:BI:36:ALA:HB2	2.05	0.56
35:DA:27:G:H22	35:DA:512:G:H2'	1.69	0.56
35:DA:28:A:N6	35:DA:512:G:H1'	2.20	0.56
35:BA:2106:G:H2'	35:BA:2107:C:O4'	2.05	0.56
35:BA:924:C:O2'	35:BA:925:C:H5'	2.06	0.56
20:AT:33:ILE:HG22	20:AT:37:SER:OG	2.05	0.56
4:CD:47:ARG:HE	4:CD:49:ARG:NH2	2.03	0.56
35:DA:2346:A:H5'	35:DA:2383:G:H1'	1.88	0.56
3:CC:90:GLU:HA	3:CC:93:LYS:HB2	1.88	0.56
51:DT:132:LYS:C	51:DT:134:GLU:H	2.09	0.56
1:AA:1007:C:H2'	1:AA:1008:C:H6	1.70	0.56
1:AA:291:C:O2'	1:AA:292:G:H5'	2.06	0.56
35:DA:324:A:N6	35:DA:338:G:O2'	2.38	0.56
35:BA:665:C:H2'	35:BA:666:G:H8	1.69	0.56
1:CA:1007:C:H2'	1:CA:1008:C:H6	1.69	0.56
48:DQ:30:GLY:HA2	48:DQ:107:ALA:HB2	1.87	0.56
36:BB:111:G:C2'	36:BB:112:U:H5'	2.35	0.56
44:BJ:80:UNK:O	44:BJ:82:UNK:N	2.38	0.56
3:AC:79:ARG:HG3	3:AC:79:ARG:HH11	1.71	0.56
7:AG:64:GLN:HG3	7:AG:68:ASN:ND2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:111:G:O2'	36:BB:112:U:H5'	2.06	0.56
1:CA:336:C:H2'	1:CA:337:C:H6	1.70	0.56
1:CA:612:C:O2'	1:CA:613:C:H5'	2.05	0.56
35:DA:1510:G:H2'	35:DA:1511:C:C6	2.40	0.56
35:DA:2183:C:O2'	35:DA:2184:G:H5'	2.06	0.56
29:D4:51:ASP:OD1	29:D4:52:THR:HG23	2.06	0.56
11:CK:13:GLN:NE2	11:CK:75:TYR:HA	2.21	0.56
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	1.87	0.56
20:AT:58:LYS:O	20:AT:61:SER:HB3	2.04	0.56
52:BU:26:GLY:O	52:BU:30:LYS:HG2	2.05	0.56
37:BC:197:LEU:C	37:BC:199:ALA:H	2.08	0.56
38:DD:161:THR:O	38:DD:162:SER:HB3	2.05	0.56
2:AB:96:ARG:N	2:AB:96:ARG:HD2	2.21	0.56
32:B7:19:ARG:HH11	32:B7:19:ARG:HG2	1.70	0.56
23:AW:29:A:H2'	23:AW:30:U:H6	1.70	0.56
23:AW:40:A:C2	23:AW:41:C:C3'	2.74	0.56
22:AY:27:C:C2	22:AY:28:G:C8	2.93	0.56
22:AY:29:A:C2'	22:AY:30:U:H5'	2.35	0.56
23:CW:38:U:H2'	23:CW:39:A:N7	2.21	0.56
22:AV:15:G:H2'	22:AV:16:U:C5	2.40	0.56
22:AV:3:G:C6	22:AV:4:C:C4	2.93	0.56
35:BA:2314:C:O2'	35:BA:2315:G:H5'	2.05	0.56
35:DA:1590:U:C3'	35:DA:1591:G:H5''	2.36	0.56
23:CW:14:A:N1	23:CW:24:A:C5	2.73	0.56
12:AL:33:ARG:HD3	12:AL:62:SER:HB3	1.87	0.56
45:BN:17:ASP:HB2	45:BN:55:VAL:HG12	1.88	0.56
1:CA:963:G:H21	10:CJ:55:LYS:HD3	1.70	0.56
1:CA:972:C:OP2	10:CJ:57:LYS:HE2	2.05	0.56
52:DU:83:LEU:HD22	52:DU:83:LEU:N	2.12	0.56
42:BH:19:VAL:CG2	42:BH:44:VAL:HA	2.27	0.56
29:D4:2:LYS:NZ	36:DB:44:G:N7	2.52	0.56
36:DB:41:U:O4	41:DG:71:THR:HA	2.05	0.56
13:CM:7:VAL:HG11	41:DG:139:LEU:CD1	2.36	0.56
41:DG:61:ALA:O	41:DG:65:GLY:N	2.36	0.56
35:DA:1803:A:H4'	38:DD:259:THR:HG23	1.87	0.56
56:BY:2:ARG:NE	56:BY:3:VAL:HG23	2.21	0.56
56:BY:4:LYS:HG3	56:BY:5:MET:H	1.71	0.56
2:AB:140:HIS:O	2:AB:143:GLU:HG2	2.05	0.56
41:BG:125:PHE:O	41:BG:126:ASP:O	2.23	0.56
1:AA:370:C:O2'	1:AA:371:G:H5'	2.05	0.56
35:BA:155:U:C2'	35:BA:156:U:H5''	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DW:1:MET:CE	54:DW:2:GLU:H	2.18	0.56
6:AF:37:VAL:CG1	6:AF:38:GLU:H	2.18	0.56
27:B2:47:ASN:O	27:B2:48:HIS:C	2.43	0.56
38:BD:26:LYS:O	38:BD:27:THR:HB	2.05	0.56
42:DH:83:TYR:HB3	42:DH:134:SER:HA	1.87	0.56
37:DC:29:LEU:HD23	37:DC:32:GLU:HG3	1.88	0.56
47:BP:71:VAL:HG13	47:BP:72:PRO:CD	2.36	0.56
1:CA:824:C:H2'	1:CA:825:G:C8	2.39	0.56
1:CA:1296:C:H3'	1:CA:1297:C:C5	2.39	0.56
15:CO:27:VAL:O	15:CO:31:LEU:HD23	2.05	0.56
36:DB:11:C:C2'	36:DB:12:C:H5'	2.36	0.56
35:BA:90:U:H1'	35:BA:92:A:C8	2.40	0.56
35:DA:287:C:H2'	35:DA:288:C:C6	2.40	0.56
35:DA:527:C:OP2	35:DA:2779:U:H5	1.89	0.56
1:AA:1452:C:O4'	1:AA:1456:G:N2	2.38	0.56
34:B9:7:VAL:HG12	34:B9:25:VAL:CG2	2.35	0.56
37:DC:23:ILE:HG22	37:DC:23:ILE:O	2.04	0.56
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.06	0.56
53:BV:59:ALA:HB2	53:BV:96:ILE:HD13	1.88	0.56
35:BA:708:C:H42	35:BA:723:G:H1	1.52	0.56
1:CA:1261:A:H61	1:CA:1274:G:H1'	1.69	0.56
22:AV:36:AG9:C2'	22:AV:37:A:H5'	2.35	0.56
43:DI:53:ALA:O	43:DI:57:ARG:HB2	2.04	0.56
30:B5:16:ARG:HG2	30:B5:16:ARG:HH11	1.70	0.56
26:D1:50:ARG:HG2	26:D1:59:THR:HG22	1.86	0.56
4:AD:8:VAL:HG23	4:AD:9:CYS:H	1.71	0.56
22:CV:15:G:C2	22:CV:61:A:C2	2.93	0.56
22:CV:7:U:N3	22:CV:69:G:C2	2.73	0.56
56:DY:74:PRO:O	56:DY:80:GLY:HA2	2.06	0.56
12:CL:25:PRO:HD2	12:CL:98:TYR:OH	2.06	0.56
35:DA:1915:U:C2'	35:DA:1916:A:H5''	2.36	0.56
45:BN:128:HIS:CE1	45:BN:134:ARG:HD3	2.40	0.56
40:BF:22:ALA:O	40:BF:26:ALA:HB2	2.05	0.56
1:CA:975:A:H5'	1:CA:975:A:H8	1.70	0.56
8:AH:51:VAL:HG11	8:AH:60:ARG:CD	2.25	0.56
39:BE:101:ARG:O	39:BE:201:THR:HG22	2.05	0.56
35:BA:803:U:C2'	35:BA:804:A:H5'	2.34	0.56
40:DF:188:ARG:CA	47:DP:7:ARG:HD3	2.35	0.56
1:CA:1342:C:H1'	9:CI:124:GLN:HG3	1.87	0.56
22:CV:33:G:H2'	22:CV:34:C:H6	1.70	0.56
57:BZ:152:ALA:HA	57:BZ:167:PRO:HB2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:13:ARG:CB	29:B4:13:ARG:HH11	2.16	0.56
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.71	0.56
35:DA:2317:C:H2'	35:DA:2318:G:C5'	2.34	0.56
18:CR:50:ILE:CD1	18:CR:70:ILE:HG21	2.36	0.56
35:DA:156:U:H4'	35:DA:157:U:C5'	2.33	0.56
36:BB:30:C:H2'	36:BB:31:C:O4'	2.04	0.56
4:AD:114:ARG:O	4:AD:117:ALA:HB3	2.06	0.56
35:BA:171:G:H2'	35:BA:172:C:O4'	2.04	0.56
38:BD:267:SER:O	38:BD:268:ARG:CB	2.52	0.56
35:DA:1317:A:H2'	35:DA:1318:C:H6	1.71	0.56
22:AY:1:G:C2'	22:AY:2:G:H5'	2.35	0.56
37:DC:8:TYR:OH	37:DC:12:LEU:HD21	2.05	0.56
38:BD:142:VAL:HG21	38:BD:191:ALA:HB1	1.88	0.56
50:DS:92:TYR:O	50:DS:93:LYS:HB3	2.05	0.56
39:DE:165:VAL:O	39:DE:189:PRO:HG3	2.06	0.56
45:BN:3:THR:C	45:BN:4:TYR:CD1	2.79	0.56
57:DZ:127:LYS:HB3	57:DZ:127:LYS:NZ	2.20	0.56
46:BO:121:VAL:C	46:BO:122:LEU:HD23	2.26	0.56
43:DI:35:LEU:O	43:DI:36:ALA:HB2	2.06	0.56
35:DA:1817:G:H2'	35:DA:1818:U:H5'	1.87	0.56
35:DA:304:G:H2'	35:DA:305:U:H6	1.69	0.56
1:AA:41:G:O2'	1:AA:42:G:H5'	2.05	0.56
1:AA:924:C:H2'	1:AA:925:G:C8	2.40	0.56
35:DA:665:C:H2'	35:DA:666:G:H8	1.71	0.56
1:CA:123:C:OP1	1:CA:312:C:H5'	2.06	0.56
46:BO:14:THR:O	46:BO:52:VAL:HG23	2.05	0.56
36:BB:87:G:C3'	36:BB:88:C:H5'	2.35	0.56
35:DA:654(A):G:C2'	35:DA:654(B):C:H5'	2.35	0.56
50:DS:11:LYS:N	50:DS:11:LYS:HD2	2.20	0.56
18:CR:63:GLN:OE1	18:CR:63:GLN:HA	2.06	0.56
43:BI:21:VAL:HG21	43:BI:26:ALA:HB2	1.87	0.56
22:CY:58:C:C2	22:CY:59:G:C8	2.93	0.56
23:AW:72:C:H2'	23:AW:73:C:C1'	2.34	0.56
12:CL:82:VAL:HG23	12:CL:106:ASP:OD2	2.06	0.56
12:CL:23:LYS:O	12:CL:24:VAL:HG23	2.05	0.56
40:DF:22:ALA:O	40:DF:26:ALA:HB2	2.04	0.56
52:DU:95:LEU:O	52:DU:98:LEU:HG	2.06	0.56
8:AH:51:VAL:HG13	8:AH:60:ARG:HB2	1.88	0.56
57:DZ:24:LEU:HD12	57:DZ:41:LEU:HD22	1.88	0.56
3:AC:11:ARG:HG2	3:AC:11:ARG:HH11	1.70	0.56
45:DN:47:ALA:HB1	45:DN:116:LEU:HD21	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:115:LEU:HG	47:DP:116:GLY:N	2.21	0.56
35:DA:478:A:H2	56:DY:44:ILE:HD13	1.70	0.56
50:BS:34:HIS:HB3	50:BS:53:SER:CB	2.32	0.56
35:BA:1639:U:HO2'	35:BA:1640:C:H5''	1.70	0.56
37:BC:26:ALA:HB2	37:BC:225:ILE:HG21	1.87	0.56
3:CC:73:PRO:C	3:CC:76:VAL:HG22	2.26	0.56
8:AH:6:ILE:N	8:AH:6:ILE:HD12	2.19	0.56
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.69	0.56
35:BA:2298:A:H2'	35:BA:2299:G:O4'	2.06	0.56
35:BA:2317:C:H2'	35:BA:2318:G:C5'	2.36	0.56
19:CS:31:ILE:CG2	19:CS:49:ILE:HA	2.36	0.56
20:CT:50:GLU:HA	20:CT:100:ILE:HG22	1.86	0.56
5:CE:80:ILE:HD11	5:CE:138:ALA:HB1	1.87	0.56
57:BZ:24:LEU:HD23	57:BZ:25:PRO:O	2.06	0.56
57:DZ:128:VAL:HG22	57:DZ:132:ASN:HB2	1.88	0.56
56:BY:100:ALA:O	56:BY:101:LYS:HB2	2.06	0.56
33:D8:43:GLN:C	33:D8:44:LYS:HD2	2.25	0.56
57:BZ:128:VAL:HG22	57:BZ:129:SER:N	2.20	0.56
11:AK:124:LYS:NZ	11:AK:125:PHE:HE1	2.03	0.56
1:CA:501:C:H2'	1:CA:502:G:H8	1.70	0.56
6:AF:76:ALA:HB1	6:AF:80:ARG:NH2	2.21	0.56
38:BD:46:GLN:N	38:BD:46:GLN:OE1	2.38	0.56
1:CA:1072:G:H21	2:CB:107:THR:HG21	1.70	0.56
43:BI:8:PRO:CA	43:BI:14:ASP:H	2.19	0.56
26:B1:35:THR:OG1	35:BA:2079:U:O3'	2.22	0.56
36:DB:111:G:O2'	36:DB:112:U:H5'	2.05	0.56
6:CF:15:ASP:OD1	6:CF:17:SER:HB2	2.06	0.56
35:DA:1046:A:H1'	44:DJ:10:UNK:CB	2.36	0.56
42:BH:55:PRO:HG2	42:BH:61:HIS:CE1	2.41	0.56
35:BA:847:U:H2'	35:BA:848:G:H5''	1.87	0.56
1:CA:28:G:O2'	1:CA:296:U:OP1	2.23	0.56
2:CB:50:GLU:HB3	2:CB:200:ILE:O	2.06	0.56
50:BS:11:LYS:HD2	50:BS:11:LYS:N	2.19	0.56
35:BA:979:G:H3'	35:BA:980:A:H5''	1.88	0.56
22:CY:20:G:C3'	22:CY:21:U:C5'	2.82	0.56
1:CA:1196:U:N3	24:CX:23:A:N1	2.52	0.56
7:AG:77:SER:OG	23:AW:35:U:C5'	2.53	0.56
22:AY:63:C:O4'	57:BZ:186:GLU:CB	2.53	0.56
22:AV:52:C:O2	22:AV:66:G:N1	2.37	0.56
22:AV:68:A:C6	22:AV:69:G:C8	2.94	0.56
23:AW:47:G:H2'	23:AW:48:G:H5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:587:C:H2'	47:DP:33:ARG:CZ	2.36	0.56
19:AS:20:LEU:HA	19:AS:23:ASN:ND2	2.14	0.56
56:DY:7:VAL:C	56:DY:8:LYS:HD2	2.26	0.56
43:DI:91:SER:HB3	43:DI:121:LYS:HD3	1.88	0.56
12:CL:33:ARG:HD3	12:CL:62:SER:HB3	1.87	0.56
12:AL:48:PRO:C	12:AL:49:ASN:ND2	2.57	0.56
1:AA:1120:G:H2'	1:AA:1121:U:C6	2.40	0.56
10:CJ:8:LEU:O	10:CJ:16:LEU:HD21	2.06	0.56
35:DA:1022:G:N2	35:DA:1142(A):A:C2	2.65	0.56
35:DA:544:G:N2	35:DA:547:A:H2'	2.18	0.56
35:BA:2491:U:O2'	35:BA:2492:U:H5'	2.06	0.56
51:BT:70:VAL:CG1	51:BT:71:GLY:N	2.68	0.56
52:BU:74:LEU:HD13	52:BU:74:LEU:H	1.69	0.56
52:BU:65:ILE:HD11	52:BU:96:ALA:HB3	1.88	0.56
53:BV:49:THR:HB	53:BV:50:PRO:HD2	1.87	0.56
29:D4:27:THR:O	29:D4:27:THR:HG23	2.06	0.56
31:B6:11:LEU:HD13	31:B6:11:LEU:N	2.20	0.56
2:AB:91:PRO:HG3	2:AB:154:LEU:HD12	1.88	0.56
2:AB:102:LEU:HD23	2:AB:182:ILE:HD12	1.86	0.56
48:DQ:137:TYR:N	48:DQ:137:TYR:CD1	2.72	0.56
9:AI:4:TYR:HB3	9:AI:84:ALA:HB1	1.88	0.56
1:CA:383:A:H2'	1:CA:384:G:C5'	2.33	0.56
9:CI:63:ILE:HG22	9:CI:64:THR:N	2.20	0.56
2:AB:121:LEU:O	2:AB:127:ILE:HD11	2.05	0.56
4:CD:122:ARG:HD2	4:CD:134:ASP:O	2.06	0.56
3:AC:32:LEU:HB3	3:AC:59:ARG:HH22	1.70	0.56
35:DA:2298:A:H2'	35:DA:2299:G:O4'	2.06	0.56
1:AA:100:C:H2'	1:AA:101:A:O4'	2.05	0.56
38:DD:25:THR:HG22	38:DD:26:LYS:HD3	1.88	0.56
33:D8:33:ASN:O	33:D8:34:TRP:HB3	2.05	0.56
1:AA:706:A:N7	1:AA:707:C:H5	2.03	0.56
1:AA:1228:C:C5'	13:AM:108:ARG:NH2	2.69	0.56
42:DH:8:PRO:O	42:DH:9:ILE:HG22	2.06	0.56
5:AE:20:GLN:OE1	5:AE:21:ALA:N	2.38	0.56
1:CA:765:G:N2	1:CA:813:U:H5	2.04	0.56
1:CA:651:C:O2'	1:CA:652:U:H5'	2.06	0.56
4:AD:43:HIS:O	4:AD:45:GLN:N	2.31	0.56
34:D9:7:VAL:HG12	34:D9:25:VAL:CG2	2.35	0.56
7:AG:45:ASP:HA	7:AG:48:LYS:HE2	1.88	0.56
38:DD:148:GLU:OE1	38:DD:151:LYS:NZ	2.36	0.56
10:AJ:56:HIS:O	10:AJ:58:ASP:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.34	0.56
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.88	0.56
1:AA:1027:C:H1'	1:AA:1035:A:H2	1.71	0.56
35:BA:71:A:C2	55:BX:31:HIS:HE1	2.24	0.56
1:CA:882:C:O2'	1:CA:883:C:H5'	2.05	0.56
22:CY:19:G:O6	57:DZ:184:ALA:O	2.24	0.56
23:CW:5:C:C2	23:CW:72:C:N3	2.74	0.56
23:CW:42:C:H2'	23:CW:43:G:C5'	2.36	0.56
22:AV:20:G:H4'	22:AV:21:U:OP2	2.05	0.56
22:AV:3:G:H2'	22:AV:4:C:C5'	2.36	0.56
22:AV:5:C:C2	22:AV:6:C:C5	2.94	0.56
41:BG:81:LYS:O	41:BG:82:LEU:O	2.24	0.56
33:D8:6:THR:HG22	33:D8:63:PRO:HD3	1.87	0.56
51:DT:64:ARG:HA	51:DT:72:VAL:O	2.06	0.56
51:BT:3:ARG:C	51:BT:5:ALA:N	2.56	0.56
31:B6:48:VAL:HG23	31:B6:49:HIS:N	2.20	0.56
23:AW:52:C:N3	23:AW:53:U:C4	2.74	0.56
23:AW:8:U:H3	23:AW:24:A:N6	2.03	0.56
56:DY:84:ARG:HD2	56:DY:97:ARG:CD	2.36	0.56
1:CA:973:G:O4'	10:CJ:55:LYS:HG3	2.06	0.56
52:DU:101:ARG:HH11	52:DU:101:ARG:CB	2.18	0.56
3:CC:116:VAL:O	3:CC:119:ARG:HB3	2.05	0.56
52:BU:101:ARG:C	52:BU:102:GLU:HG2	2.25	0.56
1:AA:976:G:N2	1:AA:1362:C:H2'	2.21	0.56
13:AM:93:ARG:CG	35:BA:888:C:OP1	2.54	0.56
53:BV:14:VAL:O	53:BV:15:GLU:HG3	2.06	0.56
35:BA:2801(A):A:C4'	35:BA:2802:G:H5'	2.31	0.56
9:CI:127:LYS:O	9:CI:127:LYS:HG2	2.06	0.56
27:D2:13:ALA:HA	27:D2:16:LEU:CD1	2.36	0.56
32:B7:8:ASN:ND2	32:B7:11:LYS:H	2.03	0.56
2:CB:91:PRO:HG3	2:CB:154:LEU:HD12	1.87	0.56
5:AE:33:VAL:CG2	5:AE:109:ILE:HG12	2.36	0.56
9:AI:21:PRO:HA	9:AI:58:HIS:O	2.05	0.56
46:BO:10:VAL:HG21	46:BO:16:ALA:O	2.06	0.56
35:DA:157:U:H5'	35:DA:158:U:OP1	2.06	0.56
1:CA:1502:A:H5'	1:CA:1504:G:N7	2.21	0.56
1:CA:67:C:H2'	1:CA:68:G:H8	1.68	0.56
45:DN:48:MET:H	45:DN:48:MET:HE3	1.70	0.56
33:B8:33:ASN:O	33:B8:34:TRP:HB3	2.05	0.56
35:DA:2657:A:O2'	42:DH:160:LYS:HE2	2.06	0.56
18:AR:36:ASN:HB3	18:AR:39:VAL:HB	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:136:PHE:O	57:DZ:138:GLU:N	2.39	0.56
56:BY:95:LYS:CE	56:BY:100:ALA:HB1	2.36	0.56
50:BS:28:VAL:O	50:BS:89:ARG:HD2	2.05	0.56
10:AJ:23:ILE:HG22	10:AJ:23:ILE:O	2.06	0.56
34:B9:4:ARG:HD2	34:B9:34:GLN:HE21	1.70	0.56
30:B5:40:LYS:HZ2	30:B5:46:CYS:H	1.53	0.56
48:BQ:2:LEU:O	48:BQ:70:PRO:HG2	2.06	0.56
3:CC:64:VAL:HG11	3:CC:66:VAL:HG23	1.88	0.56
35:DA:654(S):G:H2'	35:DA:654(S):G:N3	2.20	0.56
9:AI:2:GLU:O	9:AI:2:GLU:HG2	2.05	0.56
5:CE:36:ASP:O	5:CE:37:ARG:HG3	2.05	0.56
57:BZ:51:ALA:HB1	57:BZ:57:ILE:HD11	1.88	0.56
49:BR:29:LEU:CD2	49:BR:70:LEU:HD11	2.35	0.56
48:BQ:36:ALA:HB2	48:BQ:103:MET:SD	2.46	0.56
10:CJ:56:HIS:O	10:CJ:58:ASP:N	2.39	0.56
38:DD:248:SER:HB2	38:DD:249:PRO:HD2	1.87	0.56
50:BS:51:ALA:HB3	50:BS:73:LEU:HB2	1.88	0.56
10:CJ:100:THR:HG22	10:CJ:101:VAL:N	2.20	0.56
3:CC:79:ARG:HH11	3:CC:79:ARG:HG3	1.71	0.56
55:DX:57:LEU:HD22	55:DX:57:LEU:O	2.05	0.56
40:BF:148:LEU:HD21	40:BF:191:ARG:HH11	1.70	0.56
37:DC:197:LEU:C	37:DC:199:ALA:H	2.07	0.56
22:AY:25:A:C2	22:AY:26:G:C4	2.93	0.56
35:BA:1846:G:H5'	35:BA:1846:G:C8	2.36	0.56
22:AV:24:A:C2	22:AV:25:A:N7	2.74	0.56
22:AV:44:A:C6	22:AV:45:U:C5	2.94	0.56
1:CA:1442(A):G:H2'	51:DT:118:ARG:HH11	1.71	0.56
1:CA:179:A:H2'	1:CA:180:U:H6	1.70	0.56
23:AW:59:G:O2'	23:AW:60:A:H5'	2.05	0.56
43:BI:91:SER:HB3	43:BI:121:LYS:HD3	1.88	0.56
12:AL:38:THR:O	12:AL:79:GLU:HG2	2.06	0.56
45:DN:128:HIS:HE1	45:DN:134:ARG:CZ	2.19	0.56
12:CL:49:ASN:ND2	12:CL:49:ASN:N	2.54	0.56
53:BV:19:LYS:HB3	53:BV:94:LEU:O	2.05	0.56
53:BV:87:HIS:NE2	53:BV:89:GLN:HG2	2.21	0.56
29:D4:31:ILE:HD12	29:D4:31:ILE:N	2.21	0.56
39:BE:51:PHE:N	39:BE:74:PRO:HG2	2.20	0.56
9:AI:65:VAL:HG21	9:AI:73:GLN:CB	2.33	0.56
35:DA:1568:G:H21	38:DD:58:HIS:CE1	2.24	0.56
39:BE:116:VAL:HG22	39:BE:122:PHE:CG	2.41	0.56
30:B5:45:VAL:HG11	30:B5:55:ARG:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:114:U:H2'	1:CA:115:G:H8	1.66	0.56
9:CI:93:ARG:HG3	9:CI:97:LYS:HB2	1.87	0.56
39:DE:132:HIS:CD2	39:DE:135:HIS:NE2	2.74	0.56
38:DD:176:ARG:NH1	38:DD:176:ARG:HG2	2.21	0.56
25:D0:84:LEU:N	25:D0:84:LEU:HD12	2.20	0.56
39:BE:21:VAL:HG23	39:BE:23:VAL:HG13	1.87	0.56
47:DP:112:LEU:HD22	47:DP:113:LYS:N	2.21	0.56
2:CB:22:LYS:HE2	2:CB:22:LYS:CA	2.34	0.56
57:BZ:80:ARG:CB	57:BZ:80:ARG:HH11	2.19	0.56
50:BS:106:ARG:CZ	50:BS:106:ARG:HB3	2.35	0.56
2:AB:22:LYS:HE2	2:AB:22:LYS:CA	2.36	0.56
25:B0:81:VAL:O	25:B0:83:PRO:HD3	2.05	0.56
3:CC:162:GLN:HG2	24:CX:24:A:C1'	2.35	0.56
48:BQ:57:HIS:NE2	48:BQ:116:GLU:CG	2.69	0.56
35:BA:2477:C:H5'	35:BA:2477:C:C6	2.41	0.56
1:CA:1072:G:H2'	1:CA:1073:U:O4'	2.06	0.56
35:DA:573:G:N1	35:DA:2031:A:OP2	2.34	0.56
25:B0:36:ILE:HD13	25:B0:58:THR:HG23	1.87	0.56
22:AV:36:AG9:H2'	22:AV:37:A:H5'	1.88	0.56
1:CA:245:C:O2'	1:CA:246:A:H5'	2.04	0.56
2:CB:185:ILE:CG2	2:CB:199:TYR:HB2	2.36	0.56
1:CA:276:G:O2'	1:CA:277:C:H5'	2.06	0.56
45:DN:69:GLN:O	45:DN:71:ILE:HG13	2.05	0.56
1:AA:1113:C:H6	1:AA:1113:C:O5'	1.89	0.56
4:AD:39:PRO:O	4:AD:44:GLY:HA3	2.06	0.56
10:CJ:44:VAL:HG22	10:CJ:66:ARG:HG2	1.87	0.56
35:DA:1467:C:O2'	35:DA:1468:C:H5'	2.06	0.56
35:DA:2248:C:H2'	35:DA:2249:U:H5'	1.88	0.56
35:DA:1862:G:O2'	35:DA:1863:G:H5'	2.06	0.56
35:BA:2555:U:H2'	35:BA:2556:C:H5'	1.88	0.56
51:DT:65:LYS:CE	51:DT:66:VAL:H	2.19	0.56
23:AW:9:A:N3	23:AW:47:G:H2'	2.20	0.56
56:DY:81:LYS:HD3	56:DY:97:ARG:CB	2.35	0.56
43:DI:88:ILE:CG2	43:DI:89:TYR:N	2.69	0.56
1:AA:1122:U:H2'	1:AA:1123:A:C8	2.41	0.56
45:BN:133:GLN:CG	45:BN:134:ARG:H	2.06	0.56
40:BF:3:GLU:HA	40:BF:24:LEU:CG	2.36	0.56
47:BP:107:LYS:O	47:BP:109:GLY:N	2.39	0.56
53:DV:19:LYS:HB3	53:DV:94:LEU:O	2.05	0.56
42:BH:44:VAL:HG12	42:BH:45:VAL:N	2.21	0.56
1:CA:976:G:N2	1:CA:1362:C:H2'	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:91:ARG:O	51:BT:117:ASP:HB2	2.06	0.56
47:DP:144:GLU:N	47:DP:145:PRO:CD	2.54	0.56
52:BU:102:GLU:HG3	53:BV:2:PHE:CZ	2.41	0.56
35:BA:2635:C:OP1	39:BE:77:ILE:HG21	2.06	0.56
39:DE:111:ARG:HG2	49:DR:2:ARG:NH2	2.21	0.56
26:D1:89:GLU:CA	26:D1:92:LYS:HB3	2.31	0.56
31:D6:27:LYS:HB3	31:D6:30:THR:CG2	2.36	0.56
50:DS:56:LEU:O	50:DS:56:LEU:HD23	2.06	0.56
38:BD:31:LYS:HB3	38:BD:34:VAL:HG22	1.88	0.56
29:B4:7:PRO:CG	41:BG:62:LEU:HD12	2.37	0.56
37:DC:26:ALA:HB2	37:DC:225:ILE:HG21	1.87	0.56
3:AC:40:ARG:O	3:AC:44:GLU:HB2	2.05	0.56
18:AR:58:LEU:HD12	18:AR:58:LEU:N	2.19	0.56
18:CR:58:LEU:N	18:CR:58:LEU:HD12	2.20	0.56
1:AA:345:C:O2'	51:BT:35:LYS:NZ	2.38	0.56
38:DD:26:LYS:O	38:DD:27:THR:HB	2.04	0.56
57:DZ:163:LEU:HD23	57:DZ:163:LEU:H	1.69	0.56
35:BA:2657:A:O2'	42:BH:160:LYS:HE2	2.06	0.56
35:BA:2807:G:H3'	35:BA:2808:U:H5''	1.88	0.56
2:AB:165:VAL:HG23	2:AB:166:ASP:N	2.19	0.56
1:AA:376:G:O2'	1:AA:377:G:H5'	2.06	0.56
38:DD:142:VAL:HG23	38:DD:192:THR:C	2.26	0.56
35:DA:2543:G:H2'	35:DA:2544:G:H8	1.71	0.56
8:AH:17:THR:HB	8:AH:78:GLN:OE1	2.06	0.56
1:AA:591:U:H2'	1:AA:592:G:H8	1.70	0.56
12:CL:117:ARG:HB2	12:CL:117:ARG:CZ	2.36	0.56
7:CG:69:VAL:O	7:CG:69:VAL:HG12	2.06	0.56
22:CV:77:C:C6	22:CV:77:C:H5'	2.41	0.56
35:BA:2012:G:O3'	54:BW:96:ILE:HG13	2.06	0.56
35:BA:654(S):G:H2'	35:BA:654(S):G:N3	2.21	0.56
4:AD:23:GLY:O	4:AD:27:TYR:HD1	1.89	0.56
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.34	0.56
4:CD:49:ARG:NE	4:CD:49:ARG:HA	2.20	0.56
7:CG:31:MET:SD	7:CG:36:LYS:HB2	2.46	0.56
35:DA:2639:A:H2'	35:DA:2640:G:H5'	1.88	0.56
33:B8:23:VAL:CG1	33:B8:46:ARG:HB3	2.36	0.56
1:CA:1396:A:O4'	1:CA:1398:A:H1'	2.05	0.56
20:CT:38:LYS:HA	20:CT:41:ILE:HD11	1.88	0.56
1:AA:693:G:H2'	1:AA:694:A:C8	2.40	0.56
3:CC:125:GLU:HG2	3:CC:190:ARG:H	1.70	0.56
36:BB:60:C:H2'	36:BB:61:G:H8	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:197:GLY:O	38:BD:198:ASN:HB3	2.05	0.56
35:DA:1266:G:P	54:DW:15:ARG:HH22	2.29	0.56
35:DA:1029:A:H2'	35:DA:1030:G:O4'	2.05	0.56
1:CA:417:C:O2'	1:CA:418:C:H5'	2.05	0.56
22:CY:10:G:C2	22:CY:28:G:H1'	2.39	0.55
22:CY:11:C:H41	22:CY:47:G:N2	2.04	0.55
22:AY:10:G:C2	22:AY:28:G:H1'	2.41	0.55
22:AY:24:A:N1	22:AY:25:A:N7	2.53	0.55
22:AY:68:A:C4	22:AY:69:G:C8	2.95	0.55
4:CD:31:CYS:O	4:CD:32:ALA:HB3	2.06	0.55
51:BT:12:SER:O	51:BT:13:ARG:NE	2.39	0.55
23:AW:11:C:H2'	23:AW:12:U:C1'	2.36	0.55
43:DI:83:ALA:CB	43:DI:88:ILE:HG23	2.36	0.55
43:DI:88:ILE:HD11	43:DI:142:VAL:CG1	2.25	0.55
23:CW:13:U:C6	23:CW:14:A:H5''	2.41	0.55
35:DA:1915:U:C3'	35:DA:1916:A:C5'	2.70	0.55
1:CA:1120:G:H2'	1:CA:1121:U:C6	2.41	0.55
35:DA:996:A:H4'	52:DU:92:ARG:HE	1.69	0.55
52:DU:101:ARG:O	52:DU:102:GLU:HG2	2.06	0.55
52:DU:95:LEU:CD1	53:DV:11:GLN:HE21	2.19	0.55
50:DS:36:TYR:N	50:DS:36:TYR:CD1	2.74	0.55
53:BV:2:PHE:CB	53:BV:42:GLY:HA2	2.36	0.55
41:DG:5:VAL:H	41:DG:8:LYS:HB3	1.70	0.55
13:CM:86:CYS:HA	19:CS:73:GLU:O	2.06	0.55
56:BY:28:LYS:HG2	56:BY:39:VAL:CG2	2.34	0.55
56:BY:2:ARG:HD3	56:BY:2:ARG:C	2.26	0.55
40:BF:28:ILE:HD13	40:BF:28:ILE:N	2.20	0.55
13:AM:97:PRO:HB2	13:AM:101:GLN:NE2	2.21	0.55
35:BA:2801(A):A:H5'	35:BA:2802:G:H8	1.70	0.55
40:DF:34:TRP:CZ2	47:DP:12:ALA:HB2	2.40	0.55
35:DA:482:A:H4'	56:DY:47:LYS:HG2	1.88	0.55
50:BS:30:ARG:NH2	50:BS:62:LYS:HD2	2.22	0.55
2:AB:171:ALA:HA	2:AB:174:VAL:CG2	2.36	0.55
8:AH:68:ARG:HG2	8:AH:68:ARG:HH11	1.71	0.55
1:CA:390:C:H4'	16:CP:28:ARG:HH21	1.70	0.55
9:CI:53:VAL:HB	9:CI:92:TYR:HE2	1.71	0.55
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.70	0.55
29:B4:31:ILE:HD12	29:B4:31:ILE:N	2.21	0.55
15:AO:82:ILE:HD13	15:AO:82:ILE:C	2.26	0.55
8:CH:86:ILE:HB	8:CH:133:LEU:HD22	1.88	0.55
7:CG:15:ASP:OD1	7:CG:16:LEU:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:10:ARG:NH1	9:AI:105:ASP:HB2	2.21	0.55
33:D8:39:LYS:HE2	33:D8:43:GLN:NE2	2.21	0.55
36:BB:11:C:C2'	36:BB:12:C:H5'	2.35	0.55
1:AA:154:C:H42	1:AA:167:G:H1	1.53	0.55
35:BA:2445:G:OP1	40:BF:74:ARG:NH2	2.39	0.55
45:BN:54:VAL:HB	45:BN:122:VAL:HG22	1.87	0.55
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.21	0.55
1:CA:692:U:H5	11:CK:26:ASN:ND2	2.05	0.55
44:BJ:66:UNK:O	44:BJ:72:UNK:HA	2.04	0.55
1:AA:601:C:H2'	1:AA:602:A:H8	1.70	0.55
41:BG:118:ARG:HB3	41:BG:181:ARG:NE	2.21	0.55
35:BA:1449:A:H5'	35:BA:1450:G:OP2	2.06	0.55
35:BA:830:G:H4'	35:BA:831:G:OP2	2.06	0.55
35:DA:2742:C:O2'	35:DA:2743:C:H5'	2.05	0.55
3:AC:34:LEU:O	3:AC:38:ARG:HG2	2.05	0.55
37:BC:190:ILE:O	37:BC:194:ILE:HG12	2.05	0.55
36:BB:65:C:N4	36:BB:109:C:H2'	2.21	0.55
20:AT:46:GLU:O	20:AT:46:GLU:HG2	2.06	0.55
40:DF:160:ASN:HD22	40:DF:160:ASN:C	2.09	0.55
1:AA:453:A:H2'	1:AA:454:C:C6	2.41	0.55
22:CY:55:G:C5	57:DZ:183:LEU:HD13	2.42	0.55
22:CY:58:C:H2'	22:CY:59:G:H8	1.70	0.55
4:AD:13:ARG:O	4:AD:15:GLU:N	2.39	0.55
35:DA:1485:G:H2'	35:DA:1486:A:C8	2.41	0.55
45:BN:132:ALA:O	45:BN:133:GLN:HB3	2.07	0.55
42:DH:7:LEU:CD2	42:DH:69:ARG:HD2	2.25	0.55
8:CH:51:VAL:HG13	8:CH:60:ARG:HB2	1.87	0.55
45:DN:133:GLN:CG	45:DN:135:PRO:HD3	2.35	0.55
3:AC:119:ARG:HG3	3:AC:119:ARG:NH1	2.22	0.55
35:DA:2302:G:H1'	41:DG:128:ARG:HE	1.71	0.55
35:DA:483:A:H4'	56:DY:49:VAL:HA	1.87	0.55
48:DQ:34:LEU:CD1	48:DQ:129:THR:HB	2.30	0.55
4:CD:129:ASN:ND2	4:CD:145:GLU:N	2.51	0.55
39:DE:101:ARG:O	39:DE:201:THR:HG22	2.06	0.55
32:B7:12:ARG:CD	32:B7:46:VAL:HG21	2.34	0.55
3:AC:73:PRO:C	3:AC:76:VAL:HG22	2.27	0.55
29:B4:15:ILE:N	29:B4:31:ILE:O	2.39	0.55
35:BA:2892:A:N6	35:BA:2893:G:H21	2.04	0.55
38:DD:117:VAL:HG21	38:DD:128:GLY:C	2.27	0.55
20:AT:50:GLU:HA	20:AT:100:ILE:HG22	1.87	0.55
50:BS:16:ASN:O	50:BS:19:LYS:N	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DS:106:ARG:CZ	50:DS:106:ARG:HB3	2.36	0.55
1:CA:865:A:H2	1:CA:918:A:H4'	1.71	0.55
35:DA:2777:G:H5''	35:DA:2778:A:H5''	1.88	0.55
4:AD:23:GLY:O	4:AD:27:TYR:CD1	2.59	0.55
43:DI:8:PRO:CA	43:DI:14:ASP:H	2.18	0.55
38:BD:131:LEU:HD13	38:BD:136:ILE:HG12	1.87	0.55
1:AA:646:U:H2'	1:AA:647:C:C6	2.41	0.55
1:AA:1067:A:H1'	1:AA:1068:G:O4'	2.06	0.55
38:BD:161:THR:O	38:BD:162:SER:HB3	2.05	0.55
36:BB:114:C:H4'	50:BS:46:VAL:HG22	1.88	0.55
23:CW:39:A:C3'	23:CW:41:C:OP1	2.54	0.55
51:DT:27:THR:CG2	51:DT:28:VAL:H	2.19	0.55
31:D6:48:VAL:O	31:D6:49:HIS:CB	2.54	0.55
40:DF:20:LEU:HD12	40:DF:199:TRP:HZ3	1.71	0.55
12:AL:48:PRO:HG2	12:AL:49:ASN:HD21	1.71	0.55
35:BA:1713:U:O2'	35:BA:1714:G:H5'	2.06	0.55
17:AQ:9:VAL:HG12	17:AQ:56:VAL:CG2	2.25	0.55
35:DA:2314:C:O2'	35:DA:2315:G:H5'	2.06	0.55
56:BY:66:PRO:O	56:BY:67:LEU:HB3	2.05	0.55
3:CC:181:ASN:HD21	3:CC:204:LEU:HB2	1.70	0.55
50:DS:59:LYS:CD	50:DS:61:ASN:HB2	2.35	0.55
50:BS:59:LYS:CD	50:BS:61:ASN:HB2	2.36	0.55
50:BS:70:GLY:CA	50:BS:101:LEU:HD23	2.36	0.55
35:BA:483:A:H4'	56:BY:49:VAL:HA	1.88	0.55
30:B5:54:GLY:CA	30:B5:55:ARG:HE	2.18	0.55
26:B1:57:GLU:O	26:B1:58:ILE:HG23	2.06	0.55
1:CA:370:C:O2'	1:CA:371:G:H5'	2.07	0.55
57:DZ:65:GLN:OE1	57:DZ:67:LEU:HD11	2.07	0.55
1:AA:403:C:H2'	1:AA:404:U:H6	1.71	0.55
36:BB:52:A:N6	50:BS:33:LYS:HG3	2.17	0.55
1:CA:1321:C:H3'	1:CA:1322:C:H5''	1.88	0.55
38:DD:12:SER:HB2	38:DD:208:LYS:HB3	1.88	0.55
2:CB:112:VAL:O	2:CB:116:GLU:HG2	2.05	0.55
35:DA:2579:C:O3'	39:DE:131:ALA:HB2	2.07	0.55
38:DD:25:THR:HG22	38:DD:26:LYS:N	2.21	0.55
1:AA:1342:C:H1'	9:AI:124:GLN:HG3	1.88	0.55
41:BG:172:LEU:HD23	41:BG:172:LEU:C	2.25	0.55
49:DR:98:LEU:O	49:DR:113:LEU:HD22	2.07	0.55
2:CB:166:ASP:HB3	2:CB:169:LYS:CB	2.37	0.55
1:CA:154:C:H42	1:CA:167:G:H1	1.54	0.55
48:BQ:137:TYR:CD1	48:BQ:137:TYR:N	2.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:24:GLN:HE22	49:BR:36:THR:HG21	1.72	0.55
35:BA:709:U:H2'	35:BA:710:G:C8	2.42	0.55
42:DH:68:THR:O	42:DH:70:THR:N	2.39	0.55
56:BY:88:LYS:HE2	56:BY:93:GLY:HA3	1.87	0.55
11:CK:33:THR:C	11:CK:40:ILE:HD11	2.27	0.55
5:AE:60:TYR:HE1	5:AE:64:ARG:HH21	1.48	0.55
48:DQ:36:ALA:HB1	48:DQ:127:ILE:HD12	1.89	0.55
18:AR:31:LEU:N	18:AR:31:LEU:HD23	2.22	0.55
41:DG:77:ILE:HG23	41:DG:77:ILE:O	2.05	0.55
35:DA:2201:C:O2'	35:DA:2202:C:H5'	2.06	0.55
35:DA:1052:C:H5	35:DA:1054:A:H61	1.55	0.55
35:BA:2346:A:H5'	35:BA:2383:G:H1'	1.87	0.55
25:B0:53:MET:HG3	25:B0:59:LEU:HD23	1.88	0.55
54:BW:37:ARG:NH1	54:BW:38:TYR:CZ	2.75	0.55
29:B4:22:ILE:N	29:B4:22:ILE:HD12	2.22	0.55
54:BW:47:VAL:HA	54:BW:50:VAL:HG12	1.89	0.55
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.06	0.55
48:DQ:55:VAL:HG12	48:DQ:64:ILE:CD1	2.33	0.55
22:AY:28:G:C6	22:AY:29:A:N6	2.75	0.55
22:AY:70:G:C5	22:AY:71:G:N7	2.75	0.55
22:AV:32:G:C6	22:AV:43:G:C6	2.95	0.55
33:D8:62:LEU:HD13	35:DA:242:G:C5'	2.13	0.55
35:BA:1590:U:C3'	35:BA:1591:G:H5''	2.36	0.55
1:CA:520:A:OP2	12:CL:51:ALA:HB1	2.06	0.55
1:CA:1122:U:H2'	1:CA:1123:A:C8	2.41	0.55
45:DN:128:HIS:CE1	45:DN:134:ARG:HD3	2.41	0.55
35:BA:1494:A:C3'	35:BA:1495:A:H5''	2.36	0.55
29:D4:34:GLU:CB	41:DG:113:ARG:HH11	2.14	0.55
41:DG:95:ARG:NH1	41:DG:95:ARG:HG2	2.21	0.55
1:CA:1228:C:C5'	13:CM:108:ARG:NH2	2.70	0.55
35:DA:2801(A):A:H5'	35:DA:2802:G:H8	1.71	0.55
3:CC:84:ILE:O	3:CC:88:ARG:HG3	2.07	0.55
3:AC:95:THR:CG2	3:AC:97:LYS:HB2	2.36	0.55
3:AC:95:THR:HG22	3:AC:97:LYS:HB2	1.87	0.55
9:CI:50:LEU:O	9:CI:53:VAL:HG22	2.07	0.55
51:DT:34:VAL:O	51:DT:35:LYS:CB	2.54	0.55
39:DE:69:LYS:HE3	39:DE:90:THR:N	2.20	0.55
39:BE:69:LYS:CE	39:BE:90:THR:H	2.18	0.55
2:CB:121:LEU:O	2:CB:127:ILE:HD11	2.07	0.55
35:DA:1541:G:H4'	35:DA:1542:A:H5''	1.89	0.55
1:CA:191:G:H1'	20:CT:105:SER:CB	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D8:34:TRP:HB2	35:DA:2420:C:OP1	2.06	0.55
35:BA:1790:C:O2'	38:BD:209:ALA:HB2	2.07	0.55
42:BH:11:VAL:HG21	42:BH:50:VAL:HG23	1.87	0.55
42:BH:9:ILE:HD12	42:BH:50:VAL:HB	1.87	0.55
33:B8:39:LYS:HE2	33:B8:43:GLN:NE2	2.22	0.55
47:DP:83:VAL:HG23	47:DP:105:LEU:HD13	1.89	0.55
18:AR:36:ASN:HB2	18:AR:40:LEU:CD1	2.37	0.55
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.88	0.55
49:DR:24:GLN:HE22	49:DR:36:THR:HG21	1.71	0.55
1:CA:1296:C:OP1	13:CM:14:ARG:HD3	2.06	0.55
1:AA:401:C:H2'	1:AA:402:G:H8	1.71	0.55
1:CA:91:C:O2	1:CA:91:C:H2'	2.05	0.55
57:BZ:81:ARG:NH1	57:BZ:81:ARG:CB	2.69	0.55
1:CA:501:C:O2'	1:CA:502:G:H5'	2.07	0.55
5:CE:101:ILE:HD11	5:CE:119:LEU:HD23	1.87	0.55
35:BA:2784:C:H1'	39:BE:37:ARG:NH1	2.21	0.55
4:CD:47:ARG:NH2	4:CD:49:ARG:HH22	2.05	0.55
35:DA:2468:G:H22	35:DA:2481:G:C2'	2.20	0.55
7:CG:45:ASP:HA	7:CG:48:LYS:HE2	1.88	0.55
5:CE:20:GLN:OE1	5:CE:21:ALA:N	2.40	0.55
1:CA:1316:G:H2'	1:CA:1317:C:H5''	1.87	0.55
1:CA:1317:C:OP2	14:CN:17:LYS:HG2	2.06	0.55
44:DJ:22:UNK:O	44:DJ:88:UNK:HA	2.06	0.55
35:BA:2861:G:O2'	35:BA:2862:G:H5'	2.07	0.55
2:CB:181:PHE:HD1	8:CH:70:GLN:HB3	1.71	0.55
35:BA:492:A:H2'	35:BA:493:G:O4'	2.07	0.55
35:DA:1009:A:H5'	52:DU:59:ARG:HD3	1.88	0.55
35:BA:80:G:O2'	35:BA:81:G:H5'	2.07	0.55
28:B3:1:MET:C	28:B3:3:ARG:H	2.10	0.55
1:CA:505:G:H2'	1:CA:506:G:H8	1.72	0.55
19:AS:29:ARG:HD2	19:AS:29:ARG:N	2.22	0.55
22:CY:56:U:H5''	22:CY:57:U:OP2	2.07	0.55
23:AW:34:C:C2'	23:AW:34:C:O2	2.53	0.55
22:AY:14:A:C6	22:AY:24:A:C5	2.94	0.55
4:CD:31:CYS:HG	58:CD:1000:ZN:ZN	0.27	0.55
22:AV:58:C:N4	41:BG:84:LYS:HE2	2.21	0.55
30:B5:3:LYS:HB3	35:BA:747:U:C4	2.41	0.55
31:B6:41:PRO:HD2	31:B6:45:LYS:O	2.06	0.55
56:DY:36:ALA:HA	56:DY:69:ALA:N	2.21	0.55
43:BI:92:VAL:CG1	43:BI:120:ILE:HD13	2.33	0.55
12:AL:85:ILE:HG13	12:AL:98:TYR:HB3	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:58:ASP:OD1	45:BN:124:ALA:HB1	2.07	0.55
2:AB:77:ALA:CB	2:AB:211:ILE:HG21	2.37	0.55
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.89	0.55
33:D8:50:LEU:O	33:D8:51:ALA:CB	2.54	0.55
22:CV:34:C:O2	22:CV:34:C:H2'	2.05	0.55
3:CC:40:ARG:O	3:CC:44:GLU:HB2	2.05	0.55
1:CA:253:U:H2'	1:CA:254:G:H8	1.70	0.55
38:DD:267:SER:O	38:DD:268:ARG:CB	2.55	0.55
35:DA:2712:U:O2	35:DA:2712:U:H5'	2.07	0.55
38:DD:263:ARG:HB2	38:DD:263:ARG:NH1	2.20	0.55
35:BA:2125:G:H4'	37:BC:218:THR:HG21	1.88	0.55
1:CA:347:G:N2	1:CA:348:G:H1'	2.21	0.55
38:BD:25:THR:HG22	38:BD:26:LYS:N	2.22	0.55
42:BH:11:VAL:CG1	42:BH:15:VAL:HG23	2.36	0.55
1:CA:1292:U:C5'	9:CI:38:GLN:HE22	2.20	0.55
7:AG:31:MET:SD	7:AG:36:LYS:HB2	2.46	0.55
35:BA:1280:G:C3'	35:BA:1281:G:H5''	2.36	0.55
50:BS:93:LYS:O	50:BS:93:LYS:HG3	2.07	0.55
2:AB:36:ARG:O	2:AB:41:ILE:HD11	2.07	0.55
1:AA:749:C:O2'	1:AA:750:G:H5'	2.06	0.55
1:CA:990:C:H2'	1:CA:991:U:C6	2.42	0.55
1:AA:765:G:N2	1:AA:813:U:H5	2.05	0.55
35:BA:142:A:H1'	35:BA:1408:C:O4'	2.06	0.55
18:AR:31:LEU:H	18:AR:31:LEU:CD2	2.20	0.55
35:DA:225:A:C2'	35:DA:226:G:H5'	2.36	0.55
2:CB:96:ARG:N	2:CB:96:ARG:HD2	2.21	0.55
10:AJ:44:VAL:HG22	10:AJ:66:ARG:HG2	1.88	0.55
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.07	0.55
35:BA:654(H):G:H22	35:BA:654(J):A:H8	1.53	0.55
43:BI:112:LYS:HD2	43:BI:112:LYS:N	2.22	0.55
35:BA:319:C:O2'	35:BA:320:A:H5'	2.06	0.55
35:DA:2648:C:H2'	35:DA:2649:U:C6	2.41	0.55
35:DA:1396:U:H2'	35:DA:1396:U:O2	2.05	0.55
35:BA:693:C:O2'	35:BA:694:U:H5'	2.06	0.55
44:DJ:57:UNK:O	44:DJ:58:UNK:CB	2.55	0.55
8:AH:29:SER:HB3	8:AH:32:LYS:HG3	1.86	0.55
22:CY:58:C:H5''	57:DZ:179:ASP:OD2	2.07	0.55
23:AW:42:C:H2'	23:AW:43:G:C5'	2.37	0.55
23:AW:44:A:H2'	23:AW:45:U:C5'	2.37	0.55
35:BA:898:C:C2'	35:BA:899:A:H5'	2.37	0.55
23:CW:4:C:C2	23:CW:5:C:C4	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DE:179:GLU:O	39:DE:180:ASN:HB2	2.06	0.55
22:AV:25:A:C6	22:AV:26:G:C6	2.94	0.55
22:AV:68:A:C6	22:AV:69:G:N7	2.74	0.55
22:AV:71:G:N2	22:AV:72:C:C1'	2.69	0.55
30:B5:2:ALA:N	35:BA:2014:A:HO2'	2.05	0.55
51:DT:122:ASP:C	51:DT:124:ASP:H	2.10	0.55
35:DA:1899:G:H22	35:DA:1902:C:H41	0.68	0.55
38:BD:245:PRO:O	38:BD:246:PRO:C	2.45	0.55
56:DY:7:VAL:HG21	56:DY:8:LYS:HZ2	1.71	0.55
33:B8:4:MET:CB	33:B8:61:LEU:HD22	2.37	0.55
1:AA:963:G:N3	10:AJ:55:LYS:NZ	2.54	0.55
30:D5:3:LYS:HZ3	30:D5:5:PRO:HB2	1.70	0.55
40:DF:21:ALA:C	40:DF:23:ASP:H	2.09	0.55
12:AL:41:ARG:HH11	12:AL:41:ARG:CB	2.08	0.55
45:BN:128:HIS:HE1	45:BN:134:ARG:CZ	2.20	0.55
10:CJ:8:LEU:HB3	10:CJ:16:LEU:HD21	1.87	0.55
10:CJ:3:LYS:HZ3	10:CJ:76:ASN:HA	1.71	0.55
2:CB:77:ALA:CB	2:CB:211:ILE:HG21	2.35	0.55
53:BV:39:LEU:HA	53:BV:47:VAL:CG1	2.36	0.55
41:DG:98:ARG:HA	41:DG:101:ILE:HD12	1.89	0.55
36:DB:81:G:H5'	36:DB:81:G:N3	2.21	0.55
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.42	0.55
47:DP:10:PRO:O	47:DP:11:GLY:C	2.45	0.55
1:CA:943:U:H2'	1:CA:944:G:H5'	1.89	0.55
1:CA:1141:C:H2'	1:CA:1142:G:N7	2.22	0.55
15:CO:82:ILE:C	15:CO:82:ILE:HD13	2.26	0.55
7:CG:79:ARG:HD3	7:CG:82:GLY:H	1.72	0.55
32:D7:8:ASN:HD22	32:D7:9:ARG:N	2.04	0.55
32:D7:12:ARG:HG3	35:DA:686:G:O6	2.07	0.55
29:B4:14:ILE:N	29:B4:14:ILE:HD12	2.22	0.55
35:BA:1045:A:H5''	35:BA:1047:G:N3	2.22	0.55
20:AT:57:ARG:HB2	20:AT:57:ARG:HH11	1.71	0.55
1:CA:959:A:C2'	1:CA:960:U:H4'	2.35	0.55
1:AA:708:C:H2'	1:AA:709:G:C8	2.40	0.55
1:AA:1292:U:C5'	9:AI:38:GLN:HE22	2.18	0.55
42:BH:83:TYR:HB3	42:BH:134:SER:HA	1.89	0.55
2:AB:39:ILE:O	2:AB:41:ILE:HD12	2.07	0.55
35:BA:1573:G:C2'	35:BA:1574:C:H5'	2.37	0.55
25:D0:50:ASN:HB3	25:D0:63:VAL:HG22	1.89	0.55
37:DC:47:LYS:HB3	37:DC:212:SER:HB3	1.88	0.55
3:AC:64:VAL:HG11	3:AC:66:VAL:HG23	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:601:C:H2'	1:CA:602:A:H8	1.72	0.55
45:DN:3:THR:C	45:DN:5:VAL:H	2.10	0.55
1:AA:7:G:H5'	1:AA:298:A:H5'	1.89	0.55
25:B0:40:GLN:NE2	25:B0:43:THR:HA	2.21	0.55
1:CA:151:A:H2'	1:CA:152:A:H5'	1.89	0.55
35:BA:2291:U:H2'	35:BA:2292:C:C6	2.41	0.55
57:BZ:27:VAL:HG22	57:BZ:28:MET:N	2.22	0.55
35:DA:898:C:C2'	35:DA:899:A:H5'	2.35	0.55
22:AV:37:A:H2'	22:AV:38:U:C6	2.42	0.55
1:AA:336:C:H2'	1:AA:337:C:H6	1.72	0.55
35:BA:176:G:O2'	35:BA:177:G:H5'	2.06	0.55
30:B5:6:VAL:CG1	35:BA:2016:U:H1'	2.36	0.55
16:CP:52:ASP:OD2	16:CP:55:ARG:HG3	2.07	0.55
35:BA:1029:A:H2'	35:BA:1030:G:O4'	2.07	0.55
30:D5:6:VAL:CG1	35:DA:2016:U:H1'	2.36	0.55
53:DV:28:GLU:OE1	53:DV:29:PRO:HD2	2.07	0.55
7:CG:71:PRO:HG3	7:CG:99:LEU:HD13	1.88	0.55
1:AA:417:C:O2'	1:AA:418:C:H5'	2.06	0.55
3:AC:125:GLU:HG2	3:AC:190:ARG:H	1.70	0.55
35:DA:900:A:H2'	35:DA:900:A:N3	2.21	0.55
51:BT:132:LYS:C	51:BT:134:GLU:H	2.10	0.55
1:AA:716:A:N3	11:AK:118:GLY:HA2	2.21	0.55
5:AE:81:GLU:HG2	5:AE:90:VAL:HG22	1.89	0.55
22:AY:4:C:C2	22:AY:5:C:C5	2.95	0.55
22:AY:68:A:C5	22:AY:69:G:N7	2.74	0.55
22:AY:56:U:O2	57:BZ:183:LEU:CD2	2.55	0.55
23:CW:72:C:C4	23:CW:73:C:C4	2.95	0.55
23:AW:50:C:C4	23:AW:61:A:C8	2.95	0.55
33:B8:50:LEU:O	33:B8:51:ALA:CB	2.55	0.55
56:DY:37:VAL:O	56:DY:66:PRO:O	2.24	0.55
12:CL:85:ILE:HD11	12:CL:98:TYR:CB	2.37	0.55
35:BA:587:C:C4	47:BP:33:ARG:HD3	2.41	0.55
1:AA:148:G:H2'	1:AA:149:A:C8	2.41	0.55
1:AA:523:A:H61	12:AL:92:ASP:HB2	1.72	0.55
35:DA:2491:U:H5'	35:DA:2570:G:C5'	2.24	0.55
10:CJ:33:GLN:H	10:CJ:75:ILE:HD11	1.71	0.55
41:BG:112:PRO:O	41:BG:113:ARG:HA	2.07	0.55
52:BU:83:LEU:N	52:BU:83:LEU:HD22	2.14	0.55
2:AB:88:ALA:HB2	2:AB:219:VAL:CG1	2.31	0.55
35:BA:2722:G:H2'	35:BA:2723:C:H6	1.70	0.55
39:BE:111:ARG:HG2	49:BR:2:ARG:NH2	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:233:SER:HB2	2:CB:234:PRO:CD	2.30	0.55
35:DA:557:U:H2'	35:DA:558:G:H8	1.70	0.55
35:BA:2562:U:C2'	35:BA:2563:U:H5'	2.36	0.55
3:CC:6:HIS:HD2	3:CC:7:PRO:HD2	1.72	0.55
2:AB:17:PHE:CD2	2:AB:44:LEU:HD11	2.42	0.55
38:BD:35:LYS:HD2	38:BD:35:LYS:O	2.07	0.55
41:BG:39:ILE:HD12	41:BG:39:ILE:C	2.26	0.55
38:DD:35:LYS:HD2	38:DD:35:LYS:O	2.06	0.55
35:DA:2067:G:O2'	35:DA:2069:G:H5''	2.06	0.55
1:AA:859:A:H2'	1:AA:860:A:O4'	2.07	0.55
35:DA:2713:A:H3'	35:DA:2714:G:H5'	1.89	0.55
1:AA:1106:G:H2'	1:AA:1107:C:H6	1.70	0.55
38:DD:25:THR:HG22	38:DD:26:LYS:CD	2.37	0.55
37:BC:29:LEU:HD23	37:BC:32:GLU:HG3	1.88	0.55
38:BD:142:VAL:HG23	38:BD:192:THR:C	2.27	0.55
4:AD:79:PHE:CD2	4:AD:207:TYR:CD2	2.94	0.55
1:AA:639:G:O2'	1:AA:640:A:H5'	2.06	0.55
1:AA:643:C:H5'	8:AH:31:PHE:CD1	2.42	0.55
1:AA:824:C:H4'	8:AH:1:MET:H1	1.71	0.55
35:DA:2783:G:H2'	35:DA:2784:C:C6	2.41	0.55
48:BQ:10:ARG:NH1	48:BQ:10:ARG:HB2	2.22	0.55
35:DA:1186:G:H2'	35:DA:1187:G:O4'	2.07	0.55
49:DR:13:HIS:O	49:DR:14:SER:C	2.44	0.55
38:BD:134:ARG:HG3	38:BD:135:PHE:CD1	2.42	0.55
12:AL:117:ARG:HB2	12:AL:117:ARG:CZ	2.36	0.55
42:BH:20:ALA:HB1	42:BH:21:PRO:HD2	1.88	0.55
13:AM:28:ALA:O	13:AM:30:ALA:N	2.40	0.55
35:BA:2742:C:O2'	35:BA:2743:C:H5'	2.06	0.55
28:D3:59:VAL:HG12	28:D3:60:GLU:N	2.20	0.55
43:BI:53:ALA:O	43:BI:57:ARG:HB2	2.05	0.55
17:AQ:80:GLY:O	17:AQ:81:ARG:HD2	2.07	0.55
1:CA:186:C:H5'	20:CT:78:ALA:HB1	1.88	0.55
32:D7:32:LYS:O	32:D7:36:GLN:HB2	2.07	0.55
41:BG:19:LEU:HA	41:BG:22:ARG:HB2	1.88	0.55
35:DA:2753:A:O2'	35:DA:2754:U:H5'	2.05	0.55
35:DA:654(H):G:H22	35:DA:654(J):A:H8	1.55	0.55
1:CA:1113:C:O5'	1:CA:1113:C:H6	1.89	0.55
35:BA:1877:A:H5'	35:BA:1878:G:OP2	2.06	0.55
46:DO:68:GLU:HB3	46:DO:78:ARG:HH11	1.70	0.55
51:DT:30:VAL:HG21	51:DT:83:ILE:HG13	1.89	0.55
43:BI:142:VAL:O	43:BI:142:VAL:HG12	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:83:ALA:CB	43:BI:88:ILE:HG12	2.37	0.55
23:CW:10:G:C4	23:CW:11:C:C5	2.95	0.55
47:BP:143:GLY:O	47:BP:144:GLU:HB2	2.07	0.55
47:BP:97:PRO:O	47:BP:98:GLU:CB	2.55	0.55
35:BA:1495:A:N3	35:BA:1496:A:C2	2.75	0.55
29:D4:14:ILE:HG23	29:D4:31:ILE:HG22	1.88	0.55
10:CJ:51:ARG:HG3	10:CJ:60:ARG:CA	2.35	0.55
10:CJ:61:GLU:OE2	14:CN:58:LYS:HE2	2.06	0.55
10:AJ:50:ILE:N	10:AJ:50:ILE:HD13	2.12	0.55
10:AJ:51:ARG:HG3	10:AJ:60:ARG:CA	2.36	0.55
41:BG:5:VAL:O	41:BG:8:LYS:HB3	2.07	0.55
53:DV:14:VAL:O	53:DV:15:GLU:HG3	2.06	0.55
26:D1:51:VAL:O	26:D1:57:GLU:O	2.25	0.55
35:BA:943:U:OP2	47:BP:38:GLN:CD	2.45	0.55
47:DP:88:LEU:N	47:DP:88:LEU:HD12	2.22	0.55
56:DY:46:LYS:H	56:DY:62:GLU:CB	2.20	0.55
35:BA:882:G:H2'	35:BA:883:G:C8	2.42	0.55
30:B5:51:TYR:HH	30:B5:52:TYR:HD2	1.54	0.55
52:DU:108:GLU:HG3	53:DV:44:LYS:CD	2.34	0.55
5:CE:71:LEU:HD11	5:CE:114:GLY:HA3	1.88	0.55
35:DA:2892:A:N6	35:DA:2893:G:H21	2.04	0.55
1:CA:197:A:C5	1:CA:221:C:H4'	2.41	0.55
20:AT:18:GLN:HE21	20:AT:22:ARG:HH11	1.54	0.55
35:BA:2124:G:H5'	37:BC:175:PRO:HD3	1.87	0.55
18:AR:50:ILE:CD1	18:AR:70:ILE:HG21	2.37	0.55
38:BD:26:LYS:O	38:BD:27:THR:CB	2.55	0.55
39:BE:13:ARG:HD2	39:BE:20:ALA:HB1	1.89	0.55
35:DA:363(E):U:H3'	35:DA:363(F):A:O4'	2.07	0.55
1:CA:986:A:H1'	19:CS:54:GLY:O	2.06	0.55
4:CD:79:PHE:CD2	4:CD:207:TYR:CD2	2.95	0.55
1:CA:1405:G:N2	1:CA:1517:G:H22	2.04	0.55
1:AA:1296:C:H5'	1:AA:1297:C:OP2	2.07	0.55
1:AA:1296:C:OP1	13:AM:14:ARG:HD3	2.06	0.55
49:BR:96:ARG:HB2	49:BR:117:VAL:HG22	1.87	0.55
35:BA:1187:G:H5''	53:BV:81:TYR:CE1	2.41	0.55
35:DA:1430:C:H2'	35:DA:1431:U:C6	2.41	0.55
1:CA:693:G:H2'	1:CA:694:A:C8	2.42	0.55
50:DS:31:SER:O	50:DS:33:LYS:N	2.40	0.55
7:AG:69:VAL:HG12	7:AG:69:VAL:O	2.06	0.55
35:DA:774:A:H2	35:DA:787:U:O2'	1.90	0.55
35:DA:107:C:H2'	35:DA:108:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:20:ALA:HB3	42:DH:23:ARG:HB2	1.88	0.55
42:BH:24:VAL:HG13	42:BH:35:VAL:HB	1.88	0.55
35:DA:847:U:H2'	35:DA:848:G:H5''	1.88	0.55
38:BD:62:TYR:CE2	38:BD:64:ILE:HA	2.42	0.55
46:BO:43:VAL:HG21	46:BO:56:ASP:HB2	1.88	0.55
3:CC:90:GLU:HA	3:CC:93:LYS:CB	2.36	0.55
8:AH:112:LEU:N	8:AH:112:LEU:HD23	2.21	0.55
35:DA:2720:U:O2	35:DA:2720:U:H2'	2.07	0.55
8:AH:44:PHE:HA	8:AH:79:VAL:HG11	1.89	0.55
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.42	0.55
35:BA:1046:A:H5'	44:BJ:6:UNK:O	2.06	0.55
1:CA:1464:G:O2'	1:CA:1465:C:H5'	2.07	0.55
25:B0:20:ARG:NH1	35:BA:2357:U:OP1	2.40	0.55
1:AA:109:A:H2'	1:AA:326:G:N2	2.22	0.55
52:DU:25:TRP:C	52:DU:25:TRP:CD1	2.80	0.55
36:DB:60:C:H2'	36:DB:61:G:H8	1.72	0.55
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.71	0.55
51:DT:3:ARG:C	51:DT:5:ALA:N	2.58	0.55
14:AN:27:CYS:O	14:AN:29:ARG:N	2.34	0.55
14:AN:29:ARG:HH12	14:AN:31:ARG:HB2	1.72	0.55
22:AV:49:G:H3'	22:AV:50:C:H5''	1.89	0.55
23:AW:15:G:C8	23:AW:61:A:C2	2.95	0.55
23:CW:50:C:N4	23:CW:61:A:C8	2.75	0.55
1:AA:1409:C:H6	1:AA:1409:C:O5'	1.90	0.55
1:AA:529:G:O6	12:AL:49:ASN:HA	2.07	0.55
35:DA:1494:A:C3'	35:DA:1495:A:H5''	2.36	0.55
12:CL:48:PRO:HG2	12:CL:49:ASN:ND2	2.21	0.55
39:DE:51:PHE:CD1	39:DE:52:LEU:N	2.75	0.55
41:DG:5:VAL:O	41:DG:8:LYS:HB3	2.07	0.55
26:D1:23:LYS:CD	26:D1:28:GLY:HA3	2.32	0.55
35:BA:481:G:H1'	35:BA:506:G:N2	2.22	0.55
38:BD:31:LYS:C	38:BD:33:LEU:H	2.09	0.55
32:B7:8:ASN:HD22	32:B7:9:ARG:N	2.05	0.55
56:BY:53:PRO:O	56:BY:54:LYS:HG3	2.06	0.55
35:DA:882:G:H2'	35:DA:883:G:C8	2.41	0.55
26:B1:51:VAL:O	26:B1:57:GLU:O	2.24	0.55
52:DU:108:GLU:CG	53:DV:44:LYS:HD3	2.34	0.55
39:DE:69:LYS:CE	39:DE:90:THR:H	2.16	0.55
39:BE:69:LYS:HE3	39:BE:90:THR:OG1	2.07	0.55
2:CB:116:GLU:HA	2:CB:119:GLU:CB	2.36	0.55
35:DA:1280:G:C3'	35:DA:1281:G:H5''	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DI:68:LEU:O	43:DI:68:LEU:HD23	2.07	0.55
1:AA:1228:C:P	13:AM:108:ARG:NH2	2.79	0.55
35:BA:1339:G:H21	35:BA:1603:A:H1'	1.70	0.55
1:AA:154:C:N4	1:AA:167:G:H1	2.05	0.55
56:DY:88:LYS:CE	56:DY:93:GLY:HA3	2.37	0.55
1:CA:1423:G:H5'	46:DO:49:ARG:NH2	2.22	0.55
41:BG:16:ARG:HH11	41:BG:16:ARG:HG3	1.71	0.55
1:CA:692:U:C5	11:CK:26:ASN:ND2	2.74	0.55
1:CA:993:G:H2'	1:CA:993:G:N3	2.21	0.55
56:DY:95:LYS:CE	56:DY:100:ALA:HB1	2.36	0.55
5:AE:80:ILE:HD11	5:AE:138:ALA:HB1	1.87	0.55
35:BA:523:C:H2'	35:BA:524:U:H5'	1.89	0.55
35:BA:108:U:H2'	35:BA:109:G:H8	1.72	0.55
35:DA:2261:C:O2'	35:DA:2262:U:H5'	2.07	0.55
1:CA:1172:C:H2'	1:CA:1173:G:H8	1.72	0.55
54:DW:56:ALA:O	54:DW:60:ASN:HB3	2.07	0.55
43:DI:21:VAL:HG21	43:DI:26:ALA:HB2	1.88	0.55
19:AS:69:HIS:HB2	19:AS:74:PHE:HE2	1.71	0.55
35:BA:654(U):A:H2'	35:BA:654(V):A:C8	2.42	0.55
35:DA:2861:G:O2'	35:DA:2862:G:H5'	2.06	0.55
5:AE:126:ARG:HG3	5:AE:126:ARG:HH11	1.71	0.55
39:DE:100:GLU:O	39:DE:172:VAL:HG23	2.07	0.55
35:BA:898:C:H2'	35:BA:899:A:H5'	1.88	0.55
22:AV:15:G:N9	22:AV:16:U:H5	2.05	0.55
35:BA:2312:U:H2'	35:BA:2313:C:C5'	2.37	0.55
22:CV:9:A:H8	22:CV:11:C:H41	1.54	0.55
46:DO:103:ALA:HB1	46:DO:105:GLU:OE1	2.07	0.55
51:DT:70:VAL:CG1	51:DT:71:GLY:N	2.69	0.55
56:BY:81:LYS:HD3	56:BY:97:ARG:CB	2.35	0.55
47:DP:59:LEU:CA	47:DP:61:ARG:CZ	2.73	0.55
1:AA:973:G:O4'	10:AJ:55:LYS:HG3	2.07	0.55
35:DA:1713:U:O2'	35:DA:1714:G:H5'	2.07	0.55
12:CL:39:VAL:HB	12:CL:57:LYS:NZ	2.22	0.55
47:BP:33:ARG:HG3	47:BP:34:GLY:N	2.22	0.55
12:AL:48:PRO:HG2	12:AL:49:ASN:ND2	2.21	0.55
10:CJ:24:VAL:O	10:CJ:28:ARG:HG3	2.07	0.55
10:CJ:5:ARG:O	10:CJ:98:ILE:HA	2.07	0.55
52:DU:46:ALA:O	52:DU:50:ARG:HB2	2.07	0.55
53:DV:1:MET:O	53:DV:2:PHE:HB2	2.06	0.55
8:AH:50:ARG:HA	8:AH:59:LEU:HD23	1.89	0.55
35:DA:2361:A:C2'	35:DA:2362:G:H5'	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1442(A):G:C2'	51:BT:118:ARG:HH11	2.17	0.55
51:BT:28:VAL:CG2	51:BT:47:GLY:H	2.14	0.55
47:DP:143:GLY:O	47:DP:144:GLU:HB2	2.07	0.55
49:DR:21:TYR:OH	49:DR:43:GLU:HG2	2.06	0.55
3:AC:6:HIS:ND1	14:AN:49:HIS:HB3	2.21	0.55
3:CC:11:ARG:HH11	3:CC:11:ARG:HG2	1.72	0.55
57:DZ:152:ALA:HB2	57:DZ:168:GLU:HA	1.89	0.55
57:BZ:110:GLY:CA	57:BZ:146:ILE:HG23	2.37	0.55
8:CH:14:ARG:O	8:CH:18:ARG:HD3	2.06	0.55
2:AB:121:LEU:HD22	2:AB:126:GLU:HB2	1.89	0.55
2:AB:124:SER:OG	2:AB:125:PRO:HD2	2.07	0.55
3:AC:32:LEU:HD22	3:AC:59:ARG:CZ	2.37	0.55
2:CB:95:GLN:HA	2:CB:95:GLN:OE1	2.07	0.55
56:BY:95:LYS:HE2	56:BY:101:LYS:H	1.72	0.55
39:BE:46:ALA:CB	39:BE:82:ARG:HA	2.36	0.55
35:BA:2762:G:C2'	35:BA:2763:G:H5'	2.37	0.55
35:DA:2755:C:O2'	35:DA:2756:U:H6	1.89	0.55
1:CA:600:C:H2'	1:CA:601:C:C6	2.42	0.55
27:D2:29:LYS:HD3	27:D2:57:ILE:HG21	1.88	0.55
30:D5:43:HIS:CD2	35:DA:2815:C:O2'	2.60	0.55
35:BA:963:U:H2'	35:BA:964:C:C6	2.42	0.55
1:AA:501:C:O2'	1:AA:502:G:H5'	2.06	0.55
1:CA:1090:U:O2'	1:CA:1091:U:H5'	2.07	0.55
35:DA:1509(A):A:H2'	35:DA:1509(B):A:C8	2.42	0.55
43:DI:145:VAL:HG23	43:DI:146:ALA:N	2.21	0.55
38:BD:145:VAL:HG12	38:BD:146:GLU:O	2.07	0.55
1:AA:892:A:O2'	1:AA:893:C:H5'	2.07	0.55
35:DA:918:A:H5''	36:DB:98:G:O2'	2.06	0.55
27:B2:25:VAL:O	27:B2:29:LYS:HG2	2.07	0.55
22:AV:78:A:H8	35:BA:2602:A:N6	2.05	0.55
1:CA:100:C:H2'	1:CA:101:A:O4'	2.07	0.55
35:BA:2248:C:H2'	35:BA:2249:U:H5'	1.87	0.55
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.42	0.55
2:CB:79:ASP:C	2:CB:81:VAL:H	2.11	0.55
22:CY:7:U:H4'	22:CY:8:U:OP2	2.07	0.54
22:CV:23:A:H5'	22:CV:24:A:P	2.46	0.54
33:B8:14:VAL:HG21	33:B8:22:VAL:HG13	1.89	0.54
1:AA:1053:G:C4'	1:AA:1054:C:C5'	2.76	0.54
43:BI:126:TYR:N	43:BI:140:LEU:HD22	2.12	0.54
12:CL:92:ASP:O	12:CL:93:LEU:HD23	2.07	0.54
35:BA:942:G:OP1	47:BP:35:HIS:HB3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:58:ASP:C	45:BN:60:ILE:H	2.08	0.54
42:DH:44:VAL:HG12	42:DH:45:VAL:N	2.21	0.54
47:BP:101:VAL:CG2	47:BP:102:ARG:N	2.69	0.54
51:BT:70:VAL:HG12	51:BT:71:GLY:O	2.07	0.54
12:CL:48:PRO:HG2	12:CL:49:ASN:HD21	1.72	0.54
29:D4:12:ALA:CB	29:D4:29:PRO:HA	2.28	0.54
39:BE:57:LYS:HZ3	39:BE:63:LEU:HG	1.72	0.54
13:CM:86:CYS:SG	13:CM:88:ARG:HB2	2.47	0.54
31:D6:11:LEU:HD13	31:D6:11:LEU:N	2.21	0.54
9:CI:13:ALA:HA	9:CI:67:GLY:O	2.07	0.54
50:DS:70:GLY:CA	50:DS:101:LEU:HD23	2.36	0.54
1:AA:254:G:H2'	1:AA:255:G:C8	2.41	0.54
35:DA:2287:A:N6	35:DA:2344:U:H3	2.02	0.54
57:BZ:144:LEU:HD12	57:BZ:149:SER:OG	2.07	0.54
56:DY:51:VAL:HG12	56:DY:53:PRO:CD	2.32	0.54
5:AE:6:PHE:HB3	5:AE:35:GLY:O	2.06	0.54
54:BW:25:ARG:HB2	54:BW:25:ARG:NH1	2.23	0.54
36:BB:52:A:HO2'	36:BB:53:A:H8	1.55	0.54
50:BS:12:PHE:O	50:BS:14:VAL:HG23	2.07	0.54
20:CT:18:GLN:HE21	20:CT:22:ARG:HH11	1.53	0.54
1:CA:437:U:H2'	1:CA:438:G:O4'	2.07	0.54
19:AS:58:VAL:HG23	19:AS:58:VAL:O	2.07	0.54
35:DA:1316:U:H2'	35:DA:1317:A:C8	2.42	0.54
54:DW:5:ALA:O	54:DW:6:ILE:CB	2.55	0.54
35:DA:2124:G:H5'	37:DC:175:PRO:HD3	1.88	0.54
20:AT:104:LEU:HD23	20:AT:105:SER:N	2.22	0.54
42:DH:80:SER:O	42:DH:81:GLU:HB2	2.05	0.54
37:BC:8:TYR:OH	37:BC:12:LEU:HD21	2.06	0.54
47:BP:112:LEU:HD22	47:BP:113:LYS:N	2.22	0.54
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.89	0.54
48:BQ:130:LYS:HZ3	57:BZ:80:ARG:NH1	2.04	0.54
1:CA:1067:A:H1'	1:CA:1068:G:O4'	2.07	0.54
1:CA:824:C:H2'	1:CA:825:G:H8	1.72	0.54
1:CA:401:C:H2'	1:CA:402:G:H8	1.71	0.54
49:DR:100:LEU:HD13	49:DR:100:LEU:N	2.22	0.54
46:DO:4:PRO:O	46:DO:5:GLN:CB	2.54	0.54
46:BO:4:PRO:O	46:BO:5:GLN:CB	2.55	0.54
1:AA:600:C:H2'	1:AA:601:C:C6	2.42	0.54
8:AH:91:ARG:HH11	8:AH:91:ARG:CG	2.20	0.54
35:BA:142:A:H5''	35:BA:142(A):C:C5	2.41	0.54
35:BA:1221:C:H2'	35:BA:1221(A):C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:45:SER:N	27:B2:46:GLN:NE2	2.55	0.54
22:AV:36:AG9:H1A	22:AV:37:A:O4'	2.07	0.54
35:DA:1877:A:H5'	35:DA:1878:G:OP2	2.06	0.54
35:BA:2660:A:H2'	35:BA:2661:G:O4'	2.07	0.54
1:AA:28:G:O2'	1:AA:296:U:OP1	2.25	0.54
7:CG:66:VAL:O	7:CG:70:LYS:HG3	2.07	0.54
44:BJ:57:UNK:O	44:BJ:58:UNK:C	2.54	0.54
8:CH:44:PHE:HA	8:CH:79:VAL:HG11	1.89	0.54
35:BA:310:A:OP1	56:BY:17:SER:O	2.25	0.54
35:BA:1052:C:H5	35:BA:1054:A:H61	1.54	0.54
23:CW:70:G:C6	23:CW:71:G:C6	2.95	0.54
4:CD:18:LYS:CB	4:CD:33:MET:HG2	2.36	0.54
51:DT:27:THR:O	51:DT:28:VAL:CB	2.54	0.54
31:B6:15:GLU:OE1	31:B6:41:PRO:HG3	2.07	0.54
23:CW:12:U:C2	23:CW:26:G:N2	2.73	0.54
12:CL:58:VAL:N	12:CL:65:GLU:HG3	2.22	0.54
30:D5:4:HIS:O	35:DA:2056:G:N2	2.40	0.54
40:DF:125:LEU:HD13	40:DF:199:TRP:CG	2.42	0.54
45:BN:15:LEU:O	45:BN:136:GLU:HA	2.06	0.54
12:CL:69:TYR:CE2	12:CL:71:PRO:HA	2.41	0.54
57:DZ:25:PRO:HG2	57:DZ:84:GLU:O	2.08	0.54
47:DP:107:LYS:O	47:DP:109:GLY:N	2.40	0.54
31:B6:30:THR:O	31:B6:32:ASN:N	2.40	0.54
39:BE:4:ILE:CD1	39:BE:28:ALA:HB1	2.34	0.54
50:DS:30:ARG:NH2	50:DS:62:LYS:HD2	2.21	0.54
26:D1:70:VAL:O	26:D1:74:VAL:HG23	2.06	0.54
55:BX:64:LYS:HZ3	55:BX:73:ARG:HE	1.55	0.54
35:BA:803:U:H2'	35:BA:804:A:H5'	1.89	0.54
19:CS:62:ILE:HG13	19:CS:63:THR:N	2.22	0.54
47:BP:115:LEU:HG	47:BP:116:GLY:N	2.23	0.54
50:BS:66:ALA:HA	50:BS:69:VAL:HG12	1.89	0.54
52:DU:31:SER:O	52:DU:33:ARG:N	2.39	0.54
32:B7:12:ARG:NH2	32:B7:44:PRO:HB3	2.22	0.54
3:CC:73:PRO:O	3:CC:76:VAL:HG13	2.07	0.54
3:CC:94:LEU:HD12	3:CC:95:THR:N	2.22	0.54
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.60	0.54
9:CI:4:TYR:HB3	9:CI:84:ALA:HB1	1.88	0.54
35:BA:2327:A:H2'	35:BA:2328:A:H8	1.67	0.54
4:AD:121:VAL:HA	4:AD:126:ILE:HD13	1.88	0.54
1:CA:1491:G:H2'	1:CA:1492:A:H5''	1.89	0.54
54:DW:4:LYS:HG3	54:DW:106:ILE:HG22	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2123:G:H2'	35:DA:2124:G:H8	1.72	0.54
35:DA:2125:G:H4'	37:DC:218:THR:HG21	1.89	0.54
35:BA:363(E):U:H3'	35:BA:363(F):A:O4'	2.07	0.54
42:DH:11:VAL:CG1	42:DH:15:VAL:HG23	2.37	0.54
4:AD:79:PHE:HE2	4:AD:207:TYR:HB2	1.71	0.54
57:BZ:42:VAL:HG13	57:BZ:43:GLU:N	2.22	0.54
40:DF:110:LEU:HA	40:DF:183:VAL:HG12	1.87	0.54
4:CD:157:LEU:CD1	4:CD:161:ASN:HD21	2.19	0.54
35:BA:2778:A:H4'	35:BA:2779:U:OP1	2.06	0.54
20:AT:10:LEU:HD12	20:AT:11:SER:H	1.71	0.54
39:DE:128:SER:OG	39:DE:129:HIS:N	2.39	0.54
35:BA:1817:G:H2'	35:BA:1818:U:H5'	1.88	0.54
20:CT:33:ILE:HG22	20:CT:37:SER:OG	2.07	0.54
37:BC:23:ILE:O	37:BC:23:ILE:HG22	2.05	0.54
35:BA:900:A:N3	35:BA:900:A:H2'	2.21	0.54
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.42	0.54
35:BA:1862:G:O2'	35:BA:1863:G:H5'	2.07	0.54
35:BA:128:C:H2'	35:BA:129:C:H6	1.71	0.54
18:AR:63:GLN:OE1	18:AR:63:GLN:HA	2.07	0.54
35:BA:2520:C:O5'	35:BA:2520:C:H6	1.90	0.54
35:DA:2887:U:O2'	35:DA:2888:C:H5'	2.07	0.54
35:DA:680:G:H2'	35:DA:681:G:C8	2.42	0.54
22:CY:63:C:H2'	22:CY:64:C:H6	1.73	0.54
22:CY:68:A:C5	22:CY:69:G:N7	2.76	0.54
23:AW:5:C:O2	23:AW:72:C:C2	2.61	0.54
22:AY:43:G:C6	22:AY:44:A:C5	2.94	0.54
22:AY:4:C:C4	22:AY:72:C:H5	2.25	0.54
23:CW:3:G:H1	23:CW:73:C:H42	1.54	0.54
4:CD:28:SER:HB3	4:CD:29:PRO:HD2	1.89	0.54
4:CD:30:LYS:O	4:CD:32:ALA:N	2.40	0.54
22:AV:12:U:H3'	22:AV:13:U:H5'	1.89	0.54
4:AD:28:SER:HB3	4:AD:29:PRO:HD2	1.90	0.54
51:DT:46:GLU:OE2	51:DT:88:ILE:HG13	2.07	0.54
31:B6:15:GLU:OE2	31:B6:44:ARG:NH2	2.40	0.54
56:DY:2:ARG:HD3	56:DY:2:ARG:C	2.28	0.54
31:D6:15:GLU:HG3	31:D6:47:THR:CG2	2.20	0.54
12:CL:38:THR:CG2	12:CL:39:VAL:H	2.20	0.54
35:BA:587:C:O2'	35:BA:588:U:OP2	2.21	0.54
12:AL:89:ARG:HD3	12:AL:90:VAL:N	2.22	0.54
10:AJ:3:LYS:NZ	10:AJ:77:PRO:HD2	2.23	0.54
23:CW:20:G:P	23:CW:21:U:C5	3.00	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1140:C:OP1	45:DN:23:LEU:HD23	2.08	0.54
45:DN:1:MET:C	45:DN:2:LYS:HG3	2.28	0.54
53:DV:12:TYR:CE2	53:DV:22:VAL:HG12	2.42	0.54
57:DZ:74:VAL:HG12	57:DZ:86:VAL:CG1	2.32	0.54
45:BN:2:LYS:HZ2	52:BU:95:LEU:HD21	1.68	0.54
52:BU:74:LEU:HD21	52:BU:79:PHE:HB2	1.88	0.54
52:BU:102:GLU:HG3	53:BV:2:PHE:CE1	2.42	0.54
29:D4:11:PRO:O	29:D4:29:PRO:HG3	2.06	0.54
13:CM:97:PRO:HB2	13:CM:101:GLN:NE2	2.22	0.54
1:CA:536:C:H2'	1:CA:537:G:C8	2.42	0.54
19:CS:22:LEU:HD12	19:CS:47:HIS:HE1	1.72	0.54
35:BA:478:A:H2	56:BY:44:ILE:HD13	1.71	0.54
57:BZ:146:ILE:HA	57:BZ:174:VAL:O	2.07	0.54
8:CH:6:ILE:H	8:CH:6:ILE:CD1	2.20	0.54
9:AI:84:ALA:O	9:AI:87:GLN:HB3	2.07	0.54
1:CA:1128:C:H1'	1:CA:1146:A:H61	1.71	0.54
1:AA:390:C:H4'	16:AP:28:ARG:HH21	1.71	0.54
3:AC:94:LEU:HD12	3:AC:95:THR:N	2.22	0.54
1:CA:859:A:H2'	1:CA:860:A:O4'	2.07	0.54
38:DD:26:LYS:O	38:DD:27:THR:CB	2.55	0.54
40:DF:101:LEU:O	40:DF:106:ARG:NH1	2.39	0.54
35:BA:272(E):G:C2	35:BA:364:C:N3	2.76	0.54
1:AA:940:C:H2'	1:AA:941:G:C8	2.40	0.54
1:AA:986:A:H1'	19:AS:54:GLY:O	2.08	0.54
35:DA:2405:G:O2'	35:DA:2406:U:OP2	2.23	0.54
10:CJ:27:ALA:HB2	10:CJ:85:LEU:HD11	1.89	0.54
1:CA:376:G:O2'	1:CA:377:G:H5'	2.07	0.54
35:BA:674:G:H1'	40:BF:74:ARG:CD	2.38	0.54
35:DA:1721:G:C6	35:DA:1739:U:H5'	2.41	0.54
35:BA:2783:G:H2'	35:BA:2784:C:C6	2.42	0.54
1:CA:867:G:O2'	1:CA:868:C:H5'	2.06	0.54
1:CA:301:G:H2'	1:CA:302:G:C8	2.42	0.54
1:CA:1523:G:H2'	1:CA:1524:C:C6	2.43	0.54
49:BR:33:ARG:HG3	49:BR:115:GLU:HG3	1.90	0.54
29:D4:42:PHE:HB2	29:D4:43:TYR:HD1	1.72	0.54
1:AA:821:G:H2'	1:AA:822:C:C6	2.41	0.54
1:CA:922:G:N3	1:CA:1398:A:H2	2.05	0.54
35:DA:2672:G:C3'	35:DA:2673:G:H5''	2.37	0.54
13:AM:22:ILE:HD12	13:AM:22:ILE:N	2.23	0.54
35:DA:2097:C:O2'	35:DA:2098:U:H5'	2.07	0.54
35:BA:738:G:O2'	35:BA:739:G:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1203:C:H2'	1:AA:1204:A:H8	1.72	0.54
35:BA:852:G:O2'	35:BA:853:G:H5'	2.07	0.54
40:BF:160:ASN:HD22	40:BF:160:ASN:C	2.11	0.54
1:CA:568:G:O6	12:CL:5:PRO:HD3	2.06	0.54
3:CC:34:LEU:O	3:CC:38:ARG:HG2	2.07	0.54
43:DI:1:MET:O	43:DI:3:VAL:HG23	2.08	0.54
57:BZ:112:ARG:C	57:BZ:112:ARG:HD3	2.27	0.54
45:DN:18:ALA:HB1	45:DN:21:LYS:HB2	1.89	0.54
55:DX:10:ALA:HB1	55:DX:11:PRO:HD2	1.88	0.54
22:CY:6:C:H2'	22:CY:7:U:C5	2.42	0.54
22:AV:14:A:C5	22:AV:24:A:C5	2.96	0.54
35:DA:943:U:OP2	47:DP:38:GLN:CD	2.46	0.54
23:CW:47:G:H2'	23:CW:48:G:H5'	1.89	0.54
42:DH:41:MET:SD	42:DH:52:VAL:HG13	2.47	0.54
52:DU:101:ARG:C	52:DU:102:GLU:HG2	2.27	0.54
3:AC:116:VAL:O	3:AC:119:ARG:HB3	2.07	0.54
12:AL:54:LYS:CD	12:AL:54:LYS:H	2.18	0.54
35:DA:2524:G:C8	35:DA:2524:G:H5'	2.39	0.54
13:CM:99:ARG:O	13:CM:101:GLN:HG3	2.08	0.54
1:AA:490:G:H2'	1:AA:491:G:C8	2.43	0.54
56:BY:28:LYS:HB3	56:BY:38:ILE:N	2.15	0.54
50:DS:96:GLY:C	50:DS:98:VAL:H	2.11	0.54
13:AM:81:LEU:HB3	13:AM:88:ARG:HB2	1.90	0.54
55:DX:30:VAL:HG11	55:DX:39:ILE:HD12	1.89	0.54
38:DD:30:GLU:CG	38:DD:63:ARG:NE	2.70	0.54
39:DE:117:MET:CE	39:DE:124:GLY:HA3	2.37	0.54
35:DA:2443:C:O2'	35:DA:2444:G:H5'	2.07	0.54
2:AB:15:VAL:HG21	2:AB:209:ARG:NH2	2.15	0.54
26:B1:57:GLU:O	26:B1:58:ILE:CG1	2.53	0.54
5:AE:109:ILE:O	5:AE:113:ALA:HB2	2.07	0.54
3:AC:91:LEU:O	3:AC:95:THR:HB	2.07	0.54
9:AI:95:LYS:O	9:AI:99:LEU:HB2	2.07	0.54
1:AA:67:C:H2'	1:AA:68:G:H8	1.69	0.54
1:AA:348:G:H2'	1:AA:349:A:H5'	1.89	0.54
54:BW:5:ALA:O	54:BW:6:ILE:CB	2.53	0.54
1:CA:1513:A:C6	1:CA:1514:C:N4	2.76	0.54
1:AA:1320:C:H5'	19:AS:70:LYS:CG	2.37	0.54
38:BD:9:TYR:CD1	38:BD:10:THR:HG22	2.43	0.54
1:AA:943:U:H2'	1:AA:944:G:H5'	1.89	0.54
27:B2:63:VAL:HA	27:B2:66:GLU:CG	2.34	0.54
35:BA:271(R):G:O2'	35:BA:271(S):G:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:16:ARG:NH1	41:BG:16:ARG:HG3	2.21	0.54
51:DT:57:PHE:O	51:DT:59:THR:CG2	2.55	0.54
35:DA:2193:G:H2'	35:DA:2194:G:H8	1.72	0.54
27:B2:64:LEU:CD1	27:B2:68:ARG:HH12	2.19	0.54
1:CA:1473:A:H2'	1:CA:1474:G:C8	2.43	0.54
35:DA:2086:U:H2'	35:DA:2087:G:C8	2.43	0.54
35:BA:1372:U:H2'	35:BA:1373:A:H8	1.72	0.54
57:BZ:157:LEU:N	57:BZ:157:LEU:HD23	2.22	0.54
48:DQ:30:GLY:CA	48:DQ:107:ALA:HB2	2.37	0.54
40:DF:160:ASN:ND2	40:DF:162:LEU:H	2.05	0.54
40:BF:160:ASN:ND2	40:BF:162:LEU:H	2.06	0.54
19:CS:17:GLU:O	19:CS:21:GLU:HG2	2.08	0.54
55:BX:24:GLY:O	55:BX:82:GLN:HA	2.08	0.54
35:DA:341:G:O2'	35:DA:342:G:H5'	2.07	0.54
1:CA:1368:G:O2'	1:CA:1369:C:H5'	2.07	0.54
35:DA:2660:A:H2'	35:DA:2661:G:O4'	2.08	0.54
45:BN:18:ALA:HB1	45:BN:21:LYS:HB2	1.90	0.54
1:CA:1234:C:H2'	1:CA:1235:U:C6	2.42	0.54
22:CY:25:A:O2'	22:CY:26:G:H5'	2.07	0.54
23:CW:4:C:P	23:CW:4:C:H2'	2.47	0.54
23:CW:70:G:C4	23:CW:71:G:C8	2.96	0.54
51:DT:31:SER:OG	51:DT:32:TYR:N	2.41	0.54
1:AA:963:G:N2	10:AJ:55:LYS:HD3	2.23	0.54
1:AA:1054:C:H42	22:AY:36:AG9:HN2	1.55	0.54
3:CC:154:SER:O	3:CC:165:THR:HA	2.07	0.54
43:BI:77:LEU:HD12	43:BI:101:LEU:HD13	1.89	0.54
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.71	0.54
12:AL:49:ASN:ND2	12:AL:49:ASN:N	2.53	0.54
10:AJ:34:VAL:HG13	10:AJ:73:ASP:O	2.07	0.54
23:CW:20:G:N1	23:CW:58:C:C4	2.76	0.54
45:DN:17:ASP:HB2	45:DN:55:VAL:HG12	1.87	0.54
35:BA:2724:C:P	49:BR:2:ARG:NH2	2.80	0.54
4:AD:129:ASN:H	4:AD:129:ASN:HD22	1.55	0.54
56:BY:37:VAL:O	56:BY:66:PRO:O	2.25	0.54
35:DA:308:G:O2'	56:DY:19:LYS:HE2	2.08	0.54
1:AA:253:U:H2'	1:AA:254:G:H8	1.73	0.54
29:B4:5:ILE:HG12	41:BG:67:LYS:CD	2.38	0.54
29:B4:8:LYS:O	29:B4:9:LEU:HB3	2.07	0.54
3:CC:32:LEU:HB3	3:CC:59:ARG:HH22	1.73	0.54
26:D1:45:ASN:HD21	35:DA:2090:G:H21	1.55	0.54
35:DA:676:A:H2	35:DA:802:A:N6	2.01	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:222:U:H2'	1:AA:223:U:C6	2.43	0.54
35:BA:855:G:H2'	35:BA:856:C:C6	2.43	0.54
35:BA:1528(A):A:H62	35:BA:1541:G:N2	2.05	0.54
35:BA:158:U:H2'	35:BA:171:G:O5'	2.08	0.54
20:AT:89:ARG:NH1	20:AT:104:LEU:HD21	2.23	0.54
37:BC:14:LYS:HE3	37:BC:32:GLU:HB2	1.90	0.54
5:AE:71:LEU:HD11	5:AE:114:GLY:HA3	1.90	0.54
33:B8:29:LYS:HG3	33:B8:29:LYS:O	2.08	0.54
35:DA:271(R):G:O2'	35:DA:271(S):G:H5'	2.07	0.54
40:BF:110:LEU:HD13	40:BF:202:PHE:HE1	1.73	0.54
9:AI:31:GLN:NE2	9:AI:36:TYR:HA	2.22	0.54
1:AA:993:G:N3	1:AA:993:G:H2'	2.21	0.54
9:CI:31:GLN:NE2	9:CI:36:TYR:HA	2.23	0.54
35:BA:141:A:H8	35:BA:1408:C:HO2'	1.48	0.54
50:DS:74:ALA:HB1	50:DS:103:GLU:HB2	1.89	0.54
43:DI:13:GLY:O	43:DI:14:ASP:HB2	2.07	0.54
35:BA:2884:U:C2'	35:BA:2885:C:H5'	2.38	0.54
4:AD:47:ARG:NH2	4:AD:49:ARG:HH22	2.05	0.54
35:DA:1860:G:H1	35:DA:1882:C:H42	1.56	0.54
35:DA:692:C:H2'	35:DA:693:C:C6	2.43	0.54
54:DW:47:VAL:HA	54:DW:50:VAL:HG12	1.87	0.54
43:DI:112:LYS:HD2	43:DI:112:LYS:N	2.22	0.54
8:CH:39:LEU:O	8:CH:45:ILE:HG12	2.08	0.54
35:DA:2555:U:H2'	35:DA:2556:C:H5'	1.88	0.54
1:AA:227:G:H2'	1:AA:228:A:C8	2.43	0.54
1:CA:1027:C:H1'	1:CA:1035:A:H2	1.71	0.54
3:AC:90:GLU:HA	3:AC:93:LYS:CB	2.37	0.54
35:BA:2183:C:O2'	35:BA:2184:G:H5'	2.06	0.54
22:AY:32:G:N1	22:AY:42:C:O2	2.39	0.54
22:CV:9:A:C6	22:CV:48:G:C2	2.96	0.54
35:BA:1902:C:HO2'	38:BD:244:ARG:HB2	1.71	0.54
35:DA:941:A:H2'	35:DA:942:G:C8	2.42	0.54
19:AS:62:ILE:HG13	19:AS:63:THR:N	2.23	0.54
31:D6:48:VAL:HG23	31:D6:49:HIS:N	2.21	0.54
12:CL:38:THR:O	12:CL:79:GLU:HG2	2.07	0.54
12:AL:66:VAL:HG12	12:AL:67:THR:N	2.19	0.54
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.42	0.54
1:CA:1152:A:H2'	1:CA:1153:C:C6	2.43	0.54
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.43	0.54
40:BF:132:VAL:CG2	40:BF:133:ASN:H	2.07	0.54
17:CQ:80:GLY:O	17:CQ:81:ARG:HD2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:101:VAL:CG2	47:DP:102:ARG:N	2.71	0.54
40:DF:132:VAL:CG2	40:DF:133:ASN:H	2.06	0.54
35:DA:2312:U:H2'	35:DA:2313:C:C5'	2.37	0.54
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.42	0.54
3:AC:14:ILE:HG23	3:AC:15:THR:N	2.22	0.54
4:CD:145:GLU:HG2	4:CD:184:LYS:HG2	1.90	0.54
31:D6:30:THR:O	31:D6:32:ASN:N	2.41	0.54
45:BN:43:THR:HB	45:BN:46:VAL:CG1	2.34	0.54
40:BF:188:ARG:CA	47:BP:7:ARG:HD3	2.36	0.54
1:CA:1339:A:H2	22:CV:33:G:O4'	1.90	0.54
56:DY:44:ILE:N	56:DY:62:GLU:OE1	2.40	0.54
32:B7:8:ASN:ND2	32:B7:10:ARG:H	2.06	0.54
47:BP:17:LYS:O	47:BP:19:VAL:N	2.41	0.54
54:BW:1:MET:CE	54:BW:2:GLU:H	2.17	0.54
40:DF:8:GLN:HG2	40:DF:126:VAL:HG12	1.89	0.54
35:BA:2579:C:O3'	39:BE:131:ALA:HB2	2.07	0.54
2:CB:18:GLY:N	2:CB:42:ILE:HG22	2.20	0.54
57:DZ:165:VAL:HG11	57:DZ:169:GLU:HB2	1.88	0.54
35:BA:1280:G:C2'	35:BA:1281:G:H5''	2.37	0.54
10:AJ:27:ALA:HB2	10:AJ:85:LEU:HD11	1.90	0.54
1:CA:639:G:O2'	1:CA:640:A:H5'	2.07	0.54
49:DR:96:ARG:HB2	49:DR:117:VAL:HG22	1.90	0.54
18:CR:85:LEU:HD23	18:CR:88:LYS:HG2	1.89	0.54
38:BD:72:LYS:HD3	38:BD:97:TYR:CE2	2.43	0.54
35:BA:1952:A:C5	46:BO:22:ILE:HD12	2.43	0.54
5:AE:36:ASP:OD2	5:AE:40:ARG:HB2	2.08	0.54
6:CF:99:ALA:HB2	18:CR:31:LEU:HD22	1.89	0.54
1:AA:1329:A:N7	21:AU:7:ARG:NH2	2.53	0.54
35:BA:654(A):G:O2'	35:BA:654(B):C:H5'	2.07	0.54
48:BQ:27:VAL:HG12	48:BQ:28:ALA:N	2.23	0.54
20:AT:84:LEU:HD13	20:AT:84:LEU:C	2.28	0.54
38:BD:125:ILE:HD13	38:BD:131:LEU:HD21	1.90	0.54
57:BZ:112:ARG:HD3	57:BZ:112:ARG:O	2.08	0.54
1:AA:245:C:O2'	1:AA:246:A:H5'	2.08	0.54
19:CS:29:ARG:HD2	19:CS:29:ARG:N	2.22	0.54
2:AB:50:GLU:HB3	2:AB:200:ILE:O	2.07	0.54
35:DA:2745:C:H2'	35:DA:2746:U:C6	2.42	0.54
1:CA:646:U:H2'	1:CA:647:C:C6	2.43	0.54
1:CA:1462:G:O2'	1:CA:1463:C:H5'	2.07	0.54
1:CA:779:C:O2'	1:CA:780:A:H5'	2.07	0.54
35:DA:852:G:O2'	35:DA:853:G:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.08	0.54
57:DZ:185:GLU:O	57:DZ:185:GLU:HG2	2.06	0.54
11:AK:54:ARG:NH1	23:AW:42:C:OP1	2.40	0.54
23:AW:69:G:N2	23:AW:70:G:C4	2.76	0.54
23:CW:72:C:H2'	23:CW:73:C:C1'	2.38	0.54
23:CW:34:C:O2	23:CW:34:C:C2'	2.54	0.54
22:AV:12:U:C4	22:AV:13:U:C5	2.95	0.54
22:AV:56:U:O2'	22:AV:57:U:H5'	2.07	0.54
22:AV:5:C:C6	22:AV:6:C:H5	2.25	0.54
33:D8:60:LEU:O	33:D8:63:PRO:HG2	2.07	0.54
56:BY:80:GLY:O	56:BY:81:LYS:HB3	2.08	0.54
40:BF:125:LEU:HD13	40:BF:199:TRP:CG	2.42	0.54
1:CA:1051:C:H2'	1:CA:1052:U:H6	1.67	0.54
10:CJ:80:LYS:O	10:CJ:83:GLU:HB3	2.08	0.54
52:DU:95:LEU:CD1	53:DV:11:GLN:HB2	2.38	0.54
45:DN:2:LYS:NZ	53:DV:12:TYR:HA	2.22	0.54
51:BT:27:THR:HA	51:BT:87:ASP:HB2	1.90	0.54
47:DP:97:PRO:HD3	47:DP:126:VAL:O	2.08	0.54
2:AB:84:GLU:HB3	2:AB:219:VAL:CG2	2.30	0.54
29:D4:14:ILE:N	29:D4:14:ILE:HD12	2.23	0.54
40:DF:31:HIS:O	40:DF:34:TRP:HB3	2.08	0.54
26:D1:23:LYS:HD2	26:D1:28:GLY:CA	2.30	0.54
57:DZ:104:PHE:CD1	57:DZ:139:VAL:HB	2.32	0.54
1:AA:383:A:H2'	1:AA:384:G:C5'	2.36	0.54
14:CN:29:ARG:HH12	14:CN:31:ARG:HB2	1.72	0.54
4:CD:106:TYR:C	4:CD:108:LEU:H	2.11	0.54
5:CE:33:VAL:CG2	5:CE:109:ILE:HG12	2.38	0.54
5:CE:109:ILE:O	5:CE:113:ALA:HB2	2.07	0.54
23:CW:64:C:H6	23:CW:64:C:O5'	1.91	0.54
35:DA:272(E):G:C2	35:DA:364:C:N3	2.75	0.54
7:AG:102:ARG:HG2	7:AG:106:GLN:HE21	1.73	0.54
25:B0:47:PRO:HB3	25:B0:51:VAL:O	2.07	0.54
25:B0:50:ASN:HB3	25:B0:63:VAL:HG22	1.89	0.54
41:DG:35:GLU:OE1	41:DG:160:VAL:HG11	2.07	0.54
42:DH:97:ARG:HG2	42:DH:98:LEU:N	2.21	0.54
35:DA:1187:G:H5''	53:DV:81:TYR:CE1	2.43	0.54
35:BA:2777:G:H5''	35:BA:2778:A:H5''	1.90	0.54
27:B2:64:LEU:O	27:B2:68:ARG:HG2	2.07	0.54
29:D4:22:ILE:H	29:D4:22:ILE:HD12	1.71	0.54
35:DA:271(G):C:O2'	35:DA:271(H):G:H5'	2.08	0.54
1:AA:1137:C:H4'	1:AA:1138:G:N2	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:109:A:H2'	1:CA:326:G:N2	2.22	0.54
1:AA:612:C:O2'	1:AA:613:C:H5'	2.08	0.54
35:BA:792:G:H5'	35:BA:793:A:H5'	1.90	0.54
35:DA:2141:G:H2'	35:DA:2142:C:C6	2.43	0.54
1:CA:1220:G:O2'	1:CA:1221:G:H5'	2.07	0.54
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.43	0.54
48:BQ:30:GLY:CA	48:BQ:107:ALA:HB2	2.38	0.54
23:AW:73:C:C3'	23:AW:74:C:C5'	2.84	0.54
22:AY:57:U:C5	57:BZ:182:LYS:C	2.81	0.54
4:AD:18:LYS:CB	4:AD:33:MET:HG2	2.38	0.54
22:CV:71:G:N3	22:CV:71:G:H2'	2.21	0.54
35:BA:2361:A:C2'	35:BA:2362:G:H5'	2.37	0.54
47:BP:59:LEU:CA	47:BP:61:ARG:CZ	2.73	0.54
3:AC:154:SER:O	3:AC:165:THR:HA	2.07	0.54
1:AA:1054:C:HO2'	1:AA:1055:A:P	2.30	0.54
31:D6:41:PRO:HD2	31:D6:45:LYS:O	2.06	0.54
1:AA:1408:A:O3'	35:BA:1916:A:N1	2.41	0.54
40:DF:3:GLU:HA	40:DF:24:LEU:CG	2.35	0.54
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	2.08	0.54
1:CA:963:G:N3	10:CJ:55:LYS:NZ	2.55	0.54
45:DN:132:ALA:O	45:DN:133:GLN:HB3	2.08	0.54
52:DU:68:ALA:CB	52:DU:99:ALA:HB1	2.37	0.54
53:DV:46:VAL:HG13	53:DV:47:VAL:N	2.22	0.54
29:D4:24:THR:HG21	41:DG:104:GLU:OE2	2.07	0.54
29:D4:34:GLU:HB3	41:DG:113:ARG:NH1	2.16	0.54
41:DG:58:GLN:O	41:DG:61:ALA:HB3	2.08	0.54
31:B6:11:LEU:HG	31:B6:51:GLU:HG3	1.89	0.54
49:BR:2:ARG:CD	49:BR:5:LYS:HE2	2.36	0.54
25:B0:11:ARG:C	25:B0:12:ASN:HD22	2.10	0.54
35:DA:1654:A:OP2	49:DR:3:HIS:HB2	2.08	0.54
56:BY:42:VAL:CG1	56:BY:65:ALA:HB3	2.37	0.54
35:BA:2562:U:H2'	35:BA:2563:U:H5'	1.90	0.54
1:AA:127:G:N2	17:AQ:61:GLU:OE2	2.40	0.54
30:D5:54:GLY:CA	30:D5:55:ARG:HE	2.21	0.54
7:CG:26:PHE:O	7:CG:30:ILE:HG12	2.08	0.54
5:CE:6:PHE:HB3	5:CE:35:GLY:O	2.08	0.54
35:BA:1542:A:C3'	35:BA:1542:A:C8	2.90	0.54
35:DA:2472:G:H3'	35:DA:2475:C:H42	1.70	0.54
1:CA:348:G:O2'	1:CA:349:A:H5'	2.08	0.54
41:BG:146:TYR:C	41:BG:148:MET:H	2.11	0.54
38:BD:25:THR:HG22	38:BD:26:LYS:HD3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:24:THR:HG21	39:BE:188:VAL:CG1	2.37	0.54
1:CA:542:G:H2'	1:CA:543:C:C6	2.42	0.54
2:AB:166:ASP:HB3	2:AB:169:LYS:CB	2.35	0.54
38:DD:142:VAL:HG21	38:DD:191:ALA:HB1	1.89	0.54
45:DN:96:GLU:O	45:DN:100:GLU:HG3	2.07	0.54
41:DG:48:GLU:O	41:DG:49:ASP:CB	2.55	0.54
6:AF:28:ARG:NH1	6:AF:28:ARG:HG3	2.22	0.54
4:CD:157:LEU:CG	4:CD:161:ASN:HD21	2.21	0.54
49:BR:85:PRO:O	49:BR:87:TYR:N	2.40	0.54
57:DZ:51:ALA:O	57:DZ:52:SER:CB	2.56	0.54
35:DA:963:U:H2'	35:DA:964:C:C6	2.43	0.54
45:BN:73:THR:CG2	45:BN:82:LEU:HD11	2.38	0.54
43:BI:14:ASP:O	43:BI:15:VAL:O	2.26	0.54
42:DH:117:PRO:HB3	42:DH:123:PHE:CE2	2.43	0.54
13:AM:65:LYS:HB3	29:B4:44:THR:HG21	1.88	0.54
35:BA:107:C:H2'	35:BA:108:U:H6	1.72	0.54
49:DR:33:ARG:HG3	49:DR:115:GLU:HG3	1.89	0.54
35:BA:2745:C:H2'	35:BA:2746:U:C6	2.43	0.54
20:AT:38:LYS:HA	20:AT:41:ILE:HD11	1.88	0.54
35:BA:34:C:N4	35:BA:455:C:H5'	2.22	0.54
27:B2:18:PRO:O	27:B2:22:GLU:HG3	2.08	0.54
35:DA:2842:G:O2'	35:DA:2843:G:H5'	2.08	0.54
35:BA:143:G:H1'	55:BX:37:THR:HG21	1.90	0.54
5:AE:12:LEU:HD13	5:AE:12:LEU:O	2.08	0.54
35:DA:71:A:C2	55:DX:31:HIS:HE1	2.26	0.54
35:BA:2639:A:H2'	35:BA:2640:G:H5'	1.89	0.54
22:CY:57:U:H2'	57:DZ:182:LYS:HZ2	1.71	0.54
23:AW:30:U:C4	23:AW:31:C:C4	2.96	0.54
22:AY:69:G:C5	22:AY:70:G:N7	2.76	0.54
1:CA:1442(B):A:C2	51:DT:118:ARG:NH2	2.76	0.54
56:DY:2:ARG:O	56:DY:4:LYS:HG2	2.08	0.54
23:AW:20:G:C2	23:AW:59:G:C4	2.96	0.54
47:DP:59:LEU:HA	47:DP:61:ARG:NE	2.20	0.54
1:AA:1054:C:OP2	1:AA:1197:G:OP2	2.26	0.54
43:BI:83:ALA:CA	43:BI:88:ILE:HG23	2.38	0.54
35:BA:1915:U:C3'	35:BA:1916:A:C5'	2.68	0.54
23:CW:19:G:C5	23:CW:60:A:C6	2.96	0.54
35:DA:322:A:H5'	35:DA:340:A:C1'	2.38	0.54
35:BA:2308:G:O6	35:BA:2310:A:H2'	2.08	0.54
52:BU:92:ARG:NH1	53:BV:11:GLN:H	2.06	0.54
1:AA:975:A:H5'	1:AA:975:A:H8	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DE:50:GLY:C	39:DE:74:PRO:HG2	2.28	0.54
29:D4:8:LYS:O	29:D4:9:LEU:HB3	2.08	0.54
41:DG:118:ARG:CG	41:DG:118:ARG:HH11	2.21	0.54
39:BE:51:PHE:H	39:BE:74:PRO:CB	2.20	0.54
4:AD:128:VAL:CG1	4:AD:129:ASN:H	2.11	0.54
56:BY:2:ARG:CD	56:BY:3:VAL:HG23	2.37	0.54
40:DF:28:ILE:N	40:DF:28:ILE:HD13	2.22	0.54
2:AB:98:LEU:O	2:AB:101:MET:HG2	2.07	0.54
37:DC:30:VAL:HG11	37:DC:42:VAL:CG2	2.38	0.54
7:AG:79:ARG:HD3	7:AG:82:GLY:H	1.73	0.54
39:BE:132:HIS:CD2	39:BE:135:HIS:NE2	2.76	0.54
1:CA:66:G:H4'	1:CA:173:U:C5	2.43	0.54
1:CA:403:C:H2'	1:CA:404:U:H6	1.73	0.54
35:BA:7:G:H5'	45:BN:130:HIS:HD2	1.73	0.54
38:BD:12:SER:HB2	38:BD:208:LYS:HB3	1.89	0.54
35:DA:2807:G:H3'	35:DA:2808:U:H5''	1.88	0.54
2:CB:101:MET:HE2	2:CB:101:MET:HA	1.90	0.54
33:B8:34:TRP:HB2	35:BA:2420:C:OP1	2.07	0.54
35:DA:2415:G:H4'	47:DP:67:MET:H	1.71	0.54
28:D3:19:GLN:NE2	28:D3:52:HIS:HE1	2.06	0.54
1:CA:1296:C:H5'	1:CA:1297:C:OP2	2.08	0.54
1:AA:692:U:C5	11:AK:26:ASN:ND2	2.76	0.54
11:CK:124:LYS:NZ	11:CK:124:LYS:HB3	2.23	0.54
38:BD:121:PRO:HB3	38:BD:135:PHE:CE2	2.42	0.54
12:CL:7:ILE:CG2	12:CL:8:ASN:N	2.70	0.54
1:AA:1452:C:H4'	1:AA:1456:G:O5'	2.08	0.54
35:DA:536:A:P	52:DU:53:ARG:HH11	2.31	0.54
18:CR:31:LEU:H	18:CR:31:LEU:CD2	2.20	0.54
27:B2:2:LYS:HB3	35:BA:97:C:H5''	1.90	0.54
12:AL:120:TYR:N	12:AL:120:TYR:CD1	2.76	0.54
20:CT:84:LEU:HD13	20:CT:84:LEU:C	2.28	0.54
36:BB:23:G:H1	36:BB:60:C:H42	1.56	0.54
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.72	0.54
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.43	0.54
27:D2:14:ARG:HA	27:D2:63:VAL:HG11	1.89	0.54
38:BD:148:GLU:HB2	38:BD:151:LYS:HD2	1.90	0.54
5:AE:10:MET:HA	5:AE:32:VAL:HG22	1.90	0.54
35:BA:680:G:H2'	35:BA:681:G:C8	2.42	0.54
35:DA:247:G:H4'	35:DA:386:G:C5	2.43	0.54
57:BZ:19:ARG:NH1	57:BZ:84:GLU:O	2.41	0.54
35:BA:1150:C:O2'	35:BA:1151:G:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DC:51:ASP:H	37:DC:57:GLN:NE2	2.06	0.54
7:AG:66:VAL:O	7:AG:70:LYS:HG3	2.07	0.54
22:AY:10:G:C4	22:AY:11:C:C5	2.96	0.54
43:DI:109:ILE:HD12	43:DI:109:ILE:N	2.23	0.54
1:CA:1053:G:N7	1:CA:1199:U:H3'	2.22	0.54
35:DA:1494:A:O2'	35:DA:1496:A:C2	2.61	0.54
3:AC:119:ARG:NH2	3:AC:140:ARG:NH2	2.55	0.54
46:BO:68:GLU:OE1	46:BO:78:ARG:NH1	2.41	0.54
41:DG:114:ILE:HG22	41:DG:117:PHE:H	1.73	0.54
53:DV:59:ALA:HB2	53:DV:96:ILE:HD13	1.90	0.54
26:D1:57:GLU:O	26:D1:58:ILE:O	2.26	0.54
40:BF:187:VAL:HG12	47:BP:7:ARG:HD2	1.90	0.54
5:CE:144:THR:O	5:CE:148:VAL:HG23	2.08	0.54
5:CE:148:VAL:O	5:CE:150:ARG:N	2.41	0.54
23:CW:52:C:N3	23:CW:53:U:C4	2.76	0.54
38:DD:31:LYS:HB3	38:DD:34:VAL:HG22	1.89	0.54
48:BQ:51:ARG:HH21	48:BQ:52:VAL:HG23	1.73	0.54
35:BA:2579:C:H2'	35:BA:2580:U:O4'	2.07	0.54
35:DA:158:U:H2'	35:DA:171:G:O5'	2.07	0.54
36:BB:31:C:N4	50:BS:32:LEU:HD13	2.23	0.54
2:CB:111:ARG:NH2	2:CB:114:ARG:HG2	2.23	0.54
49:BR:98:LEU:HB2	49:BR:113:LEU:CD2	2.37	0.54
38:BD:25:THR:HG22	38:BD:26:LYS:CD	2.38	0.54
33:D8:34:TRP:CG	33:D8:35:GLN:N	2.75	0.54
35:BA:774:A:H2	35:BA:787:U:O2'	1.90	0.54
8:AH:14:ARG:O	8:AH:18:ARG:HD3	2.08	0.54
1:CA:1305:G:C2	1:CA:1331:G:N3	2.76	0.54
56:BY:95:LYS:HD3	56:BY:100:ALA:CB	2.38	0.54
25:D0:40:GLN:HE21	25:D0:43:THR:HA	1.73	0.54
35:BA:2543:G:H2'	35:BA:2544:G:H8	1.71	0.54
4:CD:98:GLU:CG	4:CD:103:ASN:HD21	2.20	0.54
1:AA:585:G:H4'	12:AL:8:ASN:HD21	1.73	0.54
40:DF:157:VAL:HA	40:DF:176:LEU:O	2.08	0.54
35:BA:1331:A:O2'	35:BA:1332:G:H8	1.91	0.54
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.08	0.54
49:DR:28:LEU:HA	49:DR:34:ILE:HG12	1.90	0.54
19:AS:42:PRO:HG3	29:B4:50:VAL:HG21	1.88	0.54
35:BA:1509(A):A:H2'	35:BA:1509(B):A:C8	2.42	0.54
44:DJ:22:UNK:C	44:DJ:88:UNK:HA	2.38	0.54
35:DA:1009:A:C4'	52:DU:59:ARG:HD3	2.37	0.54
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1638:C:H4'	35:DA:2710:C:O2	2.08	0.54
1:CA:59:A:H5'	1:CA:60:A:H5''	1.90	0.54
1:CA:25:C:O2'	1:CA:26:A:H5'	2.07	0.54
18:CR:79:LEU:CD2	18:CR:80:PRO:HD2	2.38	0.54
35:BA:2815:C:H2'	35:BA:2816:C:H6	1.72	0.54
50:DS:51:ALA:HB3	50:DS:73:LEU:HB2	1.90	0.54
38:BD:2:ALA:O	38:BD:3:VAL:HB	2.07	0.54
38:DD:197:GLY:O	38:DD:198:ASN:HB3	2.08	0.54
35:BA:341:G:O2'	35:BA:342:G:H5'	2.08	0.54
44:DJ:56:UNK:CB	44:DJ:83:UNK:HA	2.38	0.54
23:CW:39:A:C6	23:CW:41:C:OP2	2.61	0.53
23:CW:42:C:C5	23:CW:43:G:C8	2.95	0.53
22:AV:1:G:H1'	25:B0:5:LYS:CE	2.39	0.53
22:AV:43:G:N1	22:AV:44:A:C4	2.76	0.53
22:AV:5:C:C2	22:AV:71:G:C2	2.96	0.53
22:CV:23:A:O3'	22:CV:24:A:H8	1.91	0.53
30:B5:3:LYS:HZ3	30:B5:5:PRO:HB2	1.72	0.53
19:AS:16:LEU:O	19:AS:20:LEU:HG	2.07	0.53
35:BA:1486:A:N6	35:BA:1504:C:H42	2.06	0.53
43:BI:88:ILE:CG2	43:BI:89:TYR:N	2.70	0.53
8:CH:109:ILE:CG2	8:CH:137:VAL:HB	2.38	0.53
40:BF:119:ARG:HH11	40:BF:119:ARG:HG2	1.72	0.53
23:CW:59:G:O2'	23:CW:60:A:H5'	2.08	0.53
35:BA:146:G:H5'	35:BA:146:G:H8	1.74	0.53
51:BT:70:VAL:HG12	51:BT:71:GLY:H	1.73	0.53
47:DP:102:ARG:HH11	47:DP:102:ARG:CB	2.22	0.53
47:DP:102:ARG:O	47:DP:103:ALA:HB2	2.07	0.53
41:DG:43:LEU:HD11	41:DG:153:ARG:HB3	1.90	0.53
53:BV:38:LEU:HD23	53:BV:39:LEU:N	2.23	0.53
39:DE:75:VAL:O	39:DE:77:ILE:N	2.35	0.53
41:DG:87:PRO:O	41:DG:88:ILE:HD13	2.09	0.53
35:DA:914:C:H2'	35:DA:915:C:C5'	2.31	0.53
13:CM:88:ARG:HG2	13:CM:88:ARG:NH1	2.22	0.53
30:B5:20:ARG:HA	30:B5:23:HIS:CE1	2.43	0.53
1:AA:1290:G:N3	1:AA:1290:G:H2'	2.23	0.53
35:DA:991:C:C5'	35:DA:991:C:H6	2.16	0.53
2:CB:140:HIS:O	2:CB:143:GLU:HG2	2.07	0.53
3:CC:52:LEU:HD23	3:CC:52:LEU:H	1.74	0.53
47:DP:16:ARG:HD3	47:DP:18:ARG:N	2.17	0.53
26:B1:51:VAL:O	26:B1:58:ILE:HG12	2.08	0.53
9:CI:85:LEU:HD13	9:CI:92:TYR:CD2	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:134:ILE:O	3:AC:138:VAL:HG23	2.09	0.53
1:CA:1502:A:C2	1:CA:1505:G:N2	2.69	0.53
48:DQ:16:ARG:HG2	48:DQ:17:LEU:N	2.22	0.53
42:DH:121:ILE:CD1	42:DH:144:VAL:HG21	2.38	0.53
35:BA:1693:U:O2'	38:BD:14:ARG:NH2	2.41	0.53
38:BD:16:MET:CE	38:BD:208:LYS:HD3	2.38	0.53
46:BO:49:ARG:HA	46:BO:53:LYS:HZ1	1.73	0.53
1:CA:542:G:H5'	4:CD:41:GLY:CA	2.36	0.53
2:CB:36:ARG:O	2:CB:41:ILE:HD11	2.08	0.53
39:DE:80:GLU:O	39:DE:81:ILE:HD13	2.08	0.53
36:BB:92:C:H5''	57:BZ:79:ARG:NH2	2.23	0.53
40:DF:206:ILE:HG22	40:DF:207:GLY:N	2.23	0.53
25:D0:36:ILE:HD13	25:D0:58:THR:HG23	1.89	0.53
41:BG:114:ILE:CG2	41:BG:117:PHE:HB2	2.38	0.53
35:BA:2464:C:O2'	35:BA:2465:C:P	2.67	0.53
1:AA:990:C:H2'	1:AA:991:U:C6	2.41	0.53
35:DA:1603:A:C8	35:DA:1603:A:H5'	2.44	0.53
1:AA:1072:G:H2'	1:AA:1073:U:O4'	2.07	0.53
13:AM:79:LYS:HB3	13:AM:79:LYS:HZ3	1.73	0.53
38:BD:94:LEU:HB2	38:BD:104:TYR:HE1	1.73	0.53
18:CR:31:LEU:HD23	18:CR:31:LEU:N	2.23	0.53
35:BA:225:A:C2'	35:BA:226:G:H5'	2.38	0.53
29:D4:50:VAL:C	29:D4:52:THR:H	2.12	0.53
29:B4:22:ILE:H	29:B4:22:ILE:HD12	1.73	0.53
3:AC:90:GLU:HA	3:AC:93:LYS:HB2	1.89	0.53
48:BQ:30:GLY:HA2	48:BQ:107:ALA:HB2	1.89	0.53
41:BG:95:ARG:HH11	41:BG:95:ARG:HG2	1.73	0.53
35:BA:394:A:O2'	35:BA:395:U:H5'	2.07	0.53
45:DN:123:TYR:OH	45:DN:130:HIS:CE1	2.61	0.53
1:AA:1220:G:O2'	1:AA:1221:G:H5'	2.08	0.53
41:DG:28:VAL:HG12	41:DG:28:VAL:O	2.07	0.53
35:BA:643:A:O2'	35:BA:644:A:H5'	2.09	0.53
23:AW:43:G:C2	23:AW:44:A:C4	2.96	0.53
23:CW:69:G:N1	23:CW:70:G:C5	2.75	0.53
4:CD:8:VAL:HG23	4:CD:9:CYS:H	1.72	0.53
22:AV:19:G:C6	22:AV:59:G:C6	2.95	0.53
22:CV:14:A:C2	22:CV:15:G:H1'	2.43	0.53
51:BT:2:ASN:O	51:BT:3:ARG:C	2.46	0.53
23:CW:9:A:N3	23:CW:47:G:H2'	2.24	0.53
1:CA:523:A:H61	12:CL:92:ASP:HB2	1.72	0.53
47:BP:33:ARG:O	47:BP:35:HIS:O	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:4:ILE:HB	10:AJ:74:ILE:HD11	1.91	0.53
10:AJ:80:LYS:O	10:AJ:83:GLU:HB3	2.08	0.53
45:BN:133:GLN:CG	45:BN:135:PRO:HD3	2.33	0.53
45:DN:126:PRO:O	45:DN:127:ASP:CB	2.56	0.53
47:BP:124:LYS:HD3	47:BP:143:GLY:HA3	1.89	0.53
45:BN:2:LYS:NZ	53:BV:12:TYR:HA	2.23	0.53
40:DF:133:ASN:N	40:DF:133:ASN:ND2	2.56	0.53
13:CM:3:ARG:HH22	41:DG:113:ARG:N	2.06	0.53
41:DG:58:GLN:HG3	41:DG:59:GLU:N	2.22	0.53
39:BE:50:GLY:C	39:BE:74:PRO:HG2	2.28	0.53
12:AL:69:TYR:CE2	12:AL:71:PRO:HA	2.44	0.53
50:BS:97:ARG:C	50:BS:97:ARG:NE	2.62	0.53
57:DZ:108:PRO:CG	57:DZ:111:VAL:HG23	2.38	0.53
2:CB:55:PHE:CD1	2:CB:58:ILE:HD12	2.43	0.53
42:DH:24:VAL:HG13	42:DH:35:VAL:HB	1.89	0.53
19:CS:64:GLU:HG3	19:CS:65:ASN:H	1.71	0.53
8:AH:20:TYR:HA	8:AH:65:TYR:HE2	1.73	0.53
1:CA:1128:C:O2'	1:CA:1130:A:C8	2.59	0.53
41:BG:131:TYR:HE2	41:BG:133:LEU:HD23	1.73	0.53
29:B4:14:ILE:HG23	29:B4:31:ILE:HG22	1.89	0.53
1:AA:197:A:N7	1:AA:221:C:H4'	2.23	0.53
57:DZ:57:ILE:HG22	57:DZ:58:VAL:N	2.22	0.53
26:D1:62:VAL:HG22	26:D1:63:ALA:N	2.23	0.53
1:CA:532:A:N6	3:CC:193:TYR:HB3	2.22	0.53
1:AA:1228:C:H5'	13:AM:108:ARG:NH2	2.23	0.53
26:B1:12:PRO:HB3	26:B1:43:TYR:CD1	2.43	0.53
47:BP:112:LEU:HD13	47:BP:113:LYS:N	2.23	0.53
1:CA:376:G:OP1	16:CP:6:LEU:HB2	2.09	0.53
18:CR:36:ASN:HB3	18:CR:39:VAL:HG21	1.89	0.53
6:AF:44:GLY:HA2	6:AF:59:TYR:CE1	2.43	0.53
38:DD:155:LEU:HD23	38:DD:177:LEU:CD2	2.39	0.53
3:CC:162:GLN:CG	24:CX:24:A:O4'	2.56	0.53
42:DH:74:ASN:OD1	42:DH:138:LYS:HE3	2.08	0.53
36:BB:92:C:H5''	57:BZ:79:ARG:HH22	1.73	0.53
56:BY:88:LYS:CE	56:BY:93:GLY:HA3	2.38	0.53
56:DY:95:LYS:HD3	56:DY:100:ALA:HA	1.90	0.53
56:DY:95:LYS:HD3	56:DY:100:ALA:CB	2.39	0.53
20:CT:10:LEU:HD12	20:CT:11:SER:H	1.73	0.53
35:DA:469:G:O2'	35:DA:470:A:H5''	2.08	0.53
27:B2:21:LEU:HD12	27:B2:64:LEU:HD23	1.90	0.53
35:BA:2023:G:H5'	35:BA:2617:C:H4'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DN:71:ILE:HG21	45:DN:84:LYS:HB3	1.89	0.53
35:BA:692:C:H2'	35:BA:693:C:C6	2.43	0.53
30:B5:43:HIS:CD2	35:BA:2815:C:O2'	2.61	0.53
1:AA:1091:U:H2'	1:AA:1093:A:OP2	2.07	0.53
17:AQ:98:LEU:HD12	17:AQ:98:LEU:N	2.23	0.53
13:CM:22:ILE:HD12	13:CM:22:ILE:N	2.23	0.53
39:DE:13:ARG:HD2	39:DE:20:ALA:HB1	1.88	0.53
35:BA:2720:U:H2'	35:BA:2720:U:O2	2.08	0.53
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.07	0.53
22:CY:27:C:H2'	22:CY:28:G:C8	2.42	0.53
22:AY:56:U:C2	57:BZ:183:LEU:HB2	2.43	0.53
51:DT:2:ASN:O	51:DT:3:ARG:C	2.47	0.53
36:DB:6:C:H42	36:DB:115:G:H1	1.56	0.53
22:CV:27:C:H3'	22:CV:27:C:H6	1.74	0.53
35:BA:1590:U:H2'	35:BA:1591:G:C5'	2.19	0.53
19:AS:18:LYS:O	19:AS:22:LEU:HB2	2.08	0.53
56:DY:31:LEU:HB2	56:DY:32:PRO:CA	2.37	0.53
23:AW:19:G:C5	23:AW:60:A:C6	2.96	0.53
23:CW:25:A:C3'	23:CW:26:G:C8	2.90	0.53
12:CL:43:VAL:CG1	12:CL:55:VAL:HG21	2.39	0.53
12:AL:58:VAL:N	12:AL:65:GLU:HG3	2.24	0.53
12:AL:92:ASP:O	12:AL:93:LEU:HD23	2.07	0.53
23:CW:19:G:C6	23:CW:59:G:C6	2.96	0.53
53:DV:39:LEU:HA	53:DV:47:VAL:HG13	1.90	0.53
47:DP:146:VAL:CG2	47:DP:147:LEU:N	2.66	0.53
33:D8:47:LYS:HD2	33:D8:48:PHE:N	2.23	0.53
51:BT:27:THR:O	51:BT:28:VAL:CB	2.56	0.53
45:BN:1:MET:C	45:BN:2:LYS:HG3	2.28	0.53
1:AA:1279:A:H2	10:AJ:43:ARG:HH22	1.56	0.53
41:DG:118:ARG:O	41:DG:118:ARG:HG2	2.08	0.53
10:CJ:50:ILE:N	10:CJ:50:ILE:HD13	2.13	0.53
5:AE:148:VAL:O	5:AE:150:ARG:N	2.41	0.53
50:BS:96:GLY:C	50:BS:98:VAL:H	2.11	0.53
6:CF:69:GLU:CD	6:CF:69:GLU:N	2.60	0.53
4:CD:129:ASN:H	4:CD:129:ASN:HD22	1.54	0.53
49:BR:21:TYR:OH	49:BR:43:GLU:HG2	2.07	0.53
41:BG:6:ALA:O	41:BG:7:LEU:C	2.46	0.53
35:BA:1568:G:H21	38:BD:58:HIS:CE1	2.26	0.53
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.90	0.53
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.74	0.53
4:AD:106:TYR:C	4:AD:108:LEU:H	2.11	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:134:ILE:O	3:CC:138:VAL:HG23	2.09	0.53
35:BA:1541:G:H4'	35:BA:1542:A:H5''	1.88	0.53
41:DG:34:LEU:HD11	41:DG:172:LEU:HD21	1.89	0.53
38:DD:75:ILE:O	38:DD:118:VAL:HG23	2.09	0.53
2:CB:142:LEU:HA	2:CB:145:LEU:HB2	1.88	0.53
22:AY:1:G:H2'	22:AY:2:G:H8	1.73	0.53
33:B8:33:ASN:O	33:B8:34:TRP:CB	2.57	0.53
39:DE:104:VAL:HG11	39:DE:188:VAL:CG2	2.39	0.53
1:CA:706:A:N7	1:CA:707:C:H5	2.06	0.53
56:BY:95:LYS:CG	56:BY:101:LYS:H	2.21	0.53
50:DS:92:TYR:CG	50:DS:93:LYS:N	2.75	0.53
1:CA:154:C:N4	1:CA:167:G:H1	2.06	0.53
49:BR:13:HIS:O	49:BR:14:SER:C	2.46	0.53
11:CK:107:SER:C	11:CK:108:ILE:HD12	2.29	0.53
1:AA:358:U:H2'	1:AA:359:U:C6	2.43	0.53
38:DD:121:PRO:HB3	38:DD:135:PHE:CE2	2.41	0.53
57:BZ:138:GLU:O	57:BZ:155:LEU:HB2	2.08	0.53
35:BA:1818:U:H2'	38:BD:157:ARG:HG3	1.89	0.53
1:AA:1239:A:H62	1:AA:1299:A:H62	1.57	0.53
37:DC:186:LEU:O	37:DC:190:ILE:HG12	2.08	0.53
1:AA:336:C:O2'	1:AA:337:C:H5'	2.07	0.53
36:DB:23:G:H1	36:DB:60:C:H42	1.55	0.53
18:CR:79:LEU:HD23	18:CR:80:PRO:HD2	1.89	0.53
1:AA:1090:U:O2'	1:AA:1091:U:H5'	2.09	0.53
2:CB:85:ALA:HB1	2:CB:92:TYR:CD1	2.43	0.53
1:AA:59:A:H5'	1:AA:60:A:H5''	1.91	0.53
35:DA:1362:C:O2'	35:DA:1363:C:H5'	2.08	0.53
42:DH:84:SER:O	42:DH:85:LYS:HB2	2.08	0.53
35:DA:1831:G:H2'	35:DA:1832:C:C6	2.43	0.53
38:DD:127:VAL:HA	38:DD:193:VAL:HG13	1.91	0.53
22:CY:19:G:H8	57:DZ:186:GLU:C	2.03	0.53
22:CY:20:G:C3'	22:CY:21:U:H5'	2.24	0.53
22:AY:20:G:C3'	22:AY:21:U:C5'	2.82	0.53
22:AY:27:C:H2'	22:AY:28:G:O4'	2.08	0.53
22:AV:29:A:C6	22:AV:30:U:O4	2.62	0.53
1:AA:430:A:OP2	4:AD:8:VAL:HG22	2.09	0.53
46:DO:64:ARG:NH1	51:DT:70:VAL:CG2	2.71	0.53
38:BD:244:ARG:HG2	38:BD:245:PRO:HB3	1.90	0.53
19:AS:16:LEU:H	19:AS:16:LEU:CD1	2.19	0.53
43:DI:110:ASP:CB	43:DI:113:ARG:HB2	2.39	0.53
31:D6:16:CYS:O	31:D6:17:LYS:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:12:U:OP2	23:CW:12:U:H6	1.92	0.53
12:CL:66:VAL:HG12	12:CL:67:THR:N	2.19	0.53
53:BV:1:MET:O	53:BV:2:PHE:HB2	2.08	0.53
41:DG:72:ARG:HA	41:DG:87:PRO:CG	2.39	0.53
39:BE:65:GLY:O	39:BE:67:PHE:N	2.41	0.53
49:BR:4:LEU:O	49:BR:5:LYS:HG2	2.08	0.53
49:DR:4:LEU:O	49:DR:5:LYS:HG2	2.08	0.53
50:DS:66:ALA:HA	50:DS:69:VAL:HG12	1.91	0.53
35:BA:271(M):G:C2'	35:BA:271(N):U:H5''	2.33	0.53
35:DA:271(M):G:C2'	35:DA:271(N):U:H5''	2.34	0.53
39:BE:117:MET:CE	39:BE:124:GLY:HA3	2.37	0.53
25:D0:14:ARG:CG	25:D0:14:ARG:HH11	2.22	0.53
48:DQ:31:ASP:O	48:DQ:133:ARG:O	2.27	0.53
3:AC:52:LEU:HD23	3:AC:52:LEU:H	1.73	0.53
15:AO:33:THR:HG21	15:AO:85:LEU:CD2	2.36	0.53
2:CB:116:GLU:HA	2:CB:119:GLU:HB3	1.91	0.53
3:CC:148:GLY:HA3	3:CC:172:ARG:O	2.09	0.53
35:DA:1539:G:C2	35:DA:1540:U:H1'	2.43	0.53
35:BA:2123:G:H2'	35:BA:2124:G:H8	1.73	0.53
48:BQ:16:ARG:HG2	48:BQ:17:LEU:N	2.23	0.53
1:AA:1493:A:HO2'	24:AX:19:A:H1'	1.74	0.53
33:D8:33:ASN:O	33:D8:34:TRP:CB	2.56	0.53
30:D5:40:LYS:HZ2	30:D5:46:CYS:H	1.55	0.53
49:DR:103:ARG:HD2	54:DW:40:ASN:ND2	2.23	0.53
25:D0:51:VAL:CG2	25:D0:81:VAL:HG23	2.38	0.53
35:BA:1009:A:H5'	52:BU:59:ARG:HD3	1.90	0.53
41:BG:118:ARG:HB3	41:BG:181:ARG:CZ	2.38	0.53
49:DR:13:HIS:HE1	49:DR:15:SER:HB3	1.74	0.53
35:BA:654(S):G:O5'	35:BA:654(T):C:H5''	2.09	0.53
35:BA:962:G:O2'	35:BA:963:U:H5'	2.08	0.53
27:B2:64:LEU:HD11	27:B2:68:ARG:HH12	1.73	0.53
43:BI:11:ASN:C	43:BI:12:LEU:HD23	2.29	0.53
43:BI:9:LEU:HB2	43:BI:12:LEU:O	2.08	0.53
40:DF:65:TRP:CZ3	40:DF:73:ALA:O	2.61	0.53
35:DA:1286:A:C2'	35:DA:1288:U:OP2	2.56	0.53
49:BR:28:LEU:HA	49:BR:34:ILE:HG12	1.88	0.53
35:BA:271(G):C:O2'	35:BA:271(H):G:H5'	2.08	0.53
35:BA:847:U:OP2	35:BA:928:G:O6	2.26	0.53
54:BW:47:VAL:HA	54:BW:50:VAL:CG1	2.38	0.53
35:DA:1385:G:H4'	35:DA:1386:C:OP1	2.08	0.53
35:DA:319:C:O2'	35:DA:320:A:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:24:GLU:HG2	17:CQ:39:SER:HB3	1.91	0.53
1:AA:301:G:H2'	1:AA:302:G:H8	1.72	0.53
38:DD:231:HIS:ND1	38:DD:232:PRO:HD2	2.22	0.53
35:BA:1858:G:HO2'	35:BA:1859:A:H8	1.56	0.53
56:DY:68:HIS:ND1	56:DY:70:SER:HB3	2.24	0.53
4:AD:168:ARG:HH11	4:AD:168:ARG:HG3	1.73	0.53
26:D1:41:ARG:NH1	35:DA:1365:A:OP1	2.42	0.53
38:BD:112:GLN:O	38:BD:115:GLN:HB3	2.09	0.53
10:AJ:21:GLN:HG2	10:AJ:25:GLU:OE2	2.09	0.53
35:DA:866:A:N3	35:DA:866:A:H2'	2.23	0.53
22:CY:9:A:C6	22:CY:47:G:C6	2.97	0.53
22:AY:55:G:H2'	22:AY:56:U:H1'	1.90	0.53
23:CW:3:G:H1	23:CW:73:C:N4	2.07	0.53
23:CW:30:U:C4	23:CW:31:C:N4	2.76	0.53
23:CW:40:A:H2'	23:CW:41:C:H5	1.68	0.53
22:AV:53:U:H2'	22:AV:54:G:H8	1.72	0.53
46:DO:68:GLU:OE1	46:DO:78:ARG:NH1	2.42	0.53
51:DT:27:THR:HA	51:DT:87:ASP:HB2	1.90	0.53
47:BP:61:ARG:N	47:BP:61:ARG:HD2	2.22	0.53
35:DA:105:C:O2'	56:DY:2:ARG:HG3	2.08	0.53
12:CL:36:VAL:N	12:CL:58:VAL:CG1	2.68	0.53
12:CL:76:ASN:OD1	12:CL:107:ALA:HA	2.07	0.53
40:DF:119:ARG:HH11	40:DF:119:ARG:HG2	1.73	0.53
1:AA:1122:U:H2'	1:AA:1123:A:H8	1.74	0.53
10:CJ:78:ASN:O	10:CJ:82:ILE:HG12	2.07	0.53
47:BP:102:ARG:O	47:BP:103:ALA:HB2	2.08	0.53
25:D0:11:ARG:C	25:D0:12:ASN:HD22	2.11	0.53
35:BA:2632:A:N3	39:BE:61:ARG:NH1	2.56	0.53
35:BA:1654:A:OP2	49:BR:3:HIS:HB2	2.07	0.53
46:DO:23:ARG:HG3	46:DO:24:VAL:N	2.22	0.53
13:AM:86:CYS:SG	13:AM:88:ARG:HB2	2.49	0.53
1:AA:1128:C:H5	1:AA:1139:G:HO2'	1.56	0.53
41:BG:125:PHE:CD2	41:BG:131:TYR:HB2	2.43	0.53
48:DQ:27:VAL:HG13	48:DQ:105:GLU:CD	2.29	0.53
3:AC:84:ILE:O	3:AC:88:ARG:HG3	2.07	0.53
27:B2:55:ARG:CG	27:B2:55:ARG:HH11	2.20	0.53
25:B0:27:GLU:OE2	35:BA:856:C:H4'	2.08	0.53
1:CA:222:U:H2'	1:CA:223:U:C6	2.42	0.53
2:CB:121:LEU:HD22	2:CB:126:GLU:HB2	1.89	0.53
1:CA:1106:G:OP1	3:CC:172:ARG:HD3	2.08	0.53
1:AA:542:G:H2'	1:AA:543:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:276:A:OP1	35:BA:278:A:H1'	2.09	0.53
2:AB:74:LYS:HG3	2:AB:74:LYS:O	2.09	0.53
47:BP:83:VAL:HG23	47:BP:105:LEU:HD13	1.91	0.53
35:BA:2405:G:O2'	35:BA:2406:U:OP2	2.25	0.53
1:CA:434:U:H2'	1:CA:435:C:H6	1.71	0.53
35:DA:994:C:H3'	52:DU:54:LYS:HE3	1.91	0.53
35:BA:1532:C:C2'	35:BA:1533:G:H5'	2.39	0.53
17:AQ:32:TYR:O	17:AQ:34:LYS:N	2.42	0.53
57:BZ:33:LEU:HG	57:BZ:34:ASN:N	2.22	0.53
56:DY:95:LYS:HE2	56:DY:101:LYS:H	1.72	0.53
35:BA:2193:G:H2'	35:BA:2194:G:H8	1.74	0.53
28:B3:19:GLN:NE2	28:B3:52:HIS:HE1	2.06	0.53
35:DA:2477:C:C6	35:DA:2477:C:H5'	2.43	0.53
35:BA:1286:A:C2'	35:BA:1288:U:OP2	2.57	0.53
27:B2:21:LEU:CD1	27:B2:64:LEU:HA	2.39	0.53
43:DI:14:ASP:O	43:DI:15:VAL:O	2.26	0.53
29:B4:42:PHE:HB2	29:B4:43:TYR:HD1	1.74	0.53
57:BZ:92:SER:C	57:BZ:130:PRO:HG2	2.29	0.53
35:BA:1860:G:H1	35:BA:1882:C:H42	1.57	0.53
42:BH:127:GLU:HG3	42:BH:130:ARG:HE	1.72	0.53
35:BA:1385:G:H4'	35:BA:1386:C:OP1	2.08	0.53
35:DA:712:G:O2'	35:DA:713:G:H5'	2.08	0.53
35:DA:118:A:OP2	35:DA:119:A:H5''	2.08	0.53
35:DA:738:G:O2'	35:DA:739:G:H5'	2.08	0.53
11:CK:85:ARG:HG2	11:CK:111:ASP:O	2.08	0.53
1:CA:1137:C:H4'	1:CA:1138:G:C2	2.44	0.53
22:AY:32:G:C6	22:AY:43:G:C6	2.97	0.53
22:AY:5:C:O2	22:AY:70:G:N1	2.41	0.53
35:DA:2875:C:C4'	51:DT:5:ALA:HB2	2.36	0.53
1:AA:427:U:C3'	1:AA:428:G:H5''	2.35	0.53
22:CV:71:G:N2	22:CV:72:C:C2	2.77	0.53
43:BI:62:LYS:HE3	43:BI:133:HIS:O	2.08	0.53
12:CL:33:ARG:HB3	12:CL:85:ILE:CG2	2.39	0.53
47:BP:101:VAL:HG23	47:BP:102:ARG:N	2.23	0.53
47:BP:124:LYS:HD3	47:BP:143:GLY:CA	2.38	0.53
35:DA:1886:C:H2'	35:DA:1887:C:C6	2.43	0.53
17:CQ:9:VAL:HG12	17:CQ:56:VAL:CG2	2.28	0.53
28:D3:8:LEU:HD13	28:D3:31:LEU:HA	1.90	0.53
35:DA:2562:U:C2'	35:DA:2563:U:H5'	2.38	0.53
13:AM:99:ARG:O	13:AM:101:GLN:HG3	2.08	0.53
46:BO:23:ARG:HG3	46:BO:24:VAL:N	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DN:46:VAL:O	45:DN:47:ALA:HB3	2.07	0.53
9:CI:69:GLY:O	9:CI:73:GLN:HG3	2.08	0.53
3:CC:6:HIS:ND1	14:CN:49:HIS:HB3	2.23	0.53
15:AO:39:LEU:C	15:AO:39:LEU:HD13	2.29	0.53
1:CA:1228:C:H5'	13:CM:108:ARG:NH2	2.24	0.53
22:CV:32:G:C6	22:CV:43:G:C6	2.97	0.53
35:DA:2512:C:H4'	39:DE:122:PHE:CE2	2.44	0.53
3:CC:24:ALA:HB2	3:CC:32:LEU:HD12	1.91	0.53
38:DD:28:GLU:H	38:DD:29:PRO:CD	2.16	0.53
35:DA:1045:A:H5''	35:DA:1047:G:N3	2.23	0.53
1:CA:373:A:O2'	1:CA:374:A:H5'	2.08	0.53
4:CD:135:LEU:O	4:CD:137:SER:N	2.40	0.53
35:DA:1448:G:N3	35:DA:1528(A):A:H2	2.07	0.53
40:BF:101:LEU:HD12	40:BF:102:PRO:CD	2.37	0.53
9:CI:79:LEU:HD11	9:CI:83:ARG:NH2	2.24	0.53
57:DZ:133:ILE:O	57:DZ:133:ILE:HG22	2.08	0.53
57:BZ:80:ARG:HB3	57:BZ:80:ARG:NH1	2.24	0.53
35:DA:2126:A:H5'	37:DC:38:PHE:CD2	2.44	0.53
40:BF:122:LYS:CA	40:BF:122:LYS:HE2	2.39	0.53
57:BZ:119:GLU:O	57:BZ:122:ARG:NH1	2.42	0.53
49:BR:13:HIS:HE1	49:BR:15:SER:HB3	1.73	0.53
51:DT:57:PHE:CG	51:DT:58:ASN:N	2.63	0.53
35:DA:706:A:OP1	38:DD:7:LYS:HE3	2.08	0.53
1:CA:359:U:H2'	1:CA:360:A:H8	1.73	0.53
1:CA:7:G:H5'	1:CA:298:A:H5'	1.91	0.53
53:DV:76:LYS:HB2	53:DV:81:TYR:HB3	1.90	0.53
6:AF:97:PHE:N	18:AR:30:ASP:OD1	2.41	0.53
35:DA:2023:G:H5'	35:DA:2617:C:H4'	1.91	0.53
35:BA:1831:G:H2'	35:BA:1832:C:C6	2.44	0.53
45:BN:28:THR:HG22	45:BN:29:LYS:N	2.24	0.53
35:BA:237:C:O2'	35:BA:238:C:H5'	2.08	0.53
35:DA:1678:G:N2	35:DA:1989:G:H22	2.06	0.53
1:AA:25:C:O2'	1:AA:26:A:H5'	2.09	0.53
22:CY:5:C:H2'	22:CY:6:C:C6	2.44	0.53
11:AK:57:THR:OG1	11:AK:58:PRO:HD2	2.08	0.53
22:AY:63:C:C1'	57:BZ:186:GLU:CG	2.85	0.53
23:CW:7:U:N3	23:CW:68:A:N6	2.57	0.53
22:AV:42:C:O2'	22:AV:43:G:H5'	2.08	0.53
4:AD:26:CYS:CA	4:AD:31:CYS:HB2	2.37	0.53
56:DY:28:LYS:CB	56:DY:37:VAL:HB	2.35	0.53
23:CW:11:C:N3	23:CW:27:C:O2	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:27:C:C3'	23:CW:28:G:C8	2.87	0.53
23:CW:9:A:C5	23:CW:47:G:C2	2.97	0.53
10:AJ:5:ARG:O	10:AJ:98:ILE:HA	2.08	0.53
3:CC:119:ARG:HG3	3:CC:119:ARG:NH1	2.23	0.53
35:DA:1495:A:N3	35:DA:1496:A:C2	2.77	0.53
36:BB:81:G:N3	36:BB:81:G:H5'	2.24	0.53
51:BT:28:VAL:HG22	51:BT:46:GLU:C	2.28	0.53
1:CA:529:G:O6	12:CL:49:ASN:HA	2.09	0.53
40:DF:133:ASN:ND2	40:DF:133:ASN:H	2.06	0.53
29:D4:33:VAL:HG13	41:DG:109:VAL:HG13	1.90	0.53
41:DG:36:LYS:HD2	41:DG:38:VAL:HG23	1.91	0.53
36:DB:42:C:O2	41:DG:93:THR:N	2.40	0.53
39:BE:34:VAL:CG2	39:BE:34:VAL:O	2.57	0.53
35:DA:557:U:O2'	35:DA:558:G:H5'	2.09	0.53
31:D6:11:LEU:HG	31:D6:51:GLU:HG3	1.91	0.53
1:CA:1290:G:N3	1:CA:1290:G:H2'	2.23	0.53
48:BQ:34:LEU:CD1	48:BQ:129:THR:HB	2.32	0.53
57:BZ:171:ILE:C	57:BZ:171:ILE:HD12	2.29	0.53
5:CE:144:THR:OG1	5:CE:146:ALA:HB3	2.08	0.53
35:DA:1826:G:C4'	38:DD:242:ARG:HH21	2.18	0.53
3:CC:95:THR:HG22	3:CC:97:LYS:H	1.74	0.53
1:AA:1141:C:H2'	1:AA:1142:G:N7	2.23	0.53
12:AL:72:GLY:C	12:AL:73:GLU:HG3	2.29	0.53
30:D5:50:GLY:CA	30:D5:55:ARG:HB2	2.39	0.53
30:D5:45:VAL:CG1	30:D5:55:ARG:HG2	2.39	0.53
3:AC:76:VAL:CG2	3:AC:77:ILE:H	2.18	0.53
9:CI:47:LEU:C	9:CI:49:PRO:HD2	2.28	0.53
1:AA:66:G:H4'	1:AA:173:U:C5	2.44	0.53
36:BB:28:C:O2'	36:BB:29:A:H5'	2.08	0.53
20:CT:57:ARG:HH11	20:CT:57:ARG:HB2	1.73	0.53
57:DZ:153:SER:HB2	57:DZ:163:LEU:HD13	1.90	0.53
47:BP:64:LYS:C	47:BP:66:GLY:H	2.11	0.53
10:CJ:23:ILE:HG22	10:CJ:23:ILE:O	2.08	0.53
56:BY:95:LYS:HD3	56:BY:100:ALA:HA	1.91	0.53
4:AD:79:PHE:HD2	4:AD:207:TYR:CD2	2.26	0.53
38:DD:112:GLN:O	38:DD:115:GLN:HB3	2.08	0.53
16:AP:14:ASN:HA	16:AP:42:ARG:NH2	2.24	0.53
35:DA:1952:A:C5	46:DO:22:ILE:HD12	2.44	0.53
12:AL:7:ILE:HG23	12:AL:8:ASN:N	2.23	0.53
35:DA:1532:C:C2'	35:DA:1533:G:H5'	2.39	0.53
5:CE:93:PRO:HG2	8:CH:105:ARG:NH2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:45:ASN:OD1	38:BD:46:GLN:N	2.42	0.53
1:CA:57:G:H2'	1:CA:58:C:C6	2.44	0.53
1:CA:1432:G:OP1	51:DT:107:ASP:HB2	2.09	0.53
43:DI:11:ASN:C	43:DI:12:LEU:HD23	2.29	0.53
42:BH:117:PRO:HB3	42:BH:123:PHE:CE2	2.43	0.53
13:CM:28:ALA:O	13:CM:30:ALA:N	2.41	0.53
1:AA:1514:C:H2'	1:AA:1515:C:H6	1.74	0.53
47:BP:65:ARG:HH11	47:BP:65:ARG:HG3	1.72	0.53
41:DG:40:ASN:HD22	41:DG:41:GLN:H	1.56	0.53
53:DV:98:GLU:C	53:DV:99:ILE:HD13	2.29	0.53
35:BA:500:G:N2	35:BA:502:A:H3'	2.22	0.53
20:CT:58:LYS:O	20:CT:61:SER:HB3	2.09	0.53
1:CA:575:G:OP1	1:CA:575:G:H4'	2.09	0.53
32:D7:35:ARG:HD3	35:DA:54:G:O2'	2.08	0.53
35:BA:2097:C:O2'	35:BA:2098:U:H5'	2.08	0.53
1:CA:319:G:O2'	1:CA:320:C:H5'	2.09	0.53
25:D0:77:ARG:NH2	35:DA:857:C:OP2	2.40	0.53
46:DO:35:VAL:HG11	46:DO:103:ALA:CB	2.34	0.53
35:DA:1484:G:N2	35:DA:1505:C:N4	2.56	0.53
35:BA:1486:A:H61	35:BA:1504:C:N4	2.07	0.53
43:BI:113:ARG:HH11	43:BI:113:ARG:CB	2.18	0.53
12:CL:86:ARG:HB2	12:CL:101:VAL:HG23	1.89	0.53
12:AL:47:LYS:C	12:AL:47:LYS:HD2	2.29	0.53
10:AJ:24:VAL:O	10:AJ:28:ARG:HG3	2.08	0.53
10:AJ:3:LYS:HZ3	10:AJ:76:ASN:HA	1.74	0.53
8:AH:109:ILE:CG2	8:AH:137:VAL:HB	2.38	0.53
53:BV:39:LEU:HA	53:BV:47:VAL:HG13	1.91	0.53
41:DG:61:ALA:HA	41:DG:64:THR:CG2	2.39	0.53
1:CA:81:U:H3	1:CA:88:A:N6	1.97	0.53
2:CB:58:ILE:HG23	2:CB:222:ILE:HD11	1.91	0.53
41:BG:39:ILE:HG13	41:BG:92:VAL:CG1	2.39	0.53
47:BP:16:ARG:NE	47:BP:18:ARG:HB2	2.23	0.53
3:CC:76:VAL:CG2	3:CC:77:ILE:H	2.19	0.53
9:CI:95:LYS:O	9:CI:99:LEU:HB2	2.08	0.53
35:BA:1539:G:C2	35:BA:1540:U:H1'	2.44	0.53
55:DX:12:VAL:HG22	55:DX:27:THR:O	2.09	0.53
4:CD:96:LEU:HG	4:CD:139:ARG:NH2	2.24	0.53
43:DI:68:LEU:HG	43:DI:72:LEU:HD11	1.91	0.53
35:BA:389:G:N1	47:BP:70:GLN:HG3	2.24	0.53
47:DP:71:VAL:HG12	47:DP:72:PRO:HD3	1.89	0.53
39:DE:12:THR:O	39:DE:23:VAL:HG22	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:79:PHE:HD2	4:CD:207:TYR:CD2	2.27	0.53
35:DA:2762:G:C2'	35:DA:2763:G:H5'	2.39	0.53
17:AQ:26:GLN:O	17:AQ:27:PHE:HB3	2.09	0.53
6:CF:11:ASN:HB3	6:CF:14:LEU:HD21	1.89	0.53
50:DS:85:VAL:HG22	50:DS:106:ARG:HB2	1.90	0.53
11:AK:98:LEU:O	11:AK:99:GLN:C	2.47	0.53
46:DO:121:VAL:C	46:DO:122:LEU:HD23	2.28	0.53
6:CF:44:GLY:HA2	6:CF:59:TYR:CE1	2.44	0.53
39:DE:98:PRO:HG3	39:DE:175:VAL:HG12	1.91	0.53
53:BV:5:VAL:HG21	53:BV:35:LEU:HB3	1.91	0.53
35:DA:1339:G:N2	35:DA:1603:A:H1'	2.24	0.53
48:DQ:36:ALA:HB1	48:DQ:127:ILE:CD1	2.39	0.53
40:BF:157:VAL:CG2	40:BF:194:MET:HG2	2.39	0.53
15:CO:73:GLU:O	15:CO:74:ASP:HB2	2.08	0.53
1:AA:1316:G:H2'	1:AA:1317:C:H5''	1.88	0.53
1:AA:102:G:O2'	1:AA:103:C:H5'	2.09	0.53
11:AK:85:ARG:HG2	11:AK:111:ASP:O	2.08	0.53
1:CA:291:C:O2'	1:CA:292:G:H5'	2.09	0.53
42:DH:55:PRO:HG2	42:DH:61:HIS:CE1	2.43	0.53
43:DI:4:ILE:HG12	43:DI:18:VAL:CG2	2.39	0.53
37:BC:5:GLY:O	37:BC:9:ARG:HB2	2.09	0.53
25:B0:72:ARG:O	25:B0:75:LEU:HB2	2.08	0.53
41:BG:37:VAL:HG13	41:BG:37:VAL:O	2.08	0.53
55:BX:57:LEU:HD22	55:BX:57:LEU:O	2.09	0.53
35:DA:2305:A:H8	41:DG:156:ASP:OD1	1.91	0.53
35:BA:1678:G:N2	35:BA:1989:G:H22	2.06	0.53
22:CY:43:G:C6	22:CY:44:A:C5	2.97	0.53
4:CD:11:LEU:C	4:CD:13:ARG:N	2.58	0.53
1:CA:430:A:OP2	4:CD:8:VAL:HG22	2.08	0.53
35:DA:587:C:H3'	47:DP:33:ARG:NH2	2.24	0.53
35:BA:612:C:C3'	35:BA:613:G:H5''	2.38	0.53
1:AA:532:A:H2	1:AA:1207:G:H1'	1.74	0.53
31:D6:15:GLU:OE1	31:D6:41:PRO:HG3	2.08	0.53
35:BA:587:C:H2'	47:BP:33:ARG:CZ	2.39	0.53
33:D8:52:LYS:HE2	35:DA:834:C:H4'	1.91	0.53
51:BT:28:VAL:CB	51:BT:88:ILE:HG12	2.36	0.53
47:DP:97:PRO:O	47:DP:98:GLU:CB	2.55	0.53
52:BU:68:ALA:CB	52:BU:99:ALA:HB1	2.38	0.53
36:DB:80:U:O2'	36:DB:81:G:H5''	2.09	0.53
56:BY:28:LYS:N	56:BY:28:LYS:HZ1	2.04	0.53
29:B4:27:THR:HG23	29:B4:27:THR:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:71:VAL:HB	2:AB:164:VAL:CG1	2.38	0.53
47:DP:19:VAL:HG23	47:DP:19:VAL:O	2.08	0.53
57:DZ:104:PHE:HD1	57:DZ:139:VAL:CB	2.19	0.53
54:BW:10:VAL:O	54:BW:11:ARG:CB	2.51	0.53
8:AH:6:ILE:H	8:AH:6:ILE:CD1	2.20	0.53
3:AC:46:GLU:O	3:AC:47:LEU:HB2	2.09	0.53
1:AA:322:C:H4'	20:AT:23:ARG:HD2	1.91	0.53
49:BR:98:LEU:H	49:BR:113:LEU:HD23	1.74	0.53
41:BG:145:THR:HG21	41:BG:148:MET:HB3	1.91	0.53
1:AA:552:U:O2'	1:AA:553:A:H5'	2.08	0.53
35:BA:2713:A:H3'	35:BA:2714:G:C5'	2.39	0.53
2:CB:39:ILE:O	2:CB:41:ILE:HD12	2.09	0.53
22:CY:78:A:N1	35:DA:2583:G:O2'	2.27	0.53
37:DC:31:LYS:HE2	37:DC:181:PHE:O	2.09	0.53
56:DY:100:ALA:O	56:DY:101:LYS:HB2	2.08	0.53
41:BG:107:LEU:HD11	41:BG:178:PHE:CD1	2.44	0.53
43:BI:68:LEU:HG	43:BI:72:LEU:HD11	1.91	0.53
17:CQ:32:TYR:O	17:CQ:34:LYS:N	2.42	0.53
1:AA:501:C:H2'	1:AA:502:G:H8	1.73	0.53
35:DA:2869:G:H2'	35:DA:2870:C:H6	1.72	0.53
45:DN:73:THR:CG2	45:DN:82:LEU:HD11	2.39	0.53
6:AF:99:ALA:HB2	18:AR:31:LEU:HD22	1.90	0.53
1:CA:724:G:O2'	1:CA:725:G:H5'	2.09	0.53
28:D3:1:MET:C	28:D3:3:ARG:H	2.11	0.53
18:CR:73:ALA:HB3	18:CR:79:LEU:HD12	1.90	0.53
38:BD:241:PRO:O	38:BD:243:GLY:N	2.41	0.53
52:BU:25:TRP:C	52:BU:25:TRP:CD1	2.81	0.53
29:D4:36:CYS:HA	41:DG:108:ASN:O	2.08	0.53
35:DA:2666:C:H5'	35:DA:2667:C:OP2	2.09	0.53
35:DA:654(U):A:H2'	35:DA:654(V):A:C8	2.43	0.53
12:AL:126:LYS:HA	12:AL:126:LYS:HE2	1.89	0.53
41:DG:12:TYR:HA	41:DG:16:ARG:HG3	1.89	0.53
22:AY:20:G:C3'	22:AY:21:U:H5'	2.26	0.53
22:AY:56:U:O2'	57:BZ:183:LEU:HD13	2.08	0.53
35:DA:1846:G:H5'	35:DA:1846:G:C8	2.39	0.53
22:CV:14:A:C6	22:CV:15:G:C4	2.96	0.53
33:B8:62:LEU:HD13	35:BA:242:G:C5'	2.16	0.53
1:AA:1054:C:O2'	1:AA:1055:A:P	2.67	0.53
10:AJ:3:LYS:HZ3	10:AJ:77:PRO:HD2	1.74	0.53
10:CJ:80:LYS:HB3	10:CJ:80:LYS:HZ3	1.74	0.53
29:D4:15:ILE:HA	29:D4:21:VAL:HG22	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:126:ASP:O	41:DG:128:ARG:N	2.41	0.53
35:BA:322:A:H5'	35:BA:340:A:H1'	1.91	0.53
31:B6:5:VAL:HG22	31:B6:6:ARG:N	2.22	0.53
28:B3:7:LYS:HB2	28:B3:34:GLU:HG2	1.91	0.53
42:DH:136:ILE:H	42:DH:136:ILE:CD1	2.22	0.53
1:AA:255:G:H1'	17:AQ:16:GLN:HE21	1.73	0.53
57:BZ:152:ALA:HB1	57:BZ:167:PRO:HB2	1.89	0.53
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.45	0.53
3:CC:20:SER:CB	3:CC:40:ARG:HH22	2.22	0.53
3:CC:91:LEU:O	3:CC:95:THR:HB	2.08	0.53
47:DP:16:ARG:NE	47:DP:18:ARG:HB2	2.24	0.53
1:CA:373:A:H2'	1:CA:374:A:C8	2.33	0.53
5:CE:6:PHE:HB2	5:CE:34:VAL:HG22	1.91	0.53
38:BD:117:VAL:HG21	38:BD:128:GLY:C	2.30	0.53
35:BA:1317:A:H2'	35:BA:1318:C:H6	1.74	0.53
1:AA:1305:G:C2	1:AA:1331:G:N3	2.77	0.53
49:DR:98:LEU:H	49:DR:113:LEU:HD23	1.74	0.53
35:BA:99:U:H4'	35:BA:102:G:H1'	1.91	0.53
50:BS:92:TYR:O	50:BS:93:LYS:HB3	2.07	0.53
8:AH:1:MET:H2	8:AH:1:MET:HE2	1.74	0.53
6:CF:19:LEU:HD23	6:CF:19:LEU:C	2.29	0.53
1:CA:749:C:O2'	1:CA:750:G:H5'	2.08	0.53
45:BN:96:GLU:O	45:BN:100:GLU:HG3	2.08	0.53
38:DD:134:ARG:HG3	38:DD:135:PHE:CD1	2.44	0.53
53:DV:5:VAL:HG21	53:DV:35:LEU:HB3	1.90	0.53
35:BA:1186:G:H2'	35:BA:1187:G:O4'	2.09	0.53
36:DB:28:C:O2'	36:DB:29:A:H5'	2.09	0.53
7:AG:73:MET:HG2	7:AG:90:GLU:HA	1.91	0.53
35:DA:654(S):G:O5'	35:DA:654(T):C:H5''	2.09	0.53
35:BA:2777:G:H5''	35:BA:2778:A:H5'	1.90	0.53
38:DD:106:ILE:HD11	38:DD:157:ARG:O	2.09	0.53
35:DA:7:G:H5'	45:DN:130:HIS:HD2	1.73	0.53
1:CA:1137:C:H4'	1:CA:1138:G:N2	2.23	0.53
53:BV:98:GLU:C	53:BV:99:ILE:HD13	2.30	0.53
35:DA:34:C:N4	35:DA:455:C:H5'	2.24	0.53
48:DQ:54:MET:HG3	48:DQ:117:ALA:HB1	1.90	0.53
35:DA:2171:A:H4'	35:DA:2172:U:O5'	2.08	0.53
4:CD:209:ARG:HH11	4:CD:209:ARG:HG3	1.73	0.53
35:DA:2801:A:H2'	35:DA:2801:A:N3	2.24	0.53
35:BA:269:U:H2'	35:BA:269:U:O2	2.09	0.53
35:DA:269:U:H2'	35:DA:269:U:O2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:12:LEU:HD13	5:CE:12:LEU:O	2.07	0.53
35:DA:2335:A:O2'	35:DA:2336:A:H5''	2.08	0.53
55:BX:3:THR:O	55:BX:4:ALA:HB3	2.08	0.53
22:AY:27:C:H2'	22:AY:28:G:C8	2.44	0.52
23:CW:71:G:N1	23:CW:72:C:C6	2.77	0.52
22:AV:14:A:C2	22:AV:15:G:H1'	2.44	0.52
22:AV:69:G:H2'	22:AV:70:G:H8	1.74	0.52
36:DB:7:G:H3'	36:DB:8:U:C5'	2.20	0.52
22:CV:5:C:C2	22:CV:71:G:C2	2.97	0.52
46:DO:71:ARG:NH2	46:DO:77:ILE:HG21	2.24	0.52
23:AW:15:G:OP2	23:AW:16:U:H5	1.91	0.52
23:AW:14:A:C2	23:AW:24:A:C5	2.96	0.52
35:BA:1484:G:N2	35:BA:1505:C:N4	2.57	0.52
23:CW:61:A:O2'	23:CW:62:U:H5'	2.09	0.52
41:BG:51:ARG:CA	41:BG:51:ARG:NE	2.60	0.52
10:CJ:32:ALA:HB1	10:CJ:75:ILE:HD11	1.91	0.52
35:DA:322:A:H5'	35:DA:340:A:H1'	1.90	0.52
51:BT:27:THR:CG2	51:BT:28:VAL:N	2.71	0.52
39:DE:77:ILE:CG2	39:DE:78:LEU:H	2.00	0.52
41:DG:158:ALA:O	41:DG:159:VAL:HB	2.09	0.52
57:BZ:163:LEU:HD23	57:BZ:163:LEU:N	2.25	0.52
41:DG:121:ASN:CG	41:DG:122:PRO:HD2	2.30	0.52
6:AF:69:GLU:CD	6:AF:69:GLU:N	2.62	0.52
41:BG:13:GLU:O	41:BG:14:GLU:HG3	2.09	0.52
2:CB:187:LEU:HD11	2:CB:205:ASP:HA	1.90	0.52
1:CA:1228:C:P	13:CM:108:ARG:NH2	2.82	0.52
27:D2:48:HIS:C	27:D2:50:ILE:H	2.11	0.52
38:DD:34:VAL:HG23	38:DD:35:LYS:N	2.24	0.52
16:CP:14:ASN:HA	16:CP:42:ARG:NH2	2.24	0.52
3:AC:32:LEU:HB3	3:AC:59:ARG:NH2	2.24	0.52
5:CE:6:PHE:HD1	5:CE:63:ARG:NH1	2.07	0.52
9:AI:47:LEU:C	9:AI:49:PRO:HD2	2.29	0.52
25:D0:27:GLU:OE2	35:DA:856:C:H4'	2.10	0.52
48:BQ:51:ARG:HH21	48:BQ:52:VAL:CG2	2.22	0.52
48:BQ:55:VAL:HG12	48:BQ:64:ILE:CD1	2.35	0.52
1:CA:1320:C:H5'	19:CS:70:LYS:CG	2.39	0.52
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.73	0.52
57:DZ:166:SER:N	57:DZ:167:PRO:HA	2.20	0.52
33:B8:32:LEU:O	33:B8:33:ASN:O	2.28	0.52
33:B8:34:TRP:CG	33:B8:35:GLN:N	2.76	0.52
2:AB:169:LYS:HD3	2:AB:169:LYS:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:103:ARG:HG3	57:DZ:103:ARG:NH1	2.23	0.52
1:CA:880:C:H2'	1:CA:881:G:C8	2.42	0.52
1:AA:824:C:H2'	1:AA:825:G:H8	1.74	0.52
1:AA:16:A:N1	1:AA:919:A:C2	2.77	0.52
40:BF:108:LYS:HD2	40:BF:112:MET:HE3	1.90	0.52
35:BA:271(P):C:H5'	43:BI:46:ALA:HB2	1.89	0.52
43:DI:48:GLU:HA	43:DI:51:ILE:HB	1.91	0.52
3:AC:103:VAL:CG1	3:AC:104:GLN:N	2.72	0.52
35:DA:2012:G:H4'	54:DW:96:ILE:CD1	2.39	0.52
26:B1:29:GLY:O	26:B1:31:GLY:N	2.40	0.52
36:BB:94:C:H2'	36:BB:95:C:C6	2.41	0.52
5:CE:43:LEU:HB2	5:CE:136:MET:SD	2.49	0.52
35:BA:1131:G:O2'	35:BA:1132:A:H8	1.91	0.52
35:BA:706:A:OP1	38:BD:7:LYS:HE3	2.08	0.52
22:AV:77:C:C6	22:AV:77:C:H5'	2.44	0.52
35:DA:1221:C:H2'	35:DA:1221(A):C:C6	2.43	0.52
18:AR:79:LEU:CD2	18:AR:80:PRO:HD2	2.39	0.52
37:BC:186:LEU:O	37:BC:190:ILE:HG12	2.09	0.52
1:AA:1459:C:O2'	1:AA:1460:A:H5'	2.09	0.52
10:CJ:21:GLN:HG2	10:CJ:25:GLU:OE2	2.08	0.52
43:BI:1:MET:O	43:BI:3:VAL:HG23	2.08	0.52
17:AQ:85:VAL:HG12	17:AQ:89:LEU:HD12	1.91	0.52
1:CA:453:A:H2'	1:CA:454:C:C6	2.44	0.52
6:CF:5:GLU:HG3	6:CF:93:SER:OG	2.09	0.52
37:BC:51:ASP:H	37:BC:57:GLN:NE2	2.06	0.52
5:AE:79:GLU:HA	5:AE:91:LEU:O	2.09	0.52
5:AE:91:LEU:HD22	5:AE:91:LEU:N	2.23	0.52
35:BA:2273:A:H2'	35:BA:2274:A:C8	2.43	0.52
38:DD:132:PRO:HD3	38:DD:190:TYR:CZ	2.43	0.52
46:BO:9:GLU:O	46:BO:83:ALA:HA	2.09	0.52
25:D0:72:ARG:O	25:D0:75:LEU:HB2	2.09	0.52
22:CY:27:C:H2'	22:CY:28:G:O4'	2.08	0.52
23:AW:44:A:C3'	23:AW:45:U:H5''	2.39	0.52
22:AV:20:G:C2	22:AV:59:G:C4	2.97	0.52
22:CV:12:U:C2	22:CV:26:G:N2	2.77	0.52
33:B8:13:ARG:HG3	33:B8:13:ARG:O	2.09	0.52
35:DA:747:U:O2	35:DA:2014:A:H1'	2.10	0.52
40:DF:196:LEU:O	40:DF:196:LEU:HD23	2.09	0.52
1:AA:1151:A:N3	10:AJ:39:PRO:HG3	2.24	0.52
1:CA:1054:C:OP2	1:CA:1197:G:OP2	2.28	0.52
35:BA:1886:C:H2'	35:BA:1887:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DV:38:LEU:HD23	53:DV:39:LEU:N	2.25	0.52
40:BF:133:ASN:H	40:BF:133:ASN:ND2	2.07	0.52
53:BV:52:VAL:HG13	53:BV:52:VAL:O	2.08	0.52
41:DG:131:TYR:H	41:DG:159:VAL:CG1	2.21	0.52
35:DA:2306:C:H5''	35:DA:2307:G:O4'	2.09	0.52
35:BA:2306:C:H5''	35:BA:2307:G:O4'	2.10	0.52
1:CA:1400:C:C4	22:CV:36:AG9:N3	2.77	0.52
3:CC:95:THR:C	3:CC:97:LYS:H	2.13	0.52
27:D2:48:HIS:C	27:D2:50:ILE:N	2.62	0.52
9:CI:28:VAL:HG13	9:CI:63:ILE:O	2.09	0.52
4:AD:170:VAL:HG12	4:AD:174:LEU:HB2	1.91	0.52
5:CE:41:VAL:O	5:CE:66:MET:HA	2.09	0.52
9:AI:50:LEU:O	9:AI:53:VAL:HG22	2.10	0.52
1:AA:1116:C:H2'	1:AA:1117:G:C5'	2.36	0.52
7:AG:62:PHE:CD1	7:AG:124:LEU:HD21	2.43	0.52
15:AO:85:LEU:HD22	15:AO:87:ILE:HD13	1.92	0.52
35:BA:1049:C:H2'	35:BA:1050:A:C8	2.43	0.52
57:DZ:5:LEU:CD1	57:DZ:47:VAL:HG21	2.39	0.52
21:CU:25:LYS:HG2	21:CU:26:LYS:N	2.25	0.52
38:DD:9:TYR:CD1	38:DD:10:THR:HG22	2.43	0.52
50:BS:13:ARG:HG3	50:BS:14:VAL:N	2.21	0.52
1:CA:1280:A:H5'	10:CJ:40:LEU:HD22	1.90	0.52
47:BP:93:GLY:O	47:BP:123:LEU:HB2	2.09	0.52
35:DA:2657:A:C2'	35:DA:2658:C:H5'	2.39	0.52
26:B1:41:ARG:HD3	26:B1:43:TYR:CZ	2.44	0.52
2:AB:95:GLN:HA	2:AB:95:GLN:OE1	2.09	0.52
57:DZ:129:SER:HB2	57:DZ:130:PRO:HD2	1.90	0.52
1:CA:1305:G:OP1	21:CU:2:GLY:HA3	2.09	0.52
50:BS:89:ARG:HH11	50:BS:89:ARG:HG2	1.74	0.52
1:AA:692:U:H5	11:AK:26:ASN:ND2	2.06	0.52
42:BH:96:ALA:HA	42:BH:105:LEU:HA	1.91	0.52
17:CQ:98:LEU:N	17:CQ:98:LEU:HD12	2.24	0.52
46:DO:49:ARG:HA	46:DO:53:LYS:HZ1	1.74	0.52
1:AA:1017:G:H2'	1:AA:1018:C:C6	2.44	0.52
27:B2:69:ARG:HG2	27:B2:69:ARG:NH1	2.22	0.52
1:CA:425:G:O2'	1:CA:426:G:H5'	2.09	0.52
39:DE:107:THR:O	39:DE:190:GLY:HA2	2.10	0.52
1:AA:867:G:O2'	1:AA:868:C:H5'	2.09	0.52
1:CA:1440:C:H1'	1:CA:1462:G:N2	2.23	0.52
35:BA:2171:A:H4'	35:BA:2172:U:O5'	2.08	0.52
35:DA:1693:U:O2'	38:DD:14:ARG:NH2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2295:C:O2'	35:BA:2296:U:H5'	2.10	0.52
32:B7:32:LYS:O	32:B7:36:GLN:HB2	2.09	0.52
38:DD:71:ASP:HB2	38:DD:103:ARG:HH22	1.75	0.52
7:CG:100:ALA:O	7:CG:104:LEU:HD23	2.09	0.52
1:CA:41:G:O2'	1:CA:42:G:H5'	2.10	0.52
36:BB:6:C:H42	36:BB:115:G:H1	1.56	0.52
1:AA:1418:A:C2	1:AA:1483:A:C2	2.98	0.52
57:BZ:35:ARG:HH11	57:BZ:35:ARG:HG3	1.74	0.52
47:DP:65:ARG:HH11	47:DP:65:ARG:HG3	1.74	0.52
42:BH:152:ARG:HG3	42:BH:152:ARG:O	2.08	0.52
37:DC:5:GLY:O	37:DC:9:ARG:HB2	2.09	0.52
1:CA:229:U:O2'	1:CA:230:G:H5'	2.08	0.52
23:AW:35:U:H6	23:AW:35:U:OP2	1.93	0.52
22:AY:55:G:C5'	48:BQ:56:ARG:NH2	2.62	0.52
57:BZ:183:LEU:CD1	57:BZ:184:ALA:N	2.69	0.52
23:CW:7:U:C4	23:CW:68:A:N6	2.77	0.52
22:CV:12:U:O2	22:CV:13:U:H1'	2.08	0.52
22:CV:14:A:N7	22:CV:24:A:C6	2.78	0.52
22:CV:8:U:C2	22:CV:15:G:O6	2.62	0.52
51:DT:117:ASP:O	51:DT:118:ARG:C	2.47	0.52
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.24	0.52
12:CL:86:ARG:HB2	12:CL:101:VAL:CG2	2.38	0.52
30:D5:2:ALA:N	35:DA:2014:A:HO2'	2.07	0.52
12:AL:39:VAL:HG12	12:AL:40:VAL:N	2.25	0.52
1:CA:963:G:N2	10:CJ:55:LYS:HD3	2.24	0.52
23:CW:20:G:C2	23:CW:59:G:C4	2.96	0.52
53:DV:38:LEU:HD22	53:DV:52:VAL:HG11	1.91	0.52
29:D4:9:LEU:HD22	29:D4:26:SER:O	2.09	0.52
41:DG:141:PHE:CD1	41:DG:142:PRO:HD2	2.43	0.52
35:BA:322:A:H5'	35:BA:340:A:C1'	2.40	0.52
16:CP:50:LYS:HD3	16:CP:51:VAL:N	2.24	0.52
35:BA:1689:A:N6	35:BA:1698:A:H2	1.97	0.52
10:AJ:61:GLU:OE2	14:AN:58:LYS:HE2	2.09	0.52
57:DZ:108:PRO:C	57:DZ:110:GLY:N	2.62	0.52
47:BP:40:SER:O	47:BP:41:ARG:NE	2.35	0.52
47:BP:7:ARG:CB	47:BP:7:ARG:NH1	2.73	0.52
2:AB:58:ILE:HG23	2:AB:222:ILE:HD11	1.91	0.52
22:CV:37:A:H2'	22:CV:38:U:C6	2.44	0.52
35:DA:2801(A):A:C4'	35:DA:2802:G:H5'	2.32	0.52
2:AB:67:THR:CG2	2:AB:155:LEU:HD21	2.39	0.52
29:B4:26:SER:OG	29:B4:27:THR:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:16:ARG:CB	47:BP:16:ARG:HH11	2.23	0.52
47:BP:19:VAL:HG23	47:BP:19:VAL:O	2.10	0.52
3:CC:32:LEU:HD22	3:CC:59:ARG:CZ	2.40	0.52
42:DH:149:ARG:HA	42:DH:162:ILE:CG1	2.39	0.52
3:AC:150:LYS:HG3	3:AC:169:ALA:CB	2.35	0.52
1:CA:1505:G:C5'	1:CA:1506:U:H5''	2.35	0.52
35:DA:1528(A):A:H62	35:DA:1541:G:N2	2.07	0.52
35:BA:2174:C:H1'	37:BC:219:MET:HE1	1.91	0.52
35:DA:2579:C:H2'	35:DA:2580:U:O4'	2.10	0.52
36:DB:55:U:O3'	41:DG:27:ASN:ND2	2.42	0.52
57:DZ:153:SER:N	57:DZ:167:PRO:HB2	2.24	0.52
47:DP:93:GLY:O	47:DP:123:LEU:HB2	2.09	0.52
35:BA:1681:G:HO2'	35:BA:1762:A:H2'	1.74	0.52
1:AA:190:U:H2'	1:AA:191:G:C8	2.44	0.52
1:AA:191:G:N3	20:AT:105:SER:HB3	2.24	0.52
20:AT:99:LEU:O	20:AT:101:GLY:N	2.43	0.52
16:CP:6:LEU:HG	16:CP:17:TYR:HB3	1.89	0.52
2:AB:20:GLU:HB2	2:AB:190:THR:OG1	2.10	0.52
2:AB:22:LYS:H	2:AB:40:HIS:HE1	1.57	0.52
4:AD:177:ASP:O	4:AD:179:GLU:N	2.43	0.52
35:DA:271(P):C:H5'	43:DI:46:ALA:HB2	1.90	0.52
13:CM:6:GLY:O	13:CM:8:GLU:N	2.39	0.52
5:CE:36:ASP:OD2	5:CE:40:ARG:HB2	2.08	0.52
15:AO:73:GLU:O	15:AO:74:ASP:HB2	2.08	0.52
13:AM:84:ILE:O	13:AM:84:ILE:HG22	2.09	0.52
35:DA:225:A:O2'	35:DA:257:A:H4'	2.10	0.52
35:BA:34:C:H41	35:BA:455:C:H5'	1.74	0.52
25:D0:20:ARG:NH1	35:DA:2357:U:OP1	2.42	0.52
5:CE:79:GLU:HA	5:CE:91:LEU:O	2.08	0.52
35:DA:1980:G:O2'	35:DA:1982:C:OP2	2.27	0.52
34:D9:14:CYS:SG	34:D9:27:CYS:HB2	2.50	0.52
39:BE:100:GLU:O	39:BE:172:VAL:HG23	2.10	0.52
35:DA:2494:G:O2'	48:DQ:80:GLU:HA	2.10	0.52
2:AB:85:ALA:HB1	2:AB:92:TYR:CD1	2.44	0.52
35:BA:1754:C:OP1	51:BT:96:ARG:NH1	2.41	0.52
35:BA:2801:A:N3	35:BA:2801:A:H2'	2.25	0.52
35:BA:418:G:O2'	35:BA:419:C:H5'	2.09	0.52
42:DH:152:ARG:O	42:DH:152:ARG:HG3	2.10	0.52
35:DA:2233:U:H2'	35:DA:2234:G:C8	2.45	0.52
17:AQ:45:HIS:O	17:AQ:73:VAL:HG23	2.10	0.52
2:CB:224:GLN:HB2	2:CB:229:VAL:HG22	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AY:57:U:O5'	57:BZ:182:LYS:C	2.47	0.52
22:AY:57:U:O4'	57:BZ:183:LEU:N	2.37	0.52
11:CK:54:ARG:NH1	23:CW:42:C:OP1	2.43	0.52
22:CV:7:U:H3'	22:CV:8:U:C5'	2.38	0.52
56:DY:36:ALA:HB1	56:DY:67:LEU:O	2.09	0.52
56:DY:7:VAL:HG21	56:DY:8:LYS:HZ3	1.73	0.52
23:AW:20:G:N1	23:AW:58:C:C4	2.78	0.52
43:DI:140:LEU:HD23	43:DI:140:LEU:C	2.30	0.52
23:CW:50:C:C4	23:CW:61:A:C8	2.97	0.52
1:AA:1409:C:H1'	35:BA:1913:A:N7	2.25	0.52
10:AJ:90:LEU:H	10:AJ:91:PRO:HD3	1.75	0.52
10:CJ:34:VAL:HG13	10:CJ:73:ASP:O	2.09	0.52
47:BP:101:VAL:HG12	47:BP:107:LYS:H	1.75	0.52
47:BP:97:PRO:HD3	47:BP:126:VAL:O	2.09	0.52
52:BU:88:ILE:C	52:BU:90:VAL:N	2.63	0.52
52:BU:92:ARG:O	52:BU:93:LYS:C	2.48	0.52
35:DA:2635:C:OP1	39:DE:77:ILE:HG21	2.09	0.52
29:D4:24:THR:HB	41:DG:5:VAL:HG13	1.91	0.52
29:B4:11:PRO:O	29:B4:29:PRO:HG3	2.09	0.52
9:AI:69:GLY:O	9:AI:73:GLN:HG3	2.09	0.52
2:AB:140:HIS:C	2:AB:143:GLU:HG2	2.30	0.52
35:BA:484:C:OP1	56:BY:50:ARG:NE	2.43	0.52
57:BZ:149:SER:OG	57:BZ:150:LEU:HD22	2.10	0.52
30:B5:51:TYR:N	30:B5:55:ARG:HD3	2.24	0.52
3:CC:19:GLU:HG3	3:CC:54:ARG:NH1	2.25	0.52
38:DD:31:LYS:C	38:DD:33:LEU:H	2.13	0.52
9:CI:53:VAL:C	9:CI:54:ASP:HB2	2.29	0.52
1:AA:1116:C:H3'	1:AA:1117:G:H5''	1.91	0.52
21:AU:12:LYS:CB	21:AU:22:ARG:HD2	2.38	0.52
1:AA:151:A:H2'	1:AA:152:A:H5'	1.90	0.52
57:DZ:56:VAL:HG13	57:DZ:69:THR:O	2.09	0.52
6:CF:37:VAL:CG1	6:CF:38:GLU:N	2.71	0.52
41:DG:76:SER:C	41:DG:78:SER:N	2.56	0.52
1:CA:1314:C:H5	19:CS:6:LYS:CE	2.19	0.52
41:DG:15:VAL:HG13	41:DG:175:LEU:HB3	1.90	0.52
1:AA:1280:A:H5'	10:AJ:40:LEU:HD22	1.90	0.52
35:DA:2405:G:O2'	35:DA:2406:U:P	2.68	0.52
39:BE:81:ILE:HG22	39:BE:81:ILE:O	2.09	0.52
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.45	0.52
4:AD:157:LEU:CD1	4:AD:161:ASN:HD21	2.22	0.52
27:D2:53:LEU:O	27:D2:57:ILE:HG12	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:358:U:H2'	1:CA:359:U:C6	2.44	0.52
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.10	0.52
5:CE:91:LEU:N	5:CE:91:LEU:HD22	2.24	0.52
35:BA:1362:C:O2'	35:BA:1363:C:H5'	2.09	0.52
35:BA:1488:G:H5'	35:BA:1489:U:OP2	2.10	0.52
44:BJ:15:UNK:HA	44:BJ:65:UNK:O	2.10	0.52
1:AA:314:C:O2'	1:AA:315:A:H5'	2.09	0.52
38:BD:4:LYS:HE3	38:BD:20:ASP:HA	1.91	0.52
22:CY:68:A:C4	22:CY:69:G:C8	2.97	0.52
22:AY:31:C:C2	22:AY:43:G:N2	2.75	0.52
22:AV:69:G:C5	22:AV:70:G:N7	2.78	0.52
51:BT:30:VAL:HG21	51:BT:83:ILE:HG13	1.91	0.52
47:DP:23:PRO:CD	47:DP:33:ARG:CZ	2.79	0.52
56:DY:80:GLY:O	56:DY:81:LYS:HB3	2.08	0.52
43:DI:123:LEU:HD23	43:DI:124:GLY:N	2.25	0.52
23:CW:11:C:C4	23:CW:12:U:C4	2.97	0.52
53:DV:19:LYS:NZ	53:DV:20:LEU:N	2.46	0.52
35:DA:1884:A:O2'	35:DA:1885:A:H5''	2.09	0.52
47:DP:148:LEU:O	47:DP:149:GLU:HB2	2.09	0.52
51:BT:117:ASP:O	51:BT:118:ARG:C	2.48	0.52
51:BT:33:LYS:NZ	51:BT:74:ARG:NH2	2.57	0.52
1:AA:472:A:O2'	16:AP:81:ARG:HA	2.10	0.52
39:BE:51:PHE:H	39:BE:74:PRO:HB2	1.74	0.52
57:BZ:163:LEU:HD23	57:BZ:163:LEU:H	1.75	0.52
35:DA:1291:C:H2'	35:DA:1292:U:H6	1.75	0.52
57:DZ:108:PRO:C	57:DZ:110:GLY:H	2.11	0.52
55:BX:30:VAL:HG11	55:BX:39:ILE:HD12	1.92	0.52
35:DA:2286:A:H4'	35:DA:2287:A:O4'	2.10	0.52
45:BN:78:TYR:N	45:BN:78:TYR:CD1	2.76	0.52
37:DC:21:TYR:HB3	37:DC:25:GLU:HG3	1.90	0.52
47:DP:17:LYS:C	47:DP:19:VAL:H	2.11	0.52
1:CA:586:C:O2'	1:CA:587:G:H5'	2.09	0.52
1:AA:389:A:H2'	1:AA:390:C:H5'	1.89	0.52
32:D7:12:ARG:NH2	32:D7:44:PRO:HB3	2.24	0.52
7:AG:26:PHE:O	7:AG:30:ILE:HG12	2.10	0.52
55:BX:27:THR:HB	55:BX:80:ILE:HG22	1.91	0.52
35:DA:1541:G:H4'	35:DA:1542:A:O4'	2.10	0.52
1:CA:322:C:H4'	20:CT:23:ARG:HD2	1.91	0.52
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.75	0.52
1:AA:1104:G:H2'	1:AA:1105:A:C8	2.44	0.52
35:DA:1317:A:H2'	35:DA:1318:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:165:VAL:CG1	57:DZ:166:SER:N	2.67	0.52
7:AG:102:ARG:HG2	7:AG:106:GLN:NE2	2.25	0.52
10:CJ:23:ILE:HG23	10:CJ:85:LEU:CD2	2.38	0.52
2:CB:169:LYS:HD3	2:CB:169:LYS:O	2.10	0.52
57:BZ:23:LYS:HD2	57:BZ:38:TYR:HE1	1.75	0.52
1:AA:445:G:H2'	1:AA:446:G:C8	2.44	0.52
25:B0:51:VAL:CG2	25:B0:81:VAL:HG23	2.40	0.52
40:DF:63:LYS:HZ2	40:DF:67:GLN:HB2	1.74	0.52
11:AK:108:ILE:HG21	18:AR:88:LYS:OXT	2.08	0.52
4:AD:157:LEU:CG	4:AD:161:ASN:HD21	2.21	0.52
49:BR:100:LEU:N	49:BR:100:LEU:HD13	2.25	0.52
1:AA:356:A:O2'	1:AA:357:G:H5'	2.10	0.52
57:BZ:33:LEU:CD1	57:BZ:34:ASN:H	2.23	0.52
1:AA:425:G:O2'	1:AA:426:G:H5'	2.09	0.52
35:BA:633:A:C2'	35:BA:634:C:H5'	2.40	0.52
48:BQ:29:PHE:HB2	48:BQ:105:GLU:OE2	2.10	0.52
7:CG:71:PRO:HD3	7:CG:103:TRP:HZ3	1.74	0.52
35:BA:654(V):A:H3'	35:BA:655:A:H2'	1.91	0.52
38:BD:248:SER:HB2	38:BD:249:PRO:HD2	1.92	0.52
35:DA:2389:G:H5''	35:DA:2390:U:H5'	1.92	0.52
11:AK:115:PRO:C	11:AK:117:ASN:H	2.13	0.52
19:AS:17:GLU:O	19:AS:21:GLU:HG2	2.10	0.52
35:BA:1997:G:O2'	35:BA:1998:G:H5'	2.08	0.52
22:CY:27:C:C2	22:CY:28:G:C8	2.98	0.52
22:CY:69:G:C5	22:CY:70:G:N7	2.77	0.52
23:AW:72:C:C4	23:AW:73:C:C4	2.97	0.52
22:AY:25:A:H2'	22:AY:26:G:N7	2.24	0.52
35:BA:2469:A:H2'	48:BQ:56:ARG:HH21	1.75	0.52
22:CV:19:G:C6	22:CV:59:G:C6	2.98	0.52
35:DA:1902:C:C5'	38:DD:246:PRO:HD3	2.40	0.52
23:AW:50:C:N4	23:AW:61:A:C8	2.78	0.52
35:DA:803:U:H2'	35:DA:804:A:H5'	1.90	0.52
19:AS:64:GLU:HG3	19:AS:65:ASN:H	1.74	0.52
19:AS:65:ASN:CA	29:B4:48:ARG:HH12	1.95	0.52
56:BY:81:LYS:CD	56:BY:97:ARG:HB3	2.37	0.52
43:DI:66:GLU:OE1	43:DI:66:GLU:HA	2.09	0.52
43:BI:91:SER:OG	43:BI:119:PRO:HB2	2.10	0.52
12:CL:38:THR:CG2	12:CL:39:VAL:N	2.73	0.52
46:BO:77:ILE:HD13	51:BT:74:ARG:HG2	1.90	0.52
39:DE:51:PHE:H	39:DE:74:PRO:CB	2.23	0.52
35:DA:2312:U:OP1	41:DG:73:ALA:HA	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:181:ASN:OD1	3:CC:204:LEU:HD12	2.09	0.52
15:CO:85:LEU:HD22	15:CO:87:ILE:HD13	1.90	0.52
35:BA:2067:G:O2'	35:BA:2069:G:H5''	2.10	0.52
6:AF:15:ASP:OD1	6:AF:17:SER:HB2	2.10	0.52
7:CG:79:ARG:HG2	7:CG:81:GLY:N	2.19	0.52
32:D7:12:ARG:CD	32:D7:46:VAL:HG21	2.36	0.52
54:BW:4:LYS:HG3	54:BW:106:ILE:HG22	1.92	0.52
20:AT:14:LYS:O	20:AT:18:GLN:HB2	2.08	0.52
16:AP:6:LEU:HG	16:AP:17:TYR:HB3	1.92	0.52
22:CV:63:C:H2'	22:CV:64:C:H6	1.74	0.52
11:AK:124:LYS:HB3	11:AK:124:LYS:NZ	2.25	0.52
41:BG:170:ARG:HG2	41:BG:170:ARG:HH11	1.74	0.52
4:AD:90:GLY:CA	4:AD:204:ILE:HD11	2.39	0.52
34:B9:18:ARG:HD2	35:BA:1034:G:H5'	1.91	0.52
35:DA:633:A:C2'	35:DA:634:C:H5'	2.40	0.52
1:AA:203:U:H5''	1:AA:204:U:OP1	2.09	0.52
27:B2:32:LEU:HA	27:B2:53:LEU:HD12	1.91	0.52
40:BF:65:TRP:CZ3	40:BF:73:ALA:O	2.63	0.52
18:AR:79:LEU:HD23	18:AR:80:PRO:HD2	1.91	0.52
48:BQ:36:ALA:HB1	48:BQ:127:ILE:HD12	1.91	0.52
3:AC:34:LEU:HG	14:AN:25:VAL:HG11	1.91	0.52
35:BA:2248:C:C2'	35:BA:2249:U:H5'	2.40	0.52
1:AA:981:U:H5'	14:AN:21:TYR:CE1	2.44	0.52
35:DA:2668:G:O2'	35:DA:2669:G:H5'	2.10	0.52
35:BA:2141:G:H2'	35:BA:2142:C:C6	2.44	0.52
1:AA:414:A:O2'	1:AA:415:A:H5'	2.09	0.52
9:CI:122:ALA:HB1	9:CI:123:PRO:HD2	1.90	0.52
1:CA:777:A:H2'	1:CA:778:G:H8	1.75	0.52
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.09	0.52
1:AA:726:C:O2'	1:AA:727:G:H5'	2.10	0.52
22:CY:19:G:O5'	57:DZ:186:GLU:O	2.27	0.52
22:CY:23:A:C2	22:CY:50:C:C2	2.98	0.52
23:AW:30:U:C2	23:AW:31:C:C5	2.97	0.52
23:AW:38:U:H2'	23:AW:39:A:N7	2.24	0.52
22:AY:4:C:N3	22:AY:72:C:C5	2.78	0.52
51:DT:12:SER:O	51:DT:13:ARG:CZ	2.57	0.52
4:AD:8:VAL:HG23	4:AD:9:CYS:N	2.25	0.52
51:DT:124:ASP:HB3	51:DT:125:ARG:HH12	1.74	0.52
23:AW:24:A:C4	23:AW:25:A:C8	2.97	0.52
23:AW:15:G:C5	23:AW:61:A:C2	2.98	0.52
35:BA:2360:A:O2'	35:BA:2361:A:O5'	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:587:C:C3'	47:DP:33:ARG:NH2	2.72	0.52
1:CA:147:G:H1	1:CA:175:C:H42	1.56	0.52
1:CA:1203:C:H2'	1:CA:1204:A:H8	1.74	0.52
12:AL:33:ARG:HB3	12:AL:85:ILE:CG2	2.40	0.52
35:BA:2092:U:C4'	35:BA:2093:G:H5''	2.22	0.52
35:BA:1885:A:H2'	35:BA:1886:C:O4'	2.09	0.52
46:BO:68:GLU:HB3	46:BO:78:ARG:HH11	1.75	0.52
51:BT:31:SER:C	51:BT:32:TYR:CD2	2.82	0.52
47:DP:124:LYS:HD3	47:DP:143:GLY:HA3	1.92	0.52
55:DX:64:LYS:HD3	55:DX:73:ARG:NE	2.24	0.52
31:B6:30:THR:OG1	31:B6:31:PRO:HD2	2.10	0.52
50:DS:54:LEU:C	50:DS:56:LEU:H	2.12	0.52
2:CB:17:PHE:CD2	2:CB:44:LEU:HD11	2.44	0.52
1:AA:256:U:H2'	1:AA:257:G:O4'	2.10	0.52
47:DP:17:LYS:O	47:DP:19:VAL:N	2.43	0.52
1:AA:389:A:H2'	1:AA:390:C:C5'	2.40	0.52
29:B4:15:ILE:HA	29:B4:21:VAL:HG22	1.91	0.52
55:BX:12:VAL:HG23	55:BX:13:LEU:H	1.75	0.52
1:CA:1116:C:H2'	1:CA:1117:G:C5'	2.37	0.52
1:AA:437:U:H2'	1:AA:438:G:O4'	2.10	0.52
1:CA:1327:C:H5''	21:CU:20:LYS:HB3	1.91	0.52
35:DA:1963:U:C2'	35:DA:1963:U:O2	2.56	0.52
35:DA:951:C:O2'	35:DA:952:G:H5'	2.09	0.52
3:AC:51:GLY:O	3:AC:115:LEU:HD21	2.10	0.52
2:AB:162:ILE:O	2:AB:162:ILE:HG13	2.10	0.52
20:CT:89:ARG:NH1	20:CT:104:LEU:HD21	2.25	0.52
35:DA:1015:G:H8	35:DA:1015:G:H5'	1.75	0.52
17:CQ:26:GLN:O	17:CQ:27:PHE:HB3	2.10	0.52
5:AE:19:MET:O	5:AE:20:GLN:HB2	2.10	0.52
1:CA:376:G:H2'	1:CA:377:G:C8	2.43	0.52
18:CR:36:ASN:HB2	18:CR:40:LEU:CD1	2.39	0.52
6:AF:91:VAL:HG11	18:AR:72:ARG:HH12	1.75	0.52
35:BA:813:U:H2'	35:BA:814:C:H6	1.73	0.52
1:AA:57:G:H2'	1:AA:58:C:C6	2.44	0.52
35:DA:1517:G:O2'	35:DA:1518:U:H5'	2.10	0.52
49:DR:76:VAL:HG12	49:DR:77:ARG:N	2.24	0.52
38:DD:72:LYS:HD3	38:DD:97:TYR:CE2	2.45	0.52
35:BA:1721:G:H5'	35:BA:1722:A:OP1	2.10	0.52
11:AK:33:THR:C	11:AK:40:ILE:HD11	2.30	0.52
35:DA:2815:C:H2'	35:DA:2816:C:H6	1.74	0.52
7:AG:145:ALA:O	7:AG:146:GLU:CB	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:30:THR:HA	49:DR:78:LYS:HZ3	1.74	0.52
1:AA:1329:A:P	13:AM:28:ALA:HB3	2.50	0.52
1:CA:1524:C:H2'	1:CA:1525:G:C8	2.44	0.52
54:DW:47:VAL:HA	54:DW:50:VAL:CG1	2.39	0.52
1:AA:1457:G:O2'	1:AA:1458:G:H5'	2.09	0.52
1:CA:981:U:H5'	14:CN:21:TYR:CE1	2.45	0.52
1:CA:12:U:H4'	1:CA:526:C:H4'	1.92	0.52
35:DA:2836:U:H2'	35:DA:2837:G:C8	2.44	0.52
47:BP:95:VAL:CG2	47:BP:125:VAL:HG23	2.39	0.52
1:CA:837:G:O2'	1:CA:838:G:H5'	2.10	0.52
5:CE:18:ARG:HG2	5:CE:25:ARG:O	2.09	0.52
35:DA:1305:C:O2'	35:DA:1306:C:H5'	2.10	0.52
23:AW:32:G:C6	23:AW:43:G:C6	2.98	0.52
23:AW:3:G:N2	23:AW:74:C:C6	2.77	0.52
23:CW:29:A:H2'	23:CW:30:U:H6	1.73	0.52
22:AV:54:G:O2'	22:AV:55:G:H5'	2.10	0.52
35:BA:2494:G:O2'	48:BQ:80:GLU:HA	2.10	0.52
22:CV:3:G:C2'	22:CV:4:C:H5''	2.40	0.52
22:CV:56:U:O2'	22:CV:57:U:H5'	2.10	0.52
23:AW:15:G:OP2	23:AW:16:U:C5	2.63	0.52
19:AS:22:LEU:HD12	19:AS:47:HIS:HE1	1.72	0.52
43:DI:77:LEU:HD12	43:DI:101:LEU:HD13	1.92	0.52
12:AL:22:SER:C	12:AL:24:VAL:N	2.64	0.52
12:AL:27:LEU:HD22	12:AL:27:LEU:N	2.25	0.52
10:AJ:16:LEU:HD11	10:AJ:70:ARG:HG3	1.91	0.52
52:DU:47:TYR:HA	52:DU:50:ARG:HH12	1.75	0.52
47:DP:102:ARG:NH1	47:DP:102:ARG:CB	2.73	0.52
52:BU:95:LEU:O	52:BU:98:LEU:HG	2.10	0.52
52:BU:95:LEU:CD1	53:BV:11:GLN:HB2	2.39	0.52
1:CA:1279:A:H2'	1:CA:1279:A:N3	2.25	0.52
2:AB:87:ARG:O	2:AB:223:ILE:HD11	2.10	0.52
25:B0:14:ARG:CG	25:B0:14:ARG:HH11	2.22	0.52
5:AE:150:ARG:HB2	5:AE:150:ARG:NH1	2.25	0.52
3:AC:181:ASN:OD1	3:AC:204:LEU:HD12	2.10	0.52
35:BA:2286:A:H4'	35:BA:2287:A:O4'	2.09	0.52
50:DS:66:ALA:O	50:DS:69:VAL:HG12	2.09	0.52
35:BA:1292:U:H2'	35:BA:1293:C:C6	2.44	0.52
35:BA:479:A:H4'	35:BA:480:A:OP1	2.10	0.52
2:CB:171:ALA:HA	2:CB:174:VAL:CG2	2.40	0.52
42:BH:136:ILE:H	42:BH:136:ILE:CD1	2.23	0.52
30:B5:45:VAL:CG1	30:B5:55:ARG:HG2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:41:VAL:O	5:AE:66:MET:HA	2.10	0.52
9:CI:100:GLY:C	9:CI:102:LEU:H	2.13	0.52
1:CA:1116:C:H3'	1:CA:1117:G:H5''	1.91	0.52
4:AD:135:LEU:O	4:AD:137:SER:N	2.38	0.52
1:CA:191:G:N3	20:CT:105:SER:HB3	2.24	0.52
38:DD:145:VAL:HG12	38:DD:146:GLU:O	2.10	0.52
50:DS:16:ASN:O	50:DS:19:LYS:N	2.35	0.52
47:DP:112:LEU:HD13	47:DP:113:LYS:N	2.25	0.52
47:DP:140:ALA:O	47:DP:141:ALA:HB3	2.09	0.52
1:AA:606:G:H2'	1:AA:631:G:N2	2.25	0.52
11:CK:98:LEU:O	11:CK:99:GLN:C	2.48	0.52
43:BI:48:GLU:OE2	43:BI:52:ARG:HD3	2.10	0.52
35:BA:2468:G:H22	35:BA:2481:G:C2'	2.22	0.52
35:BA:2086:U:H2'	35:BA:2087:G:C8	2.45	0.52
3:CC:34:LEU:HG	14:CN:25:VAL:HG11	1.92	0.52
1:AA:1368:G:O2'	1:AA:1369:C:H5'	2.10	0.52
35:BA:2836:U:H2'	35:BA:2837:G:C8	2.45	0.52
1:AA:560:U:H5'	1:AA:566:G:N2	2.24	0.52
35:DA:1003:G:N2	35:DA:1153:C:C2	2.78	0.52
40:BF:142:TRP:O	40:BF:145:GLU:HB2	2.10	0.52
48:BQ:87:LYS:O	48:BQ:88:GLY:O	2.28	0.52
1:AA:1508:G:H2'	1:AA:1509:C:O4'	2.10	0.52
35:BA:1419:A:O2'	35:BA:1420:U:H5''	2.09	0.52
22:CY:19:G:O6	22:CY:59:G:C6	2.63	0.52
23:AW:40:A:C6	23:AW:41:C:H2'	2.45	0.52
23:AW:3:G:N1	23:AW:4:C:C4	2.78	0.52
4:CD:8:VAL:HG23	4:CD:9:CYS:N	2.25	0.52
22:AV:7:U:O4	22:AV:69:G:C6	2.63	0.52
46:DO:77:ILE:HD13	51:DT:74:ARG:HG2	1.91	0.52
35:DA:1902:C:HO2'	38:DD:244:ARG:HB2	1.72	0.52
56:DY:42:VAL:CG1	56:DY:65:ALA:HB3	2.39	0.52
10:AJ:16:LEU:HD22	10:AJ:16:LEU:O	2.09	0.52
10:CJ:16:LEU:O	10:CJ:16:LEU:HD22	2.10	0.52
35:BA:1494:A:O2'	35:BA:1496:A:C2	2.63	0.52
57:DZ:17:ALA:HA	57:DZ:20:ARG:HB2	1.92	0.52
56:BY:28:LYS:CB	56:BY:37:VAL:HB	2.39	0.52
9:AI:13:ALA:HA	9:AI:67:GLY:O	2.10	0.52
57:DZ:111:VAL:O	57:DZ:112:ARG:CB	2.57	0.52
50:DS:34:HIS:HB3	50:DS:53:SER:CB	2.33	0.52
26:D1:67:ILE:N	26:D1:68:PRO:HD2	2.25	0.52
55:BX:64:LYS:HD3	55:BX:73:ARG:NE	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DF:187:VAL:HG12	47:DP:7:ARG:HD2	1.91	0.52
38:BD:34:VAL:HG23	38:BD:35:LYS:N	2.24	0.52
35:BA:557:U:O2'	35:BA:558:G:H5'	2.10	0.52
41:BG:60:LEU:O	41:BG:60:LEU:HD13	2.10	0.52
47:BP:16:ARG:HH11	47:BP:16:ARG:C	2.12	0.52
47:DP:16:ARG:C	47:DP:16:ARG:HH11	2.13	0.52
15:CO:78:TYR:O	15:CO:82:ILE:HG22	2.10	0.52
41:BG:130:ASN:HD22	41:BG:160:VAL:HG22	1.74	0.52
1:CA:255:G:H1'	17:CQ:16:GLN:HE21	1.74	0.52
38:DD:260:ARG:NH1	38:DD:267:SER:OG	2.43	0.52
16:CP:4:ILE:HD12	16:CP:4:ILE:N	2.25	0.52
35:DA:2833:G:C3'	35:DA:2834:G:C5'	2.87	0.52
38:DD:70:TRP:O	38:DD:73:VAL:HG23	2.10	0.52
35:DA:1280:G:C2'	35:DA:1281:G:H5''	2.39	0.52
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.45	0.52
5:CE:80:ILE:HG22	8:CH:104:ARG:CZ	2.39	0.52
39:DE:23:VAL:HG12	39:DE:173:VAL:HG21	1.91	0.52
1:CA:710:G:OP1	6:CF:54:LYS:HE3	2.10	0.52
50:BS:85:VAL:HG22	50:BS:106:ARG:HB2	1.91	0.52
50:BS:89:ARG:HB3	50:BS:92:TYR:CB	2.40	0.52
40:DF:122:LYS:HE2	40:DF:122:LYS:CA	2.39	0.52
22:AV:39:A:C6	24:AX:16:A:N6	2.77	0.52
4:CD:177:ASP:O	4:CD:179:GLU:N	2.43	0.52
42:BH:70:THR:HG23	42:BH:74:ASN:HD21	1.75	0.52
18:AR:85:LEU:HD23	18:AR:88:LYS:HG2	1.91	0.52
5:AE:137:GLU:HG3	5:AE:141:GLN:NE2	2.25	0.52
26:B1:19:GLN:HB2	26:B1:35:THR:CG2	2.40	0.52
26:D1:85:LEU:O	26:D1:86:SER:HB3	2.09	0.52
35:BA:2672:G:C3'	35:BA:2673:G:H5''	2.40	0.52
44:BJ:111:UNK:O	44:BJ:112:UNK:C	2.57	0.52
39:BE:128:SER:OG	39:BE:129:HIS:N	2.43	0.52
55:BX:10:ALA:HB1	55:BX:11:PRO:HD2	1.92	0.52
52:BU:8:VAL:HG23	52:BU:11:ARG:HH21	1.73	0.52
11:CK:115:PRO:C	11:CK:117:ASN:H	2.14	0.52
52:BU:66:ASN:ND2	52:BU:66:ASN:O	2.43	0.52
17:CQ:85:VAL:HG12	17:CQ:89:LEU:HD12	1.91	0.52
22:CV:78:A:H8	35:DA:2602:A:N6	2.07	0.52
16:AP:58:TYR:O	16:AP:62:VAL:HG22	2.10	0.52
23:AW:30:U:H2'	23:AW:31:C:C5	2.34	0.52
23:AW:2:G:C2	23:AW:3:G:C4	2.98	0.52
23:CW:3:G:C6	23:CW:4:C:N4	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:42:C:C2'	23:CW:43:G:C5'	2.88	0.52
22:AV:14:A:C6	22:AV:15:G:C4	2.98	0.52
22:CV:8:U:H1'	22:CV:50:C:O2	2.09	0.52
23:AW:26:G:H2'	23:AW:27:C:N1	2.25	0.52
33:B8:4:MET:O	33:B8:62:LEU:HD11	2.09	0.52
43:BI:66:GLU:HA	43:BI:66:GLU:OE1	2.10	0.52
12:AL:49:ASN:HD22	12:AL:49:ASN:N	2.00	0.52
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.92	0.52
10:AJ:3:LYS:HD2	10:AJ:77:PRO:CD	2.40	0.52
35:BA:1747(A):G:O2'	35:BA:1748:G:H5''	2.09	0.52
10:CJ:5:ARG:CG	10:CJ:71:LEU:HD11	2.39	0.52
42:DH:44:VAL:HG12	42:DH:45:VAL:H	1.75	0.52
53:DV:39:LEU:N	53:DV:39:LEU:HD22	2.24	0.52
3:CC:119:ARG:NH2	3:CC:140:ARG:NH2	2.51	0.52
35:DA:2308:G:O6	35:DA:2310:A:H2'	2.10	0.52
51:BT:27:THR:CG2	51:BT:28:VAL:H	2.17	0.52
35:BA:105:C:O2'	56:BY:2:ARG:HG3	2.09	0.52
26:D1:92:LYS:NZ	35:DA:153:C:OP1	2.38	0.52
3:AC:6:HIS:HD2	3:AC:7:PRO:HD2	1.74	0.52
19:CS:16:LEU:O	19:CS:20:LEU:HG	2.10	0.52
49:DR:38:VAL:HB	49:DR:39:PRO:CD	2.36	0.52
9:AI:28:VAL:HG13	9:AI:63:ILE:O	2.10	0.52
5:AE:6:PHE:HB2	5:AE:34:VAL:HG22	1.91	0.52
9:AI:53:VAL:C	9:AI:54:ASP:HB2	2.30	0.52
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.10	0.52
1:AA:346:G:OP2	51:BT:41:ARG:NH1	2.40	0.52
35:DA:705:A:H1'	38:DD:9:TYR:CE2	2.45	0.52
2:AB:111:ARG:NH2	2:AB:114:ARG:HG2	2.23	0.52
1:CA:1489:G:H2'	1:CA:1490:C:O4'	2.10	0.52
51:BT:106:SER:O	51:BT:107:ASP:HB3	2.10	0.52
42:BH:8:PRO:O	42:BH:9:ILE:HG22	2.09	0.52
47:BP:64:LYS:C	47:BP:66:GLY:N	2.63	0.52
35:BA:2713:A:H3'	35:BA:2714:G:H5'	1.91	0.52
37:DC:15:VAL:CG1	37:DC:33:LEU:HD11	2.40	0.52
1:CA:433:C:H2'	1:CA:434:U:C6	2.45	0.52
18:CR:36:ASN:HB3	18:CR:39:VAL:CB	2.39	0.52
50:DS:24:LEU:HB3	50:DS:85:VAL:HG12	1.91	0.52
37:BC:31:LYS:HE2	37:BC:181:PHE:O	2.09	0.52
35:BA:1608:A:H1'	35:BA:1610:A:OP2	2.10	0.52
1:CA:591:U:H2'	1:CA:592:G:H8	1.74	0.52
50:BS:74:ALA:HB1	50:BS:103:GLU:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:63:LEU:N	8:CH:63:LEU:HD22	2.24	0.52
35:DA:1149:G:H2'	35:DA:1150:C:C6	2.45	0.52
35:BA:1441:G:O2'	35:BA:1442:G:H5'	2.09	0.52
35:DA:237:C:O2'	35:DA:238:C:H5'	2.10	0.52
49:DR:29:LEU:CD2	49:DR:70:LEU:HD11	2.40	0.52
35:DA:1441:G:O2'	35:DA:1442:G:H5'	2.09	0.52
56:DY:57:GLN:CG	56:DY:58:GLY:H	2.23	0.52
53:BV:28:GLU:OE1	53:BV:29:PRO:HD2	2.09	0.52
35:DA:639:U:H2'	35:DA:640:C:C6	2.45	0.52
35:BA:866:A:H2'	35:BA:866:A:N3	2.25	0.52
4:AD:209:ARG:HH11	4:AD:209:ARG:HG3	1.74	0.52
22:CY:45:U:H2'	22:CY:46:U:O4'	2.10	0.51
11:CK:57:THR:OG1	11:CK:58:PRO:HD2	2.10	0.51
22:AV:7:U:H3'	22:AV:8:U:C5'	2.39	0.51
51:DT:125:ARG:C	51:DT:127:ALA:H	2.14	0.51
23:AW:57:U:C1'	23:AW:59:G:N7	2.73	0.51
35:BA:587:C:H3'	47:BP:33:ARG:NH2	2.25	0.51
40:DF:22:ALA:HB1	40:DF:26:ALA:CB	2.40	0.51
35:DA:146:G:H5'	35:DA:146:G:H8	1.75	0.51
52:DU:92:ARG:O	52:DU:93:LYS:C	2.47	0.51
46:BO:103:ALA:HB1	46:BO:105:GLU:OE1	2.10	0.51
1:AA:460:G:N2	1:AA:471:G:C8	2.78	0.51
56:BY:4:LYS:HG3	56:BY:5:MET:N	2.26	0.51
19:AS:73:GLU:HG2	19:AS:73:GLU:O	2.10	0.51
35:DA:1292:U:H2'	35:DA:1293:C:C6	2.45	0.51
26:D1:51:VAL:HG22	26:D1:52:ARG:N	2.25	0.51
42:DH:136:ILE:CD1	42:DH:136:ILE:N	2.73	0.51
38:DD:30:GLU:CG	38:DD:63:ARG:CZ	2.84	0.51
42:DH:115:VAL:HG11	42:DH:148:ILE:HD13	1.92	0.51
7:CG:120:ILE:CD1	7:CG:120:ILE:H	2.19	0.51
4:CD:126:ILE:O	4:CD:132:ARG:HB2	2.10	0.51
3:AC:73:PRO:O	3:AC:76:VAL:HG13	2.11	0.51
3:AC:95:THR:HG22	3:AC:97:LYS:H	1.73	0.51
9:CI:48:GLU:HB3	9:CI:101:PHE:HE2	1.75	0.51
9:AI:100:GLY:C	9:AI:102:LEU:H	2.13	0.51
27:D2:5:GLU:O	27:D2:9:GLN:HG3	2.10	0.51
51:DT:34:VAL:CG1	51:DT:35:LYS:N	2.73	0.51
54:DW:25:ARG:HB2	54:DW:25:ARG:NH1	2.25	0.51
57:DZ:57:ILE:CG2	57:DZ:58:VAL:N	2.73	0.51
7:AG:15:ASP:OD2	7:AG:18:TYR:HB2	2.11	0.51
55:DX:12:VAL:CG2	55:DX:27:THR:HG23	2.37	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:116:GLU:HA	2:AB:119:GLU:HB3	1.90	0.51
1:AA:1314:C:H5	19:AS:6:LYS:CE	2.22	0.51
49:BR:113:LEU:HD23	49:BR:113:LEU:C	2.29	0.51
35:BA:1598:C:H5'	55:BX:36:LYS:CB	2.40	0.51
2:CB:138:LEU:O	2:CB:141:GLU:HB3	2.10	0.51
35:BA:271(A):A:H5'	35:BA:271(B):C:OP2	2.10	0.51
16:AP:48:TRP:O	16:AP:49:LEU:HB2	2.09	0.51
1:AA:625:G:H4'	16:AP:16:HIS:CD2	2.44	0.51
42:DH:96:ALA:HA	42:DH:105:LEU:HA	1.92	0.51
48:BQ:135:ASP:OD1	48:BQ:135:ASP:N	2.42	0.51
35:BA:994:C:H3'	52:BU:54:LYS:HE3	1.92	0.51
11:AK:107:SER:C	11:AK:108:ILE:HD12	2.30	0.51
42:DH:70:THR:HG23	42:DH:74:ASN:HD21	1.75	0.51
3:CC:103:VAL:CG1	3:CC:104:GLN:N	2.72	0.51
41:BG:27:ASN:C	41:BG:29:TRP:N	2.61	0.51
1:CA:189(I):G:H2'	1:CA:189(J):G:C8	2.45	0.51
43:DI:9:LEU:HB2	43:DI:12:LEU:O	2.09	0.51
35:DA:17:G:H4'	52:DU:25:TRP:CH2	2.45	0.51
27:D2:63:VAL:HA	27:D2:66:GLU:HG2	1.92	0.51
38:BD:132:PRO:HD3	38:BD:190:TYR:CZ	2.45	0.51
38:DD:2:ALA:O	38:DD:3:VAL:HB	2.10	0.51
38:DD:77:ALA:O	38:DD:116:GLN:HG2	2.09	0.51
56:BY:68:HIS:ND1	56:BY:70:SER:HB3	2.25	0.51
10:AJ:100:THR:HG22	10:AJ:101:VAL:N	2.25	0.51
35:DA:1997:G:O2'	35:DA:1998:G:H5'	2.10	0.51
13:AM:73:GLU:O	13:AM:77:ASN:HB2	2.09	0.51
35:BA:1472:A:H2'	35:BA:1473:G:O4'	2.10	0.51
4:CD:168:ARG:HG3	4:CD:168:ARG:HH11	1.75	0.51
35:DA:57:C:O2'	35:DA:58:G:H5'	2.10	0.51
1:CA:414:A:O2'	1:CA:415:A:H5'	2.10	0.51
22:CY:50:C:O2	22:CY:61:A:H1'	2.11	0.51
22:AY:67:C:H3'	22:AY:67:C:C6	2.44	0.51
38:DD:244:ARG:HG2	38:DD:245:PRO:HB3	1.92	0.51
23:AW:16:U:O3'	23:AW:62:U:O3'	2.28	0.51
23:AW:9:A:C6	23:AW:47:G:C6	2.98	0.51
19:AS:9:VAL:HG12	19:AS:9:VAL:O	2.10	0.51
56:DY:28:LYS:H	56:DY:28:LYS:HZ1	1.52	0.51
1:CA:1122:U:H2'	1:CA:1123:A:H8	1.74	0.51
10:CJ:3:LYS:NZ	10:CJ:77:PRO:HD2	2.24	0.51
35:BA:2849:U:OP2	51:BT:95:ARG:NH1	2.43	0.51
57:DZ:76:LEU:O	57:DZ:84:GLU:OE1	2.27	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BV:19:LYS:HG3	53:BV:20:LEU:N	2.24	0.51
49:DR:10:LEU:HD22	49:DR:17:ARG:CD	2.37	0.51
25:B0:10:THR:HG21	35:BA:2277:G:OP2	2.11	0.51
56:BY:36:ALA:HB1	56:BY:67:LEU:O	2.10	0.51
13:AM:88:ARG:NH1	13:AM:88:ARG:HG2	2.21	0.51
31:D6:5:VAL:HG22	31:D6:6:ARG:N	2.25	0.51
1:AA:536:C:H2'	1:AA:537:G:C8	2.45	0.51
1:CA:735:C:O2'	1:CA:736:C:H5'	2.10	0.51
13:CM:68:GLY:H	13:CM:71:ARG:HB3	1.75	0.51
1:AA:162:A:C6	1:AA:163:C:H1'	2.45	0.51
3:AC:84:ILE:HD11	3:AC:88:ARG:HH21	1.75	0.51
3:AC:95:THR:C	3:AC:97:LYS:H	2.13	0.51
1:CA:254:G:H2'	1:CA:255:G:C8	2.41	0.51
21:AU:25:LYS:HG2	21:AU:26:LYS:N	2.24	0.51
38:DD:209:ALA:C	38:DD:210:GLY:O	2.46	0.51
1:AA:1106:G:OP1	3:AC:172:ARG:HD3	2.11	0.51
38:BD:260:ARG:NH1	38:BD:267:SER:OG	2.43	0.51
36:DB:55:U:O2'	36:DB:56:G:H5'	2.10	0.51
3:CC:51:GLY:O	3:CC:115:LEU:HD21	2.10	0.51
40:DF:101:LEU:HD12	40:DF:102:PRO:CD	2.38	0.51
2:CB:71:VAL:HB	2:CB:164:VAL:CG1	2.36	0.51
1:AA:433:C:H2'	1:AA:434:U:C6	2.45	0.51
38:BD:221:VAL:HG22	38:BD:226:MET:CE	2.40	0.51
22:AY:75:A:O2'	22:AY:76:C:H5'	2.10	0.51
6:AF:19:LEU:HD23	6:AF:19:LEU:C	2.29	0.51
39:BE:98:PRO:HG3	39:BE:175:VAL:HG12	1.92	0.51
38:BD:96:HIS:HA	38:BD:102:LYS:HB3	1.92	0.51
10:CJ:90:LEU:H	10:CJ:91:PRO:HD3	1.75	0.51
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.75	0.51
43:BI:13:GLY:O	43:BI:14:ASP:HB2	2.09	0.51
1:CA:1239:A:H62	1:CA:1299:A:H62	1.56	0.51
18:CR:73:ALA:CB	18:CR:79:LEU:HD12	2.41	0.51
17:CQ:89:LEU:O	17:CQ:92:ARG:HB3	2.10	0.51
1:AA:186:C:H5'	20:AT:78:ALA:HB1	1.93	0.51
15:CO:63:ARG:HG2	15:CO:67:LEU:HD11	1.92	0.51
35:DA:979:G:H3'	35:DA:980:A:H5''	1.90	0.51
35:DA:2735:G:H2'	35:DA:2736:G:H8	1.74	0.51
3:AC:132:ARG:HG2	3:AC:136:GLN:NE2	2.25	0.51
35:DA:185:U:H4'	35:DA:218:A:H4'	1.92	0.51
35:DA:825:C:O2'	35:DA:826:U:H5'	2.09	0.51
40:DF:142:TRP:O	40:DF:145:GLU:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DU:104:GLN:O	52:DU:107:ALA:HB3	2.11	0.51
1:CA:1196:U:C5	24:CX:23:A:C6	2.99	0.51
22:AY:45:U:H2'	22:AY:46:U:C6	2.44	0.51
22:AY:55:G:C2	22:AY:56:U:O2	2.63	0.51
22:AY:4:C:H42	22:AY:72:C:H5	1.57	0.51
22:CV:4:C:N1	22:CV:5:C:C5	2.79	0.51
22:CV:58:C:H42	41:DG:84:LYS:HE2	1.73	0.51
35:BA:747:U:O2	35:BA:2014:A:H1'	2.10	0.51
38:DD:245:PRO:O	38:DD:246:PRO:C	2.47	0.51
35:BA:2360:A:O2'	35:BA:2361:A:P	2.68	0.51
56:DY:4:LYS:HG3	56:DY:5:MET:N	2.25	0.51
23:AW:57:U:C2'	23:AW:59:G:N7	2.73	0.51
1:AA:1057:G:H5''	3:AC:154:SER:CB	2.13	0.51
43:BI:129:THR:HG23	43:BI:136:VAL:C	2.30	0.51
1:CA:523:A:N6	12:CL:92:ASP:HB2	2.26	0.51
10:CJ:8:LEU:HD23	10:CJ:96:ILE:CG2	2.40	0.51
52:DU:88:ILE:C	52:DU:90:VAL:N	2.64	0.51
5:AE:101:ILE:N	5:AE:101:ILE:HD13	2.25	0.51
33:D8:7:HIS:CD2	47:DP:50:ARG:HD3	2.45	0.51
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.09	0.51
16:CP:80:PHE:H	16:CP:80:PHE:HD1	1.59	0.51
4:AD:145:GLU:HG2	4:AD:184:LYS:HG2	1.93	0.51
13:AM:92:HIS:HD2	13:AM:110:ARG:NH2	2.09	0.51
50:DS:35:ILE:CG2	50:DS:53:SER:HB2	2.41	0.51
40:BF:31:HIS:O	40:BF:34:TRP:HB3	2.10	0.51
2:CB:172:ILE:CD1	2:CB:172:ILE:H	2.09	0.51
30:B5:50:GLY:CA	30:B5:55:ARG:HB2	2.40	0.51
15:CO:85:LEU:HD23	15:CO:85:LEU:C	2.30	0.51
41:BG:129:GLY:O	41:BG:130:ASN:HB2	2.10	0.51
35:BA:676:A:H2	35:BA:802:A:N6	2.03	0.51
1:CA:256:U:H2'	1:CA:257:G:O4'	2.10	0.51
35:BA:743:G:O2'	35:BA:744:G:H5'	2.09	0.51
35:DA:2632:A:N3	39:DE:61:ARG:NH1	2.58	0.51
35:BA:1779:U:C5	35:BA:1784:A:N7	2.68	0.51
1:CA:1491:G:H5'	1:CA:1491:G:H8	1.75	0.51
36:DB:56:G:H4'	36:DB:57:A:H8	1.72	0.51
45:BN:68:GLU:HG2	45:BN:88:GLU:OE2	2.10	0.51
2:CB:137:ARG:HD3	2:CB:138:LEU:N	2.25	0.51
35:DA:1682:G:H2'	35:DA:1683:C:C6	2.45	0.51
57:DZ:95:PRO:HA	57:DZ:129:SER:CA	2.41	0.51
6:CF:68:PRO:HG3	6:CF:71:ARG:NH2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:71:VAL:O	47:DP:73:GLY:N	2.43	0.51
1:CA:818:G:C3'	1:CA:819:A:H5''	2.40	0.51
6:CF:91:VAL:HG11	18:CR:72:ARG:HH12	1.75	0.51
35:DA:709:U:H2'	35:DA:710:G:C8	2.46	0.51
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.45	0.51
53:BV:79:VAL:HG13	53:BV:79:VAL:O	2.11	0.51
35:BA:1856:G:H2'	35:BA:1857:G:C5'	2.40	0.51
45:DN:89:LYS:HB3	45:DN:89:LYS:HZ2	1.75	0.51
7:CG:145:ALA:O	7:CG:146:GLU:CB	2.58	0.51
45:BN:71:ILE:HG21	45:BN:84:LYS:HB3	1.92	0.51
2:AB:52:GLU:CG	2:AB:56:ARG:HH12	2.24	0.51
36:BB:55:U:O2'	36:BB:56:G:H5'	2.10	0.51
29:B4:50:VAL:C	29:B4:52:THR:H	2.12	0.51
5:CE:9:LYS:O	5:CE:32:VAL:HG13	2.10	0.51
1:AA:311:C:HO2'	1:AA:312:C:H5'	1.76	0.51
35:DA:654(A):G:O2'	35:DA:654(B):C:H5'	2.10	0.51
19:AS:29:ARG:O	19:AS:30:LEU:C	2.48	0.51
35:BA:17:G:H4'	52:BU:25:TRP:CH2	2.45	0.51
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.10	0.51
1:CA:668:G:O2'	15:CO:46:HIS:HD2	1.94	0.51
35:DA:2267:A:H5''	35:DA:2268:A:C5'	2.40	0.51
35:BA:2389:G:H5''	35:BA:2390:U:H5'	1.92	0.51
1:CA:1264:C:H2'	1:CA:1265:G:C8	2.45	0.51
38:DD:131:LEU:HD13	38:DD:136:ILE:HG12	1.91	0.51
35:DA:999:U:O2'	35:DA:1000:A:H5'	2.10	0.51
51:DT:53:ARG:O	51:DT:53:ARG:HG3	2.10	0.51
49:BR:99:LYS:HD3	49:BR:99:LYS:H	1.75	0.51
17:AQ:24:GLU:HG2	17:AQ:39:SER:HB3	1.93	0.51
23:AW:29:A:C4	23:AW:30:U:C5	2.98	0.51
23:AW:44:A:C6	23:AW:45:U:C5	2.99	0.51
22:AY:31:C:H42	22:AY:43:G:H1	1.59	0.51
4:CD:12:CYS:SG	4:CD:19:LEU:O	2.68	0.51
41:BG:46:ALA:C	41:BG:82:LEU:HD11	2.31	0.51
4:AD:30:LYS:CB	4:AD:35:ARG:HD2	2.41	0.51
46:DO:2:ILE:CD1	46:DO:82:ASN:ND2	2.69	0.51
51:BT:12:SER:O	51:BT:13:ARG:CZ	2.59	0.51
56:DY:4:LYS:HD2	56:DY:32:PRO:CG	2.41	0.51
43:DI:129:THR:HG23	43:DI:136:VAL:C	2.30	0.51
38:DD:48:ARG:NH1	38:DD:48:ARG:HG3	2.25	0.51
12:CL:35:GLY:HA3	12:CL:58:VAL:CG1	2.32	0.51
12:CL:41:ARG:HH11	12:CL:41:ARG:CB	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:41:ARG:CZ	12:CL:43:VAL:HG12	2.41	0.51
12:AL:47:LYS:CB	12:AL:48:PRO:CD	2.83	0.51
10:AJ:5:ARG:CG	10:AJ:71:LEU:HD11	2.41	0.51
10:AJ:8:LEU:HD23	10:AJ:96:ILE:CG2	2.39	0.51
40:BF:22:ALA:HB1	40:BF:26:ALA:CB	2.40	0.51
42:DH:7:LEU:HD22	42:DH:65:HIS:NE2	2.25	0.51
10:CJ:97:GLU:C	10:CJ:98:ILE:HD12	2.31	0.51
35:DA:1162:G:H4'	53:DV:24:LYS:HB2	1.93	0.51
12:CL:42:THR:HA	12:CL:54:LYS:HA	1.92	0.51
51:BT:28:VAL:HG12	51:BT:29:ARG:HH11	1.76	0.51
51:BT:31:SER:OG	51:BT:32:TYR:N	2.43	0.51
1:AA:1279:A:N3	1:AA:1279:A:H2'	2.24	0.51
39:DE:79:ARG:N	39:DE:79:ARG:HD2	2.25	0.51
41:DG:14:GLU:C	41:DG:17:PRO:HD2	2.31	0.51
39:BE:79:ARG:N	39:BE:79:ARG:HD2	2.26	0.51
1:AA:738:C:H2'	1:AA:739:C:C6	2.46	0.51
1:CA:490:G:H2'	1:CA:491:G:C8	2.44	0.51
5:CE:150:ARG:HB2	5:CE:150:ARG:NH1	2.25	0.51
1:CA:1139:G:N3	1:CA:1141:C:N4	2.58	0.51
2:AB:12:GLU:C	2:AB:14:GLY:N	2.63	0.51
26:D1:45:ASN:ND2	26:D1:45:ASN:C	2.64	0.51
35:BA:528:A:N1	35:BA:2043:C:O5'	2.44	0.51
4:CD:110:PHE:CD1	4:CD:110:PHE:N	2.68	0.51
9:AI:48:GLU:HB3	9:AI:101:PHE:HE2	1.76	0.51
35:BA:2148:G:H2'	35:BA:2149:G:H8	1.75	0.51
1:CA:197:A:N7	1:CA:221:C:H4'	2.26	0.51
41:DG:19:LEU:C	41:DG:21:ARG:H	2.13	0.51
35:DA:271(A):A:H5'	35:DA:271(B):C:OP2	2.09	0.51
35:BA:1015:G:H8	35:BA:1015:G:H5'	1.75	0.51
4:CD:61:LYS:HD3	4:CD:206:PHE:CE2	2.45	0.51
1:CA:879:C:O2'	1:CA:880:C:H5'	2.11	0.51
57:BZ:38:TYR:CG	57:BZ:38:TYR:O	2.63	0.51
1:CA:445:G:H2'	1:CA:446:G:C8	2.44	0.51
1:CA:692:U:H5	11:CK:26:ASN:HD22	1.58	0.51
4:AD:98:GLU:CG	4:AD:103:ASN:HD21	2.21	0.51
11:CK:105:VAL:HB	11:CK:108:ILE:HD11	1.92	0.51
35:DA:2193:G:H2'	35:DA:2194:G:C8	2.45	0.51
38:BD:77:ALA:O	38:BD:116:GLN:HG2	2.10	0.51
35:DA:2884:U:C2'	35:DA:2885:C:H5'	2.40	0.51
11:AK:67:ASP:O	11:AK:71:LYS:HG3	2.10	0.51
43:BI:10:GLU:O	43:BI:12:LEU:HD23	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:106:G:H5''	57:BZ:31:ARG:HB3	1.92	0.51
35:DA:2086:U:OP1	38:DD:262:ARG:HD3	2.11	0.51
6:CF:97:PHE:N	18:CR:30:ASP:OD1	2.44	0.51
35:BA:107:C:H2'	35:BA:108:U:C6	2.45	0.51
35:DA:847:U:OP2	35:DA:928:G:O6	2.27	0.51
35:DA:78:A:H2'	35:DA:79:G:C8	2.45	0.51
35:DA:654(V):A:H3'	35:DA:655:A:H2'	1.92	0.51
35:DA:310:A:OP1	56:DY:17:SER:O	2.27	0.51
1:AA:276:G:O2'	1:AA:277:C:H5'	2.08	0.51
17:AQ:74:LEU:HD12	17:AQ:75:ARG:HG2	1.92	0.51
1:AA:1517:G:H1'	35:BA:1919:A:O3'	2.09	0.51
35:DA:1488:G:H5'	35:DA:1489:U:OP2	2.10	0.51
35:BA:78:A:H2'	35:BA:79:G:H8	1.74	0.51
35:DA:648:G:O2'	35:DA:649:G:H5'	2.10	0.51
35:DA:657:U:H2'	35:DA:658:C:C6	2.46	0.51
1:AA:575:G:OP1	1:AA:575:G:H4'	2.10	0.51
7:CG:136:LYS:HB3	7:CG:136:LYS:NZ	2.26	0.51
28:B3:46:ASN:O	28:B3:50:VAL:HG22	2.10	0.51
35:DA:70:G:H2'	35:DA:113:G:O2'	2.10	0.51
23:AW:40:A:H2'	23:AW:41:C:C6	2.42	0.51
23:AW:7:U:N3	23:AW:69:G:C6	2.78	0.51
22:AY:50:C:O2	22:AY:61:A:H1'	2.11	0.51
22:AV:19:G:H1'	22:AV:62:U:C4	2.46	0.51
22:AV:27:C:H6	22:AV:27:C:H3'	1.76	0.51
22:AV:57:U:O2'	22:AV:59:G:N7	2.32	0.51
35:BA:2301:C:H2'	35:BA:2302:G:O4'	2.10	0.51
22:CV:12:U:C4	22:CV:13:U:C5	2.98	0.51
23:AW:53:U:C2	23:AW:66:G:N1	2.79	0.51
43:DI:83:ALA:CB	43:DI:88:ILE:HG12	2.39	0.51
43:BI:83:ALA:HB2	43:BI:88:ILE:HG12	1.92	0.51
30:D5:3:LYS:HD3	35:DA:747:U:O4	2.11	0.51
10:CJ:6:ILE:HG22	10:CJ:98:ILE:CG1	2.26	0.51
3:CC:119:ARG:HE	3:CC:140:ARG:HH21	1.58	0.51
3:AC:108:ASN:OD1	3:AC:110:ASN:HB2	2.11	0.51
13:AM:3:ARG:HB2	29:B4:34:GLU:HG2	1.92	0.51
1:AA:1442(A):G:H2'	51:BT:118:ARG:HD2	1.93	0.51
2:CB:87:ARG:O	2:CB:223:ILE:HD11	2.11	0.51
5:AE:51:VAL:CB	5:AE:52:PRO:HD3	2.30	0.51
2:AB:46:LYS:HG3	2:AB:49:GLU:OE1	2.11	0.51
22:CV:30:U:C2	22:CV:31:C:C5	2.99	0.51
56:BY:46:LYS:H	56:BY:62:GLU:CB	2.23	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:30:GLU:CG	38:BD:63:ARG:NE	2.71	0.51
47:BP:17:LYS:C	47:BP:19:VAL:H	2.12	0.51
27:D2:47:ASN:HD22	35:DA:94(A):G:H21	1.58	0.51
2:AB:14:GLY:C	2:AB:15:VAL:HG22	2.31	0.51
35:DA:1049:C:H2'	35:DA:1050:A:C8	2.45	0.51
35:BA:2789:C:H1'	35:BA:2892:A:C2	2.46	0.51
1:CA:1513:A:H2'	1:CA:1514:C:H6	1.73	0.51
20:CT:53:LEU:HD12	20:CT:100:ILE:CG2	2.41	0.51
1:AA:939:G:H5''	7:AG:102:ARG:NH1	2.25	0.51
20:AT:53:LEU:HD12	20:AT:100:ILE:CG2	2.40	0.51
50:BS:16:ASN:OD1	50:BS:17:ARG:N	2.44	0.51
35:DA:2406:U:O4	47:DP:70:GLN:HB3	2.09	0.51
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.10	0.51
39:DE:45:THR:O	39:DE:46:ALA:HB2	2.10	0.51
1:AA:956:U:O2'	1:AA:957:U:H5'	2.11	0.51
51:DT:57:PHE:O	51:DT:59:THR:HG23	2.10	0.51
11:CK:99:GLN:HG2	11:CK:105:VAL:HG21	1.93	0.51
1:AA:359:U:H2'	1:AA:360:A:H8	1.75	0.51
22:CY:78:A:C2	35:DA:2583:G:N3	2.79	0.51
37:BC:216:THR:HB	37:BC:222:SER:CB	2.40	0.51
36:DB:73:A:N6	57:DZ:29:TYR:CE2	2.70	0.51
27:B2:21:LEU:HD12	27:B2:64:LEU:HA	1.93	0.51
43:BI:15:VAL:O	43:BI:17:GLN:N	2.43	0.51
5:AE:36:ASP:O	5:AE:37:ARG:HG3	2.11	0.51
1:CA:10:A:OP2	5:CE:126:ARG:HB3	2.10	0.51
35:BA:848:G:H2'	35:BA:849:A:C8	2.45	0.51
39:DE:39:PRO:HA	39:DE:43:GLY:HA2	1.92	0.51
13:CM:73:GLU:O	13:CM:77:ASN:HB2	2.10	0.51
35:DA:2728:U:O2'	35:DA:2729:G:H5'	2.10	0.51
5:AE:18:ARG:HG2	5:AE:25:ARG:O	2.10	0.51
35:DA:748:G:C8	54:DW:89:ALA:HB1	2.45	0.51
1:AA:131:C:H2'	1:AA:132:C:C6	2.46	0.51
38:DD:241:PRO:O	38:DD:243:GLY:N	2.43	0.51
35:DA:1925:C:O2'	35:DA:1926:U:H5'	2.10	0.51
28:D3:36:VAL:HG23	28:D3:36:VAL:O	2.11	0.51
1:CA:369:C:O2	1:CA:369:C:H2'	2.09	0.51
43:BI:4:ILE:HG12	43:BI:18:VAL:CG2	2.40	0.51
22:AY:19:G:C4	22:AY:59:G:N2	2.79	0.51
22:CV:19:G:H1'	22:CV:62:U:C4	2.46	0.51
46:DO:77:ILE:HD11	51:DT:72:VAL:HG12	1.92	0.51
47:DP:61:ARG:HD2	47:DP:61:ARG:N	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1485:G:H2'	35:BA:1486:A:C8	2.45	0.51
31:D6:15:GLU:OE2	31:D6:44:ARG:NH2	2.44	0.51
1:AA:1408:A:H5'	35:BA:1912:A:C6	2.45	0.51
1:CA:1494:G:H4'	1:CA:1494:G:OP2	2.10	0.51
35:BA:1887:C:H3'	35:BA:1888:G:H5''	1.93	0.51
53:DV:51:VAL:CG1	53:DV:52:VAL:H	2.23	0.51
2:CB:80:ILE:HG21	2:CB:212:GLN:HA	1.92	0.51
51:BT:28:VAL:CG2	51:BT:46:GLU:HA	2.41	0.51
46:BO:77:ILE:HD11	51:BT:72:VAL:HG12	1.93	0.51
29:D4:1:MET:H1	36:DB:43:C:H4'	1.76	0.51
28:D3:8:LEU:HD12	28:D3:30:ARG:O	2.10	0.51
52:BU:91:ASP:CG	52:BU:96:ALA:HB2	2.31	0.51
1:CA:1279:A:H2	10:CJ:43:ARG:HH22	1.57	0.51
47:BP:146:VAL:O	47:BP:148:LEU:HG	2.11	0.51
49:DR:10:LEU:HD13	49:DR:17:ARG:NH1	2.26	0.51
49:DR:7:GLY:C	49:DR:8:ARG:HE	2.11	0.51
35:DA:2562:U:H2'	35:DA:2563:U:H5'	1.92	0.51
13:CM:92:HIS:HD2	13:CM:110:ARG:NH2	2.08	0.51
35:DA:1291:C:H2'	35:DA:1292:U:C6	2.46	0.51
57:DZ:149:SER:HB2	57:DZ:173:ALA:HA	1.92	0.51
47:DP:7:ARG:CB	47:DP:7:ARG:NH1	2.73	0.51
3:CC:58:GLU:O	3:CC:59:ARG:HG3	2.11	0.51
57:DZ:116:VAL:O	57:DZ:175:VAL:HG22	2.11	0.51
22:CY:35:U:C3'	22:CY:36:AG9:H15'	2.33	0.51
5:AE:6:PHE:HD1	5:AE:63:ARG:NH1	2.08	0.51
3:AC:55:VAL:O	3:AC:57:ILE:HG13	2.11	0.51
51:DT:34:VAL:CG1	51:DT:35:LYS:H	2.23	0.51
4:AD:126:ILE:O	4:AD:132:ARG:HB2	2.10	0.51
35:DA:1542:A:C3'	35:DA:1542:A:C8	2.91	0.51
2:AB:114:ARG:HA	2:AB:117:GLU:HB3	1.93	0.51
54:DW:2:GLU:HA	54:DW:64:MET:HE1	1.92	0.51
1:CA:190:U:H2'	1:CA:191:G:C8	2.45	0.51
46:BO:49:ARG:HA	46:BO:53:LYS:NZ	2.26	0.51
4:AD:152:SER:HA	4:AD:155:LEU:CG	2.41	0.51
51:BT:102:ILE:HB	51:BT:110:ILE:CD1	2.41	0.51
37:BC:15:VAL:CG1	37:BC:33:LEU:HD11	2.41	0.51
47:DP:71:VAL:HG13	47:DP:72:PRO:CD	2.41	0.51
30:D5:40:LYS:HE2	30:D5:46:CYS:CB	2.41	0.51
28:D3:52:HIS:CD2	28:D3:52:HIS:H	2.27	0.51
50:BS:90:GLY:O	50:BS:92:TYR:N	2.43	0.51
39:BE:45:THR:O	39:BE:46:ALA:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:6:GLY:C	13:AM:8:GLU:N	2.64	0.51
1:CA:1017:G:H2'	1:CA:1018:C:C6	2.46	0.51
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	1.92	0.51
1:AA:358:U:O2'	1:AA:359:U:H5'	2.11	0.51
40:DF:157:VAL:HG22	40:DF:194:MET:HG2	1.93	0.51
1:CA:170:U:H2'	1:CA:171:A:H8	1.75	0.51
35:DA:2248:C:C2'	35:DA:2249:U:H5'	2.40	0.51
35:BA:491:G:O2'	35:BA:492:A:H5'	2.10	0.51
57:BZ:15:PRO:O	57:BZ:19:ARG:HG3	2.11	0.51
12:CL:120:TYR:N	12:CL:120:TYR:CD1	2.77	0.51
35:DA:34:C:H41	35:DA:455:C:H5'	1.76	0.51
38:DD:125:ILE:HD13	38:DD:131:LEU:HD21	1.93	0.51
20:CT:93:GLU:O	20:CT:95:ALA:N	2.44	0.51
16:CP:58:TYR:C	16:CP:60:LEU:H	2.14	0.51
57:DZ:37:VAL:O	57:DZ:38:TYR:HB3	2.09	0.51
35:BA:185:U:H4'	35:BA:218:A:H4'	1.93	0.51
14:CN:12:ARG:C	14:CN:14:PRO:HD2	2.31	0.51
47:DP:127:ALA:HB3	47:DP:130:PHE:CE1	2.46	0.51
35:DA:653:A:H5'	35:DA:654:A:OP2	2.11	0.51
50:BS:48:LEU:N	50:BS:48:LEU:HD12	2.26	0.51
54:BW:56:ALA:O	54:BW:60:ASN:HB3	2.11	0.51
7:AG:71:PRO:HG3	7:AG:99:LEU:HD13	1.92	0.51
7:AG:95:ARG:HG2	7:AG:99:LEU:CD1	2.40	0.51
23:CW:41:C:O4'	23:CW:41:C:OP2	2.28	0.51
22:AV:12:U:N3	22:AV:26:G:C2	2.79	0.51
22:AV:51:G:OP1	22:AV:52:C:OP2	2.29	0.51
42:BH:41:MET:CG	42:BH:42:ARG:N	2.54	0.51
43:DI:113:ARG:CB	43:DI:113:ARG:HH11	2.18	0.51
23:CW:23:A:H5'	23:CW:24:A:OP1	2.11	0.51
23:CW:27:C:H5''	23:CW:28:G:OP1	2.11	0.51
12:CL:90:VAL:CG2	12:CL:99:HIS:HE2	2.24	0.51
38:BD:44:ASN:N	38:BD:44:ASN:OD1	2.43	0.51
12:AL:21:LYS:O	12:AL:23:LYS:N	2.44	0.51
10:AJ:97:GLU:C	10:AJ:98:ILE:HD12	2.31	0.51
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HG3	1.91	0.51
52:DU:90:VAL:HG21	53:DV:47:VAL:HG21	1.93	0.51
53:BV:39:LEU:HD22	53:BV:39:LEU:N	2.26	0.51
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.11	0.51
3:CC:9:GLY:HA3	14:CN:49:HIS:HA	1.93	0.51
57:DZ:107:THR:HG23	57:DZ:111:VAL:HB	1.91	0.51
26:D1:52:ARG:NH2	35:DA:2218:U:H1'	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:20:TYR:HA	8:CH:65:TYR:HE2	1.73	0.51
57:BZ:141:VAL:HG13	57:BZ:144:LEU:CD2	2.41	0.51
33:B8:31:HIS:HE1	35:BA:2392:A:OP2	1.93	0.51
3:AC:19:GLU:O	3:AC:56:ASP:HA	2.10	0.51
12:CL:72:GLY:C	12:CL:73:GLU:HG3	2.30	0.51
18:AR:23:LYS:HB2	18:AR:56:THR:O	2.11	0.51
3:AC:148:GLY:CA	3:AC:203:PHE:HB3	2.41	0.51
50:DS:13:ARG:CG	50:DS:14:VAL:N	2.74	0.51
42:BH:121:ILE:CD1	42:BH:144:VAL:HG21	2.41	0.51
39:BE:12:THR:O	39:BE:23:VAL:HG22	2.11	0.51
1:AA:1502:A:H2	1:AA:1505:G:C2	2.29	0.51
35:BA:2712:U:O2	35:BA:2712:U:H5'	2.10	0.51
35:DA:2846:G:H2'	35:DA:2847:U:O4'	2.11	0.51
1:AA:818:G:C3'	1:AA:819:A:H5''	2.40	0.51
1:CA:166:G:O2'	1:CA:167:G:H5'	2.11	0.51
35:BA:271(P):C:C2'	35:BA:271(Q):G:H5'	2.41	0.51
43:DI:48:GLU:OE2	43:DI:52:ARG:HD3	2.10	0.51
35:BA:2193:G:H2'	35:BA:2194:G:C8	2.46	0.51
22:CV:76:C:C2'	22:CV:77:C:C5'	2.89	0.51
35:BA:2222:G:O2'	35:BA:2223:G:H5'	2.10	0.51
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.11	0.51
42:DH:127:GLU:HG3	42:DH:130:ARG:HE	1.75	0.51
40:DF:160:ASN:HD21	40:DF:162:LEU:HB2	1.76	0.51
17:AQ:89:LEU:O	17:AQ:92:ARG:HB3	2.10	0.51
35:BA:350:U:H2'	35:BA:351:G:O4'	2.11	0.51
32:B7:35:ARG:HD3	35:BA:54:G:O2'	2.10	0.51
35:BA:1266:G:P	54:BW:15:ARG:HH22	2.34	0.51
35:BA:748:G:C8	54:BW:89:ALA:HB1	2.44	0.51
55:BX:56:THR:HG22	55:BX:79:ALA:HB2	1.92	0.51
46:DO:20:MET:HE3	46:DO:44:LYS:HE3	1.91	0.51
17:CQ:45:HIS:O	17:CQ:73:VAL:HG23	2.10	0.51
26:D1:56:GLN:HB3	26:D1:87:PRO:HB3	1.91	0.51
35:BA:2887:U:O2'	35:BA:2888:C:H5'	2.11	0.51
47:DP:99:LEU:HD23	47:DP:99:LEU:O	2.11	0.51
32:D7:19:ARG:HG2	32:D7:19:ARG:HH11	1.76	0.51
49:BR:75:LEU:O	49:BR:75:LEU:HD13	2.11	0.51
35:DA:2513:G:H2'	35:DA:2514:U:C6	2.46	0.51
47:DP:95:VAL:CG2	47:DP:125:VAL:HG23	2.41	0.51
22:CY:11:C:C2'	22:CY:12:U:H6	2.21	0.51
22:CY:30:U:C2	22:CY:31:C:C5	2.99	0.51
22:CY:4:C:O2'	22:CY:5:C:OP2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:68:A:C5	23:AW:69:G:C8	2.99	0.51
22:CV:10:G:C2	22:CV:28:G:H1'	2.45	0.51
22:CV:3:G:H1	22:CV:72:C:N4	2.09	0.51
30:B5:3:LYS:HZ2	30:B5:5:PRO:C	2.11	0.51
47:DP:33:ARG:O	47:DP:35:HIS:O	2.28	0.51
56:BY:74:PRO:O	56:BY:80:GLY:HA2	2.11	0.51
52:DU:83:LEU:H	52:DU:83:LEU:CD2	2.11	0.51
51:BT:124:ASP:HB3	51:BT:125:ARG:HH12	1.75	0.51
51:BT:33:LYS:HZ2	51:BT:74:ARG:NH2	2.09	0.51
52:BU:92:ARG:NH2	53:BV:10:LYS:CG	2.72	0.51
1:CA:472:A:O2'	16:CP:81:ARG:HA	2.10	0.51
35:BA:2787:C:H1'	39:BE:61:ARG:HD3	1.93	0.51
39:BE:50:GLY:HA2	39:BE:78:LEU:HB3	1.93	0.51
13:CM:90:LEU:O	13:CM:91:ARG:CG	2.58	0.51
5:AE:144:THR:OG1	5:AE:146:ALA:HB3	2.11	0.51
1:CA:448:A:P	1:CA:485:G:H22	2.33	0.51
57:DZ:125:LEU:HD12	57:DZ:126:VAL:H	1.76	0.51
26:D1:68:PRO:C	26:D1:70:VAL:H	2.12	0.51
35:DA:271(M):G:O2'	35:DA:271(O):C:H5'	2.11	0.51
33:D8:31:HIS:HE1	35:DA:2392:A:OP2	1.93	0.51
1:AA:266:G:H5''	1:AA:268:C:N4	2.15	0.51
39:BE:117:MET:O	39:BE:118:LYS:HB2	2.10	0.51
48:DQ:27:VAL:HG12	48:DQ:28:ALA:N	2.24	0.51
9:AI:85:LEU:HD13	9:AI:92:TYR:CD2	2.46	0.51
2:CB:162:ILE:O	2:CB:162:ILE:HG13	2.11	0.51
15:AO:78:TYR:O	15:AO:82:ILE:HG22	2.11	0.51
1:AA:406:G:N2	1:AA:437:U:H3	2.09	0.51
35:DA:2789:C:H1'	35:DA:2892:A:C2	2.46	0.51
35:BA:1541:G:H4'	35:BA:1542:A:O4'	2.11	0.51
39:DE:65:GLY:O	39:DE:67:PHE:N	2.43	0.51
51:BT:34:VAL:CG1	51:BT:35:LYS:N	2.74	0.51
19:AS:6:LYS:C	19:AS:7:LYS:HE3	2.32	0.51
7:CG:15:ASP:OD2	7:CG:18:TYR:HB2	2.10	0.51
41:DG:18:GLU:HG3	41:DG:18:GLU:O	2.09	0.51
38:DD:21:PHE:HB3	38:DD:24:ILE:CD1	2.38	0.51
35:DA:743:G:O2'	35:DA:744:G:H5'	2.11	0.51
54:DW:75:TYR:CE1	54:DW:104:THR:HB	2.46	0.51
35:DA:2122:U:H2'	35:DA:2123:G:H8	1.75	0.51
38:BD:21:PHE:HB3	38:BD:24:ILE:CD1	2.39	0.51
35:DA:276:A:OP1	35:DA:278:A:H1'	2.10	0.51
16:AP:5:ARG:CB	16:AP:67:THR:OG1	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:79:LEU:HD11	9:AI:83:ARG:NH2	2.25	0.51
50:BS:89:ARG:CG	50:BS:89:ARG:HH11	2.23	0.51
26:B1:66:HIS:C	26:B1:68:PRO:HD2	2.31	0.51
57:BZ:39:VAL:HG23	57:BZ:40:ASP:N	2.26	0.51
39:BE:80:GLU:O	39:BE:81:ILE:HD13	2.11	0.51
1:CA:14:U:O2	1:CA:17:U:H5	1.94	0.51
51:DT:54:ARG:NH1	51:DT:54:ARG:HG2	2.20	0.51
5:CE:137:GLU:HG3	5:CE:141:GLN:NE2	2.26	0.51
20:CT:51:GLU:HA	20:CT:54:LYS:HZ1	1.75	0.51
40:BF:157:VAL:HG22	40:BF:194:MET:HG2	1.92	0.51
35:DA:1666:G:C2'	35:DA:1667:G:H5'	2.40	0.51
35:BA:536:A:P	52:BU:53:ARG:HH11	2.34	0.51
35:DA:2672:G:H3'	35:DA:2673:G:H5''	1.91	0.51
14:CN:12:ARG:HB3	14:CN:12:ARG:HH11	1.74	0.51
7:AG:71:PRO:HD3	7:AG:103:TRP:HZ3	1.76	0.51
7:AG:95:ARG:HG2	7:AG:99:LEU:HD11	1.92	0.51
42:BH:119:GLU:HG2	42:BH:120:GLY:N	2.26	0.51
42:BH:84:SER:O	42:BH:85:LYS:HB2	2.11	0.51
35:DA:1472:A:H2'	35:DA:1473:G:O4'	2.11	0.51
1:CA:927:G:H8	1:CA:927:G:H5'	1.76	0.51
35:DA:1858:G:HO2'	35:DA:1859:A:H8	1.58	0.51
22:CY:29:A:H2'	22:CY:30:U:O4'	2.10	0.51
22:CY:3:G:H2'	22:CY:4:C:H5''	1.92	0.51
22:CY:73:C:O2'	22:CY:74:C:H5'	2.11	0.51
23:AW:74:C:C6	23:AW:74:C:C5'	2.92	0.51
23:AW:6:C:C2	23:AW:7:U:C5	2.99	0.51
57:BZ:184:ALA:C	57:BZ:186:GLU:HG3	2.29	0.51
23:CW:73:C:C3'	23:CW:74:C:C5'	2.85	0.51
23:CW:32:G:C6	23:CW:43:G:C6	2.99	0.51
14:AN:29:ARG:HG3	14:AN:29:ARG:HH11	1.76	0.51
22:CV:54:G:O2'	22:CV:55:G:H5'	2.11	0.51
22:CV:20:G:C2	22:CV:59:G:C4	2.99	0.51
23:AW:16:U:O2	23:AW:62:U:C4'	2.57	0.51
47:DP:40:SER:C	47:DP:41:ARG:HE	2.14	0.51
43:BI:126:TYR:O	43:BI:140:LEU:HB3	2.10	0.51
35:BA:1914:C:H2'	35:BA:1915:U:O4'	2.10	0.51
1:AA:147:G:H1	1:AA:175:C:H42	1.59	0.51
45:BN:133:GLN:O	45:BN:134:ARG:HB3	2.10	0.51
35:DA:993:G:OP1	52:DU:50:ARG:NH1	2.44	0.51
52:DU:92:ARG:NH1	53:DV:11:GLN:H	2.09	0.51
53:DV:52:VAL:O	53:DV:52:VAL:HG13	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:80:ILE:HG21	2:AB:212:GLN:HA	1.93	0.51
40:BF:133:ASN:N	40:BF:133:ASN:ND2	2.56	0.51
46:BO:71:ARG:NH2	46:BO:77:ILE:HG21	2.26	0.51
51:BT:23:ARG:O	51:BT:25:GLY:N	2.44	0.51
57:DZ:15:PRO:HA	57:DZ:18:LEU:HD13	1.93	0.51
35:BA:997:G:OP1	52:BU:93:LYS:HD3	2.11	0.51
47:BP:148:LEU:O	47:BP:149:GLU:HB2	2.11	0.51
49:DR:17:ARG:O	49:DR:17:ARG:HG2	2.11	0.51
19:CS:9:VAL:O	19:CS:9:VAL:HG12	2.11	0.51
50:BS:35:ILE:CG2	50:BS:53:SER:HB2	2.41	0.51
50:BS:59:LYS:HG2	50:BS:60:GLY:N	2.26	0.51
29:D4:13:ARG:HH11	29:D4:13:ARG:CB	2.15	0.51
29:B4:27:THR:O	29:B4:28:LYS:CB	2.58	0.51
22:CY:53:U:C2	22:CY:54:G:C8	2.98	0.51
2:CB:140:HIS:C	2:CB:143:GLU:HG2	2.31	0.51
35:BA:1639:U:H2'	35:BA:1640:C:C5'	2.39	0.51
37:BC:21:TYR:HB3	37:BC:25:GLU:HG3	1.92	0.51
3:CC:19:GLU:O	3:CC:56:ASP:HA	2.11	0.51
14:CN:29:ARG:HH11	14:CN:29:ARG:HG3	1.76	0.51
3:AC:76:VAL:HG23	3:AC:77:ILE:HG13	1.93	0.51
9:CI:96:LEU:O	9:CI:102:LEU:HB2	2.11	0.51
32:D7:8:ASN:ND2	32:D7:10:ARG:H	2.09	0.51
13:AM:23:TYR:CE2	13:AM:71:ARG:HB2	2.45	0.51
1:AA:224:C:H2'	1:AA:225:C:C6	2.46	0.51
57:DZ:3:TYR:O	57:DZ:58:VAL:HG23	2.11	0.51
57:DZ:4:ARG:NH1	57:DZ:58:VAL:HG11	2.25	0.51
35:BA:2789:C:H1'	35:BA:2892:A:H2	1.75	0.51
36:DB:55:U:H4'	41:DG:27:ASN:HD21	1.76	0.51
35:DA:1316:U:H2'	35:DA:1317:A:H8	1.76	0.51
38:BD:26:LYS:O	38:BD:27:THR:HG22	2.11	0.51
33:D8:32:LEU:O	33:D8:33:ASN:O	2.29	0.51
2:AB:138:LEU:O	2:AB:141:GLU:HB3	2.10	0.51
50:BS:24:LEU:HB3	50:BS:85:VAL:HG12	1.93	0.51
45:BN:120:LEU:HD22	45:BN:122:VAL:HG23	1.93	0.51
1:CA:606:G:H2'	1:CA:631:G:N2	2.26	0.51
1:AA:398:C:H2'	1:AA:399:G:C8	2.46	0.51
45:DN:4:TYR:HB2	52:DU:64:ARG:NH1	2.26	0.51
1:CA:1161:C:H2'	1:CA:1162:C:H6	1.76	0.51
57:DZ:52:SER:OG	57:DZ:53:ILE:N	2.44	0.51
35:BA:1429:G:H2'	35:BA:1430:C:C6	2.46	0.51
25:B0:40:GLN:HE21	25:B0:43:THR:HA	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:29:TYR:CE1	43:BI:33:ARG:NE	2.59	0.51
43:DI:10:GLU:OE1	43:DI:11:ASN:HB2	2.11	0.51
35:DA:922:U:H2'	35:DA:923:C:H6	1.76	0.51
1:AA:232:G:H2'	1:AA:233:C:C6	2.46	0.51
2:AB:52:GLU:HG2	2:AB:56:ARG:HH12	1.75	0.51
8:CH:30:ARG:O	8:CH:34:GLU:HG2	2.10	0.51
18:AR:73:ALA:CB	18:AR:79:LEU:HD12	2.40	0.51
35:BA:491:G:H2'	35:BA:492:A:C8	2.46	0.51
41:DG:40:ASN:ND2	41:DG:41:GLN:H	2.09	0.51
38:DD:76:PRO:HB2	38:DD:116:GLN:OE1	2.11	0.51
38:DD:76:PRO:O	38:DD:98:VAL:HG23	2.11	0.51
52:DU:66:ASN:ND2	52:DU:66:ASN:O	2.44	0.51
1:AA:837:G:O2'	1:AA:838:G:H5'	2.11	0.51
1:AA:1478:C:O2'	1:AA:1479:C:H5'	2.10	0.51
1:CA:261:U:OP1	20:CT:79:ARG:NH2	2.43	0.51
1:AA:751:U:C2'	1:AA:752:G:H5'	2.41	0.51
14:AN:13:THR:N	14:AN:14:PRO:CD	2.74	0.51
35:BA:118:A:OP2	35:BA:119:A:H5''	2.11	0.51
2:AB:79:ASP:C	2:AB:81:VAL:H	2.13	0.51
16:AP:69:THR:O	16:AP:69:THR:OG1	2.28	0.51
35:BA:324:A:N6	35:BA:338:G:O2'	2.41	0.51
38:BD:71:ASP:HB2	38:BD:103:ARG:HH22	1.75	0.51
22:CY:31:C:H42	22:CY:43:G:H1	1.58	0.51
22:AY:11:C:N4	22:AY:47:G:H22	2.07	0.51
22:AY:73:C:O2'	22:AY:74:C:H5'	2.11	0.51
57:BZ:179:ASP:H	57:BZ:182:LYS:NZ	2.09	0.51
22:CV:10:G:N2	22:CV:28:G:C1'	2.71	0.51
22:CV:71:G:N2	22:CV:72:C:N1	2.58	0.51
23:AW:53:U:O2	23:AW:66:G:C2	2.63	0.51
35:BA:2394:C:OP1	47:BP:63:PRO:CD	2.57	0.51
56:DY:81:LYS:CD	56:DY:97:ARG:HB3	2.37	0.51
43:DI:77:LEU:CD2	43:DI:141:LYS:HG2	2.41	0.51
23:CW:15:G:H2'	23:CW:61:A:N1	2.25	0.51
12:AL:84:LEU:HD12	12:AL:104:VAL:HG11	1.92	0.51
10:AJ:32:ALA:HB1	10:AJ:75:ILE:HD11	1.92	0.51
10:AJ:4:ILE:HD11	10:AJ:77:PRO:HB3	1.93	0.51
35:BA:548:A:H2'	35:BA:548:A:N3	2.26	0.51
35:DA:1887:C:H3'	35:DA:1888:G:H5''	1.92	0.51
29:B4:33:VAL:HG12	29:B4:34:GLU:N	2.26	0.51
46:BO:2:ILE:CD1	46:BO:82:ASN:ND2	2.73	0.51
51:BT:129:ARG:HH12	51:BT:131:ALA:CA	2.23	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:101:VAL:HG23	47:DP:102:ARG:N	2.25	0.51
52:BU:101:ARG:HH11	52:BU:101:ARG:HB2	1.76	0.51
41:DG:72:ARG:HA	41:DG:87:PRO:HG2	1.91	0.51
35:DA:1535:A:H5''	35:DA:1536:C:OP2	2.10	0.51
2:CB:52:GLU:HG2	2:CB:56:ARG:HH12	1.76	0.51
50:BS:35:ILE:CD1	50:BS:99:LYS:HE2	2.33	0.51
38:BD:35:LYS:CB	38:BD:35:LYS:HZ2	2.20	0.51
45:DN:78:TYR:CD1	45:DN:78:TYR:N	2.77	0.51
29:B4:26:SER:HB2	41:BG:143:GLU:OE2	2.11	0.51
3:AC:19:GLU:HG3	3:AC:54:ARG:NH1	2.26	0.51
5:CE:145:LYS:HG2	5:CE:149:GLU:CD	2.32	0.51
3:CC:46:GLU:O	3:CC:47:LEU:HB2	2.11	0.51
39:DE:9:VAL:HG13	39:DE:25:VAL:O	2.11	0.51
35:DA:1541:G:H1'	35:DA:1542:A:C5	2.46	0.51
1:CA:939:G:H5''	7:CG:102:ARG:NH1	2.26	0.51
35:DA:389:G:N1	47:DP:70:GLN:HG3	2.26	0.51
4:AD:61:LYS:HD3	4:AD:206:PHE:CE2	2.45	0.51
2:CB:74:LYS:O	2:CB:74:LYS:HG3	2.10	0.51
36:BB:11:C:OP2	36:BB:12:C:H5	1.94	0.51
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.46	0.51
50:DS:87:PHE:H	50:DS:106:ARG:HD3	1.76	0.51
35:BA:709:U:H2'	35:BA:710:G:H8	1.76	0.51
13:AM:10:PRO:O	13:AM:45:VAL:HG11	2.11	0.51
1:CA:599:C:O2'	1:CA:600:C:H5'	2.11	0.51
6:CF:84:ASN:O	6:CF:86:ARG:HG3	2.10	0.51
1:AA:608:A:H2'	1:AA:609:A:O4'	2.11	0.51
28:B3:52:HIS:CD2	28:B3:52:HIS:H	2.28	0.51
1:AA:691:G:H1'	1:AA:696:A:N6	2.26	0.51
16:AP:55:ARG:C	16:AP:57:ARG:H	2.13	0.51
35:DA:1151:G:H5''	52:DU:81:HIS:CE1	2.46	0.51
1:CA:336:C:O2'	1:CA:337:C:H5'	2.11	0.51
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.49	0.51
37:DC:54:ARG:HB3	37:DC:57:GLN:HB3	1.93	0.51
35:DA:1441:G:H4'	35:DA:1628:G:OP1	2.10	0.51
1:AA:1264:C:H2'	1:AA:1265:G:C8	2.45	0.51
35:BA:2842:G:O2'	35:BA:2843:G:H5'	2.11	0.51
40:DF:60:SER:OG	40:DF:61:GLY:N	2.44	0.51
1:CA:1469:G:H2'	1:CA:1470:G:H8	1.76	0.51
1:AA:1042:G:H2'	1:AA:1043:C:C6	2.46	0.51
35:BA:2267:A:H5''	35:BA:2268:A:H5'	1.93	0.51
1:AA:353:A:H5'	1:AA:353:A:H8	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:7:U:O2	23:CW:69:G:C4	2.65	0.50
23:CW:40:A:C6	23:CW:41:C:H2'	2.46	0.50
22:AV:20:G:C4	22:AV:59:G:C2	2.98	0.50
41:BG:83:ARG:CZ	41:BG:84:LYS:HE3	2.41	0.50
4:AD:10:ARG:O	4:AD:13:ARG:HB2	2.11	0.50
22:CV:24:A:H62	22:CV:48:G:N2	2.07	0.50
22:CV:3:G:H2'	22:CV:4:C:H5'	1.91	0.50
22:CV:19:G:C2'	22:CV:59:G:N2	2.73	0.50
51:DT:89:VAL:HG11	51:DT:91:ARG:NE	2.25	0.50
23:AW:23:A:C2	23:AW:50:C:N3	2.80	0.50
43:BI:77:LEU:HD22	43:BI:140:LEU:CA	2.37	0.50
35:BA:1190:G:H5'	47:BP:35:HIS:N	2.23	0.50
26:D1:29:GLY:O	26:D1:30:VAL:CG2	2.44	0.50
1:CA:1151:A:N3	10:CJ:39:PRO:HG3	2.26	0.50
35:DA:1888:G:N3	35:DA:1888:G:H5'	2.26	0.50
35:DA:2302:G:H1'	41:DG:128:ARG:CZ	2.41	0.50
31:B6:26:ASN:OD1	31:B6:27:LYS:N	2.43	0.50
13:AM:90:LEU:O	13:AM:91:ARG:CG	2.59	0.50
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.46	0.50
35:BA:1568:G:H21	38:BD:58:HIS:HE1	1.58	0.50
27:D2:16:LEU:O	27:D2:17:SER:HB3	2.11	0.50
3:CC:32:LEU:HB3	3:CC:59:ARG:NH2	2.25	0.50
57:DZ:104:PHE:HB3	57:DZ:141:VAL:CG2	2.41	0.50
26:B1:51:VAL:HG21	26:B1:74:VAL:CG2	2.41	0.50
42:BH:115:VAL:HG11	42:BH:148:ILE:HD13	1.93	0.50
51:BT:34:VAL:HG13	51:BT:39:ARG:HA	1.92	0.50
55:DX:12:VAL:HG23	55:DX:13:LEU:H	1.75	0.50
20:AT:23:ARG:O	20:AT:27:LYS:HB2	2.11	0.50
35:BA:2126:A:H5'	37:BC:38:PHE:CD2	2.46	0.50
1:AA:1314:C:C5	19:AS:6:LYS:HE2	2.39	0.50
42:DH:118:PRO:HG2	42:DH:121:ILE:HD12	1.93	0.50
13:AM:13:LYS:HA	13:AM:44:ARG:NH1	2.23	0.50
22:CY:1:G:H2'	22:CY:2:G:H8	1.75	0.50
35:BA:2405:G:O2'	35:BA:2406:U:P	2.68	0.50
9:CI:113:LYS:H	9:CI:119:ALA:HA	1.76	0.50
4:CD:79:PHE:CD2	4:CD:207:TYR:HD2	2.29	0.50
56:BY:95:LYS:NZ	56:BY:100:ALA:HB1	2.26	0.50
15:AO:23:GLY:O	15:AO:27:VAL:HB	2.11	0.50
26:D1:82:LEU:HD23	26:D1:82:LEU:O	2.10	0.50
51:DT:102:ILE:HB	51:DT:110:ILE:CD1	2.41	0.50
35:DA:99:U:H4'	35:DA:102:G:H1'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:84:ILE:HG22	13:CM:84:ILE:O	2.10	0.50
1:CA:1181:G:O2'	1:CA:1182:G:H5'	2.11	0.50
35:BA:1996:C:H5	46:BO:32:TYR:OH	1.94	0.50
8:AH:63:LEU:N	8:AH:63:LEU:HD22	2.27	0.50
36:BB:56:G:H4'	36:BB:57:A:H8	1.76	0.50
1:AA:724:G:O2'	1:AA:725:G:H5'	2.11	0.50
38:BD:131:LEU:HD13	38:BD:136:ILE:CG1	2.41	0.50
12:CL:120:TYR:N	12:CL:120:TYR:HD1	2.09	0.50
41:DG:12:TYR:HA	41:DG:16:ARG:CG	2.41	0.50
14:AN:12:ARG:C	14:AN:14:PRO:HD2	2.31	0.50
35:BA:2666:C:H5'	35:BA:2667:C:OP2	2.11	0.50
35:BA:57:C:H2'	35:BA:58:G:O4'	2.12	0.50
41:BG:168:GLU:O	41:BG:171:ALA:N	2.43	0.50
50:BS:25:ARG:CB	50:BS:25:ARG:HH11	2.25	0.50
4:CD:97:LEU:O	4:CD:97:LEU:HD23	2.11	0.50
35:BA:889:C:O2'	35:BA:890:A:O5'	2.27	0.50
1:CA:314:C:O2'	1:CA:315:A:H5'	2.11	0.50
1:CA:1319:A:H61	1:CA:1361:G:H21	1.59	0.50
22:CY:12:U:C2	22:CY:26:G:N2	2.79	0.50
48:DQ:51:ARG:HH21	48:DQ:52:VAL:CG2	2.24	0.50
22:AY:49:G:C3'	22:AY:50:C:C5'	2.86	0.50
22:AY:55:G:N2	57:BZ:183:LEU:HD23	2.27	0.50
23:CW:44:A:C3'	23:CW:45:U:H5''	2.41	0.50
23:CW:44:A:C6	23:CW:45:U:C5	2.99	0.50
22:CV:13:U:C2	22:CV:25:A:N1	2.79	0.50
23:AW:23:A:H5'	23:AW:24:A:OP1	2.10	0.50
29:B4:48:ARG:O	29:B4:49:PHE:HB2	2.11	0.50
23:AW:20:G:N2	23:AW:58:C:C2	2.79	0.50
23:AW:57:U:C2	23:AW:59:G:N7	2.80	0.50
47:DP:25:SER:O	47:DP:30:THR:HG23	2.11	0.50
43:BI:140:LEU:C	43:BI:140:LEU:HD23	2.31	0.50
43:BI:77:LEU:CD2	43:BI:141:LYS:HG2	2.39	0.50
23:CW:9:A:C5	23:CW:48:G:C2	2.99	0.50
47:BP:23:PRO:HB2	47:BP:33:ARG:NE	2.27	0.50
12:AL:82:VAL:HG23	12:AL:106:ASP:OD2	2.10	0.50
35:DA:1142(A):A:O2'	35:DA:1143:A:H3'	2.11	0.50
47:BP:102:ARG:HH11	47:BP:102:ARG:CB	2.23	0.50
51:BT:121:ILE:O	51:BT:124:ASP:HB2	2.11	0.50
51:BT:64:ARG:HA	51:BT:72:VAL:O	2.10	0.50
51:BT:89:VAL:HG11	51:BT:91:ARG:NE	2.26	0.50
45:BN:2:LYS:HZ2	52:BU:95:LEU:CD2	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:2:ALA:CB	13:CM:9:ILE:HG23	2.39	0.50
29:D4:6:HIS:C	29:D4:8:LYS:H	2.15	0.50
41:DG:10:LYS:HB3	41:DG:14:GLU:OE2	2.12	0.50
1:CA:473:G:H2'	1:CA:474:G:C8	2.44	0.50
56:BY:4:LYS:HD2	56:BY:32:PRO:CG	2.41	0.50
9:CI:65:VAL:HG21	9:CI:73:GLN:CB	2.32	0.50
50:DS:30:ARG:HH11	50:DS:35:ILE:HB	1.76	0.50
2:CB:46:LYS:HG3	2:CB:49:GLU:OE1	2.11	0.50
35:BA:1535:A:H5''	35:BA:1536:C:OP2	2.12	0.50
5:CE:144:THR:O	5:CE:145:LYS:C	2.49	0.50
35:DA:94:C:H5'	35:DA:94(A):G:OP2	2.12	0.50
47:DP:18:ARG:HB3	47:DP:18:ARG:NH1	2.25	0.50
26:B1:52:ARG:HH22	35:BA:2218:U:H1'	1.75	0.50
1:CA:127:G:N2	17:CQ:61:GLU:OE2	2.44	0.50
2:CB:114:ARG:HA	2:CB:117:GLU:HB3	1.93	0.50
41:DG:18:GLU:HG2	41:DG:175:LEU:HD22	1.92	0.50
1:CA:348:G:H2'	1:CA:349:A:H5'	1.92	0.50
1:CA:1206:G:H2'	1:CA:1207:G:O4'	2.12	0.50
49:BR:76:VAL:HG12	49:BR:77:ARG:N	2.26	0.50
35:BA:819:A:C4	35:BA:1189:A:C2	2.99	0.50
40:DF:110:LEU:HD13	40:DF:202:PHE:HE1	1.75	0.50
35:BA:1719:G:H2'	35:BA:1720:U:H5'	1.92	0.50
1:AA:879:C:O2'	1:AA:880:C:H5'	2.11	0.50
35:DA:2777:G:C5'	35:DA:2778:A:H5'	2.41	0.50
2:CB:194:PRO:HG2	2:CB:195:ASP:H	1.76	0.50
41:DG:145:THR:CG2	41:DG:148:MET:HB3	2.41	0.50
1:CA:142:G:H2'	1:CA:143:A:H8	1.76	0.50
41:DG:138:GLN:HE21	41:DG:149:VAL:HG23	1.75	0.50
35:DA:1372:U:H2'	35:DA:1373:A:H8	1.72	0.50
5:CE:126:ARG:NH1	5:CE:126:ARG:HG3	2.25	0.50
1:AA:1316:G:H4'	14:AN:18:VAL:CG1	2.41	0.50
14:CN:13:THR:N	14:CN:14:PRO:CD	2.75	0.50
14:AN:12:ARG:HB3	14:AN:12:ARG:HH11	1.76	0.50
38:BD:224:ALA:O	38:BD:225:ALA:HB2	2.11	0.50
39:BE:39:PRO:HA	39:BE:43:GLY:HA2	1.91	0.50
1:AA:499:A:H4'	1:AA:500:G:OP1	2.11	0.50
57:BZ:121:HIS:C	57:BZ:123:ASP:H	2.15	0.50
1:AA:781:A:H4'	1:AA:1522:U:O2'	2.11	0.50
1:AA:505:G:H2'	1:AA:506:G:H8	1.76	0.50
40:DF:113:ALA:HB1	40:DF:186:ILE:HG21	1.92	0.50
35:DA:2128:C:H2'	35:DA:2129:C:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1006:C:O2	45:DN:106:MET:HG2	2.11	0.50
4:AD:159:ARG:HH11	4:AD:159:ARG:HG3	1.75	0.50
7:AG:136:LYS:HB3	7:AG:136:LYS:NZ	2.27	0.50
23:AW:4:C:C2	23:AW:5:C:C5	2.99	0.50
41:DG:82:LEU:C	41:DG:83:ARG:HG3	2.30	0.50
51:DT:129:ARG:HH12	51:DT:131:ALA:CA	2.23	0.50
31:B6:16:CYS:O	31:B6:17:LYS:HB2	2.10	0.50
47:DP:38:GLN:CG	47:DP:39:LYS:N	2.71	0.50
43:DI:62:LYS:HE3	43:DI:133:HIS:O	2.12	0.50
23:CW:26:G:C5	23:CW:27:C:N4	2.79	0.50
12:CL:53:ARG:HH12	12:CL:92:ASP:HB3	1.75	0.50
47:BP:33:ARG:HG3	47:BP:34:GLY:H	1.75	0.50
57:DZ:81:ARG:CB	57:DZ:81:ARG:NH1	2.73	0.50
1:CA:1055:A:N3	3:CC:156:ARG:HD2	2.26	0.50
46:BO:64:ARG:NH1	51:BT:70:VAL:CG2	2.74	0.50
39:BE:52:LEU:HD22	39:BE:76:ARG:HD3	1.94	0.50
40:DF:34:TRP:HB2	47:DP:10:PRO:O	2.11	0.50
2:AB:187:LEU:HD11	2:AB:205:ASP:HA	1.93	0.50
37:BC:30:VAL:HG11	37:BC:42:VAL:CG2	2.38	0.50
35:BA:662:G:OP1	47:BP:18:ARG:CD	2.59	0.50
56:DY:51:VAL:C	56:DY:53:PRO:HD2	2.31	0.50
8:CH:11:THR:HA	8:CH:14:ARG:NH1	2.26	0.50
35:DA:1210:A:C8	35:DA:1210:A:H5'	2.46	0.50
13:CM:66:LEU:O	13:CM:70:LEU:HB3	2.11	0.50
42:DH:115:VAL:HG11	42:DH:148:ILE:CD1	2.42	0.50
4:AD:175:SER:OG	4:AD:186:LEU:HD21	2.11	0.50
40:BF:8:GLN:HG2	40:BF:126:VAL:HG12	1.92	0.50
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.47	0.50
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.11	0.50
38:BD:268:ARG:HH11	38:BD:268:ARG:CB	2.22	0.50
48:DQ:17:LEU:HD22	48:DQ:96:VAL:HG13	1.93	0.50
45:BN:67:LEU:O	45:BN:68:GLU:CB	2.59	0.50
23:AW:36:C:O2	23:AW:36:C:C2'	2.58	0.50
35:BA:2657:A:C2'	35:BA:2658:C:H5'	2.39	0.50
1:CA:532:A:N6	3:CC:193:TYR:CB	2.75	0.50
1:AA:191:G:C1'	20:AT:105:SER:HB3	2.42	0.50
35:BA:2415:G:O3'	47:BP:66:GLY:HA3	2.12	0.50
57:BZ:41:LEU:HD11	57:BZ:82:ARG:NH2	2.27	0.50
35:BA:412:A:N7	35:BA:2411:A:H2	2.09	0.50
9:AI:7:THR:HB	9:AI:83:ARG:NH1	2.26	0.50
35:DA:2162:G:H5'	35:DA:2173:A:H5'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:76:LYS:CB	48:BQ:91:GLU:HG3	2.40	0.50
35:DA:271(P):C:C2'	35:DA:271(Q):G:H5'	2.40	0.50
45:DN:120:LEU:HD22	45:DN:122:VAL:HG23	1.91	0.50
1:AA:955:U:H1'	1:AA:1227:A:N6	2.26	0.50
12:AL:7:ILE:CG2	12:AL:8:ASN:N	2.73	0.50
35:DA:1331:A:O2'	35:DA:1332:G:H8	1.93	0.50
37:BC:195:ARG:NH1	37:BC:195:ARG:HG3	2.26	0.50
27:B2:32:LEU:CD1	27:B2:36:ARG:HH12	2.25	0.50
43:DI:5:LEU:HD23	43:DI:36:ALA:HB2	1.94	0.50
40:BF:157:VAL:HA	40:BF:176:LEU:O	2.10	0.50
45:BN:65:LYS:O	45:BN:69:GLN:HG3	2.11	0.50
42:BH:127:GLU:CG	42:BH:130:ARG:HE	2.23	0.50
12:AL:120:TYR:N	12:AL:120:TYR:HD1	2.09	0.50
35:BA:979:G:H3'	35:BA:980:A:C5'	2.42	0.50
1:CA:1316:G:H4'	14:CN:18:VAL:CG1	2.41	0.50
56:BY:57:GLN:CG	56:BY:58:GLY:H	2.24	0.50
35:DA:239:U:H2'	35:DA:240:G:O4'	2.11	0.50
35:BA:2668:G:O2'	35:BA:2669:G:H5'	2.10	0.50
35:DA:1841:U:H2'	35:DA:1842:G:C8	2.46	0.50
35:BA:653:A:H5'	35:BA:654:A:OP2	2.10	0.50
35:BA:2701:C:H2'	35:BA:2702:U:H2'	1.93	0.50
46:BO:20:MET:HE3	46:BO:44:LYS:HE3	1.92	0.50
16:AP:19:ILE:HB	16:AP:37:GLY:O	2.11	0.50
42:DH:94:TYR:H	42:DH:94:TYR:HD1	1.58	0.50
7:AG:100:ALA:O	7:AG:104:LEU:HD23	2.11	0.50
22:CY:57:U:H5	57:DZ:181:GLU:O	1.90	0.50
23:AW:40:A:N1	23:AW:41:C:H2'	2.26	0.50
22:AY:25:A:H2'	22:AY:26:G:H8	1.70	0.50
23:CW:38:U:C2	23:CW:39:A:N7	2.79	0.50
22:AV:14:A:C5	22:AV:24:A:C6	2.99	0.50
22:AV:3:G:C2'	22:AV:4:C:H5"	2.41	0.50
51:DT:80:SER:OG	51:DT:81:PRO:HD3	2.11	0.50
51:DT:85:LYS:NZ	51:DT:85:LYS:CB	2.62	0.50
33:B8:21:LYS:HD3	33:B8:48:PHE:CZ	2.47	0.50
33:B8:62:LEU:N	33:B8:63:PRO:CD	2.74	0.50
43:DI:101:LEU:HD23	43:DI:109:ILE:HG12	1.92	0.50
12:CL:33:ARG:HB3	12:CL:85:ILE:HG22	1.92	0.50
12:CL:84:LEU:C	12:CL:84:LEU:HD23	2.32	0.50
12:AL:43:VAL:CG1	12:AL:55:VAL:HG21	2.41	0.50
10:AJ:5:ARG:HA	10:AJ:73:ASP:OD1	2.12	0.50
42:DH:41:MET:SD	42:DH:53:GLU:N	2.78	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:4:ILE:HB	10:CJ:74:ILE:HD11	1.93	0.50
10:CJ:4:ILE:HD11	10:CJ:77:PRO:HB3	1.93	0.50
23:CW:20:G:H4'	23:CW:21:U:OP2	2.11	0.50
35:BA:1884:A:O2'	35:BA:1885:A:H5''	2.11	0.50
53:DV:19:LYS:HG3	53:DV:20:LEU:N	2.26	0.50
53:DV:38:LEU:HD12	53:DV:57:VAL:HG12	1.92	0.50
53:DV:41:GLY:HA3	53:DV:45:THR:OG1	2.11	0.50
1:AA:1441:G:H5''	1:AA:1442:G:H5'	1.93	0.50
29:D4:2:LYS:HZ3	36:DB:39:A:H61	1.58	0.50
52:BU:90:VAL:HG21	53:BV:47:VAL:HG21	1.93	0.50
41:DG:125:PHE:CD1	41:DG:125:PHE:N	2.79	0.50
55:DX:64:LYS:NZ	55:DX:73:ARG:HE	2.10	0.50
1:CA:460:G:N2	1:CA:471:G:C8	2.79	0.50
31:B6:5:VAL:CG1	31:B6:7:ILE:HG22	2.42	0.50
39:BE:62:PRO:C	39:BE:64:LYS:N	2.65	0.50
1:AA:448:A:P	1:AA:485:G:H22	2.35	0.50
1:CA:1287:A:C2	1:CA:1353:G:H1'	2.47	0.50
1:AA:1287:A:C2	1:AA:1353:G:H1'	2.46	0.50
22:CV:36:AG9:C2'	22:CV:37:A:H5'	2.40	0.50
47:BP:84:ASN:C	47:BP:86:LYS:H	2.13	0.50
50:BS:66:ALA:O	50:BS:69:VAL:HG12	2.11	0.50
27:D2:48:HIS:NE2	35:DA:96:G:H4'	2.26	0.50
35:DA:2864:G:O2'	35:DA:2865:U:H5'	2.11	0.50
16:AP:28:ARG:HG2	16:AP:29:ASP:OD1	2.11	0.50
9:CI:37:PHE:CE2	9:CI:74:ILE:HG12	2.46	0.50
35:DA:2148:G:H2'	35:DA:2149:G:H8	1.77	0.50
35:DA:2811:G:H4'	39:DE:61:ARG:HH21	1.77	0.50
35:DA:705:A:C2	35:DA:727:A:H1'	2.47	0.50
38:DD:16:MET:CE	38:DD:208:LYS:HD3	2.41	0.50
42:BH:158:HIS:CD2	42:BH:170:ARG:HA	2.47	0.50
54:BW:75:TYR:CE1	54:BW:104:THR:HB	2.46	0.50
19:CS:6:LYS:C	19:CS:7:LYS:HE3	2.32	0.50
1:AA:1107:C:H2'	1:AA:1108:G:H5''	1.94	0.50
7:CG:152:ALA:O	7:CG:155:ARG:HG3	2.12	0.50
54:DW:73:ALA:HB3	54:DW:106:ILE:CD1	2.40	0.50
35:BA:1762:A:C8	35:BA:1762:A:O5'	2.64	0.50
42:DH:14:GLY:O	42:DH:29:PRO:HD3	2.12	0.50
5:AE:71:LEU:O	5:AE:72:GLN:CG	2.58	0.50
37:DC:14:LYS:HE3	37:DC:32:GLU:HB2	1.92	0.50
1:CA:376:G:O3'	16:CP:5:ARG:HD2	2.11	0.50
11:AK:105:VAL:HB	11:AK:108:ILE:HD11	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:401:C:OP2	4:AD:73:ARG:NH2	2.44	0.50
40:BF:206:ILE:HG22	40:BF:207:GLY:N	2.26	0.50
46:DO:49:ARG:HA	46:DO:53:LYS:NZ	2.26	0.50
41:BG:28:VAL:O	41:BG:31:VAL:HG12	2.11	0.50
37:BC:31:LYS:HZ1	37:BC:183:PRO:HD3	1.76	0.50
5:AE:43:LEU:HB2	5:AE:136:MET:SD	2.50	0.50
36:DB:52:A:O2'	36:DB:53:A:C8	2.64	0.50
35:BA:1805:U:O2	38:BD:50:THR:HB	2.12	0.50
1:CA:892:A:O2'	1:CA:893:C:H5'	2.11	0.50
4:CD:90:GLY:CA	4:CD:204:ILE:HD11	2.41	0.50
34:B9:9:ARG:HH12	34:B9:15:LYS:HA	1.76	0.50
34:D9:9:ARG:HH12	34:D9:15:LYS:HA	1.76	0.50
34:D9:9:ARG:NH1	34:D9:16:VAL:HG23	2.27	0.50
35:DA:923:C:O2'	35:DA:924:C:H5'	2.11	0.50
1:AA:648:A:H2'	1:AA:649:G:H8	1.77	0.50
1:AA:366:C:H4'	1:AA:367:U:OP1	2.12	0.50
43:DI:4:ILE:HG12	43:DI:18:VAL:HG22	1.93	0.50
55:BX:3:THR:HA	55:BX:6:ASP:HB2	1.94	0.50
14:AN:13:THR:HG22	14:AN:13:THR:O	2.11	0.50
35:DA:1138:G:H2'	35:DA:1139:G:O4'	2.11	0.50
40:BF:60:SER:OG	40:BF:61:GLY:N	2.43	0.50
35:BA:1925:C:O2'	35:BA:1926:U:H5'	2.12	0.50
38:BD:155:LEU:HD23	38:BD:177:LEU:CD2	2.41	0.50
46:DO:9:GLU:O	46:DO:83:ALA:HA	2.11	0.50
35:DA:394:A:O2'	35:DA:395:U:H5'	2.12	0.50
49:DR:99:LYS:HD3	49:DR:99:LYS:H	1.76	0.50
26:D1:69:LYS:O	26:D1:69:LYS:HG3	2.11	0.50
47:BP:99:LEU:O	47:BP:99:LEU:HD23	2.11	0.50
15:AO:63:ARG:HG2	15:AO:67:LEU:HD11	1.94	0.50
35:BA:999:U:H5''	35:BA:1154:G:O6	2.12	0.50
22:CY:45:U:H2'	22:CY:46:U:C6	2.47	0.50
57:DZ:182:LYS:O	57:DZ:183:LEU:HD23	2.10	0.50
23:CW:29:A:C5	23:CW:30:U:C5	2.99	0.50
22:AV:4:C:C4	22:AV:5:C:N4	2.80	0.50
33:D8:4:MET:O	33:D8:62:LEU:HD11	2.12	0.50
51:DT:28:VAL:HG22	51:DT:46:GLU:C	2.31	0.50
56:DY:31:LEU:CD2	56:DY:31:LEU:N	2.74	0.50
12:CL:75:HIS:HB2	12:CL:77:LEU:HG	1.92	0.50
1:CA:1053:G:C4'	1:CA:1054:C:C5'	2.78	0.50
52:DU:93:LYS:HD2	52:DU:93:LYS:H	1.76	0.50
53:DV:2:PHE:HB2	53:DV:42:GLY:CA	2.38	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:124:LYS:HD3	47:DP:143:GLY:CA	2.41	0.50
39:DE:4:ILE:CD1	39:DE:28:ALA:HB1	2.35	0.50
16:AP:50:LYS:HD3	16:AP:51:VAL:N	2.26	0.50
41:DG:5:VAL:HG21	41:DG:101:ILE:HG12	1.93	0.50
13:CM:91:ARG:CB	13:CM:98:VAL:HG13	2.40	0.50
50:DS:35:ILE:O	50:DS:53:SER:HB2	2.11	0.50
29:B4:25:TYR:HE1	41:BG:5:VAL:HG22	1.77	0.50
2:CB:187:LEU:HA	2:CB:201:ILE:O	2.10	0.50
28:B3:31:LEU:O	28:B3:32:GLN:HB2	2.12	0.50
45:BN:47:ALA:HB1	45:BN:116:LEU:HD21	1.94	0.50
35:BA:1242:A:N1	47:BP:8:PRO:HG3	2.26	0.50
47:BP:7:ARG:HH11	47:BP:7:ARG:CB	2.25	0.50
2:AB:187:LEU:HA	2:AB:201:ILE:O	2.12	0.50
1:AA:735:C:O2'	1:AA:736:C:H5'	2.12	0.50
35:BA:1210:A:C8	35:BA:1210:A:H5'	2.45	0.50
37:BC:166:ASN:HB3	37:BC:172:ILE:HB	1.94	0.50
35:DA:1639:U:H2'	35:DA:1640:C:C5'	2.40	0.50
5:CE:71:LEU:HD13	5:CE:114:GLY:O	2.10	0.50
5:CE:33:VAL:HG12	5:CE:34:VAL:N	2.26	0.50
9:CI:55:ALA:CA	9:CI:58:HIS:HD2	2.25	0.50
35:BA:2580:U:C5'	39:BE:131:ALA:HB2	2.38	0.50
35:DA:2789:C:H1'	35:DA:2892:A:H2	1.76	0.50
43:DI:27:ARG:CG	43:DI:27:ARG:HH11	2.22	0.50
36:BB:52:A:O2'	36:BB:53:A:C8	2.63	0.50
35:DA:2787:C:H1'	39:DE:61:ARG:CD	2.41	0.50
35:DA:2787:C:H1'	39:DE:61:ARG:HD3	1.94	0.50
19:CS:58:VAL:HG23	19:CS:58:VAL:O	2.10	0.50
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.46	0.50
35:BA:2162:G:O2'	35:BA:2163:C:H5'	2.11	0.50
4:CD:152:SER:HA	4:CD:155:LEU:CG	2.42	0.50
1:AA:319:G:O2'	1:AA:320:C:H5'	2.12	0.50
33:D8:34:TRP:CD2	33:D8:35:GLN:N	2.80	0.50
2:AB:142:LEU:HA	2:AB:145:LEU:CB	2.41	0.50
27:B2:63:VAL:CA	27:B2:66:GLU:HG3	2.38	0.50
8:AH:30:ARG:O	8:AH:34:GLU:HG2	2.11	0.50
38:BD:70:TRP:O	38:BD:73:VAL:HG23	2.11	0.50
57:BZ:81:ARG:O	57:BZ:81:ARG:HG3	2.11	0.50
27:B2:10:LEU:HB3	27:B2:14:ARG:NH1	2.26	0.50
35:BA:2012:G:H4'	54:BW:96:ILE:CD1	2.40	0.50
1:CA:1023:G:H2'	1:CA:1024:G:H5'	1.93	0.50
35:BA:922:U:H2'	35:BA:923:C:H6	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:523:C:O2'	35:BA:524:U:H5'	2.12	0.50
49:BR:32:GLY:C	49:BR:33:ARG:HD2	2.32	0.50
43:BI:111:PRO:HG2	43:BI:112:LYS:HD2	1.93	0.50
35:BA:2672:G:H3'	35:BA:2673:G:H5''	1.93	0.50
38:DD:131:LEU:HD13	38:DD:136:ILE:CG1	2.41	0.50
35:DA:1799:G:H5'	35:DA:1819:A:N6	2.26	0.50
26:D1:11:ARG:HB3	26:D1:11:ARG:NH1	2.27	0.50
45:BN:19:GLU:HG3	45:BN:20:GLY:N	2.27	0.50
1:AA:1174:G:H2'	1:AA:1175:G:H8	1.77	0.50
35:DA:863:A:O2'	35:DA:864:G:H5'	2.12	0.50
38:BD:129:ASN:O	38:BD:193:VAL:HG12	2.12	0.50
23:AW:68:A:C2	23:AW:69:G:C8	3.00	0.50
23:AW:7:U:C4	23:AW:68:A:N6	2.79	0.50
22:AY:45:U:H2'	22:AY:46:U:O4'	2.12	0.50
23:CW:74:C:O2	23:CW:74:C:C2'	2.59	0.50
23:CW:35:U:OP2	23:CW:35:U:H6	1.95	0.50
4:CD:30:LYS:CB	4:CD:35:ARG:HD2	2.42	0.50
35:BA:2313:C:C6	35:BA:2314:C:H5	2.30	0.50
22:CV:23:A:H3'	22:CV:48:G:O6	2.12	0.50
22:CV:69:G:C6	22:CV:70:G:C5	2.99	0.50
23:AW:12:U:H3	23:AW:26:G:H1	1.60	0.50
23:AW:57:U:H1'	23:AW:59:G:N7	2.27	0.50
33:D8:13:ARG:HD2	47:DP:61:ARG:HH11	1.77	0.50
7:CG:113:GLU:CB	7:CG:118:VAL:HG23	2.42	0.50
23:CW:10:G:C6	23:CW:27:C:H2'	2.45	0.50
57:BZ:175:VAL:HB	57:BZ:176:PRO:CD	2.39	0.50
1:AA:523:A:N6	12:AL:92:ASP:HB2	2.27	0.50
12:AL:64:TYR:HD1	12:AL:64:TYR:N	2.10	0.50
35:BA:1142(A):A:O2'	35:BA:1143:A:H3'	2.12	0.50
45:BN:126:PRO:O	45:BN:127:ASP:CB	2.59	0.50
40:BF:196:LEU:HD23	40:BF:196:LEU:O	2.12	0.50
42:DH:7:LEU:HD21	42:DH:69:ARG:NH1	2.26	0.50
45:DN:59:LYS:O	45:DN:60:ILE:C	2.50	0.50
35:DA:1886:C:H2'	35:DA:1887:C:H6	1.76	0.50
35:DA:833:U:H2'	35:DA:834:C:C6	2.46	0.50
52:BU:93:LYS:H	52:BU:93:LYS:HD2	1.76	0.50
29:D4:26:SER:OG	29:D4:27:THR:N	2.43	0.50
35:BA:2787:C:H1'	39:BE:61:ARG:CD	2.41	0.50
56:BY:2:ARG:O	56:BY:4:LYS:HG2	2.11	0.50
2:CB:54:THR:HG22	2:CB:58:ILE:HD11	1.94	0.50
35:BA:2801(A):A:C4'	35:BA:2802:G:H2'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:57:ALA:C	41:BG:59:GLU:H	2.15	0.50
47:DP:85:LEU:CD2	47:DP:85:LEU:H	2.16	0.50
50:BS:35:ILE:H	50:BS:53:SER:CB	2.25	0.50
39:DE:116:VAL:HG22	39:DE:122:PHE:CG	2.47	0.50
5:CE:70:PRO:O	5:CE:77:PRO:HD3	2.11	0.50
3:CC:54:ARG:HH11	3:CC:54:ARG:HG2	1.76	0.50
27:D2:47:ASN:ND2	35:DA:94(A):G:N2	2.60	0.50
48:DQ:133:ARG:HH11	48:DQ:133:ARG:HG3	1.76	0.50
30:D5:48:GLU:O	30:D5:49:CYS:CB	2.58	0.50
38:DD:35:LYS:HZ2	38:DD:35:LYS:CB	2.22	0.50
2:CB:12:GLU:C	2:CB:14:GLY:N	2.65	0.50
35:DA:528:A:N1	35:DA:2043:C:O5'	2.44	0.50
35:BA:1049:C:N4	35:BA:1111:A:C2	2.79	0.50
1:CA:1104:G:H2'	1:CA:1105:A:C8	2.41	0.50
41:DG:132:ASN:HA	41:DG:157:ILE:O	2.12	0.50
43:BI:22:LYS:O	43:BI:23:PRO:C	2.50	0.50
50:DS:12:PHE:O	50:DS:14:VAL:HG23	2.11	0.50
35:BA:94:C:H5'	35:BA:94(A):G:OP2	2.11	0.50
47:DP:123:LEU:C	47:DP:123:LEU:HD12	2.32	0.50
42:DH:29:PRO:HD2	42:DH:79:VAL:O	2.12	0.50
16:AP:67:THR:CG2	16:AP:68:ASP:N	2.74	0.50
18:AR:36:ASN:HB3	18:AR:39:VAL:CB	2.40	0.50
9:CI:111:ARG:O	9:CI:113:LYS:HD2	2.12	0.50
1:CA:545:C:O2'	1:CA:546:G:H5'	2.11	0.50
33:D8:37:SER:O	33:D8:39:LYS:N	2.44	0.50
35:DA:2162:G:O2'	35:DA:2163:C:H5'	2.11	0.50
57:BZ:12:GLY:O	57:BZ:13:GLU:C	2.50	0.50
35:BA:1339:G:N2	35:BA:1603:A:H1'	2.27	0.50
42:BH:74:ASN:OD1	42:BH:138:LYS:HE3	2.11	0.50
3:AC:5:ILE:HD13	3:AC:5:ILE:O	2.12	0.50
6:CF:8:ILE:CG2	6:CF:9:VAL:N	2.75	0.50
56:DY:95:LYS:NZ	56:DY:100:ALA:HB1	2.27	0.50
40:DF:157:VAL:CG2	40:DF:194:MET:HG2	2.41	0.50
38:DD:221:VAL:HG22	38:DD:226:MET:CE	2.39	0.50
22:CV:76:C:H2'	22:CV:77:C:H5''	1.92	0.50
34:D9:18:ARG:HD2	35:DA:1034:G:H5'	1.92	0.50
37:DC:216:THR:HB	37:DC:222:SER:CB	2.42	0.50
1:CA:203:U:H5''	1:CA:204:U:OP1	2.12	0.50
1:CA:867:G:H2'	1:CA:868:C:C6	2.46	0.50
17:AQ:97:SER:C	17:AQ:98:LEU:HD12	2.32	0.50
37:BC:54:ARG:HB3	37:BC:57:GLN:HB3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:79:GLU:N	5:AE:79:GLU:OE1	2.44	0.50
2:AB:23:ARG:O	2:AB:23:ARG:HG3	2.12	0.50
35:BA:1638:C:H4'	35:BA:2710:C:O2	2.12	0.50
46:BO:80:ASP:O	46:BO:81:ASP:HB3	2.11	0.50
35:DA:2567:G:H2'	35:DA:2568:C:C6	2.47	0.50
35:BA:2502:G:H5''	35:BA:2503:A:H5''	1.93	0.50
17:AQ:13:ASP:C	17:AQ:15:MET:H	2.15	0.50
35:BA:2340:G:O2'	35:BA:2341:G:H5'	2.11	0.50
1:AA:12:U:H4'	1:AA:526:C:H4'	1.94	0.50
1:CA:751:U:C2'	1:CA:752:G:H5'	2.41	0.50
22:CY:42:C:H2'	22:CY:43:G:H8	1.77	0.50
22:CY:5:C:C4	22:CY:6:C:N4	2.80	0.50
35:BA:2875:C:C4'	51:BT:5:ALA:HB2	2.39	0.50
43:BI:123:LEU:HD23	43:BI:124:GLY:N	2.27	0.50
12:CL:88:GLY:H	12:CL:98:TYR:HA	1.75	0.50
12:AL:88:GLY:H	12:AL:98:TYR:HA	1.77	0.50
10:CJ:30:SER:HB3	10:CJ:81:THR:HA	1.93	0.50
45:DN:15:LEU:CB	45:DN:134:ARG:HB2	2.33	0.50
35:BA:2864:G:OP1	51:BT:119:LYS:HD2	2.12	0.50
51:BT:65:LYS:NZ	51:BT:65:LYS:CA	2.70	0.50
52:BU:112:ARG:HH12	53:BV:46:VAL:CG1	2.22	0.50
53:BV:2:PHE:HB2	53:BV:42:GLY:CA	2.41	0.50
41:DG:101:ILE:HG22	41:DG:105:LYS:NZ	2.26	0.50
43:DI:74:ASN:O	43:DI:76:THR:N	2.38	0.50
49:BR:10:LEU:HD22	49:BR:17:ARG:CD	2.36	0.50
10:AJ:61:GLU:HG3	14:AN:58:LYS:HE2	1.93	0.50
47:DP:7:ARG:CB	47:DP:7:ARG:HH11	2.24	0.50
39:DE:117:MET:O	39:DE:118:LYS:HB2	2.12	0.50
3:AC:54:ARG:HG2	3:AC:54:ARG:HH11	1.77	0.50
42:BH:149:ARG:HA	42:BH:162:ILE:CG1	2.40	0.50
46:DO:107:ARG:CZ	51:DT:35:LYS:HD2	2.41	0.50
13:AM:68:GLY:H	13:AM:71:ARG:HB3	1.75	0.50
1:CA:221:C:H2'	1:CA:222:U:H6	1.76	0.50
1:CA:1106:G:H5''	3:CC:172:ARG:CD	2.42	0.50
55:DX:12:VAL:HG11	55:DX:27:THR:OG1	2.12	0.50
1:CA:781:A:H2'	1:CA:782:A:H5'	1.94	0.50
41:DG:172:LEU:HA	41:DG:175:LEU:HB2	1.93	0.50
41:DG:15:VAL:HG13	41:DG:175:LEU:HD13	1.93	0.50
9:CI:26:VAL:CG2	9:CI:61:ALA:HB3	2.38	0.50
35:BA:1317:A:H2'	35:BA:1318:C:C6	2.47	0.50
5:AE:67:VAL:HG22	5:AE:68:GLU:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:363(F):A:O2'	35:DA:364:C:C5	2.63	0.50
37:DC:33:LEU:O	37:DC:220:GLY:HA3	2.11	0.50
35:DA:2177:C:H1'	37:DC:45:HIS:CB	2.42	0.50
48:BQ:31:ASP:O	48:BQ:133:ARG:O	2.30	0.50
35:DA:1573:G:C2'	35:DA:1574:C:H5'	2.41	0.50
6:CF:28:ARG:HG3	6:CF:28:ARG:NH1	2.21	0.50
42:DH:97:ARG:O	42:DH:103:LEU:HD12	2.12	0.50
11:AK:102:GLY:O	11:AK:103:LEU:HD22	2.12	0.50
1:CA:608:A:H2'	1:CA:609:A:O4'	2.11	0.50
1:CA:297:G:N2	1:CA:300:A:OP2	2.41	0.50
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.46	0.50
35:DA:2779:U:H4'	35:DA:2780:G:C5'	2.42	0.50
48:BQ:84:GLY:O	48:BQ:85:LYS:HB2	2.11	0.50
40:BF:46:ARG:NH1	40:BF:46:ARG:HG3	2.26	0.50
1:AA:452:A:H4'	16:AP:72:ARG:NH1	2.27	0.50
1:CA:952:U:H2'	1:CA:953:G:C8	2.46	0.50
35:BA:680:G:O2'	35:BA:681:G:H5'	2.12	0.50
35:BA:2648:C:H2'	35:BA:2649:U:C6	2.46	0.50
35:BA:1668:A:H4'	35:BA:1669:A:O5'	2.12	0.50
35:BA:2267:A:H5''	35:BA:2268:A:C5'	2.42	0.50
6:AF:5:GLU:HG3	6:AF:93:SER:OG	2.12	0.50
2:AB:224:GLN:HB2	2:AB:229:VAL:HG22	1.92	0.50
35:DA:2322:A:H2'	35:DA:2323:G:O4'	2.12	0.50
1:CA:1059:C:OP2	3:CC:199:LYS:NZ	2.40	0.50
48:DQ:60:ARG:HA	57:DZ:179:ASP:HA	1.92	0.50
23:AW:4:C:C4	23:AW:5:C:N4	2.80	0.50
23:CW:71:G:N1	23:CW:72:C:C5	2.80	0.50
1:CA:427:U:C3'	1:CA:428:G:H5''	2.39	0.50
22:AV:57:U:O2	22:AV:59:G:C8	2.65	0.50
23:AW:15:G:N7	23:AW:61:A:C2	2.79	0.50
47:BP:57:THR:HB	47:BP:59:LEU:N	2.26	0.50
43:DI:91:SER:OG	43:DI:119:PRO:HB2	2.12	0.50
43:BI:110:ASP:CB	43:BI:113:ARG:HB2	2.42	0.50
12:AL:47:LYS:CE	12:AL:48:PRO:HD3	2.42	0.50
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.59	0.50
10:AJ:6:ILE:HG22	10:AJ:98:ILE:CG1	2.26	0.50
53:BV:38:LEU:HD12	53:BV:57:VAL:HG12	1.93	0.50
41:DG:73:ALA:N	41:DG:87:PRO:HG3	2.26	0.50
5:AE:145:LYS:HG2	5:AE:149:GLU:CD	2.32	0.50
50:DS:35:ILE:HG23	50:DS:53:SER:HB2	1.94	0.50
26:D1:68:PRO:O	26:D1:70:VAL:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:52:GLU:CG	2:CB:56:ARG:HH12	2.24	0.50
2:CB:54:THR:HG22	2:CB:58:ILE:CD1	2.42	0.50
27:B2:16:LEU:O	27:B2:17:SER:CB	2.59	0.50
22:AY:52:C:C2	22:AY:53:U:C4	2.99	0.50
50:BS:35:ILE:HG23	50:BS:53:SER:HB2	1.94	0.50
50:BS:54:LEU:C	50:BS:56:LEU:H	2.14	0.50
39:DE:201:THR:OG1	39:DE:202:LYS:N	2.45	0.50
48:DQ:42:ILE:HG22	48:DQ:47:ILE:HG13	1.93	0.50
54:BW:2:GLU:HA	54:BW:64:MET:HE1	1.92	0.50
1:AA:373:A:N3	1:AA:374:A:C8	2.80	0.50
9:CI:85:LEU:HD12	9:CI:86:VAL:N	2.27	0.50
9:AI:37:PHE:CE2	9:AI:74:ILE:HG12	2.47	0.50
35:BA:1040:C:N4	35:BA:1115:G:H1	2.07	0.50
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.12	0.50
51:BT:38:ASN:O	51:BT:38:ASN:ND2	2.45	0.50
7:AG:152:ALA:O	7:AG:155:ARG:HG3	2.11	0.50
2:AB:24:TRP:HD1	2:AB:24:TRP:H	1.60	0.50
19:CS:6:LYS:N	19:CS:6:LYS:CD	2.75	0.50
46:DO:10:VAL:HG23	46:DO:10:VAL:O	2.11	0.50
1:CA:532:A:C2	1:CA:1207:G:H4'	2.47	0.50
33:D8:33:ASN:HA	33:D8:36:LYS:CD	2.42	0.50
1:AA:1292:U:H5'	9:AI:38:GLN:HE22	1.75	0.50
35:BA:2846:G:H2'	35:BA:2847:U:O4'	2.12	0.50
50:BS:92:TYR:CG	50:BS:93:LYS:N	2.76	0.50
26:B1:67:ILE:N	26:B1:68:PRO:HD2	2.27	0.50
1:CA:585:G:N3	1:CA:879:C:H4'	2.27	0.50
4:CD:74:GLN:CA	4:CD:77:ASN:HD22	2.24	0.50
1:AA:166:G:O2'	1:AA:167:G:H5'	2.11	0.50
1:AA:797:C:O2'	1:AA:798:G:H5'	2.12	0.50
35:BA:1155:A:OP2	52:BU:58:ARG:NH1	2.45	0.50
35:BA:2208:A:H1'	35:BA:2219:G:C5	2.47	0.50
56:DY:88:LYS:O	56:DY:90:LEU:HD23	2.12	0.50
1:CA:1423:G:H2'	1:CA:1424:C:H6	1.77	0.50
1:CA:695:A:H61	1:CA:797:C:H1'	1.77	0.50
1:CA:398:C:H2'	1:CA:399:G:C8	2.47	0.50
35:BA:1856:G:O2'	35:BA:1857:G:H5'	2.12	0.50
55:DX:3:THR:HA	55:DX:6:ASP:HB2	1.94	0.50
54:BW:50:VAL:HG22	54:BW:50:VAL:O	2.12	0.50
54:DW:50:VAL:O	54:DW:50:VAL:HG22	2.11	0.50
35:BA:1149:G:H2'	35:BA:1150:C:C6	2.46	0.50
2:CB:82:ARG:HG3	2:CB:92:TYR:OH	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:82:ARG:HG3	2:AB:92:TYR:OH	2.12	0.50
35:DA:999:U:H5'	35:DA:1154:G:O6	2.11	0.50
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.77	0.50
36:DB:17:C:C2'	36:DB:18:G:H5'	2.41	0.50
36:DB:106:G:C5'	57:DZ:31:ARG:HG2	2.42	0.50
35:DA:80:G:O2'	35:DA:81:G:H5'	2.11	0.50
22:CY:4:C:H42	22:CY:72:C:H5	1.60	0.50
23:AW:42:C:H2'	23:AW:43:G:H5'	1.93	0.50
22:AV:3:G:H2'	22:AV:4:C:H5'	1.94	0.50
22:AV:6:C:C2	22:AV:70:G:C2	3.00	0.50
51:BT:30:VAL:HG21	51:BT:84:GLN:H	1.76	0.50
23:AW:25:A:C3'	23:AW:26:G:H8	2.24	0.50
56:DY:27:VAL:HA	56:DY:28:LYS:NZ	2.17	0.50
23:AW:20:G:H4'	23:AW:21:U:OP2	2.12	0.50
42:BH:7:LEU:HD21	42:BH:69:ARG:NH1	2.27	0.50
43:DI:129:THR:CG2	43:DI:135:GLU:HG3	2.41	0.50
43:DI:83:ALA:CA	43:DI:88:ILE:HG23	2.42	0.50
43:BI:124:GLY:H	43:BI:142:VAL:HG11	1.77	0.50
12:CL:64:TYR:N	12:CL:64:TYR:CD1	2.80	0.50
35:DA:1914:C:H2'	35:DA:1915:U:O4'	2.11	0.50
23:CW:57:U:C2'	23:CW:59:G:N7	2.75	0.50
35:DA:2112:G:O2'	35:DA:2113:U:H5'	2.12	0.50
52:DU:65:ILE:CD1	52:DU:96:ALA:HB3	2.42	0.50
52:DU:61:TRP:CE2	52:DU:94:ASN:HA	2.47	0.50
42:BH:44:VAL:HG12	42:BH:45:VAL:H	1.75	0.50
13:AM:7:VAL:O	13:AM:9:ILE:HD12	2.12	0.50
22:CV:1:G:H2'	22:CV:2:G:H8	1.77	0.50
51:BT:28:VAL:HG13	51:BT:46:GLU:CA	2.41	0.50
1:AA:1278:U:H4'	1:AA:1279:A:C8	2.47	0.50
35:DA:2301:C:H2'	35:DA:2302:G:O4'	2.12	0.50
13:CM:3:ARG:NH2	41:DG:113:ARG:CB	2.74	0.50
41:DG:72:ARG:CB	41:DG:87:PRO:HD2	2.42	0.50
35:BA:271(M):G:O2'	35:BA:271(O):C:H5'	2.11	0.50
47:BP:40:SER:C	47:BP:41:ARG:HE	2.14	0.50
47:DP:84:ASN:C	47:DP:86:LYS:H	2.14	0.50
35:BA:1240:U:O2'	35:BA:1241:A:H5'	2.11	0.50
47:DP:9:ASN:N	47:DP:10:PRO:HD2	2.10	0.50
48:DQ:130:LYS:NZ	57:DZ:80:ARG:HA	2.27	0.50
48:DQ:63:LYS:HE2	57:DZ:118:GLN:NE2	2.27	0.50
1:CA:389:A:H2'	1:CA:390:C:H5'	1.94	0.50
9:AI:99:LEU:O	9:AI:101:PHE:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:102:LEU:C	9:AI:102:LEU:HD23	2.32	0.50
1:AA:221:C:H2'	1:AA:222:U:H6	1.75	0.50
35:BA:1448:G:N3	35:BA:1528(A):A:H2	2.09	0.50
3:CC:148:GLY:CA	3:CC:203:PHE:HB3	2.42	0.50
23:AW:64:C:O5'	23:AW:64:C:H6	1.95	0.50
35:BA:951:C:O2'	35:BA:952:G:H5'	2.12	0.50
7:CG:152:ALA:C	7:CG:154:TYR:H	2.15	0.50
2:CB:142:LEU:HA	2:CB:145:LEU:CB	2.42	0.50
26:D1:19:GLN:HE21	26:D1:19:GLN:CA	2.17	0.50
39:DE:24:THR:HG21	39:DE:188:VAL:CG1	2.37	0.50
57:BZ:18:LEU:O	57:BZ:23:LYS:HB2	2.12	0.50
6:AF:68:PRO:HG3	6:AF:71:ARG:NH2	2.27	0.50
6:AF:8:ILE:HA	6:AF:87:ARG:O	2.12	0.50
51:DT:58:ASN:N	51:DT:58:ASN:HD22	2.09	0.50
39:BE:165:VAL:O	39:BE:189:PRO:HG3	2.11	0.50
35:DA:2377:A:H4'	50:DS:107:GLU:HG3	1.94	0.50
7:CG:73:MET:HG2	7:CG:90:GLU:HA	1.93	0.50
35:DA:570:G:H2'	35:DA:2030:A:C6	2.47	0.50
35:BA:2869:G:H2'	35:BA:2870:C:H6	1.75	0.50
35:BA:491:G:H2'	35:BA:492:A:H8	1.76	0.50
16:AP:58:TYR:C	16:AP:60:LEU:H	2.15	0.50
35:DA:57:C:H2'	35:DA:58:G:O4'	2.12	0.50
35:BA:2001:A:H2'	35:BA:2002:G:C8	2.47	0.50
28:D3:46:ASN:O	28:D3:50:VAL:HG22	2.12	0.50
35:DA:2138:C:H2'	35:DA:2139:C:C6	2.47	0.50
29:D4:47:GLN:O	29:D4:48:ARG:HB3	2.11	0.50
35:DA:1419:A:O2'	35:DA:1420:U:H5''	2.12	0.50
1:CA:726:C:O2'	1:CA:727:G:H5'	2.12	0.50
35:DA:1165:U:O2'	35:DA:1166:C:H5'	2.12	0.50
1:CA:278:G:O4'	1:CA:282:A:H1'	2.12	0.50
32:D7:47:ARG:HH11	55:DX:60:ARG:HH21	1.60	0.50
35:DA:350:U:H2'	35:DA:351:G:O4'	2.12	0.50
35:DA:902:C:H2'	35:DA:903:C:C6	2.46	0.50
42:BH:94:TYR:HD1	42:BH:94:TYR:H	1.60	0.50
52:DU:60:LEU:O	52:DU:60:LEU:HD22	2.12	0.50
16:AP:25:ARG:HH11	16:AP:25:ARG:HG3	1.76	0.50
25:B0:74:ARG:HG3	25:B0:74:ARG:HH11	1.76	0.50
48:DQ:51:ARG:HH21	48:DQ:52:VAL:HG23	1.77	0.49
23:AW:70:G:C6	23:AW:71:G:C5	2.99	0.49
48:BQ:59:ARG:HG3	48:BQ:59:ARG:O	2.12	0.49
23:CW:74:C:C5'	23:CW:74:C:C6	2.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:4:C:C2	22:AV:5:C:C6	3.01	0.49
22:AV:70:G:C4	22:AV:71:G:C8	2.99	0.49
22:CV:3:G:N2	22:CV:4:C:C2	2.80	0.49
35:BA:2014:A:H2'	35:BA:2015:A:C8	2.47	0.49
51:DT:121:ILE:O	51:DT:124:ASP:HB2	2.11	0.49
35:DA:1484:G:C3'	35:DA:1485:G:H5''	2.42	0.49
35:DA:1484:G:N2	35:DA:1505:C:H42	2.10	0.49
35:BA:1484:G:C3'	35:BA:1485:G:H5''	2.42	0.49
23:CW:11:C:H2'	23:CW:12:U:C1'	2.41	0.49
23:CW:48:G:O5'	23:CW:49:G:OP2	2.30	0.49
12:AL:41:ARG:C	12:AL:41:ARG:HD2	2.32	0.49
25:D0:10:THR:HG21	35:DA:2277:G:OP2	2.11	0.49
13:CM:7:VAL:O	13:CM:9:ILE:HD12	2.11	0.49
39:BE:63:LEU:O	39:BE:65:GLY:N	2.45	0.49
35:BA:1999:C:H5''	35:BA:2723:C:O2'	2.11	0.49
13:CM:86:CYS:C	13:CM:88:ARG:H	2.15	0.49
56:BY:13:VAL:CG1	56:BY:28:LYS:HD3	2.41	0.49
5:AE:144:THR:O	5:AE:145:LYS:C	2.48	0.49
35:DA:558:G:OP2	45:DN:111:PRO:HD2	2.11	0.49
22:CV:44:A:C6	22:CV:45:U:C5	3.00	0.49
30:B5:51:TYR:OH	30:B5:52:TYR:HD2	1.95	0.49
27:D2:55:ARG:O	27:D2:58:ALA:HB3	2.12	0.49
48:DQ:134:ARG:CZ	57:DZ:122:ARG:NE	2.73	0.49
9:AI:4:TYR:O	9:AI:18:PHE:HA	2.12	0.49
13:CM:23:TYR:CE2	13:CM:71:ARG:HB2	2.47	0.49
1:CA:373:A:N3	1:CA:374:A:C8	2.80	0.49
17:AQ:50:LYS:HG3	17:AQ:51:TYR:CE1	2.47	0.49
52:BU:108:GLU:CG	53:BV:44:LYS:HD3	2.37	0.49
55:BX:12:VAL:HG11	55:BX:27:THR:OG1	2.11	0.49
51:BT:34:VAL:CG1	51:BT:35:LYS:H	2.24	0.49
35:BA:1682:G:H5'	35:BA:1762:A:O2'	2.12	0.49
11:AK:22:HIS:HB3	11:AK:29:ILE:CG2	2.41	0.49
42:BH:28:GLY:HA3	42:BH:79:VAL:HB	1.93	0.49
16:CP:48:TRP:O	16:CP:49:LEU:HB2	2.12	0.49
26:B1:68:PRO:O	26:B1:70:VAL:N	2.45	0.49
6:AF:8:ILE:CG2	6:AF:9:VAL:N	2.74	0.49
50:DS:89:ARG:HH11	50:DS:89:ARG:HG2	1.77	0.49
1:AA:401:C:H2'	1:AA:402:G:C8	2.47	0.49
41:DG:57:ALA:HA	41:DG:90:LEU:HD23	1.94	0.49
48:DQ:10:ARG:HB2	48:DQ:10:ARG:NH1	2.23	0.49
43:BI:48:GLU:HA	43:BI:51:ILE:HB	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:68:LEU:CD2	43:BI:72:LEU:HD11	2.42	0.49
49:BR:87:TYR:HB3	49:BR:94:TYR:CD2	2.47	0.49
17:CQ:63:ARG:HG2	17:CQ:64:PRO:CD	2.42	0.49
11:CK:67:ASP:O	11:CK:71:LYS:HG3	2.11	0.49
1:AA:1388:C:H2'	1:AA:1389:C:H6	1.77	0.49
35:DA:1670:C:O2	39:DE:129:HIS:HE1	1.95	0.49
46:DO:43:VAL:CG2	46:DO:56:ASP:HB2	2.41	0.49
1:CA:691:G:H1'	1:CA:696:A:N6	2.26	0.49
1:AA:952:U:H2'	1:AA:953:G:C8	2.45	0.49
50:BS:46:VAL:HG12	50:BS:47:THR:N	2.27	0.49
22:AV:78:A:OP1	22:AV:78:A:H4'	2.11	0.49
35:DA:692:C:H2'	35:DA:693:C:H6	1.77	0.49
35:DA:693:C:O2'	35:DA:694:U:H5'	2.12	0.49
35:DA:2140:C:H2'	35:DA:2141:G:C8	2.47	0.49
35:DA:2116:G:N7	35:DA:2117:A:C2	2.80	0.49
16:CP:19:ILE:HB	16:CP:37:GLY:O	2.12	0.49
40:DF:41:LEU:O	40:DF:44:ARG:HG2	2.12	0.49
34:B9:14:CYS:SG	34:B9:27:CYS:HB2	2.52	0.49
5:CE:127:ASN:O	5:CE:131:ILE:HG12	2.11	0.49
35:DA:2295:C:O2'	35:DA:2296:U:H5'	2.11	0.49
1:AA:260:G:H2'	1:AA:261:U:C6	2.47	0.49
1:AA:1059:C:OP2	3:AC:199:LYS:NZ	2.41	0.49
52:BU:60:LEU:HD22	52:BU:60:LEU:O	2.11	0.49
56:DY:98:VAL:HG12	56:DY:98:VAL:O	2.12	0.49
22:CY:16:U:H6	22:CY:16:U:O5'	1.94	0.49
50:DS:48:LEU:N	50:DS:48:LEU:HD12	2.27	0.49
22:AY:4:C:C2	22:AY:5:C:C6	3.00	0.49
30:B5:3:LYS:HD3	35:BA:747:U:O4	2.12	0.49
23:AW:26:G:C2'	23:AW:27:C:C6	2.93	0.49
56:DY:13:VAL:CG1	56:DY:28:LYS:HD3	2.41	0.49
56:DY:65:ALA:HB1	56:DY:66:PRO:HD2	1.94	0.49
43:BI:93:THR:CG2	43:BI:119:PRO:HB3	2.41	0.49
43:BI:123:LEU:HD11	43:BI:144:VAL:HG21	1.91	0.49
12:CL:39:VAL:HG12	12:CL:40:VAL:N	2.26	0.49
1:AA:148:G:O2'	1:AA:149:A:H5'	2.12	0.49
10:AJ:8:LEU:CD2	10:AJ:96:ILE:HG22	2.40	0.49
1:CA:1054:C:O2'	1:CA:1055:A:P	2.70	0.49
3:CC:156:ARG:NH2	3:CC:159:GLY:O	2.42	0.49
10:CJ:16:LEU:HD11	10:CJ:70:ARG:HG3	1.93	0.49
35:BA:1886:C:H2'	35:BA:1887:C:H6	1.76	0.49
12:CL:69:TYR:O	12:CL:71:PRO:HD3	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D8:50:LEU:CD1	33:D8:51:ALA:N	2.73	0.49
35:DA:2360:A:O2'	35:DA:2361:A:O5'	2.31	0.49
51:BT:28:VAL:HG21	51:BT:46:GLU:HG3	1.94	0.49
57:DZ:44:PHE:CE2	57:DZ:86:VAL:HG21	2.47	0.49
12:CL:47:LYS:CE	12:CL:48:PRO:HD3	2.42	0.49
45:BN:1:MET:H3	53:BV:20:LEU:HD21	1.76	0.49
41:DG:99:MET:O	41:DG:102:PHE:HB3	2.12	0.49
13:CM:89:GLY:HA2	13:CM:93:ARG:NH1	2.27	0.49
56:BY:31:LEU:HB2	56:BY:32:PRO:CA	2.41	0.49
50:DS:97:ARG:C	50:DS:97:ARG:NE	2.65	0.49
17:CQ:50:LYS:HG3	17:CQ:51:TYR:CE1	2.47	0.49
35:BA:558:G:OP2	45:BN:111:PRO:HD2	2.12	0.49
29:B4:6:HIS:C	29:B4:8:LYS:H	2.14	0.49
5:CE:139:LEU:HA	5:CE:142:LEU:HD12	1.94	0.49
1:CA:1147:C:O2	9:CI:16:ARG:NH1	2.41	0.49
9:CI:4:TYR:O	9:CI:18:PHE:HA	2.12	0.49
42:BH:115:VAL:HG11	42:BH:148:ILE:CD1	2.42	0.49
5:AE:7:GLU:O	5:AE:8:GLU:HB3	2.13	0.49
37:DC:166:ASN:HB3	37:DC:172:ILE:HB	1.93	0.49
51:DT:34:VAL:HG13	51:DT:39:ARG:HA	1.94	0.49
35:BA:2833:G:C3'	35:BA:2834:G:C5'	2.87	0.49
3:CC:150:LYS:HB3	3:CC:201:TYR:HB2	1.94	0.49
45:DN:67:LEU:O	45:DN:68:GLU:CB	2.60	0.49
20:CT:14:LYS:O	20:CT:18:GLN:HB2	2.11	0.49
1:CA:828:A:N3	2:CB:26:PRO:HG3	2.28	0.49
19:AS:6:LYS:CE	19:AS:6:LYS:H	2.24	0.49
45:BN:67:LEU:HD23	45:BN:87:LEU:HD13	1.93	0.49
20:CT:99:LEU:O	20:CT:101:GLY:N	2.44	0.49
37:BC:33:LEU:O	37:BC:220:GLY:HA3	2.13	0.49
1:CA:1458:G:O2'	1:CA:1459:C:H5'	2.12	0.49
4:AD:79:PHE:CD2	4:AD:207:TYR:HD2	2.29	0.49
2:CB:20:GLU:HB2	2:CB:190:THR:OG1	2.10	0.49
35:BA:2755:C:O2'	35:BA:2756:U:H6	1.92	0.49
2:AB:37:ASN:O	2:AB:37:ASN:OD1	2.30	0.49
35:BA:1278:A:O2'	35:BA:1279:G:H5'	2.12	0.49
17:CQ:97:SER:C	17:CQ:98:LEU:HD12	2.32	0.49
35:DA:1188:U:H2'	35:DA:1189:A:H5'	1.93	0.49
57:BZ:72:ARG:HG3	57:BZ:72:ARG:NH1	2.27	0.49
1:AA:142:G:H2'	1:AA:143:A:H8	1.76	0.49
1:CA:1425:U:H2'	1:CA:1426:C:H6	1.77	0.49
1:CA:203:U:OP2	1:CA:203:U:H6	1.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1579:A:H2'	35:DA:1580:A:O4'	2.12	0.49
35:BA:225:A:O2'	35:BA:257:A:H4'	2.12	0.49
3:CC:8:ILE:C	3:CC:10:PHE:N	2.65	0.49
49:BR:28:LEU:HD22	49:BR:28:LEU:O	2.12	0.49
40:BF:160:ASN:HD21	40:BF:162:LEU:HB2	1.76	0.49
19:AS:33:THR:HG22	19:AS:50:ALA:O	2.12	0.49
36:BB:17:C:C2'	36:BB:18:G:H5'	2.42	0.49
39:BE:134:ILE:O	39:BE:134:ILE:HD12	2.12	0.49
47:DP:45:LEU:HD22	47:DP:46:LYS:H	1.77	0.49
1:CA:47:C:O2	1:CA:49:U:C4	2.65	0.49
35:DA:270:A:O2'	35:DA:271:A:H5'	2.12	0.49
35:BA:772:C:O2'	35:BA:773:U:H5'	2.11	0.49
35:DA:654(D):G:O6	35:DA:654(R):C:H1'	2.12	0.49
1:CA:421:U:C2'	1:CA:421:U:O2	2.60	0.49
1:CA:353:A:H8	1:CA:353:A:H5'	1.76	0.49
23:AW:29:A:P	23:AW:29:A:H8	2.35	0.49
23:AW:4:C:H42	23:AW:72:C:N4	2.09	0.49
4:CD:35:ARG:C	4:CD:37:PRO:HD3	2.33	0.49
22:AV:23:A:H3'	22:AV:48:G:O6	2.13	0.49
41:BG:72:ARG:CD	41:BG:86:MET:HA	2.35	0.49
4:AD:35:ARG:C	4:AD:37:PRO:HD3	2.32	0.49
22:CV:24:A:C2	22:CV:25:A:N7	2.80	0.49
22:CV:25:A:C6	22:CV:26:G:C6	3.00	0.49
1:CA:1442(B):A:C4	51:DT:118:ARG:CZ	2.95	0.49
1:AA:1054:C:N4	22:AY:36:AG9:N1	2.59	0.49
1:AA:1055:A:N3	3:AC:156:ARG:HD2	2.26	0.49
22:AY:35:U:H3'	22:AY:36:AG9:C5'	2.36	0.49
12:CL:84:LEU:HD12	12:CL:104:VAL:HG11	1.93	0.49
47:BP:23:PRO:O	47:BP:33:ARG:NH1	2.45	0.49
12:AL:64:TYR:N	12:AL:64:TYR:CD1	2.80	0.49
45:BN:58:ASP:O	45:BN:59:LYS:HB2	2.12	0.49
10:CJ:3:LYS:HD2	10:CJ:77:PRO:CD	2.42	0.49
45:DN:134:ARG:O	45:DN:136:GLU:N	2.45	0.49
41:DG:139:LEU:HD12	41:DG:140:ILE:H	1.74	0.49
31:B6:5:VAL:HG12	31:B6:8:LYS:CB	2.43	0.49
35:DA:484:C:OP1	56:DY:50:ARG:NE	2.45	0.49
3:AC:181:ASN:HD22	3:AC:205:GLY:H	1.56	0.49
41:BG:152:LEU:CD2	41:BG:152:LEU:H	2.15	0.49
35:BA:914:C:H2'	35:BA:915:C:C5'	2.33	0.49
35:BA:309:G:N3	35:BA:329:G:O2'	2.46	0.49
1:CA:1353:G:O2'	1:CA:1354:C:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:7:LEU:HB3	41:BG:100:TRP:HE3	1.75	0.49
40:BF:34:TRP:CH2	47:BP:12:ALA:HB2	2.46	0.49
40:DF:34:TRP:CH2	47:DP:12:ALA:HB2	2.46	0.49
19:CS:19:VAL:HG12	19:CS:23:ASN:HD21	1.77	0.49
22:CV:43:G:O2'	22:CV:44:A:H5'	2.12	0.49
53:BV:66:ARG:HH11	53:BV:66:ARG:HG2	1.77	0.49
17:AQ:67:LYS:O	17:AQ:69:LYS:N	2.40	0.49
29:B4:1:MET:SD	41:BG:98:ARG:CG	2.95	0.49
5:AE:139:LEU:HA	5:AE:142:LEU:HD12	1.94	0.49
39:DE:69:LYS:C	39:DE:71:GLY:H	2.14	0.49
57:DZ:30:ASN:O	57:DZ:32:HIS:N	2.44	0.49
4:AD:96:LEU:HG	4:AD:139:ARG:NH2	2.25	0.49
1:CA:1268:A:H2'	1:CA:1269:A:C8	2.47	0.49
3:AC:16:ARG:CB	3:AC:16:ARG:HH11	2.24	0.49
35:DA:2632:A:C2	39:DE:61:ARG:HD2	2.46	0.49
50:BS:13:ARG:CG	50:BS:14:VAL:N	2.74	0.49
35:DA:2713:A:C3'	35:DA:2714:G:C5'	2.90	0.49
35:BA:1682:G:H2'	35:BA:1683:C:C6	2.47	0.49
35:BA:1316:U:H2'	35:BA:1317:A:C8	2.47	0.49
35:DA:271(C):C:O2'	35:DA:271(D):G:H5'	2.12	0.49
1:AA:1502:A:C2	1:AA:1505:G:N2	2.79	0.49
7:CG:102:ARG:HG2	7:CG:106:GLN:HE21	1.77	0.49
21:AU:2:GLY:C	21:AU:4:GLY:N	2.65	0.49
1:AA:1305:G:OP1	21:AU:2:GLY:HA3	2.12	0.49
35:DA:297:C:H2'	35:DA:298:G:O4'	2.12	0.49
6:AF:11:ASN:HB3	6:AF:14:LEU:HD21	1.94	0.49
49:DR:87:TYR:HB3	49:DR:94:TYR:CD2	2.47	0.49
1:AA:605:U:H2'	1:AA:606:G:C8	2.46	0.49
11:CK:82:VAL:HB	11:CK:108:ILE:HG13	1.94	0.49
1:AA:599:C:O2'	1:AA:600:C:H5'	2.11	0.49
6:CF:8:ILE:HA	6:CF:87:ARG:O	2.11	0.49
1:CA:991:U:O2	1:CA:993:G:C8	2.63	0.49
38:DD:226:MET:HB3	38:DD:230:ASP:HB2	1.94	0.49
39:DE:93:VAL:HG12	39:DE:175:VAL:CG2	2.42	0.49
35:DA:535:C:O3'	52:DU:53:ARG:NH1	2.45	0.49
34:B9:9:ARG:NH1	34:B9:16:VAL:HG23	2.26	0.49
35:DA:870:A:C2	35:DA:908:C:C2	3.00	0.49
55:DX:29:TRP:CE3	55:DX:78:LYS:HB3	2.47	0.49
13:AM:117:VAL:O	13:AM:118:ALA:HB2	2.13	0.49
3:AC:127:ARG:NH1	3:AC:127:ARG:HG2	2.27	0.49
1:CA:648:A:H2'	1:CA:649:G:H8	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1298:C:H4'	1:CA:1299:A:O4'	2.12	0.49
45:DN:65:LYS:O	45:DN:69:GLN:HG3	2.13	0.49
43:BI:111:PRO:HB2	43:BI:112:LYS:HD2	1.95	0.49
20:AT:38:LYS:HA	20:AT:41:ILE:CD1	2.42	0.49
35:DA:1488:G:H2'	35:DA:1488:G:N3	2.27	0.49
10:AJ:42:THR:HA	10:AJ:68:HIS:HA	1.94	0.49
1:AA:1268:A:H2'	1:AA:1269:A:C8	2.47	0.49
39:DE:108:SER:O	39:DE:162:ALA:HA	2.12	0.49
30:D5:41:PRO:HG2	30:D5:44:THR:OG1	2.12	0.49
35:BA:648:G:O2'	35:BA:649:G:H5'	2.12	0.49
17:CQ:74:LEU:HD12	17:CQ:75:ARG:HG2	1.95	0.49
25:B0:77:ARG:NH2	35:BA:857:C:OP2	2.43	0.49
35:DA:2500:U:O2	35:DA:2504:U:C5	2.65	0.49
1:CA:1042:G:H2'	1:CA:1043:C:C6	2.47	0.49
22:CY:57:U:C2	57:DZ:184:ALA:HB3	2.41	0.49
22:CY:63:C:O2'	22:CY:64:C:H5'	2.13	0.49
23:AW:32:G:H2'	23:AW:33:G:H8	1.77	0.49
23:AW:5:C:H1'	23:AW:72:C:O2	2.11	0.49
22:AY:23:A:C2'	22:AY:24:A:H8	2.23	0.49
22:AY:25:A:N3	22:AY:26:G:C5	2.80	0.49
22:AY:60:A:C6	57:BZ:186:GLU:OE1	2.66	0.49
22:AY:56:U:N1	57:BZ:182:LYS:O	2.45	0.49
22:AY:56:U:C2	57:BZ:183:LEU:CB	2.94	0.49
22:AV:20:G:C8	22:AV:59:G:N2	2.81	0.49
22:CV:20:G:C4	22:CV:59:G:C2	3.00	0.49
51:DT:31:SER:C	51:DT:32:TYR:CD2	2.86	0.49
23:AW:12:U:H6	23:AW:12:U:OP2	1.96	0.49
33:B8:47:LYS:HD2	33:B8:48:PHE:N	2.27	0.49
33:B8:48:PHE:O	33:B8:49:VAL:CG2	2.60	0.49
56:DY:32:PRO:O	56:DY:33:LYS:C	2.49	0.49
38:DD:44:ASN:OD1	38:DD:44:ASN:N	2.45	0.49
12:CL:41:ARG:O	12:CL:55:VAL:HG22	2.12	0.49
40:DF:20:LEU:O	40:DF:21:ALA:O	2.31	0.49
12:AL:47:LYS:HE2	12:AL:48:PRO:CB	2.39	0.49
12:AL:33:ARG:HB3	12:AL:85:ILE:HG22	1.94	0.49
35:BA:1140:C:OP1	45:BN:23:LEU:HD23	2.13	0.49
1:CA:1053:G:N7	1:CA:1200:C:C5'	2.73	0.49
3:CC:108:ASN:OD1	3:CC:110:ASN:HB2	2.11	0.49
35:BA:2308:G:N2	41:BG:79:ASN:CG	2.66	0.49
41:DG:117:PHE:O	41:DG:118:ARG:CB	2.59	0.49
49:DR:2:ARG:CD	49:DR:5:LYS:HE2	2.38	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:65:ALA:HB1	56:BY:66:PRO:HD2	1.94	0.49
50:BS:97:ARG:HG2	50:BS:97:ARG:NH1	2.28	0.49
50:DS:35:ILE:H	50:DS:53:SER:CB	2.25	0.49
35:DA:479:A:H4'	35:DA:480:A:OP1	2.11	0.49
41:BG:64:THR:HG23	41:BG:66:GLN:N	2.25	0.49
48:BQ:45:GLN:H	48:BQ:45:GLN:CD	2.15	0.49
18:CR:50:ILE:HD11	18:CR:70:ILE:HG21	1.94	0.49
1:CA:1107:C:H2'	1:CA:1108:G:H5''	1.94	0.49
35:BA:364:C:H2'	35:BA:365:C:C5'	2.43	0.49
37:BC:29:LEU:HD22	37:BC:33:LEU:HD11	1.95	0.49
45:BN:41:ASP:O	45:BN:42:TRP:O	2.30	0.49
37:DC:29:LEU:HD22	37:DC:33:LEU:HD11	1.93	0.49
33:B8:37:SER:O	33:B8:39:LYS:N	2.46	0.49
39:DE:11:MET:HB2	39:DE:23:VAL:O	2.12	0.49
9:AI:113:LYS:H	9:AI:119:ALA:HA	1.75	0.49
2:CB:22:LYS:H	2:CB:40:HIS:HE1	1.58	0.49
10:AJ:23:ILE:HG23	10:AJ:85:LEU:CD2	2.40	0.49
57:BZ:23:LYS:HA	57:BZ:40:ASP:HA	1.94	0.49
1:CA:156:G:O2'	1:CA:157:G:H5'	2.12	0.49
1:CA:605:U:H2'	1:CA:606:G:C8	2.47	0.49
48:BQ:132:VAL:CG1	57:BZ:81:ARG:HE	2.24	0.49
27:B2:32:LEU:CD1	27:B2:36:ARG:NH1	2.75	0.49
35:DA:1817:G:C2'	35:DA:1818:U:H5'	2.41	0.49
35:DA:1856:G:H2'	35:DA:1857:G:C5'	2.41	0.49
43:BI:10:GLU:OE1	43:BI:11:ASN:HB2	2.12	0.49
35:DA:1860:G:O3'	37:DC:206:LYS:HB2	2.12	0.49
16:AP:55:ARG:C	16:AP:57:ARG:N	2.64	0.49
48:BQ:27:VAL:HG13	48:BQ:105:GLU:CD	2.33	0.49
42:BH:88:LEU:HD22	42:BH:88:LEU:N	2.26	0.49
1:AA:1181:G:O2'	1:AA:1182:G:H5'	2.12	0.49
1:AA:1298:C:H4'	1:AA:1299:A:O4'	2.13	0.49
5:CE:9:LYS:C	5:CE:32:VAL:HG13	2.32	0.49
35:DA:1386:C:H2'	35:DA:1387:C:C6	2.47	0.49
1:AA:352:C:H4'	1:AA:354:G:OP1	2.13	0.49
35:BA:902:C:H2'	35:BA:903:C:C6	2.48	0.49
38:DD:133:LEU:HB3	38:DD:173:VAL:HG11	1.94	0.49
52:BU:5:LYS:O	52:BU:6:THR:C	2.50	0.49
35:DA:654(L):G:H2'	35:DA:654(M):C:H4'	1.94	0.49
4:AD:97:LEU:HD23	4:AD:97:LEU:O	2.13	0.49
20:AT:93:GLU:OE1	20:AT:93:GLU:C	2.51	0.49
22:CY:19:G:C2	22:CY:59:G:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:7:U:N3	23:AW:68:A:N6	2.61	0.49
29:B4:47:GLN:O	29:B4:48:ARG:HB3	2.13	0.49
29:B4:48:ARG:HG3	29:B4:49:PHE:HD1	1.77	0.49
42:BH:41:MET:SD	42:BH:53:GLU:O	2.70	0.49
7:AG:113:GLU:CB	7:AG:118:VAL:HG23	2.42	0.49
35:DA:1747(A):G:O2'	35:DA:1748:G:H5''	2.11	0.49
12:AL:39:VAL:HG12	12:AL:40:VAL:H	1.77	0.49
35:DA:144:C:H2'	35:DA:145:G:H8	1.78	0.49
33:D8:50:LEU:C	33:D8:53:PRO:HD2	2.32	0.49
51:BT:125:ARG:C	51:BT:127:ALA:H	2.15	0.49
51:BT:28:VAL:CG1	51:BT:29:ARG:HH11	2.25	0.49
41:DG:124:SER:HB2	41:DG:131:TYR:CE2	2.47	0.49
41:DG:64:THR:HG23	41:DG:66:GLN:N	2.27	0.49
41:DG:86:MET:N	41:DG:87:PRO:CD	2.76	0.49
2:CB:84:GLU:CB	2:CB:219:VAL:HG21	2.30	0.49
35:DA:1652:A:O3'	35:DA:1653:G:C8	2.65	0.49
39:BE:57:LYS:C	39:BE:59:VAL:N	2.66	0.49
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.48	0.49
43:DI:73:GLU:CG	43:DI:74:ASN:N	2.76	0.49
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.47	0.49
57:DZ:109:ALA:C	57:DZ:145:GLU:HA	2.33	0.49
29:B4:1:MET:HG2	41:BG:98:ARG:HG3	1.94	0.49
27:D2:7:ARG:O	27:D2:11:GLU:HG3	2.12	0.49
48:DQ:45:GLN:H	48:DQ:45:GLN:CD	2.15	0.49
27:D2:46:GLN:H	27:D2:49:LYS:HD2	1.77	0.49
48:DQ:29:PHE:HB2	48:DQ:105:GLU:OE2	2.12	0.49
1:AA:1327:C:H5''	21:AU:20:LYS:HB3	1.94	0.49
25:B0:25:ARG:HD2	25:B0:29:GLN:NE2	2.27	0.49
35:BA:1541:G:H1'	35:BA:1542:A:C5	2.47	0.49
46:DO:114:ILE:H	46:DO:114:ILE:CD1	2.24	0.49
1:AA:1435:G:C2	1:AA:1436:U:C4	3.01	0.49
33:B8:33:ASN:ND2	33:B8:33:ASN:N	2.57	0.49
8:AH:11:THR:HA	8:AH:14:ARG:NH1	2.27	0.49
35:BA:2177:C:H1'	37:BC:45:HIS:CB	2.42	0.49
50:DS:90:GLY:O	50:DS:92:TYR:N	2.43	0.49
40:DF:63:LYS:HZ1	40:DF:67:GLN:HB2	1.77	0.49
51:BT:58:ASN:N	51:BT:58:ASN:HD22	2.10	0.49
1:CA:356:A:O2'	1:CA:357:G:H5'	2.13	0.49
44:BJ:22:UNK:C	44:BJ:119:UNK:HA	2.42	0.49
35:BA:1722:A:H2	35:BA:1740:G:HO2'	1.60	0.49
37:BC:46:ALA:HA	37:BC:212:SER:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:194:PRO:HG2	2:AB:195:ASP:H	1.77	0.49
43:DI:10:GLU:O	43:DI:12:LEU:HD23	2.11	0.49
1:AA:72:C:H2'	1:AA:73:G:H8	1.77	0.49
1:CA:1329:A:P	13:CM:28:ALA:HB3	2.52	0.49
1:AA:262:A:C6	1:AA:263:A:C6	3.00	0.49
1:CA:1090:U:H2'	1:CA:1091:U:H6	1.77	0.49
17:AQ:78:GLU:OE1	17:AQ:81:ARG:HD3	2.13	0.49
35:BA:2182:G:H2'	35:BA:2183:C:C6	2.47	0.49
1:CA:777:A:H2'	1:CA:778:G:C8	2.46	0.49
35:DA:979:G:H3'	35:DA:980:A:C5'	2.43	0.49
35:BA:773:U:H4'	38:BD:47:GLY:HA3	1.95	0.49
20:AT:93:GLU:O	20:AT:95:ALA:N	2.45	0.49
1:AA:666:G:C5	1:AA:741:G:C6	3.00	0.49
1:CA:35:G:H2'	1:CA:36:C:C6	2.48	0.49
38:DD:224:ALA:O	38:DD:225:ALA:HB2	2.12	0.49
20:CT:32:ALA:O	20:CT:36:LEU:HD23	2.12	0.49
1:AA:779:C:O2'	1:AA:780:A:H5'	2.12	0.49
25:D0:74:ARG:HH11	25:D0:74:ARG:HG3	1.77	0.49
35:BA:2611:U:H5'	35:BA:2611:U:H6	1.78	0.49
35:BA:1003:G:N2	35:BA:1153:C:C2	2.81	0.49
22:CY:14:A:C6	22:CY:24:A:C5	3.01	0.49
48:DQ:56:ARG:CD	57:DZ:180:VAL:HG11	2.42	0.49
23:AW:35:U:C4	23:AW:37:A:H5''	2.48	0.49
22:AV:58:C:N3	41:BG:84:LYS:HE2	2.27	0.49
41:BG:42:GLY:O	41:BG:88:ILE:HG22	2.12	0.49
33:D8:62:LEU:N	33:D8:63:PRO:CD	2.74	0.49
22:CV:11:C:C6	22:CV:12:U:C5	3.01	0.49
33:B8:50:LEU:C	33:B8:53:PRO:HD2	2.33	0.49
43:DI:142:VAL:HG12	43:DI:142:VAL:O	2.11	0.49
12:CL:41:ARG:HD2	12:CL:41:ARG:C	2.33	0.49
10:AJ:98:ILE:N	10:AJ:98:ILE:HD12	2.28	0.49
45:DN:58:ASP:O	45:DN:60:ILE:N	2.36	0.49
3:AC:106:VAL:HG12	3:AC:108:ASN:H	1.77	0.49
39:DE:34:VAL:O	39:DE:34:VAL:CG2	2.59	0.49
29:D4:27:THR:O	29:D4:28:LYS:CB	2.59	0.49
13:AM:86:CYS:C	13:AM:88:ARG:H	2.16	0.49
57:DZ:97:GLU:HA	57:DZ:126:VAL:O	2.13	0.49
3:CC:11:ARG:O	3:CC:12:LEU:C	2.51	0.49
35:DA:1689:A:N6	35:DA:1698:A:H2	1.97	0.49
1:CA:1400:C:H6	1:CA:1400:C:C5'	2.25	0.49
1:AA:255:G:H4'	17:AQ:17:LYS:HD2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:16:ARG:CB	47:DP:16:ARG:HH11	2.24	0.49
1:AA:1139:G:N3	1:AA:1141:C:N4	2.60	0.49
4:CD:24:GLU:HB2	4:CD:112:VAL:HG21	1.95	0.49
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.94	0.49
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.13	0.49
39:BE:69:LYS:HE3	39:BE:90:THR:N	2.20	0.49
35:BA:154(A):C:H3'	35:BA:155:U:H5''	1.93	0.49
1:CA:406:G:N2	1:CA:437:U:H3	2.11	0.49
1:AA:192:U:O4'	20:AT:103:GLY:HA2	2.13	0.49
1:AA:320:C:H2'	1:AA:321:A:C8	2.47	0.49
3:AC:173:VAL:HG12	3:AC:173:VAL:O	2.13	0.49
1:CA:532:A:H2	1:CA:1207:G:C4'	2.26	0.49
35:DA:2665:A:OP1	35:DA:2665:A:H4'	2.11	0.49
39:BE:21:VAL:HG23	39:BE:23:VAL:CG1	2.42	0.49
42:DH:9:ILE:O	42:DH:9:ILE:CG2	2.59	0.49
49:DR:113:LEU:C	49:DR:113:LEU:HD23	2.33	0.49
21:CU:2:GLY:C	21:CU:4:GLY:N	2.65	0.49
1:CA:1064:G:O4'	1:CA:1066:C:H1'	2.13	0.49
49:BR:101:ALA:O	49:BR:102:GLU:CB	2.57	0.49
35:DA:1429:G:H2'	35:DA:1430:C:C6	2.48	0.49
35:DA:1719:G:H2'	35:DA:1720:U:H5'	1.94	0.49
39:BE:93:VAL:HG12	39:BE:175:VAL:CG2	2.43	0.49
35:BA:923:C:O2'	35:BA:924:C:H5'	2.13	0.49
18:AR:30:ASP:O	18:AR:32:ARG:N	2.46	0.49
20:CT:33:ILE:O	20:CT:34:LYS:C	2.51	0.49
8:CH:30:ARG:NH1	8:CH:30:ARG:HB3	2.28	0.49
35:DA:2271:G:H2'	35:DA:2272:U:H6	1.77	0.49
16:CP:55:ARG:C	16:CP:57:ARG:N	2.65	0.49
35:BA:1354:A:H2'	35:BA:1355:G:O4'	2.13	0.49
48:BQ:54:MET:HG3	48:BQ:117:ALA:HB1	1.94	0.49
35:BA:2201:C:O2'	35:BA:2202:C:H5'	2.13	0.49
3:AC:118:GLN:O	3:AC:122:GLU:HG3	2.13	0.49
43:DI:22:LYS:O	43:DI:23:PRO:C	2.51	0.49
39:BE:196:VAL:HG23	39:BE:196:VAL:O	2.11	0.49
35:BA:2168:G:N2	35:BA:2170:A:H3'	2.27	0.49
35:BA:239:U:H2'	35:BA:240:G:O4'	2.13	0.49
35:BA:2271:G:H2'	35:BA:2272:U:C6	2.48	0.49
42:DH:119:GLU:HG2	42:DH:120:GLY:N	2.27	0.49
46:DO:119:PRO:HB2	51:DT:68:TYR:CE2	2.47	0.49
22:CY:32:G:C6	22:CY:43:G:C6	3.01	0.49
23:AW:37:A:C2	23:AW:38:U:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DT:13:ARG:CA	51:DT:13:ARG:NH1	2.69	0.49
22:CV:5:C:C2	22:CV:6:C:C5	2.99	0.49
22:CV:70:G:C2	22:CV:71:G:C8	3.01	0.49
33:B8:50:LEU:CD1	33:B8:51:ALA:N	2.74	0.49
56:BY:81:LYS:HD2	56:BY:96:ILE:CG2	2.42	0.49
23:CW:14:A:H2'	23:CW:15:G:O4'	2.13	0.49
35:BA:587:C:C3'	47:BP:33:ARG:NH2	2.75	0.49
12:AL:38:THR:CG2	12:AL:39:VAL:N	2.69	0.49
1:AA:520:A:OP2	12:AL:51:ALA:HB1	2.12	0.49
12:AL:75:HIS:HB2	12:AL:77:LEU:HG	1.94	0.49
10:AJ:30:SER:HB3	10:AJ:81:THR:HA	1.95	0.49
8:AH:83:ILE:HG13	8:AH:83:ILE:O	2.12	0.49
35:BA:1888:G:N3	35:BA:1888:G:H5'	2.26	0.49
35:DA:1018:C:O2'	35:DA:1019:U:H5'	2.13	0.49
47:BP:102:ARG:NH1	47:BP:102:ARG:CB	2.75	0.49
47:BP:101:VAL:CB	47:BP:107:LYS:HA	2.35	0.49
35:BA:144:C:H2'	35:BA:145:G:H8	1.78	0.49
2:AB:206:ASP:O	2:AB:211:ILE:HD11	2.13	0.49
1:CA:1358:U:OP1	14:CN:35:ARG:HG2	2.12	0.49
8:AH:25:ASP:OD2	8:AH:60:ARG:HD2	2.13	0.49
33:D8:58:ILE:CG2	47:DP:49:ARG:CD	2.90	0.49
12:CL:47:LYS:C	12:CL:47:LYS:HD2	2.33	0.49
53:BV:41:GLY:HA3	53:BV:45:THR:OG1	2.13	0.49
39:DE:120:TRP:CE3	39:DE:155:LYS:HD3	2.48	0.49
3:AC:11:ARG:O	3:AC:12:LEU:C	2.51	0.49
1:CA:1149:C:H2'	1:CA:1150:U:C6	2.46	0.49
50:DS:35:ILE:N	50:DS:53:SER:HB2	2.28	0.49
1:CA:1228:C:OP1	13:CM:115:LYS:HE3	2.13	0.49
1:AA:1147:C:O2	9:AI:16:ARG:NH1	2.42	0.49
30:D5:20:ARG:HA	30:D5:23:HIS:CE1	2.48	0.49
5:CE:71:LEU:O	5:CE:72:GLN:CG	2.59	0.49
1:AA:170:U:H2'	1:AA:171:A:H8	1.76	0.49
40:BF:8:GLN:CG	40:BF:126:VAL:HA	2.42	0.49
54:BW:73:ALA:HB3	54:BW:106:ILE:CD1	2.41	0.49
45:BN:123:TYR:OH	45:BN:130:HIS:CE1	2.66	0.49
35:DA:259:G:H1'	35:DA:621:A:O2'	2.13	0.49
35:DA:2415:G:O3'	47:DP:66:GLY:HA3	2.13	0.49
8:AH:11:THR:CG2	8:AH:14:ARG:HH12	2.24	0.49
35:DA:412:A:N7	35:DA:2411:A:H2	2.10	0.49
16:CP:43:LYS:HE3	16:CP:48:TRP:CE3	2.48	0.49
2:CB:27:LYS:HB2	2:CB:193:ASP:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:63:TYR:N	6:AF:63:TYR:CD1	2.80	0.49
35:DA:768:G:O2'	35:DA:769:G:H5'	2.11	0.49
37:DC:46:ALA:HA	37:DC:212:SER:O	2.12	0.49
1:AA:606:G:N2	1:AA:631:G:H2'	2.27	0.49
48:DQ:10:ARG:CZ	48:DQ:10:ARG:HB3	2.43	0.49
35:BA:1188:U:H4'	53:BV:79:VAL:HG22	1.95	0.49
1:AA:43:C:H42	1:AA:399:G:H1	1.61	0.49
1:CA:271:C:O2'	1:CA:272:C:H5'	2.13	0.49
12:AL:119:LYS:C	12:AL:120:TYR:HD1	2.16	0.49
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.95	0.49
5:CE:19:MET:O	5:CE:20:GLN:HB2	2.13	0.49
35:DA:2740:A:H2'	35:DA:2741:A:C8	2.48	0.49
54:DW:60:ASN:OD1	54:DW:61:ASN:ND2	2.44	0.49
19:CS:29:ARG:O	19:CS:30:LEU:C	2.50	0.49
35:BA:1488:G:N3	35:BA:1488:G:H2'	2.28	0.49
35:BA:2140:C:H2'	35:BA:2141:G:C8	2.48	0.49
35:DA:624:C:O2'	35:DA:657:U:H5''	2.13	0.49
35:BA:999:U:O2'	35:BA:1000:A:H5'	2.13	0.49
38:BD:127:VAL:HA	38:BD:193:VAL:HG13	1.93	0.49
35:DA:832:G:H5'	47:DP:45:LEU:HD11	1.93	0.49
1:CA:801:U:H2'	1:CA:802:A:H8	1.78	0.49
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.13	0.49
1:AA:1319:A:H61	1:AA:1361:G:H21	1.61	0.49
48:DQ:87:LYS:O	48:DQ:88:GLY:O	2.31	0.49
6:CF:33:TYR:N	6:CF:33:TYR:CD1	2.81	0.49
4:CD:159:ARG:HH11	4:CD:159:ARG:HG3	1.76	0.49
35:BA:972:G:OP2	35:BA:974:G:H5''	2.12	0.49
27:D2:42:GLY:O	27:D2:43:GLN:O	2.31	0.49
22:CY:70:G:C5	22:CY:71:G:N7	2.81	0.49
51:DT:48:ILE:HD12	51:DT:48:ILE:N	2.27	0.49
23:AW:26:G:C5	23:AW:27:C:N4	2.81	0.49
33:B8:30:ARG:CZ	35:BA:2419:U:O4	2.60	0.49
47:DP:23:PRO:O	47:DP:33:ARG:NH1	2.45	0.49
56:DY:28:LYS:O	56:DY:29:GLU:C	2.51	0.49
23:AW:20:G:C6	23:AW:58:C:C4	3.00	0.49
42:BH:41:MET:SD	42:BH:52:VAL:HG13	2.52	0.49
47:DP:57:THR:HB	47:DP:59:LEU:N	2.26	0.49
1:AA:1056:U:OP1	3:AC:163:ALA:HB3	2.13	0.49
23:CW:23:A:C2	23:CW:50:C:N3	2.81	0.49
10:AJ:22:LYS:C	10:AJ:22:LYS:HD2	2.33	0.49
35:DA:1021:A:H8	35:DA:1022:G:H5''	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DU:92:ARG:HB3	53:DV:11:GLN:NE2	2.27	0.49
35:DA:1885:A:H2'	35:DA:1886:C:O4'	2.13	0.49
35:DA:2360:A:O2'	35:DA:2361:A:P	2.71	0.49
35:DA:833:U:H5''	47:DP:48:PRO:HB3	1.95	0.49
53:BV:12:TYR:CE2	53:BV:22:VAL:HG12	2.46	0.49
1:AA:1358:U:OP1	14:AN:35:ARG:HG2	2.13	0.49
35:BA:2524:G:C8	35:BA:2524:G:H5'	2.42	0.49
13:CM:3:ARG:HH21	41:DG:113:ARG:HB2	1.75	0.49
49:BR:53:HIS:HA	49:BR:56:LYS:HD3	1.95	0.49
39:BE:65:GLY:C	39:BE:67:PHE:N	2.66	0.49
39:BE:201:THR:OG1	39:BE:202:LYS:N	2.45	0.49
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.95	0.49
39:DE:117:MET:HE1	39:DE:124:GLY:HA3	1.95	0.49
1:AA:1133:G:N2	1:AA:1143:G:H1'	2.28	0.49
5:AE:8:GLU:HA	5:AE:33:VAL:O	2.13	0.49
16:CP:28:ARG:HG2	16:CP:29:ASP:OD1	2.12	0.49
1:CA:1381:U:H5	1:CA:1382:C:C4	2.30	0.49
3:AC:24:ALA:HB2	3:AC:32:LEU:HD12	1.93	0.49
5:CE:8:GLU:HA	5:CE:33:VAL:O	2.12	0.49
1:AA:1381:U:H5	1:AA:1382:C:C4	2.31	0.49
19:CS:33:THR:HG22	19:CS:50:ALA:O	2.13	0.49
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.12	0.49
55:DX:12:VAL:HG11	55:DX:27:THR:HG23	1.95	0.49
36:DB:91:C:OP1	48:DQ:16:ARG:HG2	2.11	0.49
1:CA:1207:G:O2'	1:CA:1208:C:H5'	2.13	0.49
47:BP:123:LEU:HD12	47:BP:123:LEU:C	2.33	0.49
38:BD:226:MET:HB3	38:BD:230:ASP:HB2	1.93	0.49
41:BG:32:PRO:HB2	41:BG:172:LEU:CD1	2.42	0.49
35:DA:1771:C:O2'	35:DA:1786:A:H8	1.94	0.49
3:CC:5:ILE:O	3:CC:5:ILE:HD13	2.12	0.49
1:AA:339:C:OP2	46:BO:97:ARG:NH1	2.46	0.49
8:AH:30:ARG:HB3	8:AH:30:ARG:NH1	2.27	0.49
1:AA:865:A:H2	1:AA:918:A:H4'	1.78	0.49
1:CA:598:U:H2'	1:CA:599:C:C6	2.47	0.49
35:DA:1179:C:H2'	35:DA:1180:C:C6	2.48	0.49
13:CM:6:GLY:C	13:CM:8:GLU:N	2.66	0.49
35:BA:573:G:N1	35:BA:2031:A:OP2	2.36	0.49
35:BA:2032:G:O2'	39:BE:145:LYS:NZ	2.45	0.49
43:DI:15:VAL:O	43:DI:17:GLN:N	2.46	0.49
35:DA:870:A:C2	35:DA:908:C:N3	2.80	0.49
1:AA:232:G:H1'	1:AA:262:A:N1	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:654(B):C:H2'	35:BA:654(C):G:C8	2.48	0.49
42:DH:127:GLU:CG	42:DH:130:ARG:HE	2.26	0.49
10:CJ:58:ASP:O	10:CJ:59:SER:C	2.50	0.49
50:BS:73:LEU:O	50:BS:73:LEU:HD23	2.12	0.49
56:DY:57:GLN:HG2	56:DY:58:GLY:H	1.78	0.49
35:BA:657:U:H2'	35:BA:658:C:C6	2.48	0.49
3:CC:132:ARG:HG2	3:CC:136:GLN:NE2	2.27	0.49
46:BO:119:PRO:HB2	51:BT:68:TYR:CE2	2.47	0.49
35:BA:1547:C:H2'	35:BA:1548:C:C6	2.48	0.49
55:DX:47:PHE:O	55:DX:49:VAL:HG13	2.13	0.49
9:AI:24:GLY:HA2	9:AI:59:PHE:O	2.13	0.49
2:CB:21:ARG:O	2:CB:23:ARG:N	2.45	0.49
1:CA:283:C:C2	1:CA:284:G:C8	3.00	0.49
1:CA:948:C:H2'	1:CA:949:A:H8	1.78	0.49
35:DA:2611:U:H5'	35:DA:2611:U:H6	1.77	0.49
28:B3:36:VAL:HG23	28:B3:36:VAL:O	2.12	0.49
3:CC:118:GLN:O	3:CC:122:GLU:HG3	2.13	0.49
23:AW:38:U:C2	23:AW:39:A:N7	2.81	0.49
22:AY:70:G:C2	22:AY:71:G:C4	3.00	0.49
35:DA:1902:C:H5'	38:DD:246:PRO:HD3	1.95	0.49
47:DP:33:ARG:HG3	47:DP:34:GLY:N	2.27	0.49
43:DI:92:VAL:HG12	43:DI:92:VAL:O	2.12	0.49
12:CL:21:LYS:O	12:CL:23:LYS:N	2.45	0.49
12:CL:64:TYR:HD1	12:CL:64:TYR:N	2.10	0.49
47:BP:101:VAL:HB	47:BP:107:LYS:CA	2.33	0.49
45:DN:2:LYS:HZ1	53:DV:12:TYR:HA	1.77	0.49
52:DU:101:ARG:HB2	52:DU:101:ARG:HH11	1.78	0.49
52:DU:92:ARG:NH2	53:DV:10:LYS:CG	2.71	0.49
35:DA:548:A:N3	35:DA:548:A:H2'	2.27	0.49
13:AM:3:ARG:HB2	29:B4:34:GLU:CG	2.43	0.49
46:BO:64:ARG:CZ	51:BT:70:VAL:HG21	2.43	0.49
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.40	0.49
39:DE:77:ILE:CG2	39:DE:78:LEU:N	2.68	0.49
16:CP:80:PHE:N	16:CP:80:PHE:CD1	2.80	0.49
1:CA:738:C:H2'	1:CA:739:C:C6	2.47	0.49
39:BE:34:VAL:O	39:BE:34:VAL:HG22	2.13	0.49
13:AM:93:ARG:HG2	35:BA:888:C:OP1	2.13	0.49
31:D6:30:THR:OG1	31:D6:31:PRO:HD2	2.12	0.49
31:D6:5:VAL:CG1	31:D6:7:ILE:HG22	2.43	0.49
57:DZ:108:PRO:HG3	57:DZ:117:LEU:HD13	1.95	0.49
35:DA:309:G:N3	35:DA:329:G:O2'	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D1:64:ALA:HA	26:D1:67:ILE:CD1	2.43	0.49
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.95	0.49
50:BS:30:ARG:HH11	50:BS:35:ILE:HB	1.77	0.49
38:BD:31:LYS:C	38:BD:33:LEU:N	2.65	0.49
35:BA:1568:G:P	38:BD:63:ARG:HH22	2.36	0.49
48:DQ:133:ARG:HG3	48:DQ:133:ARG:NH1	2.28	0.49
1:CA:1133:G:N2	1:CA:1143:G:H1'	2.27	0.49
9:CI:28:VAL:HG13	9:CI:63:ILE:C	2.33	0.49
41:BG:128:ARG:O	41:BG:129:GLY:O	2.30	0.49
37:BC:48:LEU:HB3	37:BC:50:ILE:HG13	1.95	0.49
35:DA:1049:C:N4	35:DA:1111:A:C2	2.81	0.49
3:AC:58:GLU:O	3:AC:59:ARG:HG3	2.12	0.49
9:CI:102:LEU:C	9:CI:102:LEU:HD23	2.34	0.49
21:CU:12:LYS:CB	21:CU:22:ARG:HD2	2.38	0.49
39:DE:62:PRO:C	39:DE:64:LYS:N	2.65	0.49
16:AP:4:ILE:N	16:AP:4:ILE:HD12	2.28	0.49
42:BH:50:VAL:HG12	42:BH:51:ARG:N	2.27	0.49
23:AW:77:C:O5'	23:AW:77:C:H6	1.96	0.49
47:BP:112:LEU:H	47:BP:128:HIS:CD2	2.29	0.49
18:AR:36:ASN:HB2	18:AR:40:LEU:HD11	1.94	0.49
2:CB:37:ASN:OD1	2:CB:37:ASN:O	2.30	0.49
1:AA:17:U:H2'	1:AA:18:C:H6	1.78	0.49
1:AA:865:A:C2	1:AA:918:A:H4'	2.46	0.49
41:DG:35:GLU:HB3	41:DG:160:VAL:CG1	2.42	0.49
8:CH:77:GLU:HG2	8:CH:78:GLN:N	2.27	0.49
56:BY:90:LEU:HG	56:BY:91:GLU:N	2.27	0.49
1:AA:601:C:H2'	1:AA:602:A:C8	2.48	0.49
1:AA:328:C:H4'	1:AA:329:A:C5'	2.43	0.49
35:DA:2884:U:H2'	35:DA:2885:C:H5'	1.95	0.49
35:DA:1332:G:N2	35:DA:1609:A:O2'	2.46	0.49
11:AK:74:ALA:C	11:AK:76:GLY:N	2.65	0.49
4:AD:24:GLU:HB2	4:AD:112:VAL:HG21	1.94	0.49
50:BS:83:LYS:HE3	50:BS:105:ALA:CB	2.42	0.49
35:BA:2884:U:H2'	35:BA:2885:C:O4'	2.13	0.49
50:DS:83:LYS:HE3	50:DS:105:ALA:CB	2.43	0.49
1:CA:15:G:H8	1:CA:1396:A:HO2'	1.59	0.49
1:AA:10:A:OP2	5:AE:126:ARG:HB3	2.12	0.49
39:DE:96:PHE:HA	39:DE:100:GLU:OE1	2.12	0.49
38:DD:129:ASN:O	38:DD:193:VAL:HG12	2.13	0.49
35:BA:78:A:H2'	35:BA:79:G:C8	2.47	0.49
52:DU:76:TYR:CZ	52:DU:80:ILE:HG13	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D1:11:ARG:HB2	26:D1:12:PRO:HD2	1.95	0.49
1:AA:1155:G:O2'	1:AA:1156:G:H5'	2.13	0.49
35:DA:643:A:O2'	35:DA:644:A:H5'	2.12	0.49
1:CA:1262:C:H42	1:CA:1273:G:H1	1.60	0.49
1:AA:1487:G:O2'	1:AA:1488:G:H5'	2.13	0.49
35:BA:2128:C:H2'	35:BA:2129:C:O4'	2.12	0.49
35:BA:1755:A:H2'	35:BA:1756:G:H5'	1.94	0.49
35:BA:654(D):G:O6	35:BA:654(R):C:H1'	2.12	0.49
47:BP:96:THR:O	47:BP:100:LEU:HD23	2.13	0.49
1:AA:777:A:H2'	1:AA:778:G:H8	1.78	0.49
25:B0:6:GLY:O	25:B0:7:LEU:HD23	2.12	0.49
12:AL:109:GLY:HA3	12:AL:121:GLY:O	2.12	0.49
6:CF:16:GLN:H	6:CF:16:GLN:CD	2.16	0.49
56:BY:98:VAL:O	56:BY:98:VAL:HG12	2.13	0.49
1:CA:499:A:H4'	1:CA:500:G:OP1	2.12	0.49
35:BA:2736:G:O2'	35:BA:2737:G:H5'	2.12	0.49
22:AV:64:C:H2'	22:AV:65:G:C8	2.48	0.49
23:AW:11:C:C4	23:AW:12:U:C4	3.01	0.49
23:AW:54:G:H2'	23:AW:54:G:N3	2.28	0.49
35:DA:1190:G:H5'	47:DP:35:HIS:N	2.23	0.49
33:B8:60:LEU:O	33:B8:63:PRO:HG2	2.13	0.49
47:DP:59:LEU:O	47:DP:59:LEU:HD23	2.12	0.49
43:BI:119:PRO:O	43:BI:121:LYS:N	2.46	0.49
12:AL:41:ARG:O	12:AL:55:VAL:HG22	2.13	0.49
35:BA:1747:G:H2'	35:BA:1747(A):G:H8	1.78	0.49
10:CJ:4:ILE:HD13	10:CJ:74:ILE:HD11	1.94	0.49
10:CJ:8:LEU:C	10:CJ:16:LEU:HD21	2.34	0.49
3:CC:106:VAL:HG12	3:CC:108:ASN:H	1.78	0.49
3:AC:119:ARG:HE	3:AC:140:ARG:HH21	1.60	0.49
36:BB:80:U:O2'	36:BB:81:G:H5''	2.12	0.49
8:AH:25:ASP:HA	8:AH:59:LEU:O	2.13	0.49
29:D4:1:MET:N	36:DB:44:G:P	2.86	0.49
1:CA:1256:A:H5'	1:CA:1257:U:OP1	2.13	0.49
39:DE:52:LEU:N	39:DE:74:PRO:HB3	2.28	0.49
35:DA:1652:A:OP1	49:DR:9:LYS:HD3	2.13	0.49
4:AD:128:VAL:CG1	4:AD:129:ASN:N	2.73	0.49
1:AA:1201:A:H1'	1:AA:1202:G:OP2	2.13	0.49
41:BG:5:VAL:HG12	41:BG:6:ALA:H	1.77	0.49
47:BP:7:ARG:H	47:BP:8:PRO:HD2	1.78	0.49
50:BS:35:ILE:O	50:BS:53:SER:HB2	2.13	0.49
57:BZ:144:LEU:N	57:BZ:144:LEU:HD22	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DE:101:ARG:HH11	39:DE:171:GLU:CB	2.17	0.49
3:CC:74:GLY:O	3:CC:76:VAL:N	2.46	0.49
3:CC:88:ARG:HA	3:CC:91:LEU:CD1	2.43	0.49
26:D1:45:ASN:CB	35:DA:2230:G:H1'	2.43	0.49
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.76	0.49
4:CD:170:VAL:HG12	4:CD:174:LEU:HB2	1.93	0.49
1:CA:253:U:H2'	1:CA:254:G:C8	2.48	0.49
17:CQ:3:LYS:HD3	17:CQ:61:GLU:O	2.12	0.49
9:AI:85:LEU:HD12	9:AI:86:VAL:N	2.26	0.49
25:D0:25:ARG:HD2	25:D0:29:GLN:NE2	2.28	0.49
40:DF:8:GLN:HG2	40:DF:126:VAL:CB	2.43	0.49
37:DC:52:PRO:CG	37:DC:53:ARG:HH11	2.26	0.49
39:BE:69:LYS:C	39:BE:71:GLY:H	2.15	0.49
42:DH:158:HIS:CD2	42:DH:170:ARG:HA	2.47	0.49
19:AS:6:LYS:N	19:AS:6:LYS:HE3	2.28	0.49
42:BH:29:PRO:HD2	42:BH:79:VAL:O	2.12	0.49
47:BP:71:VAL:O	47:BP:73:GLY:N	2.46	0.49
38:DD:108:PRO:CG	38:DD:111:LEU:HD23	2.43	0.49
35:DA:2591:C:P	38:DD:239:ARG:HB3	2.53	0.49
51:BT:57:PHE:O	51:BT:59:THR:CG2	2.61	0.49
56:DY:90:LEU:HG	56:DY:91:GLU:N	2.27	0.49
1:CA:606:G:N2	1:CA:631:G:H2'	2.28	0.49
1:AA:545:C:O2'	1:AA:546:G:H5'	2.12	0.49
1:AA:1170:A:H2'	1:AA:1171:G:H5'	1.95	0.49
35:DA:1608:A:H1'	35:DA:1610:A:OP2	2.12	0.49
1:CA:1030(D):A:C2'	1:CA:1031:G:H5'	2.43	0.49
4:CD:4:TYR:CG	4:CD:5:ILE:N	2.80	0.49
35:BA:1131:G:O6	35:BA:2040:C:H1'	2.13	0.49
1:CA:1184:G:O2'	1:CA:1185:G:H5'	2.12	0.49
44:BJ:79:UNK:O	44:BJ:80:UNK:CB	2.61	0.49
35:DA:654(B):C:H2'	35:DA:654(C):G:C8	2.48	0.49
1:CA:59:A:C5'	1:CA:60:A:H5''	2.43	0.49
35:BA:1440:G:O2'	35:BA:1441:G:H5'	2.12	0.49
15:CO:63:ARG:O	15:CO:67:LEU:HG	2.12	0.49
35:DA:1005:C:H2'	35:DA:1006:C:C6	2.48	0.49
35:BA:654(Q):C:O2'	35:BA:654(R):C:H5'	2.13	0.49
10:CJ:12:ASP:OD2	10:CJ:15:THR:HG23	2.12	0.49
57:BZ:5:LEU:O	57:BZ:59:LEU:HA	2.13	0.49
35:DA:840:C:H2'	35:DA:841:A:H8	1.77	0.49
10:CJ:42:THR:HA	10:CJ:68:HIS:HA	1.94	0.49
35:DA:373:U:H2'	35:DA:374:A:H8	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:40:VAL:HG13	6:AF:40:VAL:O	2.13	0.49
11:AK:114:VAL:HG13	11:AK:114:VAL:O	2.12	0.49
35:BA:1799:G:H5'	35:BA:1819:A:N6	2.28	0.49
22:CY:11:C:H2'	22:CY:12:U:C5	2.45	0.48
22:CY:25:A:H2'	22:CY:26:G:N7	2.24	0.48
22:CY:4:C:C4	22:CY:72:C:H5	2.31	0.48
48:DQ:59:ARG:O	48:DQ:59:ARG:HG3	2.13	0.48
23:AW:43:G:C6	23:AW:44:A:C5	3.01	0.48
23:AW:45:U:H2'	23:AW:46:U:O4'	2.12	0.48
22:AY:11:C:H2'	22:AY:12:U:C5	2.43	0.48
22:AY:25:A:C6	22:AY:26:G:C6	3.01	0.48
23:CW:70:G:C5	23:CW:71:G:C6	3.01	0.48
22:AV:12:U:C2	22:AV:13:U:C6	3.01	0.48
4:AD:13:ARG:O	4:AD:14:ARG:C	2.52	0.48
51:DT:28:VAL:HG12	51:DT:29:ARG:HH11	1.77	0.48
51:DT:70:VAL:HG12	51:DT:71:GLY:H	1.75	0.48
35:DA:1486:A:N1	35:DA:1504:C:N3	2.61	0.48
42:BH:41:MET:CE	42:BH:53:GLU:H	2.25	0.48
43:DI:83:ALA:HB2	43:DI:88:ILE:HG12	1.95	0.48
3:AC:156:ARG:NH2	3:AC:159:GLY:O	2.43	0.48
8:CH:40:ALA:C	8:CH:42:GLU:N	2.66	0.48
46:BO:77:ILE:HD11	51:BT:72:VAL:CG1	2.42	0.48
28:D3:7:LYS:CB	28:D3:34:GLU:HG2	2.43	0.48
52:BU:98:LEU:O	52:BU:99:ALA:C	2.52	0.48
41:DG:133:LEU:C	41:DG:133:LEU:HD12	2.33	0.48
39:BE:52:LEU:N	39:BE:74:PRO:HB3	2.28	0.48
56:BY:28:LYS:HZ1	56:BY:28:LYS:H	1.55	0.48
56:BY:28:LYS:CA	56:BY:38:ILE:HG22	2.32	0.48
35:DA:2801(A):A:C4'	35:DA:2802:G:H2'	2.43	0.48
47:BP:84:ASN:C	47:BP:86:LYS:N	2.67	0.48
50:BS:35:ILE:N	50:BS:53:SER:HB2	2.27	0.48
17:AQ:3:LYS:HD3	17:AQ:61:GLU:O	2.12	0.48
29:B4:1:MET:HE2	41:BG:66:GLN:OE1	2.13	0.48
9:CI:18:PHE:HD2	9:CI:62:TYR:HD2	1.61	0.48
3:AC:77:ILE:O	3:AC:83:ARG:HB3	2.12	0.48
9:CI:33:PHE:CE1	9:CI:37:PHE:CD2	3.01	0.48
7:AG:79:ARG:HG2	7:AG:81:GLY:N	2.21	0.48
4:AD:110:PHE:N	4:AD:110:PHE:CD1	2.67	0.48
35:DA:2892:A:H62	35:DA:2893:G:N2	2.10	0.48
51:BT:36:GLU:HG2	51:BT:36:GLU:O	2.12	0.48
40:DF:83:PHE:O	40:DF:84:VAL:CB	2.56	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:104:VAL:HG11	39:BE:188:VAL:CG2	2.43	0.48
2:AB:169:LYS:HB3	2:AB:170:GLU:OE2	2.13	0.48
47:DP:64:LYS:C	47:DP:66:GLY:N	2.63	0.48
4:AD:61:LYS:NZ	4:AD:62:GLN:HE21	2.11	0.48
47:BP:140:ALA:O	47:BP:141:ALA:HB3	2.13	0.48
35:BA:1009:A:C4'	52:BU:59:ARG:HD3	2.43	0.48
1:CA:1014:A:H2'	1:CA:1015:A:C8	2.48	0.48
1:CA:334:C:O2'	1:CA:335:C:H5'	2.12	0.48
13:CM:10:PRO:O	13:CM:45:VAL:HG11	2.13	0.48
11:CK:21:ILE:HD13	11:CK:82:VAL:HG13	1.95	0.48
35:BA:27:G:N2	35:BA:512:G:C2'	2.76	0.48
1:CA:1434:A:H2'	1:CA:1435:G:O4'	2.13	0.48
35:DA:1721:G:H5'	35:DA:1722:A:OP1	2.13	0.48
35:BA:1579:A:H2'	35:BA:1580:A:O4'	2.13	0.48
35:BA:993:G:OP1	52:BU:50:ARG:NH1	2.46	0.48
1:AA:1023:G:H2'	1:AA:1024:G:H5'	1.94	0.48
35:DA:523:C:O2'	35:DA:524:U:H5'	2.13	0.48
45:DN:93:THR:O	45:DN:94:HIS:CB	2.61	0.48
35:DA:491:G:H2'	35:DA:492:A:C8	2.48	0.48
1:AA:1028:C:H2'	1:AA:1029:C:H5'	1.96	0.48
35:BA:644:A:C2	35:BA:2369:A:H1'	2.48	0.48
40:DF:181:LEU:HD11	40:DF:186:ILE:HD11	1.95	0.48
47:BP:100:LEU:HD22	47:BP:100:LEU:N	2.28	0.48
35:BA:2735:G:H2'	35:BA:2736:G:H8	1.77	0.48
1:CA:1081:G:H2'	1:CA:1082:G:H8	1.78	0.48
52:DU:17:ILE:HG23	52:DU:39:LEU:HD12	1.95	0.48
47:DP:96:THR:O	47:DP:100:LEU:HD23	2.13	0.48
35:DA:911:A:H2'	48:DQ:9:TYR:OH	2.13	0.48
35:BA:1305:C:O2'	35:BA:1306:C:H5'	2.12	0.48
35:BA:84:A:N1	35:BA:98:G:O2'	2.40	0.48
35:BA:2619:C:O2'	35:BA:2620:C:H5'	2.13	0.48
35:BA:2728:U:O2'	35:BA:2729:G:H5'	2.13	0.48
35:BA:2455:G:H2'	35:BA:2456:C:C6	2.48	0.48
41:BG:38:VAL:HG22	41:BG:93:THR:HG23	1.93	0.48
22:AY:67:C:C3'	22:AY:67:C:C6	2.96	0.48
22:AV:69:G:H2'	22:AV:70:G:C8	2.48	0.48
51:DT:28:VAL:CG1	51:DT:29:ARG:HH11	2.26	0.48
56:DY:81:LYS:HD2	56:DY:96:ILE:CG2	2.43	0.48
42:BH:41:MET:CE	42:BH:42:ARG:N	2.76	0.48
43:DI:92:VAL:CG1	43:DI:120:ILE:HD13	2.34	0.48
43:DI:124:GLY:H	43:DI:142:VAL:HG11	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:113:GLU:HB3	7:AG:118:VAL:CG2	2.44	0.48
38:DD:48:ARG:HG3	38:DD:48:ARG:HH11	1.78	0.48
35:DA:1748:G:H5'	35:DA:1748:G:C8	2.43	0.48
12:CL:24:VAL:CG1	12:CL:26:ALA:HB2	2.43	0.48
12:AL:35:GLY:HA3	12:AL:58:VAL:CG1	2.33	0.48
10:AJ:4:ILE:HD13	10:AJ:74:ILE:HD11	1.94	0.48
42:DH:41:MET:SD	42:DH:53:GLU:O	2.71	0.48
50:DS:36:TYR:HA	50:DS:52:SER:HA	1.94	0.48
1:AA:1441:G:H5''	1:AA:1442:G:O4'	2.13	0.48
28:D3:7:LYS:HD2	28:D3:34:GLU:OE2	2.12	0.48
1:CA:1278:U:H4'	1:CA:1279:A:C8	2.48	0.48
16:AP:80:PHE:CD1	16:AP:80:PHE:N	2.81	0.48
29:D4:33:VAL:HG12	29:D4:34:GLU:N	2.28	0.48
41:DG:104:GLU:C	41:DG:106:LEU:N	2.65	0.48
41:DG:45:GLU:O	41:DG:88:ILE:HG13	2.13	0.48
41:DG:68:PRO:CA	41:DG:92:VAL:HB	2.39	0.48
19:CS:73:GLU:HG2	19:CS:73:GLU:O	2.14	0.48
39:BE:34:VAL:HG12	39:BE:49:LEU:HA	1.94	0.48
2:AB:172:ILE:H	2:AB:172:ILE:CD1	2.11	0.48
35:BA:1652:A:O3'	35:BA:1653:G:C8	2.66	0.48
41:BG:5:VAL:HG12	41:BG:6:ALA:N	2.28	0.48
1:AA:1353:G:O2'	1:AA:1354:C:H5'	2.12	0.48
1:AA:81:U:H3	1:AA:88:A:N6	1.96	0.48
39:BE:116:VAL:HG21	39:BE:122:PHE:CD2	2.48	0.48
42:BH:136:ILE:N	42:BH:136:ILE:CD1	2.72	0.48
30:B5:48:GLU:O	30:B5:49:CYS:CB	2.58	0.48
2:AB:101:MET:HA	2:AB:101:MET:HE2	1.95	0.48
3:CC:77:ILE:O	3:CC:83:ARG:HB3	2.13	0.48
9:AI:4:TYR:CE2	9:AI:88:TYR:HB2	2.48	0.48
9:AI:63:ILE:CG2	9:AI:64:THR:N	2.76	0.48
1:AA:586:C:O2'	1:AA:587:G:H5'	2.13	0.48
35:BA:528:A:C2	35:BA:2042:A:H2'	2.48	0.48
37:DC:48:LEU:HB3	37:DC:50:ILE:HG13	1.94	0.48
4:CD:175:SER:OG	4:CD:186:LEU:HD21	2.13	0.48
9:CI:99:LEU:O	9:CI:101:PHE:N	2.46	0.48
35:DA:1039:G:H2'	35:DA:1040:C:C6	2.48	0.48
7:CG:20:ASP:C	7:CG:22:LEU:H	2.17	0.48
7:CG:23:VAL:HG12	7:CG:23:VAL:O	2.13	0.48
2:AB:137:ARG:HD3	2:AB:138:LEU:N	2.28	0.48
20:CT:82:SER:O	20:CT:86:ARG:CB	2.60	0.48
9:AI:111:ARG:O	9:AI:113:LYS:HD2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2692:C:O2'	35:DA:2693:A:H5'	2.14	0.48
8:CH:1:MET:HE2	8:CH:1:MET:H3	1.77	0.48
15:CO:64:ARG:O	15:CO:65:ARG:C	2.51	0.48
1:CA:1037:C:H2'	1:CA:1038:C:C6	2.47	0.48
1:AA:1014:A:H2'	1:AA:1015:A:C8	2.47	0.48
35:BA:2884:U:H2'	35:BA:2885:C:H5'	1.94	0.48
1:CA:151:A:O2'	1:CA:152:A:H5'	2.13	0.48
1:CA:955:U:H1'	1:CA:1227:A:N6	2.28	0.48
7:CG:64:GLN:HG3	7:CG:68:ASN:HD21	1.78	0.48
48:BQ:36:ALA:HB1	48:BQ:127:ILE:CD1	2.44	0.48
20:CT:38:LYS:HA	20:CT:41:ILE:CD1	2.42	0.48
54:BW:20:VAL:HG23	54:BW:21:VAL:N	2.27	0.48
1:CA:59:A:H2'	1:CA:59:A:N3	2.26	0.48
1:AA:301:G:H2'	1:AA:302:G:C8	2.46	0.48
1:CA:320:C:H2'	1:CA:321:A:C8	2.48	0.48
1:CA:627:G:O2'	1:CA:628:G:H5'	2.13	0.48
52:BU:17:ILE:HG23	52:BU:39:LEU:HD12	1.95	0.48
2:CB:61:LEU:HD21	2:CB:161:ALA:HB2	1.94	0.48
35:DA:2199:A:H3'	35:DA:2200:C:H6	1.77	0.48
1:AA:857:C:H2'	1:AA:858:G:O4'	2.13	0.48
1:AA:15:G:H4'	5:AE:24:ARG:NH1	2.28	0.48
35:DA:1354:A:H2'	35:DA:1355:G:O4'	2.13	0.48
35:BA:2138:C:H2'	35:BA:2139:C:C6	2.48	0.48
35:DA:2020:A:O2'	35:DA:2021:C:H5'	2.12	0.48
35:BA:863:A:O2'	35:BA:864:G:H5'	2.13	0.48
7:CG:137:LYS:O	7:CG:141:VAL:HG23	2.14	0.48
7:AG:80:VAL:O	7:AG:80:VAL:HG12	2.14	0.48
22:CY:17:C:H5''	22:CY:18:U:H6	1.74	0.48
22:CY:71:G:C6	22:CY:72:C:C4	3.01	0.48
22:CY:17:C:OP1	57:DZ:186:GLU:HG3	2.13	0.48
23:CW:71:G:H3'	23:CW:71:G:C8	2.47	0.48
22:AV:12:U:N3	22:AV:26:G:N2	2.61	0.48
41:BG:72:ARG:HB3	41:BG:86:MET:H	1.78	0.48
4:AD:14:ARG:C	4:AD:16:GLY:H	2.15	0.48
46:DO:69:ILE:HD13	46:DO:77:ILE:HG23	1.95	0.48
35:DA:1484:G:H21	35:DA:1505:C:N4	2.10	0.48
56:DY:29:GLU:OE2	56:DY:38:ILE:HG21	2.13	0.48
1:CA:148:G:O2'	1:CA:149:A:H5'	2.13	0.48
43:DI:123:LEU:HD11	43:DI:144:VAL:HG21	1.95	0.48
43:DI:88:ILE:CG2	43:DI:89:TYR:H	2.24	0.48
35:DA:1747:G:H2'	35:DA:1747(A):G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:8:LEU:C	10:AJ:16:LEU:HD21	2.33	0.48
47:BP:107:LYS:C	47:BP:109:GLY:N	2.67	0.48
35:DA:997:G:OP1	52:DU:93:LYS:HD3	2.12	0.48
13:AM:2:ALA:CB	13:AM:9:ILE:HG23	2.38	0.48
51:BT:70:VAL:CG1	51:BT:71:GLY:H	2.27	0.48
12:CL:47:LYS:HE2	12:CL:48:PRO:CB	2.41	0.48
52:BU:92:ARG:HB3	53:BV:11:GLN:NE2	2.28	0.48
53:BV:38:LEU:HD22	53:BV:52:VAL:HG11	1.94	0.48
39:DE:52:LEU:HD22	39:DE:76:ARG:HD3	1.94	0.48
1:AA:474:G:C2'	1:AA:475:G:H8	2.26	0.48
12:AL:42:THR:HA	12:AL:54:LYS:HA	1.95	0.48
56:BY:29:GLU:OE2	56:BY:38:ILE:HG21	2.13	0.48
26:D1:89:GLU:O	26:D1:93:GLU:HG2	2.13	0.48
49:BR:12:ARG:HG3	49:BR:12:ARG:HH11	1.77	0.48
50:DS:59:LYS:HG2	50:DS:60:GLY:N	2.28	0.48
47:BP:39:LYS:HA	47:BP:39:LYS:HD3	1.55	0.48
22:AY:52:C:C2	22:AY:53:U:C5	3.01	0.48
48:DQ:133:ARG:O	48:DQ:134:ARG:HG2	2.12	0.48
5:AE:33:VAL:HG21	5:AE:109:ILE:HG12	1.96	0.48
5:CE:7:GLU:HB2	5:CE:35:GLY:O	2.13	0.48
1:AA:173:U:H5''	1:AA:197:A:O4'	2.13	0.48
35:DA:2787:C:H2'	35:DA:2787:C:O2	2.12	0.48
38:DD:11:PRO:O	38:DD:12:SER:C	2.51	0.48
45:DN:68:GLU:HG2	45:DN:88:GLU:OE2	2.13	0.48
19:CS:6:LYS:H	19:CS:6:LYS:CE	2.26	0.48
1:CA:192:U:O4'	20:CT:103:GLY:HA2	2.13	0.48
19:AS:36:ARG:HH11	19:AS:53:ASN:HA	1.77	0.48
33:D8:33:ASN:N	33:D8:36:LYS:HD2	2.29	0.48
33:B8:34:TRP:CD2	33:B8:35:GLN:N	2.82	0.48
11:AK:15:ALA:HB1	11:AK:78:GLN:HE21	1.78	0.48
35:BA:297:C:H2'	35:BA:298:G:O4'	2.14	0.48
37:DC:4:HIS:ND1	37:DC:8:TYR:CE2	2.81	0.48
35:BA:1403:C:H5''	35:BA:1471:A:C1'	2.43	0.48
1:CA:1242:C:H42	1:CA:1295:G:H1	1.61	0.48
5:CE:105:VAL:HB	5:CE:106:PRO:HD3	1.95	0.48
35:DA:1278:A:O2'	35:DA:1279:G:H5'	2.14	0.48
57:BZ:13:GLU:OE1	57:BZ:13:GLU:N	2.31	0.48
11:CK:102:GLY:O	11:CK:103:LEU:HD22	2.12	0.48
35:DA:1155:A:OP2	52:DU:58:ARG:NH1	2.46	0.48
36:DB:11:C:OP2	36:DB:12:C:H5	1.96	0.48
3:CC:162:GLN:OE1	24:CX:24:A:O4'	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:88:LYS:O	56:BY:90:LEU:HD23	2.13	0.48
1:CA:1436:U:H2'	1:CA:1437:C:H6	1.78	0.48
36:BB:94:C:O2'	36:BB:95:C:H5'	2.13	0.48
15:AO:7:GLU:O	15:AO:10:LYS:HB3	2.13	0.48
1:CA:794:A:H4'	1:CA:1521:G:O2'	2.12	0.48
1:CA:766:A:H2'	1:CA:767:A:O4'	2.13	0.48
35:BA:665:C:H2'	35:BA:666:G:C8	2.48	0.48
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.78	0.48
35:BA:1362:C:C2'	35:BA:1363:C:H5'	2.44	0.48
35:DA:1756:G:H4'	35:DA:1758:G:O4'	2.13	0.48
35:BA:2261:C:O2'	35:BA:2262:U:H5'	2.13	0.48
30:D5:35:GLU:O	30:D5:36:CYS:CB	2.61	0.48
38:DD:4:LYS:HE3	38:DD:20:ASP:HA	1.95	0.48
35:DA:1161:C:H4'	53:DV:8:GLY:HA2	1.95	0.48
49:BR:37:THR:HA	49:BR:111:LEU:HD23	1.95	0.48
57:BZ:69:THR:HA	57:BZ:89:PHE:O	2.13	0.48
50:DS:46:VAL:HG12	50:DS:47:THR:N	2.29	0.48
49:DR:104:ARG:HD2	49:DR:109:ALA:HB3	1.95	0.48
1:CA:1201:A:H1'	1:CA:1202:G:OP2	2.13	0.48
45:DN:28:THR:HG22	45:DN:29:LYS:N	2.27	0.48
35:DA:74:A:H4'	35:DA:75:G:O4'	2.13	0.48
30:B5:41:PRO:HG2	30:B5:44:THR:OG1	2.13	0.48
30:D5:7:PRO:HA	35:DA:2615:U:C2	2.47	0.48
22:CY:20:G:N2	22:CY:58:C:C2	2.82	0.48
22:CY:9:A:C5	22:CY:47:G:C6	3.01	0.48
22:CY:57:U:O2	22:CY:59:G:C4	2.66	0.48
23:AW:70:G:C8	23:AW:71:G:N7	2.80	0.48
22:AY:29:A:C6	22:AY:30:U:C4	3.01	0.48
22:AY:29:A:H2'	22:AY:30:U:O4'	2.14	0.48
23:CW:44:A:C2'	23:CW:45:U:H5''	2.42	0.48
22:AV:3:G:H2'	22:AV:4:C:H5''	1.96	0.48
22:AV:52:C:C2	22:AV:53:U:C5	3.02	0.48
22:AV:58:C:O2'	22:AV:59:G:H5'	2.13	0.48
1:AA:532:A:H2	1:AA:1207:G:C1'	2.26	0.48
8:CH:103:VAL:HG21	8:CH:110:ALA:CB	2.31	0.48
12:AL:37:CYS:O	12:AL:38:THR:C	2.52	0.48
42:DH:41:MET:HE3	42:DH:42:ARG:N	2.27	0.48
10:CJ:5:ARG:HA	10:CJ:73:ASP:OD1	2.13	0.48
45:DN:1:MET:H3	53:DV:20:LEU:HD21	1.78	0.48
35:BA:1493:C:H4'	35:BA:1494:A:OP2	2.13	0.48
2:CB:80:ILE:HD11	2:CB:208:ILE:CG2	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:54:LYS:CB	12:CL:70:ILE:HD12	2.30	0.48
49:DR:12:ARG:HG3	49:DR:12:ARG:HH11	1.79	0.48
49:BR:56:LYS:C	49:BR:58:GLY:H	2.16	0.48
10:CJ:61:GLU:HG3	14:CN:58:LYS:HE2	1.95	0.48
26:D1:94:LEU:O	26:D1:96:LYS:N	2.46	0.48
31:D6:35:GLU:O	31:D6:36:LEU:HB2	2.13	0.48
3:CC:6:HIS:CD2	3:CC:7:PRO:HD2	2.47	0.48
2:AB:54:THR:HG22	2:AB:58:ILE:CD1	2.43	0.48
30:B5:52:TYR:O	30:B5:53:ALA:HB2	2.13	0.48
3:CC:55:VAL:O	3:CC:57:ILE:HG13	2.13	0.48
3:AC:20:SER:CB	3:AC:40:ARG:HH22	2.24	0.48
3:AC:57:ILE:CG2	3:AC:58:GLU:N	2.76	0.48
25:D0:27:GLU:C	25:D0:29:GLN:H	2.17	0.48
35:DA:2134:A:C2	35:DA:2159:G:H1'	2.48	0.48
1:CA:224:C:H2'	1:CA:225:C:C6	2.49	0.48
1:CA:1492:A:O2'	1:CA:1493:A:P	2.71	0.48
38:BD:9:TYR:C	38:BD:10:THR:HG22	2.34	0.48
37:BC:11:LEU:HD13	37:BC:33:LEU:O	2.13	0.48
47:DP:112:LEU:H	47:DP:128:HIS:CD2	2.32	0.48
1:AA:376:G:O3'	16:AP:5:ARG:HD2	2.13	0.48
49:BR:103:ARG:HD2	54:BW:40:ASN:ND2	2.28	0.48
1:CA:1294:G:H2'	1:CA:1295:G:C8	2.48	0.48
1:CA:853:G:H2'	1:CA:854:G:H8	1.78	0.48
1:AA:692:U:H5	11:AK:26:ASN:HD22	1.61	0.48
15:CO:23:GLY:O	15:CO:27:VAL:HB	2.13	0.48
35:BA:1179:C:H2'	35:BA:1180:C:C6	2.48	0.48
35:DA:1131:G:O6	35:DA:2040:C:H1'	2.13	0.48
22:CV:76:C:C2'	22:CV:77:C:H5''	2.44	0.48
1:AA:189(D):C:H1'	1:AA:189(H):G:C2	2.48	0.48
1:AA:189(I):G:H2'	1:AA:189(J):G:C8	2.47	0.48
17:AQ:63:ARG:HG2	17:AQ:64:PRO:CD	2.43	0.48
1:AA:511:C:H1'	4:AD:43:HIS:NE2	2.28	0.48
35:DA:848:G:H5'	35:DA:848:G:H8	1.79	0.48
26:B1:19:GLN:CB	26:B1:35:THR:CG2	2.92	0.48
35:BA:221:A:O2'	35:BA:222:A:OP2	2.29	0.48
27:B2:2:LYS:CB	35:BA:97:C:H5''	2.44	0.48
38:DD:231:HIS:ND1	38:DD:232:PRO:CD	2.76	0.48
35:DA:53:A:H2'	35:DA:54:G:O4'	2.12	0.48
35:DA:402:A:C2'	35:DA:403:U:H5'	2.44	0.48
28:D3:40:THR:CG2	28:D3:43:ILE:HG12	2.43	0.48
6:AF:84:ASN:O	6:AF:86:ARG:HG3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:668:G:O2'	15:AO:46:HIS:HD2	1.96	0.48
35:BA:1838:C:N4	35:BA:1898:U:H2'	2.29	0.48
35:BA:654(L):G:H2'	35:BA:654(M):C:H4'	1.96	0.48
6:AF:23:LYS:O	6:AF:27:GLN:HG2	2.13	0.48
35:DA:1838:C:N4	35:DA:1898:U:H2'	2.28	0.48
20:CT:72:LEU:O	20:CT:73:HIS:HB2	2.13	0.48
35:BA:510:C:O2'	35:BA:511:U:H5'	2.13	0.48
22:CY:13:U:C4	22:CY:25:A:N6	2.81	0.48
22:CY:29:A:C6	22:CY:30:U:C4	3.02	0.48
22:CY:71:G:N1	22:CY:72:C:C5	2.81	0.48
23:AW:44:A:C2'	23:AW:45:U:H5''	2.43	0.48
22:AY:70:G:C2'	22:AY:71:G:O4'	2.61	0.48
22:AV:3:G:C6	22:AV:4:C:N4	2.82	0.48
51:DT:23:ARG:O	51:DT:25:GLY:N	2.47	0.48
51:DT:28:VAL:HG13	51:DT:46:GLU:CA	2.43	0.48
46:DO:64:ARG:CZ	51:DT:70:VAL:HG21	2.44	0.48
23:AW:20:G:C4	23:AW:59:G:N3	2.82	0.48
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	2.13	0.48
23:CW:20:G:C6	23:CW:58:C:C4	3.01	0.48
23:CW:57:U:C1'	23:CW:59:G:N7	2.77	0.48
41:DG:43:LEU:HD11	41:DG:153:ARG:HB2	1.94	0.48
39:DE:51:PHE:H	39:DE:74:PRO:HB2	1.77	0.48
2:CB:84:GLU:HB3	2:CB:219:VAL:CG2	2.29	0.48
39:BE:51:PHE:HE1	39:BE:52:LEU:HD13	1.78	0.48
1:CA:80:G:N7	1:CA:81:U:C5	2.81	0.48
31:D6:5:VAL:HG12	31:D6:8:LYS:CB	2.44	0.48
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.14	0.48
1:AA:1371:G:OP2	9:AI:11:LYS:HG2	2.14	0.48
53:DV:66:ARG:HG2	53:DV:66:ARG:HH11	1.79	0.48
1:CA:1128:C:C5'	9:CI:16:ARG:HH12	2.27	0.48
2:CB:14:GLY:C	2:CB:15:VAL:HG22	2.33	0.48
22:CY:37:A:H2'	22:CY:38:U:O4'	2.14	0.48
35:DA:686:G:N2	35:DA:788:A:H61	2.12	0.48
35:DA:1779:U:C5	35:DA:1784:A:N7	2.68	0.48
7:AG:120:ILE:CD1	7:AG:120:ILE:H	2.19	0.48
40:BF:8:GLN:HG2	40:BF:126:VAL:CB	2.44	0.48
18:CR:23:LYS:HB2	18:CR:56:THR:O	2.14	0.48
7:AG:23:VAL:HG12	7:AG:23:VAL:O	2.13	0.48
45:DN:67:LEU:HD23	45:DN:87:LEU:HD13	1.95	0.48
20:CT:23:ARG:O	20:CT:27:LYS:HB2	2.13	0.48
38:BD:25:THR:O	38:BD:26:LYS:C	2.51	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1432:G:OP2	51:BT:108:ARG:HD3	2.14	0.48
37:BC:4:HIS:ND1	37:BC:8:TYR:CE2	2.82	0.48
42:DH:9:ILE:HG12	42:DH:73:ALA:HB2	1.95	0.48
50:BS:20:ARG:NE	50:BS:20:ARG:CA	2.76	0.48
39:DE:21:VAL:HG23	39:DE:23:VAL:CG1	2.43	0.48
26:B1:64:ALA:HA	26:B1:67:ILE:HG13	1.94	0.48
6:AF:7:ASN:O	6:AF:8:ILE:HG13	2.13	0.48
48:BQ:133:ARG:HG3	48:BQ:133:ARG:HH11	1.78	0.48
1:AA:1240:U:H4'	7:AG:38:LEU:HD21	1.96	0.48
11:AK:126:ARG:C	11:AK:128:ALA:N	2.66	0.48
35:DA:819:A:C4	35:DA:1189:A:C2	3.01	0.48
1:AA:598:U:H2'	1:AA:599:C:C6	2.48	0.48
35:DA:286:C:O2'	35:DA:287:C:H5'	2.14	0.48
49:DR:101:ALA:O	49:DR:102:GLU:CB	2.59	0.48
37:DC:195:ARG:NH1	37:DC:195:ARG:HG3	2.26	0.48
45:BN:93:THR:O	45:BN:94:HIS:CB	2.61	0.48
53:BV:35:LEU:O	53:BV:36:PRO:C	2.51	0.48
1:AA:1030(D):A:C2'	1:AA:1031:G:H5'	2.44	0.48
4:AD:67:ILE:HG21	4:AD:196:LEU:HD23	1.96	0.48
43:BI:38:LEU:CB	43:BI:40:THR:HG23	2.43	0.48
1:CA:1525:G:OP1	11:CK:120:ARG:NH2	2.46	0.48
7:CG:95:ARG:HG2	7:CG:99:LEU:HD11	1.95	0.48
35:DA:2267:A:H5''	35:DA:2268:A:H5'	1.94	0.48
29:D4:48:ARG:O	29:D4:49:PHE:HB2	2.13	0.48
47:DP:100:LEU:HD22	47:DP:100:LEU:N	2.29	0.48
1:AA:30:U:H4'	1:AA:31:G:OP1	2.13	0.48
30:B5:7:PRO:HA	35:BA:2615:U:C2	2.48	0.48
52:DU:113:ALA:C	52:DU:115:ALA:H	2.15	0.48
35:DA:426:C:O2'	35:DA:427:U:H5'	2.13	0.48
1:CA:264:U:H2'	1:CA:265:G:O4'	2.14	0.48
32:B7:5:TRP:CZ3	35:BA:464:U:H4'	2.49	0.48
35:BA:191:A:O2'	35:BA:192:C:H5'	2.13	0.48
35:BA:840:C:H2'	35:BA:841:A:H8	1.78	0.48
20:AT:72:LEU:O	20:AT:73:HIS:HB2	2.13	0.48
11:CK:114:VAL:O	11:CK:114:VAL:HG13	2.14	0.48
55:BX:47:PHE:O	55:BX:49:VAL:HG13	2.12	0.48
22:CY:56:U:P	57:DZ:180:VAL:HG12	2.49	0.48
23:AW:33:G:C2'	23:AW:34:C:H4'	2.44	0.48
22:AY:57:U:OP2	57:BZ:182:LYS:CB	2.59	0.48
23:CW:72:C:H2'	23:CW:73:C:C6	2.48	0.48
4:CD:21:LEU:O	4:CD:113:SER:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:63:C:H2'	22:AV:64:C:H6	1.77	0.48
22:AV:9:A:C6	22:AV:47:G:C6	3.02	0.48
41:BG:43:LEU:N	41:BG:43:LEU:HD22	2.29	0.48
35:BA:1794:U:H1'	35:BA:1900:A:N3	2.29	0.48
23:AW:13:U:H2'	23:AW:14:A:H5''	1.93	0.48
35:DA:589:C:O3'	40:DF:95:ARG:NH1	2.47	0.48
47:DP:32:THR:O	47:DP:33:ARG:HB3	2.14	0.48
23:CW:78:A:O2'	35:DA:2394:C:O2	2.31	0.48
7:CG:113:GLU:HB3	7:CG:118:VAL:CG2	2.43	0.48
43:BI:92:VAL:O	43:BI:92:VAL:HG12	2.14	0.48
23:CW:9:A:C6	23:CW:48:G:C2	3.01	0.48
30:D5:3:LYS:HZ2	30:D5:5:PRO:C	2.12	0.48
2:CB:77:ALA:HB2	2:CB:211:ILE:HG21	1.94	0.48
2:CB:80:ILE:H	2:CB:80:ILE:CD1	2.01	0.48
46:BO:105:GLU:OE1	46:BO:105:GLU:N	2.45	0.48
28:D3:31:LEU:O	28:D3:32:GLN:HB2	2.13	0.48
52:BU:98:LEU:O	52:BU:100:VAL:N	2.47	0.48
41:DG:61:ALA:HA	41:DG:64:THR:HG22	1.96	0.48
49:BR:2:ARG:CD	49:BR:2:ARG:O	2.61	0.48
10:CJ:63:PHE:CD1	14:CN:58:LYS:HA	2.44	0.48
57:DZ:150:LEU:O	57:DZ:171:ILE:HD12	2.12	0.48
35:BA:1291:C:H2'	35:BA:1292:U:H6	1.79	0.48
22:AY:52:C:C4	22:AY:53:U:O4	2.66	0.48
50:BS:70:GLY:HA3	50:BS:101:LEU:HD23	1.95	0.48
29:B4:9:LEU:HD22	29:B4:26:SER:O	2.13	0.48
5:AE:70:PRO:O	5:AE:77:PRO:HD3	2.14	0.48
13:CM:70:LEU:C	13:CM:70:LEU:HD23	2.34	0.48
17:CQ:67:LYS:O	17:CQ:69:LYS:N	2.42	0.48
9:AI:55:ALA:CA	9:AI:58:HIS:HD2	2.24	0.48
29:B4:30:GLU:C	29:B4:31:ILE:HD12	2.34	0.48
1:CA:1326:C:OP1	21:CU:12:LYS:HE2	2.14	0.48
4:AD:135:LEU:C	4:AD:137:SER:H	2.17	0.48
46:BO:107:ARG:CZ	51:BT:35:LYS:HD2	2.42	0.48
45:DN:41:ASP:O	45:DN:42:TRP:O	2.32	0.48
7:CG:16:LEU:CD1	9:CI:42:ARG:HA	2.41	0.48
3:CC:173:VAL:O	3:CC:173:VAL:HG12	2.13	0.48
1:AA:192:U:C4'	20:AT:103:GLY:HA2	2.44	0.48
24:AX:19:A:C5	22:AY:39:A:C2	3.01	0.48
39:BE:23:VAL:HG12	39:BE:173:VAL:HG21	1.96	0.48
57:BZ:24:LEU:C	57:BZ:24:LEU:HD23	2.34	0.48
35:DA:2206:G:C2	35:DA:2207:G:H5'	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1291:G:O3'	9:CI:39:GLY:HA3	2.14	0.48
18:CR:36:ASN:HB2	18:CR:40:LEU:HD11	1.95	0.48
48:DQ:76:LYS:CB	48:DQ:91:GLU:HG3	2.41	0.48
56:DY:88:LYS:HZ3	56:DY:93:GLY:C	2.17	0.48
51:DT:58:ASN:ND2	51:DT:58:ASN:N	2.62	0.48
35:DA:152:G:H1	35:DA:174:C:N4	2.10	0.48
50:BS:36:TYR:HD1	50:BS:36:TYR:N	2.12	0.48
20:CT:10:LEU:HG	20:CT:12:ALA:HB2	1.96	0.48
38:BD:76:PRO:HB2	38:BD:116:GLN:OE1	2.13	0.48
47:BP:13:ASN:ND2	47:BP:13:ASN:C	2.67	0.48
51:DT:106:SER:O	51:DT:107:ASP:HB3	2.13	0.48
13:CM:106:ASN:O	13:CM:107:ALA:CB	2.62	0.48
52:BU:47:TYR:HA	52:BU:50:ARG:HH12	1.78	0.48
1:AA:1084:G:H5'	1:AA:1102:A:OP2	2.13	0.48
18:CR:30:ASP:O	18:CR:32:ARG:N	2.45	0.48
35:BA:535:C:O3'	52:BU:53:ARG:NH1	2.46	0.48
1:AA:867:G:H2'	1:AA:868:C:C6	2.48	0.48
36:DB:109:C:H5'	36:DB:110:G:O5'	2.13	0.48
42:DH:88:LEU:N	42:DH:88:LEU:HD22	2.29	0.48
35:DA:491:G:H2'	35:DA:492:A:H8	1.78	0.48
3:CC:125:GLU:HG2	3:CC:190:ARG:O	2.13	0.48
16:CP:55:ARG:C	16:CP:57:ARG:H	2.16	0.48
2:CB:79:ASP:O	2:CB:81:VAL:N	2.46	0.48
1:AA:1439:C:H5'	20:AT:38:LYS:NZ	2.29	0.48
1:AA:59:A:N3	1:AA:59:A:H2'	2.27	0.48
52:BU:76:TYR:CZ	52:BU:80:ILE:HG13	2.49	0.48
49:DR:75:LEU:HD13	49:DR:75:LEU:O	2.12	0.48
42:DH:94:TYR:N	42:DH:94:TYR:CD1	2.81	0.48
1:CA:1174:G:H2'	1:CA:1175:G:H8	1.79	0.48
35:BA:758:C:O2	35:BA:1981:A:H2	1.96	0.48
9:CI:24:GLY:HA2	9:CI:59:PHE:O	2.13	0.48
35:BA:2335:A:O2'	35:BA:2336:A:H5''	2.12	0.48
35:DA:745:G:H2'	35:DA:746:A:H5'	1.95	0.48
1:CA:857:C:H2'	1:CA:858:G:O4'	2.13	0.48
17:CQ:13:ASP:C	17:CQ:15:MET:H	2.17	0.48
23:AW:69:G:N3	23:AW:69:G:H2'	2.29	0.48
23:AW:71:G:O5'	23:AW:71:G:C8	2.67	0.48
23:CW:71:G:C8	23:CW:71:G:O5'	2.66	0.48
22:AV:5:C:C4	22:AV:6:C:N4	2.81	0.48
22:CV:71:G:N2	22:CV:72:C:C1'	2.77	0.48
33:B8:13:ARG:HD2	47:BP:61:ARG:HH11	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2112:G:O2'	35:BA:2113:U:H5'	2.14	0.48
43:DI:62:LYS:NZ	43:DI:133:HIS:HB2	2.28	0.48
1:AA:961:U:O5'	1:AA:961:U:H6	1.97	0.48
12:CL:24:VAL:HG12	12:CL:26:ALA:HB2	1.95	0.48
12:CL:41:ARG:O	12:CL:55:VAL:CG2	2.61	0.48
8:CH:83:ILE:O	8:CH:83:ILE:HG13	2.13	0.48
12:AL:53:ARG:HH12	12:AL:92:ASP:HB3	1.78	0.48
45:BN:134:ARG:O	45:BN:136:GLU:N	2.47	0.48
40:BF:20:LEU:O	40:BF:21:ALA:O	2.32	0.48
45:DN:133:GLN:O	45:DN:134:ARG:HB3	2.13	0.48
52:DU:91:ASP:CG	52:DU:96:ALA:HB2	2.33	0.48
35:DA:544:G:C2	35:DA:547:A:H5'	2.49	0.48
35:BA:2811:G:H4'	39:BE:61:ARG:HH21	1.78	0.48
9:AI:9:ARG:HG2	9:AI:14:VAL:CG2	2.33	0.48
40:BF:28:ILE:HD13	40:BF:28:ILE:H	1.79	0.48
13:AM:91:ARG:CB	13:AM:98:VAL:HG13	2.40	0.48
57:DZ:172:ALA:O	57:DZ:173:ALA:HB2	2.14	0.48
50:DS:58:LEU:O	50:DS:59:LYS:O	2.32	0.48
28:B3:8:LEU:HD13	28:B3:31:LEU:HA	1.95	0.48
50:BS:58:LEU:O	50:BS:59:LYS:O	2.31	0.48
57:BZ:104:PHE:HD1	57:BZ:141:VAL:HG21	1.79	0.48
29:B4:5:ILE:CG1	41:BG:67:LYS:NZ	2.77	0.48
27:D2:45:SER:H	27:D2:46:GLN:HE21	1.58	0.48
56:BY:51:VAL:C	56:BY:53:PRO:HD2	2.33	0.48
4:CD:24:GLU:O	4:CD:27:TYR:HB2	2.13	0.48
1:CA:620:C:C1'	4:CD:135:LEU:HD23	2.44	0.48
5:CE:7:GLU:O	5:CE:8:GLU:HB3	2.13	0.48
35:BA:2580:U:H5'	39:BE:131:ALA:CB	2.36	0.48
1:AA:151:A:O2'	1:AA:152:A:H5'	2.13	0.48
6:CF:100:ASN:ND2	18:CR:23:LYS:NZ	2.62	0.48
35:BA:2892:A:H62	35:BA:2893:G:N2	2.10	0.48
35:BA:1464:C:O2'	35:BA:1528:A:C8	2.50	0.48
38:DD:10:THR:O	38:DD:13:ARG:HB3	2.14	0.48
1:AA:1097:C:O2'	1:AA:1098:C:H5'	2.13	0.48
38:DD:26:LYS:O	38:DD:27:THR:HG22	2.13	0.48
35:BA:705:A:C2	35:BA:727:A:H1'	2.49	0.48
35:DA:1598:C:H5'	55:DX:36:LYS:CB	2.38	0.48
1:CA:541:G:O2'	1:CA:542:G:H5'	2.13	0.48
20:AT:82:SER:O	20:AT:86:ARG:CB	2.60	0.48
5:AE:71:LEU:HD13	5:AE:114:GLY:O	2.14	0.48
57:BZ:12:GLY:O	57:BZ:13:GLU:O	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:97:ARG:O	42:BH:103:LEU:HD12	2.14	0.48
35:DA:141:A:H8	35:DA:1408:C:HO2'	1.46	0.48
35:BA:1517:G:O2'	35:BA:1518:U:H5'	2.12	0.48
53:BV:76:LYS:HB2	53:BV:81:TYR:HB3	1.95	0.48
35:BA:1332:G:N2	35:BA:1609:A:O2'	2.47	0.48
38:BD:186:HIS:CD2	38:BD:188:GLU:HB2	2.46	0.48
38:BD:76:PRO:O	38:BD:98:VAL:HG23	2.13	0.48
38:BD:270:ILE:HD12	38:BD:270:ILE:O	2.13	0.48
35:DA:1996:C:H5	46:DO:32:TYR:OH	1.96	0.48
46:DO:98:VAL:HG12	46:DO:117:LEU:HB3	1.95	0.48
1:CA:366:C:H4'	1:CA:367:U:OP1	2.12	0.48
35:BA:1996:C:C5	46:BO:32:TYR:OH	2.67	0.48
35:BA:848:G:H8	35:BA:848:G:H5'	1.78	0.48
3:CC:188:LEU:O	3:CC:190:ARG:HG3	2.13	0.48
35:BA:692:C:H2'	35:BA:693:C:H6	1.78	0.48
1:AA:108:G:N2	1:AA:108:G:OP2	2.46	0.48
43:DI:116:LEU:HD12	43:DI:117:GLU:H	1.79	0.48
35:BA:1151:G:H5''	52:BU:81:HIS:CE1	2.49	0.48
35:DA:2872:G:C2	35:DA:2873:A:N6	2.82	0.48
7:CG:101:LEU:O	7:CG:105:VAL:HG23	2.14	0.48
1:AA:110:C:H2'	1:AA:111:G:O4'	2.13	0.48
35:BA:2689:U:H5''	35:BA:2690:C:H5'	1.96	0.48
35:DA:2027:G:O2'	35:DA:2028:U:H5'	2.14	0.48
35:BA:70:G:H2'	35:BA:113:G:O2'	2.13	0.48
52:BU:104:GLN:O	52:BU:107:ALA:HB3	2.13	0.48
35:BA:247:G:H4'	35:BA:386:G:C5	2.48	0.48
35:BA:1688:U:H1'	35:BA:1701:A:C6	2.49	0.48
35:BA:1165:U:O2'	35:BA:1166:C:H5'	2.13	0.48
23:AW:40:A:C4'	23:AW:40:A:OP2	2.60	0.48
22:AY:44:A:C6	22:AY:45:U:C4	3.02	0.48
23:CW:4:C:C4	23:CW:5:C:N4	2.82	0.48
22:AV:14:A:C3'	22:AV:15:G:C8	2.76	0.48
22:AV:15:G:C8	22:AV:16:U:C5	3.01	0.48
4:AD:21:LEU:O	4:AD:113:SER:HB2	2.13	0.48
51:BT:3:ARG:C	51:BT:5:ALA:H	2.16	0.48
19:AS:19:VAL:HG12	19:AS:23:ASN:HD21	1.78	0.48
56:BY:7:VAL:CG2	56:BY:8:LYS:HZ2	2.23	0.48
56:DY:26:LYS:O	56:DY:27:VAL:C	2.51	0.48
42:BH:7:LEU:HD22	42:BH:65:HIS:NE2	2.28	0.48
43:BI:77:LEU:HD23	43:BI:77:LEU:C	2.34	0.48
10:AJ:34:VAL:HG13	10:AJ:73:ASP:C	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:133:GLN:O	45:BN:134:ARG:CB	2.61	0.48
29:B4:33:VAL:HG21	41:BG:109:VAL:CG1	2.44	0.48
51:BT:65:LYS:HZ1	51:BT:66:VAL:N	2.12	0.48
39:DE:34:VAL:HG12	39:DE:49:LEU:HA	1.95	0.48
29:D4:11:PRO:HA	29:D4:25:TYR:HA	1.96	0.48
41:DG:123:ASN:HA	41:DG:125:PHE:CE1	2.48	0.48
12:AL:69:TYR:O	12:AL:71:PRO:HD3	2.14	0.48
41:DG:120:LEU:HG	41:DG:179:PRO:O	2.13	0.48
56:BY:27:VAL:HA	56:BY:28:LYS:NZ	2.18	0.48
50:DS:54:LEU:C	50:DS:56:LEU:N	2.67	0.48
35:DA:1204:A:H61	35:DA:1240:U:H2'	1.78	0.48
2:AB:17:PHE:CB	2:AB:44:LEU:HD11	2.43	0.48
1:AA:253:U:H2'	1:AA:254:G:C8	2.49	0.48
57:BZ:151:HIS:CD2	57:BZ:151:HIS:N	2.81	0.48
47:BP:18:ARG:HB3	47:BP:18:ARG:NH1	2.28	0.48
48:DQ:42:ILE:N	48:DQ:42:ILE:HD12	2.29	0.48
35:DA:661:C:H2'	35:DA:662:G:H8	1.77	0.48
47:DP:17:LYS:C	47:DP:19:VAL:N	2.67	0.48
9:AI:20:ARG:NH1	9:AI:20:ARG:HG3	2.28	0.48
4:AD:171:GLY:C	4:AD:173:TRP:H	2.17	0.48
35:DA:2297:C:O2'	35:DA:2298:A:H5'	2.14	0.48
35:DA:2036:C:H6	35:DA:2036:C:C5'	2.21	0.48
57:DZ:61:LEU:HD21	57:DZ:65:GLN:CB	2.44	0.48
13:AM:70:LEU:HD23	13:AM:70:LEU:C	2.34	0.48
1:AA:1326:C:OP1	21:AU:12:LYS:HE2	2.13	0.48
37:DC:52:PRO:HG2	37:DC:53:ARG:HH11	1.78	0.48
7:AG:152:ALA:C	7:AG:154:TYR:H	2.17	0.48
42:BH:118:PRO:HG2	42:BH:121:ILE:HD12	1.95	0.48
35:DA:1762:A:C8	35:DA:1762:A:O5'	2.66	0.48
2:CB:71:VAL:HG13	2:CB:93:VAL:HB	1.96	0.48
35:DA:363(E):U:H5'	35:DA:363(F):A:OP1	2.14	0.48
2:AB:95:GLN:HE21	2:AB:147:LYS:CE	2.27	0.48
17:AQ:90:ILE:O	17:AQ:94:ASN:ND2	2.47	0.48
16:CP:5:ARG:CB	16:CP:67:THR:OG1	2.62	0.48
1:AA:865:A:H5'	1:AA:1078:U:C5	2.48	0.48
11:AK:21:ILE:HD13	11:AK:82:VAL:HG13	1.96	0.48
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.48	0.48
8:AH:77:GLU:HG2	8:AH:78:GLN:N	2.28	0.48
48:BQ:10:ARG:CZ	48:BQ:10:ARG:HB3	2.44	0.48
57:BZ:33:LEU:CG	57:BZ:34:ASN:N	2.76	0.48
36:DB:31:C:C2'	36:DB:53:A:H61	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:11:LEU:CD1	2:CB:217:ARG:NH2	2.76	0.48
40:BF:164:ARG:HG3	40:BF:175:THR:OG1	2.13	0.48
35:DA:1666:G:O2'	35:DA:1667:G:H5'	2.14	0.48
35:BA:2377:A:H4'	50:BS:107:GLU:HG3	1.96	0.48
45:BN:30:ILE:O	45:BN:34:LEU:HD22	2.13	0.48
35:BA:1386:C:H2'	35:BA:1387:C:C6	2.49	0.48
7:CG:64:GLN:HE21	7:CG:68:ASN:ND2	2.11	0.48
34:D9:35:ARG:HD3	35:DA:2742:C:OP1	2.13	0.48
1:CA:1028:C:H2'	1:CA:1029:C:H5'	1.96	0.48
38:BD:2:ALA:O	38:BD:3:VAL:CB	2.62	0.48
2:CB:224:GLN:C	2:CB:226:ARG:H	2.16	0.48
22:CV:78:A:OP1	22:CV:78:A:H4'	2.13	0.48
17:AQ:74:LEU:HD13	17:AQ:74:LEU:C	2.34	0.48
2:AB:224:GLN:C	2:AB:226:ARG:H	2.16	0.48
5:CE:127:ASN:OD1	5:CE:129:ILE:HB	2.14	0.48
35:DA:2094:G:OP1	43:DI:22:LYS:HD2	2.14	0.48
1:AA:777:A:H2'	1:AA:778:G:C8	2.49	0.48
34:B9:19:ARG:HA	35:BA:2757:A:OP1	2.13	0.48
3:CC:157:ILE:CD1	3:CC:166:GLU:HB2	2.44	0.48
1:CA:119:A:O2'	1:CA:120:A:OP2	2.25	0.48
6:AF:33:TYR:N	6:AF:33:TYR:CD1	2.82	0.48
22:AY:14:A:H3'	22:AY:15:G:H8	1.79	0.48
22:AY:69:G:C5	22:AY:70:G:C8	3.02	0.48
30:B5:4:HIS:CB	30:B5:5:PRO:CD	2.82	0.48
46:DO:77:ILE:HD11	51:DT:72:VAL:CG1	2.43	0.48
51:DT:28:VAL:CG2	51:DT:47:GLY:H	2.20	0.48
51:DT:33:LYS:NZ	51:DT:74:ARG:NH2	2.62	0.48
23:AW:52:C:C2	23:AW:53:U:C4	3.02	0.48
1:AA:963:G:HO2'	10:AJ:54:PHE:HZ	1.62	0.48
43:BI:129:THR:CG2	43:BI:135:GLU:HG3	2.43	0.48
45:BN:59:LYS:O	45:BN:60:ILE:C	2.52	0.48
42:DH:41:MET:CE	42:DH:53:GLU:H	2.27	0.48
35:DA:1493:C:H4'	35:DA:1494:A:OP2	2.14	0.48
35:DA:1493:C:O2	35:DA:1493:C:C2'	2.61	0.48
35:BA:1493:C:C2'	35:BA:1493:C:O2	2.62	0.48
13:AM:3:ARG:HG2	13:AM:9:ILE:HD11	1.96	0.48
13:AM:3:ARG:NH2	41:BG:113:ARG:HB2	2.29	0.48
2:AB:80:ILE:HD11	2:AB:208:ILE:CG2	2.34	0.48
35:DA:252:G:OP2	47:DP:50:ARG:NH2	2.44	0.48
47:DP:48:PRO:CG	47:DP:49:ARG:N	2.68	0.48
51:BT:62:THR:HA	51:BT:74:ARG:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:101:VAL:HG12	47:DP:107:LYS:H	1.78	0.48
10:CJ:63:PHE:HA	14:CN:59:ALA:H	1.79	0.48
56:BY:28:LYS:O	56:BY:29:GLU:C	2.50	0.48
49:DR:56:LYS:C	49:DR:58:GLY:H	2.17	0.48
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.14	0.48
10:AJ:49:VAL:O	10:AJ:60:ARG:HB2	2.13	0.48
47:DP:6:LEU:HD12	47:DP:8:PRO:CG	2.42	0.48
53:BV:66:ARG:N	53:BV:91:TYR:HE1	2.12	0.48
1:AA:252:U:C4	1:AA:253:U:O4	2.67	0.48
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.13	0.48
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.79	0.48
5:CE:6:PHE:HD1	5:CE:63:ARG:HH12	1.62	0.48
1:CA:255:G:O2'	1:CA:256:U:H5'	2.13	0.48
39:DE:9:VAL:CG2	39:DE:25:VAL:HB	2.41	0.48
43:BI:27:ARG:NH1	43:BI:27:ARG:HG3	2.21	0.48
7:CG:15:ASP:HB3	7:CG:20:ASP:H	1.79	0.48
43:DI:139:GLN:NE2	43:DI:139:GLN:H	2.11	0.48
18:AR:50:ILE:HD11	18:AR:70:ILE:HG21	1.96	0.48
42:DH:28:GLY:HA3	42:DH:79:VAL:HB	1.95	0.48
1:AA:1242:C:H42	1:AA:1295:G:H1	1.60	0.48
6:CF:68:PRO:HG3	6:CF:71:ARG:HH21	1.78	0.48
35:BA:271(C):C:O2'	35:BA:271(D):G:H5'	2.12	0.48
50:DS:89:ARG:HH11	50:DS:89:ARG:CG	2.27	0.48
35:BA:2206:G:C2	35:BA:2207:G:H5'	2.48	0.48
26:D1:76:ARG:HD2	35:DA:271(R):G:OP1	2.13	0.48
41:DG:57:ALA:HA	41:DG:90:LEU:CD2	2.43	0.48
41:BG:114:ILE:HG21	41:BG:117:PHE:HB2	1.95	0.48
5:CE:101:ILE:N	5:CE:101:ILE:HD13	2.29	0.48
40:DF:16:GLY:O	40:DF:17:ARG:HG3	2.14	0.48
1:AA:203:U:OP2	1:AA:203:U:H3'	2.14	0.48
35:BA:2779:U:H4'	35:BA:2780:G:C5'	2.44	0.48
27:B2:15:LYS:O	27:B2:15:LYS:HG3	2.13	0.48
1:AA:1030(C):G:H2'	1:AA:1030(D):A:C8	2.49	0.48
1:CA:203:U:H3'	1:CA:203:U:OP2	2.14	0.48
1:AA:271:C:O2'	1:AA:272:C:H5'	2.13	0.48
1:CA:1521:G:H2'	1:CA:1522:U:H6	1.78	0.48
46:BO:98:VAL:HG12	46:BO:117:LEU:HB3	1.96	0.48
1:CA:921:U:O2	5:CE:19:MET:HB2	2.14	0.48
57:DZ:9:TYR:HD1	57:DZ:37:VAL:HG12	1.78	0.48
1:CA:313:A:H2'	1:CA:314:C:C6	2.49	0.48
1:CA:983:A:HO2'	1:CA:1049:U:HO2'	1.55	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1368:G:O2'	35:DA:1369:G:H5'	2.14	0.48
1:AA:421:U:C2'	1:AA:421:U:O2	2.61	0.48
22:CY:63:C:C1'	57:DZ:185:GLU:OE1	2.61	0.48
23:AW:40:A:C8	23:AW:41:C:C4	3.02	0.48
22:AY:43:G:N1	22:AY:44:A:C5	2.82	0.48
22:AV:23:A:H5'	22:AV:24:A:OP1	2.14	0.48
22:AV:5:C:O2	22:AV:71:G:C4	2.66	0.48
22:AV:70:G:N3	22:AV:71:G:C8	2.82	0.48
4:AD:31:CYS:HG	58:AD:1000:ZN:ZN	0.45	0.48
51:DT:70:VAL:CG1	51:DT:71:GLY:H	2.27	0.48
23:AW:15:G:H22	23:AW:23:A:C1'	2.17	0.48
23:AW:26:G:H3'	23:AW:27:C:C6	2.49	0.48
23:AW:9:A:C5	23:AW:48:G:C2	3.02	0.48
35:DA:612:C:C3'	35:DA:613:G:H5''	2.39	0.48
43:BI:97:ILE:HG22	43:BI:101:LEU:HD22	1.96	0.48
35:BA:1916:A:H5'	35:BA:1916:A:C8	2.46	0.48
40:DF:18:ARG:HG2	40:DF:19:GLU:N	2.29	0.48
12:AL:84:LEU:CD1	12:AL:104:VAL:HG11	2.44	0.48
40:BF:18:ARG:HG2	40:BF:19:GLU:N	2.29	0.48
1:CA:961:U:O2'	1:CA:962:C:H5'	2.14	0.48
1:CA:1123:A:O2'	10:CJ:38:ILE:HG22	2.13	0.48
45:BN:1:MET:O	45:BN:2:LYS:HG3	2.14	0.48
52:BU:91:ASP:OD1	52:BU:96:ALA:CB	2.58	0.48
35:DA:2313:C:C6	35:DA:2314:C:H5	2.32	0.48
41:DG:106:LEU:O	41:DG:110:ALA:HB3	2.14	0.48
41:DG:36:LYS:CD	41:DG:38:VAL:HG23	2.44	0.48
39:BE:57:LYS:O	39:BE:59:VAL:N	2.46	0.48
35:DA:2820:A:O4'	49:DR:5:LYS:HD2	2.14	0.48
35:DA:557:U:H2'	35:DA:558:G:C8	2.49	0.48
2:CB:48:MET:HE1	2:CB:49:GLU:HA	1.95	0.48
47:BP:6:LEU:HD12	47:BP:8:PRO:CG	2.43	0.48
35:DA:1242:A:N1	47:DP:8:PRO:HG3	2.28	0.48
1:AA:1288:A:O2'	1:AA:1289:A:H5'	2.14	0.48
36:BB:50:G:OP2	50:BS:62:LYS:CB	2.61	0.48
29:B4:26:SER:HB2	41:BG:143:GLU:OE1	2.14	0.48
27:D2:47:ASN:OD1	27:D2:47:ASN:N	2.45	0.48
1:AA:1128:C:C5'	9:AI:16:ARG:HH12	2.27	0.48
50:DS:67:ARG:HH11	50:DS:67:ARG:CB	2.17	0.48
5:AE:33:VAL:HG12	5:AE:34:VAL:N	2.29	0.48
3:AC:84:ILE:HD11	3:AC:88:ARG:NH2	2.29	0.48
35:BA:74:A:H4'	35:BA:75:G:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DE:33:VAL:CG1	39:DE:69:LYS:HZ1	2.27	0.48
3:CC:207:VAL:HG12	3:CC:207:VAL:O	2.14	0.48
43:BI:100:ALA:HA	43:BI:103:ARG:CD	2.39	0.48
7:AG:20:ASP:C	7:AG:22:LEU:H	2.17	0.48
39:DE:61:ARG:C	39:DE:63:LEU:N	2.68	0.48
51:BT:38:ASN:C	51:BT:40:THR:H	2.17	0.48
38:BD:75:ILE:O	38:BD:118:VAL:HG23	2.14	0.48
35:DA:1682:G:H5'	35:DA:1762:A:O2'	2.13	0.48
4:CD:79:PHE:O	4:CD:79:PHE:HD1	1.97	0.48
1:CA:1405:G:H2'	1:CA:1406:U:C6	2.42	0.48
1:CA:445:G:H2'	1:CA:446:G:H8	1.79	0.48
27:D2:31:GLU:HB3	27:D2:53:LEU:HD11	1.96	0.48
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.75	0.48
1:AA:1426:C:O2'	1:AA:1427:U:H5'	2.14	0.48
5:CE:31:LEU:HD21	5:CE:43:LEU:HD11	1.96	0.48
1:CA:1073:U:H3	1:CA:1102:A:H61	1.62	0.48
1:AA:501:C:O3'	12:AL:118:SER:HB2	2.14	0.48
1:CA:511:C:H1'	4:CD:43:HIS:NE2	2.28	0.48
35:BA:2884:U:H2'	35:BA:2885:C:C5'	2.44	0.48
4:AD:4:TYR:CG	4:AD:5:ILE:N	2.81	0.48
35:DA:1668:A:H4'	35:DA:1669:A:O5'	2.14	0.48
1:CA:956:U:O2'	1:CA:957:U:H5'	2.14	0.48
1:AA:451:A:C6	1:AA:480:U:H2'	2.48	0.48
13:AM:106:ASN:O	13:AM:107:ALA:CB	2.62	0.48
46:BO:1:MET:HE2	46:BO:32:TYR:CD2	2.48	0.48
49:DR:32:GLY:C	49:DR:33:ARG:HD2	2.34	0.48
1:CA:227:G:H2'	1:CA:228:A:H8	1.79	0.48
54:BW:20:VAL:CG2	54:BW:47:VAL:HG21	2.44	0.48
35:DA:2887:U:H2'	35:DA:2888:C:C6	2.49	0.48
43:DI:111:PRO:HG2	43:DI:112:LYS:HD2	1.94	0.48
35:DA:1362:C:C2'	35:DA:1363:C:H5'	2.44	0.48
35:DA:2736:G:O2'	35:DA:2737:G:H5'	2.14	0.48
14:CN:13:THR:O	14:CN:13:THR:HG22	2.14	0.48
20:CT:73:HIS:O	20:CT:76:ALA:HB3	2.14	0.48
35:DA:889:C:H1'	35:DA:890:A:O4'	2.14	0.48
35:BA:2020:A:O2'	35:BA:2021:C:H5'	2.14	0.48
19:AS:79:THR:O	19:AS:80:TYR:HB3	2.14	0.48
44:BJ:108:UNK:O	44:BJ:110:UNK:N	2.46	0.48
6:CF:23:LYS:O	6:CF:27:GLN:HG2	2.13	0.48
10:AJ:12:ASP:OD2	10:AJ:15:THR:HG23	2.14	0.48
26:B1:83:GLU:O	26:B1:84:GLY:O	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1122:G:O2'	35:DA:1123:C:H5'	2.13	0.48
35:DA:1769:G:O2'	35:DA:1958:C:OP1	2.28	0.48
22:CY:17:C:OP2	57:DZ:186:GLU:C	2.53	0.47
22:CY:57:U:C6	22:CY:59:G:OP2	2.67	0.47
23:CW:32:G:H2'	23:CW:33:G:H8	1.78	0.47
4:CD:14:ARG:C	4:CD:16:GLY:H	2.16	0.47
51:BT:13:ARG:CA	51:BT:13:ARG:NH1	2.72	0.47
43:DI:98:ALA:HB1	43:DI:109:ILE:HD13	1.95	0.47
1:AA:961:U:O2'	1:AA:962:C:H5'	2.14	0.47
43:BI:88:ILE:CG2	43:BI:89:TYR:H	2.23	0.47
12:CL:36:VAL:C	12:CL:58:VAL:HG22	2.34	0.47
12:AL:41:ARG:O	12:AL:55:VAL:CG2	2.62	0.47
12:AL:40:VAL:HG22	12:AL:78:GLN:O	2.12	0.47
42:DH:41:MET:CE	42:DH:42:ARG:N	2.77	0.47
2:AB:77:ALA:HB2	2:AB:211:ILE:HG21	1.96	0.47
40:BF:132:VAL:O	40:BF:133:ASN:O	2.32	0.47
41:DG:36:LYS:CE	41:DG:95:ARG:HH12	2.26	0.47
13:CM:97:PRO:HG3	13:CM:103:THR:HG22	1.96	0.47
41:DG:170:ARG:NH2	41:DG:180:PHE:CD2	2.82	0.47
35:BA:308:G:O2'	56:BY:19:LYS:HE2	2.13	0.47
31:D6:7:ILE:HG12	31:D6:29:ASN:ND2	2.29	0.47
41:BG:8:LYS:O	41:BG:11:TYR:HB3	2.14	0.47
41:BG:91:ARG:C	41:BG:91:ARG:CD	2.82	0.47
9:AI:18:PHE:HD2	9:AI:62:TYR:HD2	1.62	0.47
1:CA:389:A:H2'	1:CA:390:C:C5'	2.43	0.47
9:CI:37:PHE:HB3	9:CI:43:ALA:HB2	1.96	0.47
9:CI:99:LEU:HD12	9:CI:101:PHE:HE1	1.79	0.47
9:AI:96:LEU:O	9:AI:102:LEU:HB2	2.13	0.47
7:AG:120:ILE:HG22	7:AG:124:LEU:HD12	1.96	0.47
40:DF:8:GLN:CG	40:DF:126:VAL:HA	2.43	0.47
13:AM:70:LEU:O	13:AM:74:VAL:HG23	2.14	0.47
1:AA:439:A:H2'	1:AA:441:A:C4'	2.44	0.47
44:DJ:130:UNK:C	44:DJ:132:UNK:N	2.76	0.47
38:DD:25:THR:O	38:DD:26:LYS:C	2.52	0.47
33:B8:33:ASN:N	33:B8:33:ASN:HD22	2.12	0.47
38:BD:209:ALA:C	38:BD:210:GLY:O	2.49	0.47
45:BN:48:MET:N	45:BN:48:MET:HE3	2.28	0.47
1:AA:1291:G:O3'	9:AI:39:GLY:HA3	2.14	0.47
1:AA:939:G:H5''	7:AG:102:ARG:HH22	1.77	0.47
40:BF:66:PRO:O	40:BF:67:GLN:CB	2.57	0.47
39:DE:104:VAL:HG11	39:DE:188:VAL:HG23	1.94	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:386:C:O2'	1:CA:387:U:H5'	2.14	0.47
35:DA:1403:C:H5''	35:DA:1471:A:C1'	2.43	0.47
1:AA:14:U:O2	1:AA:17:U:H5	1.97	0.47
1:AA:156:G:O2'	1:AA:157:G:H5'	2.13	0.47
35:DA:709:U:H3	35:DA:722:A:N6	2.10	0.47
45:BN:5:VAL:HG13	45:BN:5:VAL:O	2.14	0.47
15:CO:7:GLU:O	15:CO:10:LYS:HB3	2.14	0.47
1:CA:611:A:H2	1:CA:630:G:N2	2.12	0.47
35:DA:2732:G:C3'	35:DA:2733:A:H5'	2.44	0.47
38:DD:72:LYS:NZ	38:DD:72:LYS:HB3	2.29	0.47
53:DV:6:LYS:O	53:DV:37:VAL:HG21	2.14	0.47
40:DF:192:LEU:HD21	40:DF:194:MET:HG3	1.95	0.47
46:BO:22:ILE:HG12	46:BO:41:ALA:HA	1.96	0.47
38:DD:45:ASN:OD1	38:DD:46:GLN:N	2.47	0.47
3:CC:82:GLU:O	3:CC:86:VAL:HG13	2.14	0.47
1:CA:1427:U:H2'	1:CA:1428:A:H8	1.79	0.47
3:AC:8:ILE:C	3:AC:10:PHE:N	2.65	0.47
57:BZ:57:ILE:CG2	57:BZ:58:VAL:N	2.76	0.47
54:BW:37:ARG:HG3	54:BW:37:ARG:HH11	1.79	0.47
2:CB:79:ASP:C	2:CB:81:VAL:N	2.67	0.47
41:BG:95:ARG:O	41:BG:96:ARG:C	2.50	0.47
48:DQ:54:MET:HE1	48:DQ:104:PHE:HB3	1.95	0.47
56:BY:57:GLN:HG2	56:BY:58:GLY:H	1.78	0.47
15:AO:63:ARG:O	15:AO:67:LEU:HG	2.13	0.47
42:BH:107:VAL:O	42:BH:107:VAL:HG23	2.14	0.47
17:CQ:74:LEU:HD13	17:CQ:74:LEU:C	2.35	0.47
2:CB:23:ARG:O	2:CB:23:ARG:HG3	2.13	0.47
55:BX:47:PHE:O	55:BX:48:LYS:C	2.52	0.47
5:CE:103:GLY:O	5:CE:104:ALA:C	2.51	0.47
2:CB:237:ALA:O	2:CB:238:LEU:HB3	2.14	0.47
35:BA:639:U:H2'	35:BA:640:C:C6	2.49	0.47
49:BR:45:ARG:O	49:BR:48:VAL:HG12	2.13	0.47
35:DA:1141:U:C5	45:DN:64:GLY:HA3	2.49	0.47
1:CA:644:G:O2'	1:CA:645:C:H5'	2.14	0.47
35:BA:2233:U:H2'	35:BA:2234:G:C8	2.49	0.47
1:CA:666:G:C5	1:CA:741:G:C6	3.02	0.47
1:CA:935:A:H2'	1:CA:936:C:C6	2.49	0.47
38:BD:68:LYS:HG3	38:BD:68:LYS:O	2.13	0.47
1:AA:1086:U:H6	1:AA:1086:U:O5'	1.97	0.47
7:AG:101:LEU:O	7:AG:105:VAL:HG23	2.14	0.47
35:DA:1007:C:OP1	45:DN:35:ARG:NH1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:10:ARG:O	4:CD:13:ARG:HB2	2.14	0.47
4:AD:22:LYS:O	4:AD:113:SER:HB3	2.14	0.47
56:DY:2:ARG:CZ	56:DY:3:VAL:HG23	2.44	0.47
40:DF:25:PRO:CB	40:DF:119:ARG:HD3	2.36	0.47
17:AQ:9:VAL:HG11	17:AQ:84:LEU:HD13	1.96	0.47
35:DA:1494:A:O2'	35:DA:1496:A:H2	1.96	0.47
28:D3:8:LEU:CD1	28:D3:31:LEU:HA	2.44	0.47
29:D4:30:GLU:C	29:D4:31:ILE:HD12	2.35	0.47
41:DG:6:ALA:O	41:DG:10:LYS:HG3	2.13	0.47
10:CJ:49:VAL:O	10:CJ:60:ARG:HB2	2.13	0.47
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.49	0.47
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.49	0.47
10:AJ:50:ILE:CD1	14:AN:41:ARG:HD3	2.43	0.47
10:AJ:63:PHE:CD1	14:AN:58:LYS:HA	2.45	0.47
2:CB:47:THR:HG23	2:CB:202:PRO:HG2	1.96	0.47
33:D8:30:ARG:CZ	35:DA:2419:U:O4	2.62	0.47
22:CV:36:AG9:H2'	22:CV:37:A:H5'	1.95	0.47
39:DE:101:ARG:HE	39:DE:169:ASN:ND2	2.11	0.47
47:BP:17:LYS:C	47:BP:19:VAL:N	2.67	0.47
5:CE:146:ALA:O	5:CE:147:ASP:C	2.53	0.47
1:AA:19:C:H5''	5:AE:86:ALA:HB3	1.90	0.47
35:DA:2849:U:OP2	51:DT:95:ARG:NH1	2.46	0.47
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.13	0.47
9:CI:18:PHE:HB2	9:CI:62:TYR:O	2.15	0.47
9:CI:63:ILE:CG2	9:CI:64:THR:N	2.78	0.47
37:BC:50:ILE:HD12	37:BC:50:ILE:O	2.14	0.47
26:B1:53:VAL:O	26:B1:54:ALA:HB3	2.14	0.47
1:CA:624:C:H2'	1:CA:625:G:C8	2.47	0.47
18:CR:23:LYS:HD2	18:CR:58:LEU:HA	1.96	0.47
3:CC:206:GLU:HG2	3:CC:207:VAL:N	2.22	0.47
35:DA:2144:U:HO2'	35:DA:2147:G:H1	1.62	0.47
41:DG:19:LEU:HB3	41:DG:25:TYR:CE2	2.37	0.47
2:CB:97:TRP:CE2	2:CB:101:MET:HG3	2.49	0.47
38:BD:210:GLY:O	38:BD:211:ARG:CB	2.62	0.47
42:BH:9:ILE:CG2	42:BH:9:ILE:O	2.56	0.47
42:DH:11:VAL:HG12	42:DH:15:VAL:HG23	1.96	0.47
35:DA:364:C:H2'	35:DA:365:C:C5'	2.44	0.47
1:AA:1294:G:H2'	1:AA:1295:G:C8	2.49	0.47
6:CF:35:ALA:HB2	6:CF:67:MET:SD	2.54	0.47
1:CA:706:A:O4'	11:CK:29:ILE:HD13	2.14	0.47
9:CI:118:LYS:O	9:CI:119:ALA:HB3	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:67:THR:CG2	16:CP:68:ASP:N	2.76	0.47
1:CA:401:C:H2'	1:CA:402:G:C8	2.49	0.47
52:BU:57:PHE:O	52:BU:58:ARG:C	2.52	0.47
1:CA:1240:U:H4'	7:CG:38:LEU:HD21	1.96	0.47
35:BA:2208:A:H1'	35:BA:2219:G:C4	2.49	0.47
56:DY:88:LYS:NZ	56:DY:93:GLY:C	2.67	0.47
1:CA:1422:G:H2'	1:CA:1423:G:C8	2.46	0.47
43:BI:47:LEU:HD12	43:BI:50:ARG:NH1	2.29	0.47
35:BA:152:G:H1	35:BA:174:C:N4	2.09	0.47
35:DA:1962:C:O2'	35:DA:1964:G:OP2	2.31	0.47
8:CH:91:ARG:CG	8:CH:91:ARG:HH11	2.23	0.47
11:CK:59:TYR:CZ	11:CK:63:LEU:HD21	2.48	0.47
4:AD:43:HIS:C	4:AD:45:GLN:H	2.16	0.47
4:CD:43:HIS:C	4:CD:45:GLN:H	2.15	0.47
1:CA:1226:C:OP1	19:CS:81:ARG:NH2	2.47	0.47
35:BA:469:G:O2'	35:BA:470:A:H5''	2.14	0.47
48:DQ:21:THR:CG2	48:DQ:101:ARG:HB2	2.44	0.47
35:BA:2726:U:H4'	46:BO:1:MET:HE3	1.95	0.47
1:CA:1507:A:H2'	1:CA:1508:G:O5'	2.14	0.47
35:BA:1816:G:C8	38:BD:62:TYR:CZ	3.01	0.47
44:BJ:80:UNK:C	44:BJ:82:UNK:N	2.77	0.47
32:B7:19:ARG:NH1	32:B7:19:ARG:HG2	2.28	0.47
10:AJ:56:HIS:O	10:AJ:58:ASP:O	2.32	0.47
10:CJ:56:HIS:O	10:CJ:58:ASP:O	2.32	0.47
54:DW:20:VAL:HG23	54:DW:47:VAL:HG21	1.96	0.47
25:B0:73:GLY:C	25:B0:75:LEU:H	2.16	0.47
49:DR:29:LEU:O	49:DR:75:LEU:HD21	2.14	0.47
35:BA:57:C:O2'	35:BA:58:G:H5'	2.14	0.47
2:AB:237:ALA:O	2:AB:238:LEU:HB3	2.13	0.47
35:DA:1754:C:OP2	51:DT:113:LYS:HE3	2.14	0.47
35:BA:292:C:O2'	35:BA:293:U:H5'	2.14	0.47
48:BQ:58:PHE:O	48:BQ:58:PHE:HD1	1.97	0.47
6:AF:16:GLN:CD	6:AF:16:GLN:H	2.17	0.47
35:BA:1980:G:O2'	35:BA:1982:C:OP2	2.32	0.47
22:CY:24:A:N1	22:CY:25:A:N7	2.62	0.47
22:CY:56:U:O5'	22:CY:56:U:C6	2.58	0.47
22:CY:67:C:H3'	22:CY:67:C:C6	2.49	0.47
22:AY:29:A:C5	22:AY:30:U:C5	3.02	0.47
22:AY:71:G:N1	22:AY:72:C:C6	2.82	0.47
23:CW:5:C:O2	23:CW:72:C:C2	2.67	0.47
23:CW:43:G:C2	23:CW:44:A:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:12:U:C2'	22:AV:13:U:O4'	2.55	0.47
22:CV:49:G:H3'	22:CV:50:C:H5''	1.93	0.47
22:CV:68:A:C6	22:CV:69:G:N7	2.82	0.47
30:B5:4:HIS:CD2	35:BA:2056:G:H1	2.30	0.47
35:BA:1902:C:C5'	38:BD:246:PRO:HD3	2.44	0.47
33:B8:58:ILE:CG2	47:BP:49:ARG:CD	2.92	0.47
33:B8:61:LEU:HD12	33:B8:62:LEU:N	2.29	0.47
1:AA:1054:C:N4	22:AY:36:AG9:C2	2.77	0.47
23:CW:24:A:C4	23:CW:25:A:C8	3.03	0.47
12:CL:27:LEU:N	12:CL:27:LEU:HD22	2.28	0.47
35:BA:589:C:O3'	40:BF:95:ARG:NH1	2.47	0.47
12:AL:24:VAL:CG1	12:AL:26:ALA:HB2	2.45	0.47
12:AL:35:GLY:CA	12:AL:58:VAL:CG1	2.92	0.47
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HB3	1.95	0.47
35:BA:1495:A:C2	35:BA:1496:A:C2	3.03	0.47
33:D8:55:ALA:O	33:D8:58:ILE:HB	2.14	0.47
33:D8:56:GLU:HA	33:D8:59:LYS:HZ1	1.77	0.47
52:BU:112:ARG:NH2	53:BV:46:VAL:HG11	2.30	0.47
9:CI:114:TYR:CD1	9:CI:114:TYR:N	2.64	0.47
49:DR:53:HIS:HA	49:DR:56:LYS:HD3	1.95	0.47
9:AI:9:ARG:HA	9:AI:13:ALA:O	2.14	0.47
45:DN:112:LEU:O	45:DN:115:ARG:HB3	2.14	0.47
10:AJ:49:VAL:HG22	10:AJ:50:ILE:N	2.29	0.47
41:BG:41:GLN:NE2	41:BG:155:MET:HB3	2.29	0.47
35:DA:1241:A:O2'	35:DA:1242:A:H5'	2.14	0.47
41:BG:60:LEU:O	41:BG:63:ILE:HG12	2.14	0.47
9:AI:28:VAL:HG13	9:AI:63:ILE:C	2.35	0.47
30:D5:51:TYR:OH	30:D5:52:TYR:HD2	1.98	0.47
2:CB:235:SER:OG	2:CB:236:TYR:HD1	1.96	0.47
14:CN:22:THR:O	14:CN:23:ARG:HB2	2.14	0.47
57:DZ:72:ARG:NH2	57:DZ:89:PHE:CD2	2.78	0.47
35:BA:156:U:O2	35:BA:156:U:H2'	2.14	0.47
1:AA:828:A:H5''	1:AA:859:A:N1	2.29	0.47
35:BA:2162:G:H5'	35:BA:2173:A:H5'	1.94	0.47
1:CA:192:U:C4'	20:CT:103:GLY:HA2	2.43	0.47
41:DG:22:ARG:O	41:DG:22:ARG:HD3	2.14	0.47
1:CA:1216:G:O2'	1:CA:1217:C:H5'	2.14	0.47
2:AB:145:LEU:O	2:AB:149:LEU:HB2	2.14	0.47
37:DC:11:LEU:HD13	37:DC:33:LEU:O	2.14	0.47
33:B8:39:LYS:CG	33:B8:43:GLN:HE21	2.25	0.47
50:DS:16:ASN:O	50:DS:19:LYS:CB	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DS:16:ASN:OD1	50:DS:17:ARG:N	2.48	0.47
1:CA:1292:U:H5'	9:CI:38:GLN:HE22	1.77	0.47
48:DQ:110:THR:C	48:DQ:112:GLU:N	2.68	0.47
1:CA:640:A:C2'	1:CA:641:U:H5'	2.45	0.47
22:CV:64:C:H2'	22:CV:65:G:C8	2.50	0.47
1:CA:1014:A:C2	1:CA:1219:U:O2	2.68	0.47
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.49	0.47
38:DD:96:HIS:HA	38:DD:102:LYS:HB3	1.94	0.47
8:AH:97:VAL:C	8:AH:99:GLU:H	2.17	0.47
1:CA:502:G:C6	1:CA:503:C:C4	3.02	0.47
35:BA:2011:U:C2'	35:BA:2012:G:H5'	2.43	0.47
35:DA:1602:U:H3'	35:DA:1603:A:C5'	2.43	0.47
1:AA:202:U:H3'	1:AA:203:U:C6	2.49	0.47
35:DA:1856:G:O2'	35:DA:1857:G:H5'	2.14	0.47
35:DA:1675:C:C2	39:DE:129:HIS:CD2	3.02	0.47
38:BD:106:ILE:HD11	38:BD:157:ARG:O	2.14	0.47
5:AE:80:ILE:HG22	8:AH:104:ARG:NH2	2.29	0.47
35:BA:554:U:O2'	35:BA:555:U:H5'	2.15	0.47
1:CA:1507:A:C2'	1:CA:1508:G:O5'	2.62	0.47
1:AA:1418:A:H2	35:BA:1948:G:N3	2.13	0.47
43:BI:4:ILE:HG12	43:BI:18:VAL:HG22	1.95	0.47
20:CT:93:GLU:C	20:CT:93:GLU:OE1	2.53	0.47
29:D4:48:ARG:HG3	29:D4:49:PHE:HD1	1.78	0.47
42:BH:94:TYR:CD1	42:BH:94:TYR:N	2.82	0.47
1:CA:34:C:H2'	1:CA:35:G:C8	2.49	0.47
35:DA:2101:G:H2'	35:DA:2102:U:O4'	2.15	0.47
1:AA:683:G:H2'	1:AA:684:A:C8	2.49	0.47
35:BA:1582:C:O2'	35:BA:1586:A:C8	2.65	0.47
1:AA:689:C:H2'	1:AA:690:G:O4'	2.14	0.47
39:DE:143:ASN:HB2	39:DE:147:PRO:HD2	1.94	0.47
48:DQ:58:PHE:HD1	48:DQ:58:PHE:O	1.97	0.47
30:B5:35:GLU:O	30:B5:36:CYS:CB	2.62	0.47
1:AA:801:U:H2'	1:AA:802:A:H8	1.80	0.47
35:BA:1141:U:C5	45:BN:64:GLY:HA3	2.49	0.47
1:CA:236:G:C6	1:CA:237:C:C4	3.03	0.47
35:BA:1161:C:H4'	53:BV:8:GLY:HA2	1.95	0.47
23:AW:42:C:C2'	23:AW:43:G:C5'	2.89	0.47
23:CW:35:U:C4	23:CW:37:A:H5''	2.49	0.47
23:CW:40:A:N1	23:CW:41:C:H2'	2.29	0.47
22:AV:51:G:H2'	22:AV:52:C:H6	1.78	0.47
33:B8:13:ARG:HD2	47:BP:61:ARG:NH1	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:15:G:H22	23:CW:23:A:C1'	2.20	0.47
12:CL:40:VAL:HG22	12:CL:78:GLN:O	2.15	0.47
33:D8:21:LYS:HD3	33:D8:48:PHE:CZ	2.49	0.47
33:D8:50:LEU:CD1	33:D8:51:ALA:H	2.14	0.47
51:BT:28:VAL:CG2	51:BT:47:GLY:N	2.69	0.47
35:BA:1162:G:H4'	53:BV:24:LYS:HB2	1.96	0.47
52:BU:74:LEU:CD2	52:BU:79:PHE:HB2	2.44	0.47
52:BU:91:ASP:O	52:BU:95:LEU:HB2	2.15	0.47
15:CO:55:GLY:HA2	15:CO:58:MET:CE	2.32	0.47
56:BY:10:GLY:C	56:BY:27:VAL:HG22	2.35	0.47
50:DS:98:VAL:HG12	50:DS:100:ALA:H	1.79	0.47
1:AA:738:C:H2'	1:AA:739:C:H6	1.79	0.47
57:DZ:151:HIS:HB2	57:DZ:168:GLU:O	2.13	0.47
28:B3:7:LYS:HD2	28:B3:34:GLU:OE2	2.14	0.47
47:BP:46:LYS:HB3	47:BP:52:GLU:HG2	1.96	0.47
41:BG:41:GLN:OE1	41:BG:153:ARG:HG3	2.15	0.47
53:DV:66:ARG:N	53:DV:91:TYR:HE1	2.12	0.47
40:DF:116:ASP:OD2	47:DP:5:ASP:HB2	2.14	0.47
1:AA:80:G:N7	1:AA:81:U:C5	2.82	0.47
22:CY:52:C:N3	22:CY:53:U:C4	2.83	0.47
3:CC:84:ILE:HD11	3:CC:88:ARG:HH21	1.79	0.47
9:CI:5:TYR:HD2	9:CI:18:PHE:HE1	1.62	0.47
9:CI:4:TYR:CE2	9:CI:88:TYR:HB2	2.49	0.47
1:CA:374:A:C6	1:CA:375:U:C4	3.02	0.47
3:AC:74:GLY:O	3:AC:76:VAL:N	2.47	0.47
17:CQ:59:ILE:HG21	17:CQ:71:PHE:HB3	1.96	0.47
9:AI:37:PHE:HB3	9:AI:43:ALA:HB2	1.96	0.47
9:AI:48:GLU:OE1	9:AI:51:ARG:HD2	2.15	0.47
35:DA:2299:G:N2	35:DA:2318:G:H1'	2.29	0.47
18:AR:23:LYS:HD2	18:AR:58:LEU:HA	1.96	0.47
46:BO:17:ARG:HB2	46:BO:45:GLU:O	2.14	0.47
1:AA:68:G:C2	1:AA:69:G:C4	3.02	0.47
7:AG:15:ASP:HB3	7:AG:20:ASP:H	1.80	0.47
1:CA:1106:G:H5''	3:CC:172:ARG:HD3	1.97	0.47
1:CA:828:A:H5''	1:CA:859:A:N1	2.30	0.47
41:DG:172:LEU:C	41:DG:172:LEU:HD23	2.34	0.47
1:AA:710:G:OP1	6:AF:54:LYS:HE3	2.13	0.47
38:BD:211:ARG:O	38:BD:215:LEU:HG	2.15	0.47
39:BE:14:ILE:HG12	39:BE:21:VAL:HG22	1.96	0.47
42:BH:11:VAL:HG12	42:BH:15:VAL:HG23	1.94	0.47
35:BA:2713:A:C3'	35:BA:2714:G:C5'	2.93	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:129:SER:HB2	57:DZ:130:PRO:CD	2.44	0.47
35:BA:2406:U:O4	47:BP:70:GLN:HB3	2.13	0.47
35:BA:2847:U:OP1	51:BT:98:LYS:HD3	2.13	0.47
39:DE:23:VAL:CG1	39:DE:173:VAL:HG21	2.45	0.47
16:AP:43:LYS:HE3	16:AP:48:TRP:CE3	2.50	0.47
27:D2:24:LEU:O	27:D2:28:LYS:HG2	2.15	0.47
44:BJ:118:UNK:O	44:BJ:119:UNK:CB	2.62	0.47
57:DZ:27:VAL:O	57:DZ:88:PHE:HB2	2.13	0.47
1:CA:1436:U:H2'	1:CA:1437:C:C6	2.49	0.47
1:CA:1519:A:C2'	1:CA:1520:G:H5'	2.44	0.47
36:DB:29:A:H2'	36:DB:30:C:C6	2.50	0.47
35:DA:1405:U:H2'	35:DA:1406:U:H6	1.78	0.47
3:AC:82:GLU:O	3:AC:86:VAL:HG13	2.14	0.47
35:DA:635:C:O2'	35:DA:636:G:H5'	2.15	0.47
53:BV:6:LYS:O	53:BV:37:VAL:HG21	2.15	0.47
35:DA:2855:C:O2'	35:DA:2856:C:H5'	2.14	0.47
35:DA:2726:U:H4'	46:DO:1:MET:HE3	1.95	0.47
35:BA:1817:G:C2'	35:BA:1818:U:H5'	2.44	0.47
35:DA:554:U:O2'	35:DA:555:U:H5'	2.14	0.47
3:CC:127:ARG:NH1	3:CC:127:ARG:HG2	2.27	0.47
48:BQ:28:ALA:O	48:BQ:29:PHE:HD1	1.97	0.47
36:DB:112:U:H2'	36:DB:113:G:H8	1.79	0.47
7:AG:64:GLN:HE21	7:AG:68:ASN:ND2	2.12	0.47
36:BB:45:A:N3	36:BB:45:A:H2'	2.29	0.47
57:DZ:8:TYR:O	57:DZ:37:VAL:HB	2.14	0.47
35:BA:889:C:H1'	35:BA:890:A:O4'	2.14	0.47
47:DP:45:LEU:CD2	47:DP:46:LYS:H	2.28	0.47
35:DA:654(Q):C:O2'	35:DA:654(R):C:H5'	2.14	0.47
9:AI:40:LEU:HD12	9:AI:70:LYS:HG3	1.96	0.47
35:BA:1498:C:O4'	35:BA:1577:C:H4'	2.14	0.47
32:D7:5:TRP:CD1	32:D7:7:PRO:HD3	2.49	0.47
9:AI:56:LEU:HD23	9:AI:56:LEU:C	2.35	0.47
1:AA:927:G:H5'	1:AA:927:G:H8	1.79	0.47
35:BA:1043:C:O2'	35:BA:1044:G:H5'	2.14	0.47
22:CY:4:C:N3	22:CY:72:C:C5	2.81	0.47
23:AW:71:G:C2	23:AW:72:C:C6	3.03	0.47
23:AW:73:C:C4	23:AW:74:C:H5	2.32	0.47
22:AY:56:U:OP1	48:BQ:56:ARG:CD	2.42	0.47
11:CK:54:ARG:CZ	23:CW:42:C:OP1	2.63	0.47
22:AV:51:G:H1	22:AV:67:C:N4	2.12	0.47
22:AV:53:U:C1'	22:AV:66:G:N2	2.74	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:15:G:H2'	22:CV:16:U:C5	2.48	0.47
51:BT:3:ARG:HH11	51:BT:3:ARG:CG	2.27	0.47
23:AW:14:A:H2'	23:AW:15:G:O4'	2.14	0.47
56:BY:8:LYS:N	56:BY:8:LYS:CD	2.78	0.47
56:DY:8:LYS:HE3	56:DY:74:PRO:HD3	1.97	0.47
43:BI:101:LEU:HD23	43:BI:109:ILE:HG12	1.96	0.47
43:BI:81:VAL:HG21	43:BI:88:ILE:HD13	1.96	0.47
12:CL:84:LEU:CD1	12:CL:104:VAL:HG11	2.44	0.47
35:BA:1021:A:H8	35:BA:1022:G:H5''	1.80	0.47
45:BN:58:ASP:O	45:BN:60:ILE:N	2.37	0.47
1:CA:973:G:OP1	10:CJ:57:LYS:HD3	2.15	0.47
10:CJ:22:LYS:C	10:CJ:22:LYS:HD2	2.34	0.47
10:CJ:98:ILE:HD12	10:CJ:98:ILE:N	2.28	0.47
23:CW:57:U:H1'	23:CW:59:G:N7	2.30	0.47
53:DV:19:LYS:CE	53:DV:20:LEU:H	2.27	0.47
17:CQ:9:VAL:HG11	17:CQ:84:LEU:HD13	1.96	0.47
33:D8:56:GLU:C	33:D8:58:ILE:N	2.66	0.47
35:BA:2864:G:O2'	35:BA:2865:U:H5'	2.13	0.47
52:BU:95:LEU:HD13	53:BV:11:GLN:HE21	1.80	0.47
35:BA:2787:C:O2	35:BA:2787:C:H2'	2.14	0.47
35:BA:2632:A:C2	39:BE:61:ARG:HD2	2.47	0.47
49:BR:17:ARG:O	49:BR:17:ARG:HG2	2.14	0.47
53:BV:15:GLU:CB	53:BV:16:PRO:HD2	2.33	0.47
35:BA:1241:A:O2'	35:BA:1242:A:H5'	2.14	0.47
35:DA:1244:G:O2'	35:DA:1245:G:H5'	2.15	0.47
27:B2:16:LEU:HD22	27:B2:20:GLU:HB3	1.97	0.47
13:CM:117:VAL:O	13:CM:118:ALA:HB2	2.14	0.47
22:AY:53:U:N3	22:AY:54:G:N7	2.63	0.47
48:BQ:45:GLN:H	48:BQ:45:GLN:NE2	2.13	0.47
3:CC:76:VAL:HG23	3:CC:77:ILE:HG13	1.95	0.47
8:AH:6:ILE:HB	8:AH:85:ARG:NH2	2.30	0.47
15:CO:33:THR:HG21	15:CO:85:LEU:CD2	2.38	0.47
52:BU:113:ALA:C	52:BU:115:ALA:H	2.17	0.47
9:AI:99:LEU:HD12	9:AI:101:PHE:HE1	1.80	0.47
1:CA:162:A:C6	1:CA:163:C:H1'	2.49	0.47
35:DA:2892:A:H62	35:DA:2893:G:H21	1.62	0.47
39:DE:57:LYS:C	39:DE:59:VAL:N	2.66	0.47
1:CA:1104:G:O5'	2:CB:111:ARG:HD2	2.13	0.47
35:DA:2580:U:H5'	39:DE:131:ALA:CB	2.40	0.47
41:BG:145:THR:CG2	41:BG:148:MET:HB3	2.44	0.47
1:CA:191:G:C1'	20:CT:105:SER:HB3	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DI:127:VAL:C	43:DI:128:LEU:HD22	2.35	0.47
54:BW:9:TYR:H	54:BW:102:HIS:HD2	1.52	0.47
35:BA:364:C:H2'	35:BA:365:C:H5''	1.96	0.47
46:BO:114:ILE:H	46:BO:114:ILE:CD1	2.27	0.47
57:BZ:80:ARG:HB3	57:BZ:80:ARG:HH11	1.79	0.47
35:DA:2161:C:H2'	35:DA:2162:G:H8	1.80	0.47
2:AB:27:LYS:HB2	2:AB:193:ASP:HB2	1.95	0.47
6:AF:9:VAL:HA	6:AF:59:TYR:O	2.14	0.47
48:BQ:133:ARG:O	48:BQ:134:ARG:HG2	2.14	0.47
35:BA:286:C:O2'	35:BA:287:C:H5'	2.14	0.47
1:CA:601:C:H2'	1:CA:602:A:C8	2.49	0.47
44:BJ:70:UNK:O	44:BJ:72:UNK:N	2.47	0.47
3:AC:103:VAL:HG12	3:AC:104:GLN:H	1.77	0.47
35:DA:1491:G:O2'	38:DD:101:GLU:HB2	2.14	0.47
40:BF:16:GLY:O	40:BF:17:ARG:HG3	2.14	0.47
25:B0:43:THR:O	25:B0:43:THR:HG23	2.12	0.47
45:DN:30:ILE:O	45:DN:34:LEU:HD22	2.15	0.47
4:AD:47:ARG:HH21	4:AD:49:ARG:HH22	1.63	0.47
22:AV:76:C:H2'	22:AV:77:C:H5''	1.97	0.47
48:DQ:67:ARG:HB3	48:DQ:102:VAL:O	2.14	0.47
1:CA:232:G:H1'	1:CA:262:A:N1	2.29	0.47
55:BX:29:TRP:CE3	55:BX:78:LYS:HB3	2.49	0.47
35:BA:1962:C:O2'	35:BA:1964:G:OP2	2.33	0.47
35:BA:1510:G:O2'	35:BA:1511:C:H5'	2.15	0.47
51:DT:38:ASN:ND2	51:DT:38:ASN:O	2.47	0.47
35:DA:2182:G:H2'	35:DA:2183:C:C6	2.49	0.47
1:AA:41:G:H2'	1:AA:42:G:H8	1.79	0.47
54:BW:46:PHE:O	54:BW:50:VAL:HG12	2.13	0.47
8:CH:64:LYS:CG	8:CH:79:VAL:HG21	2.45	0.47
35:BA:1054:A:H2'	35:BA:1107:G:C8	2.49	0.47
54:DW:20:VAL:HG23	54:DW:21:VAL:N	2.29	0.47
13:CM:19:LEU:O	13:CM:22:ILE:HD13	2.15	0.47
35:DA:1010:A:N3	35:DA:1153:C:H1'	2.29	0.47
16:CP:58:TYR:O	16:CP:62:VAL:HG22	2.15	0.47
35:BA:53:A:H2'	35:BA:54:G:O4'	2.14	0.47
35:DA:2340:G:O2'	35:DA:2341:G:H5'	2.14	0.47
35:DA:2168:G:N2	35:DA:2170:A:H3'	2.29	0.47
1:CA:1087:G:H22	1:CA:1099:G:H1'	1.78	0.47
35:DA:1252:G:N7	52:DU:36:ARG:NH1	2.60	0.47
49:BR:104:ARG:HD2	49:BR:109:ALA:HB3	1.96	0.47
1:AA:677:U:O2'	1:AA:678:U:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DE:167:VAL:HG22	39:DE:170:LEU:HD11	1.95	0.47
1:CA:660:G:H2'	1:CA:661:G:C8	2.49	0.47
1:CA:1021:G:N2	1:CA:1022:G:H1'	2.30	0.47
49:BR:88:ARG:HD2	49:BR:88:ARG:O	2.14	0.47
35:DA:2320:A:H2'	35:DA:2320:A:N3	2.29	0.47
1:CA:689:C:H2'	1:CA:690:G:O4'	2.14	0.47
13:CM:33:ALA:HA	13:CM:59:TYR:CE2	2.49	0.47
35:DA:2515:C:O2'	35:DA:2516:G:H5'	2.15	0.47
22:AY:37:A:H2'	22:AY:38:U:O4'	2.15	0.47
12:CL:109:GLY:HA3	12:CL:121:GLY:O	2.14	0.47
23:AW:35:U:H3	23:AW:37:A:H8	1.62	0.47
22:AY:3:G:H2'	22:AY:4:C:H5''	1.97	0.47
4:CD:13:ARG:O	4:CD:14:ARG:C	2.53	0.47
22:AV:9:A:C6	22:AV:48:G:C2	3.03	0.47
22:CV:27:C:H3'	22:CV:27:C:C6	2.49	0.47
22:CV:7:U:O4	22:CV:69:G:C6	2.68	0.47
51:DT:32:TYR:O	51:DT:33:LYS:O	2.33	0.47
31:B6:15:GLU:CD	31:B6:44:ARG:HH12	2.18	0.47
33:B8:7:HIS:CD2	47:BP:50:ARG:HD3	2.49	0.47
47:BP:62:LEU:HG	47:BP:63:PRO:HD2	1.97	0.47
42:BH:41:MET:CE	42:BH:42:ARG:H	2.27	0.47
43:DI:119:PRO:O	43:DI:121:LYS:N	2.48	0.47
43:DI:93:THR:HG23	43:DI:119:PRO:CB	2.43	0.47
1:AA:1053:G:N7	1:AA:1200:C:C5'	2.76	0.47
43:BI:83:ALA:HA	43:BI:88:ILE:HG23	1.95	0.47
30:D5:4:HIS:CD2	35:DA:2056:G:H1	2.31	0.47
10:AJ:3:LYS:HD2	10:AJ:77:PRO:HD3	1.97	0.47
35:BA:1021:A:H8	35:BA:1021:A:H3'	1.80	0.47
42:DH:41:MET:CE	42:DH:42:ARG:H	2.28	0.47
23:CW:20:G:OP1	23:CW:21:U:C5	2.67	0.47
52:DU:90:VAL:HG11	53:DV:39:LEU:HB2	1.96	0.47
10:CJ:48:THR:HA	10:CJ:62:HIS:CB	2.41	0.47
53:BV:52:VAL:CG1	53:BV:55:ALA:HB3	2.40	0.47
40:DF:132:VAL:O	40:DF:133:ASN:O	2.32	0.47
36:DB:42:C:O2'	41:DG:66:GLN:NE2	2.48	0.47
41:DG:13:GLU:O	41:DG:17:PRO:HG3	2.14	0.47
41:DG:159:VAL:O	41:DG:159:VAL:HG13	2.14	0.47
41:DG:96:ARG:O	41:DG:97:ASP:C	2.53	0.47
13:CM:89:GLY:CA	13:CM:93:ARG:HH11	2.28	0.47
56:BY:2:ARG:CZ	56:BY:3:VAL:HG23	2.45	0.47
36:BB:48:A:H4'	50:BS:95:HIS:HD2	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1291:C:H5'	35:DA:1534:U:O2'	2.15	0.47
28:B3:8:LEU:HD12	28:B3:30:ARG:O	2.15	0.47
55:BX:64:LYS:NZ	55:BX:73:ARG:HE	2.11	0.47
35:BA:2801(A):A:H4'	35:BA:2802:G:H2'	1.96	0.47
3:CC:57:ILE:CG2	3:CC:58:GLU:N	2.77	0.47
3:CC:99:VAL:HG23	3:CC:99:VAL:O	2.14	0.47
47:DP:18:ARG:HH11	47:DP:18:ARG:CB	2.28	0.47
38:DD:31:LYS:C	38:DD:33:LEU:N	2.68	0.47
17:AQ:51:TYR:CD2	17:AQ:57:VAL:HG11	2.50	0.47
9:CI:37:PHE:HB3	9:CI:43:ALA:CB	2.45	0.47
1:CA:252:U:C4	1:CA:253:U:O4	2.68	0.47
55:BX:12:VAL:HG22	55:BX:27:THR:O	2.13	0.47
3:CC:16:ARG:HH11	3:CC:16:ARG:CB	2.26	0.47
1:AA:345:C:H3'	51:BT:41:ARG:CZ	2.44	0.47
1:AA:541:G:H2'	1:AA:542:G:H8	1.80	0.47
4:AD:152:SER:CA	4:AD:155:LEU:HG	2.44	0.47
33:D8:32:LEU:HB3	33:D8:36:LYS:NZ	2.29	0.47
1:AA:1431:C:C2'	1:AA:1432:G:H5'	2.45	0.47
9:AI:26:VAL:CG2	9:AI:61:ALA:HB3	2.40	0.47
18:CR:25:THR:HG22	18:CR:42:ARG:NH1	2.30	0.47
4:CD:73:ARG:HG3	4:CD:77:ASN:HD21	1.79	0.47
48:BQ:110:THR:C	48:BQ:112:GLU:N	2.68	0.47
46:DO:22:ILE:HG12	46:DO:41:ALA:HA	1.96	0.47
1:AA:155:C:H2'	1:AA:156:G:H8	1.75	0.47
15:CO:17:ARG:HD3	15:CO:26:GLU:OE1	2.15	0.47
41:BG:16:ARG:NE	41:BG:31:VAL:HG11	2.28	0.47
15:AO:17:ARG:HD3	15:AO:26:GLU:OE1	2.15	0.47
3:CC:103:VAL:HG12	3:CC:104:GLN:H	1.78	0.47
11:CK:21:ILE:HB	11:CK:84:VAL:HA	1.97	0.47
1:AA:398:C:H2'	1:AA:399:G:H8	1.80	0.47
53:DV:35:LEU:O	53:DV:36:PRO:C	2.51	0.47
1:CA:1033:G:H2'	1:CA:1034:G:C5'	2.43	0.47
47:BP:108:LYS:O	47:BP:110:TYR:N	2.47	0.47
39:BE:98:PRO:HD3	39:BE:175:VAL:CG1	2.44	0.47
39:DE:98:PRO:HD3	39:DE:175:VAL:CG1	2.45	0.47
1:CA:452:A:H4'	16:CP:72:ARG:NH1	2.29	0.47
22:AV:76:C:C2'	22:AV:77:C:C5'	2.92	0.47
18:AR:25:THR:HG22	18:AR:42:ARG:NH1	2.30	0.47
20:AT:33:ILE:O	20:AT:34:LYS:C	2.53	0.47
43:BI:40:THR:O	43:BI:44:LEU:N	2.42	0.47
35:BA:2086:U:OP1	38:BD:262:ARG:HD3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:53:ARG:NH1	2:AB:199:TYR:CD2	2.82	0.47
54:BW:20:VAL:HG23	54:BW:47:VAL:HG21	1.95	0.47
3:AC:125:GLU:HG2	3:AC:190:ARG:O	2.15	0.47
35:BA:2116:G:N7	35:BA:2117:A:C2	2.82	0.47
1:CA:1319:A:N6	1:CA:1361:G:H21	2.11	0.47
38:DD:173:VAL:HG22	38:DD:174:ILE:N	2.30	0.47
1:AA:1021:G:N2	1:AA:1022:G:H1'	2.30	0.47
1:AA:851:G:H2'	1:AA:852:G:H8	1.79	0.47
35:BA:860:U:C5	35:BA:917:A:N7	2.82	0.47
35:BA:551:G:O2'	35:BA:1220:A:N3	2.43	0.47
7:AG:76:ARG:HH11	7:AG:76:ARG:HG2	1.79	0.47
35:DA:1945:G:H2'	35:DA:1946:U:H6	1.80	0.47
4:CD:52:SER:O	4:CD:53:ASP:C	2.53	0.47
35:DA:2604:U:O2'	35:DA:2605:U:H5'	2.15	0.47
2:AB:9:GLU:OE1	2:AB:10:LEU:N	2.48	0.47
22:CY:19:G:C6	22:CY:59:G:C6	3.03	0.47
22:CY:57:U:P	57:DZ:182:LYS:O	2.72	0.47
23:AW:74:C:O2	23:AW:75:A:C1'	2.63	0.47
23:AW:3:G:O6	23:AW:4:C:N4	2.48	0.47
22:AY:28:G:H3'	22:AY:29:A:N7	2.29	0.47
22:AY:67:C:H6	22:AY:67:C:H5''	1.79	0.47
22:AY:5:C:H2'	22:AY:6:C:C6	2.49	0.47
23:CW:45:U:H2'	23:CW:46:U:O4'	2.15	0.47
22:AV:43:G:C2	22:AV:44:A:C4	3.03	0.47
22:CV:10:G:H2'	22:CV:11:C:C6	2.49	0.47
22:CV:20:G:C8	22:CV:59:G:N2	2.83	0.47
51:DT:28:VAL:CB	51:DT:88:ILE:HG12	2.35	0.47
46:DO:79:PHE:CD2	51:DT:72:VAL:HG13	2.50	0.47
23:AW:10:G:O6	23:AW:28:G:C8	2.68	0.47
56:BY:8:LYS:HE3	56:BY:74:PRO:HD3	1.97	0.47
33:D8:14:VAL:HG21	33:D8:22:VAL:CG1	2.44	0.47
35:BA:1484:G:N2	35:BA:1505:C:H42	2.12	0.47
43:DI:129:THR:HG23	43:DI:136:VAL:O	2.15	0.47
43:DI:77:LEU:HD22	43:DI:140:LEU:CA	2.38	0.47
1:AA:1206:G:H2'	1:AA:1207:G:O4'	2.13	0.47
23:CW:15:G:C8	23:CW:61:A:C2	3.03	0.47
12:CL:39:VAL:HG12	12:CL:40:VAL:H	1.79	0.47
30:D5:3:LYS:HG2	35:DA:2015:A:H2	1.78	0.47
8:CH:109:ILE:HG12	8:CH:110:ALA:N	2.29	0.47
35:DA:1916:A:H5'	35:DA:1916:A:C8	2.48	0.47
40:DF:125:LEU:HD12	40:DF:196:LEU:HG	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:53:ARG:HG2	12:AL:93:LEU:HD11	1.97	0.47
12:AL:86:ARG:N	12:AL:99:HIS:O	2.48	0.47
8:AH:109:ILE:HG12	8:AH:110:ALA:N	2.30	0.47
8:AH:40:ALA:C	8:AH:42:GLU:N	2.65	0.47
40:BF:22:ALA:C	40:BF:24:LEU:H	2.18	0.47
1:CA:1197:G:O2'	1:CA:1198:G:H5'	2.15	0.47
45:DN:19:GLU:HG3	45:DN:20:GLY:N	2.30	0.47
40:BF:133:ASN:N	40:BF:133:ASN:HD22	2.06	0.47
51:BT:28:VAL:CG1	51:BT:46:GLU:HA	2.42	0.47
53:BV:49:THR:CB	53:BV:50:PRO:CD	2.91	0.47
2:AB:84:GLU:CB	2:AB:219:VAL:HG21	2.31	0.47
1:AA:475:G:C2'	1:AA:476:G:H8	2.25	0.47
41:DG:60:LEU:HD13	41:DG:60:LEU:C	2.35	0.47
2:CB:88:ALA:HB2	2:CB:219:VAL:CG1	2.34	0.47
35:DA:917:A:N1	36:DB:80:U:H4'	2.29	0.47
56:BY:2:ARG:HD3	56:BY:3:VAL:N	2.29	0.47
56:BY:32:PRO:O	56:BY:33:LYS:C	2.52	0.47
1:CA:447:G:H2'	1:CA:485:G:H22	1.70	0.47
13:AM:93:ARG:HG3	35:BA:888:C:OP1	2.15	0.47
1:AA:1306:A:H1'	1:AA:1332:A:C2	2.50	0.47
9:CI:13:ALA:HB2	9:CI:68:GLY:HA3	1.96	0.47
3:CC:18:TRP:N	3:CC:18:TRP:CE3	2.76	0.47
41:BG:9:ARG:O	41:BG:13:GLU:HG2	2.15	0.47
35:BA:2801(A):A:H5'	35:BA:2802:G:C8	2.50	0.47
1:AA:115:G:H1'	1:AA:116:A:N7	2.30	0.47
47:DP:84:ASN:C	47:DP:86:LYS:N	2.68	0.47
27:D2:65:ASN:HB3	27:D2:69:ARG:NH1	2.18	0.47
47:DP:7:ARG:H	47:DP:8:PRO:HD2	1.79	0.47
2:AB:54:THR:HG22	2:AB:58:ILE:HD11	1.95	0.47
35:DA:2801(A):A:H5'	35:DA:2802:G:C8	2.50	0.47
38:DD:30:GLU:CG	38:DD:63:ARG:NH2	2.78	0.47
2:CB:174:VAL:O	2:CB:178:ARG:HB2	2.14	0.47
50:BS:67:ARG:CB	50:BS:67:ARG:HH11	2.18	0.47
39:DE:199:ARG:HH12	39:DE:202:LYS:HE2	1.80	0.47
5:CE:148:VAL:C	5:CE:150:ARG:H	2.18	0.47
35:DA:2864:G:OP1	51:DT:119:LYS:HD2	2.15	0.47
30:D5:47:PRO:C	30:D5:49:CYS:H	2.17	0.47
13:CM:5:ALA:CB	13:CM:66:LEU:HD13	2.44	0.47
4:CD:171:GLY:C	4:CD:173:TRP:H	2.18	0.47
5:CE:33:VAL:HG21	5:CE:109:ILE:HG12	1.97	0.47
35:DA:2134:A:H61	35:DA:2157:G:C1'	2.25	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:138:VAL:HG22	3:AC:151:VAL:CG2	2.44	0.47
15:AO:85:LEU:HD23	15:AO:85:LEU:C	2.34	0.47
35:BA:2134:A:C2	35:BA:2159:G:H1'	2.50	0.47
35:BA:856:C:H2'	35:BA:856:C:O2	2.14	0.47
7:AG:16:LEU:CD1	9:AI:42:ARG:HA	2.41	0.47
39:DE:63:LEU:O	39:DE:65:GLY:N	2.48	0.47
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.14	0.47
35:DA:1541:G:C5'	35:DA:1542:A:O4'	2.63	0.47
2:CB:189:ASP:C	2:CB:191:ASP:N	2.67	0.47
43:BI:127:VAL:C	43:BI:128:LEU:HD22	2.35	0.47
4:CD:149:ALA:HB3	4:CD:152:SER:OG	2.15	0.47
43:DI:68:LEU:CD2	43:DI:72:LEU:HD11	2.44	0.47
5:CE:67:VAL:HG22	5:CE:68:GLU:N	2.30	0.47
1:CA:541:G:H2'	1:CA:542:G:H8	1.78	0.47
57:BZ:24:LEU:HD12	57:BZ:41:LEU:CD2	2.45	0.47
35:BA:2712:U:O2'	35:BA:2712(A):A:P	2.73	0.47
1:AA:377:G:C2	1:AA:387:U:O2	2.68	0.47
35:DA:2847:U:OP1	51:DT:98:LYS:HD3	2.14	0.47
35:DA:646:A:H2'	35:DA:647:G:O4'	2.14	0.47
1:CA:1190:G:OP2	3:CC:5:ILE:HG23	2.14	0.47
35:DA:2208:A:H1'	35:DA:2219:G:C5	2.50	0.47
1:CA:386:C:C2'	1:CA:387:U:H5'	2.44	0.47
51:BT:78:LEU:C	51:BT:79:HIS:ND1	2.68	0.47
2:AB:27:LYS:C	2:AB:29:ALA:H	2.17	0.47
48:DQ:110:THR:OG1	48:DQ:112:GLU:HB3	2.15	0.47
50:DS:89:ARG:HB3	50:DS:92:TYR:CB	2.45	0.47
1:AA:1064:G:O4'	1:AA:1066:C:H1'	2.14	0.47
1:AA:1226:C:OP1	19:AS:81:ARG:NH2	2.48	0.47
11:CK:21:ILE:CD1	11:CK:82:VAL:HG13	2.45	0.47
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.44	0.47
35:DA:2011:U:C2'	35:DA:2012:G:H5'	2.45	0.47
1:CA:398:C:H2'	1:CA:399:G:H8	1.80	0.47
25:D0:23:VAL:HG13	25:D0:38:VAL:HG22	1.96	0.47
37:BC:31:LYS:NZ	37:BC:183:PRO:HD3	2.29	0.47
36:DB:28:C:P	50:DS:31:SER:HG	2.37	0.47
35:DA:1722:A:H2	35:DA:1740:G:HO2'	1.59	0.47
1:CA:105:G:H2'	1:CA:106:C:H6	1.78	0.47
35:BA:2777:G:C5'	35:BA:2778:A:H5'	2.44	0.47
1:CA:1030(C):G:H2'	1:CA:1030(D):A:C8	2.50	0.47
35:BA:1405:U:H2'	35:BA:1406:U:H6	1.78	0.47
1:CA:72:C:H2'	1:CA:73:G:H8	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1666:G:C2'	35:BA:1667:G:H5'	2.45	0.47
13:AM:28:ALA:C	13:AM:30:ALA:N	2.68	0.47
35:BA:870:A:C2	35:BA:908:C:N3	2.83	0.47
1:CA:1182:G:H4'	1:CA:1184:G:OP1	2.15	0.47
35:DA:1816:G:C8	38:DD:62:TYR:CZ	3.02	0.47
1:AA:262:A:H2'	1:AA:263:A:C8	2.49	0.47
51:DT:38:ASN:C	51:DT:40:THR:H	2.18	0.47
36:BB:112:U:H2'	36:BB:113:G:H8	1.78	0.47
33:B8:23:VAL:HG12	33:B8:46:ARG:HH11	1.79	0.47
35:DA:2743:C:H2'	35:DA:2744:G:O4'	2.15	0.47
1:CA:352:C:H4'	1:CA:354:G:OP1	2.15	0.47
47:BP:65:ARG:NH1	47:BP:65:ARG:HG3	2.29	0.47
39:BE:96:PHE:HA	39:BE:100:GLU:OE1	2.15	0.47
35:DA:2682:U:O4	35:DA:2728:U:H1'	2.14	0.47
35:DA:1368:G:C2	35:DA:1369:G:C8	3.02	0.47
1:CA:1248:A:H2'	1:CA:1249:C:H5'	1.97	0.47
35:DA:956:G:OP2	48:DQ:14:ARG:NH2	2.47	0.47
1:CA:1526:G:H2'	1:CA:1527:C:C6	2.48	0.47
20:AT:32:ALA:O	20:AT:36:LEU:HD23	2.14	0.47
1:CA:677:U:H3	1:CA:714:G:H22	1.62	0.47
47:BP:127:ALA:HB3	47:BP:130:PHE:CE1	2.50	0.47
35:BA:402:A:C2'	35:BA:403:U:H5'	2.45	0.47
35:DA:292:C:O2'	35:DA:293:U:H5'	2.15	0.47
1:CA:977:A:H2'	1:CA:978:A:H5'	1.97	0.47
35:BA:2199:A:H3'	35:BA:2200:C:H6	1.79	0.47
35:BA:2567:G:H2'	35:BA:2568:C:C6	2.50	0.47
35:DA:887:A:O2'	35:DA:888:C:H6	1.98	0.47
49:DR:37:THR:HA	49:DR:111:LEU:HD23	1.96	0.47
35:DA:2455:G:H2'	35:DA:2456:C:C6	2.49	0.47
35:DA:758:C:O2	35:DA:1981:A:H2	1.97	0.47
17:CQ:7:THR:HG22	17:CQ:58:GLU:HG2	1.97	0.47
1:CA:914:A:O2'	1:CA:915:A:H5'	2.15	0.47
38:BD:173:VAL:HG22	38:BD:174:ILE:N	2.30	0.47
35:BA:2236:C:C2'	35:BA:2237:G:H5'	2.44	0.47
35:BA:1773:A:C2'	35:BA:1774:C:H5'	2.45	0.47
50:DS:25:ARG:HH11	50:DS:25:ARG:CB	2.27	0.47
35:DA:2502:G:H5''	35:DA:2503:A:H5''	1.96	0.47
55:DX:18:TYR:O	55:DX:20:GLY:N	2.48	0.47
22:CY:11:C:H41	22:CY:47:G:H21	1.61	0.47
22:AY:60:A:N6	57:BZ:186:GLU:CD	2.68	0.47
22:AV:8:U:C4	22:AV:13:U:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DT:91:ARG:HG2	51:DT:116:ALA:CB	2.44	0.47
56:DY:25:GLY:HA3	56:DY:39:VAL:CG1	2.45	0.47
43:DI:77:LEU:C	43:DI:77:LEU:HD23	2.34	0.47
1:AA:963:G:H21	10:AJ:55:LYS:CE	2.28	0.47
43:BI:129:THR:HG23	43:BI:136:VAL:O	2.15	0.47
1:CA:523:A:H61	12:CL:92:ASP:CB	2.28	0.47
35:BA:544:G:C2	35:BA:547:A:H5'	2.49	0.47
17:CQ:9:VAL:O	17:CQ:9:VAL:HG23	2.15	0.47
51:BT:65:LYS:HZ1	51:BT:66:VAL:H	1.63	0.47
53:BV:51:VAL:CG1	53:BV:52:VAL:H	2.24	0.47
1:CA:1259:C:H42	1:CA:1276:G:H1	1.63	0.47
1:AA:1256:A:H5'	1:AA:1257:U:OP1	2.15	0.47
49:DR:10:LEU:HD23	49:DR:21:TYR:OH	2.15	0.47
26:D1:57:GLU:O	26:D1:58:ILE:HG12	2.15	0.47
1:CA:1339:A:C2	22:CV:33:G:O4'	2.68	0.47
35:DA:2801(A):A:H4'	35:DA:2802:G:H2'	1.97	0.47
26:D1:27:GLU:O	26:D1:28:GLY:C	2.53	0.47
56:BY:44:ILE:C	56:BY:62:GLU:HG3	2.33	0.47
2:AB:97:TRP:CE2	2:AB:101:MET:HG3	2.49	0.47
1:CA:619:U:N3	4:CD:135:LEU:HD11	2.30	0.47
16:CP:14:ASN:OD1	16:CP:42:ARG:NH2	2.48	0.47
5:CE:41:VAL:HG11	5:CE:113:ALA:HA	1.97	0.47
3:AC:206:GLU:O	3:AC:207:VAL:C	2.54	0.47
3:CC:138:VAL:HG22	3:CC:151:VAL:CG2	2.44	0.47
38:DD:209:ALA:O	38:DD:212:SER:HB3	2.14	0.47
35:BA:2122:U:H2'	35:BA:2123:G:H8	1.77	0.47
1:CA:1492:A:C2	1:CA:1493:A:C2	3.02	0.47
35:BA:2094:G:OP1	43:BI:22:LYS:HD2	2.14	0.47
46:DO:10:VAL:HG22	46:DO:17:ARG:O	2.14	0.47
38:BD:10:THR:O	38:BD:13:ARG:HB3	2.14	0.47
2:CB:137:ARG:NH1	2:CB:138:LEU:HD23	2.29	0.47
2:CB:145:LEU:O	2:CB:149:LEU:HB2	2.15	0.47
11:CK:15:ALA:HB1	11:CK:78:GLN:HE21	1.79	0.47
42:BH:9:ILE:HD13	42:BH:9:ILE:C	2.35	0.47
42:BH:14:GLY:O	42:BH:29:PRO:HD3	2.14	0.47
42:BH:82:GLY:O	42:BH:83:TYR:O	2.33	0.47
50:DS:20:ARG:NE	50:DS:20:ARG:CA	2.77	0.47
56:BY:95:LYS:HD3	56:BY:100:ALA:HB1	1.97	0.47
48:DQ:84:GLY:O	48:DQ:85:LYS:HB2	2.13	0.47
35:DA:2543:G:O2'	35:DA:2544:G:H5'	2.14	0.47
35:BA:2762:G:H2'	35:BA:2763:G:C5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:91:VAL:HG12	6:AF:92:LYS:N	2.29	0.47
4:AD:73:ARG:HG3	4:AD:77:ASN:HD21	1.80	0.47
48:DQ:57:HIS:CD2	48:DQ:116:GLU:HG3	2.50	0.47
57:DZ:27:VAL:O	57:DZ:88:PHE:N	2.48	0.47
56:BY:88:LYS:NZ	56:BY:93:GLY:C	2.68	0.47
11:CK:39:PRO:C	11:CK:40:ILE:HD13	2.34	0.47
57:BZ:103:ARG:HH11	57:BZ:103:ARG:CB	2.27	0.47
35:BA:2223:G:H2'	35:BA:2224:G:C5'	2.45	0.47
35:BA:332:A:O2'	35:BA:334:C:OP2	2.19	0.47
38:DD:218:ARG:HB3	38:DD:219:PRO:HD2	1.97	0.47
1:CA:232:G:H2'	1:CA:233:C:C6	2.50	0.47
49:DR:45:ARG:O	49:DR:48:VAL:HG12	2.14	0.47
40:DF:46:ARG:HG3	40:DF:46:ARG:NH1	2.29	0.47
1:AA:393:A:H2'	1:AA:394:G:H8	1.79	0.47
37:DC:197:LEU:C	37:DC:199:ALA:N	2.68	0.47
4:AD:39:PRO:HB2	4:AD:44:GLY:HA2	1.97	0.47
35:BA:2346:A:H5'	35:BA:2383:G:C1'	2.45	0.47
35:BA:829:A:N7	35:BA:2247:A:O2'	2.43	0.47
50:DS:73:LEU:O	50:DS:73:LEU:HD23	2.15	0.47
53:DV:99:ILE:HD13	53:DV:99:ILE:N	2.29	0.47
35:DA:236:C:H2'	35:DA:237:C:C6	2.50	0.47
54:BW:60:ASN:OD1	54:BW:61:ASN:ND2	2.48	0.47
1:AA:781:A:H2'	1:AA:782:A:H5'	1.96	0.47
1:AA:1319:A:N6	1:AA:1361:G:H21	2.13	0.47
35:BA:1756:G:H4'	35:BA:1758:G:O4'	2.14	0.47
35:DA:1130:U:O2	39:DE:149:ARG:NH2	2.47	0.47
1:AA:677:U:H3	1:AA:714:G:H22	1.63	0.47
35:BA:2650:U:O2'	35:BA:2651:C:H5'	2.15	0.47
57:DZ:77:ASP:O	57:DZ:78:LYS:HB2	2.15	0.47
35:BA:825:C:O2'	35:BA:826:U:H5'	2.14	0.47
7:AG:137:LYS:O	7:AG:141:VAL:HG23	2.14	0.47
1:CA:1270:C:O2'	1:CA:1271:G:H5'	2.15	0.47
35:BA:2050:C:H2'	35:BA:2051:A:O4'	2.15	0.47
26:B1:75:GLU:C	26:B1:77:ALA:H	2.17	0.47
1:CA:851:G:H2'	1:CA:852:G:H8	1.79	0.47
35:BA:956:G:OP2	48:BQ:14:ARG:NH2	2.48	0.47
35:DA:2062:A:O2'	35:DA:2063:C:OP1	2.32	0.47
1:AA:1087:G:H22	1:AA:1099:G:H1'	1.79	0.47
35:DA:2701:C:H2'	35:DA:2702:U:H2'	1.96	0.47
22:AY:20:G:O6	35:BA:898:C:H5'	2.15	0.47
22:AV:30:U:N3	22:AV:31:C:C4	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:46:ALA:HB2	41:BG:88:ILE:HG12	1.97	0.47
51:DT:128:GLU:O	51:DT:129:ARG:C	2.53	0.47
51:BT:7:ILE:O	51:BT:10:VAL:HB	2.15	0.47
47:BP:25:SER:O	47:BP:30:THR:HG23	2.15	0.47
23:AW:11:C:H3'	23:AW:12:U:H6	1.79	0.47
23:AW:48:G:O5'	23:AW:49:G:OP2	2.33	0.47
35:BA:833:U:H2'	35:BA:834:C:C6	2.50	0.47
35:DA:587:C:C6	47:DP:33:ARG:HD3	2.49	0.47
43:DI:98:ALA:O	43:DI:101:LEU:HB3	2.15	0.47
23:CW:26:G:H2'	23:CW:27:C:N1	2.29	0.47
35:BA:1917:U:O2'	35:BA:1918:A:H5'	2.15	0.47
12:CL:37:CYS:O	12:CL:38:THR:C	2.52	0.47
12:CL:37:CYS:CA	12:CL:58:VAL:HG22	2.44	0.47
35:DA:1916:A:H2'	35:DA:1917:U:O4'	2.14	0.47
12:AL:24:VAL:O	12:AL:24:VAL:HG12	2.15	0.47
10:CJ:33:GLN:O	10:CJ:75:ILE:HG23	2.15	0.47
10:CJ:34:VAL:HG13	10:CJ:73:ASP:C	2.36	0.47
47:BP:101:VAL:HG12	47:BP:107:LYS:N	2.30	0.47
52:DU:91:ASP:O	52:DU:95:LEU:HB2	2.15	0.47
3:AC:107:GLN:N	3:AC:107:GLN:CD	2.65	0.47
33:D8:48:PHE:O	33:D8:49:VAL:CG2	2.59	0.47
53:DV:72:VAL:HG23	53:DV:72:VAL:O	2.15	0.47
41:DG:131:TYR:HB3	41:DG:159:VAL:HG11	1.97	0.47
41:DG:60:LEU:HD13	41:DG:60:LEU:O	2.15	0.47
41:DG:96:ARG:O	41:DG:99:MET:N	2.36	0.47
35:BA:1798:U:H5'	38:BD:259:THR:CG2	2.32	0.47
10:CJ:50:ILE:CD1	14:CN:41:ARG:HD3	2.44	0.47
50:DS:97:ARG:NH1	50:DS:97:ARG:HG2	2.29	0.47
2:CB:83:MET:HG3	2:CB:234:PRO:HG2	1.96	0.47
1:CA:1288:A:O2'	1:CA:1289:A:H5'	2.15	0.47
3:CC:181:ASN:HD22	3:CC:205:GLY:H	1.57	0.47
26:D1:68:PRO:C	26:D1:70:VAL:N	2.68	0.47
17:CQ:51:TYR:CD2	17:CQ:57:VAL:HG11	2.49	0.47
2:AB:48:MET:HE1	2:AB:49:GLU:HA	1.96	0.47
35:BA:2512:C:H4'	39:BE:122:PHE:CE2	2.50	0.47
35:BA:557:U:H2'	35:BA:558:G:C8	2.48	0.47
29:B4:8:LYS:O	29:B4:9:LEU:CB	2.63	0.47
27:D2:10:LEU:O	27:D2:13:ALA:N	2.48	0.47
30:B5:47:PRO:C	30:B5:49:CYS:H	2.17	0.47
5:CE:76:ILE:HD11	5:CE:142:LEU:CD2	2.45	0.47
27:D2:46:GLN:HG2	27:D2:49:LYS:HZ1	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:31:VAL:HG22	41:DG:32:PRO:CD	2.35	0.47
6:AF:100:ASN:ND2	18:AR:23:LYS:NZ	2.63	0.47
18:CR:66:LEU:HD11	18:CR:70:ILE:HD11	1.97	0.47
1:CA:1501:C:H3'	1:CA:1502:A:C5'	2.45	0.47
4:AD:122:ARG:HH12	4:AD:135:LEU:CD1	2.26	0.47
42:BH:163:TYR:CD1	42:BH:163:TYR:N	2.83	0.47
16:CP:18:ARG:CG	16:CP:35:LYS:HE3	2.44	0.47
37:BC:52:PRO:HG2	37:BC:53:ARG:HH11	1.79	0.47
42:DH:140:LYS:O	42:DH:144:VAL:HG23	2.15	0.47
50:DS:13:ARG:HG3	50:DS:14:VAL:N	2.21	0.47
35:BA:705:A:H1'	38:BD:9:TYR:CE2	2.49	0.47
42:BH:159:GLU:OE1	42:BH:159:GLU:HA	2.14	0.47
35:BA:365:C:C6	35:BA:365:C:H5'	2.40	0.47
9:CI:7:THR:HB	9:CI:83:ARG:NH1	2.26	0.47
39:DE:14:ILE:HG12	39:DE:21:VAL:HG22	1.97	0.47
1:AA:921:U:O2'	5:AE:19:MET:O	2.30	0.47
6:AF:63:TYR:HD1	6:AF:63:TYR:N	2.13	0.47
1:CA:401:C:OP2	4:CD:73:ARG:NH2	2.48	0.47
50:DS:90:GLY:C	50:DS:92:TYR:N	2.67	0.47
17:CQ:90:ILE:O	17:CQ:94:ASN:ND2	2.48	0.47
35:DA:2591:C:OP2	38:DD:239:ARG:HB3	2.15	0.47
1:CA:600:C:H2'	1:CA:601:C:H6	1.80	0.47
35:DA:2464:C:O2'	35:DA:2465:C:P	2.73	0.47
27:B2:69:ARG:HB2	27:B2:70:GLN:OE1	2.15	0.47
37:DC:31:LYS:NZ	37:DC:183:PRO:HD3	2.30	0.47
37:DC:31:LYS:HZ1	37:DC:183:PRO:HD3	1.80	0.47
41:BG:170:ARG:NH1	41:BG:174:GLU:OE1	2.46	0.47
1:CA:1431:C:H2'	1:CA:1432:G:H5'	1.96	0.47
1:CA:202:U:H3'	1:CA:203:U:C6	2.50	0.47
30:D5:16:ARG:HG2	30:D5:16:ARG:NH1	2.30	0.47
13:CM:28:ALA:C	13:CM:30:ALA:N	2.68	0.47
4:CD:47:ARG:HH21	4:CD:49:ARG:HH22	1.63	0.47
48:DQ:35:VAL:HG23	48:DQ:100:GLY:O	2.15	0.47
35:DA:829:A:N7	35:DA:2247:A:O2'	2.39	0.47
35:DA:1009:A:O4'	52:DU:59:ARG:HD3	2.15	0.47
43:BI:116:LEU:HD12	43:BI:117:GLU:H	1.80	0.47
35:DA:71:A:H5''	35:DA:73:A:C8	2.50	0.47
14:CN:12:ARG:CB	14:CN:12:ARG:NH1	2.78	0.47
47:DP:99:LEU:C	47:DP:99:LEU:HD23	2.36	0.47
19:AS:32:LYS:HA	19:AS:50:ALA:HB3	1.96	0.47
35:DA:644:A:C2	35:DA:2369:A:H1'	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1754:C:OP1	51:DT:96:ARG:NH1	2.48	0.47
35:DA:2167:U:H2'	35:DA:2168:G:C8	2.49	0.47
1:AA:47:C:O2	1:AA:49:U:C4	2.68	0.47
28:D3:10:LYS:HD3	28:D3:53:LEU:HD23	1.96	0.47
43:DI:2:LYS:HB2	43:DI:39:ALA:HB3	1.96	0.47
35:DA:1459:G:C8	35:DA:1461:G:H1'	2.50	0.47
36:BB:103:G:O2'	36:BB:104:U:H5'	2.15	0.47
44:BJ:124:UNK:O	44:BJ:125:UNK:C	2.62	0.47
29:D4:32:TYR:CD1	29:D4:32:TYR:N	2.83	0.47
51:BT:53:ARG:O	51:BT:53:ARG:HG3	2.15	0.47
5:AE:103:GLY:O	5:AE:104:ALA:C	2.53	0.47
19:CS:79:THR:O	19:CS:80:TYR:HB3	2.15	0.47
35:BA:1138:G:H2'	35:BA:1139:G:O4'	2.14	0.47
2:AB:61:LEU:HD21	2:AB:161:ALA:HB2	1.96	0.47
38:DD:40:THR:HG22	38:DD:41:GLY:O	2.14	0.47
22:CY:70:G:C6	22:CY:71:G:C6	3.03	0.47
23:AW:69:G:N1	23:AW:70:G:C5	2.83	0.47
41:BG:43:LEU:HB3	41:BG:45:GLU:HG2	1.95	0.47
51:DT:117:ASP:O	51:DT:121:ILE:HG13	2.15	0.47
35:BA:1484:G:H21	35:BA:1505:C:N4	2.12	0.47
43:BI:98:ALA:O	43:BI:99:GLU:C	2.53	0.47
12:AL:60:LEU:CD2	12:AL:65:GLU:HA	2.45	0.47
45:BN:128:HIS:NE2	45:BN:134:ARG:HD3	2.29	0.47
45:BN:56:ASN:HA	45:BN:124:ALA:C	2.35	0.47
8:CH:25:ASP:HA	8:CH:59:LEU:O	2.15	0.47
45:DN:128:HIS:NE2	45:DN:134:ARG:HD3	2.30	0.47
12:CL:102:ARG:HE	12:CL:102:ARG:HB3	1.47	0.47
12:CL:47:LYS:HB3	12:CL:47:LYS:HZ3	1.79	0.47
39:BE:51:PHE:CE1	39:BE:52:LEU:HD13	2.50	0.47
39:BE:51:PHE:C	39:BE:74:PRO:HB3	2.36	0.47
13:CM:90:LEU:O	13:CM:91:ARG:CB	2.63	0.47
13:CM:94:ARG:HB3	13:CM:96:LEU:HG	1.96	0.47
35:DA:1999:C:H5''	35:DA:2723:C:O2'	2.15	0.47
35:BA:832:G:H5'	47:BP:45:LEU:HD11	1.97	0.47
2:AB:174:VAL:O	2:AB:178:ARG:HB2	2.15	0.47
38:BD:30:GLU:CG	38:BD:63:ARG:NH2	2.78	0.47
2:AB:235:SER:OG	2:AB:236:TYR:HD1	1.96	0.47
41:BG:36:LYS:HD3	41:BG:160:VAL:HG21	1.97	0.47
5:AE:7:GLU:HB2	5:AE:35:GLY:O	2.15	0.47
9:CI:99:LEU:C	9:CI:101:PHE:H	2.19	0.47
27:B2:55:ARG:NH2	35:BA:75:G:H4'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:8:GLN:O	40:BF:10:PRO:N	2.48	0.47
1:CA:781:A:C3'	1:CA:782:A:H5'	2.45	0.47
20:CT:89:ARG:HB2	20:CT:104:LEU:CD1	2.41	0.47
33:B8:33:ASN:HA	33:B8:36:LYS:CD	2.44	0.47
1:AA:433:C:O2'	1:AA:434:U:H5'	2.15	0.47
20:CT:82:SER:O	20:CT:86:ARG:HD2	2.14	0.47
1:AA:1505:G:H5''	1:AA:1506:U:H5''	1.96	0.47
22:CY:76:C:OP1	25:D0:3:HIS:ND1	2.48	0.47
51:BT:98:LYS:HB3	51:BT:100:TYR:CE1	2.50	0.47
1:CA:1291:G:H4'	9:CI:39:GLY:HA3	1.97	0.47
18:CR:25:THR:HG22	18:CR:42:ARG:HH11	1.79	0.47
18:CR:40:LEU:HD12	18:CR:40:LEU:N	2.29	0.47
6:AF:68:PRO:HG3	6:AF:71:ARG:HH21	1.80	0.47
35:BA:709:U:H3	35:BA:722:A:N6	2.10	0.47
45:DN:99:LEU:O	45:DN:103:VAL:HG23	2.15	0.47
40:DF:164:ARG:HG3	40:DF:175:THR:OG1	2.14	0.47
1:CA:501:C:O3'	12:CL:118:SER:HB2	2.15	0.47
40:BF:7:TYR:HB2	40:BF:16:GLY:C	2.36	0.47
35:BA:2330:G:H2'	35:BA:2331:G:O4'	2.14	0.47
35:DA:2114:A:O2'	35:DA:2115:G:H5'	2.15	0.47
18:AR:25:THR:HG22	18:AR:42:ARG:HH11	1.79	0.47
35:BA:2854:G:H2'	35:BA:2855:C:C6	2.50	0.47
35:DA:1668:A:N3	35:DA:1670:C:C4	2.83	0.47
7:CG:32:ARG:NH1	7:CG:32:ARG:HG2	2.30	0.47
35:BA:530:G:C5	35:BA:2022:U:H5''	2.50	0.47
13:AM:32:GLU:O	13:AM:35:GLU:HG2	2.15	0.47
1:CA:1522:U:N3	1:CA:1523:G:N7	2.63	0.47
29:B4:51:ASP:C	29:B4:51:ASP:OD1	2.54	0.47
43:DI:37:VAL:HG12	43:DI:38:LEU:N	2.30	0.47
11:CK:11:LYS:O	11:CK:13:GLN:HG3	2.14	0.47
2:CB:53:ARG:NH1	2:CB:199:TYR:CD2	2.83	0.47
7:CG:95:ARG:HG2	7:CG:99:LEU:CD1	2.44	0.47
35:BA:2639:A:C2'	35:BA:2640:G:H5'	2.45	0.47
41:BG:97:ASP:C	41:BG:99:MET:H	2.16	0.47
1:AA:59:A:C5'	1:AA:60:A:H5''	2.45	0.47
35:BA:1670:C:O2	39:BE:129:HIS:HE1	1.97	0.47
1:AA:1269:A:OP1	21:AU:24:ARG:HD2	2.15	0.47
35:BA:2167:U:H2'	35:BA:2168:G:C8	2.50	0.47
35:BA:192:C:H2'	35:BA:193:U:H5'	1.97	0.47
1:CA:936:C:H2'	1:CA:937:A:O4'	2.15	0.47
17:AQ:7:THR:HG22	17:AQ:58:GLU:HG2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:644:G:O2'	1:AA:645:C:H5'	2.15	0.47
41:BG:106:LEU:HD12	41:BG:110:ALA:HB3	1.97	0.47
35:DA:510:C:O2'	35:DA:511:U:H5'	2.15	0.47
1:AA:568:G:O6	12:AL:5:PRO:HD3	2.15	0.47
35:DA:1688:U:H1'	35:DA:1701:A:C6	2.49	0.47
38:DD:166:GLN:HE21	38:DD:166:GLN:CA	2.27	0.47
23:AW:35:U:P	23:AW:35:U:H3'	2.54	0.46
7:CG:139:GLU:O	7:CG:142:GLU:N	2.48	0.46
11:CK:54:ARG:NH2	23:CW:42:C:OP1	2.48	0.46
22:AV:13:U:N3	22:AV:25:A:C6	2.82	0.46
51:DT:62:THR:HA	51:DT:74:ARG:O	2.14	0.46
23:AW:9:A:C6	23:AW:48:G:C2	3.03	0.46
1:CA:1056:U:OP1	3:CC:163:ALA:HB3	2.15	0.46
23:CW:15:G:C5	23:CW:61:A:C2	3.03	0.46
12:AL:46:LYS:HB3	12:AL:47:LYS:H	1.41	0.46
10:CJ:7:LYS:HD3	10:CJ:71:LEU:HD13	1.97	0.46
8:CH:25:ASP:OD2	8:CH:60:ARG:HD2	2.15	0.46
45:DN:1:MET:N	53:DV:20:LEU:HD21	2.30	0.46
35:BA:145:G:C3'	35:BA:146:G:H5''	2.44	0.46
46:BO:35:VAL:HG11	46:BO:103:ALA:CB	2.35	0.46
39:DE:48:GLN:NE2	39:DE:78:LEU:HD22	2.30	0.46
16:AP:80:PHE:HD1	16:AP:80:PHE:H	1.59	0.46
13:CM:3:ARG:HG2	13:CM:9:ILE:HD11	1.96	0.46
36:DB:42:C:H4'	41:DG:67:LYS:HZ2	1.79	0.46
56:BY:40:GLU:HA	56:BY:40:GLU:OE1	2.15	0.46
10:AJ:63:PHE:HA	14:AN:59:ALA:H	1.80	0.46
2:AB:83:MET:HG3	2:AB:234:PRO:HG2	1.97	0.46
57:DZ:145:GLU:HG3	57:DZ:146:ILE:HG12	1.97	0.46
35:BA:1204:A:N1	35:BA:1241:A:C2	2.81	0.46
40:BF:184:TYR:O	40:BF:188:ARG:HG2	2.14	0.46
50:BS:54:LEU:C	50:BS:56:LEU:N	2.69	0.46
17:AQ:61:GLU:HA	17:AQ:71:PHE:CE1	2.50	0.46
22:CY:52:C:C4	22:CY:53:U:C4	3.02	0.46
47:BP:16:ARG:O	47:BP:16:ARG:NH1	2.47	0.46
48:DQ:32:TYR:HE1	48:DQ:133:ARG:NH1	2.13	0.46
1:CA:1133:G:H2'	1:CA:1134:G:C8	2.50	0.46
38:DD:35:LYS:N	38:DD:36:PRO:CD	2.76	0.46
24:CX:19:A:C5	22:CY:39:A:C2	3.03	0.46
4:CD:135:LEU:C	4:CD:137:SER:H	2.18	0.46
35:DA:156:U:O2	35:DA:156:U:H2'	2.14	0.46
35:BA:1541:G:C5'	35:BA:1542:A:O4'	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DE:25:VAL:HG21	51:DT:8:LYS:HG2	1.97	0.46
39:DE:57:LYS:O	39:DE:59:VAL:N	2.47	0.46
13:CM:40:ASN:HA	13:CM:41:PRO:HD3	1.78	0.46
1:CA:828:A:H2'	1:CA:829:G:O4'	2.16	0.46
43:BI:139:GLN:NE2	43:BI:139:GLN:H	2.13	0.46
18:AR:66:LEU:HD11	18:AR:70:ILE:HD11	1.97	0.46
2:CB:93:VAL:HG11	2:CB:97:TRP:CD1	2.50	0.46
33:B8:33:ASN:N	33:B8:36:LYS:HD2	2.29	0.46
35:BA:363(E):U:H5'	35:BA:363(F):A:OP1	2.14	0.46
35:DA:1014:U:O2'	35:DA:1015:G:H5''	2.15	0.46
47:DP:82:GLY:HA2	47:DP:113:LYS:O	2.15	0.46
1:AA:1346:A:C5'	9:AI:120:ARG:HH12	2.28	0.46
26:B1:48:LYS:HA	26:B1:60:PHE:O	2.15	0.46
8:AH:118:VAL:C	8:AH:119:LEU:HD23	2.35	0.46
6:CF:14:LEU:HB2	6:CF:19:LEU:HB2	1.95	0.46
1:AA:153:C:O2'	1:AA:154:C:H5'	2.15	0.46
6:CF:91:VAL:HG12	6:CF:92:LYS:N	2.29	0.46
31:B6:42:TRP:CZ2	35:BA:642:G:O3'	2.67	0.46
35:DA:2747:G:O2'	42:DH:67:LEU:HD13	2.15	0.46
11:AK:21:ILE:HB	11:AK:84:VAL:HG12	1.97	0.46
35:DA:1168:G:O2'	35:DA:1169:G:H5'	2.15	0.46
35:BA:2591:C:P	38:BD:239:ARG:HB3	2.55	0.46
6:CF:7:ASN:O	6:CF:8:ILE:HG13	2.14	0.46
1:CA:358:U:O2'	1:CA:359:U:H5'	2.15	0.46
40:DF:192:LEU:HD21	40:DF:194:MET:CG	2.45	0.46
1:CA:1170:A:H2'	1:CA:1171:G:H5'	1.97	0.46
35:DA:574:C:N3	39:DE:145:LYS:HE2	2.30	0.46
1:CA:393:A:H2'	1:CA:394:G:H8	1.79	0.46
49:DR:28:LEU:CD2	49:DR:114:VAL:HG12	2.45	0.46
1:AA:1027:C:H1'	1:AA:1035:A:C2	2.50	0.46
1:AA:1027:C:H2'	1:AA:1028:C:C5	2.50	0.46
28:B3:2:PRO:O	28:B3:3:ARG:O	2.33	0.46
18:CR:44:LEU:CD2	18:CR:79:LEU:HD22	2.44	0.46
47:BP:125:VAL:CG1	47:BP:138:LEU:HD21	2.45	0.46
26:D1:87:PRO:HA	26:D1:90:ILE:CG1	2.46	0.46
39:BE:39:PRO:HA	39:BE:43:GLY:CA	2.45	0.46
2:AB:21:ARG:O	2:AB:23:ARG:N	2.48	0.46
20:AT:90:GLN:O	20:AT:93:GLU:HB3	2.15	0.46
1:CA:836:G:C6	1:CA:851:G:C6	3.03	0.46
35:BA:1841:U:H2'	35:BA:1842:G:C8	2.50	0.46
47:BP:91:PHE:H	47:BP:91:PHE:HD1	1.58	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DN:91:LEU:HA	45:DN:95:PRO:HB3	1.97	0.46
35:DA:191:A:H2'	35:DA:192:C:H6	1.80	0.46
35:DA:1837:C:O2'	35:DA:1927:A:N3	2.47	0.46
41:BG:10:LYS:O	41:BG:15:VAL:HG23	2.15	0.46
6:CF:40:VAL:HG13	6:CF:40:VAL:O	2.15	0.46
40:BF:82:ILE:HG13	40:BF:82:ILE:O	2.15	0.46
40:DF:82:ILE:HG13	40:DF:82:ILE:O	2.14	0.46
53:BV:69:LYS:HG3	53:BV:70:ILE:N	2.30	0.46
30:B5:29:THR:HG21	35:BA:2814:C:O2'	2.15	0.46
23:CW:71:G:O5'	23:CW:71:G:H8	1.97	0.46
23:CW:7:U:C2	23:CW:69:G:C5	3.03	0.46
51:DT:3:ARG:HH11	51:DT:3:ARG:CG	2.29	0.46
22:AV:14:A:C8	22:AV:24:A:C2	3.04	0.46
22:AV:19:G:O2'	22:AV:59:G:N2	2.48	0.46
41:BG:83:ARG:C	41:BG:85:GLY:H	2.19	0.46
22:CV:51:G:H1	22:CV:67:C:N4	2.13	0.46
33:B8:56:GLU:C	33:B8:58:ILE:N	2.67	0.46
47:DP:41:ARG:NE	47:DP:41:ARG:HA	2.31	0.46
56:DY:10:GLY:C	56:DY:27:VAL:HG22	2.35	0.46
23:AW:20:G:OP1	23:AW:21:U:C6	2.69	0.46
43:BI:109:ILE:HG22	43:BI:114:LEU:HD11	1.96	0.46
43:BI:93:THR:HG23	43:BI:119:PRO:CB	2.42	0.46
12:CL:53:ARG:HG2	12:CL:93:LEU:HD11	1.96	0.46
1:AA:180:U:H2'	1:AA:181:G:H5'	1.91	0.46
12:AL:46:LYS:HE3	12:AL:92:ASP:HA	1.97	0.46
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HB3	1.95	0.46
45:DN:58:ASP:O	45:DN:59:LYS:HB2	2.15	0.46
35:BA:1494:A:O2'	35:BA:1496:A:H2	1.98	0.46
47:DP:107:LYS:C	47:DP:109:GLY:N	2.67	0.46
52:BU:92:ARG:HD2	53:BV:11:GLN:NE2	2.30	0.46
39:DE:51:PHE:C	39:DE:74:PRO:HB3	2.36	0.46
29:D4:33:VAL:CG2	41:DG:109:VAL:HG22	2.45	0.46
41:DG:113:ARG:N	41:DG:140:ILE:HB	2.30	0.46
56:BY:26:LYS:O	56:BY:27:VAL:C	2.53	0.46
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.44	0.46
13:AM:89:GLY:HA2	13:AM:93:ARG:NH1	2.30	0.46
49:BR:10:LEU:HD13	49:BR:17:ARG:NH1	2.30	0.46
31:D6:34:LEU:CD2	31:D6:51:GLU:HB3	2.44	0.46
1:CA:1371:G:OP2	9:CI:11:LYS:HG2	2.15	0.46
57:DZ:146:ILE:HA	57:DZ:174:VAL:HG12	1.97	0.46
17:CQ:50:LYS:HG3	17:CQ:51:TYR:CD1	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1291:C:H2'	35:BA:1292:U:C6	2.50	0.46
1:AA:255:G:O2'	1:AA:256:U:H5'	2.16	0.46
35:DA:2287:A:C6	35:DA:2289:G:C4	3.03	0.46
30:B5:49:CYS:O	30:B5:50:GLY:C	2.52	0.46
30:D5:50:GLY:HA2	30:D5:55:ARG:HB2	1.96	0.46
14:CN:22:THR:OG1	14:CN:33:VAL:HG21	2.15	0.46
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.15	0.46
1:CA:255:G:H4'	17:CQ:17:LYS:HD2	1.97	0.46
9:AI:97:LYS:HB3	9:AI:98:PRO:CD	2.40	0.46
57:DZ:63:ASP:O	57:DZ:65:GLN:N	2.48	0.46
25:B0:27:GLU:HG3	25:B0:68:GLU:HA	1.97	0.46
1:AA:343:U:O2	1:AA:347:G:C6	2.69	0.46
35:DA:1545:A:H2'	35:DA:1546:C:O4'	2.15	0.46
35:BA:2161:C:H2'	35:BA:2162:G:H8	1.80	0.46
43:BI:27:ARG:CG	43:BI:27:ARG:HH11	2.22	0.46
41:DG:22:ARG:HD2	41:DG:23:PHE:CE1	2.51	0.46
51:DT:78:LEU:C	51:DT:79:HIS:ND1	2.68	0.46
2:CB:97:TRP:CE2	2:CB:173:ALA:HB2	2.50	0.46
1:AA:706:A:N7	1:AA:707:C:C5	2.83	0.46
20:CT:99:LEU:O	20:CT:100:ILE:C	2.54	0.46
35:BA:1014:U:H2'	35:BA:1015:G:H5'	1.98	0.46
56:BY:95:LYS:HD3	56:BY:100:ALA:CA	2.45	0.46
51:DT:98:LYS:HB3	51:DT:100:TYR:CE1	2.50	0.46
16:CP:68:ASP:C	16:CP:70:ALA:N	2.69	0.46
35:BA:646:A:H2'	35:BA:647:G:O4'	2.15	0.46
11:AK:82:VAL:HB	11:AK:108:ILE:HG13	1.97	0.46
45:BN:96:GLU:HB2	45:BN:122:VAL:HG12	1.97	0.46
13:CM:45:VAL:O	13:CM:48:LEU:HD22	2.14	0.46
1:CA:1194:U:H4'	5:CE:22:GLY:CA	2.45	0.46
35:DA:2011:U:H2'	35:DA:2012:G:H5'	1.96	0.46
57:BZ:30:ASN:OD1	57:BZ:33:LEU:HB3	2.14	0.46
1:AA:764:C:H2'	1:AA:765:G:H8	1.80	0.46
15:AO:64:ARG:O	15:AO:65:ARG:C	2.53	0.46
1:AA:501:C:OP1	12:AL:117:ARG:NH2	2.43	0.46
39:BE:107:THR:O	39:BE:190:GLY:HA2	2.14	0.46
35:BA:570:G:H2'	35:BA:2030:A:C6	2.49	0.46
35:BA:574:C:N3	39:BE:145:LYS:HE2	2.30	0.46
35:BA:2153:G:H2'	35:BA:2154:G:C8	2.50	0.46
8:AH:54:ASP:C	8:AH:56:LYS:N	2.68	0.46
1:AA:1184:G:O2'	1:AA:1185:G:H5'	2.15	0.46
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.97	0.46
35:DA:2639:A:C2'	35:DA:2640:G:H5'	2.45	0.46
35:BA:829:A:N7	35:BA:2248:C:H5'	2.30	0.46
35:DA:1440:G:O2'	35:DA:1441:G:H5'	2.15	0.46
1:AA:185:A:O2'	1:AA:186:C:H5'	2.15	0.46
35:DA:1399:C:O2'	35:DA:1400:G:H5'	2.16	0.46
35:DA:1043:C:O2'	35:DA:1044:G:H5'	2.16	0.46
3:AC:157:ILE:CD1	3:AC:166:GLU:HB2	2.45	0.46
35:DA:1231:G:H2'	35:DA:1232:G:H8	1.80	0.46
1:CA:1236:A:O2'	1:CA:1304:G:H4'	2.15	0.46
38:BD:93:ALA:HB3	38:BD:105:ILE:HG23	1.97	0.46
1:CA:110:C:H2'	1:CA:111:G:O4'	2.15	0.46
7:CG:67:GLU:HA	7:CG:67:GLU:OE1	2.15	0.46
16:CP:69:THR:OG1	16:CP:69:THR:O	2.33	0.46
55:DX:65:ARG:HH11	55:DX:65:ARG:HG2	1.80	0.46
22:CY:14:A:H3'	22:CY:15:G:H8	1.80	0.46
35:DA:2469:A:H2'	48:DQ:56:ARG:HH21	1.80	0.46
57:DZ:179:ASP:OD2	57:DZ:181:GLU:HB2	2.15	0.46
22:AY:15:G:N2	22:AY:61:A:C4	2.83	0.46
36:DB:7:G:H4'	50:DS:29:PHE:CD2	2.50	0.46
22:CV:14:A:C5	22:CV:24:A:C5	3.04	0.46
22:CV:3:G:H2'	22:CV:4:C:H5"	1.96	0.46
51:DT:30:VAL:HG21	51:DT:84:GLN:H	1.81	0.46
51:DT:28:VAL:CG1	51:DT:46:GLU:HA	2.43	0.46
23:AW:24:A:H2'	23:AW:25:A:O4'	2.16	0.46
23:CW:12:U:H3	23:CW:26:G:H1	1.62	0.46
1:AA:1408:A:H5'	35:BA:1912:A:N6	2.30	0.46
35:BA:941:A:H2'	35:BA:942:G:C8	2.50	0.46
40:DF:22:ALA:C	40:DF:24:LEU:H	2.19	0.46
12:AL:41:ARG:CZ	12:AL:43:VAL:HG12	2.45	0.46
45:BN:134:ARG:H	45:BN:135:PRO:HD3	1.80	0.46
1:CA:1121:U:H2'	1:CA:1122:U:C6	2.51	0.46
52:DU:74:LEU:CD2	52:DU:79:PHE:HB2	2.45	0.46
35:DA:251:A:H5"	47:DP:51:PHE:CZ	2.50	0.46
46:BO:69:ILE:HD12	46:BO:69:ILE:N	2.30	0.46
51:BT:29:ARG:HD2	51:BT:29:ARG:HA	1.60	0.46
51:BT:32:TYR:O	51:BT:33:LYS:O	2.32	0.46
52:BU:79:PHE:O	52:BU:83:LEU:HD22	2.15	0.46
35:DA:860:U:C5	35:DA:917:A:N7	2.83	0.46
13:AM:90:LEU:O	13:AM:91:ARG:CB	2.63	0.46
39:BE:199:ARG:HH12	39:BE:202:LYS:HE2	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:17:PHE:CB	2:CB:44:LEU:HD11	2.45	0.46
35:DA:1204:A:N1	35:DA:1241:A:C2	2.80	0.46
17:AQ:5:VAL:HG13	17:AQ:59:ILE:O	2.16	0.46
57:BZ:146:ILE:HG22	57:BZ:174:VAL:HG12	1.97	0.46
35:BA:686:G:N2	35:BA:788:A:H61	2.14	0.46
9:CI:20:ARG:NH1	9:CI:20:ARG:HG3	2.29	0.46
26:B1:57:GLU:C	26:B1:58:ILE:HG23	2.35	0.46
35:DA:528:A:C2	35:DA:2042:A:H2'	2.50	0.46
7:CG:78:ARG:HG2	7:CG:79:ARG:H	1.80	0.46
2:AB:19:HIS:HD2	2:AB:189:ASP:OD2	1.99	0.46
1:AA:1106:G:H5''	3:AC:172:ARG:CD	2.45	0.46
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.15	0.46
35:BA:2665:A:OP1	35:BA:2665:A:H4'	2.15	0.46
35:BA:1789:A:H2'	35:BA:1790:C:O4'	2.16	0.46
23:AW:76:C:C4	23:AW:77:C:N4	2.83	0.46
7:AG:36:LYS:O	7:AG:39:ALA:HB3	2.14	0.46
1:AA:818:G:H3'	1:AA:819:A:H5''	1.97	0.46
1:CA:1405:G:H21	1:CA:1517:G:H22	1.61	0.46
6:CF:63:TYR:N	6:CF:63:TYR:CD1	2.82	0.46
48:BQ:133:ARG:HG3	48:BQ:133:ARG:NH1	2.30	0.46
27:D2:53:LEU:O	27:D2:53:LEU:HD23	2.15	0.46
57:BZ:81:ARG:HB2	57:BZ:81:ARG:HH11	1.80	0.46
35:DA:813:U:H2'	35:DA:814:C:H6	1.80	0.46
40:DF:124:LEU:O	40:DF:193:VAL:HA	2.14	0.46
8:CH:118:VAL:C	8:CH:119:LEU:HD23	2.36	0.46
1:AA:37:U:OP2	12:AL:123:LYS:HD3	2.15	0.46
36:DB:28:C:H2'	36:DB:29:A:C8	2.51	0.46
1:CA:764:C:H2'	1:CA:765:G:H8	1.80	0.46
1:AA:991:U:O2	1:AA:993:G:C8	2.65	0.46
35:BA:2011:U:H2'	35:BA:2012:G:H5'	1.96	0.46
2:CB:30:ARG:HG3	2:CB:31:TYR:CD1	2.51	0.46
1:CA:1070:U:O2'	1:CA:1071:C:H5'	2.15	0.46
35:DA:27:G:N2	35:DA:512:G:C2'	2.79	0.46
18:AR:25:THR:O	18:AR:26:LEU:HG	2.15	0.46
42:BH:24:VAL:HG11	42:BH:72:ILE:CD1	2.46	0.46
2:AB:56:ARG:NH1	2:AB:56:ARG:HG2	2.30	0.46
7:AG:40:ALA:O	7:AG:44:TYR:CD2	2.68	0.46
43:DI:40:THR:O	43:DI:44:LEU:N	2.39	0.46
46:BO:43:VAL:CG2	46:BO:56:ASP:HB2	2.45	0.46
34:B9:35:ARG:HD3	35:BA:2742:C:OP1	2.15	0.46
27:D2:64:LEU:HD22	27:D2:68:ARG:HH11	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:117:ASN:HA	11:CK:117:ASN:HD22	1.59	0.46
35:DA:903:C:H2'	35:DA:904:C:C6	2.51	0.46
1:CA:801:U:H2'	1:CA:802:A:C8	2.50	0.46
35:BA:1755:A:C2	35:BA:2716:U:H1'	2.50	0.46
35:DA:1341:U:OP1	35:DA:1397:U:N3	2.34	0.46
35:BA:1005:C:H2'	35:BA:1006:C:C6	2.50	0.46
35:DA:1498:C:O4'	35:DA:1577:C:H4'	2.14	0.46
35:DA:1548:C:H2'	35:DA:1549:C:H6	1.80	0.46
44:DJ:35:UNK:O	44:DJ:37:UNK:N	2.49	0.46
35:DA:836:G:C5	35:DA:837:C:C4	3.03	0.46
29:B4:32:TYR:N	29:B4:32:TYR:CD1	2.84	0.46
16:CP:25:ARG:HG3	16:CP:25:ARG:HH11	1.79	0.46
1:AA:369:C:H2'	1:AA:369:C:O2	2.15	0.46
41:BG:77:ILE:HG22	41:BG:77:ILE:O	2.14	0.46
35:DA:67:U:O2'	35:DA:68:G:H5'	2.15	0.46
1:AA:1081:G:H2'	1:AA:1082:G:H8	1.79	0.46
11:AK:54:ARG:CZ	23:AW:42:C:OP1	2.63	0.46
23:AW:68:A:C6	23:AW:69:G:C8	3.03	0.46
23:AW:70:G:C4	23:AW:71:G:C5	3.03	0.46
22:AY:4:C:O2'	22:AY:5:C:P	2.73	0.46
22:AY:56:U:OP1	48:BQ:56:ARG:NH1	2.47	0.46
19:AS:40:ILE:HG21	19:AS:62:ILE:CD1	2.46	0.46
56:BY:7:VAL:HG21	56:BY:8:LYS:HZ3	1.77	0.46
42:BH:41:MET:HE2	42:BH:42:ARG:C	2.35	0.46
47:DP:58:THR:O	47:DP:58:THR:HG22	2.16	0.46
47:DP:62:LEU:HG	47:DP:63:PRO:HD2	1.98	0.46
23:CW:12:U:N3	23:CW:26:G:N2	2.29	0.46
23:CW:8:U:N3	23:CW:24:A:N6	2.63	0.46
47:BP:33:ARG:O	47:BP:34:GLY:C	2.54	0.46
12:AL:86:ARG:HB2	12:AL:101:VAL:CG2	2.45	0.46
53:DV:51:VAL:CG1	53:DV:52:VAL:N	2.79	0.46
33:D8:56:GLU:O	33:D8:58:ILE:N	2.49	0.46
51:BT:91:ARG:HG2	51:BT:116:ALA:CB	2.46	0.46
57:DZ:43:GLU:HG2	57:DZ:44:PHE:N	2.30	0.46
43:BI:73:GLU:CG	43:BI:74:ASN:N	2.78	0.46
35:DA:861:A:N3	36:DB:79:C:O2'	2.44	0.46
41:DG:170:ARG:HH21	41:DG:180:PHE:HD2	1.63	0.46
5:AE:148:VAL:C	5:AE:150:ARG:H	2.18	0.46
3:CC:15:THR:CG2	3:CC:181:ASN:HA	2.44	0.46
50:DS:70:GLY:HA3	50:DS:101:LEU:HD23	1.96	0.46
2:CB:48:MET:HA	2:CB:51:LEU:HD12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:56:ARG:NH1	2:CB:56:ARG:HG2	2.30	0.46
35:DA:2307:G:N3	35:DA:2307:G:H3'	2.30	0.46
47:BP:6:LEU:N	47:BP:6:LEU:HD23	2.20	0.46
9:AI:15:ALA:HB2	9:AI:65:VAL:CB	2.45	0.46
56:BY:46:LYS:HG3	56:BY:47:LYS:N	2.31	0.46
35:DA:1568:G:P	38:DD:63:ARG:HH22	2.38	0.46
49:DR:38:VAL:HG12	49:DR:42:LYS:HD2	1.96	0.46
1:CA:19:C:H5''	5:CE:86:ALA:HB3	1.93	0.46
2:AB:93:VAL:HG11	2:AB:97:TRP:CD1	2.50	0.46
48:DQ:135:ASP:OD1	48:DQ:135:ASP:N	2.46	0.46
1:CA:1145:C:H4'	1:CA:1146:A:H5'	1.97	0.46
37:BC:48:LEU:HD12	37:BC:48:LEU:N	2.31	0.46
22:CY:36:AG9:H2A	22:CY:37:A:C1'	2.45	0.46
9:AI:33:PHE:CE1	9:AI:37:PHE:CD2	3.03	0.46
55:BX:55:ASN:HB2	55:BX:80:ILE:HG12	1.98	0.46
51:DT:36:GLU:HG2	51:DT:36:GLU:O	2.15	0.46
13:AM:66:LEU:O	13:AM:70:LEU:HB3	2.16	0.46
1:AA:1326:C:H2'	1:AA:1327:C:C6	2.50	0.46
1:AA:1327:C:H2'	1:AA:1328:C:C6	2.51	0.46
35:DA:2646:C:H6	35:DA:2646:C:O5'	1.98	0.46
35:BA:2148:G:H2'	35:BA:2149:G:C8	2.49	0.46
1:CA:68:G:C2	1:CA:69:G:C4	3.03	0.46
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.50	0.46
46:DO:17:ARG:HB2	46:DO:45:GLU:O	2.14	0.46
57:DZ:165:VAL:HG13	57:DZ:169:GLU:HB2	1.96	0.46
33:D8:33:ASN:N	33:D8:33:ASN:ND2	2.59	0.46
33:B8:32:LEU:HB3	33:B8:36:LYS:NZ	2.30	0.46
1:AA:1216:G:O2'	1:AA:1217:C:H5'	2.15	0.46
37:BC:14:LYS:O	37:BC:29:LEU:HD11	2.15	0.46
35:DA:631:A:OP1	47:DP:64:LYS:CE	2.63	0.46
20:AT:99:LEU:O	20:AT:100:ILE:C	2.54	0.46
27:B2:3:LEU:CD2	27:B2:7:ARG:HH11	2.28	0.46
2:CB:27:LYS:C	2:CB:29:ALA:H	2.18	0.46
31:D6:42:TRP:CZ2	35:DA:642:G:O3'	2.68	0.46
57:BZ:13:GLU:O	57:BZ:14:LYS:C	2.52	0.46
50:BS:87:PHE:H	50:BS:106:ARG:HD3	1.79	0.46
57:BZ:119:GLU:HG3	57:BZ:119:GLU:O	2.16	0.46
1:AA:695:A:H61	1:AA:797:C:H1'	1.80	0.46
35:BA:1168:G:O2'	35:BA:1169:G:H5'	2.16	0.46
51:BT:58:ASN:ND2	51:BT:58:ASN:N	2.64	0.46
41:BG:12:TYR:HA	41:BG:16:ARG:CG	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:21:ILE:HB	11:CK:84:VAL:HG12	1.97	0.46
35:BA:26:G:C6	35:BA:27:G:N1	2.82	0.46
1:CA:501:C:H2'	1:CA:502:G:C8	2.50	0.46
11:AK:59:TYR:CZ	11:AK:63:LEU:HD21	2.50	0.46
1:AA:203:U:H6	1:AA:203:U:OP2	1.98	0.46
27:B2:68:ARG:CG	27:B2:68:ARG:NH1	2.75	0.46
35:BA:570:G:H2'	35:BA:2030:A:N7	2.30	0.46
39:BE:144:ARG:HB3	39:BE:145:LYS:H	1.50	0.46
2:AB:11:LEU:CD1	2:AB:217:ARG:NH2	2.78	0.46
5:AE:36:ASP:O	5:AE:37:ARG:CB	2.63	0.46
35:DA:2153:G:H2'	35:DA:2154:G:C8	2.51	0.46
57:BZ:31:ARG:HD2	57:BZ:94:GLU:OE1	2.15	0.46
35:BA:2291:U:O2'	35:BA:2374:C:H1'	2.16	0.46
20:CT:42:GLN:NE2	20:CT:42:GLN:HA	2.30	0.46
25:B0:36:ILE:HD11	25:B0:39:ARG:HG2	1.98	0.46
54:DW:37:ARG:HG3	54:DW:37:ARG:HH11	1.80	0.46
7:CG:36:LYS:O	7:CG:39:ALA:HB3	2.15	0.46
36:BB:109:C:H5'	36:BB:110:G:O5'	2.14	0.46
48:BQ:14:ARG:O	48:BQ:72:LYS:HE2	2.16	0.46
35:BA:1311:G:C2	55:BX:60:ARG:NH1	2.83	0.46
39:BE:167:VAL:HG22	39:BE:170:LEU:HD11	1.98	0.46
35:BA:2322:A:H2'	35:BA:2323:G:O4'	2.15	0.46
18:CR:65:ILE:O	18:CR:69:THR:HG23	2.15	0.46
35:BA:598:G:H2'	35:BA:599:G:O4'	2.16	0.46
2:CB:9:GLU:OE1	2:CB:10:LEU:N	2.48	0.46
35:DA:560:C:H4'	52:DU:52:ARG:CZ	2.44	0.46
26:B1:7:ILE:HG12	26:B1:62:VAL:HG23	1.96	0.46
35:DA:2050:C:H2'	35:DA:2051:A:O4'	2.15	0.46
49:BR:18:LEU:HD21	49:BR:22:ARG:CZ	2.46	0.46
57:DZ:181:GLU:HA	57:DZ:181:GLU:OE1	2.15	0.46
22:AY:32:G:C5	22:AY:43:G:C2	3.04	0.46
23:CW:29:A:C4	23:CW:30:U:C5	3.03	0.46
14:AN:22:THR:O	14:AN:23:ARG:HB2	2.14	0.46
22:CV:15:G:N9	22:CV:16:U:H5	2.13	0.46
30:B5:3:LYS:HG2	35:BA:2015:A:H2	1.80	0.46
46:DO:69:ILE:N	46:DO:69:ILE:HD12	2.30	0.46
23:AW:11:C:C2'	23:AW:12:U:O4'	2.64	0.46
23:AW:10:G:N3	23:AW:11:C:C6	2.84	0.46
23:AW:63:C:H2'	23:AW:63:C:O2	2.15	0.46
35:DA:589:C:O2'	35:DA:590:A:H5'	2.15	0.46
47:DP:23:PRO:HB2	47:DP:33:ARG:NE	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:11:C:H2'	23:CW:12:U:O4'	2.15	0.46
23:CW:9:A:C8	23:CW:47:G:N2	2.83	0.46
1:AA:1408:A:O2'	1:AA:1409:C:H5''	2.15	0.46
12:AL:84:LEU:HD23	12:AL:84:LEU:C	2.36	0.46
35:DA:145:G:C3'	35:DA:146:G:H5''	2.44	0.46
10:CJ:22:LYS:C	10:CJ:24:VAL:H	2.18	0.46
52:DU:92:ARG:HD2	53:DV:11:GLN:NE2	2.31	0.46
5:AE:101:ILE:H	5:AE:101:ILE:HD13	1.81	0.46
53:BV:19:LYS:NZ	53:BV:20:LEU:N	2.44	0.46
39:DE:51:PHE:HE1	39:DE:52:LEU:HD13	1.80	0.46
41:DG:86:MET:HG2	41:DG:86:MET:O	2.16	0.46
49:DR:11:ASN:C	49:DR:11:ASN:OD1	2.53	0.46
1:CA:476:G:H2'	1:CA:477:A:C8	2.51	0.46
1:CA:80:G:OP1	1:CA:80:G:H4'	2.16	0.46
9:CI:15:ALA:HB2	9:CI:65:VAL:CG2	2.46	0.46
47:BP:45:LEU:HD22	47:BP:46:LYS:H	1.80	0.46
35:BA:2801(A):A:H4'	35:BA:2802:G:C5'	2.35	0.46
2:AB:47:THR:HG23	2:AB:202:PRO:HG2	1.97	0.46
48:BQ:42:ILE:HG22	48:BQ:47:ILE:HG13	1.97	0.46
48:DQ:111:GLU:HG2	48:DQ:111:GLU:O	2.16	0.46
41:BG:128:ARG:C	41:BG:129:GLY:O	2.51	0.46
26:D1:45:ASN:ND2	35:DA:2090:G:H21	2.13	0.46
35:DA:1112:G:O2'	35:DA:1113:U:C6	2.67	0.46
3:AC:88:ARG:HA	3:AC:91:LEU:CD1	2.44	0.46
9:CI:55:ALA:HA	9:CI:58:HIS:CD2	2.44	0.46
48:BQ:52:VAL:O	48:BQ:55:VAL:HG22	2.16	0.46
57:DZ:61:LEU:N	57:DZ:61:LEU:HD23	2.22	0.46
1:CA:173:U:H5''	1:CA:197:A:O4'	2.16	0.46
1:AA:828:A:H2'	1:AA:829:G:O4'	2.15	0.46
1:CA:1514:C:H2'	1:CA:1515:C:C6	2.50	0.46
39:DE:132:HIS:CG	39:DE:135:HIS:NE2	2.83	0.46
20:AT:89:ARG:HD2	20:AT:104:LEU:HD21	1.96	0.46
42:DH:124:GLU:HG3	42:DH:132:ARG:CG	2.46	0.46
42:DH:124:GLU:CB	42:DH:132:ARG:HG2	2.44	0.46
1:CA:1411:C:H6	1:CA:1411:C:O5'	1.98	0.46
50:DS:17:ARG:HA	50:DS:20:ARG:HH12	1.81	0.46
39:DE:24:THR:HG23	39:DE:184:VAL:CG2	2.46	0.46
50:BS:85:VAL:HG23	50:BS:106:ARG:HG3	1.98	0.46
26:B1:67:ILE:O	26:B1:70:VAL:HB	2.16	0.46
57:BZ:132:ASN:O	57:BZ:133:ILE:HD13	2.14	0.46
30:B5:40:LYS:HE2	30:B5:46:CYS:CB	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:163:ALA:HB3	41:DG:169:ALA:HB2	1.98	0.46
12:AL:20:LYS:HZ3	12:AL:20:LYS:HB3	1.77	0.46
15:CO:21:ASP:C	15:CO:23:GLY:H	2.18	0.46
1:AA:1190:G:OP2	3:AC:5:ILE:HG23	2.15	0.46
1:CA:1240:U:C4'	7:CG:38:LEU:HD21	2.45	0.46
11:CK:105:VAL:HG23	11:CK:105:VAL:O	2.15	0.46
26:B1:29:GLY:O	26:B1:30:VAL:HG23	2.15	0.46
20:CT:13:LEU:C	20:CT:15:ARG:N	2.67	0.46
1:CA:1112:C:H1'	3:CC:179:ARG:CD	2.45	0.46
51:DT:50:ILE:HD11	51:DT:102:ILE:HD11	1.98	0.46
1:CA:451:A:C6	1:CA:480:U:H2'	2.50	0.46
1:CA:511:C:HO2'	1:CA:512:U:H6	1.63	0.46
27:B2:45:SER:H	27:B2:46:GLN:HE22	1.61	0.46
35:DA:665:C:H2'	35:DA:666:G:C8	2.50	0.46
35:DA:1054:A:H2'	35:DA:1107:G:C8	2.51	0.46
5:AE:126:ARG:NH1	5:AE:126:ARG:HG3	2.30	0.46
35:DA:680:G:H2'	35:DA:681:G:H8	1.79	0.46
35:DA:2098:U:H2'	35:DA:2099:U:O4'	2.15	0.46
20:AT:38:LYS:HA	20:AT:41:ILE:HG12	1.98	0.46
4:AD:168:ARG:HG3	4:AD:168:ARG:NH1	2.30	0.46
35:BA:1638:C:H5''	35:BA:2710:C:O2'	2.15	0.46
1:CA:935:A:H2'	1:CA:936:C:H6	1.80	0.46
35:DA:2052:G:H4'	39:DE:143:ASN:O	2.16	0.46
1:AA:34:C:H2'	1:AA:35:G:C8	2.51	0.46
1:CA:894:G:H2'	1:CA:895:G:C8	2.51	0.46
43:BI:2:LYS:HB2	43:BI:39:ALA:HB3	1.97	0.46
35:BA:1641:A:H2'	35:BA:1642:G:O4'	2.16	0.46
35:BA:1130:U:O2	39:BE:149:ARG:NH2	2.49	0.46
35:DA:2828:C:O2'	35:DA:2829:C:H5'	2.15	0.46
47:BP:131:SER:O	47:BP:132:LYS:C	2.54	0.46
57:BZ:158:PRO:HA	57:BZ:159:PRO:HD3	1.82	0.46
15:AO:25:THR:HG21	15:AO:70:LEU:HB2	1.97	0.46
35:DA:1564:C:O2'	35:DA:1565:C:H5'	2.15	0.46
1:CA:683:G:H2'	1:CA:684:A:C8	2.51	0.46
5:CE:28:PHE:CD1	5:CE:28:PHE:N	2.84	0.46
39:BE:108:SER:O	39:BE:162:ALA:HA	2.15	0.46
20:CT:81:LYS:C	20:CT:83:ARG:H	2.19	0.46
35:BA:1252:G:N7	52:BU:36:ARG:NH1	2.62	0.46
22:AY:13:U:C2	22:AY:25:A:C6	3.02	0.46
48:BQ:59:ARG:HB2	57:BZ:180:VAL:HB	1.97	0.46
48:BQ:60:ARG:CA	57:BZ:178:GLU:O	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DE:36:ARG:HG2	39:DE:36:ARG:NH1	2.30	0.46
23:CW:35:U:P	23:CW:35:U:H3'	2.54	0.46
23:CW:38:U:O2	23:CW:39:A:N7	2.49	0.46
22:AV:14:A:H5''	22:AV:15:G:N7	2.31	0.46
22:AV:10:G:N2	22:AV:27:C:C2	2.83	0.46
22:CV:51:G:H2'	22:CV:52:C:H6	1.80	0.46
51:BT:3:ARG:HB3	51:BT:6:LEU:CB	2.46	0.46
33:B8:50:LEU:CD1	33:B8:51:ALA:H	2.14	0.46
43:DI:97:ILE:HG22	43:DI:101:LEU:HD22	1.96	0.46
3:AC:155:GLY:O	3:AC:156:ARG:CB	2.64	0.46
43:BI:62:LYS:HA	43:BI:65:ALA:HB3	1.98	0.46
12:CL:60:LEU:CD2	12:CL:65:GLU:HA	2.45	0.46
12:AL:85:ILE:HD11	12:AL:98:TYR:CB	2.43	0.46
40:BF:25:PRO:CB	40:BF:119:ARG:HD3	2.39	0.46
13:AM:57:ARG:NH1	29:B4:34:GLU:HA	2.29	0.46
46:BO:69:ILE:HD13	46:BO:77:ILE:HG23	1.96	0.46
51:BT:117:ASP:O	51:BT:121:ILE:HG13	2.15	0.46
51:BT:128:GLU:O	51:BT:129:ARG:C	2.54	0.46
39:DE:50:GLY:HA2	39:DE:78:LEU:HB3	1.96	0.46
1:AA:456:C:H2'	1:AA:457:C:H6	1.80	0.46
1:AA:473:G:H2'	1:AA:474:G:C8	2.48	0.46
41:DG:96:ARG:O	41:DG:99:MET:HB3	2.15	0.46
53:BV:72:VAL:HG23	53:BV:72:VAL:O	2.15	0.46
1:CA:456:C:H2'	1:CA:457:C:H6	1.80	0.46
39:BE:72:VAL:O	39:BE:72:VAL:HG12	2.16	0.46
39:DE:119:ARG:HD2	39:DE:120:TRP:CE2	2.50	0.46
56:BY:31:LEU:CD2	56:BY:31:LEU:N	2.76	0.46
49:DR:55:ALA:CB	49:DR:79:LEU:HD22	2.46	0.46
10:AJ:50:ILE:CD1	10:AJ:50:ILE:H	2.07	0.46
31:D6:7:ILE:CG1	31:D6:29:ASN:HD21	2.27	0.46
19:CS:45:VAL:HG12	19:CS:63:THR:CA	2.38	0.46
57:BZ:151:HIS:HA	57:BZ:171:ILE:HG22	1.98	0.46
36:BB:42:C:H5''	41:BG:67:LYS:HE3	1.98	0.46
30:B5:50:GLY:HA2	30:B5:55:ARG:HB2	1.98	0.46
48:DQ:111:GLU:O	48:DQ:115:MET:HG2	2.16	0.46
1:AA:1134:G:H22	1:AA:1141:C:C1'	2.29	0.46
2:CB:207:ALA:C	2:CB:209:ARG:N	2.68	0.46
1:CA:1326:C:H2'	1:CA:1327:C:C6	2.50	0.46
1:AA:1104:G:O5'	2:AB:111:ARG:HD2	2.15	0.46
35:BA:364:C:C2'	35:BA:365:C:H5''	2.46	0.46
1:AA:1291:G:H4'	9:AI:39:GLY:HA3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DT:52:ILE:HG23	51:DT:61:PHE:HB3	1.97	0.46
35:BA:102:G:OP1	35:BA:102:G:C4'	2.64	0.46
3:AC:131:ARG:HH11	5:AE:50:GLU:HG2	1.80	0.46
50:BS:90:GLY:C	50:BS:92:TYR:N	2.68	0.46
34:B9:1:MET:O	34:B9:34:GLN:HG2	2.16	0.46
1:CA:153:C:O2'	1:CA:154:C:H5'	2.16	0.46
57:DZ:27:VAL:HG23	57:DZ:36:LYS:CA	2.45	0.46
37:DC:31:LYS:HZ2	37:DC:183:PRO:HG3	1.80	0.46
35:DA:706:A:H2'	35:DA:707:G:O4'	2.16	0.46
1:AA:585:G:N3	1:AA:879:C:H4'	2.29	0.46
47:BP:80:TYR:CE1	47:BP:111:ARG:HD3	2.51	0.46
37:BC:31:LYS:HZ2	37:BC:183:PRO:HG3	1.81	0.46
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.50	0.46
1:AA:264:U:H2'	1:AA:265:G:O4'	2.16	0.46
47:DP:13:ASN:C	47:DP:13:ASN:ND2	2.69	0.46
35:BA:469:G:H2'	35:BA:470:A:H5''	1.96	0.46
35:BA:870:A:C2	35:BA:908:C:C2	3.03	0.46
1:CA:1183:A:H5''	1:CA:1184:G:OP1	2.15	0.46
43:BI:37:VAL:HG12	43:BI:38:LEU:N	2.30	0.46
43:DI:38:LEU:CB	43:DI:40:THR:HG23	2.45	0.46
45:DN:65:LYS:HD2	45:DN:69:GLN:HE21	1.81	0.46
54:DW:20:VAL:CG2	54:DW:47:VAL:HG21	2.45	0.46
1:CA:1027:C:H1'	1:CA:1035:A:C2	2.50	0.46
5:AE:9:LYS:C	5:AE:32:VAL:HG13	2.35	0.46
1:AA:59:A:H1'	1:AA:354:G:N2	2.30	0.46
42:DH:107:VAL:HG23	42:DH:107:VAL:O	2.15	0.46
1:AA:668:G:H4'	15:AO:48:LYS:HB2	1.98	0.46
1:CA:858:G:O6	1:CA:869:G:H3'	2.16	0.46
1:AA:914:A:O2'	1:AA:915:A:H5'	2.15	0.46
2:AB:30:ARG:HG3	2:AB:31:TYR:CD1	2.51	0.46
1:AA:936:C:H2'	1:AA:937:A:O4'	2.16	0.46
35:BA:2320:A:H2'	35:BA:2320:A:N3	2.30	0.46
31:B6:28:ARG:NH1	31:B6:28:ARG:HB3	2.31	0.46
45:BN:119:ARG:NH1	45:BN:119:ARG:HG3	2.31	0.46
35:DA:776:G:H4'	35:DA:777:A:O5'	2.15	0.46
1:CA:799:G:O6	1:CA:800:G:C2	2.69	0.46
22:CY:26:G:H2'	22:CY:27:C:O4'	2.16	0.46
22:CY:43:G:N1	22:CY:44:A:C5	2.83	0.46
23:AW:71:G:H3'	23:AW:71:G:C8	2.50	0.46
22:AY:5:C:C4	22:AY:6:C:N4	2.84	0.46
4:CD:22:LYS:O	4:CD:113:SER:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DT:88:ILE:CG2	51:DT:89:VAL:N	2.75	0.46
23:AW:25:A:C6	23:AW:26:G:C6	3.03	0.46
23:AW:53:U:C4	23:AW:54:G:C8	3.04	0.46
33:B8:52:LYS:HE2	35:BA:834:C:H4'	1.96	0.46
56:DY:32:PRO:O	56:DY:35:TYR:N	2.45	0.46
35:DA:613:G:C8	35:DA:613:G:C5'	2.93	0.46
1:AA:963:G:N2	10:AJ:55:LYS:NZ	2.61	0.46
43:BI:98:ALA:HB1	43:BI:109:ILE:HD13	1.98	0.46
12:CL:35:GLY:CA	12:CL:58:VAL:CG1	2.91	0.46
1:AA:519:C:OP2	12:AL:50:SER:OG	2.27	0.46
10:AJ:6:ILE:CD1	10:AJ:72:VAL:HB	2.42	0.46
8:AH:38:ILE:C	8:AH:40:ALA:H	2.19	0.46
40:BF:125:LEU:HD12	40:BF:196:LEU:HG	1.98	0.46
10:CJ:3:LYS:HD2	10:CJ:77:PRO:HD3	1.98	0.46
45:DN:1:MET:O	45:DN:2:LYS:HG3	2.15	0.46
51:BT:89:VAL:CG1	51:BT:91:ARG:HG3	2.45	0.46
57:DZ:40:ASP:OD1	57:DZ:41:LEU:N	2.49	0.46
40:DF:133:ASN:O	40:DF:135:LYS:N	2.49	0.46
1:AA:1259:C:H42	1:AA:1276:G:H1	1.62	0.46
14:CN:41:ARG:HG3	14:CN:42:ILE:HD13	1.98	0.46
56:BY:39:VAL:CG1	56:BY:40:GLU:H	2.24	0.46
50:DS:95:HIS:O	50:DS:98:VAL:HG23	2.16	0.46
40:BF:116:ASP:OD2	47:BP:5:ASP:HB2	2.16	0.46
3:AC:9:GLY:HA3	14:AN:49:HIS:HA	1.96	0.46
9:CI:9:ARG:HA	9:CI:13:ALA:O	2.15	0.46
22:CV:42:C:C2'	22:CV:43:G:H5'	2.46	0.46
35:DA:2801(A):A:H4'	35:DA:2802:G:C5'	2.35	0.46
55:BX:34:ALA:HB1	55:BX:39:ILE:HD11	1.98	0.46
5:CE:148:VAL:C	5:CE:150:ARG:N	2.69	0.46
2:AB:97:TRP:CE2	2:AB:173:ALA:HB2	2.49	0.46
2:AB:71:VAL:HG13	2:AB:93:VAL:HB	1.98	0.46
48:DQ:45:GLN:H	48:DQ:45:GLN:NE2	2.14	0.46
49:BR:38:VAL:O	49:BR:42:LYS:HG3	2.16	0.46
1:AA:1133:G:H2'	1:AA:1134:G:C8	2.49	0.46
9:CI:88:TYR:O	9:CI:89:ASN:CB	2.62	0.46
2:AB:207:ALA:C	2:AB:209:ARG:N	2.69	0.46
37:DC:48:LEU:HD12	37:DC:48:LEU:N	2.30	0.46
9:AI:37:PHE:HB3	9:AI:43:ALA:CB	2.46	0.46
1:CA:1269:A:OP1	21:CU:24:ARG:HD2	2.16	0.46
35:BA:2144:U:HO2'	35:BA:2147:G:H1	1.64	0.46
43:DI:27:ARG:NH1	43:DI:27:ARG:HG3	2.20	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:87:GLU:C	39:BE:87:GLU:OE1	2.54	0.46
42:BH:157:TYR:HE1	42:BH:171:LEU:N	2.12	0.46
42:DH:163:TYR:N	42:DH:163:TYR:CD1	2.84	0.46
4:CD:96:LEU:HD12	4:CD:96:LEU:N	2.30	0.46
1:AA:541:G:O2'	1:AA:542:G:H5'	2.16	0.46
1:AA:709:G:O2'	1:AA:710:G:H5'	2.16	0.46
7:CG:102:ARG:HG2	7:CG:106:GLN:NE2	2.30	0.46
5:CE:80:ILE:HA	8:CH:104:ARG:NH1	2.31	0.46
5:CE:105:VAL:CB	5:CE:106:PRO:CD	2.94	0.46
1:AA:627:G:O2'	1:AA:628:G:H5'	2.16	0.46
1:AA:865:A:H5'	1:AA:1078:U:C4	2.51	0.46
1:AA:443:C:H2'	1:AA:444:C:C6	2.51	0.46
50:DS:87:PHE:CG	50:DS:88:ASP:N	2.84	0.46
23:CW:36:C:C2'	23:CW:36:C:O2	2.64	0.46
38:BD:239:ARG:HH11	38:BD:239:ARG:HG2	1.81	0.46
35:DA:174:C:O2	35:DA:174:C:H2'	2.16	0.46
56:DY:95:LYS:CG	56:DY:101:LYS:H	2.25	0.46
1:AA:1472:U:O2'	1:AA:1473:A:H5'	2.16	0.46
1:CA:1466:C:H2'	1:CA:1467:G:O4'	2.16	0.46
1:AA:1112:C:H1'	3:AC:179:ARG:CD	2.46	0.46
20:AT:39:LYS:O	20:AT:42:GLN:HB3	2.16	0.46
1:CA:1522:U:C2	1:CA:1523:G:C8	3.04	0.46
33:D8:23:VAL:HG12	33:D8:46:ARG:HB3	1.97	0.46
1:AA:1183:A:H5''	1:AA:1184:G:OP1	2.16	0.46
1:AA:123:C:OP1	1:AA:311:C:O2'	2.32	0.46
5:AE:9:LYS:O	5:AE:32:VAL:HG13	2.16	0.46
13:CM:20:THR:C	13:CM:22:ILE:H	2.19	0.46
53:BV:99:ILE:N	53:BV:99:ILE:HD13	2.29	0.46
40:DF:155:LEU:HD22	40:DF:186:ILE:HA	1.98	0.46
30:D5:29:THR:HG21	35:DA:2814:C:O2'	2.16	0.46
2:AB:231:GLU:HB2	2:AB:232:PRO:CD	2.46	0.46
20:AT:47:GLY:O	20:AT:48:LYS:C	2.54	0.46
34:D9:19:ARG:HA	35:DA:2757:A:OP1	2.15	0.46
33:D8:38:GLY:O	33:D8:42:ARG:HB2	2.15	0.46
20:AT:81:LYS:C	20:AT:83:ARG:H	2.19	0.46
7:AG:67:GLU:HA	7:AG:67:GLU:OE1	2.16	0.46
49:BR:65:LEU:HD12	49:BR:65:LEU:N	2.30	0.46
1:AA:334:C:O2'	1:AA:335:C:H5'	2.16	0.46
22:CY:56:U:P	22:CY:56:U:H6	2.37	0.46
22:CY:19:G:H21	22:CY:59:G:H2'	1.75	0.46
22:CY:4:C:C2	22:CY:5:C:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CY:68:A:C6	22:CY:69:G:C5	3.03	0.46
22:AY:72:C:H3'	22:AY:72:C:O2	2.16	0.46
22:AV:56:U:C2'	22:AV:57:U:H5'	2.46	0.46
41:BG:75:LYS:HB3	41:BG:76:SER:H	1.58	0.46
51:DT:28:VAL:CG2	51:DT:46:GLU:HA	2.42	0.46
23:AW:54:G:C2	23:AW:55:G:C8	3.04	0.46
47:BP:48:PRO:O	47:BP:51:PHE:N	2.48	0.46
35:DA:942:G:O2'	35:DA:943:U:H5'	2.16	0.46
47:DP:39:LYS:O	47:DP:41:ARG:HG2	2.16	0.46
56:DY:2:ARG:HD3	56:DY:3:VAL:N	2.30	0.46
23:AW:19:G:HO2'	23:AW:20:G:C4'	2.29	0.46
43:DI:132:PRO:C	43:DI:133:HIS:ND1	2.69	0.46
1:AA:1406:U:O2'	1:AA:1407:C:H5'	2.16	0.46
35:DA:1712:C:O2'	35:DA:1713:U:H5'	2.16	0.46
40:BF:21:ALA:C	40:BF:23:ASP:N	2.69	0.46
57:DZ:6:LYS:HE3	57:DZ:43:GLU:OE2	2.15	0.46
39:BE:51:PHE:N	39:BE:74:PRO:CB	2.79	0.46
49:BR:2:ARG:N	49:BR:2:ARG:NH1	2.47	0.46
46:DO:24:VAL:HG23	46:DO:33:ALA:HB2	1.97	0.46
13:CM:89:GLY:HA2	13:CM:93:ARG:HH11	1.80	0.46
9:AI:13:ALA:HB2	9:AI:68:GLY:HA3	1.97	0.46
7:CG:5:ARG:O	7:CG:7:ALA:N	2.47	0.46
46:BO:24:VAL:HG13	46:BO:24:VAL:O	2.16	0.46
10:AJ:61:GLU:CG	14:AN:58:LYS:HE2	2.46	0.46
9:CI:65:VAL:O	9:CI:65:VAL:HG13	2.15	0.46
35:BA:1291:C:H5'	35:BA:1534:U:O2'	2.14	0.46
36:BB:50:G:OP1	50:BS:63:THR:HG23	2.16	0.46
38:BD:30:GLU:CG	38:BD:63:ARG:CZ	2.85	0.46
35:BA:2392:A:H2	35:BA:2424:C:N4	1.99	0.46
49:BR:38:VAL:HB	49:BR:39:PRO:CD	2.37	0.46
1:AA:1145:C:H4'	1:AA:1146:A:H5'	1.97	0.46
5:AE:76:ILE:HD11	5:AE:142:LEU:CD2	2.45	0.46
13:CM:70:LEU:O	13:CM:74:VAL:HG23	2.16	0.46
7:CG:120:ILE:HG22	7:CG:124:LEU:HD12	1.96	0.46
54:DW:10:VAL:O	54:DW:11:ARG:CB	2.54	0.46
36:DB:103:G:O2'	36:DB:104:U:H5'	2.16	0.46
35:BA:1045:A:H3'	35:BA:1045:A:N3	2.31	0.46
35:BA:2892:A:H62	35:BA:2893:G:H21	1.61	0.46
3:CC:206:GLU:O	3:CC:207:VAL:C	2.54	0.46
57:DZ:155:LEU:H	57:DZ:155:LEU:CD2	2.29	0.46
3:AC:182:ILE:HG12	3:AC:203:PHE:HD1	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:24:TRP:H	2:CB:24:TRP:HD1	1.59	0.46
50:DS:14:VAL:O	50:DS:14:VAL:HG12	2.15	0.46
54:DW:4:LYS:HA	54:DW:106:ILE:HG22	1.98	0.46
38:BD:176:ARG:HG2	38:BD:176:ARG:NH1	2.23	0.46
20:AT:89:ARG:HB2	20:AT:104:LEU:CD1	2.41	0.46
20:AT:82:SER:O	20:AT:86:ARG:HD2	2.16	0.46
35:DA:1014:U:H2'	35:DA:1015:G:H5'	1.97	0.46
47:BP:83:VAL:CG1	47:BP:112:LEU:HD21	2.46	0.46
37:DC:14:LYS:O	37:DC:29:LEU:HD11	2.16	0.46
39:DE:24:THR:HG22	39:DE:186:GLY:CA	2.46	0.46
57:DZ:103:ARG:HB2	57:DZ:136:PHE:HB2	1.97	0.46
48:DQ:12:GLN:HE21	48:DQ:73:PRO:HD3	1.81	0.46
6:AF:8:ILE:CD1	6:AF:26:ILE:HD13	2.45	0.46
38:DD:155:LEU:HD23	38:DD:177:LEU:HD22	1.96	0.46
35:DA:2732:G:C2'	35:DA:2733:A:H5'	2.45	0.46
41:DG:53:LEU:N	41:DG:53:LEU:HD22	2.31	0.46
25:D0:36:ILE:HD11	25:D0:39:ARG:HG2	1.97	0.46
20:AT:13:LEU:CD1	20:AT:13:LEU:N	2.78	0.46
35:BA:2154:G:O2'	35:BA:2155:G:H5'	2.16	0.46
46:DO:14:THR:HG21	46:DO:86:ILE:HB	1.97	0.46
1:CA:1428:A:H2'	1:CA:1429:C:C6	2.51	0.46
57:BZ:31:ARG:CB	57:BZ:31:ARG:NH1	2.79	0.46
1:CA:262:A:C6	1:CA:263:A:C6	3.03	0.46
49:DR:28:LEU:HD21	49:DR:114:VAL:HG12	1.97	0.46
13:AM:19:LEU:HD22	13:AM:19:LEU:N	2.31	0.46
5:CE:79:GLU:OE1	5:CE:79:GLU:N	2.49	0.46
34:D9:27:CYS:SG	34:D9:28:GLU:N	2.89	0.46
39:BE:129:HIS:O	39:BE:130:GLY:O	2.34	0.46
47:DP:125:VAL:O	47:DP:125:VAL:HG13	2.15	0.46
35:DA:1006:C:C2	35:DA:1138:G:N2	2.83	0.46
35:BA:624:C:O2'	35:BA:657:U:H5''	2.16	0.46
35:DA:1755:A:H2'	35:DA:1756:G:H5'	1.96	0.46
1:CA:237:C:H2'	1:CA:238:G:H8	1.81	0.46
35:BA:1459:G:C8	35:BA:1461:G:H1'	2.51	0.46
18:AR:65:ILE:O	18:AR:69:THR:HG23	2.16	0.46
53:DV:69:LYS:HG3	53:DV:70:ILE:N	2.31	0.46
1:AA:1300:G:O2'	1:AA:1301:U:P	2.74	0.46
55:BX:65:ARG:HH11	55:BX:65:ARG:HG2	1.80	0.46
35:BA:139:G:H2'	35:BA:140:G:N7	2.30	0.46
1:AA:250:A:H4'	1:AA:251:G:O5'	2.16	0.46
1:AA:1070:U:O2'	1:AA:1071:C:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:598:G:H2'	35:DA:599:G:O4'	2.14	0.46
22:CY:44:A:C6	22:CY:45:U:C4	3.03	0.46
22:CY:19:G:C2	22:CY:59:G:N3	2.84	0.46
22:CY:70:G:C2	22:CY:71:G:C4	3.04	0.46
22:AY:23:A:C2'	22:AY:24:A:C8	2.96	0.46
22:AV:10:G:N1	22:AV:28:G:C4	2.84	0.46
22:AV:3:G:H8	22:AV:3:G:OP2	1.99	0.46
46:DO:80:ASP:O	46:DO:81:ASP:HB3	2.16	0.46
33:B8:30:ARG:HA	33:B8:30:ARG:NE	2.22	0.46
35:DA:588:U:H6	35:DA:588:U:O5'	1.99	0.46
47:DP:33:ARG:HG3	47:DP:34:GLY:H	1.81	0.46
8:CH:38:ILE:C	8:CH:40:ALA:H	2.19	0.46
1:AA:146:G:N2	1:AA:147:G:H1'	2.31	0.46
45:DN:134:ARG:H	45:DN:135:PRO:HD3	1.80	0.46
53:DV:22:VAL:O	53:DV:23:GLU:HB2	2.15	0.46
53:DV:52:VAL:CG1	53:DV:55:ALA:HB3	2.39	0.46
47:DP:146:VAL:O	47:DP:148:LEU:HG	2.16	0.46
12:CL:54:LYS:H	12:CL:54:LYS:CD	2.21	0.46
51:BT:65:LYS:NZ	51:BT:66:VAL:H	2.14	0.46
47:DP:126:VAL:HG22	47:DP:145:PRO:HG2	1.98	0.46
53:BV:19:LYS:CE	53:BV:20:LEU:H	2.26	0.46
39:DE:5:LEU:HG	39:DE:49:LEU:HD12	1.98	0.46
47:BP:146:VAL:CG2	47:BP:147:LEU:N	2.66	0.46
36:DB:45:A:H2'	36:DB:45:A:N3	2.29	0.46
1:CA:1287:A:H2	1:CA:1353:G:H1'	1.81	0.46
35:BA:2305:A:O2'	41:BG:136:ARG:NE	2.49	0.46
42:DH:18:GLU:O	42:DH:24:VAL:HG23	2.15	0.46
57:BZ:145:GLU:O	57:BZ:147:GLY:N	2.49	0.46
29:B4:7:PRO:HG2	41:BG:61:ALA:O	2.15	0.46
30:B5:54:GLY:C	30:B5:55:ARG:HE	2.18	0.46
48:DQ:39:PRO:HD3	48:DQ:99:PRO:HG3	1.98	0.46
3:CC:40:ARG:CA	3:CC:55:VAL:HG11	2.42	0.46
8:CH:6:ILE:HB	8:CH:85:ARG:NH2	2.31	0.46
5:AE:41:VAL:HG11	5:AE:113:ALA:HA	1.98	0.46
35:DA:154(A):C:H3'	35:DA:155:U:H5''	1.96	0.46
25:B0:27:GLU:C	25:B0:29:GLN:H	2.18	0.46
39:BE:132:HIS:CG	39:BE:135:HIS:NE2	2.84	0.46
54:BW:4:LYS:HA	54:BW:106:ILE:HG22	1.98	0.46
35:DA:2397:G:N2	35:DA:2420:C:H1'	2.31	0.46
35:BA:363(F):A:O2'	35:BA:364:C:C5	2.63	0.46
11:CK:22:HIS:HB3	11:CK:29:ILE:CG2	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:103:ARG:HD3	49:BR:108:GLY:O	2.16	0.46
35:BA:2747:G:O2'	42:BH:67:LEU:HD13	2.15	0.46
36:DB:94:C:O2'	36:DB:95:C:H5'	2.15	0.46
57:BZ:40:ASP:OD1	57:BZ:43:GLU:HG2	2.16	0.46
11:CK:108:ILE:HG21	18:CR:88:LYS:OXT	2.15	0.46
1:AA:63:C:N4	1:AA:104:G:H1	2.13	0.46
8:AH:91:ARG:CG	8:AH:91:ARG:NH1	2.77	0.46
8:CH:91:ARG:NH1	17:CQ:33:GLY:HA3	2.29	0.46
45:BN:89:LYS:O	45:BN:93:THR:CG2	2.64	0.46
35:DA:1805:U:O2	38:DD:50:THR:HB	2.15	0.46
35:BA:2572:A:N7	39:BE:144:ARG:HD2	2.31	0.46
4:CD:45:GLN:O	4:CD:45:GLN:HG3	2.16	0.46
48:BQ:67:ARG:HB3	48:BQ:102:VAL:O	2.16	0.46
1:AA:1073:U:H3	1:AA:1102:A:H61	1.63	0.46
35:BA:2855:C:O2'	35:BA:2856:C:H5'	2.16	0.46
35:DA:524:U:H4'	35:DA:555:U:H4'	1.96	0.46
30:D5:16:ARG:NH2	35:DA:517:C:OP1	2.48	0.46
13:CM:32:GLU:O	13:CM:35:GLU:HG2	2.16	0.46
37:BC:197:LEU:C	37:BC:199:ALA:N	2.69	0.46
3:AC:188:LEU:O	3:AC:190:ARG:HG3	2.15	0.46
35:DA:680:G:O2'	35:DA:681:G:H5'	2.16	0.46
1:AA:1319:A:OP2	19:AS:5:LEU:HD23	2.16	0.46
35:DA:2369:A:O2'	35:DA:2370:G:H5'	2.16	0.46
1:AA:827:U:H6	1:AA:827:U:O5'	1.99	0.46
25:B0:23:VAL:HG13	25:B0:38:VAL:HG22	1.98	0.46
35:DA:2001:A:H2'	35:DA:2002:G:C8	2.51	0.46
5:AE:26:PHE:O	5:AE:27:ARG:HB2	2.16	0.46
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	1.96	0.46
57:DZ:114:GLY:O	57:DZ:177:PRO:HD3	2.16	0.46
45:DN:119:ARG:HG3	45:DN:119:ARG:NH1	2.31	0.46
9:CI:56:LEU:C	9:CI:56:LEU:HD23	2.35	0.46
23:AW:30:U:N1	23:AW:31:C:C5	2.84	0.46
23:AW:33:G:C2'	23:AW:34:C:C4'	2.94	0.46
23:AW:45:U:C5	23:AW:46:U:C4	3.04	0.46
22:AY:42:C:H2'	22:AY:43:G:H8	1.81	0.46
23:CW:68:A:C4	23:CW:69:G:H8	2.34	0.46
22:AV:20:G:N2	22:AV:58:C:N3	2.64	0.46
22:AV:14:A:N6	22:AV:24:A:N7	2.64	0.46
41:BG:71:THR:HB	41:BG:89:GLY:O	2.16	0.46
22:CV:15:G:C8	22:CV:16:U:C5	3.04	0.46
22:CV:52:C:O2'	22:CV:53:U:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:5:C:C4	22:CV:6:C:N4	2.84	0.46
46:DO:76:ALA:HB3	51:DT:75:ILE:HD12	1.97	0.46
31:B6:48:VAL:CG2	31:B6:49:HIS:H	2.21	0.46
56:BY:7:VAL:CB	56:BY:8:LYS:HD2	2.46	0.46
56:DY:32:PRO:C	56:DY:35:TYR:H	2.19	0.46
47:DP:61:ARG:H	47:DP:61:ARG:CD	2.12	0.46
33:D8:13:ARG:HD2	47:DP:61:ARG:NH1	2.30	0.46
43:BI:98:ALA:O	43:BI:101:LEU:HB3	2.15	0.46
23:CW:14:A:C2	23:CW:24:A:C5	3.04	0.46
23:CW:47:G:O5'	23:CW:47:G:H8	1.98	0.46
12:CL:45:PRO:HG2	12:CL:50:SER:C	2.37	0.46
12:AL:58:VAL:C	12:AL:65:GLU:HG3	2.36	0.46
10:AJ:70:ARG:HG2	10:AJ:70:ARG:NH1	2.30	0.46
10:AJ:75:ILE:CG1	10:AJ:76:ASN:N	2.79	0.46
45:BN:58:ASP:C	45:BN:60:ILE:HG13	2.37	0.46
1:CA:961:U:O5'	1:CA:961:U:H6	1.98	0.46
45:DN:2:LYS:HZ2	52:DU:95:LEU:HD21	1.78	0.46
33:D8:48:PHE:C	33:D8:49:VAL:HG22	2.37	0.46
33:D8:49:VAL:HG23	33:D8:53:PRO:HB3	1.98	0.46
52:BU:65:ILE:CD1	52:BU:96:ALA:HB3	2.45	0.46
1:AA:476:G:H2'	1:AA:477:A:C8	2.51	0.46
29:D4:34:GLU:HB2	41:DG:113:ARG:HD2	1.97	0.46
49:BR:58:GLY:HA2	49:BR:80:PHE:CE1	2.48	0.46
10:CJ:61:GLU:CG	14:CN:58:LYS:HE2	2.46	0.46
35:DA:1453:U:O4'	49:DR:63:ARG:HD3	2.16	0.46
50:BS:97:ARG:HG2	50:BS:97:ARG:HH11	1.81	0.46
31:D6:26:ASN:OD1	31:D6:27:LYS:N	2.47	0.46
53:DV:15:GLU:CB	53:DV:16:PRO:HD2	2.34	0.46
40:DF:184:TYR:O	40:DF:188:ARG:HG2	2.16	0.46
57:BZ:108:PRO:CB	57:BZ:144:LEU:HB2	2.45	0.46
29:B4:5:ILE:CD1	29:B4:5:ILE:N	2.75	0.46
35:BA:661:C:H2'	35:BA:662:G:H8	1.80	0.46
23:CW:53:U:C4	23:CW:54:G:C8	3.05	0.46
23:CW:54:G:H2'	23:CW:54:G:N3	2.30	0.46
30:D5:52:TYR:O	30:D5:53:ALA:HB2	2.15	0.46
35:BA:2443:C:O2'	35:BA:2444:G:H5'	2.16	0.46
3:AC:22:TRP:HB2	3:AC:23:TYR:H	1.66	0.46
40:DF:8:GLN:O	40:DF:10:PRO:N	2.49	0.46
39:DE:87:GLU:C	39:DE:87:GLU:OE1	2.55	0.46
55:DX:12:VAL:HG11	55:DX:27:THR:CG2	2.46	0.46
35:BA:2163:C:H2'	35:BA:2164:C:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:18:ARG:CG	16:AP:35:LYS:HE3	2.46	0.46
43:DI:127:VAL:HG22	43:DI:139:GLN:CB	2.46	0.46
38:BD:221:VAL:CG2	38:BD:226:MET:CE	2.94	0.46
1:AA:1228:C:OP1	13:AM:115:LYS:HE3	2.16	0.46
42:BH:9:ILE:HG12	42:BH:73:ALA:HB2	1.99	0.46
57:BZ:24:LEU:O	57:BZ:24:LEU:HD23	2.16	0.46
4:CD:61:LYS:NZ	4:CD:62:GLN:HE21	2.13	0.46
1:AA:853:G:H2'	1:AA:854:G:H8	1.81	0.46
1:CA:1067:A:N3	1:CA:1068:G:H1'	2.31	0.46
35:BA:1281:G:H8	35:BA:1281:G:C5'	2.27	0.46
1:CA:827:U:H6	1:CA:827:U:O5'	1.98	0.46
35:DA:2638:G:OP1	39:DE:82:ARG:NH2	2.49	0.46
15:AO:21:ASP:C	15:AO:23:GLY:H	2.18	0.46
3:CC:103:VAL:CG1	3:CC:104:GLN:H	2.29	0.46
35:BA:1188:U:H2'	35:BA:1189:A:H5'	1.96	0.46
35:BA:1721:G:H8	35:BA:1741:A:H62	1.64	0.46
6:CF:8:ILE:CD1	6:CF:26:ILE:HD13	2.45	0.46
35:BA:1491:G:O2'	38:BD:101:GLU:HB2	2.16	0.46
3:AC:178:LEU:N	3:AC:178:LEU:HD22	2.31	0.46
40:DF:7:TYR:HB2	40:DF:16:GLY:C	2.36	0.46
20:AT:13:LEU:C	20:AT:15:ARG:N	2.68	0.46
35:DA:2291:U:O2'	35:DA:2374:C:H1'	2.17	0.46
27:B2:2:LYS:HE3	27:B2:5:GLU:OE1	2.16	0.46
35:DA:1510:G:O2'	35:DA:1511:C:H5'	2.16	0.46
1:CA:15:G:H4'	5:CE:24:ARG:NH1	2.30	0.46
1:AA:313:A:H2'	1:AA:314:C:C6	2.51	0.46
35:DA:2389:G:H5''	35:DA:2390:U:O4'	2.16	0.46
9:AI:24:GLY:N	9:AI:60:ASP:OD1	2.44	0.46
35:DA:2061:G:H5''	35:DA:2503:A:C2	2.51	0.46
44:BJ:125:UNK:C	44:BJ:127:UNK:N	2.75	0.46
1:AA:935:A:H2'	1:AA:936:C:C6	2.51	0.46
35:DA:139:G:H2'	35:DA:140:G:N7	2.30	0.46
54:DW:36:LEU:HD12	54:DW:48:ALA:HA	1.97	0.46
35:BA:2101:G:H2'	35:BA:2102:U:O4'	2.15	0.46
35:BA:2593:U:H2'	35:BA:2594:C:C6	2.51	0.46
2:AB:59:GLU:O	2:AB:62:ALA:HB3	2.16	0.46
25:D0:6:GLY:O	25:D0:7:LEU:HD23	2.14	0.46
35:BA:1951:U:H2'	35:BA:1953:A:OP2	2.16	0.46
35:DA:2769:C:H2'	35:DA:2770:G:O4'	2.16	0.46
1:AA:983:A:H3'	1:AA:983:A:N3	2.31	0.46
35:BA:408:G:O2'	35:BA:409:C:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DW:34:ASN:O	54:DW:35:ILE:C	2.55	0.46
22:CY:49:G:C3'	22:CY:50:C:C5'	2.84	0.45
23:CW:40:A:C5	23:CW:42:C:C4	3.04	0.45
22:AV:28:G:C6	22:AV:29:A:C5	3.04	0.45
22:AV:30:U:C2	22:AV:31:C:C6	3.04	0.45
35:BA:251:A:H5''	47:BP:51:PHE:CZ	2.50	0.45
47:DP:56:SER:O	47:DP:57:THR:C	2.53	0.45
12:AL:38:THR:HG22	12:AL:57:LYS:O	2.16	0.45
35:DA:146:G:C2'	35:DA:147:U:H5'	2.46	0.45
17:AQ:9:VAL:O	17:AQ:9:VAL:HG23	2.16	0.45
23:CW:19:G:HO2'	23:CW:20:G:C4'	2.29	0.45
53:DV:3:ALA:HA	53:DV:40:LEU:O	2.16	0.45
52:BU:95:LEU:C	52:BU:97:ASP:N	2.67	0.45
41:DG:118:ARG:NH1	41:DG:118:ARG:CG	2.79	0.45
41:DG:125:PHE:HD2	41:DG:131:TYR:HB2	1.80	0.45
29:D4:25:TYR:CD1	41:DG:5:VAL:HG22	2.51	0.45
39:BE:120:TRP:CE3	39:BE:155:LYS:HD3	2.50	0.45
41:DG:167:GLU:O	41:DG:170:ARG:HB3	2.17	0.45
56:BY:25:GLY:HA3	56:BY:39:VAL:CG1	2.46	0.45
26:D1:58:ILE:HG13	26:D1:58:ILE:O	2.16	0.45
47:BP:7:ARG:HB3	47:BP:7:ARG:CZ	2.47	0.45
1:CA:1400:C:O5'	1:CA:1400:C:C6	2.62	0.45
17:AQ:65:ILE:HD11	17:AQ:72:ARG:HG2	1.97	0.45
35:DA:662:G:OP1	47:DP:18:ARG:CD	2.61	0.45
51:DT:95:ARG:CB	51:DT:95:ARG:HH11	2.24	0.45
12:AL:73:GLU:O	12:AL:110:VAL:HG13	2.16	0.45
14:CN:23:ARG:HD2	14:CN:28:GLY:O	2.17	0.45
52:BU:108:GLU:HG3	53:BV:44:LYS:CD	2.37	0.45
9:AI:99:LEU:C	9:AI:101:PHE:H	2.18	0.45
3:AC:206:GLU:O	3:AC:208:ILE:N	2.49	0.45
1:AA:438:G:H4'	1:AA:439:A:OP1	2.16	0.45
2:CB:116:GLU:HA	2:CB:119:GLU:HB2	1.99	0.45
18:AR:50:ILE:HD12	18:AR:70:ILE:HD12	1.98	0.45
23:AW:76:C:H2'	23:AW:77:C:C6	2.51	0.45
1:AA:1212:U:H4'	1:AA:1213:A:C8	2.51	0.45
35:BA:1602:U:H3'	35:BA:1603:A:C5'	2.46	0.45
1:CA:443:C:H2'	1:CA:444:C:C6	2.51	0.45
3:CC:162:GLN:CD	24:CX:24:A:O4'	2.55	0.45
35:BA:1180:C:H2'	35:BA:1180:C:O2	2.15	0.45
48:BQ:57:HIS:CD2	48:BQ:116:GLU:HG3	2.51	0.45
56:DY:95:LYS:HD3	56:DY:100:ALA:CA	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:141:A:H2'	1:CA:142:G:C8	2.51	0.45
1:AA:502:G:C6	1:AA:503:C:C4	3.04	0.45
35:DA:2154:G:O2'	35:DA:2155:G:H5'	2.16	0.45
35:DA:572:A:H2'	35:DA:573:G:O4'	2.16	0.45
35:BA:1509(A):A:H2'	35:BA:1509(B):A:H8	1.80	0.45
8:AH:64:LYS:CG	8:AH:79:VAL:HG21	2.46	0.45
1:AA:9:G:O2'	1:AA:10:A:H5'	2.17	0.45
45:DN:123:TYR:OH	45:DN:130:HIS:HE1	1.96	0.45
35:BA:2098:U:H2'	35:BA:2099:U:O4'	2.15	0.45
1:AA:1508:G:H2'	1:AA:1509:C:H6	1.81	0.45
52:BU:66:ASN:HB2	52:BU:76:TYR:HB2	1.98	0.45
39:DE:39:PRO:HA	39:DE:43:GLY:CA	2.46	0.45
2:AB:79:ASP:C	2:AB:81:VAL:N	2.69	0.45
35:DA:1755:A:C2	35:DA:2716:U:H1'	2.51	0.45
35:DA:402:A:O2'	35:DA:403:U:H5'	2.16	0.45
35:BA:1027:A:C2	35:BA:2488:A:H5'	2.50	0.45
23:CW:76:C:H2'	23:CW:77:C:C6	2.51	0.45
35:DA:2558:C:H2'	35:DA:2559:C:C6	2.51	0.45
1:AA:1080:A:H5''	5:AE:16:THR:HG21	1.97	0.45
35:BA:2881:C:C2	35:BA:2882:A:C8	3.04	0.45
26:B1:3:LYS:HG3	26:B1:4:VAL:H	1.81	0.45
38:BD:40:THR:HG22	38:BD:41:GLY:O	2.15	0.45
1:AA:237:C:O2'	1:AA:238:G:H5'	2.16	0.45
53:BV:7:THR:O	53:BV:7:THR:HG23	2.14	0.45
1:CA:1086:U:H6	1:CA:1086:U:O5'	1.98	0.45
5:CE:17:ALA:HA	5:CE:26:PHE:HA	1.98	0.45
1:AA:1262:C:H42	1:AA:1273:G:H1	1.61	0.45
23:AW:30:U:O2'	23:AW:31:C:H5'	2.17	0.45
22:AY:70:G:C6	22:AY:71:G:C6	3.04	0.45
51:DT:3:ARG:C	51:DT:5:ALA:H	2.18	0.45
22:AV:27:C:H3'	22:AV:27:C:C6	2.51	0.45
23:AW:47:G:O2'	23:AW:48:G:C5'	2.63	0.45
23:AW:57:U:O2	23:AW:59:G:N7	2.49	0.45
1:AA:1405:G:O2'	1:AA:1406:U:H5'	2.16	0.45
35:BA:1916:A:H2'	35:BA:1917:U:O4'	2.17	0.45
1:CA:527:G:O2'	1:CA:528:C:H5'	2.15	0.45
1:AA:176:C:H2'	1:AA:177:C:C6	2.52	0.45
10:AJ:22:LYS:C	10:AJ:24:VAL:H	2.19	0.45
10:AJ:33:GLN:O	10:AJ:75:ILE:HG23	2.16	0.45
10:AJ:3:LYS:HZ2	10:AJ:76:ASN:HA	1.77	0.45
45:BN:132:ALA:O	45:BN:133:GLN:CB	2.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:41:MET:SD	42:DH:43:VAL:HG13	2.56	0.45
10:CJ:8:LEU:CD2	10:CJ:96:ILE:HG22	2.42	0.45
35:DA:1021:A:H3'	35:DA:1021:A:H8	1.81	0.45
45:DN:58:ASP:C	45:DN:60:ILE:HG13	2.36	0.45
52:DU:95:LEU:HD13	53:DV:11:GLN:HE21	1.80	0.45
40:BF:133:ASN:O	40:BF:135:LYS:N	2.48	0.45
47:DP:50:ARG:CG	47:DP:50:ARG:HH11	2.29	0.45
52:BU:98:LEU:C	52:BU:100:VAL:N	2.69	0.45
41:DG:131:TYR:N	41:DG:159:VAL:HG13	2.27	0.45
41:DG:92:VAL:HG13	41:DG:92:VAL:O	2.15	0.45
1:CA:473:G:C5	1:CA:474:G:N7	2.84	0.45
1:CA:474:G:C2'	1:CA:475:G:H8	2.26	0.45
3:AC:11:ARG:O	3:AC:14:ILE:O	2.34	0.45
9:AI:114:TYR:HD2	10:AJ:60:ARG:HG3	1.82	0.45
40:BF:40:GLN:NE2	40:BF:184:TYR:HB3	2.32	0.45
26:B1:51:VAL:CG1	26:B1:58:ILE:HD11	2.39	0.45
42:BH:148:ILE:C	42:BH:162:ILE:HD11	2.37	0.45
48:DQ:28:ALA:O	48:DQ:29:PHE:HD1	1.97	0.45
42:DH:148:ILE:C	42:DH:162:ILE:HD11	2.36	0.45
5:AE:33:VAL:HG22	5:AE:109:ILE:HG12	1.98	0.45
25:D0:27:GLU:HG3	25:D0:68:GLU:HA	1.97	0.45
35:DA:2036:C:C6	35:DA:2036:C:H5'	2.36	0.45
39:DE:17:ASP:HB3	39:DE:18:ASP:H	1.57	0.45
4:AD:122:ARG:HA	4:AD:122:ARG:HD2	1.75	0.45
7:AG:15:ASP:CB	7:AG:20:ASP:H	2.29	0.45
37:BC:34:ALA:HB1	37:BC:40:GLU:HG3	1.98	0.45
41:DG:26:GLN:O	41:DG:27:ASN:HB2	2.15	0.45
27:B2:47:ASN:O	27:B2:49:LYS:N	2.49	0.45
25:D0:84:LEU:H	25:D0:84:LEU:CD1	2.26	0.45
35:BA:1014:U:O2'	35:BA:1015:G:H5''	2.16	0.45
2:CB:95:GLN:HE21	2:CB:147:LYS:CE	2.27	0.45
1:AA:386:C:O2'	1:AA:387:U:H5'	2.16	0.45
34:D9:1:MET:O	34:D9:34:GLN:HG2	2.16	0.45
4:AD:79:PHE:HD1	4:AD:79:PHE:O	1.99	0.45
35:DA:2208:A:H1'	35:DA:2219:G:C4	2.52	0.45
48:BQ:110:THR:OG1	48:BQ:112:GLU:HB3	2.16	0.45
46:DO:22:ILE:HD11	46:DO:42:SER:CB	2.44	0.45
27:D2:24:LEU:HG	27:D2:60:LEU:HD11	1.98	0.45
56:BY:88:LYS:HZ3	56:BY:93:GLY:C	2.19	0.45
8:AH:97:VAL:HG13	8:AH:98:LYS:N	2.31	0.45
56:DY:95:LYS:HD3	56:DY:100:ALA:HB1	1.96	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:174:GLU:OE2	41:BG:182:LYS:HE3	2.17	0.45
20:AT:10:LEU:HG	20:AT:12:ALA:HB2	1.97	0.45
20:AT:13:LEU:HD12	20:AT:13:LEU:N	2.31	0.45
1:AA:141:A:H2'	1:AA:142:G:C8	2.50	0.45
46:DO:1:MET:HE2	46:DO:32:TYR:CD2	2.50	0.45
35:DA:573:G:O2'	35:DA:574:C:H3'	2.17	0.45
35:DA:1775:U:C2'	35:DA:1776:G:H5'	2.46	0.45
35:BA:524:U:H4'	35:BA:555:U:H4'	1.98	0.45
8:AH:35:ILE:O	8:AH:39:LEU:HD23	2.17	0.45
35:DA:2184:G:H2'	35:DA:2185:C:C6	2.51	0.45
50:BS:73:LEU:HD23	50:BS:73:LEU:C	2.37	0.45
43:BI:111:PRO:CB	43:BI:112:LYS:HD2	2.46	0.45
22:AV:78:A:C8	35:BA:2602:A:N6	2.84	0.45
35:BA:2184:G:H2'	35:BA:2185:C:C6	2.51	0.45
12:CL:119:LYS:C	12:CL:120:TYR:HD1	2.19	0.45
20:CT:90:GLN:O	20:CT:93:GLU:HB3	2.16	0.45
2:AB:79:ASP:O	2:AB:81:VAL:N	2.49	0.45
35:DA:902:C:H2'	35:DA:903:C:H6	1.82	0.45
19:AS:33:THR:OG1	19:AS:34:TRP:N	2.49	0.45
9:CI:24:GLY:N	9:CI:60:ASP:OD1	2.44	0.45
7:AG:65:ALA:HB1	7:AG:127:ALA:HB3	1.98	0.45
38:BD:231:HIS:ND1	38:BD:232:PRO:HD2	2.31	0.45
35:DA:2364:C:H2'	35:DA:2365:G:O4'	2.16	0.45
51:BT:99:LEU:O	51:BT:99:LEU:CD1	2.64	0.45
53:DV:7:THR:O	53:DV:7:THR:HG23	2.17	0.45
22:AY:68:A:C6	22:AY:69:G:C5	3.04	0.45
22:AV:24:A:H62	22:AV:48:G:N2	2.15	0.45
22:AV:3:G:N2	22:AV:72:C:N3	2.58	0.45
35:DA:941:A:H4'	47:DP:35:HIS:CE1	2.51	0.45
19:AS:13:ASP:C	19:AS:15:LEU:H	2.20	0.45
56:DY:31:LEU:CB	56:DY:32:PRO:CA	2.95	0.45
31:D6:48:VAL:CG2	31:D6:49:HIS:H	2.22	0.45
23:CW:11:C:C2'	23:CW:12:U:C6	2.99	0.45
35:DA:1914:C:P	35:DA:1914:C:C3'	3.05	0.45
40:DF:21:ALA:C	40:DF:23:ASP:N	2.70	0.45
12:AL:90:VAL:CG2	12:AL:99:HIS:HE2	2.28	0.45
8:AH:83:ILE:HD13	8:AH:137:VAL:HG22	1.99	0.45
35:BA:1712:C:O2'	35:BA:1713:U:H5'	2.16	0.45
23:CW:20:G:C4	23:CW:59:G:N3	2.84	0.45
45:DN:58:ASP:C	45:DN:60:ILE:N	2.69	0.45
52:BU:88:ILE:HG23	53:BV:47:VAL:CG2	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:74:ASN:O	43:BI:76:THR:N	2.38	0.45
31:B6:7:ILE:HG12	31:B6:29:ASN:ND2	2.28	0.45
49:DR:58:GLY:HA2	49:DR:80:PHE:CE1	2.49	0.45
35:BA:2287:A:C6	35:BA:2289:G:C4	3.05	0.45
3:CC:11:ARG:O	3:CC:14:ILE:O	2.34	0.45
3:CC:11:ARG:NH2	3:CC:177:THR:O	2.49	0.45
26:D1:53:VAL:HG22	26:D1:74:VAL:HG13	1.95	0.45
35:BA:2305:A:C4	41:BG:154:GLY:HA3	2.52	0.45
17:AQ:59:ILE:HG21	17:AQ:71:PHE:HB3	1.96	0.45
35:DA:990:A:OP2	35:DA:991:C:OP2	2.35	0.45
57:BZ:104:PHE:CD1	57:BZ:141:VAL:HG21	2.51	0.45
57:DZ:104:PHE:HB3	57:DZ:141:VAL:HG23	1.98	0.45
8:AH:4:ASP:HB2	8:AH:89:PRO:CG	2.44	0.45
2:AB:16:HIS:HD2	2:AB:210:SER:HA	1.81	0.45
5:CE:41:VAL:HG13	5:CE:113:ALA:HA	1.98	0.45
55:BX:12:VAL:CG2	55:BX:27:THR:HG23	2.41	0.45
15:AO:82:ILE:HG23	15:AO:83:GLU:N	2.32	0.45
1:CA:1327:C:H2'	1:CA:1328:C:H6	1.82	0.45
1:CA:1409:C:H42	1:CA:1491:G:H1	1.63	0.45
1:CA:1492:A:C1'	1:CA:1493:A:OP1	2.59	0.45
38:BD:11:PRO:O	38:BD:12:SER:C	2.54	0.45
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.80	0.45
39:BE:104:VAL:HG11	39:BE:188:VAL:HG23	1.97	0.45
35:BA:631:A:OP1	47:BP:64:LYS:CE	2.64	0.45
35:DA:213:A:H2'	35:DA:214:G:O4'	2.16	0.45
37:BC:173:HIS:CD2	37:BC:173:HIS:N	2.84	0.45
38:DD:182:LEU:H	38:DD:272:ALA:CB	2.27	0.45
35:DA:271(Q):G:O2'	35:DA:271(R):G:P	2.74	0.45
50:BS:36:TYR:HA	50:BS:52:SER:HA	1.97	0.45
36:DB:52:A:O2'	36:DB:53:A:H8	1.99	0.45
35:DA:2884:U:H2'	35:DA:2885:C:C5'	2.46	0.45
9:CI:40:LEU:HD12	9:CI:70:LYS:HG3	1.97	0.45
53:BV:34:GLU:O	53:BV:36:PRO:CD	2.64	0.45
4:AD:45:GLN:O	4:AD:45:GLN:HG3	2.17	0.45
4:CD:67:ILE:HG21	4:CD:196:LEU:HD23	1.97	0.45
35:BA:2114:A:O2'	35:BA:2115:G:H5'	2.16	0.45
8:AH:56:LYS:O	8:AH:58:TYR:HD1	1.99	0.45
45:BN:65:LYS:O	45:BN:69:GLN:HB2	2.16	0.45
48:DQ:21:THR:HG21	48:DQ:101:ARG:CB	2.46	0.45
35:BA:1467:C:C2'	35:BA:1468:C:H5'	2.46	0.45
8:CH:54:ASP:C	8:CH:56:LYS:N	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DF:148:LEU:HD21	40:DF:191:ARG:NH1	2.31	0.45
35:DA:2526:G:H5'	35:DA:2742:C:O2'	2.16	0.45
13:AM:20:THR:C	13:AM:22:ILE:H	2.20	0.45
35:BA:2369:A:O2'	35:BA:2370:G:H5'	2.17	0.45
26:D1:41:ARG:HD3	26:D1:43:TYR:CZ	2.51	0.45
35:DA:1799:G:H5'	35:DA:1819:A:H61	1.81	0.45
35:BA:654(P):C:C2'	35:BA:654(Q):C:H5'	2.47	0.45
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.15	0.45
2:AB:230:VAL:HG23	2:AB:231:GLU:N	2.31	0.45
1:AA:278:G:O4'	1:AA:282:A:H1'	2.15	0.45
1:AA:1248:A:H2'	1:AA:1249:C:H5'	1.98	0.45
40:BF:113:ALA:HB1	40:BF:186:ILE:HG21	1.97	0.45
34:D9:30:PRO:HG2	35:DA:2528:U:OP1	2.16	0.45
4:CD:192:GLU:H	4:CD:192:GLU:CD	2.20	0.45
49:DR:88:ARG:HD2	49:DR:88:ARG:O	2.16	0.45
15:CO:37:ASN:HD22	15:CO:37:ASN:N	2.14	0.45
35:DA:2881:C:C2	35:DA:2882:A:C8	3.04	0.45
35:DA:773:U:H4'	38:DD:47:GLY:HA3	1.97	0.45
23:AW:45:U:H3'	23:AW:46:U:C5	2.52	0.45
23:AW:73:C:H3'	23:AW:74:C:C5'	2.45	0.45
22:CV:3:G:C6	22:CV:4:C:C4	3.04	0.45
22:CV:52:C:O2	22:CV:66:G:N1	2.46	0.45
51:BT:6:LEU:O	51:BT:10:VAL:HG23	2.16	0.45
23:AW:11:C:H2'	23:AW:12:U:O4'	2.15	0.45
23:AW:15:G:H8	23:AW:16:U:C5	2.35	0.45
56:DY:8:LYS:CD	56:DY:8:LYS:N	2.80	0.45
43:DI:126:TYR:O	43:DI:140:LEU:HB3	2.16	0.45
43:DI:98:ALA:O	43:DI:99:GLU:C	2.55	0.45
43:BI:84:GLY:HA2	43:BI:144:VAL:HG13	1.98	0.45
12:CL:104:VAL:O	12:CL:107:ALA:HB3	2.17	0.45
12:AL:86:ARG:HB2	12:AL:101:VAL:HG23	1.98	0.45
10:AJ:16:LEU:HD13	10:AJ:16:LEU:O	2.16	0.45
1:CA:963:G:H21	10:CJ:55:LYS:CE	2.29	0.45
52:DU:88:ILE:O	52:DU:90:VAL:N	2.39	0.45
3:AC:110:ASN:OD1	3:AC:140:ARG:HD2	2.17	0.45
17:CQ:78:GLU:OE1	17:CQ:81:ARG:HD3	2.16	0.45
47:DP:101:VAL:HB	47:DP:107:LYS:CA	2.34	0.45
41:DG:107:LEU:HD22	41:DG:177:GLY:O	2.17	0.45
35:BA:887:A:O2'	35:BA:888:C:H6	1.99	0.45
10:AJ:50:ILE:HA	10:AJ:60:ARG:HB2	1.99	0.45
2:CB:51:LEU:O	2:CB:55:PHE:CD2	2.68	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:41:ARG:HA	47:BP:41:ARG:NE	2.31	0.45
47:BP:39:LYS:O	47:BP:41:ARG:HG2	2.17	0.45
47:DP:91:PHE:N	47:DP:91:PHE:CD1	2.74	0.45
19:CS:62:ILE:HD12	19:CS:66:MET:HE1	1.98	0.45
50:BS:66:ALA:HA	50:BS:69:VAL:CG1	2.46	0.45
39:BE:116:VAL:HG21	39:BE:122:PHE:CE2	2.51	0.45
32:B7:8:ASN:ND2	32:B7:10:ARG:N	2.64	0.45
27:D2:47:ASN:HD22	35:DA:94(A):G:N2	2.15	0.45
56:DY:52:SER:O	56:DY:54:LYS:N	2.49	0.45
8:CH:11:THR:CG2	8:CH:14:ARG:HH12	2.26	0.45
30:D5:49:CYS:O	30:D5:50:GLY:C	2.54	0.45
14:CN:23:ARG:HA	14:CN:29:ARG:O	2.16	0.45
17:AQ:50:LYS:HG3	17:AQ:51:TYR:CD1	2.52	0.45
37:DC:50:ILE:HD12	37:DC:50:ILE:O	2.16	0.45
9:CI:33:PHE:HE1	9:CI:37:PHE:HD2	1.63	0.45
15:AO:86:GLY:O	15:AO:87:ILE:HG23	2.16	0.45
46:BO:10:VAL:HG23	46:BO:10:VAL:O	2.16	0.45
1:CA:1327:C:H2'	1:CA:1328:C:C6	2.51	0.45
35:BA:1528:A:C2	35:BA:1542:A:H2	2.34	0.45
35:DA:2148:G:H2'	35:DA:2149:G:C8	2.51	0.45
39:DE:68:ALA:C	39:DE:70:ALA:H	2.14	0.45
2:AB:189:ASP:C	2:AB:191:ASP:N	2.68	0.45
1:AA:1095:U:OP1	1:AA:1108:G:N2	2.43	0.45
2:AB:116:GLU:HA	2:AB:119:GLU:HB2	1.98	0.45
38:BD:206:LEU:HD22	38:BD:211:ARG:HG3	1.98	0.45
35:DA:364:C:H2'	35:DA:365:C:H5''	1.98	0.45
50:BS:17:ARG:HA	50:BS:20:ARG:HH12	1.81	0.45
16:AP:67:THR:CG2	16:AP:68:ASP:H	2.27	0.45
42:BH:124:GLU:HG3	42:BH:132:ARG:CG	2.46	0.45
36:DB:83:G:C2'	36:DB:84:C:H5'	2.46	0.45
1:AA:624:C:H2'	1:AA:625:G:C8	2.49	0.45
25:B0:50:ASN:HB2	25:B0:81:VAL:HB	1.98	0.45
4:AD:74:GLN:CA	4:AD:77:ASN:HD22	2.26	0.45
27:D2:35:LEU:HD12	27:D2:53:LEU:HD12	1.99	0.45
35:DA:1515:G:H2'	35:DA:1516:C:C6	2.51	0.45
1:AA:1033:G:H2'	1:AA:1034:G:C5'	2.43	0.45
11:AK:34:ASP:CB	11:AK:35:PRO:CD	2.93	0.45
11:AK:39:PRO:C	11:AK:40:ILE:HD13	2.36	0.45
40:DF:164:ARG:HG2	40:DF:164:ARG:NH1	2.29	0.45
38:BD:101:GLU:HG2	38:BD:102:LYS:N	2.31	0.45
38:BD:72:LYS:HD3	38:BD:97:TYR:CZ	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1498:U:O2'	1:AA:1499:A:OP2	2.34	0.45
30:D5:43:HIS:HD2	35:DA:2815:C:O2'	1.99	0.45
11:CK:59:TYR:O	11:CK:63:LEU:HD23	2.16	0.45
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.51	0.45
13:AM:65:LYS:HD3	29:B4:44:THR:CB	2.47	0.45
46:DO:32:TYR:CD1	46:DO:32:TYR:N	2.84	0.45
38:BD:64:ILE:HG23	38:BD:64:ILE:O	2.16	0.45
35:DA:39:C:O2	40:DF:46:ARG:NH2	2.49	0.45
35:DA:491:G:O2'	35:DA:492:A:H5'	2.16	0.45
27:D2:64:LEU:O	27:D2:68:ARG:HG2	2.15	0.45
57:BZ:19:ARG:HH12	57:BZ:84:GLU:C	2.20	0.45
41:DG:16:ARG:O	41:DG:20:ILE:HG13	2.16	0.45
1:CA:260:G:H2'	1:CA:261:U:C6	2.51	0.45
41:BG:171:ALA:O	41:BG:175:LEU:HG	2.15	0.45
1:CA:1319:A:OP2	19:CS:5:LEU:HD23	2.16	0.45
35:DA:840:C:H2'	35:DA:841:A:C8	2.51	0.45
1:AA:284:G:H2'	1:AA:285:G:H8	1.81	0.45
1:CA:1188:A:H2'	1:CA:1189:C:O4'	2.17	0.45
1:AA:1400:C:H4'	1:AA:1401:G:OP2	2.17	0.45
35:DA:1641:A:H2'	35:DA:1642:G:O4'	2.16	0.45
35:BA:2515:C:O2'	35:BA:2516:G:H5'	2.16	0.45
35:DA:1375:C:O2'	35:DA:1376:C:H5'	2.17	0.45
35:DA:280:C:O2'	35:DA:281:G:H5'	2.17	0.45
39:DE:196:VAL:O	39:DE:196:VAL:HG23	2.16	0.45
22:CY:67:C:C3'	22:CY:67:C:C6	2.99	0.45
23:AW:70:G:C2	23:AW:71:G:C4	3.05	0.45
22:AY:63:C:H2'	22:AY:64:C:C6	2.51	0.45
22:AY:60:A:C5	57:BZ:186:GLU:OE1	2.70	0.45
22:AV:57:U:C5	22:AV:59:G:OP2	2.70	0.45
46:DO:71:ARG:NE	46:DO:105:GLU:OE2	2.50	0.45
51:DT:28:VAL:HG21	51:DT:46:GLU:HG3	1.98	0.45
23:AW:15:G:C6	23:AW:61:A:C4	3.04	0.45
35:DA:1506:C:O2	35:DA:1506:C:C2'	2.64	0.45
39:BE:36:ARG:HG2	39:BE:36:ARG:NH1	2.31	0.45
35:BA:1486:A:N1	35:BA:1504:C:N3	2.65	0.45
43:DI:84:GLY:HA2	43:DI:144:VAL:HG13	1.97	0.45
53:DV:49:THR:CB	53:DV:50:PRO:CD	2.93	0.45
46:BO:79:PHE:CD2	51:BT:72:VAL:HG13	2.52	0.45
51:BT:48:ILE:N	51:BT:48:ILE:HD12	2.31	0.45
57:DZ:44:PHE:C	57:DZ:44:PHE:CD1	2.90	0.45
35:BA:1796:U:H2'	35:BA:1797:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DS:97:ARG:HH11	50:DS:97:ARG:HG2	1.81	0.45
18:AR:35:ARG:C	18:AR:37:VAL:H	2.20	0.45
2:CB:233:SER:CB	2:CB:234:PRO:CD	2.92	0.45
13:AM:94:ARG:HB3	13:AM:96:LEU:HG	1.99	0.45
15:AO:51:HIS:O	15:AO:54:ARG:HB3	2.17	0.45
9:AI:15:ALA:HB2	9:AI:65:VAL:CG2	2.44	0.45
47:BP:85:LEU:HD23	47:BP:115:LEU:O	2.17	0.45
38:DD:35:LYS:C	38:DD:35:LYS:CD	2.77	0.45
8:AH:4:ASP:CG	8:AH:85:ARG:HH21	2.20	0.45
26:B1:53:VAL:HB	26:B1:58:ILE:HD13	1.99	0.45
35:BA:197:A:H2'	35:BA:198:C:H5'	1.98	0.45
9:CI:33:PHE:CZ	9:CI:47:LEU:HD11	2.51	0.45
1:CA:266:G:H5'	1:CA:266:G:C8	2.52	0.45
1:CA:1479:C:C2	1:CA:1480:G:C8	3.05	0.45
38:DD:10:THR:C	38:DD:11:PRO:O	2.53	0.45
35:DA:2473:U:O2	35:DA:2473:U:O4'	2.34	0.45
1:CA:438:G:H4'	1:CA:439:A:OP1	2.17	0.45
1:CA:439:A:C5	1:CA:441:A:H1'	2.51	0.45
35:DA:1658:C:H2'	35:DA:1659:U:C6	2.52	0.45
42:DH:50:VAL:HG12	42:DH:51:ARG:N	2.30	0.45
35:BA:626:U:C5'	35:BA:627:A:H5'	2.46	0.45
35:DA:2163:C:H2'	35:DA:2164:C:O4'	2.16	0.45
34:B9:1:MET:SD	35:BA:2478:A:OP2	2.74	0.45
44:BJ:85:UNK:O	44:BJ:86:UNK:O	2.34	0.45
1:AA:1240:U:C4'	7:AG:38:LEU:HD21	2.46	0.45
17:CQ:91:ARG:HA	17:CQ:94:ASN:HD22	1.82	0.45
1:CA:1014:A:H2	1:CA:1219:U:O2	1.98	0.45
45:DN:96:GLU:HB2	45:DN:122:VAL:HG12	1.97	0.45
35:BA:1532:C:O2'	35:BA:1533:G:H5'	2.17	0.45
11:CK:74:ALA:O	11:CK:76:GLY:N	2.50	0.45
34:B9:18:ARG:HD3	35:BA:1034:G:H5'	1.97	0.45
34:D9:18:ARG:HD3	35:DA:1034:G:H5'	1.99	0.45
35:DA:102:G:OP1	35:DA:102:G:C4'	2.64	0.45
35:DA:2032:G:O2'	39:DE:145:LYS:NZ	2.47	0.45
49:DR:97:VAL:CG1	49:DR:114:VAL:HG22	2.47	0.45
35:BA:933:A:H2'	35:BA:934:G:O4'	2.17	0.45
34:D9:33:LYS:HE3	35:DA:2526:G:O2'	2.17	0.45
35:BA:2740:A:H2'	35:BA:2741:A:C8	2.51	0.45
35:DA:649:G:H2'	35:DA:650:C:C6	2.51	0.45
57:DZ:38:TYR:CD1	57:DZ:38:TYR:O	2.70	0.45
35:BA:2682:U:O4	35:BA:2728:U:H1'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:72:LEU:O	20:CT:73:HIS:CB	2.64	0.45
1:CA:237:C:O2'	1:CA:238:G:H5'	2.16	0.45
35:DA:192:C:H2'	35:DA:193:U:H5'	1.98	0.45
39:BE:143:ASN:HB2	39:BE:147:PRO:HD2	1.98	0.45
1:AA:236:G:C6	1:AA:237:C:C4	3.04	0.45
35:DA:551:G:O2'	35:DA:1220:A:N3	2.40	0.45
35:BA:29:U:H2'	35:BA:30:G:C8	2.52	0.45
1:CA:1163:C:H2'	1:CA:1164:G:H8	1.81	0.45
35:BA:1368:G:O2'	35:BA:1369:G:H5'	2.17	0.45
19:CS:13:ASP:C	19:CS:15:LEU:H	2.19	0.45
35:BA:35:G:H2'	35:BA:36:G:O4'	2.17	0.45
35:BA:911:A:H2'	48:BQ:9:TYR:OH	2.17	0.45
44:BJ:49:UNK:O	44:BJ:50:UNK:C	2.64	0.45
21:CU:5:ASP:O	21:CU:11:GLY:HA3	2.17	0.45
13:AM:33:ALA:HA	13:AM:59:TYR:CE2	2.52	0.45
27:B2:41:ILE:HG13	27:B2:43:GLN:HB2	1.99	0.45
38:BD:166:GLN:CA	38:BD:166:GLN:HE21	2.28	0.45
39:DE:141:ILE:O	39:DE:141:ILE:HG13	2.16	0.45
10:CJ:67:THR:O	10:CJ:67:THR:HG22	2.16	0.45
28:B3:40:THR:CG2	28:B3:43:ILE:HG12	2.47	0.45
23:CW:7:U:N3	23:CW:69:G:C6	2.84	0.45
51:DT:7:ILE:O	51:DT:10:VAL:HB	2.16	0.45
22:AV:20:G:C4	22:AV:59:G:N3	2.85	0.45
22:AV:14:A:C6	22:AV:24:A:N7	2.85	0.45
22:AV:68:A:N1	22:AV:69:G:C4	2.84	0.45
22:AV:73:C:C4	22:AV:74:C:C5	3.05	0.45
1:AA:429:U:H1'	1:AA:430:A:H5''	1.97	0.45
23:AW:47:G:O5'	23:AW:47:G:H8	1.99	0.45
23:AW:51:G:C2'	23:AW:52:C:H5'	2.47	0.45
33:B8:49:VAL:HG23	33:B8:53:PRO:HB3	1.98	0.45
47:BP:56:SER:O	47:BP:57:THR:C	2.54	0.45
1:AA:1197:G:O2'	1:AA:1198:G:H5'	2.17	0.45
23:CW:24:A:H2'	23:CW:25:A:O4'	2.17	0.45
12:CL:84:LEU:HD23	12:CL:85:ILE:O	2.16	0.45
12:CL:89:ARG:HD3	12:CL:90:VAL:H	1.80	0.45
1:CA:1199:U:H4'	10:CJ:54:PHE:CZ	2.52	0.45
23:CW:20:G:N2	23:CW:58:C:H2'	2.31	0.45
35:DA:1019:U:H2'	35:DA:1020:A:C8	2.52	0.45
35:DA:1140:C:H1'	35:DA:1143:A:N3	2.31	0.45
45:DN:56:ASN:HA	45:DN:124:ALA:C	2.37	0.45
45:DN:132:ALA:O	45:DN:133:GLN:CB	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DN:15:LEU:HD13	45:DN:15:LEU:C	2.37	0.45
45:DN:16:ILE:HG12	45:DN:17:ASP:N	2.32	0.45
57:DZ:41:LEU:O	57:DZ:42:VAL:C	2.55	0.45
52:BU:61:TRP:CE2	52:BU:94:ASN:HA	2.51	0.45
53:BV:20:LEU:N	53:BV:20:LEU:HD12	2.32	0.45
39:DE:34:VAL:O	39:DE:34:VAL:HG22	2.16	0.45
16:AP:51:VAL:O	16:AP:53:VAL:N	2.50	0.45
1:AA:474:G:C2'	1:AA:475:G:C8	2.87	0.45
36:DB:42:C:O2'	41:DG:67:LYS:NZ	2.50	0.45
35:BA:1654:A:P	49:BR:3:HIS:HB2	2.57	0.45
46:DO:24:VAL:O	46:DO:24:VAL:HG13	2.17	0.45
10:CJ:49:VAL:HG22	10:CJ:50:ILE:N	2.32	0.45
5:AE:148:VAL:C	5:AE:150:ARG:N	2.69	0.45
35:BA:1652:A:OP1	49:BR:9:LYS:HD3	2.16	0.45
31:B6:37:ARG:NH1	31:B6:39:TYR:HE2	2.14	0.45
31:D6:5:VAL:HG11	35:DA:2284:C:OP1	2.17	0.45
29:B4:11:PRO:HA	29:B4:25:TYR:HA	1.98	0.45
27:D2:69:ARG:HG3	27:D2:69:ARG:HH11	1.80	0.45
47:BP:10:PRO:O	47:BP:11:GLY:O	2.35	0.45
1:AA:80:G:H4'	1:AA:80:G:OP1	2.16	0.45
9:AI:18:PHE:HB2	9:AI:62:TYR:O	2.16	0.45
15:CO:76:GLU:C	15:CO:78:TYR:H	2.20	0.45
4:AD:170:VAL:O	4:AD:171:GLY:C	2.55	0.45
10:AJ:92:THR:HG23	10:AJ:93:GLY:N	2.32	0.45
1:AA:439:A:C5	1:AA:441:A:H1'	2.52	0.45
4:AD:96:LEU:N	4:AD:96:LEU:HD12	2.32	0.45
36:BB:28:C:H2'	36:BB:29:A:C8	2.52	0.45
19:CS:36:ARG:HH11	19:CS:53:ASN:HA	1.78	0.45
1:CA:1095:U:OP1	1:CA:1108:G:N2	2.43	0.45
55:DX:55:ASN:HB2	55:DX:80:ILE:HG12	1.98	0.45
1:AA:830:G:H2'	1:AA:831:U:O4'	2.17	0.45
35:DA:2580:U:C5'	39:DE:131:ALA:HB2	2.40	0.45
35:DA:1598:C:H5'	55:DX:36:LYS:HG3	1.99	0.45
46:BO:47:ILE:HG13	46:BO:48:PRO:HD2	1.95	0.45
38:BD:210:GLY:C	38:BD:212:SER:N	2.69	0.45
42:BH:50:VAL:CG1	42:BH:51:ARG:N	2.80	0.45
35:DA:272(D):G:H1	35:DA:364:C:N4	2.14	0.45
47:BP:82:GLY:HA2	47:BP:113:LYS:O	2.17	0.45
47:DP:83:VAL:CG1	47:DP:112:LEU:HD21	2.46	0.45
16:AP:68:ASP:C	16:AP:70:ALA:N	2.69	0.45
54:BW:40:ASN:C	54:BW:41:LYS:HG2	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:112:LYS:HA	9:AI:119:ALA:CB	2.45	0.45
2:CB:169:LYS:HB3	2:CB:170:GLU:OE2	2.16	0.45
16:AP:14:ASN:OD1	16:AP:42:ARG:NH2	2.50	0.45
1:CA:874:G:H2'	1:CA:875:C:H6	1.81	0.45
1:AA:874:G:H2'	1:AA:875:C:H6	1.81	0.45
1:CA:1405:G:C4	1:CA:1406:U:C5	3.04	0.45
35:BA:1339:G:H5''	55:BX:16:LYS:HD3	1.98	0.45
52:BU:57:PHE:C	52:BU:59:ARG:N	2.68	0.45
40:DF:67:GLN:O	40:DF:67:GLN:CG	2.62	0.45
8:CH:97:VAL:C	8:CH:99:GLU:H	2.20	0.45
3:AC:103:VAL:CG1	3:AC:104:GLN:H	2.29	0.45
26:B1:29:GLY:O	26:B1:30:VAL:CG2	2.65	0.45
6:CF:9:VAL:HA	6:CF:59:TYR:O	2.16	0.45
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.54	0.45
1:AA:424:G:HO2'	1:AA:425:G:H5'	1.82	0.45
35:BA:1751:C:O4'	35:BA:2860:A:C2	2.69	0.45
41:DG:144:ILE:HD12	41:DG:145:THR:H	1.82	0.45
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.16	0.45
35:BA:314:A:H2'	35:BA:315:G:C8	2.52	0.45
43:BI:5:LEU:HD23	43:BI:36:ALA:HB2	1.97	0.45
49:DR:65:LEU:HD12	49:DR:65:LEU:N	2.32	0.45
40:BF:192:LEU:HD21	40:BF:194:MET:HG3	1.99	0.45
46:DO:113:LYS:O	46:DO:117:LEU:HB2	2.17	0.45
38:DD:94:LEU:HD22	38:DD:95:LEU:N	2.32	0.45
57:BZ:57:ILE:N	57:BZ:57:ILE:HD12	2.30	0.45
1:CA:560:U:H5'	1:CA:566:G:N2	2.32	0.45
7:AG:64:GLN:HG3	7:AG:68:ASN:HD21	1.80	0.45
2:CB:70:PHE:CD2	2:CB:163:PHE:HB3	2.51	0.45
35:DA:829:A:N7	35:DA:2248:C:H5'	2.31	0.45
43:DI:111:PRO:HB2	43:DI:112:LYS:HD2	1.98	0.45
41:BG:97:ASP:C	41:BG:99:MET:N	2.69	0.45
4:CD:168:ARG:NH1	4:CD:168:ARG:HG3	2.32	0.45
21:AU:24:ARG:HG2	21:AU:24:ARG:HH11	1.80	0.45
1:CA:1175:G:H2'	1:CA:1176:A:C8	2.52	0.45
1:AA:801:U:H2'	1:AA:802:A:C8	2.51	0.45
35:BA:828:U:O2	35:BA:828:U:H3'	2.16	0.45
35:DA:1547:C:H2'	35:DA:1548:C:C6	2.51	0.45
5:AE:17:ALA:HA	5:AE:26:PHE:HA	1.99	0.45
38:DD:93:ALA:HB3	38:DD:105:ILE:HG23	1.98	0.45
22:AY:78:A:N1	35:BA:2583:G:O2'	2.37	0.45
35:BA:270:A:O2'	35:BA:271:A:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2774:C:H2'	35:BA:2775:A:O4'	2.17	0.45
1:AA:948:C:H2'	1:AA:949:A:H8	1.81	0.45
35:DA:755:C:H2'	35:DA:756:C:C6	2.52	0.45
1:CA:39:G:O2'	1:CA:40:C:H5'	2.16	0.45
36:BB:3:C:H42	36:BB:118:G:H1	1.65	0.45
35:DA:871:U:OP1	48:DQ:5:ARG:HG3	2.16	0.45
35:BA:1945:G:H2'	35:BA:1946:U:H6	1.81	0.45
35:BA:2604:U:O2'	35:BA:2605:U:H5'	2.17	0.45
35:BA:2150:U:H2'	35:BA:2151:G:H8	1.82	0.45
57:DZ:7:ALA:O	57:DZ:62:PRO:HD3	2.16	0.45
38:DD:68:LYS:O	38:DD:68:LYS:HG3	2.16	0.45
31:D6:28:ARG:NH1	31:D6:28:ARG:HB3	2.31	0.45
47:BP:75:ILE:N	47:BP:75:ILE:HD12	2.32	0.45
7:CG:80:VAL:O	7:CG:80:VAL:HG12	2.15	0.45
35:BA:426:C:O2'	35:BA:427:U:H5'	2.17	0.45
22:CY:69:G:C5	22:CY:70:G:C8	3.04	0.45
23:AW:72:C:C2'	23:AW:73:C:O4'	2.62	0.45
23:CW:4:C:C2	23:CW:5:C:C5	3.05	0.45
11:CK:58:PRO:HA	11:CK:90:GLY:CA	2.45	0.45
22:CV:3:G:OP2	22:CV:3:G:H8	2.00	0.45
1:CA:146:G:N2	1:CA:147:G:H1'	2.32	0.45
40:DF:20:LEU:O	40:DF:24:LEU:HD23	2.16	0.45
35:BA:1021:A:C8	35:BA:1021:A:H3'	2.51	0.45
53:DV:20:LEU:N	53:DV:20:LEU:HD12	2.32	0.45
35:DA:1162:G:H1'	53:DV:23:GLU:OE1	2.16	0.45
53:DV:2:PHE:HB3	53:DV:3:ALA:H	1.48	0.45
3:CC:110:ASN:OD1	3:CC:140:ARG:HD2	2.17	0.45
50:DS:36:TYR:HD1	50:DS:36:TYR:N	2.14	0.45
1:CA:975:A:H4'	1:CA:1358:U:O2	2.17	0.45
1:AA:1276:G:C2'	1:AA:1277:C:H5'	2.46	0.45
29:D4:8:LYS:O	29:D4:9:LEU:CB	2.64	0.45
35:DA:1796:U:H2'	35:DA:1797:C:C6	2.52	0.45
50:DS:98:VAL:HG12	50:DS:100:ALA:N	2.32	0.45
41:BG:137:GLU:HG2	41:BG:152:LEU:CD1	2.46	0.45
57:DZ:109:ALA:CB	57:DZ:145:GLU:HB2	2.43	0.45
41:BG:6:ALA:O	41:BG:9:ARG:N	2.50	0.45
17:CQ:48:GLU:O	17:CQ:49:GLU:C	2.54	0.45
29:B4:28:LYS:HE3	29:B4:28:LYS:CA	2.43	0.45
5:AE:111:GLU:C	5:AE:113:ALA:H	2.20	0.45
5:AE:41:VAL:HG13	5:AE:113:ALA:HA	1.97	0.45
1:CA:625:G:H2'	1:CA:626:U:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:33:PHE:CZ	9:AI:47:LEU:HD11	2.51	0.45
35:DA:2299:G:N1	35:DA:2318:G:C8	2.85	0.45
7:AG:78:ARG:HG2	7:AG:79:ARG:H	1.82	0.45
35:BA:2134:A:H1'	35:BA:2159:G:H21	1.80	0.45
21:CU:24:ARG:HG2	21:CU:24:ARG:HH11	1.82	0.45
37:BC:52:PRO:CG	37:BC:53:ARG:HH11	2.29	0.45
35:DA:1542:A:C8	35:DA:1544:A:H5''	2.52	0.45
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.51	0.45
48:BQ:12:GLN:HE21	48:BQ:73:PRO:HD3	1.82	0.45
20:AT:102:GLY:O	20:AT:103:GLY:C	2.55	0.45
42:BH:159:GLU:O	42:BH:160:LYS:O	2.35	0.45
1:CA:1103:C:C5'	2:CB:98:LEU:HD13	2.46	0.45
2:AB:137:ARG:NH1	2:AB:138:LEU:HD23	2.32	0.45
38:BD:209:ALA:O	38:BD:212:SER:HB3	2.16	0.45
39:BE:24:THR:HG23	39:BE:184:VAL:CG2	2.46	0.45
37:DC:4:HIS:HD1	37:DC:8:TYR:HE2	1.64	0.45
8:AH:117:GLY:O	8:AH:119:LEU:HG	2.17	0.45
1:AA:445:G:H2'	1:AA:446:G:H8	1.79	0.45
50:DS:85:VAL:HG23	50:DS:106:ARG:HG3	1.98	0.45
1:CA:153:C:H2'	1:CA:154:C:H6	1.80	0.45
15:CO:17:ARG:CD	15:CO:26:GLU:OE1	2.65	0.45
1:AA:401:C:P	4:AD:73:ARG:HH21	2.40	0.45
45:BN:4:TYR:HB2	52:BU:64:ARG:NH1	2.31	0.45
56:DY:89:PHE:O	56:DY:90:LEU:HB3	2.16	0.45
13:CM:18:ALA:CB	13:CM:45:VAL:HG21	2.47	0.45
1:CA:999:C:O2'	1:CA:1000:U:H5'	2.17	0.45
2:CB:131:PRO:O	2:CB:135:GLN:HG3	2.17	0.45
40:BF:15:SER:O	40:BF:16:GLY:O	2.35	0.45
1:CA:1072:G:N2	2:CB:107:THR:HG21	2.32	0.45
13:CM:24:GLY:C	13:CM:25:ILE:HG13	2.36	0.45
22:AV:76:C:C2'	22:AV:77:C:H5''	2.47	0.45
1:AA:1030(B):C:H2'	1:AA:1030(C):G:O4'	2.17	0.45
1:CA:1244:C:H2'	1:CA:1245:A:H8	1.81	0.45
49:DR:97:VAL:HG12	49:DR:114:VAL:HG22	1.99	0.45
49:DR:32:GLY:O	49:DR:115:GLU:HA	2.17	0.45
35:DA:1286:A:H2'	35:DA:1288:U:OP2	2.17	0.45
27:B2:6:VAL:HA	27:B2:9:GLN:HB2	1.99	0.45
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.17	0.45
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.97	0.45
35:DA:2672:G:H2'	35:DA:2673:G:H5''	1.99	0.45
8:CH:35:ILE:O	8:CH:39:LEU:HD23	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:118:A:H1'	35:DA:178:G:O4'	2.17	0.45
42:BH:94:TYR:HD1	42:BH:94:TYR:N	2.15	0.45
20:AT:72:LEU:O	20:AT:73:HIS:CB	2.65	0.45
1:AA:827:U:H2'	1:AA:870:U:O4	2.16	0.45
34:D9:30:PRO:HB2	35:DA:2527:C:H4'	1.98	0.45
1:AA:1270:C:O2'	1:AA:1271:G:H5'	2.16	0.45
35:DA:933:A:H2'	35:DA:934:G:O4'	2.17	0.45
35:BA:2877:G:O2'	35:BA:2878:U:H5'	2.16	0.45
55:BX:18:TYR:O	55:BX:20:GLY:N	2.49	0.45
3:AC:99:VAL:HG23	3:AC:99:VAL:O	2.16	0.45
22:CY:44:A:C2	22:CY:45:U:C2	3.05	0.45
22:CY:62:U:C2'	57:DZ:186:GLU:CB	2.82	0.45
22:AY:44:A:C2	22:AY:45:U:C2	3.04	0.45
22:AY:9:A:C8	22:AY:47:G:C2	3.05	0.45
23:CW:73:C:C4	23:CW:74:C:H5	2.33	0.45
1:CA:1442:G:O6	1:CA:1442(B):A:H2	1.99	0.45
46:DO:69:ILE:HD12	46:DO:69:ILE:H	1.81	0.45
51:DT:28:VAL:HG12	51:DT:29:ARG:HD3	1.99	0.45
51:DT:32:TYR:CG	51:DT:81:PRO:HB3	2.51	0.45
31:B6:12:GLU:HG2	31:B6:23:THR:CG2	2.37	0.45
47:BP:61:ARG:CD	47:BP:61:ARG:H	2.08	0.45
23:AW:20:G:H3'	23:AW:21:U:C5'	2.38	0.45
42:BH:41:MET:SD	42:BH:53:GLU:N	2.79	0.45
31:D6:43:CYS:O	31:D6:44:ARG:NH1	2.49	0.45
43:BI:109:ILE:CG2	43:BI:110:ASP:H	2.14	0.45
43:BI:81:VAL:HG22	43:BI:143:SER:O	2.17	0.45
10:AJ:8:LEU:HD13	10:AJ:20:ALA:CB	2.47	0.45
35:BA:1018:C:O2'	35:BA:1019:U:H5'	2.17	0.45
45:BN:15:LEU:HD12	45:BN:136:GLU:HG3	1.98	0.45
35:BA:545:C:H2'	35:BA:547:A:C5'	2.47	0.45
3:CC:155:GLY:O	3:CC:156:ARG:CB	2.65	0.45
35:BA:1711:C:O2'	35:BA:1712:C:H5'	2.17	0.45
10:CJ:28:ARG:HG2	10:CJ:28:ARG:HH11	1.81	0.45
10:CJ:75:ILE:CG1	10:CJ:76:ASN:N	2.79	0.45
51:BT:90:GLN:O	51:BT:91:ARG:C	2.54	0.45
57:DZ:14:LYS:C	57:DZ:16:SER:H	2.19	0.45
47:DP:102:ARG:NH1	47:DP:102:ARG:HB3	2.32	0.45
45:BN:1:MET:N	53:BV:20:LEU:HD21	2.31	0.45
39:DE:51:PHE:CE1	39:DE:52:LEU:HD13	2.52	0.45
29:D4:6:HIS:CG	41:DG:67:LYS:HE2	2.52	0.45
35:BA:1453:U:O4'	49:BR:63:ARG:HD3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:97:PRO:HG3	13:AM:103:THR:HG22	1.99	0.45
9:CI:9:ARG:HG2	9:CI:14:VAL:CG2	2.34	0.45
2:AB:51:LEU:O	2:AB:55:PHE:CD2	2.70	0.45
2:AB:58:ILE:CG2	2:AB:222:ILE:HD11	2.47	0.45
22:CV:43:G:C4	22:CV:44:A:C8	3.05	0.45
40:DF:28:ILE:HD13	40:DF:28:ILE:H	1.80	0.45
25:D0:14:ARG:NH1	25:D0:14:ARG:CG	2.79	0.45
1:CA:115:G:H1'	1:CA:116:A:N7	2.32	0.45
26:B1:20:ARG:CG	26:B1:20:ARG:NH1	2.75	0.45
4:CD:24:GLU:C	4:CD:24:GLU:CD	2.75	0.45
9:CI:100:GLY:C	9:CI:102:LEU:N	2.71	0.45
21:AU:22:ARG:O	21:AU:23:PRO:C	2.55	0.45
1:CA:1266:G:N2	1:CA:1268:A:H3'	2.31	0.45
36:BB:31:C:C2'	36:BB:53:A:H61	2.27	0.45
38:DD:206:LEU:HD22	38:DD:211:ARG:HG3	1.99	0.45
16:AP:20:VAL:HG23	16:AP:35:LYS:HA	1.99	0.45
7:CG:15:ASP:CB	7:CG:20:ASP:H	2.28	0.45
7:CG:20:ASP:CB	7:CG:23:VAL:HG23	2.42	0.45
41:DG:173:LEU:HD22	41:DG:178:PHE:CZ	2.52	0.45
39:BE:24:THR:HG22	39:BE:186:GLY:CA	2.44	0.45
1:CA:542:G:C5'	4:CD:41:GLY:HA3	2.43	0.45
42:DH:82:GLY:O	42:DH:83:TYR:O	2.34	0.45
38:DD:142:VAL:HG22	38:DD:143:HIS:N	2.31	0.45
5:AE:105:VAL:CB	5:AE:106:PRO:CD	2.93	0.45
42:DH:105:LEU:N	42:DH:105:LEU:HD23	2.27	0.45
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.37	0.45
13:AM:45:VAL:O	13:AM:48:LEU:HD22	2.16	0.45
27:D2:30:ARG:O	27:D2:31:GLU:C	2.55	0.45
35:BA:593:G:C6	35:BA:594:U:C4	3.04	0.45
38:DD:72:LYS:HD3	38:DD:97:TYR:CZ	2.52	0.45
40:DF:110:LEU:HD13	40:DF:206:ILE:HD11	1.99	0.45
53:DV:34:GLU:O	53:DV:36:PRO:CD	2.64	0.45
38:BD:135:PHE:HZ	4:CD:166:LYS:HG2	1.81	0.45
35:DA:1751:C:O4'	35:DA:2860:A:C2	2.69	0.45
35:DA:2884:U:H2'	35:DA:2885:C:O4'	2.16	0.45
5:CE:36:ASP:O	5:CE:37:ARG:CB	2.64	0.45
13:AM:79:LYS:HD3	13:AM:82:MET:HE1	1.98	0.45
35:DA:128:C:O2'	35:DA:129:C:O5'	2.29	0.45
4:CD:39:PRO:HB2	4:CD:44:GLY:HA2	1.97	0.45
29:B4:50:VAL:O	29:B4:52:THR:N	2.47	0.45
29:D4:51:ASP:C	29:D4:51:ASP:OD1	2.54	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:66:VAL:HG12	7:CG:66:VAL:O	2.17	0.45
50:DS:73:LEU:C	50:DS:73:LEU:HD23	2.37	0.45
1:AA:560:U:O2'	1:AA:561:U:OP2	2.23	0.45
1:CA:751:U:H2'	1:CA:752:G:H5'	1.99	0.45
35:DA:195:A:OP1	47:DP:46:LYS:HE2	2.17	0.45
1:CA:509:A:H5''	4:CD:55:ALA:HB2	1.97	0.45
48:DQ:14:ARG:O	48:DQ:72:LYS:HE2	2.17	0.45
2:AB:183:PRO:HA	2:AB:198:ASP:OD2	2.17	0.45
54:BW:36:LEU:HD12	54:BW:48:ALA:HA	1.99	0.45
2:CB:198:ASP:OD1	2:CB:198:ASP:N	2.50	0.45
35:BA:2500:U:O2	35:BA:2504:U:C5	2.70	0.45
9:CI:103:THR:HG22	9:CI:104:ARG:N	2.32	0.45
35:DA:35:G:H2'	35:DA:36:G:O4'	2.17	0.45
40:DF:150:GLY:HA2	40:DF:172:TRP:CD2	2.52	0.45
35:DA:822:U:H2'	35:DA:823:G:H8	1.82	0.45
20:CT:47:GLY:O	20:CT:48:LYS:C	2.55	0.45
1:CA:102:G:O2'	1:CA:103:C:H5'	2.17	0.45
32:D7:33:ARG:HD2	35:DA:467:G:OP1	2.17	0.45
35:DA:2593:U:H2'	35:DA:2594:C:C6	2.52	0.45
1:AA:431:A:O2'	1:AA:432:A:H5'	2.16	0.45
7:CG:12:LEU:HD21	7:CG:28:ASN:HD21	1.82	0.45
51:DT:99:LEU:CD1	51:DT:99:LEU:O	2.65	0.45
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.52	0.45
22:CY:57:U:O5'	57:DZ:182:LYS:C	2.55	0.45
23:AW:3:G:C5	23:AW:4:C:C5	3.04	0.45
33:D8:61:LEU:HD12	33:D8:62:LEU:N	2.30	0.45
36:DB:5:C:O2'	36:DB:6:C:H5'	2.17	0.45
22:CV:54:G:C2'	22:CV:55:G:H5'	2.47	0.45
22:CV:68:A:C6	22:CV:69:G:C8	3.04	0.45
43:DI:81:VAL:H	43:DI:143:SER:HB2	1.81	0.45
35:DA:1916:A:C5'	35:DA:1916:A:H8	2.28	0.45
12:AL:27:LEU:HD11	12:AL:64:TYR:CD2	2.52	0.45
42:DH:43:VAL:CG1	42:DH:52:VAL:HG22	2.27	0.45
45:DN:1:MET:N	53:DV:20:LEU:CD2	2.80	0.45
35:BA:2849:U:H1'	35:BA:2866:U:H6	1.82	0.45
46:BO:77:ILE:HD13	51:BT:74:ARG:CG	2.46	0.45
45:BN:1:MET:N	53:BV:20:LEU:CD2	2.80	0.45
41:DG:106:LEU:HD12	41:DG:110:ALA:CB	2.47	0.45
31:B6:35:GLU:O	31:B6:36:LEU:HB2	2.16	0.45
35:BA:2820:A:O4'	49:BR:5:LYS:HD2	2.16	0.45
35:DA:1654:A:P	49:DR:3:HIS:HB2	2.57	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:3:HIS:O	49:DR:4:LEU:HB3	2.17	0.45
56:BY:4:LYS:HD2	56:BY:32:PRO:HG3	1.99	0.45
50:BS:98:VAL:HG12	50:BS:100:ALA:H	1.82	0.45
56:DY:49:VAL:HG12	56:DY:50:ARG:N	2.32	0.45
13:AM:89:GLY:CA	13:AM:93:ARG:HH11	2.30	0.45
55:DX:35:THR:O	55:DX:39:ILE:CG1	2.56	0.45
22:AY:51:G:HO2'	22:AY:52:C:H5'	1.82	0.45
49:DR:38:VAL:O	49:DR:42:LYS:HG3	2.17	0.45
38:BD:58:HIS:CD2	38:BD:59:LYS:H	2.35	0.45
57:BZ:165:VAL:HG12	57:BZ:166:SER:N	2.32	0.45
9:AI:5:TYR:CD2	9:AI:18:PHE:HE1	2.35	0.45
2:CB:16:HIS:HD2	2:CB:210:SER:HA	1.81	0.45
8:AH:86:ILE:CB	8:AH:133:LEU:HD22	2.46	0.45
26:B1:52:ARG:NH2	35:BA:2218:U:O2	2.50	0.45
5:CE:71:LEU:HD22	5:CE:114:GLY:O	2.16	0.45
3:AC:207:VAL:HG12	3:AC:207:VAL:O	2.17	0.45
15:AO:76:GLU:C	15:AO:78:TYR:H	2.20	0.45
1:AA:1327:C:H2'	1:AA:1328:C:H6	1.82	0.45
4:AD:88:VAL:HG13	5:AE:97:GLY:HA2	1.99	0.45
37:BC:34:ALA:HB2	37:BC:217:THR:HG21	1.99	0.45
36:DB:87:G:H2'	36:DB:88:C:H5''	1.99	0.45
1:CA:830:G:H2'	1:CA:831:U:O4'	2.17	0.45
7:CG:150:ALA:C	7:CG:152:ALA:H	2.20	0.45
35:BA:2188:C:H2'	35:BA:2189:U:C1'	2.47	0.45
11:AK:29:ILE:HG13	11:AK:44:SER:HB3	1.99	0.45
5:CE:80:ILE:HA	8:CH:104:ARG:HH12	1.81	0.45
42:DH:124:GLU:O	42:DH:131:VAL:HG13	2.17	0.45
38:BD:142:VAL:HG22	38:BD:143:HIS:N	2.32	0.45
11:CK:29:ILE:HG13	11:CK:44:SER:HB3	1.99	0.45
33:D8:39:LYS:CG	33:D8:43:GLN:HE21	2.28	0.45
17:AQ:91:ARG:HA	17:AQ:94:ASN:HD22	1.81	0.45
5:AE:20:GLN:O	5:AE:21:ALA:O	2.34	0.45
1:CA:824:C:H4'	8:CH:1:MET:N	2.32	0.45
10:AJ:23:ILE:HG23	10:AJ:85:LEU:HD13	1.98	0.45
48:DQ:110:THR:C	48:DQ:112:GLU:H	2.20	0.45
49:DR:103:ARG:HD3	49:DR:108:GLY:O	2.17	0.45
26:D1:6:GLU:C	26:D1:7:ILE:HD12	2.36	0.45
1:CA:1346:A:C5'	9:CI:120:ARG:HH12	2.28	0.45
11:CK:126:ARG:C	11:CK:128:ALA:N	2.67	0.45
45:BN:3:THR:C	45:BN:5:VAL:N	2.68	0.45
29:D4:5:ILE:CD1	29:D4:5:ILE:N	2.78	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:50:ILE:O	7:CG:54:THR:O	2.35	0.45
35:BA:1515:G:H2'	35:BA:1516:C:C6	2.52	0.45
41:BG:116:ASP:O	41:BG:117:PHE:CB	2.60	0.45
22:CV:76:C:O2'	22:CV:77:C:H5''	2.17	0.45
1:AA:297:G:N2	1:AA:300:A:OP2	2.47	0.45
11:AK:59:TYR:O	11:AK:63:LEU:HD23	2.17	0.45
1:CA:862:C:H2'	1:CA:863:U:C6	2.52	0.45
1:AA:72:C:H2'	1:AA:73:G:C8	2.51	0.45
20:CT:39:LYS:O	20:CT:42:GLN:HB3	2.17	0.45
8:CH:61:VAL:O	8:CH:63:LEU:HD22	2.17	0.45
49:BR:27:SER:HB3	49:BR:34:ILE:HD11	1.99	0.45
35:DA:1509(A):A:H2'	35:DA:1509(B):A:H8	1.80	0.45
35:DA:1009:A:C5'	52:DU:59:ARG:HD3	2.47	0.45
43:BI:111:PRO:O	43:BI:116:LEU:HD22	2.16	0.45
35:BA:2743:C:H2'	35:BA:2744:G:O4'	2.17	0.45
2:CB:231:GLU:HB2	2:CB:232:PRO:CD	2.47	0.45
38:DD:2:ALA:O	38:DD:3:VAL:CB	2.65	0.45
1:CA:677:U:O2'	1:CA:678:U:H5'	2.16	0.45
1:AA:283:C:C2	1:AA:284:G:C8	3.05	0.45
20:CT:96:GLY:O	20:CT:97:ALA:O	2.34	0.45
1:AA:660:G:H2'	1:AA:661:G:C8	2.52	0.45
35:DA:2033:A:O2'	35:DA:2034:U:P	2.75	0.45
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.32	0.45
1:AA:1163:C:H2'	1:AA:1164:G:H8	1.81	0.45
22:CY:58:C:H2'	22:CY:59:G:C8	2.51	0.45
22:CY:17:C:OP2	57:DZ:186:GLU:HB3	2.16	0.45
22:AY:56:U:H5''	22:AY:57:U:OP2	2.17	0.45
23:CW:69:G:N1	23:CW:70:G:C4	2.85	0.45
23:CW:33:G:H2'	23:CW:34:C:H4'	1.97	0.45
22:AV:10:G:H2'	22:AV:11:C:C6	2.51	0.45
22:AV:43:G:O2'	22:AV:44:A:H5'	2.17	0.45
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.75	0.45
22:CV:59:G:H2'	22:CV:60:A:H5'	1.98	0.45
51:DT:91:ARG:HG2	51:DT:116:ALA:HB2	1.99	0.45
31:B6:43:CYS:O	31:B6:44:ARG:NH1	2.50	0.45
23:AW:23:A:H61	23:AW:48:G:H2'	1.81	0.45
33:B8:48:PHE:C	33:B8:49:VAL:HG22	2.38	0.45
33:B8:55:ALA:O	33:B8:58:ILE:HB	2.18	0.45
23:CW:16:U:O3'	23:CW:62:U:O3'	2.34	0.45
35:DA:2491:U:H4'	35:DA:2570:G:OP1	2.17	0.45
10:CJ:6:ILE:CD1	10:CJ:72:VAL:HB	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DN:15:LEU:HD12	45:DN:136:GLU:HG3	1.99	0.45
46:BO:69:ILE:HD12	46:BO:69:ILE:H	1.81	0.45
41:DG:42:GLY:O	41:DG:43:LEU:HB2	2.16	0.45
53:BV:2:PHE:HB3	53:BV:3:ALA:H	1.50	0.45
47:BP:146:VAL:CG2	47:BP:147:LEU:H	2.00	0.45
41:DG:85:GLY:C	41:DG:87:PRO:HD3	2.38	0.45
49:BR:55:ALA:CB	49:BR:79:LEU:HD22	2.47	0.45
49:DR:2:ARG:CD	49:DR:2:ARG:O	2.60	0.45
36:BB:38:C:O4'	50:BS:95:HIS:NE2	2.50	0.45
3:CC:17:ASP:O	3:CC:18:TRP:C	2.55	0.45
2:CB:47:THR:OG1	2:CB:202:PRO:HG2	2.17	0.45
31:D6:37:ARG:NH1	31:D6:39:TYR:HE2	2.15	0.45
48:DQ:42:ILE:HA	48:DQ:46:GLN:OE1	2.16	0.45
27:D2:44:LEU:O	27:D2:45:SER:CB	2.64	0.45
9:CI:18:PHE:HB3	9:CI:20:ARG:HH12	1.82	0.45
30:D5:50:GLY:HA3	30:D5:55:ARG:HB2	1.99	0.45
52:DU:108:GLU:O	52:DU:111:GLU:N	2.48	0.45
17:CQ:17:LYS:HA	17:CQ:46:ASP:O	2.17	0.45
35:BA:2147:G:H2'	35:BA:2148:G:C4'	2.47	0.45
36:BB:29:A:H2'	36:BB:30:C:C6	2.52	0.45
39:DE:65:GLY:C	39:DE:67:PHE:N	2.68	0.45
2:AB:112:VAL:C	2:AB:114:ARG:N	2.70	0.45
9:CI:26:VAL:HA	9:CI:61:ALA:O	2.16	0.45
27:B2:48:HIS:O	27:B2:49:LYS:C	2.56	0.45
43:BI:127:VAL:HG22	43:BI:139:GLN:CB	2.47	0.45
20:CT:89:ARG:HD2	20:CT:104:LEU:HD21	1.99	0.45
47:BP:92:GLU:HG3	47:BP:93:GLY:N	2.25	0.45
20:CT:100:ILE:O	20:CT:100:ILE:CG2	2.65	0.45
1:CA:939:G:H2'	1:CA:940:C:H6	1.81	0.45
45:BN:48:MET:C	45:BN:48:MET:HE3	2.38	0.45
38:BD:182:LEU:H	38:BD:272:ALA:CB	2.29	0.45
50:DS:17:ARG:C	50:DS:19:LYS:H	2.20	0.45
47:DP:71:VAL:C	47:DP:73:GLY:N	2.70	0.45
35:DA:1771:C:C1'	35:DA:1786:A:C8	3.00	0.45
57:BZ:10:ARG:HG2	57:BZ:11:GLU:N	2.32	0.45
35:BA:2543:G:O2'	35:BA:2544:G:H5'	2.17	0.45
11:AK:21:ILE:HB	11:AK:84:VAL:HA	1.99	0.45
7:AG:50:ILE:O	7:AG:54:THR:O	2.35	0.45
1:CA:600:C:O2'	1:CA:601:C:H5'	2.17	0.45
1:AA:90:U:P	1:AA:91:C:H5'	2.57	0.45
11:CK:34:ASP:CB	11:CK:35:PRO:CD	2.93	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:69:HIS:N	3:AC:69:HIS:HD2	2.15	0.45
20:AT:10:LEU:HD12	20:AT:11:SER:N	2.32	0.45
1:CA:72:C:H2'	1:CA:73:G:C8	2.52	0.45
49:DR:30:THR:HG22	49:DR:30:THR:O	2.17	0.45
34:D9:15:LYS:HB3	35:DA:1033:U:O4	2.17	0.45
35:BA:523:C:H2'	35:BA:524:U:C5'	2.47	0.45
8:CH:56:LYS:O	8:CH:58:TYR:HD1	2.00	0.45
35:DA:1030:G:OP2	48:DQ:128:LYS:NZ	2.50	0.45
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.31	0.45
22:AV:78:A:H8	35:BA:2602:A:C6	2.34	0.45
38:DD:132:PRO:HG3	38:DD:190:TYR:CE1	2.52	0.45
47:DP:65:ARG:HG3	47:DP:65:ARG:NH1	2.31	0.45
35:DA:1002:G:H2'	35:DA:1003:G:O4'	2.16	0.45
35:DA:184:C:H2'	35:DA:185:U:C6	2.52	0.45
35:BA:2729:G:H2'	35:BA:2730:C:C6	2.53	0.45
35:DA:2716:U:O2'	35:DA:2717:G:H5'	2.16	0.45
35:DA:1231:G:H2'	35:DA:1232:G:C8	2.52	0.45
35:BA:2769:C:H2'	35:BA:2770:G:O4'	2.17	0.45
1:CA:773:G:O2'	1:CA:774:G:H5'	2.16	0.45
10:AJ:46:ARG:HH11	10:AJ:46:ARG:HG2	1.82	0.45
33:B8:8:LYS:HD2	33:B8:8:LYS:N	2.32	0.45
1:CA:131:C:H2'	1:CA:132:C:C6	2.51	0.45
26:B1:95:LEU:HA	26:B1:95:LEU:HD12	1.84	0.45
22:CY:29:A:C4	22:CY:30:U:C5	3.05	0.44
22:CY:67:C:H5''	22:CY:67:C:H6	1.81	0.44
23:AW:3:G:H2'	23:AW:3:G:N3	2.32	0.44
23:CW:3:G:H2'	23:CW:4:C:O5'	2.18	0.44
22:AV:5:C:C6	22:AV:6:C:C5	3.05	0.44
22:CV:5:C:C6	22:CV:6:C:C5	3.03	0.44
22:CV:69:G:C5	22:CV:70:G:N7	2.85	0.44
46:DO:77:ILE:HD13	51:DT:74:ARG:CG	2.47	0.44
23:AW:25:A:C6	23:AW:26:G:O6	2.71	0.44
47:BP:50:ARG:HG3	47:BP:51:PHE:N	2.32	0.44
35:DA:803:U:O2'	35:DA:804:A:H5'	2.17	0.44
56:BY:76:CYS:CB	56:BY:96:ILE:HD11	2.39	0.44
56:DY:40:GLU:HA	56:DY:40:GLU:OE1	2.17	0.44
1:AA:1207:G:O2'	1:AA:1208:C:H5'	2.16	0.44
23:CW:15:G:OP2	23:CW:16:U:H5	2.00	0.44
45:BN:15:LEU:CB	45:BN:134:ARG:HB2	2.36	0.44
1:CA:962:C:H2'	1:CA:963:G:H8	1.82	0.44
10:CJ:34:VAL:HG21	10:CJ:74:ILE:HG22	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DN:133:GLN:O	45:DN:134:ARG:CB	2.64	0.44
5:AE:92:LYS:O	5:AE:118:ILE:HD12	2.18	0.44
53:DV:62:LEU:N	53:DV:62:LEU:HD22	2.32	0.44
29:D4:28:LYS:CA	29:D4:28:LYS:HE3	2.43	0.44
57:DZ:109:ALA:HB3	57:DZ:145:GLU:CB	2.38	0.44
26:D1:52:ARG:HD3	26:D1:52:ARG:HA	1.68	0.44
8:CH:19:VAL:HG23	8:CH:21:LYS:HB2	1.99	0.44
35:BA:2307:G:H3'	35:BA:2307:G:N3	2.33	0.44
19:CS:39:THR:HG22	19:CS:40:ILE:N	2.32	0.44
2:AB:44:LEU:HA	2:AB:47:THR:OG1	2.17	0.44
2:AB:47:THR:OG1	2:AB:202:PRO:HG2	2.16	0.44
53:BV:91:TYR:N	53:BV:91:TYR:CD1	2.85	0.44
39:BE:116:VAL:CG2	39:BE:122:PHE:CD2	3.00	0.44
57:BZ:141:VAL:HG13	57:BZ:144:LEU:HD21	1.99	0.44
35:DA:2865:U:C4	35:DA:2866:U:C4	3.05	0.44
9:AI:18:PHE:HB3	9:AI:20:ARG:HH12	1.82	0.44
40:BF:8:GLN:O	40:BF:9:ILE:C	2.56	0.44
50:BS:31:SER:C	50:BS:33:LYS:N	2.70	0.44
35:BA:2297:C:O2'	35:BA:2298:A:H5'	2.18	0.44
54:BW:4:LYS:HD3	54:BW:6:ILE:HD11	1.99	0.44
1:AA:828:A:N3	2:AB:26:PRO:HG3	2.32	0.44
45:DN:48:MET:HE3	45:DN:48:MET:N	2.32	0.44
35:DA:2473:U:C5	35:DA:2474:C:H1'	2.52	0.44
41:DG:25:TYR:HD1	41:DG:30:GLU:OE2	1.99	0.44
45:BN:62:VAL:HG11	45:BN:67:LEU:CD2	2.46	0.44
1:AA:959:A:H3'	1:AA:960:U:C5'	2.47	0.44
25:B0:84:LEU:H	25:B0:84:LEU:CD1	2.25	0.44
1:AA:1047:G:O2'	1:AA:1048:G:H5'	2.18	0.44
11:AK:124:LYS:HB3	11:AK:124:LYS:HZ3	1.82	0.44
45:BN:3:THR:O	45:BN:3:THR:HG22	2.17	0.44
4:CD:98:GLU:OE2	4:CD:107:ARG:HD2	2.17	0.44
1:CA:90:U:P	1:CA:91:C:H5'	2.57	0.44
1:CA:43:C:H42	1:CA:399:G:H1	1.65	0.44
47:DP:80:TYR:CE1	47:DP:111:ARG:HD3	2.52	0.44
49:DR:13:HIS:ND1	49:DR:13:HIS:O	2.50	0.44
36:DB:28:C:H2'	36:DB:29:A:H8	1.81	0.44
1:AA:596:C:H6	1:AA:596:C:O5'	2.00	0.44
39:BE:203:LYS:C	39:BE:203:LYS:HD2	2.37	0.44
39:DE:203:LYS:HD2	39:DE:203:LYS:C	2.36	0.44
38:DD:186:HIS:CD2	38:DD:188:GLU:HB2	2.49	0.44
1:CA:189(D):C:H1'	1:CA:189(H):G:C2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:32:ARG:NH1	7:AG:32:ARG:HG2	2.30	0.44
7:CG:40:ALA:O	7:CG:44:TYR:CD2	2.69	0.44
33:D8:23:VAL:HG12	33:D8:46:ARG:HH11	1.82	0.44
1:CA:921:U:H2'	1:CA:922:G:O4'	2.16	0.44
40:DF:160:ASN:ND2	40:DF:160:ASN:C	2.70	0.44
28:D3:2:PRO:O	28:D3:3:ARG:O	2.36	0.44
40:BF:160:ASN:OD1	40:BF:163:VAL:HG23	2.17	0.44
35:DA:319:C:H2'	35:DA:320:A:O4'	2.17	0.44
35:BA:236:C:H2'	35:BA:237:C:C6	2.52	0.44
35:DA:828:U:H3'	35:DA:828:U:O2	2.18	0.44
14:AN:12:ARG:NH1	14:AN:12:ARG:CB	2.79	0.44
35:DA:654(P):C:C2'	35:DA:654(Q):C:H5'	2.47	0.44
35:BA:903:C:H2'	35:BA:904:C:C6	2.51	0.44
35:BA:840:C:H2'	35:BA:841:A:C8	2.52	0.44
32:B7:47:ARG:HH11	55:BX:60:ARG:HH21	1.65	0.44
35:BA:2052:G:H4'	39:BE:143:ASN:O	2.16	0.44
2:CB:183:PRO:HA	2:CB:198:ASP:OD2	2.18	0.44
1:AA:1196:U:O4	24:AX:23:A:C8	2.71	0.44
35:BA:280:C:O2'	35:BA:281:G:H5'	2.17	0.44
27:B2:28:LYS:HD3	27:B2:31:GLU:OE2	2.16	0.44
40:DF:70:THR:HG22	40:DF:72:ARG:HG2	1.99	0.44
1:AA:773:G:O2'	1:AA:774:G:H5'	2.17	0.44
3:AC:60:ALA:O	3:AC:61:ALA:HB2	2.18	0.44
35:BA:2263:C:O2'	35:BA:2264:C:H5'	2.17	0.44
13:AM:63:THR:HG22	13:AM:64:TRP:N	2.32	0.44
35:BA:1231:G:H2'	35:BA:1232:G:H8	1.81	0.44
1:AA:479:C:O2	1:AA:479:C:H2'	2.16	0.44
5:AE:28:PHE:N	5:AE:28:PHE:CD1	2.85	0.44
36:DB:3:C:H42	36:DB:118:G:H1	1.64	0.44
35:DA:2236:C:C2'	35:DA:2237:G:H5'	2.47	0.44
22:CY:25:A:C2	22:CY:26:G:C4	3.05	0.44
22:CY:57:U:OP1	48:DQ:51:ARG:NH2	2.50	0.44
23:AW:40:A:N6	23:AW:42:C:C2	2.85	0.44
22:AY:57:U:O4'	57:BZ:183:LEU:CA	2.66	0.44
23:CW:3:G:H2'	23:CW:3:G:N3	2.31	0.44
23:CW:29:A:H8	23:CW:29:A:P	2.40	0.44
23:CW:33:G:C2'	23:CW:34:C:H4'	2.47	0.44
51:DT:10:VAL:O	51:DT:13:ARG:HG2	2.17	0.44
22:AV:1:G:H2'	22:AV:2:G:H8	1.81	0.44
22:AV:11:C:C2	22:AV:26:G:N2	2.85	0.44
22:AV:57:U:C6	22:AV:59:G:OP2	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:74:C:H2'	22:AV:75:A:O4'	2.17	0.44
36:DB:8:U:H5'	36:DB:8:U:H6	1.82	0.44
22:CV:15:G:OP2	22:CV:15:G:C8	2.70	0.44
41:DG:46:ALA:CB	41:DG:82:LEU:HD11	2.37	0.44
35:DA:1794:U:H1'	35:DA:1900:A:N3	2.32	0.44
35:BA:1899:G:N2	35:BA:1902:C:C4	2.85	0.44
23:AW:20:G:C2	23:AW:58:C:C2	3.05	0.44
43:DI:77:LEU:HD21	43:DI:79:ILE:CG1	2.48	0.44
12:CL:89:ARG:NH1	12:CL:97:ARG:HG2	2.28	0.44
47:BP:32:THR:O	47:BP:33:ARG:HB3	2.18	0.44
35:BA:587:C:C6	47:BP:33:ARG:HD3	2.52	0.44
1:AA:523:A:H61	12:AL:92:ASP:CB	2.30	0.44
1:CA:1055:A:OP1	1:CA:1055:A:C8	2.70	0.44
1:CA:1052:U:O2'	1:CA:1055:A:OP2	2.33	0.44
10:CJ:16:LEU:O	10:CJ:16:LEU:HD13	2.16	0.44
10:CJ:30:SER:CA	10:CJ:80:LYS:HE2	2.39	0.44
10:CJ:8:LEU:HD13	10:CJ:20:ALA:CB	2.45	0.44
52:DU:65:ILE:HD11	52:DU:93:LYS:HA	1.98	0.44
51:BT:48:ILE:O	51:BT:63:VAL:HA	2.18	0.44
28:D3:7:LYS:CG	28:D3:34:GLU:HG2	2.47	0.44
31:B6:5:VAL:HG11	31:B6:7:ILE:HG22	1.98	0.44
12:AL:102:ARG:HE	12:AL:102:ARG:HB3	1.44	0.44
49:DR:63:ARG:NH1	49:DR:80:PHE:CG	2.85	0.44
35:DA:484:C:OP1	56:DY:49:VAL:HG13	2.17	0.44
1:CA:738:C:H2'	1:CA:739:C:H6	1.81	0.44
1:AA:1308:U:OP1	13:AM:98:VAL:N	2.50	0.44
2:CB:44:LEU:HA	2:CB:47:THR:OG1	2.17	0.44
2:AB:48:MET:HA	2:AB:51:LEU:HD12	1.98	0.44
41:BG:141:PHE:HB3	41:BG:142:PRO:HD2	2.00	0.44
22:CY:53:U:N3	22:CY:54:G:N7	2.65	0.44
9:AI:5:TYR:HD2	9:AI:18:PHE:HE1	1.64	0.44
38:DD:35:LYS:HZ2	38:DD:36:PRO:N	2.15	0.44
15:CO:86:GLY:O	15:CO:87:ILE:HG23	2.17	0.44
9:CI:48:GLU:OE1	9:CI:51:ARG:HD2	2.17	0.44
35:BA:1544:A:O2'	35:BA:1545:A:H5'	2.18	0.44
38:DD:215:LEU:HD12	38:DD:217:ARG:HH21	1.82	0.44
3:CC:182:ILE:HG12	3:CC:203:PHE:HD1	1.81	0.44
55:DX:12:VAL:HG13	55:DX:27:THR:O	2.17	0.44
40:DF:84:VAL:C	40:DF:86:GLY:N	2.70	0.44
38:BD:16:MET:HB2	38:BD:207:GLY:HA3	1.99	0.44
3:CC:113:ALA:O	3:CC:115:LEU:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DF:179:GLU:OE1	40:DF:179:GLU:N	2.50	0.44
35:BA:2807:G:H2'	35:BA:2808:U:C5'	2.43	0.44
31:D6:24:GLU:HB3	31:D6:25:LYS:H	1.59	0.44
1:CA:1212:U:H4'	1:CA:1213:A:C8	2.52	0.44
1:CA:818:G:H3'	1:CA:819:A:H5''	1.99	0.44
49:BR:72:ASP:OD2	49:BR:74:LYS:HB3	2.17	0.44
35:DA:593:G:C6	35:DA:594:U:C4	3.05	0.44
5:AE:105:VAL:HB	5:AE:106:PRO:HD3	1.97	0.44
18:CR:25:THR:O	18:CR:26:LEU:HG	2.17	0.44
22:CV:39:A:C6	24:CX:16:A:N6	2.86	0.44
35:DA:2755:C:O2'	35:DA:2756:U:H2'	2.18	0.44
49:BR:100:LEU:HD22	49:BR:112:ALA:HA	1.99	0.44
11:CK:20:TYR:C	11:CK:21:ILE:HD12	2.37	0.44
2:AB:131:PRO:O	2:AB:135:GLN:HG3	2.17	0.44
38:DD:221:VAL:CG2	38:DD:226:MET:CE	2.95	0.44
36:DB:28:C:OP1	50:DS:31:SER:OG	2.33	0.44
1:AA:992:U:O2'	1:AA:993:G:P	2.75	0.44
13:AM:24:GLY:C	13:AM:25:ILE:HG13	2.38	0.44
43:DI:31:LEU:HD12	43:DI:31:LEU:H	1.82	0.44
35:DA:2223:G:H2'	35:DA:2224:G:C5'	2.47	0.44
35:DA:2197:U:O2'	35:DA:2198:A:H2'	2.17	0.44
35:DA:523:C:H2'	35:DA:524:U:C5'	2.46	0.44
38:DD:270:ILE:O	38:DD:270:ILE:HD12	2.17	0.44
11:AK:11:LYS:O	11:AK:13:GLN:HG3	2.17	0.44
49:DR:27:SER:HB3	49:DR:34:ILE:HD11	1.98	0.44
35:DA:2262:U:O2'	35:DA:2263:C:H5'	2.17	0.44
48:BQ:21:THR:HG21	48:BQ:101:ARG:CB	2.48	0.44
49:BR:25:ALA:O	49:BR:29:LEU:HB2	2.17	0.44
35:BA:80:G:C2'	35:BA:81:G:H5'	2.48	0.44
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.17	0.44
33:D8:8:LYS:N	33:D8:8:LYS:HD2	2.31	0.44
35:DA:1831:G:H2'	35:DA:1832:C:H6	1.81	0.44
1:CA:1469:G:H2'	1:CA:1470:G:C8	2.52	0.44
1:AA:1175:G:H2'	1:AA:1176:A:C8	2.52	0.44
35:DA:402:A:H2'	35:DA:403:U:H5'	2.00	0.44
35:DA:2319:G:C5	35:DA:2320:A:N6	2.85	0.44
35:BA:1773:A:H2'	35:BA:1774:C:H5'	1.98	0.44
38:DD:166:GLN:CA	38:DD:166:GLN:NE2	2.80	0.44
27:B2:43:GLN:O	27:B2:44:LEU:O	2.35	0.44
8:CH:23:SER:OG	8:CH:24:THR:N	2.49	0.44
1:CA:1155:G:O2'	1:CA:1156:G:H5'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1501:C:H1'	38:BD:100:GLY:HA2	2.00	0.44
15:AO:37:ASN:HD22	15:AO:37:ASN:N	2.14	0.44
47:DP:131:SER:O	47:DP:132:LYS:C	2.55	0.44
35:DA:1027:A:C2	35:DA:2488:A:H5'	2.51	0.44
35:DA:2150:U:H2'	35:DA:2151:G:C8	2.52	0.44
35:BA:2823:A:OP1	39:BE:113:PHE:HB2	2.18	0.44
1:CA:1196:U:C2	24:CX:23:A:N1	2.85	0.44
23:AW:44:A:H3'	23:AW:45:U:H5''	1.99	0.44
22:AY:19:G:OP1	22:AY:19:G:C8	2.60	0.44
23:CW:4:C:H42	23:CW:72:C:N4	2.15	0.44
22:AV:25:A:N1	22:AV:26:G:C6	2.85	0.44
22:AV:43:G:C4	22:AV:44:A:C8	3.05	0.44
22:CV:28:G:C6	22:CV:29:A:C5	3.06	0.44
46:DO:104:ARG:HE	51:DT:33:LYS:HE2	1.80	0.44
35:BA:812:C:H5'	47:BP:25:SER:HB2	2.00	0.44
35:DA:587:C:C2'	47:DP:33:ARG:NH2	2.80	0.44
42:BH:41:MET:HE1	42:BH:53:GLU:H	1.82	0.44
43:DI:83:ALA:HA	43:DI:88:ILE:HG23	1.99	0.44
1:AA:532:A:N6	3:AC:156:ARG:HH12	2.15	0.44
43:BI:98:ALA:CB	43:BI:109:ILE:HB	2.46	0.44
30:D5:3:LYS:HE3	35:DA:2015:A:H2	1.81	0.44
45:DN:23:LEU:O	45:DN:23:LEU:HD23	2.17	0.44
35:BA:2491:U:H4'	35:BA:2570:G:OP1	2.17	0.44
2:CB:206:ASP:O	2:CB:211:ILE:HD11	2.17	0.44
47:DP:50:ARG:HG3	47:DP:51:PHE:N	2.32	0.44
41:DG:42:GLY:HA2	41:DG:89:GLY:CA	2.30	0.44
39:DE:52:LEU:HB2	39:DE:76:ARG:HB2	1.99	0.44
39:DE:51:PHE:N	39:DE:74:PRO:CB	2.81	0.44
39:BE:119:ARG:HD2	39:BE:120:TRP:CE2	2.51	0.44
9:CI:15:ALA:HB2	9:CI:65:VAL:CB	2.47	0.44
40:BF:34:TRP:HB2	47:BP:10:PRO:O	2.17	0.44
22:CV:36:AG9:NH2	22:CV:36:AG9:H2G	2.33	0.44
41:BG:54:GLU:O	41:BG:58:GLN:HG3	2.18	0.44
35:BA:990:A:OP2	35:BA:991:C:OP2	2.35	0.44
1:CA:1126:U:O2'	1:CA:1127:G:H5'	2.18	0.44
9:CI:5:TYR:CD2	9:CI:18:PHE:HE1	2.34	0.44
17:CQ:65:ILE:HD11	17:CQ:72:ARG:HG2	1.98	0.44
19:AS:43:GLU:O	19:AS:43:GLU:CG	2.57	0.44
35:BA:1657:C:H2'	35:BA:1658:C:H6	1.80	0.44
55:DX:27:THR:HA	55:DX:80:ILE:HA	1.99	0.44
35:DA:1528:A:C2	35:DA:1542:A:H2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:6:LYS:HE3	19:CS:6:LYS:N	2.31	0.44
35:DA:1281:G:C5'	35:DA:1281:G:H8	2.25	0.44
1:AA:542:G:C5'	4:AD:41:GLY:HA3	2.42	0.44
1:CA:532:A:H61	3:CC:193:TYR:HB3	1.80	0.44
37:BC:4:HIS:HD1	37:BC:8:TYR:HE2	1.65	0.44
57:DZ:128:VAL:HG21	57:DZ:132:ASN:CB	2.48	0.44
38:BD:108:PRO:CG	38:BD:111:LEU:HD23	2.46	0.44
35:DA:626:U:C5'	35:DA:627:A:H5'	2.48	0.44
10:CJ:23:ILE:HG23	10:CJ:85:LEU:HD13	1.99	0.44
33:D8:39:LYS:HG2	33:D8:43:GLN:NE2	2.28	0.44
6:AF:3:ARG:HG3	6:AF:3:ARG:NH1	2.31	0.44
50:BS:89:ARG:CB	50:BS:92:TYR:HB3	2.45	0.44
39:DE:37:ARG:HD2	39:DE:42:ASP:CG	2.37	0.44
1:AA:1005:A:C2'	1:AA:1006:C:H5'	2.47	0.44
1:AA:154:C:O2'	1:AA:155:C:H5'	2.17	0.44
48:BQ:135:ASP:C	48:BQ:137:TYR:H	2.20	0.44
35:DA:1188:U:H4'	53:DV:79:VAL:HG22	1.98	0.44
38:DD:101:GLU:HG2	38:DD:102:LYS:N	2.33	0.44
35:BA:1719:G:C6	35:BA:1720:U:C4	3.06	0.44
1:AA:105:G:H2'	1:AA:106:C:H6	1.79	0.44
56:BY:88:LYS:NZ	56:BY:93:GLY:HA3	2.33	0.44
13:CM:112:GLY:CA	13:CM:113:PRO:HG2	2.46	0.44
40:DF:175:THR:O	40:DF:176:LEU:HB2	2.17	0.44
35:DA:314:A:H2'	35:DA:315:G:C8	2.52	0.44
1:AA:217:C:O2'	1:AA:470:C:N4	2.50	0.44
20:AT:10:LEU:O	20:AT:13:LEU:HD13	2.17	0.44
43:DI:8:PRO:HB3	43:DI:14:ASP:N	2.32	0.44
35:DA:2854:G:H2'	35:DA:2855:C:C6	2.52	0.44
1:AA:1072:G:N2	2:AB:107:THR:HG21	2.32	0.44
5:AE:40:ARG:NH1	5:AE:40:ARG:HG2	2.32	0.44
35:BA:1667:G:H22	35:BA:1992:G:H5'	1.83	0.44
46:DO:98:VAL:CG1	46:DO:117:LEU:HB3	2.47	0.44
4:CD:163:GLU:HA	4:CD:163:GLU:OE1	2.17	0.44
25:D0:73:GLY:C	25:D0:75:LEU:H	2.20	0.44
17:CQ:92:ARG:O	17:CQ:95:TYR:CD2	2.70	0.44
47:DP:125:VAL:CG1	47:DP:138:LEU:HD21	2.47	0.44
47:DP:46:LYS:HB3	47:DP:52:GLU:HG2	1.99	0.44
35:BA:649:G:H2'	35:BA:650:C:C6	2.53	0.44
7:CG:105:VAL:HG12	7:CG:109:ASN:HD21	1.83	0.44
35:BA:1006:C:O2	45:BN:106:MET:HG2	2.17	0.44
35:BA:2150:U:H2'	35:BA:2151:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:15:G:O2'	35:BA:16:G:H5'	2.17	0.44
35:DA:2186:G:H2'	35:DA:2187:G:C8	2.52	0.44
35:DA:2650:U:O2'	35:DA:2651:C:H5'	2.17	0.44
48:BQ:121:ALA:O	48:BQ:123:HIS:N	2.50	0.44
1:AA:83:U:H2'	1:AA:84:U:C5	2.53	0.44
39:BE:176:ILE:HG22	39:BE:178:GLU:HB3	1.98	0.44
35:DA:198:C:H5'	35:DA:2244:U:OP1	2.18	0.44
49:DR:57:ARG:O	49:DR:59:ASP:N	2.43	0.44
35:DA:2774:C:H2'	35:DA:2775:A:O4'	2.18	0.44
3:CC:61:ALA:O	3:CC:62:ASP:HB2	2.18	0.44
5:AE:127:ASN:O	5:AE:131:ILE:HG12	2.17	0.44
22:AV:57:U:C4	22:AV:59:G:OP2	2.71	0.44
1:CA:1442:G:H2'	1:CA:1442(A):G:H5''	1.99	0.44
51:DT:90:GLN:O	51:DT:91:ARG:C	2.55	0.44
43:DI:93:THR:CG2	43:DI:119:PRO:HB3	2.44	0.44
1:AA:962:C:H2'	1:AA:963:G:H8	1.83	0.44
43:BI:85:GLU:HB3	43:BI:86:THR:H	1.63	0.44
45:DN:57:ALA:C	45:DN:58:ASP:OD1	2.56	0.44
35:DA:1495:A:C2	35:DA:1496:A:C2	3.05	0.44
41:BG:109:VAL:C	41:BG:112:PRO:HD2	2.37	0.44
53:BV:22:VAL:O	53:BV:23:GLU:HB2	2.17	0.44
52:BU:90:VAL:CG2	53:BV:47:VAL:HG21	2.48	0.44
41:DG:58:GLN:HG3	41:DG:59:GLU:H	1.82	0.44
1:CA:473:G:H5''	16:CP:81:ARG:HE	1.82	0.44
39:BE:61:ARG:C	39:BE:63:LEU:N	2.70	0.44
9:CI:114:TYR:HD2	10:CJ:60:ARG:HG3	1.82	0.44
5:AE:146:ALA:O	5:AE:147:ASP:C	2.54	0.44
1:AA:1308:U:H5'	13:AM:110:ARG:HD2	1.99	0.44
31:D6:7:ILE:CG1	31:D6:29:ASN:ND2	2.81	0.44
42:DH:24:VAL:HG11	42:DH:72:ILE:CD1	2.47	0.44
35:DA:1240:U:O2'	35:DA:1241:A:H5'	2.17	0.44
39:BE:117:MET:HE3	39:BE:124:GLY:HA3	1.99	0.44
57:BZ:150:LEU:CD2	57:BZ:150:LEU:H	2.30	0.44
3:CC:84:ILE:HD11	3:CC:88:ARG:NH2	2.32	0.44
35:DA:2849:U:H1'	35:DA:2866:U:H6	1.81	0.44
30:D5:54:GLY:C	30:D5:55:ARG:HE	2.20	0.44
35:DA:1045:A:H3'	35:DA:1045:A:N3	2.33	0.44
3:AC:206:GLU:HG2	3:AC:207:VAL:N	2.22	0.44
40:DF:9:ILE:HG23	40:DF:13:SER:O	2.18	0.44
35:BA:2133:G:H2'	35:BA:2157:G:N2	2.33	0.44
1:AA:197:A:N6	1:AA:221:C:C5'	2.79	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1658:C:H2'	35:BA:1659:U:C6	2.52	0.44
3:CC:206:GLU:O	3:CC:208:ILE:N	2.51	0.44
35:DA:2147:G:H2'	35:DA:2148:G:C4'	2.47	0.44
35:DA:1789:A:H2'	35:DA:1790:C:O4'	2.17	0.44
35:BA:2473:U:O4'	35:BA:2473:U:O2	2.34	0.44
1:CA:1107:C:C2'	1:CA:1108:G:H5''	2.48	0.44
1:CA:1314:C:C5	19:CS:6:LYS:HE2	2.37	0.44
35:DA:2228:G:OP2	38:DD:261:LYS:HE3	2.17	0.44
3:AC:113:ALA:HB3	3:AC:114:PRO:CD	2.41	0.44
35:DA:2175:C:H1'	37:DC:218:THR:O	2.17	0.44
4:CD:152:SER:CA	4:CD:155:LEU:HG	2.45	0.44
35:DA:259:G:N2	35:DA:621:A:H8	2.13	0.44
31:B6:25:LYS:NZ	33:B8:34:TRP:HZ2	2.16	0.44
11:AK:44:SER:H	11:AK:47:VAL:CG2	2.30	0.44
38:BD:206:LEU:HD23	38:BD:206:LEU:HA	1.78	0.44
5:AE:72:GLN:C	5:AE:74:GLY:N	2.69	0.44
42:BH:105:LEU:HD23	42:BH:105:LEU:N	2.27	0.44
1:CA:918:A:O2'	1:CA:919:A:H5'	2.18	0.44
35:BA:174:C:O2	35:BA:174:C:H2'	2.17	0.44
1:CA:992:U:O2'	1:CA:993:G:P	2.76	0.44
35:DA:1532:C:O2'	35:DA:1533:G:H5'	2.17	0.44
1:AA:862:C:H2'	1:AA:863:U:C6	2.52	0.44
38:BD:135:PHE:CZ	4:CD:166:LYS:HG2	2.52	0.44
27:B2:36:ARG:HG3	27:B2:36:ARG:HH11	1.82	0.44
50:DS:103:GLU:O	50:DS:104:GLY:C	2.55	0.44
17:AQ:63:ARG:O	17:AQ:64:PRO:C	2.56	0.44
35:DA:1996:C:C5	46:DO:32:TYR:OH	2.69	0.44
40:BF:65:TRP:CZ3	40:BF:75:HIS:HD2	2.35	0.44
1:CA:22:G:H2'	1:CA:23:C:H6	1.81	0.44
48:BQ:21:THR:CG2	48:BQ:101:ARG:HB2	2.46	0.44
35:DA:1509(B):A:O2'	35:DA:1510:G:H5'	2.18	0.44
18:AR:44:LEU:CD2	18:AR:79:LEU:HD22	2.47	0.44
2:CB:180:LEU:O	2:CB:181:PHE:HB2	2.17	0.44
1:CA:54:C:H2'	1:CA:352:C:N4	2.32	0.44
36:BB:45:A:H1'	41:BG:95:ARG:NH2	2.32	0.44
35:DA:2305:A:C2	41:DG:154:GLY:HA3	2.53	0.44
35:BA:1668:A:N3	35:BA:1670:C:C4	2.85	0.44
35:BA:218:A:C2	35:BA:235:U:H4'	2.52	0.44
42:DH:94:TYR:N	42:DH:94:TYR:HD1	2.14	0.44
55:DX:47:PHE:O	55:DX:48:LYS:C	2.55	0.44
1:AA:836:G:C6	1:AA:851:G:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:119:ARG:HH11	45:BN:119:ARG:HG3	1.82	0.44
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.17	0.44
37:DC:214:TYR:CZ	37:DC:224:ARG:HD2	2.53	0.44
45:BN:91:LEU:HA	45:BN:95:PRO:HB3	1.99	0.44
35:DA:985:C:H2'	35:DA:986:C:H6	1.83	0.44
35:DA:610:G:H2'	35:DA:611:C:C6	2.53	0.44
15:CO:25:THR:HG21	15:CO:70:LEU:HB2	1.99	0.44
1:CA:933:G:O6	7:CG:3:ARG:NH2	2.50	0.44
35:BA:560:C:H4'	52:BU:52:ARG:CZ	2.47	0.44
1:AA:977:A:H2'	1:AA:978:A:H5'	1.98	0.44
34:B9:30:PRO:HG2	35:BA:2528:U:OP1	2.18	0.44
35:DA:1208:C:O2	35:DA:1208:C:H2'	2.17	0.44
6:AF:98:LEU:HD12	6:AF:98:LEU:N	2.33	0.44
10:AJ:67:THR:HG22	10:AJ:67:THR:O	2.18	0.44
35:DA:2796:U:H3'	35:DA:2799:C:H5'	1.99	0.44
22:CY:57:U:C5	57:DZ:181:GLU:C	2.91	0.44
22:AY:19:G:C5	22:AY:60:A:C6	3.05	0.44
22:AY:29:A:C4	22:AY:30:U:C6	3.05	0.44
23:CW:30:U:C4	23:CW:31:C:C4	3.06	0.44
51:BT:30:VAL:HG21	51:BT:84:GLN:CG	2.47	0.44
22:CV:58:C:O2'	22:CV:59:G:H5'	2.18	0.44
46:DO:104:ARG:NH1	46:DO:104:ARG:HB3	2.33	0.44
46:DO:105:GLU:N	46:DO:105:GLU:OE1	2.50	0.44
47:BP:58:THR:O	47:BP:58:THR:HG22	2.18	0.44
56:DY:4:LYS:HD2	56:DY:32:PRO:HG3	1.99	0.44
43:DI:102:SER:HA	43:DI:107:VAL:O	2.18	0.44
43:DI:109:ILE:HG22	43:DI:114:LEU:HD11	1.99	0.44
1:AA:1199:U:H4'	10:AJ:54:PHE:CZ	2.52	0.44
12:CL:38:THR:HG22	12:CL:57:LYS:O	2.18	0.44
12:AL:45:PRO:HG2	12:AL:50:SER:C	2.38	0.44
12:AL:45:PRO:HG3	12:AL:53:ARG:NE	2.32	0.44
1:AA:1121:U:H2'	1:AA:1122:U:C6	2.52	0.44
35:DA:1021:A:C8	35:DA:1021:A:H3'	2.52	0.44
35:DA:1142(A):A:C8	35:DA:1142(A):A:H5'	2.52	0.44
53:DV:41:GLY:N	53:DV:45:THR:OG1	2.51	0.44
2:AB:77:ALA:HB1	2:AB:211:ILE:HG21	1.99	0.44
22:CV:1:G:C6	22:CV:75:A:C6	3.05	0.44
28:D3:28:LEU:HA	28:D3:33:GLN:OE1	2.18	0.44
52:BU:90:VAL:HG11	53:BV:39:LEU:HB2	1.98	0.44
1:AA:473:G:C5	1:AA:474:G:N7	2.86	0.44
41:DG:140:ILE:HD12	41:DG:140:ILE:C	2.37	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:96:ARG:HB2	41:DG:97:ASP:H	1.58	0.44
13:CM:85:GLY:O	13:CM:86:CYS:SG	2.76	0.44
39:BE:47:VAL:HG22	39:BE:48:GLN:O	2.17	0.44
1:AA:1308:U:OP2	13:AM:99:ARG:HD2	2.18	0.44
41:BG:7:LEU:O	41:BG:8:LYS:C	2.56	0.44
28:B3:8:LEU:CD1	28:B3:31:LEU:HA	2.47	0.44
13:CM:114:ARG:C	13:CM:115:LYS:HD3	2.36	0.44
37:DC:30:VAL:CG1	37:DC:42:VAL:HG22	2.44	0.44
35:BA:528:A:C2	35:BA:2043:C:C5'	3.00	0.44
35:BA:2646:C:H6	35:BA:2646:C:O5'	2.01	0.44
1:CA:1381:U:H1'	7:CG:78:ARG:HH11	1.82	0.44
4:CD:170:VAL:O	4:CD:171:GLY:C	2.54	0.44
17:CQ:43:LEU:HB2	17:CQ:69:LYS:HG2	2.00	0.44
19:CS:33:THR:OG1	19:CS:34:TRP:N	2.50	0.44
55:DX:56:THR:HG22	55:DX:79:ALA:CB	2.47	0.44
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.50	0.44
41:DG:171:ALA:O	41:DG:175:LEU:N	2.44	0.44
41:BG:149:VAL:O	41:BG:149:VAL:HG13	2.16	0.44
35:BA:1598:C:H5'	55:BX:36:LYS:HG3	1.99	0.44
39:BE:11:MET:HB2	39:BE:23:VAL:O	2.18	0.44
1:CA:939:G:H5''	7:CG:102:ARG:HH22	1.77	0.44
35:DA:364:C:C2'	35:DA:365:C:H5''	2.48	0.44
1:CA:1187:G:OP1	9:CI:113:LYS:HE2	2.17	0.44
35:BA:768:G:O2'	35:BA:769:G:H5'	2.17	0.44
40:BF:124:LEU:O	40:BF:193:VAL:HA	2.17	0.44
35:BA:213:A:H2'	35:BA:214:G:O4'	2.16	0.44
50:DS:24:LEU:HD22	50:DS:24:LEU:N	2.32	0.44
35:BA:271(Q):G:O2'	35:BA:271(R):G:P	2.75	0.44
1:AA:606:G:H2'	1:AA:631:G:C2	2.52	0.44
11:CK:65:ALA:HB1	11:CK:98:LEU:CD2	2.47	0.44
18:CR:85:LEU:CD2	18:CR:88:LYS:HG2	2.47	0.44
43:BI:47:LEU:HD12	43:BI:50:ARG:HH12	1.81	0.44
26:D1:82:LEU:CD2	26:D1:82:LEU:N	2.80	0.44
7:CG:47:CYS:HA	7:CG:50:ILE:CG1	2.48	0.44
1:AA:140:A:N6	1:AA:141:A:N6	2.65	0.44
13:AM:28:ALA:C	13:AM:30:ALA:H	2.21	0.44
35:DA:1312:U:P	55:DX:63:LYS:HD2	2.57	0.44
49:BR:32:GLY:O	49:BR:115:GLU:HA	2.16	0.44
35:DA:2688:U:H1'	35:DA:2721:A:N6	2.32	0.44
35:DA:2888:C:H2'	35:DA:2889:C:H6	1.82	0.44
4:CD:209:ARG:HG3	4:CD:209:ARG:NH1	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:51:ASP:HB3	37:BC:54:ARG:HG3	1.99	0.44
26:D1:85:LEU:O	26:D1:86:SER:CB	2.64	0.44
35:BA:2649:U:C2	35:BA:2672:G:N2	2.86	0.44
35:DA:826:U:H2'	35:DA:828:U:O4'	2.18	0.44
35:DA:1000:A:H2'	35:DA:1001:A:C8	2.52	0.44
1:AA:261:U:OP1	20:AT:79:ARG:NH2	2.50	0.44
1:CA:284:G:H2'	1:CA:285:G:H8	1.82	0.44
1:CA:1049:U:H1'	1:CA:1201:A:N7	2.32	0.44
35:BA:1701:A:H5'	35:BA:1702:G:OP2	2.18	0.44
47:BP:91:PHE:N	47:BP:91:PHE:CD1	2.74	0.44
35:DA:2150:U:H2'	35:DA:2151:G:H8	1.81	0.44
26:D1:72:GLU:O	26:D1:75:GLU:HB3	2.17	0.44
35:DA:29:U:H2'	35:DA:30:G:C8	2.52	0.44
39:DE:134:ILE:HA	39:DE:137:HIS:CD2	2.52	0.44
6:AF:50:TYR:CE1	18:AR:77:GLY:HA2	2.52	0.44
4:AD:192:GLU:CD	4:AD:192:GLU:H	2.20	0.44
35:BA:433:C:H2'	35:BA:434:U:C6	2.53	0.44
14:AN:22:THR:OG1	14:AN:33:VAL:HG21	2.18	0.44
22:AV:19:G:H2'	22:AV:59:G:H22	1.81	0.44
22:AV:26:G:C4	22:AV:27:C:N3	2.85	0.44
22:CV:3:G:C2'	22:CV:4:C:C5'	2.95	0.44
22:CV:57:U:C5	22:CV:59:G:OP2	2.70	0.44
51:DT:30:VAL:HA	51:DT:44:ASP:HA	2.00	0.44
23:AW:20:G:C5	23:AW:59:G:C2	3.06	0.44
43:BI:107:VAL:O	43:BI:109:ILE:HD11	2.17	0.44
43:BI:109:ILE:H	43:BI:109:ILE:HD12	1.83	0.44
43:BI:129:THR:HG22	43:BI:130:TYR:N	2.33	0.44
23:CW:47:G:O2'	23:CW:48:G:C5'	2.65	0.44
35:DA:1711:C:H2'	35:DA:1712:C:H6	1.83	0.44
12:CL:46:LYS:HE3	12:CL:92:ASP:HA	1.98	0.44
12:AL:53:ARG:HD2	12:AL:53:ARG:N	2.33	0.44
12:AL:37:CYS:CA	12:AL:58:VAL:HG22	2.47	0.44
45:BN:15:LEU:C	45:BN:15:LEU:HD13	2.36	0.44
23:CW:20:G:C6	23:CW:58:C:N4	2.86	0.44
23:CW:20:G:N2	23:CW:58:C:C2	2.85	0.44
52:DU:91:ASP:OD1	52:DU:96:ALA:CB	2.61	0.44
35:BA:146:G:H5'	35:BA:146:G:C8	2.52	0.44
1:AA:473:G:H5''	16:AP:81:ARG:HE	1.82	0.44
41:DG:14:GLU:O	41:DG:17:PRO:HD2	2.18	0.44
57:DZ:99:TYR:HA	57:DZ:124:ILE:O	2.17	0.44
50:DS:66:ALA:HA	50:DS:69:VAL:CG1	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DD:30:GLU:HG3	38:DD:63:ARG:NH2	2.32	0.44
47:BP:18:ARG:HH11	47:BP:18:ARG:CB	2.30	0.44
26:D1:45:ASN:ND2	26:D1:47:GLN:NE2	2.58	0.44
17:AQ:48:GLU:O	17:AQ:49:GLU:C	2.56	0.44
3:AC:57:ILE:HG22	3:AC:58:GLU:N	2.32	0.44
9:AI:53:VAL:HB	9:AI:92:TYR:CE2	2.51	0.44
1:AA:197:A:N6	1:AA:221:C:H5''	2.32	0.44
1:AA:223:U:O2'	1:AA:224:C:H5'	2.17	0.44
35:DA:1040:C:N4	35:DA:1115:G:H1	2.09	0.44
57:BZ:53:ILE:HG22	57:BZ:71:VAL:CB	2.48	0.44
35:BA:259:G:N2	35:BA:621:A:H8	2.10	0.44
35:BA:2124:G:O3'	37:BC:41:THR:HG21	2.18	0.44
35:DA:586:A:H5'	40:DF:89:VAL:HG21	2.00	0.44
38:BD:10:THR:C	38:BD:11:PRO:O	2.55	0.44
42:BH:140:LYS:O	42:BH:144:VAL:HG23	2.17	0.44
40:DF:178:PRO:HB3	40:DF:198:ALA:CB	2.48	0.44
31:D6:25:LYS:NZ	33:D8:34:TRP:HZ2	2.16	0.44
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.18	0.44
57:DZ:130:PRO:O	57:DZ:133:ILE:HD11	2.16	0.44
35:BA:2755:C:O2'	35:BA:2756:U:H2'	2.18	0.44
35:DA:2330:G:H2'	35:DA:2331:G:O4'	2.18	0.44
5:AE:20:GLN:O	5:AE:21:ALA:C	2.55	0.44
8:CH:1:MET:HE2	8:CH:1:MET:N	2.32	0.44
30:D5:25:LEU:HD11	54:DW:41:LYS:HE3	1.99	0.44
2:AB:180:LEU:O	2:AB:181:PHE:HB2	2.17	0.44
35:DA:1155:A:O2'	35:DA:1156:A:H2'	2.17	0.44
48:BQ:32:TYR:HE1	48:BQ:133:ARG:NH1	2.16	0.44
4:AD:98:GLU:OE2	4:AD:107:ARG:HD2	2.17	0.44
1:AA:611:A:H2	1:AA:630:G:N2	2.16	0.44
53:DV:79:VAL:O	53:DV:79:VAL:CG1	2.64	0.44
1:AA:999:C:O2'	1:AA:1000:U:H5'	2.17	0.44
6:CF:6:VAL:C	6:CF:7:ASN:HD22	2.21	0.44
5:CE:101:ILE:H	5:CE:101:ILE:HD13	1.82	0.44
5:AE:31:LEU:HD21	5:AE:43:LEU:HD11	1.99	0.44
15:AO:64:ARG:HG3	15:AO:64:ARG:NH1	2.31	0.44
4:AD:24:GLU:C	4:AD:24:GLU:CD	2.75	0.44
35:DA:2439:A:H5'	35:DA:2439:A:H8	1.80	0.44
38:DD:65:ILE:O	38:DD:65:ILE:HD13	2.17	0.44
35:BA:706:A:H2'	35:BA:707:G:O4'	2.18	0.44
43:BI:8:PRO:HB3	43:BI:14:ASP:N	2.33	0.44
4:AD:196:LEU:N	4:AD:196:LEU:HD12	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1667:G:H22	35:DA:1992:G:H5'	1.83	0.44
35:DA:1775:U:H2'	35:DA:1776:G:C5'	2.46	0.44
13:CM:28:ALA:C	13:CM:30:ALA:H	2.21	0.44
1:AA:766:A:H2'	1:AA:767:A:O4'	2.18	0.44
35:DA:444:C:O2'	35:DA:445:C:H5'	2.18	0.44
25:D0:16:SER:HB3	35:DA:2262:U:OP2	2.18	0.44
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.53	0.44
1:CA:185:A:H2'	1:CA:186:C:C6	2.53	0.44
18:CR:45:SER:HB3	18:CR:51:LEU:HD21	1.99	0.44
35:BA:17:G:H4'	52:BU:25:TRP:CZ3	2.53	0.44
1:AA:185:A:H2'	1:AA:186:C:C6	2.51	0.44
47:BP:99:LEU:C	47:BP:99:LEU:HD23	2.38	0.44
5:AE:127:ASN:OD1	5:AE:129:ILE:HB	2.16	0.44
1:AA:187:C:H2'	1:AA:188:C:C6	2.53	0.44
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.18	0.44
33:B8:38:GLY:O	33:B8:42:ARG:HB2	2.17	0.44
37:DC:210:LEU:HD13	37:DC:227:PRO:CG	2.47	0.44
35:DA:433:C:H2'	35:DA:434:U:C6	2.53	0.44
35:BA:2033:A:O2'	35:BA:2034:U:P	2.75	0.44
1:CA:30:U:H4'	1:CA:31:G:OP1	2.13	0.44
57:BZ:77:ASP:O	57:BZ:78:LYS:C	2.55	0.44
1:CA:656:C:H2'	1:CA:657:G:O4'	2.17	0.44
57:DZ:94:GLU:HG2	57:DZ:94:GLU:H	1.54	0.44
26:B1:88:LYS:O	26:B1:88:LYS:HD3	2.17	0.44
45:BN:61:ARG:HG3	45:BN:61:ARG:HH11	1.83	0.44
1:CA:479:C:O2	1:CA:479:C:H2'	2.17	0.44
8:AH:23:SER:OG	8:AH:24:THR:N	2.49	0.44
35:DA:1951:U:H2'	35:DA:1953:A:OP2	2.18	0.44
23:AW:5:C:C2	23:AW:72:C:C2	3.06	0.44
22:AY:25:A:C2	22:AY:26:G:C6	3.06	0.44
22:AY:63:C:C4'	57:BZ:186:GLU:HA	2.48	0.44
22:AY:60:A:C6	57:BZ:186:GLU:CD	2.90	0.44
22:CV:14:A:C5	22:CV:24:A:C6	3.06	0.44
22:CV:69:G:H2'	22:CV:70:G:H8	1.82	0.44
35:BA:252:G:OP2	47:BP:50:ARG:NH2	2.47	0.44
19:AS:13:ASP:O	19:AS:15:LEU:N	2.51	0.44
56:DY:97:ARG:C	56:DY:99:CYS:H	2.21	0.44
31:D6:43:CYS:O	31:D6:44:ARG:CB	2.60	0.44
43:BI:66:GLU:OE2	43:BI:69:LYS:HE3	2.17	0.44
10:AJ:7:LYS:HD3	10:AJ:71:LEU:HD13	2.00	0.44
45:BN:128:HIS:HA	45:BN:129:PRO:HD2	1.84	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DU:90:VAL:HG21	53:DV:39:LEU:HB3	1.99	0.44
35:BA:2865:U:C4	35:BA:2866:U:C4	3.06	0.44
51:BT:26:ASP:HB3	51:BT:89:VAL:O	2.17	0.44
53:BV:62:LEU:N	53:BV:62:LEU:HD22	2.33	0.44
36:DB:42:C:H4'	41:DG:67:LYS:HZ3	1.81	0.44
41:DG:158:ALA:O	41:DG:159:VAL:CB	2.66	0.44
39:BE:76:ARG:O	39:BE:77:ILE:O	2.36	0.44
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.33	0.44
57:DZ:152:ALA:HA	57:DZ:168:GLU:N	2.33	0.44
50:DS:54:LEU:HD23	50:DS:58:LEU:O	2.17	0.44
35:DA:2418:A:H2'	35:DA:2419:U:C6	2.53	0.44
35:BA:1204:A:H61	35:BA:1240:U:H2'	1.82	0.44
27:B2:17:SER:H	27:B2:67:LYS:HZ3	1.66	0.44
35:DA:498:G:O2'	56:DY:60:PHE:HZ	2.01	0.44
50:BS:54:LEU:HD23	50:BS:58:LEU:O	2.17	0.44
39:BE:117:MET:HE1	39:BE:124:GLY:HA3	1.98	0.44
27:D2:47:ASN:O	27:D2:50:ILE:N	2.50	0.44
3:AC:40:ARG:CA	3:AC:55:VAL:HG11	2.41	0.44
35:BA:2299:G:N2	35:BA:2318:G:H1'	2.32	0.44
2:AB:42:ILE:CD1	2:AB:203:GLY:HA2	2.42	0.44
38:DD:210:GLY:C	38:DD:212:SER:N	2.70	0.44
35:DA:2712:U:O2'	35:DA:2712(A):A:P	2.76	0.44
46:DO:18:LYS:HD2	46:DO:45:GLU:OE1	2.17	0.44
41:BG:146:TYR:C	41:BG:148:MET:N	2.71	0.44
3:AC:113:ALA:O	3:AC:115:LEU:N	2.51	0.44
54:DW:4:LYS:HD3	54:DW:6:ILE:HD11	1.98	0.44
1:AA:538:G:O2'	1:AA:539:A:H5'	2.17	0.44
27:B2:63:VAL:C	27:B2:65:ASN:N	2.70	0.44
40:BF:67:GLN:CG	40:BF:67:GLN:O	2.66	0.44
50:DS:16:ASN:O	50:DS:19:LYS:HB2	2.18	0.44
11:CK:44:SER:H	11:CK:47:VAL:CG2	2.30	0.44
2:CB:32:ILE:CD1	2:CB:40:HIS:HB3	2.47	0.44
50:BS:89:ARG:O	50:BS:90:GLY:O	2.35	0.44
1:CA:1406:U:O2'	1:CA:1407:C:H5'	2.17	0.44
1:CA:154:C:O2'	1:CA:155:C:H5'	2.18	0.44
57:BZ:119:GLU:HG3	57:BZ:122:ARG:NH1	2.32	0.44
13:AM:18:ALA:CB	13:AM:45:VAL:HG21	2.48	0.44
8:CH:97:VAL:HG13	8:CH:98:LYS:N	2.32	0.44
51:BT:57:PHE:O	51:BT:59:THR:HG23	2.18	0.44
15:AO:17:ARG:CD	15:AO:26:GLU:OE1	2.66	0.44
35:DA:1180:C:H2'	35:DA:1180:C:O2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DN:3:THR:C	45:DN:5:VAL:N	2.70	0.44
1:CA:1437:C:O2'	1:CA:1438:G:H5'	2.18	0.44
5:AE:64:ARG:HH11	5:AE:64:ARG:CG	2.31	0.44
41:BG:118:ARG:H	41:BG:181:ARG:NH2	2.11	0.44
53:BV:82:ARG:O	53:BV:83:ARG:HG2	2.17	0.44
1:CA:501:C:OP1	12:CL:117:ARG:NH2	2.46	0.44
4:AD:24:GLU:O	4:AD:27:TYR:HB2	2.17	0.44
5:CE:40:ARG:HG2	5:CE:40:ARG:NH1	2.30	0.44
35:BA:573:G:O2'	35:BA:574:C:H3'	2.18	0.44
1:CA:328:C:H2'	1:CA:328:C:O2	2.18	0.44
38:BD:65:ILE:HD13	38:BD:65:ILE:O	2.18	0.44
20:AT:42:GLN:NE2	20:AT:42:GLN:HA	2.31	0.44
49:BR:97:VAL:CG1	49:BR:114:VAL:HG22	2.48	0.44
49:BR:33:ARG:HA	49:BR:114:VAL:O	2.18	0.44
1:CA:137:C:H42	1:CA:226:G:H1	1.65	0.44
35:DA:1467:C:C2'	35:DA:1468:C:H5'	2.48	0.44
38:BD:110:GLY:O	38:BD:112:GLN:HG2	2.18	0.44
49:DR:25:ALA:O	49:DR:29:LEU:HB2	2.17	0.44
57:DZ:9:TYR:HA	57:DZ:37:VAL:HG12	1.99	0.44
35:BA:2887:U:H2'	35:BA:2888:C:C6	2.52	0.44
1:AA:751:U:H2'	1:AA:752:G:H5'	1.99	0.44
35:DA:654(P):C:H2'	35:DA:654(Q):C:O4'	2.17	0.44
35:DA:373:U:H2'	35:DA:374:A:C8	2.52	0.44
1:CA:983:A:H3'	1:CA:983:A:N3	2.32	0.44
23:CW:77:C:H6	23:CW:77:C:O5'	2.00	0.44
35:BA:807:U:O2'	35:BA:808:G:H5'	2.18	0.44
40:DF:33:LEU:O	40:DF:37:VAL:HG23	2.17	0.44
48:BQ:63:LYS:HE3	48:BQ:65:PHE:HE1	1.81	0.44
1:CA:811:C:O2'	1:CA:901:A:N1	2.47	0.44
35:DA:1259:G:O2'	35:DA:1260:G:H5'	2.17	0.44
2:CB:59:GLU:O	2:CB:62:ALA:HB3	2.17	0.44
7:CG:76:ARG:HH11	7:CG:76:ARG:HG2	1.83	0.44
3:CC:178:LEU:HD22	3:CC:178:LEU:N	2.33	0.44
4:CD:2:GLY:O	4:CD:3:ARG:O	2.35	0.44
22:CY:25:A:C2	22:CY:26:G:C5	3.06	0.44
22:CY:56:U:H4'	48:DQ:52:VAL:HG22	2.00	0.44
22:CY:61:A:O2'	22:CY:62:U:H5'	2.18	0.44
23:AW:40:A:C5	23:AW:42:C:C4	3.06	0.44
22:AY:44:A:C4	22:AY:45:U:C6	3.06	0.44
7:CG:143:ARG:CZ	23:CW:44:A:H5''	2.47	0.44
33:D8:61:LEU:HG	33:D8:61:LEU:H	1.23	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:33:MET:C	4:AD:35:ARG:H	2.20	0.44
22:CV:57:U:C4	22:CV:59:G:OP2	2.71	0.44
22:CV:6:C:C2	22:CV:70:G:C2	3.06	0.44
35:DA:1899:G:N2	35:DA:1902:C:C4	2.84	0.44
23:AW:28:G:OP2	23:AW:28:G:H3'	2.18	0.44
35:BA:613:G:C8	35:BA:613:G:C5'	2.92	0.44
1:CA:176:C:H2'	1:CA:177:C:C6	2.52	0.44
35:BA:1506:C:O2	35:BA:1506:C:C2'	2.65	0.44
43:BI:77:LEU:O	43:BI:141:LYS:HG2	2.17	0.44
12:CL:58:VAL:C	12:CL:65:GLU:HG3	2.37	0.44
12:CL:58:VAL:O	12:CL:65:GLU:HG3	2.16	0.44
35:DA:1912:A:C8	35:DA:1918:A:C2	3.05	0.44
35:BA:1140:C:H1'	35:BA:1143:A:N3	2.33	0.44
45:BN:16:ILE:HG12	45:BN:17:ASP:N	2.33	0.44
10:CJ:4:ILE:CD1	10:CJ:77:PRO:HB3	2.48	0.44
51:BT:122:ASP:O	51:BT:124:ASP:N	2.50	0.44
51:BT:80:SER:OG	51:BT:81:PRO:HD3	2.17	0.44
57:DZ:43:GLU:CG	57:DZ:44:PHE:N	2.81	0.44
52:BU:97:ASP:OD1	52:BU:98:LEU:N	2.50	0.44
53:DV:60:GLU:O	53:DV:62:LEU:HD22	2.18	0.44
41:DG:110:ALA:O	41:DG:111:LEU:C	2.56	0.44
1:CA:487:A:H2'	1:CA:488:C:O4'	2.18	0.44
35:BA:1652:A:H4'	35:BA:1653:G:OP1	2.18	0.44
57:DZ:144:LEU:CD1	57:DZ:149:SER:HA	2.48	0.44
31:D6:54:ILE:O	31:D6:54:ILE:CD1	2.65	0.44
9:AI:65:VAL:O	9:AI:65:VAL:HG13	2.17	0.44
1:CA:943:U:H1'	9:CI:124:GLN:HE22	1.83	0.44
31:D6:39:TYR:CE1	35:DA:2347:C:OP1	2.71	0.44
41:DG:152:LEU:N	41:DG:152:LEU:CD2	2.78	0.44
48:DQ:99:PRO:HB2	57:DZ:79:ARG:HH21	1.83	0.44
57:DZ:79:ARG:O	57:DZ:80:ARG:HB2	2.18	0.44
49:BR:38:VAL:HG12	49:BR:42:LYS:HD2	2.00	0.44
47:DP:16:ARG:O	47:DP:16:ARG:NH1	2.49	0.44
1:CA:587:G:C6	1:CA:755:G:C6	3.06	0.44
48:DQ:32:TYR:CZ	48:DQ:111:GLU:HG3	2.53	0.44
48:DQ:29:PHE:HB3	48:DQ:65:PHE:CD2	2.52	0.44
22:CY:35:U:H3'	22:CY:36:AG9:C5'	2.41	0.44
1:AA:371:G:N2	1:AA:374:A:N6	2.66	0.44
2:AB:121:LEU:HD23	2:AB:124:SER:CB	2.48	0.44
1:CA:375:U:O2'	16:CP:28:ARG:HD2	2.18	0.44
4:CD:170:VAL:HG12	4:CD:171:GLY:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:D0:27:GLU:C	25:D0:29:GLN:N	2.71	0.44
35:BA:2134:A:H61	35:BA:2157:G:C1'	2.25	0.44
1:CA:223:U:O2'	1:CA:224:C:H5'	2.18	0.44
38:BD:8:PRO:C	38:BD:10:THR:H	2.21	0.44
1:AA:943:U:H1'	9:AI:124:GLN:HE22	1.83	0.44
1:AA:191:G:N9	20:AT:105:SER:HB3	2.32	0.44
41:BG:32:PRO:HA	41:BG:162:THR:HB	2.00	0.44
35:DA:2405:G:H1'	35:DA:2412:A:N6	2.33	0.44
35:DA:389:G:H22	47:DP:72:PRO:HD3	1.83	0.44
1:AA:386:C:C2'	1:AA:387:U:H5'	2.48	0.44
26:B1:66:HIS:O	26:B1:67:ILE:C	2.55	0.44
2:AB:39:ILE:HG22	2:AB:40:HIS:N	2.33	0.44
48:BQ:110:THR:C	48:BQ:112:GLU:H	2.21	0.44
1:AA:153:C:H2'	1:AA:154:C:H6	1.80	0.44
1:AA:401:C:C6	1:AA:401:C:H3'	2.52	0.44
11:CK:124:LYS:NZ	11:CK:124:LYS:CB	2.81	0.44
1:AA:600:C:H2'	1:AA:601:C:H6	1.81	0.44
11:CK:33:THR:HB	11:CK:37:GLY:O	2.18	0.44
1:CA:502:G:OP1	12:CL:118:SER:CB	2.66	0.44
1:CA:1030(B):C:H2'	1:CA:1030(C):G:O4'	2.17	0.44
38:DD:67:PHE:CZ	38:DD:157:ARG:CZ	3.00	0.44
1:CA:9:G:O2'	1:CA:10:A:H5'	2.16	0.44
1:AA:451:A:N6	1:AA:480:U:H2'	2.33	0.44
1:AA:1182:G:H4'	1:AA:1184:G:OP1	2.18	0.44
8:CH:111:ILE:C	8:CH:112:LEU:HD23	2.38	0.44
35:DA:1509(B):A:H2'	35:DA:1510:G:C8	2.53	0.44
35:DA:1386:C:OP2	35:DA:1396:U:H5	2.01	0.44
11:AK:111:ASP:HA	18:AR:84:LYS:HE2	2.00	0.44
1:AA:1508:G:H2'	1:AA:1509:C:C6	2.52	0.44
50:BS:25:ARG:NH1	50:BS:25:ARG:HB3	2.32	0.44
35:BA:402:A:O2'	35:BA:403:U:H5'	2.17	0.44
1:CA:977:A:C2'	1:CA:978:A:H5'	2.47	0.44
2:AB:230:VAL:HG23	2:AB:231:GLU:H	1.83	0.44
1:AA:250:A:O2'	1:AA:251:G:P	2.76	0.44
54:DW:36:LEU:CD1	54:DW:48:ALA:HA	2.48	0.44
19:CS:13:ASP:O	19:CS:15:LEU:N	2.51	0.44
5:AE:87:SER:HB3	5:AE:131:ILE:HD13	2.00	0.44
35:DA:408:G:O2'	35:DA:409:C:H5'	2.17	0.44
35:DA:2698:U:H2'	35:DA:2699:C:C6	2.53	0.44
35:BA:745:G:H2'	35:BA:746:A:H5'	2.00	0.44
35:BA:498:G:O2'	35:BA:499:U:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BW:34:ASN:O	54:BW:35:ILE:C	2.56	0.44
35:BA:614:U:O4'	35:BA:614:U:O2	2.34	0.44
33:B8:16:ILE:HD12	33:B8:57:ARG:HG2	1.98	0.44
22:CY:28:G:H3'	22:CY:29:A:N7	2.33	0.44
22:CY:5:C:O2	22:CY:70:G:N1	2.50	0.44
23:CW:2:G:C2	23:CW:3:G:C4	3.06	0.44
11:CK:61:ALA:HB3	11:CK:90:GLY:HA3	2.00	0.44
46:DO:71:ARG:HG3	46:DO:71:ARG:HH11	1.83	0.44
56:BY:77:PRO:O	56:BY:78:ALA:HB2	2.18	0.44
35:DA:2014:A:H2'	35:DA:2015:A:C8	2.53	0.44
35:DA:1140:C:OP1	45:DN:23:LEU:O	2.35	0.44
35:BA:146:G:C2'	35:BA:147:U:H5'	2.48	0.44
41:DG:150:ASP:CG	41:DG:151:ALA:H	2.21	0.44
5:AE:150:ARG:NH1	5:AE:150:ARG:CB	2.81	0.44
13:AM:97:PRO:O	13:AM:98:VAL:HA	2.18	0.44
39:BE:101:ARG:HH11	39:BE:171:GLU:CB	2.16	0.44
35:BA:803:U:O2'	35:BA:804:A:H5'	2.18	0.44
47:BP:41:ARG:CA	47:BP:41:ARG:HE	2.30	0.44
17:CQ:48:GLU:O	17:CQ:50:LYS:N	2.51	0.44
53:BV:66:ARG:NH1	53:BV:66:ARG:HG2	2.32	0.44
56:BY:47:LYS:O	56:BY:48:ALA:CB	2.66	0.44
32:B7:10:ARG:HH12	35:BA:1378:A:H5''	1.83	0.44
8:CH:4:ASP:CG	8:CH:85:ARG:HH21	2.21	0.44
35:DA:856:C:H2'	35:DA:856:C:O2	2.17	0.44
35:DA:2134:A:H1'	35:DA:2159:G:H21	1.79	0.44
51:DT:35:LYS:O	51:DT:36:GLU:CB	2.66	0.44
35:BA:1545:A:H2'	35:BA:1546:C:O4'	2.17	0.44
35:BA:1040:C:O2'	35:BA:1041:C:P	2.76	0.44
51:BT:35:LYS:O	51:BT:36:GLU:CB	2.66	0.44
38:DD:13:ARG:NH1	38:DD:16:MET:SD	2.91	0.44
38:DD:16:MET:HE2	38:DD:206:LEU:O	2.18	0.44
50:BS:14:VAL:O	50:BS:14:VAL:HG12	2.16	0.44
54:DW:3:ALA:CB	54:DW:58:ALA:HB2	2.47	0.44
37:DC:34:ALA:HB1	37:DC:40:GLU:HG3	1.98	0.44
35:DA:2124:G:H1'	37:DC:43:GLU:OE1	2.18	0.44
35:DA:954:G:H2'	35:DA:955:C:H6	1.83	0.44
33:D8:33:ASN:N	33:D8:33:ASN:HD22	2.14	0.44
42:DH:159:GLU:HA	42:DH:159:GLU:OE1	2.17	0.44
1:AA:951:G:C6	1:AA:1231:G:C6	3.05	0.44
9:AI:26:VAL:HA	9:AI:61:ALA:O	2.17	0.44
47:BP:83:VAL:HG11	47:BP:112:LEU:HD21	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:51:ARG:HB2	51:BT:98:LYS:HG3	2.00	0.44
39:BE:25:VAL:HG21	51:BT:8:LYS:HG2	2.00	0.44
48:DQ:12:GLN:HE21	48:DQ:73:PRO:CD	2.31	0.44
17:AQ:37:LYS:HB2	17:AQ:37:LYS:HE3	1.75	0.44
1:AA:921:U:H2'	1:AA:922:G:O4'	2.18	0.44
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	2.18	0.44
57:BZ:128:VAL:CG2	57:BZ:161:VAL:HG22	2.48	0.44
1:CA:865:A:O2'	1:CA:919:A:H4'	2.18	0.44
1:CA:1048:G:OP1	14:CN:4:LYS:HB2	2.18	0.44
7:AG:47:CYS:HA	7:AG:50:ILE:CG1	2.48	0.44
35:BA:2538:C:O2'	35:BA:2539:C:H5'	2.18	0.44
11:AK:33:THR:HB	11:AK:37:GLY:O	2.18	0.44
35:BA:1332:G:H5''	35:BA:1332:G:H8	1.83	0.44
53:BV:5:VAL:CG2	53:BV:6:LYS:N	2.81	0.44
40:DF:15:SER:O	40:DF:16:GLY:O	2.36	0.44
35:DA:964:C:N3	35:DA:965:C:C5	2.86	0.44
35:DA:26:G:C6	35:DA:27:G:N1	2.86	0.44
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.81	0.44
35:DA:530:G:C5	35:DA:2022:U:H5''	2.52	0.44
49:DR:28:LEU:HD22	49:DR:28:LEU:O	2.18	0.44
35:DA:221:A:O2'	35:DA:222:A:OP2	2.32	0.44
35:BA:319:C:H2'	35:BA:320:A:O4'	2.17	0.44
13:AM:19:LEU:HA	13:AM:22:ILE:HD13	2.00	0.44
40:BF:160:ASN:ND2	40:BF:160:ASN:C	2.71	0.44
43:DI:111:PRO:O	43:DI:116:LEU:HD22	2.18	0.44
38:DD:231:HIS:CG	38:DD:232:PRO:HD2	2.53	0.44
1:CA:668:G:H4'	15:CO:48:LYS:HB2	1.99	0.44
36:BB:16:G:O2'	36:BB:17:C:H5'	2.18	0.44
36:BB:17:C:H2'	36:BB:18:G:O4'	2.18	0.44
1:AA:1266:G:N2	1:AA:1268:A:H3'	2.32	0.44
50:DS:25:ARG:NH1	50:DS:25:ARG:HB3	2.33	0.44
35:DA:772:C:O2'	35:DA:773:U:H5'	2.17	0.44
1:AA:977:A:C2'	1:AA:978:A:H5'	2.47	0.44
35:BA:1827:C:OP2	38:BD:222:ARG:NH1	2.51	0.44
40:BF:72:ARG:HB3	40:BF:72:ARG:NH1	2.33	0.44
35:BA:871:U:OP1	48:BQ:5:ARG:HG3	2.18	0.44
34:B9:17:ILE:HG13	34:B9:26:ILE:HD12	2.00	0.44
35:BA:466:A:H2'	35:BA:467:G:H5'	1.99	0.44
35:BA:838:C:O2'	35:BA:839:U:H5'	2.18	0.44
1:AA:582:U:C2	1:AA:760:G:C6	3.06	0.44
35:BA:1388:G:O2'	35:BA:1389:G:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:86:GLY:N	11:AK:112:THR:OG1	2.47	0.44
35:DA:271(X):G:O2'	35:DA:271(Y):U:H5''	2.17	0.44
35:DA:272(B):G:O2'	35:DA:272(C):G:C5'	2.66	0.44
42:DH:143:GLN:HE22	42:DH:147:ASN:HD21	1.66	0.44
52:DU:5:LYS:O	52:DU:6:THR:C	2.55	0.44
35:BA:610:G:H2'	35:BA:611:C:C6	2.53	0.44
22:CY:12:U:N3	22:CY:26:G:N1	2.66	0.43
48:DQ:52:VAL:O	48:DQ:55:VAL:HG22	2.18	0.43
23:AW:38:U:O2	23:AW:39:A:N7	2.51	0.43
22:AY:4:C:C2	22:AY:5:C:C4	3.05	0.43
57:BZ:179:ASP:N	57:BZ:182:LYS:CE	2.81	0.43
14:AN:23:ARG:HA	14:AN:29:ARG:O	2.17	0.43
41:DG:46:ALA:HB3	41:DG:82:LEU:HD21	2.00	0.43
33:B8:56:GLU:HG3	33:B8:59:LYS:HZ1	1.82	0.43
35:BA:833:U:H5''	47:BP:48:PRO:HB3	1.99	0.43
43:DI:85:GLU:O	43:DI:123:LEU:HD13	2.18	0.43
35:BA:1914:C:C3'	35:BA:1914:C:P	3.06	0.43
35:DA:1711:C:O2'	35:DA:1712:C:H5'	2.17	0.43
12:CL:90:VAL:C	12:CL:92:ASP:N	2.66	0.43
47:BP:23:PRO:HD2	47:BP:33:ARG:NE	2.32	0.43
57:DZ:81:ARG:HB2	57:DZ:81:ARG:HH11	1.82	0.43
35:DA:1917:U:O2'	35:DA:1918:A:H5'	2.18	0.43
41:BG:51:ARG:NH1	41:BG:53:LEU:HD21	2.33	0.43
35:BA:1884:A:C2'	35:BA:1885:A:C5'	2.83	0.43
52:DU:79:PHE:O	52:DU:83:LEU:HD22	2.17	0.43
3:CC:107:GLN:O	3:CC:108:ASN:HB2	2.17	0.43
12:CL:42:THR:HG23	12:CL:42:THR:O	2.18	0.43
51:BT:127:ALA:C	51:BT:129:ARG:N	2.72	0.43
52:BU:83:LEU:CD1	52:BU:88:ILE:HD12	2.42	0.43
41:DG:60:LEU:O	41:DG:64:THR:CG2	2.66	0.43
35:BA:1771:C:C1'	35:BA:1786:A:C8	3.00	0.43
49:BR:11:ASN:O	49:BR:12:ARG:CG	2.61	0.43
1:CA:1149:C:OP1	9:CI:9:ARG:HD3	2.18	0.43
1:CA:1288:A:H2	1:CA:1352:C:O2	2.00	0.43
47:BP:45:LEU:CD2	47:BP:46:LYS:H	2.31	0.43
41:BG:57:ALA:HA	41:BG:90:LEU:CD2	2.47	0.43
1:CA:951:G:C6	1:CA:1231:G:C6	3.06	0.43
53:DV:91:TYR:CD1	53:DV:91:TYR:N	2.85	0.43
17:AQ:43:LEU:HB2	17:AQ:69:LYS:HG2	2.00	0.43
29:B4:1:MET:H1	36:BB:43:C:H4'	1.82	0.43
29:B4:5:ILE:CD1	41:BG:67:LYS:NZ	2.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:92:VAL:HG13	41:BG:92:VAL:O	2.16	0.43
30:B5:51:TYR:CZ	30:B5:52:TYR:CD2	3.04	0.43
2:AB:101:MET:CE	2:AB:101:MET:HA	2.48	0.43
27:D2:44:LEU:O	27:D2:45:SER:HB3	2.18	0.43
13:CM:68:GLY:H	13:CM:71:ARG:CB	2.31	0.43
4:CD:134:ASP:N	4:CD:134:ASP:OD1	2.51	0.43
16:CP:15:PRO:O	16:CP:16:HIS:ND1	2.51	0.43
52:BU:113:ALA:C	52:BU:115:ALA:N	2.72	0.43
3:AC:44:GLU:HA	3:AC:52:LEU:HD11	2.00	0.43
5:CE:33:VAL:HG22	5:CE:109:ILE:HG12	2.00	0.43
46:BO:10:VAL:HG22	46:BO:17:ARG:O	2.18	0.43
35:BA:1540:U:O3'	35:BA:1542:A:OP1	2.36	0.43
39:BE:89:ASP:O	39:BE:90:THR:O	2.36	0.43
38:DD:9:TYR:C	38:DD:10:THR:HG22	2.38	0.43
1:CA:439:A:H2'	1:CA:441:A:C4'	2.46	0.43
2:CB:19:HIS:HD2	2:CB:189:ASP:OD2	2.00	0.43
57:DZ:166:SER:HB2	57:DZ:167:PRO:CA	2.47	0.43
45:BN:123:TYR:OH	45:BN:130:HIS:HE1	2.01	0.43
1:CA:191:G:N9	20:CT:105:SER:HB3	2.33	0.43
38:BD:221:VAL:CG2	38:BD:226:MET:HE2	2.46	0.43
47:DP:83:VAL:HG11	47:DP:112:LEU:HD21	2.00	0.43
4:AD:57:ARG:H	4:AD:57:ARG:HD2	1.83	0.43
8:AH:1:MET:N	8:AH:1:MET:HE2	2.32	0.43
56:BY:14:LEU:O	56:BY:14:LEU:HG	2.15	0.43
1:AA:1003:G:N2	1:AA:1038:C:N4	2.66	0.43
35:BA:2638:G:OP1	39:BE:82:ARG:NH2	2.51	0.43
41:DG:160:VAL:CG1	41:DG:161:THR:N	2.80	0.43
11:AK:21:ILE:CD1	11:AK:82:VAL:HG13	2.48	0.43
1:CA:630:G:H2'	1:CA:631:G:H5'	2.00	0.43
35:DA:1516:C:O2'	35:DA:1517:G:H5'	2.18	0.43
13:AM:112:GLY:CA	13:AM:113:PRO:HG2	2.45	0.43
35:BA:141:A:H8	35:BA:1408:C:O2'	1.95	0.43
35:DA:1339:G:H5''	55:DX:16:LYS:HD3	1.99	0.43
43:DI:5:LEU:O	43:DI:6:LEU:HD23	2.18	0.43
1:CA:1387:G:C6	1:CA:1388:C:N4	2.86	0.43
49:BR:30:THR:HG22	49:BR:30:THR:O	2.18	0.43
34:B9:15:LYS:HB3	35:BA:1033:U:O4	2.17	0.43
38:BD:80:ALA:HB3	38:BD:94:LEU:HD13	1.99	0.43
49:DR:28:LEU:HD13	49:DR:28:LEU:C	2.38	0.43
30:B5:16:ARG:NH2	35:BA:517:C:OP1	2.51	0.43
2:AB:199:TYR:CD1	2:AB:199:TYR:N	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:71:A:C2	55:BX:31:HIS:CE1	3.05	0.43
1:AA:226:G:O2'	1:AA:227:G:H5'	2.18	0.43
1:AA:781:A:C3'	1:AA:782:A:H5'	2.47	0.43
6:AF:27:GLN:HE21	6:AF:27:GLN:HA	1.83	0.43
35:DA:2700:C:O2'	35:DA:2701:C:H5'	2.18	0.43
47:BP:90:ARG:HD2	47:BP:91:PHE:HD1	1.82	0.43
49:DR:88:ARG:HD2	49:DR:88:ARG:C	2.38	0.43
5:CE:107:ARG:O	5:CE:110:LEU:N	2.47	0.43
1:CA:250:A:H4'	1:CA:251:G:O5'	2.18	0.43
45:BN:99:LEU:O	45:BN:103:VAL:HG23	2.18	0.43
1:AA:1236:A:O2'	1:AA:1304:G:H4'	2.18	0.43
42:BH:143:GLN:HE22	42:BH:147:ASN:HD21	1.66	0.43
1:CA:61:G:H2'	1:CA:62:U:O4'	2.17	0.43
22:CY:19:G:C4	22:CY:59:G:N2	2.86	0.43
22:CY:19:G:C8	57:DZ:187:ALA:N	2.69	0.43
22:AY:67:C:H2'	22:AY:68:A:H5'	2.00	0.43
22:AY:70:G:C6	22:AY:71:G:C5	3.06	0.43
22:AV:12:U:N3	22:AV:13:U:C6	2.86	0.43
22:AV:1:G:C6	22:AV:75:A:C6	3.06	0.43
35:BA:2312:U:H4'	41:BG:71:THR:CG2	2.47	0.43
22:CV:27:C:C3'	22:CV:27:C:C6	3.02	0.43
33:B8:56:GLU:C	33:B8:58:ILE:H	2.21	0.43
19:AS:39:THR:HG22	19:AS:40:ILE:N	2.31	0.43
31:D6:44:ARG:HB2	31:D6:44:ARG:NH1	2.33	0.43
1:CA:1056:U:H4'	3:CC:163:ALA:CB	2.47	0.43
43:BI:107:VAL:O	43:BI:109:ILE:CD1	2.66	0.43
23:CW:13:U:C2'	23:CW:14:A:H5"	2.47	0.43
23:CW:25:A:C6	23:CW:26:G:C6	3.06	0.43
12:CL:101:VAL:O	12:CL:104:VAL:HG23	2.18	0.43
12:AL:24:VAL:HG12	12:AL:26:ALA:HB2	2.00	0.43
12:AL:47:LYS:HB3	12:AL:47:LYS:HZ3	1.83	0.43
52:DU:74:LEU:HD22	52:DU:74:LEU:C	2.39	0.43
52:DU:98:LEU:O	52:DU:99:ALA:C	2.55	0.43
39:DE:35:GLN:HB3	39:DE:48:GLN:HB3	2.00	0.43
1:AA:457:C:N4	1:AA:475:G:H1	2.16	0.43
39:BE:52:LEU:HD12	39:BE:52:LEU:HA	1.84	0.43
39:BE:78:LEU:C	39:BE:79:ARG:HD2	2.39	0.43
54:DW:92:ARG:O	54:DW:93:ALA:O	2.35	0.43
56:BY:10:GLY:CA	56:BY:27:VAL:HG13	2.39	0.43
41:BG:115:ARG:HD3	41:BG:137:GLU:OE2	2.17	0.43
13:AM:86:CYS:SG	13:AM:88:ARG:HG3	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:57:ALA:C	41:BG:59:GLU:N	2.72	0.43
35:DA:1244:G:H4'	47:DP:11:GLY:HA2	2.00	0.43
19:CS:40:ILE:HG21	19:CS:62:ILE:CD1	2.48	0.43
9:CI:126:SER:O	9:CI:127:LYS:HB3	2.18	0.43
50:BS:68:GLN:C	50:BS:70:GLY:N	2.71	0.43
41:BG:63:ILE:CG1	41:BG:64:THR:N	2.81	0.43
41:BG:39:ILE:CG1	41:BG:92:VAL:HG12	2.47	0.43
37:BC:30:VAL:CG1	37:BC:42:VAL:HG22	2.44	0.43
12:CL:73:GLU:O	12:CL:110:VAL:HG13	2.19	0.43
8:CH:4:ASP:HB2	8:CH:89:PRO:CG	2.42	0.43
1:CA:1401:G:H2'	1:CA:1402:C:O4'	2.17	0.43
35:DA:1039:G:C6	35:DA:1040:C:N4	2.86	0.43
35:BA:1040:C:HO2'	35:BA:1041:C:C5'	2.31	0.43
35:BA:1173:G:H2'	35:BA:1175:U:C5	2.53	0.43
47:DP:92:GLU:HG3	47:DP:93:GLY:N	2.25	0.43
43:DI:100:ALA:HA	43:DI:103:ARG:CD	2.40	0.43
1:CA:960:U:O2	1:CA:960:U:H2'	2.17	0.43
1:CA:538:G:O2'	1:CA:539:A:H5'	2.17	0.43
42:BH:30:LYS:HE3	42:BH:81:GLU:H	1.83	0.43
37:DC:29:LEU:HD22	37:DC:33:LEU:CD1	2.49	0.43
50:BS:16:ASN:O	50:BS:19:LYS:CB	2.66	0.43
49:BR:72:ASP:O	49:BR:76:VAL:HB	2.19	0.43
35:DA:2126:A:H61	35:DA:2163:C:H4'	1.83	0.43
50:BS:87:PHE:CG	50:BS:88:ASP:N	2.86	0.43
50:BS:89:ARG:CG	50:BS:92:TYR:HA	2.42	0.43
15:CO:64:ARG:NH1	15:CO:64:ARG:HG3	2.31	0.43
2:AB:32:ILE:CD1	2:AB:40:HIS:HB3	2.48	0.43
2:AB:37:ASN:C	2:AB:39:ILE:H	2.22	0.43
39:BE:44:TYR:O	39:BE:45:THR:CB	2.64	0.43
39:BE:81:ILE:O	39:BE:82:ARG:O	2.36	0.43
1:CA:155:C:H2'	1:CA:156:G:H8	1.76	0.43
48:BQ:32:TYR:CZ	48:BQ:111:GLU:HG3	2.53	0.43
48:BQ:134:ARG:NH2	57:BZ:122:ARG:HE	2.16	0.43
38:DD:177:LEU:HD12	38:DD:181:GLU:HB3	2.00	0.43
35:DA:141:A:H8	35:DA:1408:C:O2'	1.92	0.43
1:CA:797:C:O2'	1:CA:798:G:H5'	2.17	0.43
35:BA:2591:C:OP2	38:BD:239:ARG:HB3	2.18	0.43
1:AA:397:A:H5'	1:AA:398:C:OP1	2.18	0.43
8:CH:117:GLY:O	8:CH:119:LEU:HG	2.18	0.43
47:BP:78:PRO:HB2	47:BP:111:ARG:HD2	2.00	0.43
1:AA:423:G:C2'	1:AA:424:G:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:55:ARG:H	29:B4:55:ARG:HG3	1.62	0.43
1:AA:189(C):C:O2'	1:AA:189(D):C:H5'	2.18	0.43
40:DF:108:LYS:HD2	40:DF:112:MET:HE3	2.00	0.43
1:CA:217:C:O2'	1:CA:470:C:N4	2.52	0.43
35:DA:1614:A:C6	54:DW:91:GLY:HA2	2.53	0.43
50:DS:74:ALA:HB1	50:DS:103:GLU:HB3	1.99	0.43
40:BF:164:ARG:HG2	40:BF:164:ARG:NH1	2.32	0.43
1:CA:1388:C:H2'	1:CA:1389:C:O4'	2.17	0.43
1:CA:955:U:O2'	1:CA:956:U:H5'	2.19	0.43
8:AH:56:LYS:CB	8:AH:58:TYR:HE1	2.31	0.43
39:DE:38:THR:OG1	39:DE:41:LYS:HG2	2.18	0.43
35:DA:821:A:H2'	35:DA:946:G:H5''	2.00	0.43
48:DQ:35:VAL:HG23	48:DQ:101:ARG:O	2.18	0.43
8:CH:56:LYS:CB	8:CH:58:TYR:HE1	2.32	0.43
1:CA:662:G:H2'	1:CA:663:A:H8	1.83	0.43
51:DT:40:THR:O	51:DT:41:ARG:CB	2.65	0.43
18:AR:44:LEU:HD22	18:AR:79:LEU:HD22	2.00	0.43
10:CJ:44:VAL:HG12	10:CJ:45:ARG:N	2.34	0.43
18:CR:44:LEU:HD22	18:CR:79:LEU:HD22	2.00	0.43
35:BA:2720:U:H3'	35:BA:2721:A:H8	1.83	0.43
11:CK:111:ASP:HA	18:CR:84:LYS:HE2	2.00	0.43
2:CB:230:VAL:HG23	2:CB:231:GLU:N	2.32	0.43
4:AD:209:ARG:NH1	4:AD:209:ARG:HG3	2.32	0.43
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	2.01	0.43
52:DU:113:ALA:C	52:DU:115:ALA:N	2.72	0.43
35:DA:889:C:O2'	35:DA:890:A:O5'	2.26	0.43
35:BA:2199:A:H3'	35:BA:2200:C:C6	2.53	0.43
6:CF:40:VAL:O	6:CF:40:VAL:HG22	2.18	0.43
4:CD:56:VAL:HG12	4:CD:202:LEU:HD13	1.99	0.43
20:AT:96:GLY:O	20:AT:97:ALA:O	2.35	0.43
1:AA:61:G:H2'	1:AA:62:U:O4'	2.18	0.43
20:AT:49:ALA:O	20:AT:52:ALA:HB3	2.18	0.43
44:BJ:76:UNK:O	44:BJ:114:UNK:CB	2.66	0.43
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.53	0.43
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.33	0.43
35:DA:614:U:O2	35:DA:614:U:O4'	2.34	0.43
10:CJ:46:ARG:HH11	10:CJ:46:ARG:HG2	1.83	0.43
28:B3:10:LYS:HD3	28:B3:53:LEU:HD23	1.99	0.43
1:CA:887:G:C2'	1:CA:888:G:H5'	2.48	0.43
22:AY:28:G:N1	22:AY:29:A:C6	2.86	0.43
22:AY:9:A:C6	22:AY:47:G:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:428:G:C6	1:CA:430:A:N6	2.86	0.43
4:CD:32:ALA:CA	4:CD:35:ARG:HG3	2.48	0.43
1:AA:428:G:C6	1:AA:430:A:N6	2.87	0.43
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.18	0.43
22:CV:12:U:N3	22:CV:26:G:C2	2.87	0.43
51:DT:19:LEU:HD22	51:DT:85:LYS:HD3	2.01	0.43
51:DT:48:ILE:O	51:DT:63:VAL:HA	2.18	0.43
23:AW:23:A:C2	23:AW:50:C:C2	3.06	0.43
23:AW:55:G:O2'	23:AW:56:U:H5'	2.19	0.43
23:AW:9:A:C4	23:AW:47:G:N3	2.86	0.43
33:B8:30:ARG:NH1	35:BA:2419:U:O4	2.52	0.43
35:DA:2394:C:OP1	47:DP:63:PRO:CD	2.60	0.43
33:D8:13:ARG:NH2	35:DA:250:G:OP2	2.52	0.43
43:DI:129:THR:HG22	43:DI:130:TYR:N	2.32	0.43
43:DI:62:LYS:HA	43:DI:65:ALA:HB3	2.01	0.43
12:CL:68:ALA:CB	12:CL:85:ILE:HD11	2.47	0.43
35:BA:588:U:O5'	35:BA:588:U:H6	2.00	0.43
12:AL:36:VAL:C	12:AL:58:VAL:HG22	2.38	0.43
35:BA:1142(A):A:C8	35:BA:1142(A):A:H5'	2.53	0.43
35:BA:544:G:N2	35:BA:547:A:H5'	2.33	0.43
10:CJ:81:THR:C	10:CJ:83:GLU:N	2.71	0.43
45:DN:23:LEU:CD1	45:DN:98:VAL:HG12	2.48	0.43
45:DN:40:PRO:HB3	52:DU:68:ALA:HB2	2.00	0.43
39:DE:91:VAL:CG1	39:DE:95:ILE:HG13	2.47	0.43
1:CA:975:A:N1	10:CJ:48:THR:HB	2.33	0.43
46:BO:104:ARG:HE	51:BT:33:LYS:HE2	1.82	0.43
51:BT:28:VAL:HG12	51:BT:29:ARG:HD3	2.00	0.43
52:BU:65:ILE:HD11	52:BU:93:LYS:HA	2.00	0.43
7:CG:5:ARG:HD2	7:CG:5:ARG:N	2.34	0.43
40:BF:28:ILE:CD1	40:BF:28:ILE:H	2.32	0.43
13:AM:99:ARG:O	13:AM:100:GLY:C	2.57	0.43
4:CD:129:ASN:ND2	4:CD:129:ASN:H	2.15	0.43
47:BP:9:ASN:O	47:BP:11:GLY:N	2.51	0.43
35:BA:1290:C:H2'	35:BA:1291:C:C6	2.53	0.43
56:DY:44:ILE:C	56:DY:62:GLU:HG3	2.36	0.43
48:DQ:43:THR:OG1	48:DQ:45:GLN:HG2	2.18	0.43
3:CC:40:ARG:HG2	3:CC:55:VAL:HB	2.00	0.43
56:BY:52:SER:O	56:BY:54:LYS:N	2.50	0.43
1:AA:1126:U:O2'	1:AA:1127:G:H5'	2.18	0.43
5:AE:6:PHE:HD1	5:AE:63:ARG:HH12	1.64	0.43
3:AC:76:VAL:CG2	3:AC:77:ILE:N	2.75	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2133:G:H2'	35:DA:2157:G:N2	2.33	0.43
1:CA:1479:C:O2'	1:CA:1480:G:H5'	2.18	0.43
18:CR:50:ILE:HD12	18:CR:70:ILE:HD12	1.99	0.43
25:B0:27:GLU:C	25:B0:29:GLN:N	2.72	0.43
36:BB:52:A:O2'	36:BB:53:A:H8	1.99	0.43
39:DE:59:VAL:HG13	39:DE:60:ASN:H	1.83	0.43
7:AG:150:ALA:C	7:AG:152:ALA:H	2.19	0.43
35:BA:1779:U:H5	35:BA:1784:A:C8	2.35	0.43
1:AA:1107:C:C2'	1:AA:1108:G:H5''	2.48	0.43
35:BA:2126:A:H61	35:BA:2163:C:H4'	1.83	0.43
37:DC:34:ALA:HB2	37:DC:217:THR:HG21	1.99	0.43
20:AT:75:ASN:ND2	20:AT:75:ASN:H	2.15	0.43
35:DA:1173:G:H2'	35:DA:1175:U:C5	2.53	0.43
1:CA:532:A:H2	1:CA:1207:G:O4'	2.02	0.43
42:DH:11:VAL:HA	42:DH:12:PRO:HD3	1.80	0.43
9:CI:79:LEU:HD13	9:CI:79:LEU:C	2.39	0.43
17:CQ:37:LYS:HB2	17:CQ:37:LYS:HE3	1.76	0.43
49:BR:103:ARG:HH11	49:BR:110:PRO:HD3	1.83	0.43
1:CA:433:C:O2'	1:CA:434:U:H5'	2.19	0.43
4:AD:58:LEU:HD23	4:AD:62:GLN:HG2	2.01	0.43
38:DD:108:PRO:HG2	38:DD:111:LEU:HD23	2.00	0.43
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.53	0.43
1:CA:1003:G:N2	1:CA:1038:C:N4	2.67	0.43
1:AA:158:G:H2'	1:AA:159:G:C8	2.53	0.43
1:CA:1421:G:O2'	1:CA:1422:G:H5'	2.19	0.43
1:AA:1015:A:H2'	1:AA:1016:A:O4'	2.18	0.43
56:BY:89:PHE:O	56:BY:90:LEU:HB3	2.18	0.43
5:AE:64:ARG:NH1	5:AE:64:ARG:HG3	2.30	0.43
28:D3:17:LYS:HE2	35:DA:969:U:OP2	2.17	0.43
8:CH:91:ARG:CG	8:CH:91:ARG:NH1	2.80	0.43
35:DA:1721:G:H8	35:DA:1741:A:H62	1.65	0.43
5:CE:141:GLN:HA	5:CE:143:ARG:HH21	1.83	0.43
35:BA:1614:A:C6	54:BW:91:GLY:HA2	2.54	0.43
4:CD:196:LEU:N	4:CD:196:LEU:HD12	2.31	0.43
1:CA:1227:A:OP2	13:CM:111:LYS:HE3	2.18	0.43
13:CM:79:LYS:HD3	13:CM:82:MET:HE1	1.99	0.43
38:DD:64:ILE:HG23	38:DD:64:ILE:O	2.18	0.43
1:CA:1523:G:C5	1:CA:1524:C:C5	3.06	0.43
1:AA:730:G:C5	1:AA:731:G:H1'	2.54	0.43
7:AG:88:PRO:O	7:AG:89:MET:HB3	2.18	0.43
1:CA:123:C:OP1	1:CA:311:C:O2'	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BO:14:THR:HG21	46:BO:86:ILE:HB	1.99	0.43
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.18	0.43
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.53	0.43
1:AA:892:A:H2'	1:AA:893:C:C6	2.53	0.43
13:AM:19:LEU:O	13:AM:22:ILE:HD13	2.18	0.43
1:CA:59:A:H1'	1:CA:354:G:N2	2.32	0.43
35:BA:1363:C:O2'	35:BA:1364:G:H5'	2.18	0.43
1:CA:1264:C:H1'	1:CA:1272:G:H22	1.83	0.43
35:BA:2888:C:H2'	35:BA:2889:C:H6	1.84	0.43
17:CQ:75:ARG:HH11	17:CQ:75:ARG:HG3	1.83	0.43
35:DA:1702:G:H2'	35:DA:1703:G:O5'	2.18	0.43
35:DA:139(A):G:N2	55:DX:44:GLU:OE1	2.39	0.43
35:BA:2513:G:H2'	35:BA:2514:U:C6	2.53	0.43
35:BA:2428:G:H5''	35:BA:2429:G:O5'	2.17	0.43
46:BO:26:LYS:HB3	46:BO:27:GLY:H	1.68	0.43
42:BH:89:ILE:O	42:BH:89:ILE:HD12	2.18	0.43
22:CY:43:G:C2'	22:CY:44:A:H5'	2.48	0.43
22:CY:5:C:C2	22:CY:71:G:N1	2.86	0.43
23:AW:42:C:H2'	23:AW:43:G:C4'	2.48	0.43
23:CW:5:C:H1'	23:CW:72:C:O2	2.18	0.43
4:CD:33:MET:C	4:CD:35:ARG:H	2.22	0.43
22:AV:51:G:C4	22:AV:52:C:C5	3.06	0.43
22:CV:26:G:C4	22:CV:27:C:N3	2.86	0.43
30:B5:3:LYS:HE3	35:BA:2015:A:H2	1.84	0.43
35:DA:1485:G:H1'	35:DA:1505:C:N4	2.27	0.43
43:DI:114:LEU:HD23	43:DI:130:TYR:CE1	2.53	0.43
31:D6:15:GLU:CD	31:D6:44:ARG:HH12	2.21	0.43
35:DA:1711:C:H2'	35:DA:1712:C:C6	2.52	0.43
12:CL:37:CYS:HA	12:CL:58:VAL:CG2	2.47	0.43
35:BA:941:A:H4'	47:BP:35:HIS:CE1	2.53	0.43
1:AA:527:G:O2'	1:AA:528:C:H5'	2.19	0.43
12:AL:39:VAL:HG12	12:AL:41:ARG:N	2.33	0.43
10:AJ:4:ILE:CD1	10:AJ:77:PRO:HB3	2.48	0.43
40:BF:21:ALA:O	40:BF:23:ASP:N	2.51	0.43
35:BA:547:A:H1'	35:BA:548:A:C8	2.52	0.43
42:DH:52:VAL:O	42:DH:65:HIS:HE1	2.02	0.43
46:BO:76:ALA:HB3	51:BT:75:ILE:HD12	2.00	0.43
52:BU:88:ILE:O	52:BU:90:VAL:N	2.37	0.43
52:BU:90:VAL:HG21	53:BV:39:LEU:HB3	2.00	0.43
1:AA:472:A:H4'	16:AP:80:PHE:O	2.18	0.43
41:DG:5:VAL:CG1	41:DG:6:ALA:N	2.69	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:73:ALA:H	41:DG:87:PRO:HG3	1.83	0.43
50:DS:56:LEU:O	50:DS:57:LYS:HB2	2.18	0.43
50:DS:68:GLN:C	50:DS:70:GLY:N	2.70	0.43
33:D8:30:ARG:NH1	35:DA:2419:U:O4	2.51	0.43
47:BP:7:ARG:N	47:BP:8:PRO:HD2	2.33	0.43
47:BP:84:ASN:HD22	47:BP:84:ASN:N	2.14	0.43
8:AH:19:VAL:HG23	8:AH:21:LYS:HB2	2.01	0.43
57:BZ:149:SER:OG	57:BZ:150:LEU:N	2.51	0.43
48:BQ:42:ILE:N	48:BQ:42:ILE:HD12	2.34	0.43
1:AA:373:A:C2	1:AA:482:A:C6	3.07	0.43
35:DA:1047:G:C8	35:DA:1110:G:N1	2.86	0.43
35:DA:528:A:C2	35:DA:2043:C:C5'	3.02	0.43
32:D7:10:ARG:HH12	35:DA:1378:A:H5''	1.83	0.43
35:BA:2103:C:H2'	35:BA:2104:G:O4'	2.18	0.43
57:DZ:30:ASN:HB3	57:DZ:90:VAL:HB	1.99	0.43
40:BF:9:ILE:HG23	40:BF:13:SER:O	2.19	0.43
35:DA:1790:C:O2'	38:DD:209:ALA:HB2	2.18	0.43
42:DH:158:HIS:CE1	42:DH:168:PRO:HB2	2.54	0.43
2:AB:114:ARG:HD2	2:AB:118:LEU:HD11	2.01	0.43
45:DN:42:TRP:CE3	45:DN:48:MET:HE1	2.53	0.43
1:CA:1492:A:H2	24:CX:20:U:O2'	2.01	0.43
1:CA:829:G:O2'	1:CA:830:G:H5'	2.18	0.43
31:D6:9:LEU:HD22	31:D6:9:LEU:C	2.39	0.43
41:DG:34:LEU:HD11	41:DG:172:LEU:HD11	1.99	0.43
4:CD:88:VAL:HG13	5:CE:97:GLY:HA2	1.99	0.43
4:CD:152:SER:O	4:CD:153:ARG:C	2.57	0.43
35:BA:272(D):G:H1	35:BA:364:C:N4	2.17	0.43
1:AA:1503:A:O2'	1:AA:1504:G:O5'	2.36	0.43
23:AW:76:C:O2'	23:AW:77:C:H5'	2.18	0.43
47:BP:64:LYS:O	47:BP:64:LYS:HG2	2.18	0.43
46:BO:114:ILE:CD1	46:BO:114:ILE:N	2.81	0.43
47:DP:83:VAL:HG13	47:DP:83:VAL:O	2.18	0.43
1:CA:709:G:O2'	1:CA:710:G:H5'	2.18	0.43
16:CP:43:LYS:C	16:CP:45:THR:N	2.70	0.43
33:D8:39:LYS:O	33:D8:43:GLN:HG3	2.17	0.43
2:CB:74:LYS:HD2	2:CB:166:ASP:CB	2.49	0.43
2:CB:39:ILE:HG22	2:CB:40:HIS:N	2.34	0.43
26:B1:68:PRO:C	26:B1:70:VAL:N	2.71	0.43
25:D0:50:ASN:HB2	25:D0:81:VAL:HB	2.00	0.43
1:CA:18:C:H4'	1:CA:1078:U:O2	2.19	0.43
1:CA:606:G:H2'	1:CA:631:G:C2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D2:31:GLU:CB	27:D2:53:LEU:HD11	2.48	0.43
1:AA:954:G:C2	1:AA:955:U:C2	3.06	0.43
11:CK:96:ARG:HA	11:CK:99:GLN:OE1	2.18	0.43
56:BY:87:LYS:O	56:BY:88:LYS:HB2	2.18	0.43
1:AA:880:C:H2'	1:AA:881:G:C8	2.48	0.43
1:CA:763:G:O2'	1:CA:764:C:H5'	2.18	0.43
11:AK:74:ALA:O	11:AK:76:GLY:N	2.50	0.43
35:DA:654(I):C:H5'	35:DA:654(J):A:OP1	2.19	0.43
1:AA:109:A:C6	1:AA:326:G:C6	3.06	0.43
54:DW:47:VAL:CA	54:DW:50:VAL:HG12	2.48	0.43
7:AG:66:VAL:HG12	7:AG:66:VAL:O	2.17	0.43
35:DA:1363:C:O2'	35:DA:1364:G:H5'	2.18	0.43
35:BA:2389:G:H5''	35:BA:2390:U:O4'	2.18	0.43
26:D1:11:ARG:HB3	26:D1:11:ARG:HH11	1.83	0.43
32:D7:5:TRP:CZ3	35:DA:464:U:H4'	2.54	0.43
49:BR:88:ARG:HD2	49:BR:88:ARG:C	2.38	0.43
38:BD:133:LEU:HB3	38:BD:173:VAL:HG11	1.99	0.43
44:BJ:124:UNK:O	44:BJ:125:UNK:O	2.37	0.43
40:BF:181:LEU:HD11	40:BF:186:ILE:HD11	2.01	0.43
35:BA:1945:G:H2'	35:BA:1946:U:C6	2.54	0.43
26:B1:93:GLU:O	26:B1:95:LEU:N	2.51	0.43
34:B9:30:PRO:HB2	35:BA:2527:C:H4'	1.99	0.43
1:CA:656:C:O2'	1:CA:657:G:H5'	2.17	0.43
39:BE:152:LYS:HE3	45:BN:77:GLY:HA3	2.01	0.43
35:BA:1529:G:O2'	35:BA:1530:C:H5'	2.18	0.43
6:CF:50:TYR:CE1	18:CR:77:GLY:HA2	2.53	0.43
49:BR:60:LEU:O	49:BR:61:HIS:C	2.55	0.43
35:BA:1412:A:H2'	35:BA:1413:G:C8	2.53	0.43
1:AA:788:U:H2'	1:AA:789:U:O4'	2.18	0.43
35:DA:533:G:H5'	52:DU:24:TYR:CD1	2.53	0.43
6:AF:47:ARG:HH11	6:AF:47:ARG:HG2	1.83	0.43
22:CY:25:A:C2'	22:CY:26:G:C8	2.88	0.43
22:CY:27:C:C2'	22:CY:28:G:H8	2.29	0.43
22:AY:27:C:C2'	22:AY:28:G:H8	2.32	0.43
22:AY:31:C:N4	22:AY:43:G:H1	2.16	0.43
22:AY:4:C:N1	22:AY:5:C:C5	2.86	0.43
4:AD:32:ALA:CA	4:AD:35:ARG:HG3	2.48	0.43
51:DT:125:ARG:C	51:DT:127:ALA:N	2.72	0.43
23:AW:49:G:C8	23:AW:49:G:OP1	2.65	0.43
1:CA:148:G:C2	1:CA:149:A:N7	2.86	0.43
23:AW:20:G:N2	23:AW:58:C:H2'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:20:G:C4	23:AW:59:G:C2	3.07	0.43
43:DI:81:VAL:HG21	43:DI:88:ILE:HD13	2.01	0.43
43:BI:62:LYS:NZ	43:BI:133:HIS:HB2	2.33	0.43
23:CW:23:A:H61	23:CW:48:G:H2'	1.83	0.43
23:CW:49:G:H3'	23:CW:50:C:C5'	2.44	0.43
23:CW:9:A:C6	23:CW:47:G:C6	3.06	0.43
12:AL:25:PRO:C	12:AL:27:LEU:N	2.70	0.43
12:AL:39:VAL:HG11	12:AL:57:LYS:HZ3	1.83	0.43
10:AJ:13:HIS:CE1	10:AJ:14:LYS:HG3	2.53	0.43
10:AJ:28:ARG:HH11	10:AJ:28:ARG:HG2	1.82	0.43
35:BA:1711:C:H2'	35:BA:1712:C:C6	2.52	0.43
35:BA:404:C:C3'	35:BA:405:U:H5'	2.48	0.43
2:CB:211:ILE:O	2:CB:215:LEU:HD23	2.19	0.43
57:DZ:14:LYS:HA	57:DZ:15:PRO:HD2	1.92	0.43
1:AA:975:A:H5'	1:AA:975:A:C8	2.54	0.43
15:CO:51:HIS:O	15:CO:54:ARG:HB3	2.16	0.43
1:AA:448:A:O2'	1:AA:449:C:H5'	2.18	0.43
49:BR:11:ASN:OD1	49:BR:11:ASN:C	2.56	0.43
55:DX:34:ALA:HB1	55:DX:39:ILE:HD11	2.00	0.43
35:BA:1244:G:H4'	47:BP:11:GLY:HA2	2.00	0.43
47:DP:7:ARG:CZ	47:DP:7:ARG:HB3	2.47	0.43
22:CV:43:G:N1	22:CV:44:A:C4	2.86	0.43
53:DV:66:ARG:NH1	53:DV:66:ARG:HG2	2.33	0.43
40:BF:83:PHE:O	40:BF:84:VAL:CB	2.50	0.43
23:CW:53:U:C2	23:CW:66:G:N1	2.87	0.43
35:DA:874:G:H5''	57:DZ:175:VAL:CG1	2.46	0.43
14:CN:29:ARG:NH1	14:CN:31:ARG:HB2	2.34	0.43
1:CA:266:G:H5''	1:CA:268:C:N4	2.21	0.43
17:CQ:59:ILE:HG22	17:CQ:60:ILE:N	2.34	0.43
2:CB:114:ARG:HD3	2:CB:118:LEU:HG	2.01	0.43
42:DH:156:ALA:C	42:DH:158:HIS:N	2.72	0.43
42:DH:157:TYR:HE1	42:DH:171:LEU:N	2.16	0.43
35:DA:2472:G:C3'	35:DA:2475:C:H42	2.32	0.43
20:CT:102:GLY:O	20:CT:103:GLY:C	2.56	0.43
41:DG:172:LEU:HD23	41:DG:173:LEU:N	2.33	0.43
35:DA:2124:G:O3'	37:DC:41:THR:HG21	2.19	0.43
2:CB:134:GLU:O	2:CB:138:LEU:HB2	2.18	0.43
1:AA:320:C:HO2'	1:AA:1435:G:HO2'	1.66	0.43
42:BH:11:VAL:HA	42:BH:12:PRO:HD3	1.78	0.43
8:AH:11:THR:HG22	8:AH:15:ASN:ND2	2.33	0.43
47:BP:71:VAL:C	47:BP:73:GLY:N	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2692:C:O2'	35:BA:2693:A:H5'	2.18	0.43
9:CI:118:LYS:CB	9:CI:118:LYS:NZ	2.81	0.43
1:AA:1187:G:OP1	9:AI:113:LYS:HE2	2.18	0.43
27:B2:7:ARG:NH1	35:BA:102:G:OP2	2.51	0.43
50:BS:93:LYS:O	50:BS:94:TYR:C	2.56	0.43
1:AA:640:A:C2'	1:AA:641:U:H5'	2.48	0.43
56:DY:88:LYS:NZ	56:DY:93:GLY:HA3	2.33	0.43
42:DH:70:THR:HG23	42:DH:74:ASN:ND2	2.34	0.43
1:CA:356:A:H1'	1:CA:368:U:HO2'	1.82	0.43
11:CK:108:ILE:HD12	11:CK:108:ILE:N	2.33	0.43
36:BB:92:C:O2'	36:BB:93:G:H5'	2.19	0.43
1:AA:1170:A:H2'	1:AA:1171:G:O4'	2.19	0.43
36:DB:73:A:H2'	36:DB:74:U:H5'	2.01	0.43
48:DQ:103:MET:CE	48:DQ:125:LEU:HD13	2.48	0.43
13:AM:30:ALA:C	13:AM:32:GLU:N	2.72	0.43
48:DQ:21:THR:O	48:DQ:21:THR:HG22	2.17	0.43
49:BR:97:VAL:HG12	49:BR:114:VAL:HG22	1.99	0.43
35:DA:2346:A:H5'	35:DA:2383:G:C1'	2.47	0.43
36:BB:111:G:H2'	36:BB:112:U:H5'	2.01	0.43
3:CC:188:LEU:HD22	3:CC:188:LEU:N	2.33	0.43
35:DA:2741:A:H2'	35:DA:2742:C:O4'	2.19	0.43
25:B0:20:ARG:HD3	35:BA:2356:C:O3'	2.19	0.43
3:CC:34:LEU:HD22	3:CC:38:ARG:CZ	2.49	0.43
1:CA:1027:C:H2'	1:CA:1028:C:C5	2.52	0.43
35:BA:394:A:C2'	35:BA:395:U:H5'	2.49	0.43
35:BA:2672:G:H2'	35:BA:2673:G:H5''	1.99	0.43
1:CA:668:G:O2'	15:CO:46:HIS:CD2	2.71	0.43
1:AA:894:G:H2'	1:AA:895:G:C8	2.53	0.43
26:B1:39:LYS:HE3	35:BA:189:G:P	2.59	0.43
35:DA:2877:G:O2'	35:DA:2878:U:H5'	2.17	0.43
1:CA:815:A:N7	1:CA:1509:C:O2'	2.45	0.43
35:DA:15:G:O2'	35:DA:16:G:H5'	2.18	0.43
8:CH:100:ILE:HA	8:CH:101:PRO:HD3	1.82	0.43
35:BA:2796:U:H3'	35:BA:2799:C:H5'	1.99	0.43
35:BA:579:G:H2'	35:BA:580:C:C6	2.53	0.43
38:DD:89:SER:O	38:DD:159:ALA:HB2	2.18	0.43
35:BA:1007:C:OP1	45:BN:35:ARG:NH1	2.51	0.43
1:CA:582:U:C2	1:CA:760:G:C6	3.06	0.43
35:DA:1053:C:O2	35:DA:1053:C:C2'	2.67	0.43
39:DE:176:ILE:HG22	39:DE:178:GLU:HB3	2.01	0.43
1:AA:1424:C:O2'	1:AA:1425:U:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:799:G:O6	1:AA:800:G:C2	2.72	0.43
35:BA:985:C:H2'	35:BA:986:C:H6	1.84	0.43
35:BA:1705:G:O2'	35:BA:1706:U:H5'	2.18	0.43
23:CW:40:A:C8	23:CW:41:C:C4	3.07	0.43
4:AD:29:PRO:C	4:AD:30:LYS:HG2	2.38	0.43
22:CV:57:U:C6	22:CV:59:G:OP2	2.71	0.43
51:DT:33:LYS:HZ2	51:DT:74:ARG:NH2	2.16	0.43
23:AW:49:G:H3'	23:AW:50:C:C5'	2.46	0.43
47:DP:41:ARG:HE	47:DP:41:ARG:CA	2.31	0.43
43:BI:102:SER:HA	43:BI:107:VAL:O	2.18	0.43
43:BI:132:PRO:C	43:BI:133:HIS:ND1	2.72	0.43
23:CW:13:U:H5'	23:CW:13:U:C6	2.54	0.43
23:CW:25:A:C6	23:CW:26:G:O6	2.71	0.43
35:DA:1713:U:C2	35:DA:1747:G:N1	2.86	0.43
12:CL:27:LEU:HD11	12:CL:64:TYR:CD2	2.53	0.43
12:AL:79:GLU:C	12:AL:81:SER:H	2.22	0.43
40:BF:20:LEU:O	40:BF:24:LEU:HD23	2.18	0.43
42:DH:41:MET:HE1	42:DH:53:GLU:H	1.84	0.43
35:DA:146:G:O2'	35:DA:147:U:H5'	2.18	0.43
10:CJ:5:ARG:HG3	10:CJ:71:LEU:HD11	2.00	0.43
29:B4:36:CYS:HA	41:BG:112:PRO:HB2	2.01	0.43
33:D8:56:GLU:C	33:D8:58:ILE:H	2.21	0.43
52:BU:101:ARG:NH1	52:BU:101:ARG:HB2	2.33	0.43
1:CA:1276:G:C2'	1:CA:1277:C:H5'	2.48	0.43
43:BI:74:ASN:ND2	43:BI:74:ASN:N	2.46	0.43
41:DG:125:PHE:CD2	41:DG:131:TYR:HD2	2.36	0.43
39:BE:51:PHE:HD1	39:BE:52:LEU:N	2.16	0.43
1:AA:1149:C:OP1	9:AI:9:ARG:HD3	2.18	0.43
7:AG:5:ARG:N	7:AG:5:ARG:HD2	2.34	0.43
18:CR:35:ARG:C	18:CR:37:VAL:H	2.22	0.43
28:B3:7:LYS:HE2	28:B3:32:GLN:OE1	2.19	0.43
47:DP:84:ASN:HD22	47:DP:84:ASN:N	2.15	0.43
1:AA:1288:A:H2	1:AA:1352:C:O2	2.01	0.43
1:CA:1228:C:H2'	1:CA:1229:A:C8	2.46	0.43
50:BS:35:ILE:HG23	50:BS:35:ILE:O	2.18	0.43
1:AA:266:G:H5'	1:AA:266:G:C8	2.53	0.43
57:BZ:166:SER:OG	57:BZ:167:PRO:HA	2.19	0.43
29:B4:1:MET:HG3	41:BG:66:GLN:CG	2.42	0.43
39:DE:102:VAL:HB	39:DE:199:ARG:O	2.19	0.43
48:BQ:42:ILE:HA	48:BQ:46:GLN:OE1	2.19	0.43
48:BQ:42:ILE:HD13	48:BQ:97:VAL:HG21	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B5:54:GLY:O	30:B5:55:ARG:NE	2.52	0.43
3:CC:59:ARG:O	10:CJ:92:THR:O	2.37	0.43
4:AD:170:VAL:HG12	4:AD:171:GLY:N	2.33	0.43
4:CD:189:PRO:CB	4:CD:194:LEU:HD21	2.40	0.43
17:CQ:5:VAL:HG13	17:CQ:59:ILE:O	2.19	0.43
40:DF:8:GLN:O	40:DF:9:ILE:C	2.57	0.43
13:AM:5:ALA:CB	13:AM:66:LEU:HD13	2.44	0.43
21:AU:25:LYS:CG	21:AU:26:LYS:N	2.82	0.43
2:CB:121:LEU:HD23	2:CB:124:SER:CB	2.48	0.43
35:DA:2787:C:H1'	39:DE:61:ARG:HG3	1.99	0.43
19:CS:31:ILE:HG12	19:CS:31:ILE:O	2.19	0.43
38:DD:213:ARG:HD2	38:DD:217:ARG:O	2.19	0.43
16:CP:18:ARG:HD3	16:CP:35:LYS:CD	2.43	0.43
35:BA:2472:G:C3'	35:BA:2475:C:H42	2.30	0.43
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.84	0.43
35:DA:1464:C:O2'	35:DA:1528:A:C8	2.50	0.43
35:BA:2175:C:H1'	37:BC:218:THR:O	2.18	0.43
35:DA:953:A:C2'	35:DA:954:G:H5'	2.48	0.43
35:DA:2788:C:O2'	35:DA:2809:A:N3	2.47	0.43
42:DH:9:ILE:HD13	42:DH:9:ILE:C	2.39	0.43
27:B2:63:VAL:HA	27:B2:66:GLU:OE2	2.19	0.43
42:DH:83:TYR:CG	42:DH:134:SER:HB3	2.53	0.43
30:D5:40:LYS:NZ	30:D5:46:CYS:SG	2.82	0.43
35:DA:1983:C:H4'	35:DA:2606:C:H4'	2.00	0.43
50:BS:24:LEU:N	50:BS:24:LEU:HD22	2.33	0.43
39:DE:81:ILE:O	39:DE:82:ARG:O	2.36	0.43
1:CA:1445:C:O2'	1:CA:1446:U:H5'	2.18	0.43
6:AF:14:LEU:HB2	6:AF:19:LEU:HB2	2.00	0.43
25:B0:49:LYS:O	25:B0:50:ASN:HB2	2.19	0.43
35:DA:709:U:H2'	35:DA:710:G:H8	1.82	0.43
35:BA:92:A:O2'	35:BA:93:G:H5'	2.19	0.43
37:DC:182:PRO:HA	37:DC:183:PRO:HD3	1.91	0.43
37:BC:182:PRO:HA	37:BC:183:PRO:HD3	1.90	0.43
35:DA:1721:G:C2	35:DA:1739:U:OP2	2.72	0.43
35:BA:2584:U:O5'	35:BA:2584:U:O2	2.36	0.43
51:DT:106:SER:HB2	51:DT:110:ILE:HD11	2.01	0.43
35:DA:2870:C:H5''	49:DR:65:LEU:HD21	2.00	0.43
35:BA:2732:G:C2'	35:BA:2733:A:H5'	2.49	0.43
1:CA:9:G:H5'	5:CE:122:GLU:OE2	2.19	0.43
7:CG:88:PRO:O	7:CG:89:MET:HB3	2.17	0.43
35:BA:470:A:H2'	35:BA:471:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:62:TYR:HA	38:BD:87:ASN:ND2	2.34	0.43
3:CC:167:TRP:O	3:CC:168:ALA:CB	2.66	0.43
1:CA:1298:C:H2'	7:CG:114:ARG:NH1	2.32	0.43
29:D4:50:VAL:O	29:D4:52:THR:N	2.48	0.43
1:AA:715:A:H2'	1:AA:716:A:C8	2.54	0.43
35:BA:2741:A:H2'	35:BA:2742:C:O4'	2.18	0.43
13:CM:19:LEU:HA	13:CM:22:ILE:HD13	2.00	0.43
35:DA:2729:G:H2'	35:DA:2730:C:H6	1.84	0.43
35:BA:2700:C:O2'	35:BA:2701:C:H5'	2.18	0.43
5:CE:87:SER:HB3	5:CE:131:ILE:HD13	2.01	0.43
35:BA:2729:G:H2'	35:BA:2730:C:H6	1.82	0.43
1:CA:741:G:H2'	1:CA:742:G:C8	2.54	0.43
35:DA:1701:A:H5'	35:DA:1702:G:OP2	2.19	0.43
40:DF:33:LEU:HA	40:DF:33:LEU:HD12	1.91	0.43
1:AA:39:G:O2'	1:AA:40:C:H5'	2.19	0.43
1:AA:656:C:O2'	1:AA:657:G:H5'	2.18	0.43
49:DR:61:HIS:O	49:DR:64:ARG:N	2.51	0.43
43:BI:56:LYS:HA	43:BI:59:ALA:HB3	2.01	0.43
35:BA:1122:G:O2'	35:BA:1123:C:H5'	2.19	0.43
35:BA:1116:C:OP2	35:BA:1116:C:H6	2.01	0.43
35:DA:2552:U:H2'	35:DA:2554:U:H5''	2.00	0.43
35:DA:1582:C:O2'	35:DA:1586:A:C8	2.64	0.43
35:BA:2364:C:H2'	35:BA:2365:G:O4'	2.19	0.43
22:CY:31:C:N3	22:CY:44:A:C2	2.87	0.43
23:AW:69:G:N2	23:AW:70:G:H1'	2.34	0.43
14:AN:27:CYS:O	14:AN:27:CYS:SG	2.77	0.43
22:CV:4:C:C4	22:CV:5:C:N4	2.87	0.43
30:B5:3:LYS:CD	35:BA:2613:U:H2'	2.49	0.43
56:DY:7:VAL:CB	56:DY:8:LYS:HD2	2.48	0.43
1:AA:1407:C:C2'	35:BA:1912:A:N1	2.82	0.43
1:CA:520:A:OP2	12:CL:51:ALA:CB	2.66	0.43
12:CL:24:VAL:HG12	12:CL:24:VAL:O	2.18	0.43
1:AA:148:G:C2	1:AA:149:A:N7	2.86	0.43
1:AA:909:A:OP1	12:AL:21:LYS:HD3	2.19	0.43
10:AJ:4:ILE:HB	10:AJ:74:ILE:CD1	2.49	0.43
1:CA:962:C:H2'	1:CA:963:G:C8	2.54	0.43
1:CA:1151:A:C4	1:CA:1152:A:N7	2.87	0.43
10:CJ:70:ARG:NH1	10:CJ:70:ARG:HG2	2.30	0.43
23:CW:20:G:C2	23:CW:58:C:C2	3.07	0.43
23:CW:58:C:O5'	23:CW:58:C:H6	2.02	0.43
23:CW:63:C:H2'	23:CW:63:C:O2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:25:ASP:O	8:CH:26:VAL:HB	2.19	0.43
47:BP:102:ARG:NH1	47:BP:102:ARG:HB3	2.34	0.43
46:BO:71:ARG:HH11	46:BO:71:ARG:HG3	1.83	0.43
52:BU:101:ARG:C	52:BU:102:GLU:CG	2.87	0.43
53:BV:2:PHE:CD1	53:BV:13:ARG:NH1	2.87	0.43
29:D4:25:TYR:CZ	41:DG:2:PRO:HA	2.54	0.43
39:BE:77:ILE:CG2	39:BE:78:LEU:H	2.00	0.43
49:BR:3:HIS:O	49:BR:4:LEU:HB3	2.17	0.43
25:B0:14:ARG:CG	25:B0:14:ARG:NH1	2.79	0.43
56:BY:30:VAL:HG12	56:BY:31:LEU:N	2.33	0.43
50:BS:98:VAL:HG12	50:BS:100:ALA:N	2.34	0.43
3:AC:11:ARG:NH2	3:AC:177:THR:O	2.52	0.43
39:BE:35:GLN:HB3	39:BE:48:GLN:HB3	2.01	0.43
50:DS:35:ILE:O	50:DS:35:ILE:HG23	2.19	0.43
39:BE:101:ARG:HE	39:BE:169:ASN:ND2	2.16	0.43
52:BU:34:LYS:CA	52:BU:34:LYS:HE2	2.35	0.43
31:D6:12:GLU:CG	31:D6:23:THR:HG22	2.36	0.43
8:CH:73:ASP:C	8:CH:75:ARG:H	2.21	0.43
47:DP:9:ASN:O	47:DP:11:GLY:N	2.52	0.43
38:DD:61:LEU:O	38:DD:63:ARG:NH1	2.51	0.43
2:CB:67:THR:CB	2:CB:155:LEU:HD21	2.47	0.43
41:BG:129:GLY:O	41:BG:130:ASN:CB	2.66	0.43
1:CA:625:G:O2'	1:CA:626:U:H5'	2.19	0.43
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.87	0.43
3:AC:40:ARG:HG2	3:AC:55:VAL:HB	2.00	0.43
5:CE:111:GLU:C	5:CE:113:ALA:H	2.22	0.43
9:AI:43:ALA:C	9:AI:45:ALA:H	2.22	0.43
13:AM:68:GLY:H	13:AM:71:ARG:CB	2.32	0.43
35:BA:1047:G:C8	35:BA:1110:G:N1	2.87	0.43
35:BA:1539:G:H2'	35:BA:1540:U:O4'	2.18	0.43
8:CH:86:ILE:CB	8:CH:133:LEU:HD22	2.48	0.43
36:BB:29:A:OP2	50:BS:31:SER:OG	2.33	0.43
16:CP:20:VAL:HG23	16:CP:35:LYS:HA	2.00	0.43
46:BO:25:LEU:CD1	46:BO:40:VAL:HG23	2.44	0.43
35:DA:1528:A:N6	35:DA:1544:A:C2	2.87	0.43
35:DA:1544:A:O2'	35:DA:1545:A:H5'	2.19	0.43
35:BA:259:G:H1'	35:BA:621:A:O2'	2.18	0.43
20:AT:26:ASN:HD22	20:AT:26:ASN:N	2.17	0.43
1:AA:1106:G:H5''	3:AC:172:ARG:HD3	2.00	0.43
38:DD:27:THR:CG2	38:DD:27:THR:O	2.64	0.43
38:BD:13:ARG:NH1	38:BD:16:MET:SD	2.91	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:9:LEU:C	31:B6:9:LEU:HD22	2.39	0.43
35:DA:2531:A:H2	35:DA:2658:C:O2	2.02	0.43
41:BG:172:LEU:HD23	41:BG:176:LEU:HD12	2.01	0.43
34:D9:10:ILE:HD12	34:D9:32:HIS:CG	2.54	0.43
16:AP:48:TRP:N	16:AP:48:TRP:CD1	2.87	0.43
39:DE:42:ASP:HB3	39:DE:44:TYR:CE1	2.54	0.43
6:AF:30:LEU:O	6:AF:35:ALA:N	2.43	0.43
6:CF:62:TRP:CH2	6:CF:64:GLN:HB2	2.52	0.43
41:DG:163:ALA:CB	41:DG:169:ALA:HB2	2.49	0.43
48:DQ:10:ARG:NH1	48:DQ:10:ARG:HB3	2.32	0.43
1:AA:600:C:O2'	1:AA:601:C:H5'	2.17	0.43
47:DP:108:LYS:O	47:DP:110:TYR:N	2.51	0.43
35:BA:797:C:O2'	35:BA:798:G:H5'	2.19	0.43
1:CA:140:A:N6	1:CA:141:A:N6	2.66	0.43
1:CA:892:A:H2'	1:CA:893:C:C6	2.54	0.43
1:CA:451:A:N6	1:CA:480:U:H2'	2.33	0.43
1:AA:1388:C:H2'	1:AA:1389:C:O4'	2.18	0.43
1:AA:929:G:H1	1:AA:1388:C:H42	1.67	0.43
35:DA:1675:C:O2	39:DE:129:HIS:HA	2.18	0.43
41:BG:132:ASN:OD1	41:BG:158:ALA:HB2	2.18	0.43
1:CA:724:G:H2'	1:CA:725:G:H8	1.82	0.43
20:CT:38:LYS:HA	20:CT:41:ILE:HG12	2.00	0.43
10:AJ:44:VAL:HG12	10:AJ:45:ARG:N	2.33	0.43
36:DB:98:G:H2'	36:DB:99:G:O4'	2.19	0.43
36:DB:17:C:H2'	36:DB:18:G:O4'	2.17	0.43
35:DA:902:C:O2'	35:DA:903:C:H5'	2.19	0.43
1:AA:1269:A:H5'	21:AU:18:TYR:O	2.19	0.43
6:AF:40:VAL:HG22	6:AF:40:VAL:O	2.19	0.43
35:BA:1702:G:H2'	35:BA:1703:G:O5'	2.19	0.43
35:DA:2052:G:N3	39:DE:149:ARG:HA	2.32	0.43
35:DA:280:C:C2'	35:DA:281:G:H5'	2.49	0.43
1:AA:911:U:O2'	1:AA:912:C:H5'	2.18	0.43
9:AI:103:THR:HG22	9:AI:104:ARG:N	2.32	0.43
35:BA:2588:G:O2'	35:BA:2589:A:H5'	2.19	0.43
56:BY:23:ARG:O	56:BY:24:VAL:O	2.37	0.43
23:CW:22:U:O4'	23:CW:22:U:O2	2.35	0.43
35:DA:1116:C:OP2	35:DA:1116:C:H6	2.01	0.43
44:DJ:77:UNK:C	44:DJ:79:UNK:N	2.82	0.43
4:CD:100:ARG:HH11	4:CD:100:ARG:HG2	1.84	0.43
22:CY:5:C:N3	22:CY:6:C:C4	2.87	0.43
22:AY:4:C:N3	22:AY:72:C:H5	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AY:57:U:C4'	57:BZ:183:LEU:H	2.30	0.43
51:DT:3:ARG:HB3	51:DT:6:LEU:CB	2.49	0.43
22:AV:3:G:C2'	22:AV:4:C:C5'	2.96	0.43
22:AV:6:C:O2	22:AV:69:G:N1	2.33	0.43
22:CV:12:U:N3	22:CV:26:G:N2	2.66	0.43
31:B6:54:ILE:O	31:B6:54:ILE:CD1	2.67	0.43
33:B8:30:ARG:HG2	47:BP:62:LEU:CD1	2.49	0.43
35:BA:2360:A:O2'	35:BA:2361:A:C5'	2.67	0.43
56:DY:30:VAL:HG12	56:DY:31:LEU:N	2.34	0.43
1:AA:973:G:OP1	10:AJ:57:LYS:HD3	2.18	0.43
12:AL:27:LEU:HB2	12:AL:33:ARG:HD2	2.01	0.43
45:BN:58:ASP:C	45:BN:60:ILE:N	2.69	0.43
40:BF:2:LYS:HG3	40:BF:25:PRO:HG2	2.01	0.43
40:BF:1:MET:O	40:BF:3:GLU:HG2	2.18	0.43
35:BA:1748:G:C8	35:BA:1748:G:H5'	2.44	0.43
10:CJ:95:GLU:HG3	10:CJ:96:ILE:H	1.81	0.43
52:DU:101:ARG:HB2	52:DU:101:ARG:NH1	2.34	0.43
52:DU:90:VAL:CG2	53:DV:47:VAL:HG21	2.48	0.43
35:DA:545:C:C3'	35:DA:547:A:C5'	2.96	0.43
35:DA:547:A:H1'	35:DA:548:A:C8	2.54	0.43
51:BT:91:ARG:HG2	51:BT:116:ALA:HB2	2.01	0.43
51:BT:28:VAL:O	51:BT:86:ILE:O	2.37	0.43
51:BT:62:THR:CG2	51:BT:75:ILE:HG12	2.46	0.43
53:BV:64:HIS:ND1	53:BV:92:THR:CG2	2.75	0.43
41:DG:103:LEU:O	41:DG:106:LEU:HB3	2.19	0.43
39:BE:52:LEU:HB2	39:BE:76:ARG:HB2	2.00	0.43
1:CA:1308:U:H5'	13:CM:110:ARG:HD2	1.99	0.43
13:CM:99:ARG:O	13:CM:100:GLY:C	2.57	0.43
39:BE:5:LEU:HG	39:BE:49:LEU:HD12	2.00	0.43
2:CB:218:ALA:O	2:CB:222:ILE:HG12	2.18	0.43
17:CQ:51:TYR:CD1	17:CQ:51:TYR:N	2.86	0.43
35:BA:480:A:H1'	56:BY:44:ILE:HG21	2.00	0.43
1:AA:127:G:HO2'	17:AQ:2:PRO:N	2.17	0.43
17:AQ:66:SER:O	17:AQ:67:LYS:C	2.57	0.43
8:AH:68:ARG:HG2	8:AH:68:ARG:NH1	2.33	0.43
39:BE:117:MET:O	39:BE:118:LYS:CB	2.66	0.43
47:BP:16:ARG:O	47:BP:18:ARG:N	2.52	0.43
3:CC:74:GLY:C	3:CC:76:VAL:N	2.71	0.43
1:CA:1134:G:H22	1:CA:1141:C:C1'	2.30	0.43
15:CO:82:ILE:HG23	15:CO:83:GLU:N	2.34	0.43
1:CA:625:G:H4'	16:CP:16:HIS:CG	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:189:PRO:CB	4:AD:194:LEU:HD21	2.41	0.43
37:DC:48:LEU:HA	37:DC:209:PHE:O	2.18	0.43
1:AA:1381:U:H1'	7:AG:78:ARG:HH11	1.83	0.43
1:AA:438:G:C2'	1:AA:494:U:O4	2.62	0.43
57:DZ:57:ILE:N	57:DZ:57:ILE:HD12	2.34	0.43
35:DA:2893:G:H5'	35:DA:2894:G:C5'	2.42	0.43
21:CU:23:PRO:C	21:CU:25:LYS:N	2.72	0.43
1:AA:621:A:H2'	1:AA:622:A:C8	2.54	0.43
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.33	0.43
16:AP:4:ILE:HD13	16:AP:64:ALA:O	2.19	0.43
41:DG:19:LEU:C	41:DG:22:ARG:H	2.20	0.43
38:BD:26:LYS:O	38:BD:27:THR:CG2	2.67	0.43
13:AM:114:ARG:C	13:AM:115:LYS:HD3	2.39	0.43
20:AT:89:ARG:CB	20:AT:104:LEU:HD11	2.44	0.43
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.18	0.43
5:CE:80:ILE:CD1	5:CE:138:ALA:HB1	2.49	0.43
35:DA:274:G:C6	35:DA:276:A:N6	2.87	0.43
30:D5:40:LYS:NZ	30:D5:46:CYS:H	2.17	0.43
9:CI:38:GLN:OE1	9:CI:38:GLN:C	2.57	0.43
36:DB:83:G:O2'	36:DB:84:C:H5'	2.18	0.43
25:D0:43:THR:O	25:D0:43:THR:HG23	2.19	0.43
48:BQ:135:ASP:HB3	57:BZ:49:ARG:HH11	1.84	0.43
1:CA:397:A:H5'	1:CA:398:C:OP1	2.18	0.43
28:B3:17:LYS:O	28:B3:20:LYS:N	2.52	0.43
20:CT:13:LEU:N	20:CT:13:LEU:CD1	2.82	0.43
31:B6:14:THR:HG23	31:B6:14:THR:O	2.19	0.43
1:CA:1432:G:C5	1:CA:1467:G:O6	2.72	0.43
35:BA:527:C:C5	35:BA:2779:U:H2'	2.53	0.43
35:BA:2732:G:C3'	35:BA:2733:A:H5'	2.49	0.43
35:DA:921:G:H4'	35:DA:2269:A:C5	2.54	0.43
4:CD:47:ARG:CZ	4:CD:49:ARG:HH22	2.32	0.43
35:DA:970:C:H2'	35:DA:971:C:C6	2.53	0.43
39:DE:105:THR:HG23	39:DE:166:THR:OG1	2.18	0.43
4:AD:163:GLU:OE1	4:AD:163:GLU:HA	2.18	0.43
1:AA:1514:C:H2'	1:AA:1515:C:C6	2.54	0.43
1:AA:724:G:H2'	1:AA:725:G:H8	1.83	0.43
35:DA:2649:U:C2	35:DA:2672:G:N2	2.86	0.43
37:DC:51:ASP:HB3	37:DC:54:ARG:HG3	2.00	0.43
38:BD:20:ASP:C	38:BD:20:ASP:OD1	2.57	0.43
38:DD:168:ARG:HA	38:DD:173:VAL:HA	2.01	0.43
38:DD:133:LEU:HD13	38:DD:173:VAL:HG11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1002:G:H2'	35:BA:1003:G:O4'	2.18	0.43
35:BA:1548:C:H2'	35:BA:1549:C:H6	1.83	0.43
35:BA:654(P):C:H2'	35:BA:654(Q):C:O4'	2.18	0.43
35:DA:1945:G:H2'	35:DA:1946:U:C6	2.53	0.43
35:DA:2062:A:HO2'	35:DA:2063:C:P	2.40	0.43
1:CA:895:G:H2'	1:CA:896:C:C6	2.54	0.43
1:AA:935:A:H2'	1:AA:936:C:H6	1.83	0.43
38:BD:231:HIS:ND1	38:BD:232:PRO:CD	2.82	0.43
22:AY:78:A:N3	35:BA:2583:G:N2	2.55	0.43
35:DA:1416:G:H1'	35:DA:1417:C:C6	2.54	0.43
52:DU:8:VAL:HG23	52:DU:11:ARG:HH21	1.83	0.43
3:CC:33:LEU:HD21	14:CN:53:LEU:HD21	2.00	0.43
1:AA:754:C:H3'	1:AA:754:C:O2	2.18	0.43
35:BA:1208:C:H2'	35:BA:1208:C:O2	2.18	0.43
37:BC:210:LEU:HD13	37:BC:227:PRO:CG	2.49	0.43
35:BA:1833:U:O2'	35:BA:1969:A:N1	2.49	0.43
35:BA:2552:U:C2	35:BA:2554:U:H5'	2.53	0.43
22:CY:55:G:O3'	22:CY:56:U:O4'	2.37	0.43
22:AY:70:G:N1	22:AY:71:G:C5	2.86	0.43
22:AY:55:G:C5'	48:BQ:56:ARG:HH22	2.28	0.43
22:AV:11:C:C6	22:AV:12:U:H5	2.35	0.43
22:AV:14:A:N7	22:AV:24:A:N1	2.66	0.43
22:CV:20:G:C3'	22:CV:21:U:C5'	2.89	0.43
22:CV:7:U:C4	22:CV:69:G:N1	2.87	0.43
22:CV:70:G:C4	22:CV:71:G:C8	3.06	0.43
41:DG:46:ALA:HB3	41:DG:82:LEU:CD1	2.37	0.43
42:BH:43:VAL:O	42:BH:43:VAL:HG23	2.18	0.43
43:DI:66:GLU:OE2	43:DI:69:LYS:HE3	2.19	0.43
31:D6:16:CYS:SG	31:D6:48:VAL:HG21	2.59	0.43
35:BA:1916:A:C5'	35:BA:1916:A:H8	2.29	0.43
12:CL:21:LYS:O	12:CL:22:SER:C	2.57	0.43
12:CL:79:GLU:C	12:CL:81:SER:H	2.22	0.43
12:CL:85:ILE:CG1	12:CL:98:TYR:HB3	2.48	0.43
40:DF:2:LYS:HG3	40:DF:25:PRO:HG2	2.01	0.43
12:AL:58:VAL:O	12:AL:65:GLU:HG3	2.19	0.43
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HD23	2.01	0.43
45:DN:2:LYS:NZ	52:DU:95:LEU:CD2	2.73	0.43
35:DA:545:C:H2'	35:DA:547:A:C5'	2.47	0.43
5:CE:92:LYS:O	5:CE:118:ILE:HD12	2.18	0.43
28:D3:8:LEU:CD1	28:D3:31:LEU:HD23	2.31	0.43
35:DA:1653:G:O6	49:DR:11:ASN:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:78:LEU:O	39:BE:78:LEU:HD12	2.19	0.43
50:DS:61:ASN:HB3	50:DS:64:GLU:HB2	2.00	0.43
35:BA:804:A:H2'	35:BA:806:C:C4	2.54	0.43
35:BA:1244:G:O2'	35:BA:1245:G:H5'	2.19	0.43
35:DA:1204:A:H2	35:DA:1241:A:N1	2.17	0.43
1:CA:1230:C:H2'	1:CA:1231:G:H8	1.83	0.43
35:BA:1536:C:O2'	35:BA:1537:G:H5'	2.19	0.43
56:DY:46:LYS:HG3	56:DY:47:LYS:N	2.33	0.43
50:BS:35:ILE:H	50:BS:53:SER:HB2	1.84	0.43
27:D2:16:LEU:HB2	27:D2:21:LEU:HG	1.99	0.43
30:B5:50:GLY:HA3	30:B5:55:ARG:HB2	2.00	0.43
1:CA:586:C:C2'	1:CA:587:G:H5'	2.49	0.43
9:AI:17:VAL:HG22	9:AI:63:ILE:CD1	2.47	0.43
37:BC:48:LEU:HA	37:BC:209:PHE:O	2.19	0.43
14:CN:23:ARG:HD2	14:CN:28:GLY:C	2.39	0.43
35:DA:1112:G:O2'	35:DA:1113:U:O4'	2.37	0.43
1:CA:623:C:C4	1:CA:624:C:C5	3.05	0.43
9:CI:53:VAL:CG2	9:CI:55:ALA:HB3	2.49	0.43
9:CI:53:VAL:HB	9:CI:92:TYR:CE2	2.52	0.43
17:CQ:61:GLU:HA	17:CQ:71:PHE:CE1	2.53	0.43
35:BA:2186:G:H2'	35:BA:2187:G:C8	2.54	0.43
57:DZ:61:LEU:HD21	57:DZ:65:GLN:HB2	2.00	0.43
35:DA:1040:C:HO2'	35:DA:1041:C:C5'	2.32	0.43
21:CU:22:ARG:O	21:CU:23:PRO:C	2.56	0.43
51:BT:40:THR:O	51:BT:41:ARG:CB	2.67	0.43
38:DD:210:GLY:O	38:DD:211:ARG:CB	2.66	0.43
42:BH:156:ALA:C	42:BH:158:HIS:N	2.70	0.43
2:CB:114:ARG:HD2	2:CB:118:LEU:HD11	2.01	0.43
1:AA:829:G:O2'	1:AA:830:G:H5'	2.17	0.43
35:DA:1541:G:H1'	35:DA:1542:A:C6	2.54	0.43
19:AS:6:LYS:CG	19:AS:7:LYS:HE3	2.48	0.43
35:BA:1171:G:H3'	35:BA:1173:G:O4'	2.18	0.43
35:BA:1316:U:H2'	35:BA:1317:A:H8	1.83	0.43
35:BA:2788:C:O2'	35:BA:2809:A:N3	2.46	0.43
35:DA:2531:A:H61	35:DA:2662:A:H61	1.67	0.43
42:DH:30:LYS:HE3	42:DH:81:GLU:H	1.83	0.43
35:DA:365:C:C6	35:DA:365:C:H5'	2.42	0.43
1:AA:1291:G:O2'	1:AA:1292:U:H5'	2.19	0.43
1:CA:52:G:H2'	1:CA:53:A:C8	2.54	0.43
1:AA:52:G:H2'	1:AA:53:A:C8	2.54	0.43
50:BS:17:ARG:C	50:BS:19:LYS:H	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:124:GLU:CB	42:BH:132:ARG:HG2	2.45	0.43
9:AI:118:LYS:NZ	9:AI:118:LYS:CB	2.82	0.43
1:AA:1348:U:OP1	9:AI:109:VAL:HA	2.18	0.43
1:AA:1296:C:C5	1:AA:1297:C:N4	2.87	0.43
6:CF:3:ARG:NH1	6:CF:3:ARG:HG3	2.33	0.43
41:BG:31:VAL:CG1	41:BG:31:VAL:O	2.63	0.43
35:BA:92:A:H2'	35:BA:93:G:O4'	2.19	0.43
5:CE:64:ARG:NH1	5:CE:64:ARG:HG3	2.30	0.43
47:BP:108:LYS:C	47:BP:110:TYR:N	2.71	0.43
24:AX:20:U:H2'	24:AX:21:A:H8	1.81	0.43
43:BI:5:LEU:O	43:BI:6:LEU:HD23	2.18	0.43
1:AA:501:C:H2'	1:AA:502:G:C8	2.52	0.43
45:DN:30:ILE:HG22	45:DN:34:LEU:HD21	1.99	0.43
29:B4:43:TYR:CD2	29:B4:44:THR:HG23	2.50	0.43
56:DY:20:TYR:N	56:DY:20:TYR:HD1	2.17	0.43
1:CA:1179:A:O2'	1:CA:1180:A:H5'	2.18	0.43
35:DA:2745:C:H2'	35:DA:2746:U:H6	1.81	0.43
35:DA:1678:G:N2	35:DA:1989:G:H1	2.17	0.43
57:BZ:35:ARG:HG3	57:BZ:35:ARG:NH1	2.34	0.43
35:BA:184:C:H2'	35:BA:185:U:C6	2.53	0.43
35:BA:510:C:H2'	35:BA:511:U:O4'	2.19	0.43
1:CA:660:G:H2'	1:CA:661:G:H8	1.84	0.43
35:DA:2553:G:H2'	35:DA:2554:U:O4'	2.19	0.43
4:CD:100:ARG:NH2	4:CD:136:PRO:O	2.52	0.43
1:AA:119:A:O2'	1:AA:120:A:OP2	2.26	0.43
35:DA:838:C:O2'	35:DA:839:U:H5'	2.19	0.43
35:DA:539:G:H2'	35:DA:540:C:H6	1.83	0.43
35:BA:67:U:O2'	35:BA:68:G:H5'	2.18	0.43
34:D9:17:ILE:HG13	34:D9:26:ILE:HD12	2.00	0.43
7:AG:12:LEU:HD21	7:AG:28:ASN:HD21	1.83	0.43
4:CD:64:LEU:HB2	4:CD:198:VAL:HG11	2.00	0.43
44:BJ:27:UNK:O	44:BJ:83:UNK:N	2.52	0.43
35:DA:2518:A:H5'	35:DA:2518:A:C8	2.54	0.43
43:BI:31:LEU:H	43:BI:31:LEU:HD12	1.82	0.43
37:DC:211:ARG:HG3	37:DC:211:ARG:HH11	1.82	0.43
4:CD:131:ARG:H	4:CD:131:ARG:HD3	1.84	0.43
39:BE:141:ILE:HG13	39:BE:141:ILE:O	2.18	0.43
48:BQ:89:ASN:N	48:BQ:89:ASN:OD1	2.47	0.43
22:CY:56:U:H5''	57:DZ:180:VAL:O	2.19	0.43
11:AK:61:ALA:HB3	11:AK:90:GLY:HA3	2.01	0.43
22:AY:73:C:N3	22:AY:74:C:C2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2469:A:O2'	48:BQ:56:ARG:NE	2.44	0.43
48:BQ:60:ARG:N	57:BZ:179:ASP:HA	2.33	0.43
22:AV:4:C:C1'	22:AV:5:C:C6	3.02	0.43
22:AV:7:U:C4	22:AV:69:G:N1	2.87	0.43
41:BG:46:ALA:HB2	41:BG:88:ILE:CG1	2.48	0.43
1:AA:413:G:N2	1:AA:428:G:O2'	2.52	0.43
22:CV:8:U:C4	22:CV:13:U:C4	3.07	0.43
30:B5:3:LYS:CE	35:BA:2613:U:H2'	2.49	0.43
35:BA:1902:C:H5'	38:BD:246:PRO:HD3	2.01	0.43
47:BP:24:GLY:O	47:BP:25:SER:HB3	2.19	0.43
23:AW:51:G:H22	23:AW:67:C:H42	1.67	0.43
33:B8:53:PRO:HG2	33:B8:54:GLU:N	2.34	0.43
56:DY:13:VAL:HG11	56:DY:28:LYS:HD3	2.01	0.43
42:BH:41:MET:SD	42:BH:43:VAL:HG13	2.58	0.43
12:CL:25:PRO:C	12:CL:27:LEU:N	2.70	0.43
12:CL:90:VAL:HG12	12:CL:92:ASP:H	1.84	0.43
12:AL:21:LYS:O	12:AL:22:SER:C	2.56	0.43
12:AL:32:PHE:HB3	12:AL:84:LEU:CD2	2.44	0.43
45:DN:131:GLN:OE1	45:DN:131:GLN:HA	2.19	0.43
57:DZ:135:GLU:O	57:DZ:137:ILE:N	2.40	0.43
22:CV:74:C:H2'	22:CV:75:A:O4'	2.19	0.43
33:D8:59:LYS:CD	47:DP:50:ARG:HB3	2.39	0.43
29:D4:26:SER:HB3	41:DG:105:LYS:HE2	2.00	0.43
29:D4:6:HIS:O	29:D4:8:LYS:N	2.52	0.43
35:DA:916:G:O2'	35:DA:917:A:O4'	2.37	0.43
1:CA:474:G:C2	1:CA:475:G:C5	3.07	0.43
1:AA:447:G:C2'	1:AA:485:G:N2	2.67	0.43
25:B0:11:ARG:C	25:B0:12:ASN:ND2	2.73	0.43
16:CP:51:VAL:O	16:CP:53:VAL:N	2.51	0.43
19:CS:47:HIS:O	19:CS:62:ILE:HG22	2.19	0.43
22:CV:43:G:H2'	22:CV:44:A:O4'	2.19	0.43
39:DE:117:MET:O	39:DE:118:LYS:CB	2.66	0.43
2:AB:102:LEU:HD23	2:AB:182:ILE:CD1	2.49	0.43
1:AA:586:C:H1'	1:AA:878:G:O2'	2.18	0.43
24:CX:22:A:C2	22:CY:36:AG9:N4	2.87	0.43
1:AA:374:A:C6	1:AA:375:U:C4	3.07	0.43
5:CE:42:GLY:CA	5:CE:65:ASN:O	2.67	0.43
1:AA:1382:C:H2'	1:AA:1383:C:H6	1.83	0.43
21:CU:25:LYS:CG	21:CU:26:LYS:N	2.82	0.43
35:BA:1542:A:C8	35:BA:1544:A:H5''	2.54	0.43
43:DI:27:ARG:NH1	43:DI:27:ARG:CG	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DE:72:VAL:O	39:DE:72:VAL:HG12	2.17	0.43
19:CS:53:ASN:HD22	19:CS:58:VAL:CG1	2.32	0.43
1:AA:828:A:H5''	1:AA:859:A:C2	2.54	0.43
35:DA:1539:G:H2'	35:DA:1540:U:O4'	2.18	0.43
35:DA:1540:U:O3'	35:DA:1542:A:OP1	2.37	0.43
41:DG:19:LEU:HA	41:DG:22:ARG:HB2	2.01	0.43
1:CA:343:U:O2	1:CA:347:G:C6	2.72	0.43
36:BB:91:C:OP1	48:BQ:16:ARG:HG2	2.18	0.43
46:DO:47:ILE:HG13	46:DO:48:PRO:HD2	1.97	0.43
54:DW:4:LYS:HG3	54:DW:106:ILE:CG2	2.49	0.43
35:DA:1171:G:H3'	35:DA:1173:G:O4'	2.18	0.43
2:CB:101:MET:CE	2:CB:101:MET:HA	2.48	0.43
1:CA:1206:G:O2'	1:CA:1207:G:H5'	2.19	0.43
1:CA:1457:G:O2'	1:CA:1458:G:H5'	2.19	0.43
2:CB:95:GLN:HE21	2:CB:147:LYS:HG2	1.84	0.43
50:DS:17:ARG:O	50:DS:20:ARG:HG2	2.19	0.43
9:CI:112:LYS:HA	9:CI:119:ALA:CB	2.45	0.43
4:CD:78:LEU:O	4:CD:79:PHE:C	2.58	0.43
16:AP:14:ASN:N	16:AP:15:PRO:CD	2.81	0.43
16:AP:15:PRO:O	16:AP:16:HIS:ND1	2.52	0.43
16:CP:6:LEU:HG	16:CP:17:TYR:CB	2.49	0.43
12:CL:20:LYS:HB3	12:CL:20:LYS:HZ2	1.82	0.43
25:D0:48:GLY:HA3	25:D0:80:HIS:HD1	1.83	0.43
17:CQ:94:ASN:O	17:CQ:98:LEU:CD1	2.67	0.43
1:CA:1015:A:H2'	1:CA:1016:A:O4'	2.19	0.43
35:DA:92:A:O2'	35:DA:93:G:H5'	2.19	0.43
56:DY:21:LYS:O	56:DY:22:GLY:O	2.37	0.43
5:CE:62:ALA:C	5:CE:64:ARG:H	2.22	0.43
1:AA:955:U:O2'	1:AA:956:U:H5'	2.19	0.43
35:DA:1332:G:H5''	35:DA:1332:G:H8	1.84	0.43
1:CA:189:G:C6	1:CA:189(L):G:C6	3.07	0.43
43:BI:9:LEU:H	43:BI:13:GLY:HA2	1.84	0.43
35:DA:570:G:H2'	35:DA:2030:A:N7	2.33	0.43
48:BQ:21:THR:O	48:BQ:21:THR:HG22	2.19	0.43
22:AV:36:AG9:H2G	22:AV:36:AG9:H1H2	1.84	0.43
30:B5:16:ARG:HG2	30:B5:16:ARG:NH1	2.34	0.43
2:CB:199:TYR:CD1	2:CB:199:TYR:N	2.87	0.43
34:B9:33:LYS:HE3	35:BA:2526:G:O2'	2.18	0.43
35:BA:680:G:H2'	35:BA:681:G:H8	1.82	0.43
35:DA:1833:U:O2	35:DA:1969:A:C2	2.72	0.43
35:DA:866:A:H2	35:DA:867:C:C4	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:5:C:O2'	36:BB:6:C:H5'	2.17	0.43
35:DA:2282:G:O2'	35:DA:2390:U:O4	2.36	0.43
35:DA:2128:C:OP1	37:DC:37:LYS:HG3	2.19	0.43
39:BE:137:HIS:HB3	39:BE:138:PRO:HD2	2.00	0.43
1:AA:741:G:H2'	1:AA:742:G:C8	2.54	0.43
35:DA:2199:A:H3'	35:DA:2200:C:C6	2.52	0.43
35:DA:745:G:C2'	35:DA:746:A:H5'	2.49	0.43
1:CA:119:A:H4'	1:CA:120:A:O5'	2.18	0.43
35:DA:2063:C:O2	35:DA:2450:A:N1	2.52	0.43
5:CE:26:PHE:O	5:CE:27:ARG:HB2	2.19	0.43
35:DA:466:A:H2'	35:DA:467:G:H5'	2.01	0.43
49:DR:60:LEU:O	49:DR:61:HIS:C	2.56	0.43
1:AA:119:A:H4'	1:AA:120:A:O5'	2.19	0.43
15:CO:40:SER:O	15:CO:43:LEU:HB2	2.19	0.43
35:BA:360:G:H2'	35:BA:361:G:C8	2.54	0.43
38:BD:89:SER:O	38:BD:159:ALA:HB2	2.19	0.43
38:DD:158:ALA:O	38:DD:196:VAL:HG11	2.19	0.43
7:AG:41:ARG:HH11	7:AG:41:ARG:HG3	1.84	0.43
15:AO:8:LYS:HG2	15:AO:12:ILE:HD11	2.01	0.43
57:DZ:35:ARG:HG3	57:DZ:35:ARG:HH11	1.83	0.43
52:DU:22:LYS:HD3	52:DU:22:LYS:HA	1.80	0.43
36:BB:98:G:H2'	36:BB:99:G:O4'	2.19	0.43
22:CY:13:U:C2	22:CY:25:A:C6	3.07	0.42
22:AV:42:C:C2'	22:AV:43:G:H5'	2.48	0.42
22:AV:44:A:C6	22:AV:45:U:C4	3.07	0.42
22:AV:51:G:H3'	22:AV:51:G:OP1	2.18	0.42
22:AV:54:G:C2'	22:AV:55:G:H5'	2.48	0.42
22:CV:56:U:C2'	22:CV:57:U:H5'	2.48	0.42
1:CA:1442(B):A:C5	51:DT:118:ARG:NE	2.87	0.42
51:DT:32:TYR:CG	51:DT:81:PRO:CB	3.02	0.42
23:AW:49:G:N2	23:AW:52:C:O5'	2.52	0.42
23:AW:51:G:C6	23:AW:52:C:C4	3.07	0.42
33:B8:56:GLU:O	33:B8:58:ILE:N	2.51	0.42
56:DY:77:PRO:O	56:DY:78:ALA:HB2	2.18	0.42
23:AW:20:G:C6	23:AW:58:C:N4	2.87	0.42
35:DA:2393:A:H5'	47:DP:62:LEU:HB2	2.01	0.42
36:BB:7:G:H5'	36:BB:8:U:OP2	2.19	0.42
38:BD:48:ARG:NH1	38:BD:48:ARG:HG3	2.34	0.42
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HD23	2.00	0.42
10:AJ:95:GLU:HG3	10:AJ:96:ILE:H	1.83	0.42
45:DN:128:HIS:HA	45:DN:129:PRO:HD2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:126:VAL:HG22	47:BP:145:PRO:HG2	2.00	0.42
52:DU:97:ASP:OD1	52:DU:98:LEU:N	2.52	0.42
5:AE:118:ILE:HG13	5:AE:119:LEU:N	2.34	0.42
47:DP:146:VAL:O	47:DP:148:LEU:N	2.52	0.42
51:BT:65:LYS:HG3	51:BT:66:VAL:N	2.34	0.42
52:BU:88:ILE:HG23	53:BV:47:VAL:HG23	2.01	0.42
16:AP:56:ALA:HB1	16:AP:74:LEU:HD23	2.00	0.42
1:AA:474:G:C2	1:AA:475:G:C5	3.07	0.42
41:DG:117:PHE:CG	41:DG:118:ARG:N	2.86	0.42
1:CA:475:G:C2'	1:CA:476:G:H8	2.28	0.42
13:CM:97:PRO:O	13:CM:98:VAL:HA	2.19	0.42
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.54	0.42
47:DP:88:LEU:C	47:DP:90:ARG:N	2.72	0.42
35:BA:1242:A:C2	47:BP:8:PRO:HG3	2.54	0.42
1:CA:1339:A:H4'	22:CV:42:C:O2'	2.19	0.42
17:AQ:65:ILE:O	17:AQ:66:SER:HB3	2.18	0.42
8:CH:68:ARG:HG2	8:CH:68:ARG:NH1	2.33	0.42
56:BY:49:VAL:HG12	56:BY:50:ARG:N	2.33	0.42
57:BZ:150:LEU:C	57:BZ:151:HIS:HD2	2.23	0.42
39:DE:103:ASP:OD2	39:DE:201:THR:HA	2.19	0.42
40:BF:84:VAL:C	40:BF:86:GLY:N	2.71	0.42
38:BD:28:GLU:N	38:BD:29:PRO:HD2	2.21	0.42
48:DQ:31:ASP:HA	48:DQ:134:ARG:HG3	2.01	0.42
1:CA:1129:C:OP1	1:CA:1130:A:H5''	2.19	0.42
2:AB:12:GLU:O	2:AB:14:GLY:N	2.51	0.42
35:DA:2230:G:H2'	35:DA:2231:C:C6	2.54	0.42
3:AC:59:ARG:NH1	3:AC:97:LYS:NZ	2.67	0.42
4:AD:108:LEU:HD23	4:AD:110:PHE:CE1	2.54	0.42
16:CP:20:VAL:CG2	16:CP:32:TYR:HB2	2.49	0.42
20:CT:22:ARG:O	20:CT:26:ASN:ND2	2.52	0.42
43:BI:23:PRO:HB3	43:BI:27:ARG:NH2	2.34	0.42
41:DG:27:ASN:C	41:DG:29:TRP:H	2.22	0.42
26:D1:44:PRO:O	26:D1:46:LEU:HD13	2.18	0.42
38:BD:8:PRO:HB3	38:BD:14:ARG:HB2	2.01	0.42
35:BA:1681:G:H8	35:BA:1681:G:OP2	2.01	0.42
2:CB:166:ASP:OD2	2:CB:169:LYS:HB2	2.19	0.42
1:CA:1405:G:H1'	1:CA:1518:A:O2'	2.18	0.42
1:CA:1038:C:H6	1:CA:1038:C:O5'	2.02	0.42
54:DW:40:ASN:C	54:DW:41:LYS:HG2	2.38	0.42
48:BQ:109:VAL:CG1	48:BQ:113:GLN:OE1	2.66	0.42
1:CA:1348:U:OP1	9:CI:109:VAL:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:48:GLY:HA3	25:B0:80:HIS:HD1	1.83	0.42
25:B0:51:VAL:HG23	25:B0:81:VAL:HG23	2.01	0.42
35:DA:142:A:H1'	35:DA:1408:C:C1'	2.49	0.42
4:CD:98:GLU:OE2	4:CD:103:ASN:ND2	2.50	0.42
1:AA:602:A:O2'	1:AA:603:U:H5'	2.18	0.42
35:BA:1331:A:O2'	35:BA:1332:G:H5''	2.19	0.42
35:DA:1750:G:H2'	35:DA:1751:C:H6	1.84	0.42
1:AA:1030(B):C:C2'	1:AA:1030(C):G:H5'	2.49	0.42
26:B1:56:GLN:CB	26:B1:87:PRO:HB3	2.47	0.42
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.54	0.42
49:BR:28:LEU:C	49:BR:28:LEU:HD13	2.39	0.42
3:AC:167:TRP:O	3:AC:168:ALA:CB	2.67	0.42
36:DB:111:G:H2'	36:DB:112:U:H5'	2.01	0.42
24:AX:17:U:H2'	24:AX:18:A:O4'	2.18	0.42
55:BX:31:HIS:ND1	55:BX:32:PRO:HD2	2.34	0.42
2:CB:185:ILE:HG22	2:CB:199:TYR:HD1	1.84	0.42
45:DN:65:LYS:O	45:DN:69:GLN:HB2	2.18	0.42
1:CA:1316:G:H2'	1:CA:1317:C:C5'	2.49	0.42
35:BA:176:G:C5	35:BA:177:G:C6	3.07	0.42
10:CJ:21:GLN:O	10:CJ:25:GLU:HG3	2.18	0.42
35:DA:234:C:H2'	35:DA:235:U:C6	2.54	0.42
35:DA:1841:U:H2'	35:DA:1842:G:H8	1.83	0.42
1:AA:858:G:O6	1:AA:869:G:H3'	2.19	0.42
35:BA:2236:C:H2'	35:BA:2237:G:H5'	2.01	0.42
1:AA:35:G:H2'	1:AA:36:C:C6	2.54	0.42
45:DN:119:ARG:HG3	45:DN:119:ARG:HH11	1.83	0.42
1:AA:237:C:H2'	1:AA:238:G:H8	1.83	0.42
40:BF:155:LEU:HD22	40:BF:186:ILE:HA	2.01	0.42
3:CC:60:ALA:O	3:CC:61:ALA:HB2	2.19	0.42
42:BH:89:ILE:O	42:BH:89:ILE:HG13	2.20	0.42
35:BA:2552:U:H2'	35:BA:2554:U:H5''	2.00	0.42
18:AR:45:SER:HB3	18:AR:51:LEU:HD21	2.00	0.42
35:BA:816:C:O2'	35:BA:817:C:H5'	2.19	0.42
20:AT:40:ALA:HB2	20:AT:55:ILE:HG22	2.00	0.42
1:CA:1300:G:O2'	1:CA:1301:U:P	2.76	0.42
4:AD:52:SER:N	4:AD:55:ALA:HB3	2.33	0.42
48:BQ:39:PRO:HD3	48:BQ:99:PRO:HG3	2.02	0.42
5:AE:45:PHE:CE2	5:AE:47:LYS:HD2	2.53	0.42
1:CA:570:G:H1'	1:CA:820:U:C4	2.54	0.42
1:CA:788:U:H2'	1:CA:789:U:O4'	2.19	0.42
22:CY:70:G:C2'	22:CY:71:G:O4'	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:40:A:C5	23:AW:41:C:C2	3.07	0.42
22:AY:67:C:H3'	22:AY:67:C:H6	1.84	0.42
23:CW:6:C:O2	23:CW:69:G:O6	2.37	0.42
4:CD:29:PRO:C	4:CD:30:LYS:HG2	2.38	0.42
22:AV:51:G:H2'	22:AV:52:C:C6	2.54	0.42
22:CV:10:G:H2'	22:CV:11:C:N1	2.34	0.42
22:CV:12:U:C2'	22:CV:13:U:O4'	2.55	0.42
51:DT:28:VAL:O	51:DT:86:ILE:O	2.36	0.42
23:AW:15:G:H21	23:AW:23:A:H1'	1.74	0.42
23:AW:66:G:H2'	23:AW:67:C:O4'	2.19	0.42
35:DA:804:A:H2'	35:DA:806:C:C4	2.54	0.42
12:CL:53:ARG:HD2	12:CL:53:ARG:N	2.34	0.42
8:CH:83:ILE:HD13	8:CH:137:VAL:HG22	2.00	0.42
40:DF:3:GLU:HA	40:DF:24:LEU:CB	2.49	0.42
10:AJ:5:ARG:HG3	10:AJ:71:LEU:HD11	2.01	0.42
42:DH:42:ARG:HA	42:DH:42:ARG:HH11	1.84	0.42
35:BA:1711:C:H2'	35:BA:1712:C:H6	1.84	0.42
10:CJ:22:LYS:C	10:CJ:24:VAL:N	2.72	0.42
23:CW:60:A:C6	23:CW:63:C:C2	3.06	0.42
17:CQ:56:VAL:N	17:CQ:78:GLU:O	2.52	0.42
1:AA:975:A:H4'	1:AA:1358:U:O2	2.18	0.42
39:DE:78:LEU:HD12	39:DE:78:LEU:O	2.19	0.42
47:BP:146:VAL:O	47:BP:148:LEU:N	2.51	0.42
41:DG:125:PHE:O	41:DG:126:ASP:O	2.37	0.42
35:DA:1797:C:O2'	38:DD:259:THR:HB	2.19	0.42
10:CJ:50:ILE:HA	10:CJ:60:ARG:HB2	1.99	0.42
56:BY:32:PRO:C	56:BY:35:TYR:H	2.21	0.42
26:D1:73:LEU:CD1	26:D1:94:LEU:HB3	2.48	0.42
26:D1:66:HIS:C	26:D1:68:PRO:HD2	2.39	0.42
26:D1:74:VAL:O	26:D1:77:ALA:HB3	2.19	0.42
28:B3:28:LEU:HA	28:B3:33:GLN:OE1	2.18	0.42
28:B3:7:LYS:CG	28:B3:34:GLU:HG2	2.49	0.42
1:AA:1287:A:C6	1:AA:1288:A:C6	3.07	0.42
35:DA:1568:G:OP2	38:DD:63:ARG:NH2	2.48	0.42
1:AA:80:G:H3'	1:AA:81:U:H5'	2.01	0.42
57:BZ:151:HIS:HB2	57:BZ:152:ALA:H	1.37	0.42
57:BZ:172:ALA:O	57:BZ:173:ALA:HB2	2.19	0.42
39:DE:199:ARG:NH1	39:DE:199:ARG:HB2	2.34	0.42
23:CW:52:C:C2	23:CW:53:U:C4	3.07	0.42
23:CW:55:G:O2'	23:CW:56:U:H5'	2.19	0.42
1:AA:1281:U:O2'	1:AA:1282:C:OP1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DD:35:LYS:NZ	38:DD:36:PRO:HD3	2.35	0.42
2:CB:236:TYR:HA	2:CB:239:VAL:CG2	2.46	0.42
48:DQ:27:VAL:CG1	48:DQ:105:GLU:OE2	2.67	0.42
35:DA:1047:G:N3	35:DA:1111:A:N6	2.67	0.42
1:CA:625:G:H2'	1:CA:626:U:C6	2.54	0.42
4:CD:122:ARG:HA	4:CD:122:ARG:HD2	1.79	0.42
3:AC:40:ARG:HH11	3:AC:40:ARG:HG3	1.84	0.42
3:AC:52:LEU:HD23	3:AC:52:LEU:N	2.35	0.42
9:CI:33:PHE:HE1	9:CI:37:PHE:CD2	2.36	0.42
6:AF:100:ASN:HD21	18:AR:23:LYS:NZ	2.18	0.42
35:DA:2103:C:H2'	35:DA:2104:G:O4'	2.19	0.42
35:DA:158:U:C2'	35:DA:171:G:O5'	2.66	0.42
21:CU:18:TYR:CG	21:CU:24:ARG:HG3	2.54	0.42
8:CH:134:ILE:HG22	8:CH:135:CYS:SG	2.60	0.42
38:DD:211:ARG:O	38:DD:215:LEU:HG	2.19	0.42
35:BA:2473:U:C5	35:BA:2474:C:H1'	2.54	0.42
23:AW:64:C:O2'	37:BC:55:SER:HB2	2.19	0.42
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.48	0.42
38:DD:73:VAL:O	38:DD:75:ILE:N	2.52	0.42
4:CD:96:LEU:N	4:CD:96:LEU:CD1	2.82	0.42
1:AA:543:C:C2	1:AA:544:G:C8	3.07	0.42
40:DF:158:THR:C	40:DF:178:PRO:HD3	2.40	0.42
4:AD:152:SER:O	4:AD:153:ARG:C	2.57	0.42
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.22	0.42
38:BD:213:ARG:HD2	38:BD:213:ARG:HA	1.82	0.42
9:AI:126:SER:O	9:AI:127:LYS:HB3	2.19	0.42
35:BA:274:G:C6	35:BA:276:A:N6	2.87	0.42
2:AB:169:LYS:HD2	2:AB:170:GLU:OE2	2.19	0.42
5:AE:72:GLN:O	5:AE:74:GLY:N	2.51	0.42
39:BE:10:GLY:HA3	51:BT:8:LYS:HZ2	1.81	0.42
4:CD:79:PHE:HD2	4:CD:207:TYR:HD2	1.66	0.42
4:AD:61:LYS:HD3	4:AD:206:PHE:CD2	2.54	0.42
4:AD:61:LYS:HB3	4:AD:61:LYS:HE2	1.90	0.42
17:CQ:52:LYS:O	17:CQ:55:ASP:OD1	2.37	0.42
16:CP:67:THR:CG2	16:CP:68:ASP:H	2.29	0.42
35:BA:769:G:O2'	35:BA:770:G:H5'	2.19	0.42
6:CF:61:LEU:O	6:CF:62:TRP:HB2	2.20	0.42
11:AK:124:LYS:NZ	11:AK:124:LYS:CB	2.82	0.42
11:AK:105:VAL:HG23	11:AK:105:VAL:O	2.19	0.42
6:CF:24:GLU:OE2	6:CF:28:ARG:NH1	2.52	0.42
38:DD:96:HIS:ND1	38:DD:102:LYS:HD3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DD:221:VAL:CG2	38:DD:226:MET:HE1	2.46	0.42
50:DS:31:SER:C	50:DS:33:LYS:N	2.72	0.42
1:AA:1112:C:N3	3:AC:178:LEU:HD23	2.35	0.42
1:AA:1387:G:C6	1:AA:1388:C:N4	2.87	0.42
4:AD:47:ARG:CZ	4:AD:49:ARG:HH22	2.33	0.42
1:CA:328:C:H4'	1:CA:329:A:C5'	2.48	0.42
50:BS:103:GLU:O	50:BS:104:GLY:C	2.57	0.42
6:CF:99:ALA:HB3	18:CR:29:PHE:CE1	2.54	0.42
49:DR:33:ARG:HA	49:DR:114:VAL:O	2.20	0.42
35:BA:1385:G:H1'	35:BA:1386:C:C6	2.54	0.42
52:DU:29:SER:OG	52:DU:30:LYS:HE2	2.20	0.42
1:CA:1091:U:O2	1:CA:1093:A:H8	2.03	0.42
35:BA:1509(B):A:O2'	35:BA:1510:G:H5'	2.19	0.42
22:AV:36:AG9:NH2	24:AX:18:A:O2'	2.52	0.42
36:BB:87:G:H2'	36:BB:88:C:H5''	2.00	0.42
2:CB:185:ILE:HB	2:CB:199:TYR:O	2.18	0.42
44:BJ:56:UNK:O	44:BJ:58:UNK:N	2.51	0.42
33:B8:11:LYS:O	47:BP:65:ARG:CD	2.68	0.42
2:CB:230:VAL:HG23	2:CB:231:GLU:H	1.84	0.42
35:BA:1441:G:H4'	35:BA:1628:G:OP1	2.19	0.42
35:DA:832:G:O2'	47:DP:52:GLU:HB3	2.18	0.42
46:BO:119:PRO:HB2	51:BT:68:TYR:CZ	2.54	0.42
35:DA:2199:A:H5'	35:DA:2200:C:OP2	2.19	0.42
35:BA:1368:G:C2	35:BA:1369:G:C8	3.07	0.42
1:AA:509:A:H5''	4:AD:55:ALA:HB2	2.01	0.42
49:DR:18:LEU:HD21	49:DR:22:ARG:CZ	2.48	0.42
35:BA:755:C:H2'	35:BA:756:C:C6	2.54	0.42
35:DA:1388:G:O2'	35:DA:1389:G:H5'	2.18	0.42
35:BA:1053:C:C2'	35:BA:1053:C:O2	2.67	0.42
28:D3:18:ASP:O	28:D3:21:ALA:HB3	2.18	0.42
34:B9:6:SER:HB2	35:BA:2466:C:H5''	2.01	0.42
22:CY:19:G:O6	22:CY:59:G:N1	2.53	0.42
22:CY:63:C:C2'	57:DZ:185:GLU:OE1	2.67	0.42
23:AW:29:A:OP2	23:AW:29:A:H8	2.01	0.42
22:AY:13:U:C4	22:AY:25:A:N6	2.87	0.42
22:AY:26:G:H2'	22:AY:27:C:O4'	2.19	0.42
22:AY:56:U:O2	57:BZ:183:LEU:CB	2.68	0.42
23:CW:3:G:N1	23:CW:4:C:C4	2.88	0.42
23:CW:73:C:H3'	23:CW:74:C:C5'	2.46	0.42
23:CW:43:G:C6	23:CW:44:A:C5	3.07	0.42
22:AV:30:U:C4	22:AV:31:C:N4	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DT:26:ASP:HB3	51:DT:89:VAL:O	2.19	0.42
23:AW:13:U:C6	23:AW:13:U:H5'	2.54	0.42
23:AW:23:A:H3'	23:AW:48:G:C6	2.50	0.42
33:B8:41:ILE:HD13	35:BA:2419:U:OP1	2.19	0.42
19:AS:19:VAL:O	19:AS:23:ASN:ND2	2.53	0.42
12:AL:75:HIS:C	12:AL:77:LEU:N	2.72	0.42
12:AL:84:LEU:HD23	12:AL:85:ILE:O	2.20	0.42
40:BF:22:ALA:C	40:BF:24:LEU:N	2.73	0.42
52:DU:88:ILE:HG23	53:DV:47:VAL:CG2	2.49	0.42
45:DN:1:MET:H1	53:DV:20:LEU:HD22	1.84	0.42
35:DA:544:G:N2	35:DA:547:A:H5'	2.33	0.42
35:BA:1495:A:H2'	35:BA:1495:A:N3	2.34	0.42
53:BV:47:VAL:C	53:BV:49:THR:N	2.73	0.42
43:BI:74:ASN:ND2	43:BI:75:LEU:H	2.18	0.42
39:BE:59:VAL:HG13	39:BE:60:ASN:H	1.82	0.42
13:AM:89:GLY:HA2	13:AM:93:ARG:HH11	1.83	0.42
14:AN:41:ARG:HG3	14:AN:42:ILE:HD13	1.99	0.42
1:AA:1202:G:C2	14:AN:42:ILE:HG21	2.54	0.42
50:DS:66:ALA:CA	50:DS:69:VAL:HG12	2.49	0.42
52:BU:34:LYS:HA	52:BU:34:LYS:CE	2.36	0.42
28:B3:7:LYS:CB	28:B3:34:GLU:HG2	2.49	0.42
22:CV:36:AG9:H2G	22:CV:36:AG9:H1H2	1.83	0.42
50:BS:66:ALA:CA	50:BS:69:VAL:HG12	2.48	0.42
38:DD:58:HIS:CD2	38:DD:59:LYS:H	2.37	0.42
41:BG:139:LEU:HA	41:BG:144:ILE:HG21	2.00	0.42
29:B4:5:ILE:HG12	41:BG:67:LYS:NZ	2.33	0.42
5:CE:139:LEU:HD23	5:CE:142:LEU:HD11	2.02	0.42
35:BA:991:C:H6	35:BA:991:C:C5'	2.20	0.42
8:CH:11:THR:HG22	8:CH:15:ASN:ND2	2.34	0.42
1:CA:1126:U:OP2	1:CA:1281:U:O2	2.37	0.42
13:CM:66:LEU:N	13:CM:70:LEU:HB2	2.34	0.42
4:CD:122:ARG:HH12	4:CD:135:LEU:CD1	2.27	0.42
17:AQ:48:GLU:O	17:AQ:50:LYS:N	2.52	0.42
1:CA:197:A:N6	1:CA:221:C:C5'	2.83	0.42
36:BB:28:C:H2'	36:BB:29:A:H8	1.84	0.42
42:BH:170:ARG:H	42:BH:170:ARG:CD	2.29	0.42
1:AA:136:C:O3'	16:AP:65:GLN:NE2	2.53	0.42
35:DA:2124:G:N3	37:DC:218:THR:HG23	2.34	0.42
40:DF:178:PRO:HB3	40:DF:198:ALA:HB1	2.02	0.42
1:CA:959:A:H3'	1:CA:960:U:C5'	2.46	0.42
38:BD:213:ARG:HD2	38:BD:217:ARG:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:83:TYR:N	42:DH:83:TYR:CD1	2.86	0.42
4:CD:61:LYS:HD3	4:CD:206:PHE:CD2	2.54	0.42
6:AF:8:ILE:HG22	6:AF:10:LEU:HD12	2.01	0.42
48:BQ:111:GLU:O	48:BQ:111:GLU:HG2	2.18	0.42
11:AK:108:ILE:N	11:AK:108:ILE:HD12	2.34	0.42
35:BA:842:G:O2'	35:BA:843:G:H5'	2.19	0.42
1:AA:1019:C:H2'	1:AA:1020:U:O4'	2.19	0.42
5:CE:64:ARG:HH11	5:CE:64:ARG:CG	2.31	0.42
47:DP:111:ARG:HG3	47:DP:111:ARG:HH11	1.85	0.42
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.18	0.42
1:CA:814:A:H2'	1:CA:816:A:H5''	2.01	0.42
20:AT:10:LEU:C	20:AT:12:ALA:H	2.23	0.42
35:BA:2572:A:C8	39:BE:144:ARG:HD2	2.54	0.42
35:BA:572:A:H2'	35:BA:573:G:O4'	2.19	0.42
35:DA:2291:U:OP1	35:DA:2381:C:H5'	2.20	0.42
42:DH:106:THR:HG22	42:DH:112:PRO:CB	2.49	0.42
1:CA:151:A:H2'	1:CA:152:A:C5'	2.50	0.42
40:DF:64:ILE:HG13	40:DF:65:TRP:CD1	2.54	0.42
38:BD:65:ILE:HD11	38:BD:67:PHE:CD2	2.54	0.42
45:BN:30:ILE:HG22	45:BN:34:LEU:HD21	2.02	0.42
45:BN:65:LYS:HD2	45:BN:69:GLN:HE21	1.84	0.42
35:BA:1816:G:P	38:BD:39:LYS:HE3	2.59	0.42
7:AG:45:ASP:HB2	7:AG:117:ALA:HB2	2.02	0.42
46:BO:12:ASP:OD2	46:BO:14:THR:HG23	2.20	0.42
44:DJ:90:UNK:O	44:DJ:91:UNK:C	2.67	0.42
35:BA:654(I):C:H5'	35:BA:654(J):A:OP1	2.19	0.42
35:DA:2720:U:H3'	35:DA:2721:A:H8	1.84	0.42
43:DI:111:PRO:CB	43:DI:112:LYS:HD2	2.49	0.42
1:AA:1179:A:O2'	1:AA:1180:A:H5'	2.19	0.42
30:B5:43:HIS:HD2	35:BA:2815:C:O2'	2.03	0.42
13:CM:19:LEU:N	13:CM:19:LEU:HD22	2.34	0.42
37:BC:54:ARG:CB	37:BC:57:GLN:HB3	2.49	0.42
25:B0:74:ARG:CG	25:B0:74:ARG:HH11	2.32	0.42
21:AU:18:TYR:CG	21:AU:24:ARG:HG3	2.54	0.42
4:AD:52:SER:O	4:AD:53:ASP:C	2.56	0.42
1:AA:1188:A:H2'	1:AA:1189:C:O4'	2.19	0.42
35:BA:697:C:H2'	35:BA:698:C:C6	2.55	0.42
56:DY:23:ARG:O	56:DY:24:VAL:O	2.38	0.42
7:AG:126:ASP:O	7:AG:131:LYS:N	2.49	0.42
26:D1:83:GLU:O	26:D1:84:GLY:O	2.38	0.42
38:DD:252:TRP:HE3	38:DD:253:GLN:O	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:21:ARG:O	26:B1:32:LYS:HA	2.19	0.42
35:BA:776:G:H4'	35:BA:777:A:O5'	2.18	0.42
29:B4:16:CYS:HB3	29:B4:20:ASN:O	2.20	0.42
22:CY:11:C:C2	22:CY:12:U:C5	3.08	0.42
23:AW:29:A:OP2	23:AW:29:A:C8	2.73	0.42
22:AY:19:G:C6	22:AY:59:G:N1	2.88	0.42
22:AY:32:G:O6	22:AY:42:C:N3	2.52	0.42
22:AY:23:A:N6	22:AY:48:G:H2'	2.34	0.42
22:AY:63:C:O4'	57:BZ:186:GLU:HA	2.19	0.42
57:BZ:114:GLY:O	57:BZ:177:PRO:HD3	2.20	0.42
23:CW:40:A:OP2	23:CW:40:A:C4'	2.61	0.42
51:DT:6:LEU:O	51:DT:10:VAL:HG23	2.19	0.42
22:CV:10:G:N2	22:CV:27:C:C2	2.85	0.42
51:DT:30:VAL:HG22	51:DT:84:GLN:HG3	2.01	0.42
35:DA:1591:G:O2'	35:DA:1592:C:H5'	2.19	0.42
23:AW:49:G:N3	23:AW:49:G:H2'	2.34	0.42
31:B6:54:ILE:HG12	35:BA:2419:U:O2'	2.19	0.42
56:DY:66:PRO:O	56:DY:67:LEU:CB	2.67	0.42
43:DI:77:LEU:O	43:DI:141:LYS:CG	2.67	0.42
43:DI:62:LYS:HZ1	43:DI:133:HIS:HB2	1.83	0.42
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.19	0.42
1:CA:1203:C:H2'	1:CA:1204:A:C8	2.55	0.42
43:BI:77:LEU:O	43:BI:141:LYS:CG	2.66	0.42
23:CW:15:G:H8	23:CW:16:U:C5	2.38	0.42
12:CL:27:LEU:HB2	12:CL:33:ARG:HD2	2.00	0.42
40:DF:1:MET:O	40:DF:3:GLU:HG2	2.19	0.42
35:DA:146:G:H5'	35:DA:146:G:C8	2.53	0.42
1:CA:1222:G:O2'	1:CA:1223:C:H5'	2.20	0.42
23:CW:20:G:H3'	23:CW:21:U:C5'	2.40	0.42
3:CC:112:SER:O	3:CC:116:VAL:HG23	2.20	0.42
35:DA:1495:A:H2'	35:DA:1495:A:N3	2.34	0.42
47:DP:48:PRO:O	47:DP:51:PHE:N	2.49	0.42
47:DP:101:VAL:HG12	47:DP:107:LYS:N	2.34	0.42
29:D4:1:MET:N	36:DB:44:G:OP1	2.52	0.42
52:BU:90:VAL:HG12	52:BU:91:ASP:N	2.34	0.42
41:DG:123:ASN:HA	41:DG:125:PHE:HE1	1.84	0.42
41:DG:37:VAL:HG23	41:DG:99:MET:SD	2.58	0.42
35:DA:861:A:C2	35:DA:917:A:C4	3.07	0.42
1:AA:448:A:N6	1:AA:487:A:H1'	2.34	0.42
1:CA:1308:U:OP2	13:CM:99:ARG:HD2	2.19	0.42
41:DG:170:ARG:NH2	41:DG:182:LYS:HE2	2.14	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:39:TYR:O	31:B6:46:HIS:HA	2.20	0.42
31:D6:5:VAL:HG11	31:D6:7:ILE:HG22	2.00	0.42
41:BG:9:ARG:C	41:BG:11:TYR:H	2.21	0.42
2:CB:58:ILE:CG2	2:CB:222:ILE:HD11	2.48	0.42
47:DP:90:ARG:HD2	47:DP:91:PHE:HD1	1.83	0.42
1:AA:1287:A:H2	1:AA:1353:G:H1'	1.81	0.42
50:BS:54:LEU:HD11	50:BS:57:LYS:HE3	2.02	0.42
39:DE:101:ARG:HB2	39:DE:201:THR:CG2	2.48	0.42
5:CE:76:ILE:HG13	5:CE:77:PRO:HD2	2.00	0.42
8:AH:133:LEU:HD23	8:AH:134:ILE:N	2.35	0.42
9:AI:100:GLY:C	9:AI:102:LEU:N	2.71	0.42
9:AI:33:PHE:HE1	9:AI:37:PHE:CD2	2.37	0.42
25:D0:27:GLU:OE1	35:DA:856:C:O2'	2.31	0.42
38:BD:263:ARG:HB2	38:BD:263:ARG:HH11	1.83	0.42
13:AM:40:ASN:ND2	13:AM:42:ALA:HB3	2.27	0.42
35:BA:2124:G:O2'	37:BC:41:THR:HB	2.20	0.42
1:CA:1492:A:O2'	1:CA:1493:A:OP1	2.36	0.42
50:DS:12:PHE:CD1	50:DS:12:PHE:N	2.87	0.42
35:DA:953:A:HO2'	35:DA:954:G:H5'	1.80	0.42
31:B6:24:GLU:HB3	31:B6:25:LYS:H	1.60	0.42
9:AI:38:GLN:OE1	9:AI:38:GLN:C	2.58	0.42
35:BA:1014:U:C2'	35:BA:1015:G:C5'	2.90	0.42
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.80	0.42
16:AP:5:ARG:HB2	16:AP:67:THR:OG1	2.19	0.42
9:AI:112:LYS:HD3	9:AI:112:LYS:C	2.40	0.42
50:BS:89:ARG:CG	50:BS:89:ARG:NH1	2.82	0.42
36:BB:47:C:O2'	50:BS:93:LYS:HG2	2.19	0.42
35:BA:953:A:C2'	35:BA:954:G:H5'	2.49	0.42
35:DA:2538:C:O2'	35:DA:2539:C:H5'	2.19	0.42
1:CA:1047:G:O2'	1:CA:1048:G:H5'	2.18	0.42
35:DA:2732:G:H3'	35:DA:2733:A:C5'	2.50	0.42
1:AA:954:G:O2'	1:AA:955:U:H5'	2.18	0.42
53:DV:5:VAL:CG2	53:DV:6:LYS:N	2.83	0.42
1:AA:881:G:P	12:AL:12:ARG:HH22	2.43	0.42
1:AA:423:G:H2'	1:AA:424:G:O4'	2.18	0.42
1:CA:423:G:H2'	1:CA:424:G:O4'	2.20	0.42
1:AA:814:A:H2'	1:AA:816:A:H5''	2.02	0.42
17:CQ:33:GLY:O	17:CQ:34:LYS:C	2.57	0.42
1:CA:596:C:H6	1:CA:596:C:O5'	2.01	0.42
35:DA:527:C:C5	35:DA:2779:U:H2'	2.55	0.42
20:CT:10:LEU:C	20:CT:12:ALA:H	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:16:ASP:OD2	37:BC:19:LYS:HB2	2.19	0.42
31:B6:52:VAL:CG2	31:B6:53:LYS:N	2.81	0.42
38:BD:72:LYS:HE2	38:BD:101:GLU:OE1	2.19	0.42
38:BD:96:HIS:ND1	38:BD:102:LYS:HD3	2.35	0.42
1:AA:189(J):G:O2'	1:AA:189(K):U:H5'	2.19	0.42
3:CC:69:HIS:HD2	3:CC:69:HIS:N	2.15	0.42
20:CT:51:GLU:HA	20:CT:54:LYS:HZ2	1.82	0.42
5:CE:36:ASP:O	5:CE:37:ARG:CG	2.67	0.42
1:CA:189(J):G:O2'	1:CA:189(K):U:H5'	2.19	0.42
31:D6:14:THR:O	31:D6:14:THR:HG23	2.19	0.42
35:BA:1666:G:O2'	35:BA:1667:G:H5'	2.19	0.42
10:CJ:29:ARG:HH11	10:CJ:29:ARG:HG2	1.84	0.42
1:AA:662:G:H2'	1:AA:663:A:H8	1.84	0.42
35:BA:1386:C:OP2	35:BA:1396:U:H5	2.01	0.42
35:BA:1509(B):A:H2'	35:BA:1510:G:C8	2.54	0.42
40:BF:148:LEU:HD21	40:BF:191:ARG:NH1	2.34	0.42
35:DA:17:G:H4'	52:DU:25:TRP:CZ3	2.54	0.42
1:AA:9:G:H5'	5:AE:122:GLU:OE2	2.19	0.42
37:DC:54:ARG:CB	37:DC:57:GLN:HB3	2.50	0.42
38:DD:109:ASP:OD2	38:DD:197:GLY:HA2	2.20	0.42
47:BP:125:VAL:O	47:BP:125:VAL:HG13	2.19	0.42
1:AA:741:G:H2'	1:AA:742:G:H8	1.85	0.42
3:CC:121:ALA:CB	3:CC:187:ALA:HB3	2.49	0.42
25:B0:6:GLY:C	25:B0:7:LEU:HD23	2.40	0.42
1:AA:1490:C:H2'	1:AA:1491:G:H8	1.85	0.42
1:AA:656:C:H2'	1:AA:657:G:O4'	2.19	0.42
4:CD:109:GLY:O	4:CD:111:ALA:N	2.52	0.42
7:AG:139:GLU:O	7:AG:142:GLU:N	2.52	0.42
1:CA:187:C:H2'	1:CA:188:C:C6	2.54	0.42
1:CA:911:U:O2'	1:CA:912:C:H5'	2.19	0.42
35:DA:704:G:H1'	35:DA:726:G:N2	2.34	0.42
35:DA:360:G:H2'	35:DA:361:G:O4'	2.19	0.42
3:CC:29:TYR:OH	14:CN:54:PRO:HD2	2.19	0.42
35:BA:1416:G:H1'	35:BA:1417:C:C6	2.54	0.42
8:CH:84:ARG:HH11	8:CH:84:ARG:HG2	1.83	0.42
17:AQ:19:VAL:O	17:AQ:19:VAL:HG23	2.19	0.42
39:BE:7:VAL:HG13	39:BE:27:LEU:HB3	2.01	0.42
32:B7:15:THR:HG22	32:B7:16:HIS:CE1	2.53	0.42
35:DA:2065:C:H2'	35:DA:2066:C:C6	2.54	0.42
22:CY:4:C:O2'	22:CY:5:C:P	2.78	0.42
23:CW:70:G:C6	23:CW:71:G:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:29:A:OP2	23:CW:29:A:H8	2.03	0.42
14:AN:23:ARG:HD2	14:AN:28:GLY:C	2.40	0.42
22:AV:43:G:H2'	22:AV:44:A:O4'	2.20	0.42
22:CV:19:G:O2'	22:CV:59:G:N2	2.53	0.42
46:DO:80:ASP:OD2	51:DT:64:ARG:NH2	2.53	0.42
51:DT:127:ALA:C	51:DT:129:ARG:N	2.73	0.42
1:AA:1056:U:H4'	3:AC:163:ALA:CB	2.50	0.42
43:DI:77:LEU:O	43:DI:141:LYS:HG2	2.18	0.42
12:CL:45:PRO:HG3	12:CL:53:ARG:NE	2.34	0.42
30:D5:3:LYS:CD	35:DA:2613:U:H2'	2.50	0.42
45:BN:23:LEU:O	45:BN:23:LEU:HD23	2.19	0.42
42:DH:7:LEU:CD2	42:DH:65:HIS:NE2	2.82	0.42
23:CW:57:U:C2	23:CW:59:G:N7	2.87	0.42
45:DN:56:ASN:HB2	45:DN:126:PRO:N	2.35	0.42
45:DN:23:LEU:HB2	45:DN:60:ILE:HG21	2.01	0.42
52:DU:112:ARG:NH2	53:DV:46:VAL:HG11	2.34	0.42
52:DU:91:ASP:O	52:DU:92:ARG:C	2.57	0.42
3:AC:107:GLN:O	3:AC:108:ASN:HB2	2.19	0.42
29:B4:33:VAL:HG21	41:BG:109:VAL:HG13	2.02	0.42
1:CA:975:A:H5'	1:CA:975:A:C8	2.53	0.42
1:CA:975:A:H61	10:CJ:48:THR:HG21	1.84	0.42
8:AH:25:ASP:O	8:AH:26:VAL:HB	2.19	0.42
46:BO:104:ARG:HB3	46:BO:104:ARG:NH1	2.35	0.42
28:D3:7:LYS:C	28:D3:54:VAL:HG13	2.39	0.42
53:BV:19:LYS:HG3	53:BV:20:LEU:O	2.19	0.42
35:BA:1162:G:H1'	53:BV:23:GLU:OE1	2.19	0.42
1:CA:472:A:H4'	16:CP:80:PHE:O	2.19	0.42
39:BE:111:ARG:HD2	39:BE:160:TYR:CE2	2.55	0.42
39:DE:120:TRP:CD2	39:DE:155:LYS:HD3	2.55	0.42
57:DZ:112:ARG:O	57:DZ:112:ARG:CD	2.54	0.42
41:BG:100:TRP:O	41:BG:104:GLU:N	2.45	0.42
40:BF:32:LEU:O	40:BF:32:LEU:HD23	2.20	0.42
47:DP:7:ARG:N	47:DP:8:PRO:HD2	2.35	0.42
36:BB:40:U:C3'	36:BB:41:U:H5''	2.46	0.42
27:D2:13:ALA:HA	27:D2:16:LEU:HG	2.01	0.42
1:AA:1103:C:C5'	2:AB:98:LEU:HD13	2.50	0.42
56:DY:55:TYR:O	56:DY:56:PRO:C	2.58	0.42
1:AA:1126:U:OP2	1:AA:1281:U:O2	2.38	0.42
30:D5:51:TYR:H	30:D5:55:ARG:HD3	1.85	0.42
35:DA:307:G:H21	35:DA:330:A:H62	1.68	0.42
1:CA:1480:G:C5	1:CA:1481:U:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DD:8:PRO:C	38:DD:10:THR:H	2.23	0.42
16:CP:64:ALA:O	16:CP:65:GLN:C	2.57	0.42
35:DA:1656:C:O2'	35:DA:1657:C:H5'	2.18	0.42
1:AA:960:U:O2	1:AA:960:U:H2'	2.18	0.42
33:B8:33:ASN:H	33:B8:33:ASN:HD22	1.65	0.42
22:CY:75:A:O2'	22:CY:76:C:H5'	2.19	0.42
35:DA:1771:C:C1'	35:DA:1786:A:H8	2.31	0.42
38:DD:110:GLY:O	38:DD:112:GLN:HG2	2.19	0.42
1:CA:1068:G:OP2	1:CA:1068:G:H8	2.02	0.42
3:CC:143:GLU:C	3:CC:145:GLY:H	2.23	0.42
1:CA:583:A:H2'	1:CA:584:G:O4'	2.19	0.42
1:CA:1005:A:C2'	1:CA:1006:C:H5'	2.48	0.42
36:DB:92:C:O2'	36:DB:93:G:H5'	2.19	0.42
6:AF:10:LEU:CD1	6:AF:10:LEU:N	2.81	0.42
35:BA:1009:A:C5'	52:BU:59:ARG:HD3	2.49	0.42
44:BJ:71:UNK:O	44:BJ:72:UNK:O	2.38	0.42
51:DT:57:PHE:O	51:DT:59:THR:HG22	2.20	0.42
1:AA:998:G:O2'	1:AA:999:C:H5'	2.20	0.42
45:DN:5:VAL:HG13	45:DN:5:VAL:O	2.19	0.42
35:BA:2192:G:C3'	35:BA:2193:G:H5''	2.49	0.42
29:D4:55:ARG:O	29:D4:55:ARG:NE	2.53	0.42
1:CA:1310:G:O2'	1:CA:1311:G:H5'	2.20	0.42
38:BD:77:ALA:HB2	38:BD:97:TYR:CG	2.54	0.42
1:CA:63:C:N4	1:CA:104:G:H1	2.14	0.42
1:CA:1030(B):C:C2'	1:CA:1030(C):G:H5'	2.50	0.42
1:CA:189(C):C:O2'	1:CA:189(D):C:H5'	2.19	0.42
38:DD:67:PHE:CE2	38:DD:157:ARG:CZ	3.02	0.42
40:BF:175:THR:O	40:BF:176:LEU:HB2	2.19	0.42
25:D0:41:ARG:O	25:D0:57:PHE:CD2	2.72	0.42
2:AB:52:GLU:HG2	2:AB:56:ARG:NH1	2.34	0.42
38:DD:80:ALA:HB3	38:DD:94:LEU:HD13	2.02	0.42
1:AA:767:A:H2'	1:AA:768:A:O4'	2.19	0.42
36:BB:55:U:H2'	36:BB:56:G:C8	2.55	0.42
29:D4:43:TYR:CD2	29:D4:44:THR:HG23	2.53	0.42
40:DF:154:VAL:HG22	40:DF:191:ARG:HB2	2.02	0.42
35:BA:848:G:H5'	35:BA:848:G:C8	2.55	0.42
3:AC:188:LEU:HD22	3:AC:188:LEU:N	2.35	0.42
1:CA:185:A:O2'	1:CA:186:C:H5'	2.20	0.42
35:BA:128:C:H2'	35:BA:129:C:C6	2.54	0.42
37:DC:51:ASP:H	37:DC:57:GLN:HE21	1.68	0.42
42:BH:119:GLU:CG	42:BH:120:GLY:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1059:C:P	3:CC:199:LYS:NZ	2.92	0.42
55:BX:48:LYS:O	55:BX:49:VAL:HG13	2.20	0.42
1:AA:677:U:H3	1:AA:714:G:N2	2.18	0.42
39:DE:134:ILE:HD12	39:DE:134:ILE:O	2.19	0.42
45:BN:61:ARG:HA	45:BN:61:ARG:HD3	1.78	0.42
42:DH:139:GLN:O	42:DH:143:GLN:HB2	2.19	0.42
35:DA:1133:U:H2'	35:DA:1137:G:OP1	2.19	0.42
5:AE:93:PRO:HG2	8:AH:105:ARG:HH21	1.85	0.42
35:BA:271(X):G:O2'	35:BA:271(Y):U:H5''	2.18	0.42
8:AH:82:HIS:HB3	8:AH:138:TRP:CE2	2.55	0.42
15:AO:18:PHE:O	15:AO:20:GLY:N	2.52	0.42
35:BA:2698:U:H2'	35:BA:2699:C:C6	2.54	0.42
42:BH:86:GLU:HB2	42:BH:131:VAL:O	2.18	0.42
4:AD:64:LEU:HB2	4:AD:198:VAL:HG11	2.02	0.42
26:D1:95:LEU:HD12	26:D1:95:LEU:HA	1.85	0.42
46:BO:91:LEU:N	46:BO:91:LEU:HD22	2.34	0.42
51:DT:14:TYR:N	51:DT:14:TYR:CD1	2.87	0.42
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.19	0.42
22:CY:55:G:C5'	48:DQ:56:ARG:HH22	2.23	0.42
23:AW:68:A:C4	23:AW:69:G:C8	3.02	0.42
22:AY:3:G:N2	22:AY:73:C:C2	2.87	0.42
23:CW:69:G:N2	23:CW:70:G:H1'	2.34	0.42
51:BT:30:VAL:HG22	51:BT:84:GLN:O	2.18	0.42
56:BY:97:ARG:C	56:BY:99:CYS:H	2.23	0.42
23:AW:19:G:C4	23:AW:59:G:C2	3.08	0.42
35:BA:1885:A:C8	35:BA:1885:A:H5'	2.50	0.42
29:D4:2:LYS:NZ	36:DB:44:G:C5	2.87	0.42
41:DG:151:ALA:HB3	41:DG:153:ARG:HH21	1.85	0.42
28:D3:54:VAL:HG12	28:D3:55:ARG:N	2.34	0.42
45:BN:1:MET:H1	53:BV:20:LEU:HD22	1.85	0.42
2:AB:84:GLU:HA	2:AB:87:ARG:HB3	2.02	0.42
53:BV:60:GLU:O	53:BV:62:LEU:HD22	2.18	0.42
31:B6:7:ILE:CG1	31:B6:29:ASN:HD21	2.28	0.42
35:BA:2787:C:H1'	39:BE:61:ARG:HG3	2.02	0.42
35:BA:2723:C:O3'	49:BR:2:ARG:NH2	2.53	0.42
56:BY:13:VAL:HG11	56:BY:28:LYS:HD3	2.01	0.42
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.54	0.42
39:BE:4:ILE:HG12	39:BE:5:LEU:N	2.34	0.42
35:DA:558:G:O2'	35:DA:559:G:H5'	2.20	0.42
10:AJ:49:VAL:CG2	10:AJ:50:ILE:N	2.83	0.42
57:DZ:108:PRO:HG2	57:DZ:111:VAL:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:26:VAL:HG21	42:DH:75:ALA:CB	2.49	0.42
35:DA:1242:A:C2	47:DP:8:PRO:HG3	2.54	0.42
1:AA:1288:A:O4'	1:AA:1353:G:H4'	2.20	0.42
2:AB:44:LEU:O	2:AB:47:THR:HB	2.19	0.42
53:DV:21:ARG:CD	53:DV:21:ARG:N	2.78	0.42
31:D6:39:TYR:O	31:D6:46:HIS:HA	2.19	0.42
2:AB:173:ALA:O	2:AB:176:GLU:N	2.53	0.42
2:AB:93:VAL:HG11	2:AB:97:TRP:HD1	1.85	0.42
3:CC:35:GLU:OE2	3:CC:97:LYS:HD2	2.19	0.42
54:BW:3:ALA:CB	54:BW:58:ALA:HB2	2.50	0.42
35:DA:2230:G:H2'	35:DA:2231:C:H6	1.84	0.42
1:CA:622:A:C8	1:CA:623:C:C5	3.08	0.42
16:CP:14:ASN:N	16:CP:15:PRO:CD	2.81	0.42
9:AI:48:GLU:OE2	9:AI:51:ARG:HB2	2.19	0.42
51:DT:34:VAL:HG22	51:DT:39:ARG:HA	2.02	0.42
39:DE:89:ASP:O	39:DE:90:THR:C	2.57	0.42
57:DZ:57:ILE:HG22	57:DZ:59:LEU:HD23	2.01	0.42
1:CA:221:C:H2'	1:CA:222:U:C6	2.54	0.42
42:BH:158:HIS:CE1	42:BH:168:PRO:HB2	2.55	0.42
16:CP:4:ILE:HD13	16:CP:64:ALA:O	2.19	0.42
55:DX:55:ASN:O	55:DX:79:ALA:HA	2.19	0.42
1:CA:1490:C:H2'	1:CA:1491:G:H8	1.84	0.42
41:DG:21:ARG:HG2	41:DG:21:ARG:O	2.19	0.42
41:BG:146:TYR:O	41:BG:148:MET:N	2.52	0.42
38:DD:25:THR:CG2	38:DD:26:LYS:N	2.83	0.42
4:AD:149:ALA:HB3	4:AD:152:SER:OG	2.19	0.42
2:CB:103:THR:HG23	2:CB:176:GLU:OE1	2.19	0.42
57:BZ:85:HIS:HD1	57:BZ:86:VAL:N	2.18	0.42
5:AE:71:LEU:HD22	5:AE:114:GLY:O	2.19	0.42
1:CA:984:C:H2'	1:CA:985:C:H6	1.82	0.42
33:B8:39:LYS:O	33:B8:43:GLN:HG3	2.19	0.42
9:CI:112:LYS:C	9:CI:112:LYS:HD3	2.40	0.42
48:BQ:130:LYS:HZ2	57:BZ:80:ARG:NH1	2.16	0.42
6:AF:61:LEU:O	6:AF:62:TRP:HB2	2.20	0.42
16:CP:68:ASP:O	16:CP:70:ALA:N	2.52	0.42
1:AA:338:A:C6	1:AA:339:C:C4	3.07	0.42
1:AA:18:C:H4'	1:AA:1078:U:O2	2.18	0.42
50:DS:89:ARG:O	50:DS:90:GLY:O	2.38	0.42
50:DS:93:LYS:O	50:DS:94:TYR:C	2.56	0.42
1:CA:443:C:H2'	1:CA:444:C:H6	1.84	0.42
25:D0:51:VAL:HG21	25:D0:79:VAL:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1019:C:H2'	1:CA:1020:U:O4'	2.19	0.42
40:BF:110:LEU:HD13	40:BF:206:ILE:HD11	2.01	0.42
1:CA:1423:G:H5'	46:DO:49:ARG:HH22	1.83	0.42
1:AA:1227:A:OP2	13:AM:111:LYS:HE3	2.19	0.42
38:DD:72:LYS:HE2	38:DD:101:GLU:OE1	2.19	0.42
1:CA:37:U:OP2	12:CL:123:LYS:HD3	2.20	0.42
5:AE:62:ALA:C	5:AE:64:ARG:H	2.23	0.42
1:CA:1032:G:H2'	1:CA:1033:G:C8	2.55	0.42
29:B4:55:ARG:O	29:B4:55:ARG:NE	2.52	0.42
43:DI:5:LEU:HD11	43:DI:19:VAL:CG1	2.49	0.42
35:DA:1270:C:H5''	35:DA:1271:G:C5'	2.49	0.42
13:CM:60:VAL:HG13	13:CM:64:TRP:HE1	1.85	0.42
6:AF:97:PHE:HD2	18:AR:31:LEU:HD21	1.84	0.42
35:DA:946:G:O2'	35:DA:947:G:H5'	2.19	0.42
38:BD:62:TYR:HA	38:BD:87:ASN:HD21	1.84	0.42
49:DR:28:LEU:HD12	49:DR:48:VAL:HG21	2.02	0.42
57:BZ:48:PHE:HA	57:BZ:51:ALA:HB3	2.02	0.42
35:BA:970:C:H2'	35:BA:971:C:C6	2.54	0.42
29:D4:43:TYR:O	29:D4:44:THR:O	2.37	0.42
46:BO:14:THR:HG22	46:BO:95:GLY:N	2.35	0.42
2:AB:70:PHE:CD2	2:AB:163:PHE:HB3	2.55	0.42
30:D5:6:VAL:HG11	35:DA:2016:U:O4'	2.20	0.42
1:AA:295:C:H2'	1:AA:296:U:C6	2.55	0.42
8:CH:64:LYS:HD2	8:CH:79:VAL:HG21	2.01	0.42
35:DA:71:A:C2	55:DX:31:HIS:CE1	3.07	0.42
1:CA:41:G:H2'	1:CA:42:G:H8	1.84	0.42
35:DA:394:A:C2'	35:DA:395:U:H5'	2.50	0.42
36:DB:16:G:O2'	36:DB:17:C:H5'	2.19	0.42
15:AO:70:LEU:HD23	15:AO:70:LEU:O	2.20	0.42
35:DA:755:C:H2'	35:DA:756:C:H6	1.84	0.42
2:AB:198:ASP:OD1	2:AB:198:ASP:N	2.51	0.42
3:AC:61:ALA:O	3:AC:62:ASP:HB2	2.19	0.42
35:DA:29:U:O5'	35:DA:29:U:H6	2.02	0.42
45:BN:33:LEU:O	45:BN:35:ARG:O	2.38	0.42
1:AA:656:C:H2'	1:AA:657:G:H8	1.84	0.42
37:DC:202:PRO:HB2	37:DC:205:ALA:HB2	2.02	0.42
35:DA:1412:A:H2'	35:DA:1413:G:C8	2.54	0.42
1:CA:1165:C:H2'	1:CA:1166:G:H8	1.85	0.42
39:DE:7:VAL:HG13	39:DE:27:LEU:HB3	2.01	0.42
35:DA:1336:A:O2'	35:DA:1337:G:H5'	2.20	0.42
3:AC:30:ARG:HD2	14:AN:38:GLY:HA3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:933:G:O6	7:AG:3:ARG:NH2	2.53	0.42
46:BO:37:ASP:O	46:BO:61:VAL:HA	2.20	0.42
44:DJ:39:UNK:HA	44:DJ:43:UNK:CB	2.49	0.42
4:AD:6:GLY:O	4:AD:7:PRO:C	2.58	0.42
36:BB:73:A:H2'	36:BB:74:U:H5'	2.01	0.42
7:CG:41:ARG:HG3	7:CG:41:ARG:HH11	1.84	0.42
42:BH:114:VAL:O	42:BH:114:VAL:HG23	2.20	0.42
22:CY:70:G:C6	22:CY:71:G:C5	3.07	0.42
22:AY:3:G:OP2	22:AY:3:G:H8	2.02	0.42
22:AY:11:C:H42	22:AY:47:G:H22	1.68	0.42
23:CW:44:A:C2	23:CW:45:U:N1	2.87	0.42
4:CD:13:ARG:HD2	4:CD:38:TYR:O	2.20	0.42
22:AV:6:C:C4	22:AV:70:G:N1	2.88	0.42
22:CV:69:G:H2'	22:CV:70:G:C8	2.55	0.42
1:CA:1442:G:C6	1:CA:1442(B):A:H2	2.38	0.42
23:AW:15:G:C8	23:AW:16:U:C5	3.08	0.42
47:BP:59:LEU:CB	47:BP:61:ARG:NH1	2.82	0.42
42:BH:43:VAL:CG1	42:BH:52:VAL:HG22	2.28	0.42
1:AA:1055:A:C8	1:AA:1055:A:OP1	2.72	0.42
1:CA:1057:G:C5	1:CA:1204:A:C2	3.07	0.42
23:CW:26:G:C2'	23:CW:27:C:C6	2.99	0.42
52:DU:98:LEU:C	52:DU:100:VAL:N	2.71	0.42
35:DA:2360:A:O2'	35:DA:2361:A:C5'	2.67	0.42
57:DZ:39:VAL:HG23	57:DZ:40:ASP:H	1.84	0.42
29:D4:2:LYS:HG2	36:DB:44:G:OP2	2.20	0.42
41:DG:63:ILE:HG22	41:DG:143:GLU:HG2	2.01	0.42
1:CA:457:C:N4	1:CA:475:G:H1	2.17	0.42
35:BA:1771:C:C1'	35:BA:1786:A:H8	2.33	0.42
13:AM:89:GLY:O	13:AM:92:HIS:N	2.50	0.42
31:B6:37:ARG:NH1	31:B6:39:TYR:CE2	2.87	0.42
57:DZ:149:SER:HB3	57:DZ:173:ALA:HA	2.02	0.42
39:BE:102:VAL:HB	39:BE:199:ARG:O	2.19	0.42
41:BG:5:VAL:HG12	41:BG:104:GLU:OE2	2.19	0.42
2:CB:47:THR:HA	2:CB:202:PRO:CG	2.49	0.42
2:CB:51:LEU:O	2:CB:55:PHE:HD2	2.02	0.42
8:CH:20:TYR:HD1	8:CH:65:TYR:CD2	2.38	0.42
35:BA:1204:A:H2	35:BA:1241:A:N1	2.17	0.42
50:BS:61:ASN:HB3	50:BS:64:GLU:HB2	2.01	0.42
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.23	0.42
23:CW:51:G:C2'	23:CW:52:C:H5'	2.49	0.42
23:CW:66:G:H2'	23:CW:67:C:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DQ:134:ARG:HG3	48:DQ:134:ARG:HH11	1.84	0.42
48:DQ:32:TYR:CE1	48:DQ:133:ARG:NH1	2.87	0.42
1:AA:1129:C:H5''	1:AA:1139:G:C6	2.55	0.42
13:CM:68:GLY:CA	13:CM:71:ARG:HB3	2.50	0.42
48:DQ:63:LYS:HE3	48:DQ:65:PHE:HE1	1.84	0.42
17:CQ:60:ILE:O	17:CQ:61:GLU:C	2.57	0.42
1:AA:68:G:O4'	1:AA:171:A:H1'	2.20	0.42
2:CB:121:LEU:HD23	2:CB:124:SER:HB3	2.01	0.42
51:BT:34:VAL:HG22	51:BT:39:ARG:HA	2.01	0.42
19:CS:32:LYS:HA	19:CS:50:ALA:HB3	2.00	0.42
35:BA:2124:G:N3	37:BC:218:THR:HG23	2.34	0.42
36:DB:87:G:H3'	36:DB:88:C:H5''	2.00	0.42
40:BF:179:GLU:OE1	40:BF:179:GLU:N	2.52	0.42
48:BQ:17:LEU:HD22	48:BQ:96:VAL:HG13	2.00	0.42
37:DC:34:ALA:CA	37:DC:40:GLU:HG3	2.50	0.42
35:BA:2531:A:H2	35:BA:2658:C:O2	2.01	0.42
3:AC:173:VAL:N	3:AC:174:PRO:HD3	2.34	0.42
2:AB:134:GLU:O	2:AB:138:LEU:HB2	2.20	0.42
35:BA:271(A):A:H1'	35:BA:365:C:O4'	2.19	0.42
2:AB:95:GLN:HE21	2:AB:147:LYS:HG2	1.85	0.42
35:BA:626:U:H5'	35:BA:627:A:H5'	2.02	0.42
41:BG:162:THR:O	41:BG:163:ALA:C	2.58	0.42
38:BD:108:PRO:HG2	38:BD:111:LEU:HD23	2.00	0.42
39:BE:9:VAL:CG2	39:BE:25:VAL:HB	2.44	0.42
1:CA:818:G:H3'	1:CA:819:A:C5'	2.50	0.42
1:CA:854:G:H3'	1:CA:871:U:O4	2.19	0.42
16:AP:43:LYS:C	16:AP:45:THR:N	2.70	0.42
35:DA:769:G:O2'	35:DA:770:G:H5'	2.20	0.42
8:AH:30:ARG:CB	8:AH:30:ARG:NH1	2.83	0.42
6:AF:7:ASN:O	6:AF:8:ILE:CG1	2.68	0.42
54:DW:29:LEU:O	54:DW:33:ARG:HG3	2.18	0.42
50:DS:86:ALA:HA	50:DS:106:ARG:HG2	2.01	0.42
50:DS:89:ARG:CB	50:DS:92:TYR:HB3	2.49	0.42
35:DA:2747:G:H4'	42:DH:67:LEU:HD12	2.01	0.42
7:AG:54:THR:C	7:AG:56:GLN:H	2.23	0.42
27:D2:28:LYS:HB3	27:D2:57:ILE:CD1	2.47	0.42
1:CA:607:A:O2'	1:CA:608:A:H5'	2.20	0.42
1:CA:1170:A:H2'	1:CA:1171:G:O4'	2.20	0.42
1:AA:217:C:O2'	1:AA:218:C:H5'	2.20	0.42
35:DA:1719:G:C6	35:DA:1720:U:C4	3.08	0.42
20:CT:10:LEU:HD12	20:CT:11:SER:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:10:LEU:O	20:CT:13:LEU:HD13	2.19	0.42
31:B6:53:LYS:HA	31:B6:53:LYS:HD2	1.81	0.42
36:BB:83:G:C2'	36:BB:84:C:H5'	2.50	0.42
1:AA:189(K):U:H2'	1:AA:189(L):G:H8	1.85	0.42
35:DA:2584:U:H2'	35:DA:2585:U:H2'	2.01	0.42
35:DA:2584:U:O5'	35:DA:2584:U:O2	2.37	0.42
35:BA:845:G:C8	35:BA:845:G:OP2	2.67	0.42
39:DE:144:ARG:HB3	39:DE:145:LYS:H	1.51	0.42
57:BZ:7:ALA:C	57:BZ:8:TYR:CD1	2.93	0.42
8:CH:31:PHE:O	8:CH:34:GLU:HB2	2.18	0.42
35:BA:1775:U:C2'	35:BA:1776:G:H5'	2.50	0.42
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.20	0.42
35:BA:1030:G:OP2	48:BQ:128:LYS:NZ	2.53	0.42
1:CA:1113:C:H2'	1:CA:1114:C:C6	2.54	0.42
41:DG:12:TYR:O	41:DG:16:ARG:HB2	2.19	0.42
16:AP:58:TYR:C	16:AP:58:TYR:CD1	2.93	0.42
38:DD:120:GLY:O	38:DD:131:LEU:HB3	2.19	0.42
52:DU:66:ASN:HB2	52:DU:76:TYR:HB2	2.01	0.42
35:DA:2166:G:H2'	35:DA:2167:U:C6	2.55	0.42
55:BX:18:TYR:C	55:BX:20:GLY:N	2.73	0.42
35:DA:2033:A:O2'	35:DA:2034:U:O5'	2.36	0.42
35:BA:1231:G:H2'	35:BA:1232:G:C8	2.54	0.42
35:DA:2796:U:H3'	35:DA:2799:C:C5'	2.50	0.42
35:DA:1053:C:O2	35:DA:1053:C:H2'	2.20	0.42
1:CA:912:C:O2'	1:CA:913:A:H5'	2.18	0.42
35:BA:2027:G:O2'	35:BA:2028:U:H5'	2.20	0.42
39:DE:151:TYR:O	39:DE:154:LYS:HB2	2.20	0.42
37:BC:211:ARG:HG3	37:BC:211:ARG:HH11	1.84	0.42
4:AD:131:ARG:HD3	4:AD:131:ARG:H	1.83	0.42
46:DO:91:LEU:N	46:DO:91:LEU:HD22	2.35	0.42
32:B7:25:PRO:HA	32:B7:28:ARG:CZ	2.50	0.42
22:CY:4:C:N3	22:CY:72:C:H5	2.18	0.42
22:AY:11:C:N1	22:AY:12:U:C5	2.88	0.42
22:AY:8:U:C2	22:AY:15:G:O6	2.72	0.42
22:AY:69:G:C6	22:AY:70:G:C6	3.08	0.42
22:AV:4:C:C6	22:AV:5:C:C5	3.07	0.42
36:DB:7:G:H21	50:DS:38:GLN:HE22	1.68	0.42
22:CV:70:G:N3	22:CV:71:G:C8	2.88	0.42
51:DT:23:ARG:HG2	51:DT:120:ARG:HH12	1.80	0.42
35:BA:833:U:O2	47:BP:55:ARG:NH2	2.53	0.42
19:AS:62:ILE:HD12	19:AS:66:MET:HE1	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:81:LYS:CD	56:BY:96:ILE:HG22	2.46	0.42
23:AW:19:G:C2	23:AW:59:G:C4	3.07	0.42
43:DI:101:LEU:HG	43:DI:107:VAL:HG11	2.02	0.42
1:AA:1052:U:O2'	1:AA:1055:A:OP2	2.33	0.42
43:BI:114:LEU:HD23	43:BI:130:TYR:CE1	2.54	0.42
1:CA:522:C:O2'	1:CA:523:A:H5'	2.20	0.42
12:CL:101:VAL:HG12	12:CL:104:VAL:CG2	2.50	0.42
1:CA:1494:G:H21	35:DA:1912:A:H1'	1.84	0.42
40:DF:21:ALA:O	40:DF:23:ASP:N	2.52	0.42
12:AL:90:VAL:C	12:AL:92:ASP:N	2.67	0.42
23:CW:20:G:C5	23:CW:59:G:C2	3.07	0.42
52:DU:98:LEU:O	52:DU:100:VAL:N	2.52	0.42
53:DV:18:LEU:N	53:DV:18:LEU:HD12	2.35	0.42
35:DA:1884:A:C2'	35:DA:1885:A:C5'	2.82	0.42
13:AM:3:ARG:HH22	41:BG:113:ARG:HB2	1.84	0.42
35:DA:251:A:C5	35:DA:252:G:H1'	2.55	0.42
51:BT:88:ILE:CG2	51:BT:89:VAL:H	2.29	0.42
52:BU:92:ARG:HD3	52:BU:95:LEU:HD12	2.02	0.42
41:DG:67:LYS:O	41:DG:67:LYS:HD2	2.19	0.42
35:DA:404:C:C3'	35:DA:405:U:H5'	2.48	0.42
31:B6:7:ILE:CG1	31:B6:29:ASN:ND2	2.82	0.42
1:CA:1308:U:OP1	13:CM:98:VAL:N	2.53	0.42
39:DE:111:ARG:HG2	49:DR:2:ARG:NH1	2.35	0.42
10:AJ:50:ILE:HD11	14:AN:41:ARG:HD3	2.02	0.42
57:DZ:146:ILE:HG12	57:DZ:146:ILE:H	1.65	0.42
33:D8:41:ILE:HD13	35:DA:2419:U:OP1	2.20	0.42
45:BN:112:LEU:O	45:BN:115:ARG:HB3	2.18	0.42
19:CS:19:VAL:O	19:CS:23:ASN:ND2	2.52	0.42
1:CA:1231:G:O3'	9:CI:126:SER:OG	2.35	0.42
57:BZ:150:LEU:H	57:BZ:150:LEU:HD23	1.85	0.42
29:B4:6:HIS:O	29:B4:8:LYS:N	2.51	0.42
5:CE:150:ARG:NH1	5:CE:150:ARG:CB	2.82	0.42
3:CC:20:SER:HB2	3:CC:40:ARG:HH21	1.81	0.42
3:CC:57:ILE:HG22	3:CC:58:GLU:N	2.33	0.42
23:CW:54:G:C2	23:CW:55:G:C8	3.08	0.42
30:D5:47:PRO:O	30:D5:49:CYS:N	2.49	0.42
3:AC:17:ASP:O	3:AC:18:TRP:C	2.57	0.42
35:BA:1826:G:C4'	38:BD:242:ARG:HH21	2.24	0.42
1:CA:1382:C:H2'	1:CA:1383:C:H6	1.85	0.42
17:CQ:62:SER:OG	17:CQ:72:ARG:HG3	2.20	0.42
35:BA:1112:G:O2'	35:BA:1113:U:O4'	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DC:53:ARG:HD3	37:DC:53:ARG:N	2.24	0.42
1:AA:184:G:C4'	1:AA:224:C:H4'	2.49	0.42
3:AC:16:ARG:CZ	3:AC:16:ARG:HB2	2.49	0.42
7:AG:20:ASP:CB	7:AG:23:VAL:HG23	2.41	0.42
38:DD:16:MET:HB2	38:DD:207:GLY:HA3	2.01	0.42
42:DH:170:ARG:H	42:DH:170:ARG:CD	2.29	0.42
13:CM:40:ASN:ND2	13:CM:42:ALA:HB3	2.30	0.42
1:CA:160:A:C1'	1:CA:344:A:C5	3.01	0.42
35:DA:8:A:H2	35:DA:2896:C:O2	2.03	0.42
4:CD:152:SER:C	4:CD:155:LEU:HG	2.40	0.42
1:AA:1434:A:H8	1:AA:1434:A:O5'	2.03	0.42
35:BA:2809:A:H62	35:BA:2891:G:H2'	1.85	0.42
42:DH:159:GLU:O	42:DH:160:LYS:O	2.38	0.42
38:BD:215:LEU:HD12	38:BD:217:ARG:HH21	1.85	0.42
1:AA:1229:A:H2'	1:AA:1230:C:C6	2.55	0.42
47:BP:71:VAL:O	47:BP:72:PRO:C	2.58	0.42
38:BD:142:VAL:HG21	38:BD:191:ALA:CB	2.48	0.42
40:BF:88:VAL:HG23	40:BF:89:VAL:N	2.34	0.42
30:B5:25:LEU:HD11	54:BW:41:LYS:HE3	2.01	0.42
37:BC:45:HIS:CE1	37:BC:173:HIS:HD1	2.38	0.42
26:B1:49:VAL:HB	26:B1:60:PHE:HB2	2.02	0.42
24:AX:15:A:H5'	24:AX:16:A:OP1	2.20	0.42
1:AA:1005:A:H5'	1:AA:1037:C:O2	2.20	0.42
48:BQ:134:ARG:NH2	57:BZ:122:ARG:HD2	2.35	0.42
11:AK:79:SER:HB2	11:AK:106:LYS:HG3	2.02	0.42
18:AR:85:LEU:CD2	18:AR:88:LYS:HG2	2.49	0.42
35:DA:814:C:O2'	35:DA:815:C:H5'	2.19	0.42
1:AA:104:G:C2	1:AA:105:G:C5	3.08	0.42
7:CG:54:THR:O	7:CG:54:THR:HG23	2.19	0.42
6:CF:86:ARG:O	6:CF:87:ARG:HG2	2.20	0.42
35:BA:27:G:N2	35:BA:512:G:H2'	2.34	0.42
37:BC:185:LYS:HA	37:BC:188:ASP:OD2	2.20	0.42
35:DA:1532:C:H2'	35:DA:1533:G:C5'	2.50	0.42
35:DA:314:A:H2'	35:DA:315:G:H8	1.85	0.42
31:B6:14:THR:CG2	31:B6:52:VAL:HG11	2.50	0.42
1:CA:1466:C:C2'	1:CA:1467:G:H5'	2.50	0.42
39:BE:37:ARG:HD2	39:BE:42:ASP:CG	2.40	0.42
35:DA:948:G:OP1	35:DA:962:G:OP1	2.38	0.42
5:AE:78:HIS:HE1	5:AE:143:ARG:H	1.67	0.42
38:BD:218:ARG:HB3	38:BD:219:PRO:HD2	2.01	0.42
35:BA:39:C:O2	40:BF:46:ARG:NH2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:4:TYR:O	4:AD:5:ILE:CB	2.67	0.42
38:BD:65:ILE:HD13	38:BD:65:ILE:H	1.84	0.42
48:BQ:27:VAL:O	48:BQ:28:ALA:HB3	2.20	0.42
1:CA:226:G:O2'	1:CA:227:G:H5'	2.19	0.42
36:BB:87:G:H3'	36:BB:88:C:H5''	2.01	0.42
35:BA:848:G:N3	35:BA:933:A:H1'	2.34	0.42
2:AB:185:ILE:HB	2:AB:199:TYR:O	2.19	0.42
1:AA:1028:C:C2'	1:AA:1029:C:H5'	2.50	0.42
5:CE:20:GLN:O	5:CE:21:ALA:C	2.57	0.42
38:BD:197:GLY:O	38:BD:198:ASN:CB	2.68	0.42
20:AT:38:LYS:HA	20:AT:41:ILE:CG1	2.50	0.42
17:AQ:92:ARG:O	17:AQ:95:TYR:CD2	2.72	0.42
54:BW:61:ASN:N	54:BW:61:ASN:HD22	2.17	0.42
3:AC:121:ALA:CB	3:AC:187:ALA:HB3	2.49	0.42
30:D5:34:PRO:O	30:D5:35:GLU:HG2	2.20	0.42
30:D5:35:GLU:O	30:D5:36:CYS:HB3	2.20	0.42
55:DX:18:TYR:C	55:DX:20:GLY:N	2.72	0.42
35:DA:773:U:H4'	38:DD:47:GLY:CA	2.50	0.42
38:BD:166:GLN:NE2	38:BD:166:GLN:CA	2.82	0.42
54:BW:36:LEU:CD1	54:BW:48:ALA:HA	2.50	0.42
1:AA:62:U:H5''	1:AA:385:C:O2'	2.19	0.42
42:BH:89:ILE:HD12	42:BH:89:ILE:C	2.40	0.42
1:AA:895:G:H2'	1:AA:896:C:C6	2.54	0.42
35:DA:1879:C:H2'	35:DA:1880:C:O4'	2.19	0.42
55:BX:54:VAL:HG22	55:BX:81:VAL:HG12	2.02	0.42
35:DA:1469:A:H2'	35:DA:1470:G:O4'	2.20	0.42
38:DD:18:VAL:HG12	38:DD:19:ALA:O	2.19	0.42
1:AA:794:A:H4'	1:AA:1521:G:O2'	2.20	0.42
50:DS:49:VAL:CG2	50:DS:80:LEU:HD12	2.50	0.42
22:CY:26:G:C5	22:CY:27:C:C4	3.08	0.42
22:CY:61:A:H2'	22:CY:62:U:C5'	2.39	0.42
22:CY:67:C:H2'	22:CY:68:A:H5'	2.00	0.42
35:DA:2469:A:O2'	48:DQ:56:ARG:NE	2.47	0.42
22:AY:44:A:H2'	22:AY:45:U:O4'	2.20	0.42
22:AY:58:C:OP2	57:BZ:182:LYS:CD	2.68	0.42
22:AY:56:U:C2'	57:BZ:182:LYS:O	2.68	0.42
22:AV:5:C:O2	22:AV:71:G:N3	2.52	0.42
22:CV:13:U:N3	22:CV:25:A:C6	2.88	0.42
22:CV:57:U:O2	22:CV:59:G:C8	2.72	0.42
22:CV:5:C:O2	22:CV:71:G:C2	2.73	0.42
46:DO:104:ARG:CZ	46:DO:104:ARG:HB3	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DT:88:ILE:CG2	51:DT:89:VAL:H	2.27	0.42
35:DA:1902:C:C2'	38:DD:244:ARG:HB2	2.50	0.42
31:B6:12:GLU:CG	31:B6:23:THR:HG22	2.36	0.42
35:BA:2393:A:C2'	35:BA:2394:C:H5'	2.49	0.42
47:DP:29:LYS:N	47:DP:29:LYS:CD	2.82	0.42
56:BY:81:LYS:CD	56:BY:97:ARG:O	2.65	0.42
43:DI:98:ALA:CB	43:DI:109:ILE:HB	2.48	0.42
43:BI:77:LEU:HD21	43:BI:79:ILE:CG1	2.50	0.42
43:BI:79:ILE:HA	43:BI:80:PRO:HD2	1.97	0.42
10:AJ:34:VAL:HG13	10:AJ:74:ILE:HA	2.02	0.42
10:AJ:4:ILE:CD1	10:AJ:4:ILE:N	2.82	0.42
10:AJ:3:LYS:NZ	10:AJ:75:ILE:O	2.53	0.42
35:BA:1140:C:OP1	45:BN:23:LEU:O	2.37	0.42
45:BN:131:GLN:C	45:BN:133:GLN:H	2.22	0.42
41:BG:53:LEU:HD13	41:BG:53:LEU:HA	1.78	0.42
45:DN:58:ASP:O	45:DN:60:ILE:HG13	2.20	0.42
51:BT:127:ALA:O	51:BT:129:ARG:N	2.52	0.42
53:BV:3:ALA:HA	53:BV:40:LEU:O	2.19	0.42
5:CE:51:VAL:O	5:CE:54:ALA:HB3	2.20	0.42
41:DG:131:TYR:CE1	41:DG:133:LEU:HB3	2.55	0.42
35:DA:916:G:HO2'	35:DA:917:A:H5''	1.85	0.42
46:DO:24:VAL:HA	46:DO:39:ILE:HG22	2.02	0.42
49:DR:2:ARG:N	49:DR:2:ARG:NH1	2.47	0.42
31:D6:27:LYS:HE2	31:D6:29:ASN:OD1	2.20	0.42
57:DZ:174:VAL:O	57:DZ:174:VAL:HG12	2.19	0.42
41:BG:104:GLU:OE1	41:BG:104:GLU:HA	2.19	0.42
35:DA:1203:G:H3'	35:DA:1204:A:H5''	2.01	0.42
19:CS:16:LEU:CD1	19:CS:16:LEU:H	2.20	0.42
40:DF:116:ASP:OD2	47:DP:5:ASP:N	2.53	0.42
41:BG:91:ARG:HD2	41:BG:92:VAL:CA	2.49	0.42
17:AQ:51:TYR:N	17:AQ:51:TYR:CD1	2.87	0.42
1:CA:235:C:H1'	17:CQ:61:GLU:OE2	2.20	0.42
17:CQ:65:ILE:O	17:CQ:66:SER:HB3	2.20	0.42
35:BA:1112:G:O2'	35:BA:1113:U:C6	2.72	0.42
35:BA:2299:G:N1	35:BA:2318:G:C8	2.88	0.42
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	2.00	0.42
2:CB:112:VAL:C	2:CB:114:ARG:N	2.70	0.42
55:DX:12:VAL:O	55:DX:13:LEU:HB2	2.20	0.42
1:CA:1513:A:C4	1:CA:1514:C:C5	3.08	0.42
19:AS:6:LYS:CD	19:AS:6:LYS:N	2.72	0.42
36:DB:55:U:H2'	36:DB:56:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:46:GLY:HA2	19:AS:61:TYR:HE1	1.85	0.42
57:DZ:163:LEU:HD23	57:DZ:163:LEU:N	2.34	0.42
38:BD:25:THR:O	38:BD:27:THR:HG22	2.20	0.42
1:CA:532:A:C2	1:CA:1207:G:C4'	3.03	0.42
51:BT:50:ILE:HD11	51:BT:102:ILE:HD11	2.01	0.42
11:CK:48:ILE:HG22	11:CK:49:GLY:N	2.27	0.42
49:BR:103:ARG:NH1	49:BR:110:PRO:HD3	2.34	0.42
1:AA:625:G:H2'	1:AA:626:U:H6	1.84	0.42
11:CK:92:GLU:OE2	11:CK:95:ILE:HD12	2.20	0.42
48:BQ:135:ASP:CB	57:BZ:49:ARG:NH1	2.83	0.42
1:CA:865:A:H5'	1:CA:1078:U:C5	2.55	0.42
4:AD:74:GLN:HA	4:AD:77:ASN:ND2	2.31	0.42
4:AD:98:GLU:OE2	4:AD:103:ASN:ND2	2.51	0.42
1:AA:583:A:H2'	1:AA:584:G:O4'	2.20	0.42
12:AL:8:ASN:HD22	17:AQ:34:LYS:HE2	1.83	0.42
41:BG:170:ARG:HG2	41:BG:170:ARG:NH1	2.34	0.42
41:BG:181:ARG:O	41:BG:182:LYS:C	2.57	0.42
47:BP:77:ARG:HB2	47:BP:78:PRO:HD2	2.02	0.42
27:B2:68:ARG:HG3	27:B2:68:ARG:NH1	2.34	0.42
37:DC:16:ASP:OD2	37:DC:19:LYS:HB2	2.20	0.42
43:DI:13:GLY:O	43:DI:17:GLN:OE1	2.38	0.42
35:DA:536:A:P	52:DU:53:ARG:NH1	2.93	0.42
29:B4:43:TYR:O	29:B4:44:THR:O	2.37	0.42
1:CA:171:A:H2'	1:CA:172:A:C8	2.55	0.42
35:DA:2152:G:H2'	35:DA:2153:G:H8	1.82	0.42
1:CA:1522:U:O2	1:CA:1523:G:C8	2.72	0.42
1:CA:767:A:H2'	1:CA:768:A:O4'	2.20	0.42
49:DR:31:HIS:C	49:DR:33:ARG:N	2.72	0.42
35:BA:708:C:O2	35:BA:708:C:H2'	2.19	0.42
1:AA:108:G:C2	1:AA:109:A:C2	3.08	0.42
38:BD:148:GLU:CD	38:BD:151:LYS:HZ2	2.22	0.42
35:DA:1638:C:H5''	35:DA:2710:C:O2'	2.20	0.42
41:BG:95:ARG:NH1	41:BG:95:ARG:HG2	2.34	0.42
35:DA:1832:C:N4	35:DA:1833:U:C4	2.88	0.42
10:AJ:21:GLN:O	10:AJ:25:GLU:HG3	2.20	0.42
33:B8:11:LYS:O	47:BP:65:ARG:HD3	2.20	0.42
35:DA:234:C:H2'	35:DA:235:U:H6	1.85	0.42
17:AQ:75:ARG:HH12	17:AQ:77:VAL:HG22	1.85	0.42
35:BA:1010:A:N3	35:BA:1153:C:H1'	2.34	0.42
35:BA:2166:G:H2'	35:BA:2167:U:C6	2.55	0.42
48:DQ:11:LYS:NZ	48:DQ:87:LYS:O	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1799:G:H5'	35:BA:1819:A:H61	1.85	0.42
25:D0:55:ARG:HG3	35:DA:2365:G:OP1	2.19	0.42
35:BA:272(B):G:O2'	35:BA:272(C):G:C5'	2.68	0.42
35:BA:1375:C:O2'	35:BA:1376:C:H5'	2.20	0.42
3:CC:30:ARG:HD2	14:CN:38:GLY:HA3	2.02	0.42
35:DA:487:C:C5	35:DA:488:G:N7	2.88	0.42
44:BJ:126:UNK:O	44:BJ:130:UNK:CB	2.67	0.42
35:BA:1409:C:H2'	35:BA:1410:G:C8	2.55	0.42
3:AC:135:LYS:HA	3:AC:135:LYS:HD2	1.92	0.42
35:DA:110:G:O2'	35:DA:111:A:H5'	2.19	0.42
48:BQ:35:VAL:HG23	48:BQ:100:GLY:O	2.20	0.42
22:AY:19:G:C2	22:AY:59:G:C2	3.08	0.42
39:DE:181:LEU:HD11	51:DT:7:ILE:HG21	2.02	0.42
22:AV:10:G:H2'	22:AV:11:C:N1	2.35	0.42
35:BA:1902:C:C2'	38:BD:244:ARG:HB2	2.50	0.42
23:AW:62:U:OP1	23:AW:63:C:N4	2.44	0.42
19:AS:11:VAL:O	19:AS:11:VAL:HG13	2.20	0.42
19:AS:47:HIS:O	19:AS:62:ILE:HG22	2.19	0.42
19:AS:9:VAL:O	19:AS:11:VAL:N	2.52	0.42
43:DI:81:VAL:HG22	43:DI:143:SER:O	2.20	0.42
23:CW:15:G:OP2	23:CW:16:U:C5	2.73	0.42
12:AL:90:VAL:HG12	12:AL:92:ASP:H	1.85	0.42
10:CJ:13:HIS:CE1	10:CJ:14:LYS:HG3	2.55	0.42
10:CJ:4:ILE:HB	10:CJ:74:ILE:CD1	2.50	0.42
53:DV:41:GLY:CA	53:DV:45:THR:OG1	2.68	0.42
1:CA:975:A:C4'	1:CA:976:G:H5''	2.31	0.42
36:BB:79:C:H2'	36:BB:80:U:O4'	2.20	0.42
39:BE:91:VAL:CG1	39:BE:95:ILE:HG13	2.49	0.42
46:BO:71:ARG:NE	46:BO:105:GLU:OE2	2.52	0.42
41:DG:114:ILE:O	41:DG:115:ARG:C	2.59	0.42
39:BE:52:LEU:O	39:BE:74:PRO:CA	2.66	0.42
1:AA:487:A:H2'	1:AA:488:C:O4'	2.20	0.42
35:BA:1797:C:O2'	38:BD:259:THR:HB	2.19	0.42
39:DE:111:ARG:HD2	39:DE:160:TYR:CE2	2.55	0.42
1:CA:448:A:O5'	1:CA:485:G:N2	2.53	0.42
1:CA:80:G:H3'	1:CA:81:U:H5'	2.01	0.42
35:BA:1312:U:P	55:BX:63:LYS:HD2	2.60	0.42
2:AB:47:THR:HA	2:AB:202:PRO:CG	2.50	0.42
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HB3	1.98	0.42
31:D6:37:ARG:NH1	31:D6:39:TYR:CE2	2.88	0.42
41:BG:60:LEU:O	41:BG:64:THR:HG22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:60:LEU:HD22	41:BG:63:ILE:HD11	2.00	0.42
27:D2:7:ARG:HH11	27:D2:7:ARG:HG2	1.85	0.42
47:DP:16:ARG:O	47:DP:18:ARG:N	2.52	0.42
56:DY:52:SER:N	56:DY:53:PRO:HD2	2.34	0.42
48:DQ:135:ASP:C	48:DQ:137:TYR:H	2.23	0.42
1:AA:1281:U:O2'	1:AA:1282:C:P	2.78	0.42
2:CB:207:ALA:O	2:CB:209:ARG:N	2.53	0.42
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.19	0.42
4:CD:126:ILE:HG23	4:CD:147:ALA:O	2.20	0.42
3:AC:35:GLU:OE2	3:AC:97:LYS:HD2	2.19	0.42
40:DF:126:VAL:HG23	40:DF:127:GLU:N	2.35	0.42
54:DW:24:ILE:O	54:DW:25:ARG:C	2.58	0.42
39:BE:132:HIS:O	39:BE:135:HIS:CD2	2.73	0.42
1:AA:620:C:C2	4:AD:135:LEU:HD23	2.55	0.42
1:AA:160:A:C1'	1:AA:344:A:C5	2.98	0.42
23:AW:17:C:H5'	23:AW:18:U:H3'	2.02	0.42
35:DA:1448:G:H2'	35:DA:1449:A:C8	2.55	0.42
35:DA:1528:A:N1	35:DA:1542:A:C2	2.73	0.42
2:AB:115:LEU:O	2:AB:119:GLU:HB2	2.19	0.42
37:BC:41:THR:HB	37:BC:218:THR:OG1	2.19	0.42
35:DA:950:G:O2'	35:DA:951:C:H5'	2.20	0.42
16:AP:20:VAL:HG22	16:AP:32:TYR:HB2	2.02	0.42
1:CA:828:A:H5''	1:CA:859:A:C2	2.55	0.42
46:DO:10:VAL:CG2	46:DO:10:VAL:O	2.68	0.42
48:BQ:12:GLN:HE21	48:BQ:73:PRO:CD	2.33	0.42
1:AA:1231:G:O3'	9:AI:126:SER:OG	2.35	0.42
47:DP:64:LYS:HG2	47:DP:64:LYS:O	2.19	0.42
50:BS:16:ASN:C	50:BS:18:ILE:N	2.73	0.42
35:BA:2694:G:O2'	35:BA:2695:C:H5'	2.20	0.42
39:DE:21:VAL:HG23	39:DE:21:VAL:O	2.19	0.42
34:D9:6:SER:HB2	35:DA:2466:C:H5''	2.02	0.42
1:CA:1291:G:O2'	1:CA:1292:U:H5'	2.20	0.42
17:AQ:90:ILE:HG22	17:AQ:94:ASN:ND2	2.30	0.42
1:CA:827:U:H2'	1:CA:870:U:O4	2.19	0.42
35:BA:2478:A:C2'	35:BA:2479:G:H5'	2.50	0.42
1:CA:1003:G:N2	1:CA:1039:C:H42	2.18	0.42
1:CA:1296:C:C5	1:CA:1297:C:N4	2.88	0.42
35:DA:2591:C:H2'	35:DA:2592:G:C8	2.55	0.42
35:DA:92:A:H2'	35:DA:93:G:O4'	2.20	0.42
41:DG:135:LEU:HD13	41:DG:155:MET:CG	2.49	0.42
56:DY:14:LEU:HG	56:DY:14:LEU:O	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B3:42:ALA:C	28:B3:44:ARG:N	2.72	0.42
49:DR:72:ASP:O	49:DR:76:VAL:HB	2.20	0.42
37:DC:182:PRO:CB	37:DC:185:LYS:HD2	2.49	0.42
54:BW:18:ARG:HG2	54:BW:76:VAL:CG1	2.50	0.42
6:CF:7:ASN:O	6:CF:8:ILE:CG1	2.68	0.42
1:CA:423:G:C2'	1:CA:424:G:H5'	2.50	0.42
35:BA:1750:G:H2'	35:BA:1751:C:H6	1.84	0.42
31:B6:52:VAL:CG2	31:B6:53:LYS:H	2.32	0.42
1:CA:55:A:O2'	1:CA:56:U:H5'	2.20	0.42
5:CE:31:LEU:HD21	5:CE:43:LEU:HG	2.02	0.42
43:BI:12:LEU:HG	43:BI:12:LEU:O	2.20	0.42
25:D0:41:ARG:HA	25:D0:41:ARG:HD3	1.88	0.42
18:AR:30:ASP:C	18:AR:32:ARG:N	2.72	0.42
42:BH:18:GLU:O	42:BH:24:VAL:HG23	2.20	0.42
1:AA:1462:G:C6	1:AA:1463:C:C4	3.08	0.42
35:BA:1385:G:O2'	35:BA:1396:U:C6	2.68	0.42
35:BA:2062:A:O2'	35:BA:2063:C:OP1	2.30	0.42
37:BC:27:ALA:HB1	37:BC:186:LEU:HB2	2.01	0.42
1:AA:453:A:C5	1:AA:454:C:C4	3.08	0.42
35:BA:2171:A:O2'	35:BA:2172:U:C6	2.70	0.42
35:BA:1754:C:OP2	51:BT:113:LYS:HE3	2.20	0.42
56:DY:57:GLN:CG	56:DY:58:GLY:N	2.83	0.42
1:AA:1264:C:H1'	1:AA:1272:G:H22	1.84	0.42
4:AD:159:ARG:HG3	4:AD:159:ARG:NH1	2.35	0.42
35:BA:902:C:O2'	35:BA:903:C:H5'	2.19	0.42
55:DX:48:LYS:O	55:DX:49:VAL:HG13	2.20	0.42
34:B9:19:ARG:O	34:B9:20:HIS:HB2	2.20	0.42
35:BA:402:A:H2'	35:BA:403:U:H5'	2.01	0.42
38:BD:168:ARG:HA	38:BD:173:VAL:HA	2.00	0.42
20:CT:81:LYS:C	20:CT:83:ARG:N	2.73	0.42
35:DA:15:G:H1	35:DA:525:U:H3	1.68	0.42
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.20	0.42
1:CA:1300:G:HO2'	1:CA:1301:U:P	2.43	0.42
35:BA:539:G:H2'	35:BA:540:C:H6	1.85	0.42
1:AA:46:G:O2'	1:AA:365:U:H1'	2.20	0.42
1:AA:363:A:N7	12:AL:30:ALA:HB1	2.35	0.42
35:BA:1469:A:H2'	35:BA:1470:G:O4'	2.20	0.42
57:BZ:63:ASP:OD1	57:BZ:65:GLN:HB2	2.20	0.42
35:DA:1344:G:H4'	35:DA:1384:A:C5	2.55	0.42
2:AB:60:ASP:O	2:AB:64:ARG:HG2	2.19	0.42
35:DA:461:C:O2'	35:DA:462:C:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:210:C:H2'	35:BA:211:A:C8	2.55	0.42
40:BF:150:GLY:HA2	40:BF:172:TRP:CD2	2.54	0.42
15:AO:38:ARG:HH11	15:AO:38:ARG:HG2	1.84	0.42
37:DC:173:HIS:CD2	37:DC:173:HIS:N	2.86	0.42
1:CA:83:U:H2'	1:CA:84:U:C5	2.55	0.42
37:BC:214:TYR:CZ	37:BC:224:ARG:HD2	2.55	0.42
22:CY:19:G:C8	22:CY:19:G:OP1	2.69	0.41
22:AY:58:C:H2'	22:AY:59:G:C8	2.52	0.41
22:AY:63:C:N1	57:BZ:186:GLU:OE1	2.53	0.41
14:AN:23:ARG:HD2	14:AN:28:GLY:O	2.18	0.41
4:AD:36:ARG:O	4:AD:38:TYR:N	2.52	0.41
51:BT:12:SER:O	51:BT:13:ARG:NH2	2.53	0.41
23:AW:25:A:H3'	23:AW:26:G:C8	2.54	0.41
35:DA:812:C:H5'	47:DP:25:SER:HB2	2.00	0.41
47:DP:59:LEU:CB	47:DP:61:ARG:NH1	2.83	0.41
1:AA:961:U:OP2	1:AA:1223:C:H4'	2.20	0.41
43:BI:113:ARG:O	43:BI:114:LEU:HG	2.20	0.41
1:AA:523:A:C2	1:AA:527:G:O6	2.73	0.41
10:AJ:34:VAL:HG21	10:AJ:74:ILE:HG22	1.98	0.41
45:DN:131:GLN:C	45:DN:133:GLN:H	2.23	0.41
22:CV:1:G:H1'	25:D0:5:LYS:CE	2.49	0.41
51:BT:28:VAL:O	51:BT:29:ARG:CD	2.68	0.41
1:AA:975:A:N1	10:AJ:48:THR:HB	2.35	0.41
29:D4:24:THR:HB	41:DG:5:VAL:CG1	2.49	0.41
31:B6:27:LYS:O	31:B6:30:THR:HG22	2.20	0.41
39:BE:79:ARG:HH11	39:BE:79:ARG:CG	2.33	0.41
1:CA:484:G:HO2'	1:CA:485:G:P	2.43	0.41
28:B3:54:VAL:HG12	28:B3:55:ARG:N	2.34	0.41
35:BA:1244:G:H2'	35:BA:1245:G:H5'	2.02	0.41
1:CA:942:G:H21	9:CI:124:GLN:HE22	1.65	0.41
17:AQ:17:LYS:HA	17:AQ:46:ASP:O	2.20	0.41
39:DE:117:MET:HA	39:DE:122:PHE:H	1.85	0.41
38:BD:35:LYS:CD	38:BD:35:LYS:C	2.78	0.41
32:B7:43:THR:HG23	32:B7:44:PRO:HD2	2.02	0.41
30:B5:51:TYR:CD2	30:B5:52:TYR:HB2	2.55	0.41
48:DQ:39:PRO:HA	48:DQ:97:VAL:O	2.20	0.41
38:BD:28:GLU:N	38:BD:29:PRO:CD	2.81	0.41
3:CC:22:TRP:HB2	3:CC:23:TYR:H	1.66	0.41
3:CC:44:GLU:HA	3:CC:52:LEU:HD11	2.00	0.41
3:CC:59:ARG:NH1	3:CC:97:LYS:NZ	2.67	0.41
8:CH:6:ILE:O	8:CH:8:ASP:N	2.53	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	2.02	0.41
35:DA:2848:G:H3'	51:DT:95:ARG:O	2.20	0.41
26:D1:45:ASN:CG	35:DA:2230:G:H1'	2.41	0.41
1:AA:371:G:H21	1:AA:374:A:N6	2.18	0.41
14:CN:27:CYS:SG	14:CN:27:CYS:O	2.78	0.41
9:AI:48:GLU:C	9:AI:50:LEU:H	2.23	0.41
39:DE:89:ASP:O	39:DE:90:THR:O	2.37	0.41
40:BF:126:VAL:HG23	40:BF:127:GLU:N	2.35	0.41
39:BE:89:ASP:O	39:BE:90:THR:C	2.57	0.41
2:CB:115:LEU:O	2:CB:119:GLU:HB2	2.19	0.41
41:DG:27:ASN:O	41:DG:30:GLU:HB3	2.20	0.41
38:DD:118:VAL:CG2	38:DD:119:ALA:N	2.81	0.41
38:DD:145:VAL:HG11	38:DD:175:LEU:HD11	2.02	0.41
37:BC:29:LEU:HD22	37:BC:33:LEU:CD1	2.50	0.41
1:CA:540:G:H2'	1:CA:541:G:O4'	2.19	0.41
2:AB:144:ARG:HA	2:AB:147:LYS:HB3	2.02	0.41
2:CB:144:ARG:HA	2:CB:147:LYS:HB3	2.02	0.41
1:CA:706:A:N7	1:CA:707:C:C5	2.86	0.41
2:CB:37:ASN:C	2:CB:39:ILE:H	2.23	0.41
39:DE:44:TYR:O	39:DE:45:THR:CB	2.68	0.41
1:CA:1296:C:H5''	1:CA:1297:C:H5	1.85	0.41
35:BA:954:G:C5	35:BA:955:C:C5	3.07	0.41
6:AF:6:VAL:C	6:AF:7:ASN:HD22	2.23	0.41
50:DS:85:VAL:O	50:DS:106:ARG:HG2	2.20	0.41
42:BH:70:THR:HG23	42:BH:74:ASN:ND2	2.34	0.41
1:AA:401:C:C6	1:AA:401:C:C3'	3.03	0.41
7:CG:54:THR:C	7:CG:56:GLN:H	2.23	0.41
1:AA:1032:G:H2'	1:AA:1033:G:C8	2.55	0.41
35:BA:1516:C:O2'	35:BA:1517:G:H5'	2.20	0.41
35:DA:2815:C:H2'	35:DA:2816:C:C6	2.54	0.41
35:DA:634:C:H2'	35:DA:635:C:H6	1.85	0.41
35:BA:527:C:O2	35:BA:527:C:O4'	2.36	0.41
9:AI:78:LYS:HB3	9:AI:78:LYS:NZ	2.35	0.41
4:CD:4:TYR:O	4:CD:5:ILE:CB	2.67	0.41
2:CB:107:THR:HA	2:CB:110:GLN:NE2	2.35	0.41
35:DA:469:G:H2'	35:DA:470:A:H5''	1.99	0.41
40:BF:192:LEU:HD21	40:BF:194:MET:CG	2.50	0.41
13:AM:65:LYS:HD3	29:B4:44:THR:HB	2.01	0.41
22:AV:76:C:O2'	22:AV:77:C:H5''	2.20	0.41
41:DG:138:GLN:HE21	41:DG:149:VAL:CG2	2.33	0.41
39:BE:38:THR:O	39:BE:40:GLU:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:28:MET:HA	57:BZ:88:PHE:O	2.20	0.41
57:BZ:27:VAL:O	57:BZ:88:PHE:HB2	2.20	0.41
35:DA:143:G:H1'	55:DX:37:THR:CG2	2.48	0.41
43:BI:82:ARG:HG2	43:BI:145:VAL:HG21	2.02	0.41
35:DA:845:G:O2'	35:DA:846:C:H5	2.03	0.41
35:DA:2271:G:C5	35:DA:2272:U:C4	3.08	0.41
37:BC:23:ILE:CG2	37:BC:190:ILE:HB	2.50	0.41
1:AA:453:A:H2'	1:AA:454:C:H6	1.85	0.41
35:DA:2016:U:H2'	35:DA:2017:U:C6	2.55	0.41
8:AH:111:ILE:C	8:AH:112:LEU:HD23	2.40	0.41
43:DI:82:ARG:HG2	43:DI:145:VAL:HG21	2.01	0.41
8:CH:44:PHE:HA	8:CH:79:VAL:CG1	2.50	0.41
27:D2:63:VAL:O	27:D2:64:LEU:C	2.58	0.41
17:AQ:75:ARG:HH11	17:AQ:75:ARG:HG3	1.85	0.41
35:DA:2729:G:H2'	35:DA:2730:C:C6	2.54	0.41
35:BA:2702:U:H4'	35:BA:2703:C:OP1	2.20	0.41
42:BH:94:TYR:CD2	42:BH:107:VAL:HB	2.55	0.41
10:AJ:42:THR:OG1	10:AJ:68:HIS:HB3	2.20	0.41
3:AC:118:GLN:HA	3:AC:187:ALA:CB	2.50	0.41
6:AF:39:LYS:O	6:AF:40:VAL:HB	2.20	0.41
1:AA:668:G:O2'	15:AO:46:HIS:CD2	2.73	0.41
45:DN:33:LEU:O	45:DN:35:ARG:O	2.38	0.41
1:AA:682:G:O2'	1:AA:683:G:H5'	2.20	0.41
18:CR:61:LYS:O	18:CR:65:ILE:HG13	2.20	0.41
31:B6:28:ARG:NH1	31:B6:28:ARG:CB	2.83	0.41
1:AA:656:C:H2'	1:AA:657:G:C8	2.55	0.41
35:DA:1501:C:H1'	38:DD:100:GLY:HA2	2.01	0.41
1:AA:743:U:O2'	1:AA:744:C:H5'	2.19	0.41
2:CB:60:ASP:O	2:CB:64:ARG:HG2	2.19	0.41
32:D7:25:PRO:HA	32:D7:28:ARG:CZ	2.50	0.41
35:BA:1564:C:O2'	35:BA:1565:C:H5'	2.19	0.41
13:CM:37:THR:O	13:CM:55:ARG:CZ	2.67	0.41
35:DA:1283:G:N2	35:DA:1285:G:H3'	2.35	0.41
4:AD:56:VAL:HG12	4:AD:202:LEU:HD13	2.02	0.41
35:BA:2070:G:H2'	35:BA:2071:A:O4'	2.20	0.41
4:AD:76:ARG:HH11	4:AD:76:ARG:HG2	1.84	0.41
55:DX:8:ILE:N	55:DX:8:ILE:HD12	2.35	0.41
35:BA:704:G:H1'	35:BA:726:G:N2	2.35	0.41
35:BA:2558:C:H2'	35:BA:2559:C:C6	2.55	0.41
22:CY:31:C:N3	22:CY:43:G:N2	2.61	0.41
23:AW:37:A:C5	23:AW:38:U:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:40:A:N1	23:AW:41:C:H3'	2.30	0.41
23:AW:45:U:C3'	23:AW:46:U:H6	2.27	0.41
23:AW:70:G:N9	23:AW:71:G:C8	2.87	0.41
22:AY:11:C:H42	22:AY:27:C:H42	1.68	0.41
22:AY:5:C:N3	22:AY:6:C:C4	2.88	0.41
23:CW:3:G:C2'	23:CW:4:C:O5'	2.68	0.41
7:CG:77:SER:OG	23:CW:35:U:H5''	2.20	0.41
22:AV:9:A:H8	22:AV:11:C:H41	1.64	0.41
22:AV:72:C:C4	22:AV:73:C:C5	3.08	0.41
41:BG:86:MET:HB3	41:BG:87:PRO:HD3	2.02	0.41
48:BQ:79:LEU:HD23	48:BQ:80:GLU:H	1.85	0.41
56:DY:2:ARG:HH11	56:DY:2:ARG:HG2	1.84	0.41
1:CA:180:U:H2'	1:CA:181:G:H5'	1.96	0.41
43:DI:113:ARG:O	43:DI:114:LEU:HD23	2.20	0.41
38:DD:52:ARG:HD3	38:DD:52:ARG:HH11	1.73	0.41
1:CA:523:A:C2	1:CA:527:G:O6	2.73	0.41
12:CL:60:LEU:C	12:CL:62:SER:N	2.73	0.41
1:AA:1151:A:C4	1:AA:1152:A:N7	2.88	0.41
10:AJ:81:THR:C	10:AJ:83:GLU:N	2.70	0.41
1:CA:963:G:HO2'	10:CJ:54:PHE:HZ	1.67	0.41
10:CJ:3:LYS:HZ2	10:CJ:76:ASN:HA	1.81	0.41
53:DV:18:LEU:N	53:DV:18:LEU:CD1	2.83	0.41
2:CB:77:ALA:HB1	2:CB:211:ILE:HG21	1.99	0.41
47:DP:47:ASP:HB2	47:DP:51:PHE:HB2	2.01	0.41
51:BT:66:VAL:HA	51:BT:71:GLY:HA2	2.01	0.41
47:DP:144:GLU:O	47:DP:145:PRO:C	2.56	0.41
52:BU:74:LEU:HD22	52:BU:74:LEU:C	2.40	0.41
53:BV:18:LEU:CD1	53:BV:18:LEU:N	2.84	0.41
53:BV:46:VAL:HG22	53:BV:47:VAL:N	2.27	0.41
1:CA:1275:A:O2'	1:CA:1276:G:H5'	2.20	0.41
39:DE:47:VAL:HG22	39:DE:48:GLN:O	2.20	0.41
39:DE:76:ARG:O	39:DE:77:ILE:O	2.37	0.41
39:DE:79:ARG:HH11	39:DE:79:ARG:CG	2.33	0.41
29:D4:25:TYR:O	41:DG:101:ILE:CG2	2.68	0.41
35:DA:2300:G:H1	35:DA:2316:C:N4	2.15	0.41
36:DB:79:C:H2'	36:DB:80:U:O4'	2.20	0.41
31:B6:27:LYS:HE2	31:B6:29:ASN:OD1	2.20	0.41
39:DE:119:ARG:HD2	39:DE:120:TRP:NE1	2.35	0.41
4:AD:129:ASN:H	4:AD:129:ASN:ND2	2.17	0.41
56:BY:2:ARG:HG2	56:BY:2:ARG:HH11	1.85	0.41
50:DS:35:ILE:H	50:DS:53:SER:HB2	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BU:31:SER:C	52:BU:33:ARG:N	2.70	0.41
2:CB:44:LEU:O	2:CB:47:THR:HB	2.20	0.41
47:BP:41:ARG:CA	47:BP:41:ARG:NE	2.83	0.41
41:BG:57:ALA:CA	41:BG:90:LEU:HD21	2.47	0.41
9:CI:127:LYS:CE	22:CV:36:AG9:H15'	2.50	0.41
1:AA:254:G:H4'	17:AQ:18:THR:HG21	2.02	0.41
17:AQ:4:LYS:HG3	17:AQ:5:VAL:N	2.35	0.41
2:AB:91:PRO:HG3	2:AB:154:LEU:CB	2.42	0.41
40:DF:68:LYS:O	40:DF:69:HIS:HB2	2.19	0.41
31:D6:19:ARG:N	31:D6:19:ARG:HD2	2.35	0.41
38:DD:35:LYS:NZ	38:DD:36:PRO:N	2.68	0.41
2:CB:91:PRO:HG3	2:CB:154:LEU:CB	2.40	0.41
41:BG:123:ASN:HB2	41:BG:126:ASP:OD1	2.20	0.41
2:AB:121:LEU:HD23	2:AB:124:SER:HB3	2.02	0.41
35:DA:528:A:C2	35:DA:2043:C:C4'	3.01	0.41
37:DC:48:LEU:HD11	37:DC:172:ILE:CG2	2.41	0.41
3:AC:74:GLY:C	3:AC:76:VAL:N	2.72	0.41
1:CA:268:C:H2'	1:CA:269:C:H6	1.85	0.41
35:DA:2134:A:H61	35:DA:2157:G:C2'	2.33	0.41
55:BX:12:VAL:HG11	55:BX:27:THR:HG23	2.01	0.41
1:AA:347:G:C2	1:AA:348:G:H1'	2.55	0.41
16:CP:4:ILE:HD12	16:CP:4:ILE:H	1.85	0.41
16:AP:64:ALA:O	16:AP:65:GLN:C	2.58	0.41
19:AS:6:LYS:CE	19:AS:6:LYS:N	2.83	0.41
35:BA:950:G:O2'	35:BA:951:C:H5'	2.20	0.41
54:DW:5:ALA:HB3	54:DW:105:VAL:H	1.85	0.41
35:DA:621:A:C2'	35:DA:622:G:H5'	2.48	0.41
1:CA:1060:C:O2'	1:CA:1061:G:H5'	2.20	0.41
35:DA:2188:C:C2'	35:DA:2189:U:O4'	2.65	0.41
35:BA:626:U:C5'	35:BA:627:A:C5'	2.98	0.41
50:BS:17:ARG:O	50:BS:20:ARG:HG2	2.19	0.41
1:AA:1347:G:C2	9:AI:107:ARG:NH2	2.88	0.41
17:CQ:52:LYS:HB3	17:CQ:52:LYS:HE3	1.91	0.41
37:DC:36:ALA:C	37:DC:38:PHE:H	2.24	0.41
30:B5:40:LYS:NZ	30:B5:46:CYS:SG	2.85	0.41
1:CA:1005:A:H5'	1:CA:1037:C:O2	2.19	0.41
48:DQ:69:PHE:CD1	48:DQ:70:PRO:HD2	2.55	0.41
1:AA:1003:G:N2	1:AA:1039:C:H42	2.18	0.41
1:AA:918:A:O2'	1:AA:919:A:H5'	2.20	0.41
4:CD:176:LEU:HD12	4:CD:177:ASP:H	1.85	0.41
27:D2:35:LEU:HD12	27:D2:53:LEU:CD1	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:28:ARG:O	6:CF:29:ALA:C	2.58	0.41
47:BP:110:TYR:CE2	47:BP:111:ARG:NH1	2.88	0.41
35:DA:527:C:N4	35:DA:2779:U:OP1	2.50	0.41
17:AQ:52:LYS:HB3	17:AQ:52:LYS:HE3	1.92	0.41
57:DZ:29:TYR:HB3	57:DZ:34:ASN:HD22	1.85	0.41
35:DA:470:A:H2'	35:DA:471:A:O4'	2.19	0.41
38:DD:65:ILE:H	38:DD:65:ILE:HD13	1.85	0.41
40:BF:192:LEU:HD22	40:BF:194:MET:HG3	2.01	0.41
35:BA:2884:U:O2'	35:BA:2885:C:H5'	2.19	0.41
43:BI:13:GLY:O	43:BI:17:GLN:OE1	2.38	0.41
38:BD:94:LEU:HD22	38:BD:95:LEU:N	2.35	0.41
35:DA:128:C:H2'	35:DA:129:C:C6	2.52	0.41
46:BO:32:TYR:N	46:BO:32:TYR:CD1	2.88	0.41
35:BA:1775:U:H2'	35:BA:1776:G:C5'	2.50	0.41
35:BA:2688:U:H1'	35:BA:2721:A:N6	2.35	0.41
25:D0:20:ARG:HD3	35:DA:2356:C:O3'	2.20	0.41
1:CA:668:G:O2'	1:CA:669:U:H5'	2.20	0.41
15:CO:48:LYS:HD3	15:CO:48:LYS:HA	1.86	0.41
38:DD:137:PRO:O	38:DD:138:VAL:C	2.58	0.41
35:BA:2128:C:OP1	37:BC:37:LYS:HG3	2.20	0.41
10:CJ:42:THR:OG1	10:CJ:68:HIS:HB3	2.20	0.41
31:D6:28:ARG:NH1	31:D6:28:ARG:CB	2.84	0.41
35:BA:280:C:C2'	35:BA:281:G:H5'	2.50	0.41
35:DA:2236:C:H2'	35:DA:2237:G:H5'	2.03	0.41
39:DE:134:ILE:HA	39:DE:137:HIS:HD2	1.83	0.41
35:BA:2796:U:H3'	35:BA:2799:C:C5'	2.50	0.41
35:BA:1672:C:H5''	35:BA:2554:U:OP1	2.20	0.41
35:BA:822:U:H2'	35:BA:823:G:H8	1.85	0.41
35:BA:732:C:O2'	35:BA:733:G:H5'	2.20	0.41
3:CC:3:ASN:OD1	3:CC:4:LYS:HG3	2.21	0.41
35:DA:2588:G:O2'	35:DA:2589:A:H5'	2.20	0.41
1:CA:1010:G:H2'	1:CA:1011:G:C8	2.55	0.41
20:CT:49:ALA:O	20:CT:52:ALA:HB3	2.19	0.41
35:BA:229:A:C5'	35:BA:230:U:H5'	2.50	0.41
33:D8:16:ILE:HD12	33:D8:57:ARG:HG2	2.02	0.41
49:DR:116:LEU:HA	49:DR:116:LEU:HD23	1.89	0.41
22:CY:3:G:OP2	22:CY:3:G:H8	2.03	0.41
51:DT:1:MET:O	51:DT:2:ASN:O	2.38	0.41
22:CV:58:C:N4	41:DG:84:LYS:HE2	2.35	0.41
51:DT:88:ILE:HG22	51:DT:89:VAL:CG2	2.39	0.41
31:B6:44:ARG:NH1	31:B6:44:ARG:HB2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:16:U:O2	23:AW:62:U:C5'	2.69	0.41
23:AW:20:G:C3'	23:AW:21:U:C5'	2.96	0.41
35:BA:1504:C:O2'	35:BA:1505:C:C5'	2.68	0.41
43:DI:77:LEU:HD21	43:DI:79:ILE:HG12	2.02	0.41
1:CA:971:G:H22	1:CA:1363(A):A:P	2.43	0.41
10:AJ:32:ALA:H	10:AJ:78:ASN:HD22	1.69	0.41
10:AJ:70:ARG:CG	10:AJ:70:ARG:HH11	2.31	0.41
42:DH:43:VAL:HG12	42:DH:52:VAL:HA	2.02	0.41
1:CA:961:U:OP2	1:CA:1223:C:H4'	2.20	0.41
10:CJ:4:ILE:N	10:CJ:4:ILE:CD1	2.83	0.41
10:CJ:78:ASN:HB2	10:CJ:81:THR:OG1	2.20	0.41
10:CJ:30:SER:C	10:CJ:80:LYS:HZ3	2.24	0.41
23:CW:20:G:C4	23:CW:59:G:C2	3.07	0.41
35:BA:1887:C:H2'	35:BA:1888:G:C5'	2.38	0.41
45:DN:133:GLN:CG	45:DN:134:ARG:H	2.08	0.41
45:DN:55:VAL:O	45:DN:56:ASN:C	2.59	0.41
47:BP:144:GLU:O	47:BP:145:PRO:C	2.58	0.41
3:AC:106:VAL:C	3:AC:108:ASN:H	2.23	0.41
46:BO:2:ILE:CG2	46:BO:8:LEU:HD21	2.50	0.41
51:BT:88:ILE:CG2	51:BT:89:VAL:N	2.76	0.41
57:DZ:24:LEU:HD23	57:DZ:24:LEU:C	2.40	0.41
52:BU:95:LEU:HD12	53:BV:11:GLN:HE21	1.85	0.41
1:AA:1278:U:H4'	1:AA:1279:A:H8	1.84	0.41
5:CE:51:VAL:CB	5:CE:52:PRO:HD3	2.30	0.41
29:D4:14:ILE:HG23	29:D4:33:VAL:HG23	2.02	0.41
41:DG:111:LEU:HB3	41:DG:117:PHE:CZ	2.56	0.41
39:BE:64:LYS:O	39:BE:73:GLU:OE2	2.38	0.41
13:CM:89:GLY:O	13:CM:92:HIS:N	2.52	0.41
4:CD:129:ASN:N	4:CD:129:ASN:ND2	2.66	0.41
35:BA:1652:A:C2'	35:BA:1653:G:H5'	2.51	0.41
9:AI:114:TYR:CD1	9:AI:114:TYR:O	2.73	0.41
35:BA:2801(A):A:O4'	35:BA:2802:G:H2'	2.20	0.41
40:DF:32:LEU:HD23	40:DF:32:LEU:O	2.19	0.41
1:AA:1354:C:O2'	1:AA:1355:G:H5'	2.21	0.41
19:CS:63:THR:HG23	19:CS:65:ASN:OD1	2.19	0.41
1:CA:1339:A:C2	22:CV:33:G:H4'	2.55	0.41
47:BP:88:LEU:N	47:BP:88:LEU:CD1	2.82	0.41
39:DE:117:MET:HA	39:DE:122:PHE:N	2.35	0.41
35:BA:484:C:OP1	56:BY:50:ARG:HG3	2.20	0.41
48:DQ:99:PRO:CB	57:DZ:79:ARG:HH21	2.33	0.41
41:BG:125:PHE:CD1	41:BG:125:PHE:N	2.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:18:TRP:CE3	3:AC:18:TRP:N	2.77	0.41
24:CX:22:A:H2	22:CY:36:AG9:N4	2.17	0.41
5:AE:42:GLY:CA	5:AE:65:ASN:O	2.68	0.41
3:AC:40:ARG:HG2	3:AC:55:VAL:CB	2.50	0.41
5:CE:72:GLN:C	5:CE:74:GLY:N	2.70	0.41
5:CE:72:GLN:O	5:CE:74:GLY:N	2.54	0.41
1:CA:254:G:H4'	17:CQ:18:THR:HG21	2.02	0.41
25:D0:25:ARG:NH1	25:D0:25:ARG:HG2	2.34	0.41
6:CF:100:ASN:HD21	18:CR:23:LYS:NZ	2.17	0.41
35:DA:2894:G:N3	35:DA:2894:G:C2'	2.81	0.41
1:CA:1498:U:O2'	1:CA:1499:A:P	2.78	0.41
16:CP:20:VAL:HG21	16:CP:32:TYR:CD1	2.56	0.41
1:CA:322:C:O2'	1:CA:323:U:H5'	2.19	0.41
35:DA:954:G:C5	35:DA:955:C:C5	3.08	0.41
35:DA:2809:A:H62	35:DA:2891:G:H2'	1.85	0.41
1:AA:706:A:O4'	11:AK:29:ILE:HD13	2.19	0.41
35:DA:2188:C:H2'	35:DA:2189:U:C1'	2.50	0.41
35:BA:2692:C:H1'	35:BA:2847:U:O2'	2.20	0.41
35:DA:2206:G:H21	35:DA:2207:G:C5'	2.33	0.41
34:D9:1:MET:HE2	34:D9:10:ILE:HD13	2.02	0.41
4:CD:57:ARG:H	4:CD:57:ARG:HD2	1.85	0.41
1:CA:1292:U:H2'	1:CA:1293:G:C8	2.55	0.41
56:BY:95:LYS:CD	56:BY:101:LYS:H	2.33	0.41
38:DD:142:VAL:HG21	38:DD:191:ALA:CB	2.50	0.41
35:DA:2121:G:H1	35:DA:2177:C:N4	2.12	0.41
8:AH:31:PHE:O	8:AH:34:GLU:HB2	2.19	0.41
1:AA:825:G:H2'	1:AA:826:C:C6	2.55	0.41
24:AX:15:A:N3	24:AX:15:A:H2'	2.36	0.41
1:CA:1003:G:N2	1:CA:1039:C:N4	2.68	0.41
1:AA:865:A:H5'	1:AA:1078:U:O4	2.21	0.41
52:DU:57:PHE:O	52:DU:58:ARG:C	2.57	0.41
50:DS:89:ARG:CG	50:DS:92:TYR:HA	2.47	0.41
48:BQ:111:GLU:O	48:BQ:115:MET:HG2	2.21	0.41
1:CA:918:A:H2'	1:CA:919:A:O4'	2.20	0.41
56:DY:87:LYS:O	56:DY:88:LYS:HB2	2.20	0.41
6:CF:8:ILE:HD13	6:CF:26:ILE:HD13	2.02	0.41
45:DN:3:THR:O	45:DN:3:THR:HG22	2.20	0.41
35:DA:2073:C:O2'	35:DA:2074:U:H5'	2.20	0.41
38:BD:74:GLY:O	38:BD:76:PRO:HD3	2.19	0.41
9:CI:36:TYR:HE1	9:CI:70:LYS:HZ2	1.67	0.41
35:BA:964:C:N3	35:BA:965:C:C5	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:9:LEU:H	43:BI:13:GLY:CA	2.33	0.41
5:AE:80:ILE:CD1	5:AE:138:ALA:HB1	2.49	0.41
3:AC:127:ARG:HD2	3:AC:127:ARG:N	2.35	0.41
49:BR:28:LEU:CD2	49:BR:114:VAL:HG12	2.50	0.41
7:AG:40:ALA:O	7:AG:44:TYR:HD2	2.03	0.41
41:DG:47:LYS:HG2	41:DG:81:LYS:HD3	2.03	0.41
35:DA:1181:C:H2'	35:DA:1182:A:H8	1.86	0.41
44:DJ:55:UNK:O	44:DJ:56:UNK:O	2.38	0.41
41:BG:96:ARG:O	41:BG:97:ASP:CB	2.68	0.41
35:BA:1831:G:H2'	35:BA:1832:C:H6	1.82	0.41
35:BA:1678:G:N2	35:BA:1989:G:H1	2.18	0.41
35:BA:1948:G:O2'	35:BA:1949:G:H5'	2.20	0.41
35:DA:649:G:H2'	35:DA:650:C:H6	1.85	0.41
42:DH:89:ILE:HD11	42:DH:94:TYR:O	2.20	0.41
39:BE:134:ILE:HA	39:BE:137:HIS:CD2	2.56	0.41
39:BE:137:HIS:CB	39:BE:138:PRO:HD2	2.50	0.41
20:CT:40:ALA:HB2	20:CT:55:ILE:HG22	2.02	0.41
30:B5:35:GLU:O	30:B5:36:CYS:HB3	2.20	0.41
35:DA:191:A:H2'	35:DA:192:C:C6	2.55	0.41
40:DF:72:ARG:NH1	40:DF:72:ARG:HB3	2.35	0.41
1:CA:656:C:H2'	1:CA:657:G:H8	1.84	0.41
4:AD:76:ARG:HG2	4:AD:76:ARG:NH1	2.35	0.41
53:DV:56:SER:O	53:DV:100:ARG:O	2.38	0.41
3:AC:29:TYR:OH	14:AN:54:PRO:HD2	2.20	0.41
24:CX:17:U:H2'	24:CX:18:A:O4'	2.21	0.41
35:DA:935:C:H2'	35:DA:936:C:C6	2.55	0.41
1:AA:1010:G:H2'	1:AA:1011:G:C8	2.55	0.41
1:AA:570:G:H1'	1:AA:820:U:C4	2.55	0.41
43:BI:60:GLU:HB3	43:BI:61:ARG:NH1	2.35	0.41
32:D7:34:ARG:HH12	32:D7:39:ARG:HD2	1.85	0.41
35:BA:1133:U:H2'	35:BA:1137:G:OP1	2.20	0.41
1:CA:1460:A:H2'	1:CA:1461:G:O4'	2.20	0.41
54:BW:13:SER:O	54:BW:14:PRO:C	2.59	0.41
1:CA:363:A:OP1	12:CL:34:ARG:HB3	2.21	0.41
54:DW:16:LYS:O	54:DW:19:LEU:HB2	2.19	0.41
35:DA:2629:A:N3	35:DA:2629:A:H2'	2.35	0.41
45:DN:61:ARG:HH11	45:DN:61:ARG:HG3	1.85	0.41
1:AA:618:C:N4	1:AA:623:C:H42	2.19	0.41
4:CD:6:GLY:O	4:CD:7:PRO:C	2.59	0.41
3:CC:184:TYR:HA	3:CC:200:ALA:O	2.20	0.41
23:AW:3:G:H2'	23:AW:4:C:O5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:183:LEU:CG	57:BZ:184:ALA:N	2.83	0.41
22:AV:25:A:C2	22:AV:26:G:C5	3.08	0.41
51:BT:30:VAL:HA	51:BT:44:ASP:HA	2.02	0.41
36:DB:7:G:H5'	36:DB:8:U:OP2	2.20	0.41
22:CV:51:G:H2'	22:CV:52:C:C6	2.55	0.41
41:DG:46:ALA:CB	41:DG:82:LEU:HD21	2.50	0.41
51:DT:122:ASP:O	51:DT:124:ASP:N	2.52	0.41
51:DT:83:ILE:CG1	51:DT:84:GLN:N	2.62	0.41
19:AS:25:LYS:O	19:AS:26:GLY:C	2.59	0.41
56:DY:9:LYS:HG3	56:DY:11:ASP:OD2	2.20	0.41
1:AA:1206:G:O2'	1:AA:1207:G:H5'	2.20	0.41
1:AA:963:G:H21	10:AJ:55:LYS:HZ3	1.66	0.41
36:BB:8:U:H5'	36:BB:8:U:H6	1.85	0.41
1:CA:522:C:H2'	1:CA:523:A:O4'	2.20	0.41
12:CL:35:GLY:O	12:CL:83:VAL:N	2.52	0.41
12:AL:104:VAL:O	12:AL:107:ALA:HB3	2.20	0.41
12:AL:45:PRO:HG3	12:AL:53:ARG:CD	2.51	0.41
45:BN:55:VAL:O	45:BN:56:ASN:C	2.58	0.41
41:BG:53:LEU:N	41:BG:53:LEU:HD22	2.35	0.41
42:DH:41:MET:HG3	42:DH:43:VAL:HG13	2.02	0.41
10:CJ:3:LYS:NZ	10:CJ:75:ILE:O	2.53	0.41
23:CW:19:G:C6	23:CW:60:A:C6	3.09	0.41
2:AB:211:ILE:O	2:AB:215:LEU:HD23	2.20	0.41
46:BO:64:ARG:HG2	46:BO:79:PHE:CD1	2.55	0.41
51:BT:23:ARG:HG2	51:BT:120:ARG:HH12	1.83	0.41
41:DG:71:THR:N	41:DG:89:GLY:O	2.43	0.41
41:DG:102:PHE:HE1	41:DG:141:PHE:HE1	1.66	0.41
41:DG:125:PHE:HB3	41:DG:130:ASN:O	2.19	0.41
57:BZ:163:LEU:H	57:BZ:163:LEU:CD2	2.34	0.41
40:BF:28:ILE:CD1	40:BF:28:ILE:N	2.84	0.41
35:BA:1653:G:O6	49:BR:11:ASN:HB2	2.20	0.41
57:DZ:100:VAL:N	57:DZ:124:ILE:O	2.41	0.41
50:DS:54:LEU:C	50:DS:57:LYS:H	2.24	0.41
47:DP:85:LEU:HD23	47:DP:115:LEU:O	2.19	0.41
1:AA:1289:A:H2'	1:AA:1290:G:O4'	2.21	0.41
38:BD:30:GLU:CD	38:BD:63:ARG:NE	2.74	0.41
9:AI:88:TYR:O	9:AI:89:ASN:CB	2.61	0.41
1:CA:1129:C:H5''	1:CA:1139:G:C6	2.55	0.41
38:DD:33:LEU:C	38:DD:33:LEU:HD23	2.41	0.41
1:AA:586:C:C2'	1:AA:587:G:H5'	2.50	0.41
1:CA:1402:C:C2'	1:CA:1403:C:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1381:U:H1'	7:CG:78:ARG:NH1	2.35	0.41
1:AA:66:G:C2	1:AA:67:C:C6	3.08	0.41
3:CC:150:LYS:HA	3:CC:169:ALA:CB	2.50	0.41
35:BA:2472:G:C2'	35:BA:2475:C:H42	2.32	0.41
2:AB:114:ARG:HD3	2:AB:118:LEU:HG	2.01	0.41
35:BA:604:G:C6	35:BA:625:G:C2	3.08	0.41
50:DS:13:ARG:O	50:DS:14:VAL:C	2.59	0.41
38:DD:26:LYS:O	38:DD:27:THR:CG2	2.68	0.41
43:DI:127:VAL:HG13	43:DI:138:ILE:O	2.19	0.41
38:BD:27:THR:HG23	38:BD:83:GLU:HB3	2.03	0.41
39:BE:23:VAL:CG1	39:BE:173:VAL:HG21	2.50	0.41
1:AA:1292:U:H2'	1:AA:1293:G:C8	2.55	0.41
47:BP:66:GLY:O	47:BP:67:MET:HB3	2.20	0.41
47:BP:71:VAL:HG13	47:BP:72:PRO:N	2.35	0.41
33:B8:39:LYS:HG2	33:B8:43:GLN:NE2	2.28	0.41
50:BS:20:ARG:HA	50:BS:20:ARG:HE	1.83	0.41
50:DS:17:ARG:C	50:DS:19:LYS:N	2.73	0.41
50:DS:16:ASN:C	50:DS:18:ILE:N	2.73	0.41
4:CD:79:PHE:O	4:CD:82:ALA:HB3	2.21	0.41
1:AA:1346:A:C8	7:AG:10:ARG:NH2	2.89	0.41
35:DA:2762:G:H2'	35:DA:2763:G:C5'	2.48	0.41
27:B2:3:LEU:HD21	27:B2:7:ARG:HH11	1.84	0.41
1:AA:818:G:H3'	1:AA:819:A:C5'	2.50	0.41
1:CA:825:G:H2'	1:CA:826:C:C6	2.56	0.41
30:B5:40:LYS:NZ	30:B5:46:CYS:H	2.17	0.41
15:CO:65:ARG:CG	15:CO:65:ARG:HH11	2.26	0.41
6:CF:61:LEU:HD23	6:CF:63:TYR:CZ	2.55	0.41
11:AK:96:ARG:HA	11:AK:99:GLN:OE1	2.19	0.41
41:DG:51:ARG:HE	41:DG:51:ARG:CA	2.32	0.41
48:BQ:10:ARG:NH1	48:BQ:10:ARG:HB3	2.34	0.41
25:D0:36:ILE:HD12	25:D0:38:VAL:N	2.36	0.41
12:AL:11:VAL:HG21	17:AQ:34:LYS:HD3	2.02	0.41
47:DP:108:LYS:C	47:DP:110:TYR:N	2.72	0.41
35:BA:2463:C:C2'	35:BA:2464:C:H5'	2.50	0.41
35:BA:635:C:O2'	35:BA:636:G:H5'	2.21	0.41
35:BA:2197:U:O2'	35:BA:2198:A:H2'	2.21	0.41
2:CB:196:LEU:CD1	2:CB:197:VAL:HG23	2.50	0.41
11:CK:74:ALA:C	11:CK:76:GLY:N	2.65	0.41
45:BN:89:LYS:HB3	45:BN:89:LYS:HZ3	1.84	0.41
1:CA:189(H):G:H2'	1:CA:189(I):G:H8	1.85	0.41
31:D6:14:THR:CG2	31:D6:52:VAL:HG11	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1670:C:O2	39:DE:129:HIS:CE1	2.73	0.41
57:BZ:94:GLU:O	57:BZ:130:PRO:HD3	2.20	0.41
35:DA:2032:G:OP2	35:DA:2454:G:O2'	2.34	0.41
35:DA:923:C:H2'	35:DA:924:C:H6	1.86	0.41
35:BA:720:C:H2'	35:BA:721:C:C6	2.55	0.41
39:DE:38:THR:O	39:DE:40:GLU:N	2.53	0.41
13:CM:30:ALA:C	13:CM:32:GLU:N	2.73	0.41
49:BR:28:LEU:HD21	49:BR:114:VAL:HG12	2.02	0.41
12:AL:119:LYS:C	12:AL:120:TYR:CD1	2.93	0.41
46:BO:98:VAL:CG1	46:BO:117:LEU:HB3	2.49	0.41
36:DB:112:U:H2'	36:DB:113:G:C8	2.55	0.41
52:BU:29:SER:OG	52:BU:30:LYS:HE2	2.21	0.41
2:AB:185:ILE:HG22	2:AB:199:TYR:HD1	1.86	0.41
35:BA:71:A:H5''	35:BA:73:A:C8	2.55	0.41
3:AC:34:LEU:HD22	3:AC:38:ARG:CZ	2.50	0.41
35:BA:2016:U:H2'	35:BA:2017:U:C6	2.55	0.41
1:CA:779:C:H2'	1:CA:780:A:O4'	2.20	0.41
18:AR:84:LYS:HD3	18:AR:84:LYS:HA	1.93	0.41
38:DD:136:ILE:HA	38:DD:137:PRO:HD3	1.92	0.41
38:BD:155:LEU:HD23	38:BD:177:LEU:HD22	2.02	0.41
25:B0:16:SER:HB3	35:BA:2262:U:OP2	2.20	0.41
20:AT:69:GLY:O	20:AT:73:HIS:CD2	2.73	0.41
13:CM:33:ALA:HB1	13:CM:59:TYR:HD2	1.86	0.41
31:B6:28:ARG:CB	31:B6:28:ARG:HH11	2.33	0.41
25:D0:7:LEU:CD2	48:DQ:81:VAL:HB	2.50	0.41
35:DA:271(Y):U:HO2'	35:DA:271(Z):C:P	2.43	0.41
35:DA:818:G:H4'	35:DA:838:C:O3'	2.21	0.41
4:AD:52:SER:O	4:AD:55:ALA:HB3	2.20	0.41
1:AA:549:C:H2'	1:AA:550:G:O4'	2.20	0.41
7:AG:132:GLY:C	7:AG:134:ALA:N	2.73	0.41
35:DA:1705:G:O2'	35:DA:1706:U:H5'	2.20	0.41
49:BR:57:ARG:O	49:BR:59:ASP:N	2.44	0.41
11:AK:69:ALA:O	11:AK:73:MET:HG2	2.20	0.41
35:DA:579:G:H2'	35:DA:580:C:C6	2.56	0.41
35:DA:736:C:H2'	35:DA:737:C:C6	2.56	0.41
3:AC:33:LEU:HD21	14:AN:53:LEU:HD21	2.02	0.41
15:AO:72:ARG:HG2	15:AO:72:ARG:HH11	1.85	0.41
51:BT:14:TYR:CD1	51:BT:14:TYR:N	2.88	0.41
22:CY:60:A:N7	57:DZ:184:ALA:CA	2.76	0.41
22:CY:9:A:C6	22:CY:48:G:C2	3.09	0.41
23:AW:40:A:H2	23:AW:41:C:H3'	1.66	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AY:70:G:N1	22:AY:71:G:C6	2.89	0.41
7:CG:139:GLU:O	7:CG:143:ARG:N	2.53	0.41
22:AV:20:G:C3'	22:AV:21:U:C5'	2.89	0.41
22:AV:73:C:C2'	22:AV:74:C:H5'	2.50	0.41
22:CV:20:G:N2	22:CV:58:C:N3	2.68	0.41
46:DO:2:ILE:CG2	46:DO:8:LEU:HD21	2.50	0.41
51:DT:127:ALA:O	51:DT:129:ARG:N	2.54	0.41
51:DT:81:PRO:O	51:DT:83:ILE:N	2.53	0.41
51:BT:10:VAL:O	51:BT:13:ARG:HG2	2.21	0.41
56:DY:13:VAL:HG21	56:DY:72:VAL:HB	2.03	0.41
1:CA:176:C:H2'	1:CA:177:C:H6	1.86	0.41
1:AA:1053:G:O5'	1:AA:1054:C:H3'	2.21	0.41
1:AA:1199:U:H4'	10:AJ:54:PHE:CE1	2.55	0.41
40:DF:22:ALA:C	40:DF:24:LEU:N	2.74	0.41
12:AL:68:ALA:CB	12:AL:85:ILE:HD11	2.47	0.41
45:BN:131:GLN:HA	45:BN:131:GLN:OE1	2.19	0.41
35:DA:146:G:H2'	35:DA:147:U:O4'	2.20	0.41
35:BA:1713:U:C2	35:BA:1747:G:N1	2.89	0.41
45:DN:19:GLU:O	45:DN:60:ILE:HA	2.21	0.41
35:DA:322:A:H5'	35:DA:340:A:O4'	2.21	0.41
35:DA:322:A:P	40:DF:169:ASN:HB2	2.61	0.41
35:BA:2849:U:O4	51:BT:23:ARG:NH2	2.54	0.41
51:BT:125:ARG:C	51:BT:127:ALA:N	2.74	0.41
51:BT:32:TYR:CG	51:BT:81:PRO:HB3	2.55	0.41
52:BU:92:ARG:HD2	53:BV:11:GLN:HB2	2.02	0.41
43:BI:73:GLU:HB2	43:BI:137:PRO:O	2.21	0.41
13:CM:86:CYS:SG	13:CM:88:ARG:HG3	2.60	0.41
31:D6:8:LYS:HD2	31:D6:27:LYS:HG2	2.03	0.41
29:B4:25:TYR:O	41:BG:105:LYS:HD3	2.21	0.41
41:BG:5:VAL:O	41:BG:6:ALA:C	2.59	0.41
2:CB:48:MET:CE	2:CB:52:GLU:HB2	2.50	0.41
19:CS:25:LYS:O	19:CS:26:GLY:C	2.58	0.41
39:BE:117:MET:HA	39:BE:122:PHE:N	2.35	0.41
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.74	0.41
48:DQ:42:ILE:CG2	48:DQ:47:ILE:HG13	2.50	0.41
1:AA:1142:G:C2'	1:AA:1143:G:H5'	2.50	0.41
1:CA:1281:U:O2'	1:CA:1282:C:OP1	2.35	0.41
9:CI:17:VAL:HG22	9:CI:63:ILE:CD1	2.46	0.41
8:AH:134:ILE:HG22	8:AH:135:CYS:SG	2.60	0.41
9:CI:48:GLU:OE2	9:CI:51:ARG:HB2	2.20	0.41
9:CI:97:LYS:HB3	9:CI:98:PRO:CD	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:D0:68:GLU:OE2	25:D0:82:ARG:HB2	2.21	0.41
55:BX:27:THR:HA	55:BX:80:ILE:HA	2.02	0.41
1:AA:221:C:H2'	1:AA:222:U:C6	2.54	0.41
1:AA:64:G:N2	1:AA:68:G:O6	2.43	0.41
1:CA:1321:C:H5''	1:CA:1322:C:H2'	2.02	0.41
1:CA:781:A:C2'	1:CA:782:A:H5'	2.51	0.41
45:DN:48:MET:C	45:DN:48:MET:HE3	2.41	0.41
31:B6:10:LEU:N	31:B6:10:LEU:HD23	2.26	0.41
35:DA:2124:G:O2'	37:DC:41:THR:HB	2.20	0.41
4:CD:148:VAL:CG1	4:CD:152:SER:HB2	2.50	0.41
35:DA:2807:G:H2'	35:DA:2808:U:C5'	2.43	0.41
35:DA:271(A):A:H1'	35:DA:365:C:O4'	2.19	0.41
1:AA:939:G:H2'	1:AA:940:C:H6	1.80	0.41
35:DA:272(J):C:N3	35:DA:363:G:O6	2.53	0.41
41:BG:161:THR:HG22	41:BG:162:THR:N	2.35	0.41
50:BS:17:ARG:C	50:BS:19:LYS:N	2.74	0.41
47:DP:71:VAL:O	47:DP:72:PRO:C	2.56	0.41
1:AA:1374:A:C1'	7:AG:31:MET:HE1	2.50	0.41
38:DD:79:VAL:CG2	38:DD:111:LEU:HD11	2.46	0.41
9:AI:79:LEU:HD13	9:AI:79:LEU:C	2.40	0.41
6:CF:81:ILE:O	6:CF:82:ARG:C	2.58	0.41
4:CD:74:GLN:HA	4:CD:77:ASN:ND2	2.29	0.41
25:D0:51:VAL:HG23	25:D0:81:VAL:HG23	2.01	0.41
45:DN:96:GLU:H	45:DN:96:GLU:CD	2.16	0.41
41:BG:12:TYR:HA	41:BG:16:ARG:HB2	2.03	0.41
35:DA:2192:G:C3'	35:DA:2193:G:H5''	2.50	0.41
35:BA:1532:C:H2'	35:BA:1533:G:C5'	2.50	0.41
28:D3:17:LYS:O	28:D3:20:LYS:N	2.54	0.41
28:B3:17:LYS:HE2	35:BA:969:U:OP2	2.21	0.41
35:DA:720:C:H2'	35:DA:721:C:C6	2.54	0.41
35:DA:2883:A:C5'	35:DA:2884:U:H5'	2.51	0.41
1:AA:408:A:H5'	4:AD:116:GLN:HB2	2.02	0.41
35:BA:1286:A:H2'	35:BA:1288:U:OP2	2.20	0.41
1:CA:189(B):C:O2'	1:CA:189(C):C:H5'	2.20	0.41
35:DA:1215:G:O2'	35:DA:1216:G:H5'	2.20	0.41
4:AD:187:ARG:NH1	4:AD:187:ARG:HG2	2.33	0.41
25:B0:36:ILE:HD12	25:B0:37:LEU:N	2.36	0.41
48:BQ:103:MET:CE	48:BQ:125:LEU:HD13	2.50	0.41
43:BI:54:GLN:HA	43:BI:57:ARG:HB3	2.01	0.41
8:AH:64:LYS:HD2	8:AH:79:VAL:HG21	2.01	0.41
35:DA:2887:U:H2'	35:DA:2888:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:815:A:N6	1:AA:1509:C:H1'	2.35	0.41
22:CV:78:A:C8	35:DA:2602:A:N6	2.88	0.41
49:BR:99:LYS:N	49:BR:99:LYS:HD3	2.35	0.41
32:D7:19:ARG:HG2	32:D7:19:ARG:NH1	2.34	0.41
35:BA:2165:G:H2'	35:BA:2166:G:O4'	2.21	0.41
46:DO:119:PRO:HB2	51:DT:68:TYR:CZ	2.55	0.41
7:AG:105:VAL:HG12	7:AG:109:ASN:HD21	1.85	0.41
57:DZ:176:PRO:HB2	57:DZ:177:PRO:HD2	2.01	0.41
51:DT:99:LEU:HB2	51:DT:101:PHE:CE2	2.55	0.41
35:BA:2010:G:H5''	54:BW:42:ARG:HB2	2.01	0.41
12:AL:28:LYS:O	12:AL:29:GLY:C	2.59	0.41
1:AA:589:C:O2'	1:AA:590:C:H5'	2.20	0.41
35:DA:816:C:O2'	35:DA:817:C:H5'	2.19	0.41
35:BA:2607:G:H2'	35:BA:2608:G:O4'	2.20	0.41
36:BB:68:C:O2'	36:BB:69:G:H5'	2.21	0.41
8:CH:82:HIS:HB3	8:CH:138:TRP:CE2	2.55	0.41
1:CA:946:A:H2'	1:CA:947:G:C8	2.55	0.41
57:DZ:11:GLU:N	57:DZ:11:GLU:CD	2.74	0.41
23:AW:22:U:O4'	23:AW:22:U:O2	2.35	0.41
4:AD:3:ARG:HD3	4:AD:3:ARG:N	2.35	0.41
1:CA:754:C:H3'	1:CA:754:C:O2	2.20	0.41
40:DF:93:LYS:HD3	40:DF:93:LYS:HA	1.78	0.41
35:BA:495:G:O2'	54:BW:62:HIS:HE1	2.03	0.41
35:BA:2642:G:O2'	35:BA:2643:G:H5'	2.20	0.41
35:BA:435:C:H2'	35:BA:436:C:H5'	2.02	0.41
42:BH:38:SER:HA	42:BH:39:PRO:HD3	1.93	0.41
22:CY:8:U:C2	22:CY:15:G:O6	2.73	0.41
22:CY:57:U:C2'	57:DZ:182:LYS:NZ	2.82	0.41
23:AW:45:U:C4	23:AW:46:U:C4	3.08	0.41
22:AY:15:G:N2	22:AY:23:A:N3	2.69	0.41
22:AY:32:G:H3'	22:AY:33:G:H8	1.86	0.41
22:AY:5:C:C2	22:AY:71:G:N1	2.88	0.41
23:CW:37:A:C2	23:CW:38:U:C2	3.08	0.41
4:CD:26:CYS:HA	4:CD:31:CYS:CB	2.44	0.41
33:D8:6:THR:CA	33:D8:61:LEU:HD11	2.45	0.41
4:AD:26:CYS:HA	4:AD:31:CYS:CB	2.47	0.41
22:CV:14:A:C8	22:CV:24:A:C2	3.08	0.41
22:CV:51:G:OP1	22:CV:52:C:OP2	2.39	0.41
22:CV:53:U:C1'	22:CV:66:G:N2	2.78	0.41
51:DT:65:LYS:NZ	51:DT:66:VAL:H	2.19	0.41
47:DP:23:PRO:HB3	47:DP:29:LYS:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:16:LEU:N	19:AS:16:LEU:HD12	2.23	0.41
35:DA:1504:C:O2'	35:DA:1505:C:C5'	2.68	0.41
56:DY:76:CYS:O	56:DY:78:ALA:N	2.53	0.41
47:DP:59:LEU:HA	47:DP:61:ARG:HH11	1.73	0.41
35:BA:1485:G:H1'	35:BA:1505:C:N4	2.28	0.41
23:CW:11:C:C2'	23:CW:12:U:O4'	2.68	0.41
23:CW:23:A:C6	23:CW:48:G:C4	3.08	0.41
12:CL:39:VAL:HG11	12:CL:57:LYS:HZ3	1.86	0.41
12:CL:60:LEU:C	12:CL:62:SER:H	2.24	0.41
10:AJ:91:PRO:CB	10:AJ:94:VAL:HB	2.51	0.41
45:BN:57:ALA:C	45:BN:58:ASP:OD1	2.59	0.41
35:BA:2092:U:C4	35:BA:2226:C:OP2	2.74	0.41
3:CC:117:ALA:C	3:CC:119:ARG:N	2.74	0.41
2:AB:80:ILE:HG21	2:AB:211:ILE:O	2.21	0.41
33:D8:56:GLU:O	33:D8:59:LYS:N	2.36	0.41
51:BT:28:VAL:CG2	51:BT:46:GLU:HG3	2.51	0.41
52:BU:91:ASP:O	52:BU:92:ARG:C	2.56	0.41
1:AA:1306:A:H2'	1:AA:1307:U:C6	2.56	0.41
13:AM:85:GLY:O	13:AM:86:CYS:SG	2.79	0.41
50:DS:59:LYS:HB3	50:DS:65:VAL:HG22	2.01	0.41
29:B4:10:VAL:CG1	29:B4:11:PRO:HD2	2.50	0.41
31:D6:12:GLU:HG2	31:D6:23:THR:CG2	2.37	0.41
27:D2:65:ASN:C	27:D2:67:LYS:N	2.73	0.41
42:DH:72:ILE:O	42:DH:75:ALA:HB3	2.20	0.41
40:DF:40:GLN:NE2	40:DF:184:TYR:HB3	2.35	0.41
19:CS:9:VAL:O	19:CS:11:VAL:N	2.53	0.41
52:DU:31:SER:C	52:DU:33:ARG:N	2.73	0.41
8:AH:21:LYS:O	8:AH:65:TYR:OH	2.37	0.41
57:BZ:104:PHE:HA	57:BZ:141:VAL:HG21	2.03	0.41
41:BG:66:GLN:HB2	41:BG:92:VAL:HG21	2.02	0.41
1:CA:736:C:C2	1:CA:737:A:N7	2.88	0.41
27:D2:12:GLU:HA	27:D2:15:LYS:HE2	2.03	0.41
5:CE:144:THR:H	5:CE:147:ASP:HB2	1.86	0.41
10:CJ:92:THR:HG23	10:CJ:93:GLY:N	2.35	0.41
1:CA:586:C:H1'	1:CA:878:G:O2'	2.20	0.41
1:CA:1130:A:C2	1:CA:1146:A:H1'	2.56	0.41
30:D5:51:TYR:CD2	30:D5:52:TYR:HB2	2.56	0.41
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	2.03	0.41
5:AE:139:LEU:HD23	5:AE:142:LEU:HD11	2.02	0.41
13:CM:68:GLY:N	13:CM:71:ARG:HB3	2.36	0.41
9:AI:55:ALA:HA	9:AI:58:HIS:CD2	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BX:12:VAL:HG13	55:BX:27:THR:O	2.20	0.41
38:DD:268:ARG:CB	38:DD:268:ARG:HH11	2.23	0.41
4:AD:96:LEU:N	4:AD:96:LEU:CD1	2.84	0.41
45:DN:62:VAL:HG11	45:DN:67:LEU:CD2	2.45	0.41
35:BA:154(A):C:H3'	35:BA:155:U:H4'	2.02	0.41
35:BA:158:U:C2'	35:BA:171:G:O5'	2.68	0.41
37:BC:36:ALA:HB3	37:BC:40:GLU:HG2	2.03	0.41
35:BA:2124:G:H1'	37:BC:43:GLU:OE1	2.19	0.41
41:DG:34:LEU:CD1	41:DG:172:LEU:HD11	2.50	0.41
19:AS:53:ASN:HD22	19:AS:58:VAL:CG1	2.33	0.41
13:CM:13:LYS:HA	13:CM:44:ARG:NH1	2.23	0.41
37:DC:41:THR:HB	37:DC:218:THR:OG1	2.20	0.41
1:AA:540:G:H2'	1:AA:541:G:O4'	2.21	0.41
35:BA:272(J):C:N3	35:BA:363:G:O6	2.54	0.41
1:AA:1060:C:O2'	1:AA:1061:G:H5'	2.19	0.41
57:BZ:82:ARG:NH1	57:BZ:83:PRO:O	2.54	0.41
1:CA:1330:U:C5	1:CA:1331:G:C5	3.08	0.41
56:BY:100:ALA:O	56:BY:101:LYS:CB	2.68	0.41
4:AD:78:LEU:O	4:AD:79:PHE:C	2.58	0.41
4:AD:79:PHE:O	4:AD:82:ALA:HB3	2.21	0.41
1:AA:832:C:O2'	1:AA:833:U:P	2.78	0.41
1:AA:824:C:H4'	8:AH:1:MET:N	2.33	0.41
26:B1:76:ARG:NE	35:BA:271(R):G:OP1	2.54	0.41
11:CK:126:ARG:CB	11:CK:126:ARG:HH11	2.30	0.41
11:AK:106:LYS:O	11:AK:107:SER:HB3	2.21	0.41
35:BA:1178:C:H2'	35:BA:1179:C:C6	2.56	0.41
41:BG:16:ARG:N	41:BG:17:PRO:HD2	2.36	0.41
1:AA:1015:A:H1'	1:AA:1218:C:O2'	2.21	0.41
6:AF:28:ARG:O	6:AF:29:ALA:C	2.58	0.41
49:DR:72:ASP:OD2	49:DR:74:LYS:HB3	2.20	0.41
2:AB:135:GLN:O	2:AB:139:LYS:HB2	2.21	0.41
1:AA:763:G:O2'	1:AA:764:C:H5'	2.20	0.41
1:CA:7:G:H2'	5:CE:119:LEU:HD22	2.02	0.41
57:DZ:51:ALA:O	57:DZ:52:SER:HB3	2.21	0.41
1:AA:1498:U:O2'	1:AA:1499:A:P	2.79	0.41
3:AC:67:THR:HG22	3:AC:69:HIS:CD2	2.56	0.41
35:BA:314:A:H2'	35:BA:315:G:H8	1.84	0.41
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.86	0.41
35:BA:2030:A:H4'	35:BA:2031:A:H8	1.85	0.41
43:DI:9:LEU:H	43:DI:13:GLY:CA	2.34	0.41
43:DI:9:LEU:H	43:DI:13:GLY:HA2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BS:83:LYS:O	50:BS:105:ALA:N	2.48	0.41
35:BA:845:G:O2'	35:BA:846:C:H5	2.04	0.41
38:BD:270:ILE:C	38:BD:271:ILE:HG12	2.41	0.41
42:BH:20:ALA:CB	42:BH:23:ARG:HB2	2.51	0.41
39:BE:38:THR:C	39:BE:40:GLU:N	2.73	0.41
35:BA:2869:G:H2'	35:BA:2870:C:O4'	2.20	0.41
35:DA:848:G:H5'	35:DA:848:G:C8	2.55	0.41
39:BE:105:THR:HG23	39:BE:166:THR:OG1	2.19	0.41
12:AL:119:LYS:O	12:AL:120:TYR:CB	2.68	0.41
36:BB:112:U:H2'	36:BB:113:G:C8	2.55	0.41
22:AV:36:AG9:NH2	22:AV:36:AG9:H2G	2.35	0.41
54:BW:47:VAL:CA	54:BW:50:VAL:HG12	2.50	0.41
44:DJ:88:UNK:C	44:DJ:90:UNK:H	2.33	0.41
35:DA:2647:U:H2'	35:DA:2648:C:C6	2.56	0.41
40:BF:160:ASN:C	40:BF:162:LEU:H	2.23	0.41
1:CA:109:A:C6	1:CA:326:G:C6	3.09	0.41
1:AA:26:A:N6	1:AA:558:G:H1'	2.35	0.41
5:CE:18:ARG:HH22	5:CE:25:ARG:HD2	1.86	0.41
35:BA:866:A:H2	35:BA:867:C:C4	2.38	0.41
35:BA:118:A:H1'	35:BA:178:G:O4'	2.20	0.41
35:BA:773:U:H4'	38:BD:47:GLY:CA	2.50	0.41
42:DH:119:GLU:CG	42:DH:120:GLY:N	2.83	0.41
3:CC:129:ALA:HB3	3:CC:132:ARG:HB3	2.02	0.41
38:DD:20:ASP:OD1	38:DD:20:ASP:C	2.58	0.41
1:AA:668:G:O2'	1:AA:669:U:H5'	2.21	0.41
35:DA:2052:G:O4'	39:DE:142:GLY:HA3	2.20	0.41
4:CD:52:SER:N	4:CD:55:ALA:HB3	2.35	0.41
38:BD:133:LEU:HD13	38:BD:173:VAL:HG11	2.03	0.41
35:DA:1409:C:H2'	35:DA:1410:G:C8	2.56	0.41
1:CA:1080:A:H5''	5:CE:16:THR:HG21	2.02	0.41
1:CA:46:G:O2'	1:CA:365:U:H1'	2.20	0.41
1:CA:1030:C:H2'	1:CA:1030(A):G:H5'	2.03	0.41
4:AD:109:GLY:O	4:AD:111:ALA:N	2.54	0.41
18:CR:68:LYS:NZ	18:CR:71:LYS:NZ	2.69	0.41
35:BA:2629:A:N3	35:BA:2629:A:H2'	2.35	0.41
22:CY:34:C:H2'	22:CY:34:C:O2	2.21	0.41
8:AH:84:ARG:HH11	8:AH:84:ARG:HG2	1.85	0.41
35:BA:2309:A:N3	35:BA:2309:A:H2'	2.35	0.41
6:CF:98:LEU:HD12	6:CF:98:LEU:N	2.34	0.41
35:BA:143(A):C:H4'	55:BX:38:GLU:OE2	2.21	0.41
22:CY:4:C:C2	22:CY:5:C:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CY:49:G:C2'	22:CY:50:C:H5'	2.50	0.41
23:AW:3:G:C4	23:AW:4:C:C5	3.08	0.41
22:AY:28:G:N2	22:AY:29:A:C4	2.89	0.41
22:AY:5:C:O2	22:AY:70:G:C2	2.74	0.41
22:AV:4:C:C2	22:AV:5:C:C4	3.08	0.41
35:BA:2300:G:H1	35:BA:2316:C:N4	2.14	0.41
22:CV:51:G:OP1	22:CV:51:G:H3'	2.20	0.41
35:BA:2612:C:C5	35:BA:2613:U:H5	2.38	0.41
35:DA:2393:A:C2'	35:DA:2394:C:H5'	2.51	0.41
1:AA:962:C:H2'	1:AA:963:G:C8	2.54	0.41
43:BI:113:ARG:O	43:BI:114:LEU:HD23	2.20	0.41
12:AL:58:VAL:CG1	12:AL:59:ARG:N	2.84	0.41
35:BA:545:C:C3'	35:BA:547:A:C5'	2.96	0.41
42:DH:43:VAL:HG23	42:DH:43:VAL:O	2.20	0.41
45:DN:128:HIS:HE1	45:DN:134:ARG:NH1	2.18	0.41
35:DA:993:G:O2'	53:DV:89:GLN:HG3	2.20	0.41
52:DU:95:LEU:C	52:DU:97:ASP:N	2.66	0.41
47:DP:101:VAL:CB	47:DP:107:LYS:HA	2.36	0.41
45:BN:2:LYS:HZ3	53:BV:12:TYR:HA	1.84	0.41
1:AA:975:A:C4'	1:AA:976:G:H5''	2.31	0.41
39:DE:78:LEU:C	39:DE:79:ARG:HD2	2.41	0.41
13:CM:7:VAL:HG12	13:CM:7:VAL:O	2.21	0.41
41:DG:60:LEU:HD12	41:DG:68:PRO:HD3	2.03	0.41
36:DB:81:G:H2'	36:DB:82:G:H5'	2.02	0.41
39:BE:59:VAL:CG1	39:BE:60:ASN:N	2.84	0.41
1:CA:1288:A:O4'	1:CA:1353:G:H4'	2.20	0.41
47:DP:85:LEU:HD12	47:DP:120:ALA:CA	2.51	0.41
1:CA:1229:A:H2'	1:CA:1230:C:C6	2.56	0.41
1:CA:1400:C:N4	22:CV:36:AG9:C6	2.82	0.41
36:BB:50:G:OP2	50:BS:62:LYS:CG	2.67	0.41
50:BS:59:LYS:HB3	50:BS:65:VAL:HG22	2.03	0.41
1:AA:268:C:H2'	1:AA:269:C:H6	1.86	0.41
38:BD:33:LEU:C	38:BD:33:LEU:HD23	2.41	0.41
29:B4:26:SER:O	29:B4:27:THR:HB	2.20	0.41
15:CO:39:LEU:O	15:CO:39:LEU:HD13	2.21	0.41
35:BA:307:G:H21	35:BA:330:A:H62	1.67	0.41
3:CC:40:ARG:HG2	3:CC:55:VAL:CB	2.51	0.41
3:CC:40:ARG:HH11	3:CC:40:ARG:HG3	1.85	0.41
48:DQ:32:TYR:O	48:DQ:106:VAL:HG22	2.21	0.41
2:CB:12:GLU:O	2:CB:14:GLY:N	2.54	0.41
26:B1:51:VAL:CG2	26:B1:53:VAL:HG23	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:621:A:H2'	1:CA:622:A:C8	2.56	0.41
9:CI:53:VAL:HG23	9:CI:55:ALA:N	2.36	0.41
17:CQ:4:LYS:HG3	17:CQ:5:VAL:N	2.36	0.41
3:AC:70:VAL:HG12	3:AC:72:LYS:N	2.24	0.41
27:D2:2:LYS:N	35:DA:98:G:OP1	2.54	0.41
4:AD:132:ARG:HD2	4:AD:133:VAL:N	2.36	0.41
4:AD:134:ASP:O	4:AD:136:PRO:HD3	2.21	0.41
38:DD:211:ARG:HA	38:DD:214:TRP:CD2	2.56	0.41
50:BS:13:ARG:O	50:BS:14:VAL:C	2.58	0.41
35:BA:8:A:H2	35:BA:2896:C:O2	2.03	0.41
38:DD:145:VAL:HG11	38:DD:175:LEU:CD1	2.50	0.41
2:CB:97:TRP:CH2	2:CB:176:GLU:OE2	2.73	0.41
1:CA:338:A:C6	1:CA:339:C:C4	3.08	0.41
45:BN:42:TRP:CE3	45:BN:48:MET:HE1	2.56	0.41
2:AB:74:LYS:HD2	2:AB:166:ASP:CB	2.50	0.41
35:BA:2405:G:H1'	35:BA:2412:A:N6	2.36	0.41
16:AP:68:ASP:O	16:AP:70:ALA:N	2.53	0.41
1:CA:433:C:H2'	1:CA:434:U:H6	1.85	0.41
4:AD:57:ARG:NH2	5:AE:107:ARG:NH1	2.69	0.41
22:AV:33:G:C4	22:AV:34:C:C5	3.08	0.41
1:AA:625:G:O2'	1:AA:626:U:H5'	2.20	0.41
20:AT:16:HIS:O	20:AT:19:SER:N	2.52	0.41
35:BA:1379:A:O4'	35:BA:1379:A:N3	2.53	0.41
2:AB:41:ILE:HD12	2:AB:41:ILE:H	1.86	0.41
4:CD:76:ARG:O	4:CD:77:ASN:C	2.59	0.41
1:AA:443:C:H2'	1:AA:444:C:H6	1.85	0.41
49:BR:96:ARG:HB2	49:BR:117:VAL:CG2	2.51	0.41
54:DW:18:ARG:HG2	54:DW:76:VAL:CG1	2.50	0.41
1:CA:630:G:C2'	1:CA:631:G:C5'	2.97	0.41
13:AM:111:LYS:O	13:AM:113:PRO:HD2	2.21	0.41
28:D3:42:ALA:C	28:D3:44:ARG:N	2.73	0.41
38:BD:45:ASN:HD22	38:BD:50:THR:HG21	1.86	0.41
43:DI:29:TYR:CE1	43:DI:33:ARG:NE	2.60	0.41
35:DA:471:A:H2'	35:DA:472:A:O4'	2.21	0.41
43:DI:10:GLU:CD	43:DI:11:ASN:N	2.74	0.41
31:D6:53:LYS:HD2	31:D6:53:LYS:HA	1.81	0.41
13:CM:63:THR:HG22	13:CM:64:TRP:N	2.35	0.41
43:BI:10:GLU:CD	43:BI:11:ASN:N	2.74	0.41
1:CA:931:C:H2'	1:CA:932:C:H6	1.86	0.41
35:DA:1882:C:H2'	35:DA:1882:C:O2	2.21	0.41
35:DA:2572:A:N7	39:DE:144:ARG:HD2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:394:G:H2'	1:CA:395:C:H6	1.86	0.41
19:CS:69:HIS:HB2	19:CS:74:PHE:CE2	2.52	0.41
3:CC:127:ARG:HD2	3:CC:127:ARG:N	2.34	0.41
26:B1:19:GLN:CB	26:B1:35:THR:HG23	2.47	0.41
46:BO:113:LYS:O	46:BO:117:LEU:HB2	2.21	0.41
35:BA:2526:G:H5'	35:BA:2742:C:O2'	2.21	0.41
35:DA:2720:U:C2	35:DA:2721:A:C8	3.09	0.41
1:AA:227:G:H2'	1:AA:228:A:H8	1.83	0.41
25:B0:73:GLY:O	25:B0:75:LEU:N	2.54	0.41
1:CA:229:U:H2'	1:CA:230:G:O4'	2.21	0.41
42:DH:94:TYR:CD2	42:DH:107:VAL:HB	2.56	0.41
35:DA:80:G:C2'	35:DA:81:G:H5'	2.51	0.41
32:D7:47:ARG:HH11	55:DX:60:ARG:NH2	2.19	0.41
35:DA:1311:G:C2	55:DX:60:ARG:NH1	2.87	0.41
35:DA:654(M):C:C2	35:DA:654(O):G:N2	2.88	0.41
20:CT:36:LEU:HD12	20:CT:55:ILE:HD12	2.03	0.41
3:CC:118:GLN:HA	3:CC:187:ALA:CB	2.49	0.41
26:B1:83:GLU:O	26:B1:84:GLY:C	2.58	0.41
35:DA:191:A:O2'	35:DA:192:C:H5'	2.20	0.41
31:D6:28:ARG:CB	31:D6:28:ARG:HH11	2.33	0.41
1:CA:656:C:H2'	1:CA:657:G:C8	2.55	0.41
35:DA:392:C:H5''	35:DA:409:C:H5''	2.02	0.41
40:BF:70:THR:HG22	40:BF:72:ARG:HG2	2.01	0.41
35:DA:2070:G:H2'	35:DA:2071:A:C8	2.56	0.41
35:DA:11:G:N2	35:DA:2628:C:OP1	2.53	0.41
53:BV:56:SER:O	53:BV:100:ARG:O	2.39	0.41
1:CA:431:A:O2'	1:CA:432:A:H5'	2.20	0.41
6:AF:89:MET:SD	18:AR:76:LEU:CD2	3.09	0.41
35:DA:807:U:O2'	35:DA:808:G:H5'	2.20	0.41
1:CA:743:U:O2'	1:CA:744:C:H5'	2.20	0.41
13:CM:27:LYS:HE3	13:CM:31:LYS:NZ	2.36	0.41
36:DB:35:U:O2'	36:DB:36:C:H5'	2.21	0.41
18:AR:87:ARG:NH1	18:AR:87:ARG:HB3	2.35	0.41
30:D5:8:LYS:HB2	35:DA:2054:A:C2	2.55	0.41
35:DA:2428:G:H5''	35:DA:2429:G:O5'	2.21	0.41
35:DA:1773:A:C2'	35:DA:1774:C:H5'	2.50	0.41
35:DA:1773:A:H2'	35:DA:1774:C:H5'	2.02	0.41
7:CG:77:SER:HB3	7:CG:86:GLN:HB3	2.03	0.41
23:CW:40:A:N6	23:CW:42:C:C2	2.88	0.41
39:DE:179:GLU:HB3	39:DE:181:LEU:HD22	2.02	0.41
22:AV:3:G:O6	22:AV:4:C:N4	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:20:G:C4	22:CV:59:G:N3	2.89	0.41
22:CV:26:G:O2'	35:DA:1923:U:H5''	2.20	0.41
22:CV:59:G:C2'	22:CV:60:A:H5'	2.50	0.41
33:B8:56:GLU:HA	33:B8:59:LYS:HZ1	1.82	0.41
35:BA:2417:C:C4	35:BA:2418:A:N7	2.88	0.41
47:BP:47:ASP:CB	47:BP:48:PRO:HA	2.47	0.41
19:AS:63:THR:HG23	19:AS:65:ASN:OD1	2.21	0.41
56:DY:39:VAL:CG1	56:DY:40:GLU:N	2.82	0.41
56:DY:97:ARG:HA	56:DY:97:ARG:HD2	1.93	0.41
1:AA:1407:C:O5'	1:AA:1407:C:H6	2.03	0.41
12:AL:35:GLY:O	12:AL:83:VAL:N	2.53	0.41
45:BN:23:LEU:HB2	45:BN:60:ILE:HG21	2.03	0.41
35:BA:146:G:O2'	35:BA:147:U:H5'	2.20	0.41
33:D8:7:HIS:HB2	33:D8:59:LYS:HB3	2.02	0.41
53:BV:18:LEU:HD12	53:BV:18:LEU:N	2.35	0.41
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.85	0.41
39:DE:52:LEU:O	39:DE:74:PRO:CA	2.66	0.41
16:AP:56:ALA:HB1	16:AP:74:LEU:CD2	2.51	0.41
41:DG:36:LYS:HE2	41:DG:95:ARG:HH22	1.85	0.41
1:CA:728:A:N6	15:CO:54:ARG:HG3	2.36	0.41
56:BY:32:PRO:O	56:BY:35:TYR:N	2.50	0.41
43:DI:74:ASN:ND2	43:DI:75:LEU:H	2.18	0.41
26:D1:64:ALA:HA	26:D1:67:ILE:HG13	2.01	0.41
31:D6:54:ILE:O	31:D6:54:ILE:HD12	2.21	0.41
40:BF:32:LEU:HD11	40:BF:105:VAL:HG13	2.02	0.41
17:AQ:62:SER:OG	17:AQ:72:ARG:HG3	2.21	0.41
57:BZ:120:ILE:HB	57:BZ:171:ILE:O	2.21	0.41
13:CM:74:VAL:O	13:CM:78:ILE:HG13	2.20	0.41
14:CN:40:CYS:O	14:CN:44:LEU:HB3	2.21	0.41
1:CA:266:G:O2'	1:CA:267:C:OP2	2.32	0.41
9:AI:99:LEU:HD12	9:AI:101:PHE:CE1	2.56	0.41
1:AA:152:A:N6	1:AA:170:U:C2	2.89	0.41
54:BW:24:ILE:O	54:BW:25:ARG:C	2.59	0.41
35:BA:1541:G:H1'	35:BA:1542:A:C6	2.55	0.41
4:AD:100:ARG:NH2	4:AD:136:PRO:O	2.53	0.41
39:DE:64:LYS:O	39:DE:73:GLU:OE2	2.38	0.41
35:BA:154(A):C:O2	35:BA:154(A):C:H2'	2.20	0.41
1:AA:322:C:O2'	1:AA:323:U:H5'	2.20	0.41
1:CA:1514:C:H2'	1:CA:1515:C:H6	1.85	0.41
38:BD:118:VAL:CG2	38:BD:119:ALA:H	2.24	0.41
35:DA:2472:G:C2'	35:DA:2475:C:H42	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2532:G:O2'	35:BA:2657:A:N6	2.51	0.41
1:CA:1060:C:C4	3:CC:2:GLY:HA2	2.56	0.41
42:DH:83:TYR:CD2	42:DH:134:SER:HB3	2.56	0.41
35:BA:631:A:O2'	47:BP:67:MET:HB3	2.20	0.41
35:DA:1014:U:C2'	35:DA:1015:G:C5'	2.89	0.41
47:DP:66:GLY:O	47:DP:67:MET:HB3	2.21	0.41
1:AA:1330:U:C5	1:AA:1331:G:C5	3.09	0.41
1:AA:1305:G:C5'	21:AU:4:GLY:HA3	2.47	0.41
1:CA:553:A:H2'	1:CA:554:C:C6	2.56	0.41
2:CB:74:LYS:HD2	2:CB:166:ASP:HB2	2.03	0.41
1:CA:1066:C:H3'	1:CA:1067:A:C8	2.56	0.41
57:BZ:95:PRO:HA	57:BZ:128:VAL:O	2.21	0.41
1:CA:401:C:H3'	1:CA:401:C:C6	2.56	0.41
4:CD:76:ARG:HH11	4:CD:76:ARG:HG2	1.85	0.41
1:AA:1003:G:N2	1:AA:1039:C:N4	2.69	0.41
48:BQ:134:ARG:NH2	57:BZ:122:ARG:NE	2.69	0.41
25:D0:49:LYS:O	25:D0:50:ASN:HB2	2.21	0.41
13:AM:15:VAL:O	13:AM:18:ALA:N	2.54	0.41
35:BA:843:G:C2'	35:BA:844:C:H5'	2.51	0.41
49:BR:13:HIS:O	49:BR:13:HIS:ND1	2.54	0.41
56:DY:95:LYS:CD	56:DY:101:LYS:H	2.33	0.41
1:AA:420:U:C5	1:AA:422:C:N3	2.88	0.41
41:BG:178:PHE:HA	41:BG:179:PRO:HD2	1.92	0.41
1:CA:1168:A:H2'	1:CA:1169:A:C8	2.56	0.41
5:AE:135:THR:O	5:AE:136:MET:C	2.59	0.41
20:CT:13:LEU:HD12	20:CT:13:LEU:N	2.35	0.41
35:BA:1578:U:H2'	35:BA:1579:A:C5'	2.50	0.41
10:AJ:29:ARG:HH11	10:AJ:29:ARG:HG2	1.85	0.41
7:CG:146:GLU:O	7:CG:149:ARG:CB	2.69	0.41
35:BA:1882:C:H3'	35:BA:1883:G:H8	1.86	0.41
1:CA:730:G:C5	1:CA:731:G:H1'	2.56	0.41
42:BH:61:HIS:O	42:BH:64:LEU:N	2.52	0.41
40:DF:160:ASN:OD1	40:DF:163:VAL:HG23	2.21	0.41
8:AH:44:PHE:HA	8:AH:79:VAL:CG1	2.50	0.41
35:BA:128:C:O2'	35:BA:129:C:O5'	2.36	0.41
1:CA:669:U:O2'	1:CA:670:G:H5'	2.20	0.41
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.83	0.41
1:CA:751:U:OP1	15:CO:18:PHE:HZ	2.04	0.41
35:BA:902:C:H2'	35:BA:903:C:H6	1.83	0.41
25:D0:74:ARG:HH11	25:D0:74:ARG:CG	2.33	0.41
35:BA:861:A:C2	35:BA:917:A:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:677:U:H3	1:CA:714:G:N2	2.18	0.41
35:BA:2052:G:N3	39:BE:149:ARG:HA	2.36	0.41
27:B2:38:GLN:HA	27:B2:41:ILE:HG12	2.01	0.41
39:DE:137:HIS:HB3	39:DE:138:PRO:HD2	2.03	0.41
42:BH:89:ILE:O	42:BH:89:ILE:CG1	2.68	0.41
35:DA:2553:G:H3'	35:DA:2554:U:H5''	2.01	0.41
35:BA:1053:C:O2	35:BA:1053:C:H2'	2.20	0.41
35:DA:1843:C:H5'	38:DD:253:GLN:OE1	2.21	0.41
35:DA:1401:G:H2'	35:DA:1402:C:C6	2.56	0.41
37:BC:202:PRO:HB2	37:BC:205:ALA:HB2	2.03	0.41
35:DA:2689:U:H5''	35:DA:2690:C:H5'	2.01	0.41
7:AG:128:ALA:C	7:AG:130:GLY:H	2.24	0.41
4:AD:180:GLY:O	4:AD:181:MET:HB2	2.21	0.41
1:CA:1069:C:O2'	1:CA:1192:C:H1'	2.20	0.41
38:BD:61:LEU:HA	38:BD:61:LEU:HD12	1.83	0.41
4:AD:166:LYS:HB2	4:AD:166:LYS:HE3	1.89	0.41
41:BG:18:GLU:OE1	41:BG:18:GLU:HA	2.21	0.41
14:CN:34:TYR:O	14:CN:36:PHE:N	2.54	0.41
35:DA:957:A:C6	35:DA:2459:A:C8	3.09	0.41
22:CY:3:G:N2	22:CY:73:C:C2	2.89	0.41
23:AW:70:G:C4	23:AW:71:G:N7	2.89	0.41
22:AY:49:G:O4'	22:AY:49:G:OP1	2.38	0.41
48:BQ:59:ARG:O	48:BQ:60:ARG:HB2	2.20	0.41
22:AY:27:C:C5	22:AY:28:G:N7	2.89	0.41
22:AY:28:G:C6	22:AY:29:A:C6	3.09	0.41
22:AY:71:G:C2	22:AY:72:C:C6	3.09	0.41
22:AY:7:U:H3'	22:AY:8:U:C5'	2.51	0.41
23:CW:72:C:C2'	23:CW:73:C:O4'	2.65	0.41
23:CW:6:C:C2	23:CW:7:U:C5	3.09	0.41
23:CW:45:U:C5	23:CW:46:U:C4	3.09	0.41
1:CA:429:U:H1'	1:CA:430:A:H5''	2.02	0.41
22:AV:31:C:C2	22:AV:32:G:C8	3.09	0.41
22:AV:54:G:C6	22:AV:65:G:C6	3.08	0.41
41:BG:76:SER:HA	41:BG:83:ARG:HB3	2.02	0.41
4:AD:30:LYS:HB3	4:AD:35:ARG:CZ	2.51	0.41
4:AD:9:CYS:SG	4:AD:31:CYS:C	2.99	0.41
22:CV:4:C:C2	22:CV:5:C:C6	3.09	0.41
51:DT:66:VAL:HA	51:DT:71:GLY:HA2	2.02	0.41
51:DT:65:LYS:HZ1	51:DT:66:VAL:H	1.67	0.41
51:BT:3:ARG:NH1	51:BT:3:ARG:HG2	2.36	0.41
23:AW:11:C:H3'	23:AW:12:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:21:LYS:HD3	33:B8:48:PHE:CE2	2.55	0.41
47:DP:33:ARG:O	47:DP:34:GLY:C	2.58	0.41
47:DP:41:ARG:NE	47:DP:41:ARG:CA	2.84	0.41
47:DP:39:LYS:HA	47:DP:39:LYS:HD3	1.51	0.41
56:BY:7:VAL:HB	56:BY:8:LYS:CE	2.50	0.41
43:DI:107:VAL:O	43:DI:109:ILE:CD1	2.69	0.41
1:AA:1206:G:C6	1:AA:1207:G:C5	3.09	0.41
1:AA:963:G:H1	1:AA:972:C:H42	1.69	0.41
43:BI:109:ILE:HG21	43:BI:114:LEU:HD11	2.02	0.41
43:BI:119:PRO:O	43:BI:120:ILE:C	2.59	0.41
1:AA:971:G:H22	1:AA:1363(A):A:P	2.44	0.41
12:CL:85:ILE:HA	12:CL:85:ILE:HD12	1.85	0.41
12:CL:86:ARG:N	12:CL:99:HIS:O	2.54	0.41
30:D5:3:LYS:CE	35:DA:2613:U:H2'	2.50	0.41
35:BA:1824:G:OP1	38:BD:52:ARG:NH1	2.52	0.41
12:AL:26:ALA:C	12:AL:27:LEU:HD22	2.41	0.41
12:AL:60:LEU:C	12:AL:62:SER:H	2.23	0.41
12:AL:40:VAL:CG1	12:AL:77:LEU:HB3	2.51	0.41
10:AJ:78:ASN:HB2	10:AJ:81:THR:OG1	2.20	0.41
45:BN:58:ASP:O	45:BN:59:LYS:CB	2.69	0.41
10:CJ:32:ALA:H	10:CJ:78:ASN:HD22	1.69	0.41
10:CJ:4:ILE:CG1	10:CJ:74:ILE:HD11	2.51	0.41
53:DV:39:LEU:CD1	53:DV:47:VAL:HG11	2.49	0.41
3:CC:71:ALA:HB3	3:CC:109:PRO:HB3	2.03	0.41
3:CC:106:VAL:C	3:CC:108:ASN:H	2.22	0.41
35:BA:146:G:C5'	35:BA:146:G:H8	2.34	0.41
35:BA:1494:A:H2'	35:BA:1495:A:C5'	2.32	0.41
39:DE:2:LYS:HD3	39:DE:95:ILE:O	2.21	0.41
22:CV:73:C:C4	22:CV:74:C:C5	3.08	0.41
35:DA:2362:G:O2'	35:DA:2363:C:H5'	2.21	0.41
51:BT:19:LEU:HD22	51:BT:85:LYS:HD3	2.03	0.41
53:BV:19:LYS:CA	53:BV:19:LYS:HE2	2.50	0.41
53:BV:24:LYS:HA	53:BV:92:THR:HG23	2.03	0.41
35:BA:2848:G:H3'	51:BT:95:ARG:O	2.21	0.41
51:BT:32:TYR:CG	51:BT:81:PRO:CB	3.04	0.41
57:DZ:19:ARG:NH1	57:DZ:84:GLU:HA	2.22	0.41
47:DP:106:LEU:HB3	47:DP:107:LYS:H	1.67	0.41
39:DE:4:ILE:HG12	39:DE:5:LEU:N	2.36	0.41
41:DG:64:THR:OG1	41:DG:94:LEU:HD21	2.21	0.41
39:BE:60:ASN:OD1	39:BE:62:PRO:HD2	2.21	0.41
39:BE:55:ASN:ND2	39:BE:75:VAL:HG22	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:111:ARG:HG2	49:BR:2:ARG:NH1	2.36	0.41
10:CJ:51:ARG:HG3	10:CJ:60:ARG:C	2.40	0.41
1:CA:1306:A:H2'	1:CA:1307:U:C6	2.56	0.41
41:DG:166:ASP:O	41:DG:170:ARG:N	2.54	0.41
31:B6:39:TYR:CE1	35:BA:2347:C:OP1	2.74	0.41
35:DA:1536:C:O2'	35:DA:1537:G:H5'	2.20	0.41
57:DZ:150:LEU:O	57:DZ:171:ILE:CD1	2.68	0.41
57:DZ:151:HIS:CB	57:DZ:170:THR:HA	2.44	0.41
39:BE:199:ARG:NH1	39:BE:199:ARG:HB2	2.36	0.41
53:DV:14:VAL:HB	53:DV:96:ILE:HG13	2.02	0.41
53:DV:16:PRO:O	53:DV:96:ILE:O	2.39	0.41
2:CB:54:THR:O	2:CB:58:ILE:HG13	2.20	0.41
35:DA:2417:C:C4	35:DA:2418:A:N7	2.89	0.41
8:CH:21:LYS:O	8:CH:65:TYR:OH	2.39	0.41
47:DP:88:LEU:N	47:DP:88:LEU:CD1	2.83	0.41
40:BF:32:LEU:O	40:BF:36:VAL:HG23	2.21	0.41
2:AB:51:LEU:O	2:AB:55:PHE:HD2	2.04	0.41
22:CV:43:G:C2	22:CV:44:A:C4	3.09	0.41
50:BS:65:VAL:O	50:BS:69:VAL:HG12	2.20	0.41
17:AQ:59:ILE:HG22	17:AQ:60:ILE:N	2.36	0.41
17:AQ:65:ILE:HD11	17:AQ:72:ARG:CG	2.51	0.41
8:AH:73:ASP:C	8:AH:75:ARG:H	2.23	0.41
57:BZ:111:VAL:HG22	57:BZ:116:VAL:CA	2.51	0.41
2:AB:67:THR:CB	2:AB:155:LEU:HD21	2.51	0.41
41:BG:61:ALA:CB	41:BG:67:LYS:HA	2.46	0.41
2:CB:102:LEU:HD23	2:CB:182:ILE:CD1	2.48	0.41
5:CE:147:ASP:HA	5:CE:150:ARG:HH11	1.85	0.41
3:CC:92:ALA:HB2	3:CC:99:VAL:HG22	2.03	0.41
3:CC:59:ARG:NH1	3:CC:97:LYS:HZ1	2.19	0.41
27:D2:48:HIS:O	27:D2:50:ILE:N	2.54	0.41
27:D2:47:ASN:C	27:D2:49:LYS:N	2.74	0.41
56:BY:52:SER:N	56:BY:53:PRO:HD2	2.35	0.41
1:AA:1129:C:OP1	1:AA:1130:A:H5''	2.20	0.41
1:CA:1142:G:C8	1:CA:1143:G:C8	3.09	0.41
26:B1:52:ARG:O	26:B1:53:VAL:O	2.39	0.41
5:AE:63:ARG:HG2	5:AE:63:ARG:HH11	1.86	0.41
4:CD:118:ARG:O	4:CD:121:VAL:N	2.54	0.41
4:AD:194:LEU:O	4:AD:195:ALA:HB2	2.21	0.41
9:AI:53:VAL:CG2	9:AI:55:ALA:HB3	2.50	0.41
32:D7:8:ASN:ND2	32:D7:10:ARG:N	2.68	0.41
35:BA:2134:A:H61	35:BA:2157:G:C2'	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1262:A:P	54:DW:99:ARG:HH12	2.44	0.41
18:CR:50:ILE:HD12	18:CR:70:ILE:CD1	2.51	0.41
1:AA:172:A:H5'	1:AA:173:U:OP1	2.21	0.41
35:BA:2894:G:C2'	35:BA:2894:G:N3	2.80	0.41
3:CC:206:GLU:CG	3:CC:207:VAL:H	2.17	0.41
8:CH:133:LEU:HD23	8:CH:134:ILE:N	2.35	0.41
4:AD:100:ARG:HG2	4:AD:100:ARG:HH11	1.85	0.41
39:DE:59:VAL:CG1	39:DE:60:ASN:N	2.84	0.41
38:DD:263:ARG:HB2	38:DD:263:ARG:HH11	1.84	0.41
37:BC:34:ALA:CA	37:BC:40:GLU:HG3	2.51	0.41
1:CA:192:U:H2'	1:CA:193:C:H6	1.78	0.41
41:DG:34:LEU:N	41:DG:34:LEU:HD12	2.36	0.41
19:AS:70:LYS:HE3	19:AS:70:LYS:N	2.36	0.41
38:DD:27:THR:HG23	38:DD:83:GLU:HB3	2.02	0.41
39:DE:132:HIS:O	39:DE:135:HIS:CD2	2.74	0.41
43:DI:68:LEU:CG	43:DI:72:LEU:HD11	2.51	0.41
38:BD:25:THR:CG2	38:BD:26:LYS:N	2.84	0.41
38:BD:176:ARG:CG	38:BD:176:ARG:NH1	2.84	0.41
33:B8:32:LEU:HB3	33:B8:36:LYS:HZ2	1.85	0.41
39:BE:12:THR:OG1	39:BE:13:ARG:N	2.53	0.41
42:DH:50:VAL:CG1	42:DH:51:ARG:N	2.82	0.41
2:AB:74:LYS:HD2	2:AB:166:ASP:HB2	2.02	0.41
42:DH:86:GLU:HB2	42:DH:131:VAL:O	2.21	0.41
47:BP:83:VAL:O	47:BP:83:VAL:HG13	2.21	0.41
2:CB:95:GLN:NE2	2:CB:147:LYS:CE	2.79	0.41
39:DE:23:VAL:HA	39:DE:184:VAL:O	2.21	0.41
4:CD:58:LEU:HD23	4:CD:62:GLN:HG2	2.01	0.41
1:CA:1294:G:H2'	1:CA:1295:G:H8	1.86	0.41
2:CB:169:LYS:HD2	2:CB:170:GLU:OE2	2.21	0.41
35:BA:2120:G:H2'	35:BA:2121:G:H8	1.86	0.41
3:AC:143:GLU:C	3:AC:145:GLY:H	2.24	0.41
35:DA:2120:G:H2'	35:DA:2121:G:H8	1.86	0.41
35:DA:1379:A:N3	35:DA:1379:A:O4'	2.53	0.41
51:BT:77:PRO:O	51:BT:78:LEU:CB	2.68	0.41
1:CA:401:C:P	4:CD:73:ARG:HH21	2.44	0.41
4:AD:176:LEU:HD12	4:AD:177:ASP:H	1.85	0.41
1:CA:640:A:O2'	1:CA:641:U:H5'	2.20	0.41
1:AA:1296:C:H5''	1:AA:1297:C:H5	1.86	0.41
1:CA:602:A:O2'	1:CA:603:U:H5'	2.20	0.41
35:DA:2463:C:C2'	35:DA:2464:C:H5'	2.50	0.41
1:AA:605:U:H2'	1:AA:606:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:998:G:O2'	1:CA:999:C:H5'	2.21	0.41
48:DQ:10:ARG:CB	48:DQ:10:ARG:CZ	2.99	0.41
43:BI:52:ARG:HE	43:BI:52:ARG:HB2	1.75	0.41
7:CG:47:CYS:HA	7:CG:50:ILE:HG12	2.02	0.41
6:CF:8:ILE:HG22	6:CF:10:LEU:HD12	2.03	0.41
56:DY:86:ARG:NH1	56:DY:95:LYS:HZ1	2.17	0.41
50:BS:36:TYR:HD1	50:BS:36:TYR:H	1.66	0.41
7:CG:135:VAL:O	7:CG:138:LYS:N	2.54	0.41
35:DA:797:C:O2'	35:DA:798:G:H5'	2.21	0.41
1:AA:1168:A:H2'	1:AA:1169:A:C8	2.56	0.41
30:D5:43:HIS:HE1	35:DA:2884:U:OP2	2.04	0.41
38:DD:65:ILE:H	38:DD:65:ILE:CD1	2.34	0.41
35:BA:2152:G:H2'	35:BA:2153:G:H8	1.82	0.41
38:DD:65:ILE:HD11	38:DD:67:PHE:CD2	2.56	0.41
46:DO:14:THR:HG22	46:DO:95:GLY:N	2.35	0.41
1:CA:152:A:N6	1:CA:170:U:C2	2.89	0.41
40:DF:65:TRP:CZ3	40:DF:75:HIS:HD2	2.39	0.41
7:AG:13:GLN:HA	7:AG:14:PRO:HD3	1.91	0.41
35:BA:1373:A:H2'	35:BA:1374:G:O4'	2.20	0.41
13:CM:82:MET:HG2	13:CM:82:MET:O	2.20	0.41
35:DA:820:A:C2	35:DA:821:A:C4	3.09	0.41
34:B9:7:VAL:C	34:B9:8:LYS:HG3	2.41	0.41
8:AH:61:VAL:O	8:AH:63:LEU:HD22	2.20	0.41
4:CD:187:ARG:NH1	4:CD:187:ARG:HG2	2.34	0.41
28:B3:59:VAL:CG1	28:B3:60:GLU:N	2.84	0.41
1:AA:290:C:O2'	1:AA:291:C:H5'	2.21	0.41
19:CS:42:PRO:HG3	29:D4:50:VAL:HG21	2.02	0.41
45:DN:65:LYS:HD2	45:DN:69:GLN:NE2	2.35	0.41
36:BB:64:C:H2'	36:BB:65:C:C6	2.56	0.41
28:D3:3:ARG:HB2	28:D3:59:VAL:O	2.20	0.41
35:BA:2745:C:H2'	35:BA:2746:U:H6	1.83	0.41
27:D2:64:LEU:HD23	27:D2:64:LEU:O	2.20	0.41
30:B5:42:PRO:HB2	30:B5:43:HIS:HD2	1.86	0.41
35:BA:2815:C:H2'	35:BA:2816:C:C6	2.53	0.41
35:DA:218:A:C2	35:DA:235:U:H4'	2.56	0.41
35:DA:825:C:H2'	35:DA:826:U:O4'	2.20	0.41
1:CA:1264:C:H2'	1:CA:1265:G:H8	1.83	0.41
49:DR:99:LYS:HD3	49:DR:99:LYS:N	2.36	0.41
15:CO:18:PHE:O	15:CO:20:GLY:N	2.53	0.41
2:AB:224:GLN:C	2:AB:226:ARG:N	2.73	0.41
36:DB:17:C:O2'	36:DB:18:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:25:ARG:NH1	16:AP:25:ARG:HG3	2.36	0.41
35:BA:2271:G:H2'	35:BA:2272:U:H6	1.85	0.41
35:BA:654(M):C:C2	35:BA:654(O):G:N2	2.89	0.41
1:CA:741:G:H2'	1:CA:742:G:H8	1.85	0.41
1:CA:1087:G:H2'	1:CA:1088:G:H8	1.85	0.41
35:DA:2319:G:C4	35:DA:2320:A:C6	3.08	0.41
35:DA:2702:U:H4'	35:DA:2703:C:OP1	2.21	0.41
35:BA:826:U:H2'	35:BA:828:U:O4'	2.21	0.41
35:BA:825:C:H2'	35:BA:826:U:O4'	2.21	0.41
35:BA:2319:G:C5	35:BA:2320:A:N6	2.89	0.41
20:AT:81:LYS:C	20:AT:83:ARG:N	2.73	0.41
1:AA:1301:U:H3'	1:AA:1302:U:H5''	2.03	0.41
35:DA:279:C:H2'	35:DA:280:C:C6	2.56	0.41
25:B0:55:ARG:HG3	35:BA:2365:G:OP1	2.21	0.41
35:BA:2553:G:H3'	35:BA:2554:U:H5''	2.03	0.41
35:BA:360:G:H2'	35:BA:361:G:O4'	2.20	0.41
54:DW:19:LEU:HA	54:DW:19:LEU:HD12	1.85	0.41
35:DA:229:A:C5'	35:DA:230:U:H5'	2.51	0.41
35:DA:435:C:H2'	35:DA:436:C:H5'	2.03	0.41
27:B2:24:LEU:HD23	27:B2:60:LEU:HD22	2.02	0.41
25:B0:41:ARG:HD3	25:B0:41:ARG:HA	1.88	0.41
54:BW:19:LEU:HD12	54:BW:19:LEU:HA	1.83	0.41
48:DQ:118:LEU:CD1	48:DQ:131:ILE:HG23	2.51	0.41
11:CK:69:ALA:O	11:CK:73:MET:HG2	2.21	0.41
7:CG:46:ALA:O	7:CG:49:ILE:N	2.54	0.41
35:BA:821:A:H2'	35:BA:946:G:H5''	2.02	0.41
35:DA:1438:U:O2'	35:DA:1439:A:H5'	2.21	0.41
35:DA:1529:G:O2'	35:DA:1530:C:H5'	2.21	0.41
52:BU:37:GLU:O	52:BU:40:PHE:HB2	2.21	0.41
28:B3:18:ASP:O	28:B3:21:ALA:HB3	2.20	0.41
35:BA:110:G:O2'	35:BA:111:A:H5'	2.21	0.41
35:BA:2065:C:H2'	35:BA:2066:C:C6	2.56	0.41
8:CH:102:ARG:N	8:CH:102:ARG:HD3	2.36	0.41
35:DA:2704:C:H2'	35:DA:2705:A:O4'	2.21	0.41
22:CY:57:U:H5	57:DZ:181:GLU:C	2.24	0.41
23:AW:2:G:C5	23:AW:75:A:C2	3.09	0.41
23:AW:5:C:O2	23:AW:72:C:N3	2.54	0.41
22:AY:41:C:C4	22:AY:42:C:N4	2.88	0.41
22:AY:55:G:N2	57:BZ:183:LEU:CD2	2.84	0.41
48:BQ:60:ARG:HA	57:BZ:178:GLU:O	2.21	0.41
23:CW:71:G:C8	23:CW:71:G:C3'	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:44:A:H3'	23:CW:45:U:H5''	2.01	0.41
51:DT:12:SER:O	51:DT:13:ARG:NH2	2.54	0.41
14:AN:29:ARG:NH1	14:AN:31:ARG:HB2	2.34	0.41
22:AV:20:G:C5	22:AV:59:G:C2	3.09	0.41
22:AV:68:A:C6	22:AV:69:G:C5	3.08	0.41
22:CV:14:A:C6	22:CV:15:G:N3	2.89	0.41
51:DT:65:LYS:HZ1	51:DT:66:VAL:N	2.19	0.41
51:DT:85:LYS:HZ3	51:DT:85:LYS:CB	2.28	0.41
23:AW:9:A:C4	23:AW:47:G:C2	3.09	0.41
47:BP:55:ARG:CG	47:BP:56:SER:N	2.65	0.41
1:CA:147:G:N2	1:CA:176:C:C2	2.90	0.41
23:AW:58:C:H6	23:AW:58:C:O5'	2.03	0.41
43:DI:79:ILE:H	43:DI:141:LYS:HB2	1.86	0.41
12:CL:75:HIS:C	12:CL:77:LEU:N	2.73	0.41
10:AJ:22:LYS:C	10:AJ:24:VAL:N	2.73	0.41
42:DH:66:GLY:HA2	42:DH:69:ARG:HB3	2.02	0.41
45:DN:136:GLU:HG2	45:DN:137:LYS:N	2.36	0.41
45:DN:55:VAL:HG22	45:DN:126:PRO:CA	2.44	0.41
52:DU:61:TRP:CH2	52:DU:94:ASN:HB2	2.55	0.41
53:DV:46:VAL:HG22	53:DV:47:VAL:N	2.27	0.41
50:DS:36:TYR:HD1	50:DS:36:TYR:H	1.69	0.41
1:AA:1275:A:O2'	1:AA:1276:G:H5'	2.21	0.41
25:D0:11:ARG:C	25:D0:12:ASN:ND2	2.74	0.41
2:CB:84:GLU:HA	2:CB:87:ARG:HB3	2.03	0.41
4:AD:59:ARG:CA	4:AD:59:ARG:NE	2.75	0.41
1:CA:473:G:C5'	16:CP:81:ARG:HE	2.34	0.41
39:BE:55:ASN:HD22	39:BE:55:ASN:HA	1.51	0.41
39:BE:68:ALA:C	39:BE:70:ALA:H	2.15	0.41
1:AA:448:A:C5	1:AA:487:A:C2	3.08	0.41
35:BA:1983:C:H4'	35:BA:2606:C:H4'	2.02	0.41
35:DA:2723:C:O3'	49:DR:2:ARG:NH2	2.53	0.41
35:DA:2822:G:O6	49:DR:4:LEU:HD23	2.21	0.41
35:DA:484:C:P	56:DY:49:VAL:HG13	2.61	0.41
35:DA:2307:G:N3	35:DA:2307:G:H5''	2.36	0.41
45:BN:46:VAL:O	45:BN:46:VAL:HG22	2.20	0.41
47:BP:41:ARG:HH22	47:BP:45:LEU:HD12	1.84	0.41
35:BA:832:G:O2'	47:BP:52:GLU:HB3	2.20	0.41
35:BA:1203:G:H3'	35:BA:1204:A:H5''	2.03	0.41
50:BS:54:LEU:HD22	50:BS:58:LEU:N	2.34	0.41
1:AA:266:G:O2'	1:AA:267:C:OP2	2.36	0.41
29:B4:1:MET:N	36:BB:43:C:H4'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:76:VAL:CG2	3:CC:77:ILE:N	2.75	0.41
27:D2:47:ASN:ND2	35:DA:94(A):G:N3	2.67	0.41
1:CA:1129:C:N4	1:CA:1135:U:N3	2.64	0.41
1:CA:1281:U:O2'	1:CA:1282:C:P	2.78	0.41
2:AB:16:HIS:CD2	2:AB:210:SER:HA	2.56	0.41
1:CA:620:C:N1	4:CD:135:LEU:HD23	2.36	0.41
35:BA:1047:G:N3	35:BA:1111:A:N6	2.69	0.41
21:AU:23:PRO:C	21:AU:25:LYS:N	2.72	0.41
1:AA:436:C:O2'	1:AA:437:U:P	2.79	0.41
7:AG:16:LEU:HD11	9:AI:42:ARG:CG	2.50	0.41
19:CS:50:ALA:HA	19:CS:58:VAL:O	2.22	0.41
36:DB:87:G:N1	36:DB:91:C:N4	2.69	0.41
7:CG:16:LEU:HD11	9:CI:42:ARG:CG	2.51	0.41
51:DT:77:PRO:O	51:DT:78:LEU:CB	2.69	0.41
1:CA:1206:G:C6	1:CA:1207:G:C5	3.09	0.41
42:DH:9:ILE:HG23	42:DH:50:VAL:HB	2.03	0.41
1:AA:553:A:H2'	1:AA:554:C:C6	2.55	0.41
42:DH:86:GLU:HA	42:DH:132:ARG:HA	2.03	0.41
1:CA:1347:G:C2	9:CI:107:ARG:NH2	2.89	0.41
41:BG:172:LEU:C	41:BG:172:LEU:CD2	2.89	0.41
1:AA:1305:G:N2	1:AA:1331:G:N3	2.69	0.41
35:DA:626:U:C5'	35:DA:627:A:C5'	2.99	0.41
51:BT:52:ILE:HG12	51:BT:61:PHE:CB	2.51	0.41
51:DT:52:ILE:HG12	51:DT:61:PHE:HB2	2.03	0.41
8:AH:30:ARG:CB	8:AH:30:ARG:HH11	2.34	0.41
48:BQ:134:ARG:HG3	48:BQ:134:ARG:HH11	1.85	0.41
38:BD:150:LYS:HD3	38:BD:150:LYS:HA	1.85	0.41
40:DF:165:ARG:HB3	40:DF:165:ARG:NH1	2.32	0.41
45:DN:103:VAL:HG21	45:DN:120:LEU:HD11	2.02	0.41
7:AG:54:THR:HG23	7:AG:54:THR:O	2.20	0.41
1:AA:603:U:H2'	1:AA:604:G:H8	1.86	0.41
8:AH:91:ARG:NH2	17:AQ:32:TYR:HA	2.36	0.41
37:BC:47:LYS:CB	37:BC:212:SER:HB3	2.50	0.41
12:CL:117:ARG:HH11	12:CL:117:ARG:HG3	1.86	0.41
53:DV:82:ARG:HD2	53:DV:82:ARG:N	2.36	0.41
1:AA:1170:A:H2'	1:AA:1171:G:C5'	2.51	0.41
5:CE:31:LEU:HD21	5:CE:43:LEU:CD1	2.50	0.41
12:AL:117:ARG:HB3	12:AL:122:THR:O	2.21	0.41
35:DA:512:G:OP1	35:DA:1235:G:H5'	2.21	0.41
35:BA:2883:A:C5'	35:BA:2884:U:H5'	2.51	0.41
35:BA:303:U:O2'	35:BA:304:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:97:PHE:HB2	18:AR:32:ARG:NH2	2.36	0.41
1:AA:452:A:C4'	16:AP:72:ARG:NH1	2.84	0.41
1:AA:663:A:H5''	18:AR:61:LYS:HE2	2.03	0.41
1:CA:366:C:O2'	1:CA:367:U:P	2.79	0.41
27:B2:46:GLN:N	27:B2:46:GLN:CD	2.74	0.41
1:AA:229:U:H2'	1:AA:230:G:O4'	2.21	0.41
3:CC:90:GLU:HA	3:CC:93:LYS:HB3	2.03	0.41
30:B5:16:ARG:NH1	30:B5:17:ASP:OD1	2.54	0.41
35:DA:1861:G:H2'	35:DA:1862:G:H8	1.86	0.41
35:DA:1266:G:O5'	54:DW:15:ARG:NH2	2.54	0.41
35:BA:493:G:H2'	35:BA:494:G:O4'	2.21	0.41
1:CA:505:G:H2'	1:CA:506:G:C8	2.55	0.41
35:DA:1385:G:O2'	35:DA:1396:U:C6	2.68	0.41
54:DW:61:ASN:N	54:DW:61:ASN:HD22	2.18	0.41
35:DA:1678:G:H22	35:DA:1989:G:H1	1.69	0.41
35:BA:1678:G:H22	35:BA:1989:G:H1	1.68	0.41
2:CB:224:GLN:C	2:CB:226:ARG:N	2.74	0.41
1:AA:779:C:H2'	1:AA:780:A:O4'	2.21	0.41
48:BQ:54:MET:HE1	48:BQ:104:PHE:HB3	2.02	0.41
1:CA:937:A:C2	1:CA:1379:G:C6	3.09	0.41
38:DD:166:GLN:HE21	38:DD:166:GLN:N	2.19	0.41
35:DA:1498:C:O4'	35:DA:1577:C:C4'	2.69	0.41
35:BA:2881:C:H2'	35:BA:2882:A:H8	1.86	0.41
15:CO:70:LEU:HD23	15:CO:70:LEU:O	2.20	0.41
56:BY:23:ARG:O	56:BY:24:VAL:C	2.59	0.41
32:B7:15:THR:HG22	32:B7:16:HIS:ND1	2.36	0.41
45:DN:61:ARG:HA	45:DN:61:ARG:HD3	1.77	0.41
38:DD:201:HIS:O	38:DD:204:ILE:HG12	2.21	0.41
35:BA:1829:A:H2'	35:BA:1830:C:H5'	2.04	0.41
38:BD:18:VAL:HG12	38:BD:19:ALA:O	2.20	0.41
35:BA:576:U:H2'	35:BA:577:G:C8	2.56	0.41
4:AD:46:LYS:O	4:AD:48:ALA:N	2.54	0.41
30:B5:8:LYS:HB2	35:BA:2054:A:C2	2.56	0.41
35:DA:2772:C:H2'	35:DA:2773:C:H6	1.85	0.41
38:DD:183:ARG:HG2	38:DD:183:ARG:HH11	1.85	0.41
48:BQ:26:TYR:O	48:BQ:26:TYR:CD1	2.74	0.41
7:AG:6:ARG:O	7:AG:6:ARG:HG2	2.21	0.41
11:AK:25:TYR:H	11:AK:25:TYR:HD1	1.69	0.41
48:BQ:66:ILE:HG13	48:BQ:66:ILE:O	2.21	0.41
35:BA:1487:G:H2'	35:BA:1487:G:N3	2.36	0.41
35:DA:275:G:H5''	35:DA:275:G:N3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2309:A:N3	35:DA:2309:A:H2'	2.35	0.41
35:BA:614(A):U:H4'	35:BA:614(B):G:H5''	2.03	0.41
14:CN:2:ALA:O	14:CN:6:LEU:HD12	2.21	0.41
23:AW:30:U:C6	23:AW:31:C:C5	3.08	0.40
23:AW:37:A:C4	23:AW:38:U:C6	3.09	0.40
23:AW:43:G:C4	23:AW:44:A:C8	3.08	0.40
23:AW:42:C:C4	23:AW:43:G:C8	3.09	0.40
4:CD:15:GLU:HA	4:CD:15:GLU:OE1	2.21	0.40
22:AV:49:G:C2	22:AV:52:C:OP1	2.75	0.40
41:BG:43:LEU:HB2	41:BG:88:ILE:HG23	2.02	0.40
25:B0:5:LYS:HG3	48:BQ:80:GLU:O	2.21	0.40
23:AW:23:A:C6	23:AW:48:G:C4	3.08	0.40
47:BP:47:ASP:HB2	47:BP:51:PHE:HB2	2.03	0.40
56:BY:96:ILE:CG2	56:BY:97:ARG:N	2.73	0.40
42:BH:42:ARG:HH11	42:BH:42:ARG:HA	1.86	0.40
43:BI:109:ILE:N	43:BI:109:ILE:CD1	2.82	0.40
12:CL:37:CYS:N	12:CL:58:VAL:HG22	2.35	0.40
12:CL:84:LEU:C	12:CL:84:LEU:CD2	2.90	0.40
12:AL:45:PRO:HG2	12:AL:51:ALA:CA	2.51	0.40
12:AL:60:LEU:C	12:AL:62:SER:N	2.74	0.40
10:CJ:34:VAL:HG13	10:CJ:74:ILE:HA	2.03	0.40
53:DV:18:LEU:CG	53:DV:19:LYS:N	2.82	0.40
35:DA:1885:A:C8	35:DA:1885:A:H5'	2.51	0.40
35:BA:2864:G:H2'	35:BA:2865:U:O4'	2.21	0.40
1:AA:1442(B):A:C8	51:BT:118:ARG:HD3	2.56	0.40
53:BV:19:LYS:HZ3	53:BV:20:LEU:CA	2.33	0.40
43:BI:75:LEU:O	43:BI:76:THR:O	2.38	0.40
31:B6:5:VAL:HG11	35:BA:2284:C:OP1	2.21	0.40
49:BR:63:ARG:NH1	49:BR:80:PHE:CG	2.89	0.40
35:DA:2563:U:O2	35:DA:2565:A:H8	2.03	0.40
14:CN:41:ARG:HG3	14:CN:42:ILE:N	2.36	0.40
35:DA:2822:G:O5'	35:DA:2822:G:H8	2.03	0.40
56:BY:31:LEU:CB	56:BY:32:PRO:CA	2.99	0.40
1:CA:447:G:H1'	1:CA:487:A:H61	1.85	0.40
49:BR:10:LEU:HD23	49:BR:21:TYR:OH	2.20	0.40
10:AJ:51:ARG:HG3	10:AJ:60:ARG:C	2.41	0.40
3:CC:12:LEU:O	3:CC:18:TRP:CZ3	2.74	0.40
57:DZ:109:ALA:HB3	57:DZ:145:GLU:CA	2.51	0.40
50:DS:65:VAL:O	50:DS:69:VAL:HG12	2.21	0.40
22:AY:52:C:N3	22:AY:66:G:O6	2.53	0.40
39:DE:117:MET:HE3	39:DE:124:GLY:HA3	2.01	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:22:TRP:HZ2	3:CC:36:ASP:OD2	2.05	0.40
1:CA:1142:G:C2'	1:CA:1143:G:H5'	2.52	0.40
2:AB:236:TYR:HA	2:AB:239:VAL:CG2	2.46	0.40
24:CX:19:A:H61	22:CY:38:U:H3	1.69	0.40
35:DA:1050:A:N1	35:DA:1051:G:C2	2.89	0.40
1:CA:371:G:N2	1:CA:374:A:N6	2.68	0.40
52:BU:111:GLU:C	52:BU:113:ALA:N	2.73	0.40
35:BA:2104:G:C5	35:BA:2186:G:C2	3.10	0.40
35:DA:1040:C:O2'	35:DA:1041:C:P	2.80	0.40
4:AD:117:ALA:O	4:AD:118:ARG:C	2.60	0.40
39:DE:55:ASN:HA	39:DE:55:ASN:HD22	1.51	0.40
57:DZ:155:LEU:HD23	57:DZ:155:LEU:N	2.33	0.40
38:DD:11:PRO:O	38:DD:13:ARG:N	2.55	0.40
38:DD:213:ARG:HA	38:DD:213:ARG:HD2	1.83	0.40
1:CA:136:C:O3'	16:CP:65:GLN:NE2	2.54	0.40
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.85	0.40
43:BI:27:ARG:NH1	43:BI:27:ARG:CG	2.82	0.40
40:BF:178:PRO:HB3	40:BF:198:ALA:CB	2.51	0.40
37:BC:32:GLU:H	37:BC:32:GLU:HG2	1.70	0.40
1:CA:1452:C:H4'	1:CA:1456:G:O5'	2.21	0.40
42:BH:83:TYR:CD1	42:BH:83:TYR:N	2.87	0.40
42:BH:83:TYR:CG	42:BH:134:SER:HB3	2.56	0.40
35:DA:2692:C:H1'	35:DA:2847:U:O2'	2.20	0.40
1:CA:377:G:C2	1:CA:387:U:O2	2.74	0.40
18:CR:40:LEU:C	18:CR:42:ARG:N	2.75	0.40
57:BZ:129:SER:O	57:BZ:132:ASN:O	2.39	0.40
35:BA:767:U:O2'	35:BA:768:G:H5'	2.22	0.40
1:AA:1003:G:N2	1:AA:1038:C:H42	2.19	0.40
39:BE:82:ARG:HG3	39:BE:82:ARG:HH11	1.86	0.40
1:CA:158:G:H2'	1:CA:159:G:C8	2.56	0.40
48:BQ:135:ASP:CB	57:BZ:49:ARG:HH11	2.34	0.40
49:DR:82:GLU:O	49:DR:86:ARG:HD3	2.21	0.40
35:BA:814:C:O2'	35:BA:815:C:H5'	2.21	0.40
13:AM:16:ASP:N	13:AM:16:ASP:OD1	2.55	0.40
8:CH:9:MET:SD	8:CH:32:LYS:HB3	2.61	0.40
35:BA:1721:G:C2	35:BA:1739:U:OP2	2.74	0.40
38:BD:72:LYS:NZ	38:BD:72:LYS:HB3	2.36	0.40
11:AK:62:GLN:C	11:AK:64:ALA:N	2.74	0.40
2:CB:30:ARG:HH21	2:CB:194:PRO:CG	2.34	0.40
1:AA:189(B):C:O2'	1:AA:189(C):C:H5'	2.21	0.40
1:AA:189:G:C6	1:AA:189(L):G:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:217:C:O2'	1:CA:218:C:H5'	2.21	0.40
4:AD:49:ARG:O	4:AD:51:PRO:HD3	2.21	0.40
1:CA:1473:A:H2'	1:CA:1474:G:H8	1.85	0.40
7:CG:13:GLN:HA	7:CG:14:PRO:HD3	1.93	0.40
35:DA:332:A:O2'	35:DA:333:G:O5'	2.39	0.40
6:AF:99:ALA:HB3	18:AR:29:PHE:CE1	2.55	0.40
12:CL:17:LYS:HB3	12:CL:18:VAL:H	1.61	0.40
6:CF:97:PHE:HB2	18:CR:32:ARG:NH2	2.36	0.40
44:DJ:118:UNK:C	44:DJ:120:UNK:N	2.83	0.40
29:B4:2:LYS:HD3	36:BB:44:G:OP1	2.21	0.40
37:DC:27:ALA:HB1	37:DC:186:LEU:HB2	2.02	0.40
33:B8:23:VAL:HG12	33:B8:46:ARG:HB3	2.01	0.40
1:CA:1100:C:OP2	2:CB:96:ARG:HG2	2.21	0.40
27:D2:66:GLU:O	27:D2:70:GLN:NE2	2.54	0.40
29:D4:36:CYS:HB2	41:DG:108:ASN:HB3	2.01	0.40
2:CB:229:VAL:O	2:CB:230:VAL:O	2.39	0.40
38:BD:132:PRO:HG3	38:BD:190:TYR:CE1	2.56	0.40
16:CP:58:TYR:CD1	16:CP:58:TYR:C	2.94	0.40
35:DA:862:G:H2'	35:DA:863:A:O4'	2.21	0.40
46:BO:81:ASP:C	46:BO:81:ASP:OD1	2.59	0.40
1:AA:1059:C:P	3:AC:199:LYS:NZ	2.94	0.40
1:AA:779:C:H4'	11:AK:121:PRO:O	2.22	0.40
35:BA:1498:C:O4'	35:BA:1577:C:C4'	2.69	0.40
1:AA:1087:G:H2'	1:AA:1088:G:H8	1.85	0.40
35:DA:2558:C:H2'	35:DA:2559:C:H6	1.85	0.40
1:AA:285:G:O2'	1:AA:286:G:H5'	2.21	0.40
1:CA:774:G:OP1	38:DD:202:LYS:NZ	2.54	0.40
35:DA:2697:G:H2'	35:DA:2698:U:O4'	2.20	0.40
35:BA:2697:G:H2'	35:BA:2698:U:O4'	2.22	0.40
1:CA:363:A:C5	12:CL:31:PRO:HD2	2.56	0.40
35:DA:2534:A:H2'	35:DA:2535:G:O5'	2.21	0.40
1:AA:1069:C:O2'	1:AA:1192:C:H1'	2.21	0.40
38:BD:252:TRP:HE3	38:BD:253:GLN:O	2.04	0.40
35:BA:921:G:H4'	35:BA:2269:A:C5	2.57	0.40
14:AN:36:PHE:HD1	14:AN:37:PHE:N	2.19	0.40
6:AF:21:LEU:O	6:AF:24:GLU:HB3	2.21	0.40
35:BA:1956:U:H2'	35:BA:1957:C:H5'	2.03	0.40
36:DB:14:U:O2	36:DB:14:U:O4'	2.38	0.40
7:AG:46:ALA:O	7:AG:49:ILE:N	2.54	0.40
47:DP:75:ILE:HD12	47:DP:75:ILE:N	2.36	0.40
25:D0:30:VAL:O	25:D0:30:VAL:HG23	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CY:32:G:H3'	22:CY:33:G:H8	1.86	0.40
22:CY:31:C:N4	22:CY:43:G:H1	2.20	0.40
23:AW:29:A:C4	23:AW:30:U:C6	3.10	0.40
23:AW:3:G:C2'	23:AW:4:C:O5'	2.69	0.40
23:AW:71:G:O5'	23:AW:71:G:H8	2.02	0.40
22:AY:3:G:N2	22:AY:73:C:N1	2.69	0.40
22:AY:6:C:C2	22:AY:7:U:C5	3.09	0.40
22:AV:14:A:H5''	22:AV:15:G:C8	2.57	0.40
41:BG:43:LEU:HB2	41:BG:88:ILE:HG21	2.03	0.40
4:AD:15:GLU:HA	4:AD:15:GLU:OE1	2.22	0.40
35:DA:1902:C:H1'	38:DD:244:ARG:HG3	2.04	0.40
51:BT:3:ARG:CG	51:BT:3:ARG:NH1	2.82	0.40
33:B8:14:VAL:HG21	33:B8:22:VAL:CG1	2.50	0.40
35:BA:2418:A:H2'	35:BA:2419:U:C6	2.57	0.40
56:DY:81:LYS:CD	56:DY:97:ARG:O	2.66	0.40
39:BE:86:PRO:C	39:BE:88:GLY:H	2.24	0.40
42:BH:43:VAL:HG12	42:BH:52:VAL:HA	2.03	0.40
47:DP:56:SER:O	47:DP:57:THR:O	2.38	0.40
23:CW:15:G:N7	23:CW:61:A:C2	2.89	0.40
12:CL:45:PRO:HG3	12:CL:53:ARG:CD	2.52	0.40
12:AL:89:ARG:HH11	12:AL:89:ARG:CB	2.08	0.40
45:BN:136:GLU:HG2	45:BN:137:LYS:N	2.36	0.40
51:BT:127:ALA:C	51:BT:129:ARG:H	2.24	0.40
51:BT:29:ARG:HG2	51:BT:86:ILE:CG2	2.49	0.40
53:BV:38:LEU:C	53:BV:38:LEU:HD23	2.41	0.40
29:D4:25:TYR:CD2	41:DG:2:PRO:HG3	2.56	0.40
41:DG:96:ARG:HA	41:DG:99:MET:CE	2.51	0.40
39:BE:120:TRP:CD2	39:BE:155:LYS:HD3	2.56	0.40
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.86	0.40
1:CA:1289:A:H2'	1:CA:1290:G:O4'	2.21	0.40
57:DZ:144:LEU:HB3	57:DZ:174:VAL:HG21	2.03	0.40
57:DZ:121:HIS:CB	57:DZ:171:ILE:HA	2.48	0.40
39:BE:103:ASP:OD2	39:BE:201:THR:HA	2.20	0.40
31:D6:54:ILE:HG12	35:DA:2419:U:O2'	2.22	0.40
41:BG:57:ALA:O	41:BG:59:GLU:N	2.54	0.40
1:AA:1352:C:H2'	1:AA:1353:G:H8	1.86	0.40
19:CS:23:ASN:O	19:CS:25:LYS:N	2.55	0.40
1:CA:944:G:C2	1:CA:1340:A:C6	3.08	0.40
35:BA:476:G:N2	35:BA:478:A:H3'	2.36	0.40
50:BS:56:LEU:O	50:BS:57:LYS:HB2	2.21	0.40
38:DD:61:LEU:HA	38:DD:61:LEU:HD12	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:20:TYR:HD1	8:AH:65:TYR:CD2	2.39	0.40
29:B4:5:ILE:CG1	41:BG:67:LYS:HZ2	2.33	0.40
2:AB:101:MET:HB2	2:AB:102:LEU:HD12	2.03	0.40
56:DY:52:SER:N	56:DY:53:PRO:CD	2.84	0.40
2:CB:207:ALA:C	2:CB:209:ARG:H	2.24	0.40
1:AA:375:U:O2'	16:AP:28:ARG:HD2	2.21	0.40
1:CA:408:A:H5'	4:CD:116:GLN:HB2	2.02	0.40
52:BU:108:GLU:O	52:BU:111:GLU:N	2.50	0.40
3:AC:59:ARG:O	10:AJ:92:THR:O	2.40	0.40
13:AM:68:GLY:N	13:AM:71:ARG:HB3	2.36	0.40
57:DZ:56:VAL:CG1	57:DZ:57:ILE:N	2.84	0.40
40:BF:127:GLU:O	40:BF:129:PHE:N	2.53	0.40
35:BA:2893:G:H5'	35:BA:2894:G:C5'	2.42	0.40
4:AD:126:ILE:HG23	4:AD:147:ALA:O	2.21	0.40
20:CT:75:ASN:ND2	20:CT:75:ASN:H	2.14	0.40
7:AG:15:ASP:CG	7:AG:18:TYR:H	2.25	0.40
13:AM:40:ASN:HA	13:AM:41:PRO:HD3	1.78	0.40
3:CC:182:ILE:CG1	3:CC:203:PHE:HD1	2.34	0.40
23:AW:64:C:O2'	37:BC:55:SER:CB	2.69	0.40
3:AC:148:GLY:HA3	3:AC:203:PHE:HB3	2.02	0.40
1:CA:346:G:H2'	1:CA:347:G:O4'	2.21	0.40
40:BF:158:THR:C	40:BF:178:PRO:HD3	2.42	0.40
54:DW:73:ALA:HB3	54:DW:106:ILE:CG1	2.52	0.40
1:AA:192:U:H2'	1:AA:193:C:H6	1.79	0.40
1:AA:1423:G:C5'	46:BO:49:ARG:NH2	2.84	0.40
33:D8:33:ASN:HA	33:D8:36:LYS:HD3	2.02	0.40
51:BT:106:SER:HB2	51:BT:110:ILE:HD11	2.03	0.40
35:DA:2656:U:C2'	35:DA:2657:A:H5''	2.51	0.40
38:BD:211:ARG:HA	38:BD:214:TRP:CD2	2.56	0.40
1:AA:1228:C:C5	1:AA:1229:A:N7	2.90	0.40
57:BZ:24:LEU:HD12	57:BZ:41:LEU:HD23	2.03	0.40
16:CP:48:TRP:CD1	16:CP:48:TRP:N	2.87	0.40
2:CB:36:ARG:O	2:CB:37:ASN:HB3	2.21	0.40
1:AA:625:G:N2	1:AA:626:U:C2	2.90	0.40
8:AH:34:GLU:HB3	8:AH:118:VAL:HG21	2.03	0.40
1:AA:1004:A:C8	1:AA:1037:C:N3	2.89	0.40
1:CA:636:U:H2'	1:CA:637:G:H8	1.82	0.40
1:CA:333:G:O2'	1:CA:334:C:H5'	2.22	0.40
40:BF:110:LEU:O	40:BF:110:LEU:HD22	2.21	0.40
13:AM:15:VAL:O	13:AM:16:ASP:C	2.59	0.40
35:DA:1178:C:H2'	35:DA:1179:C:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:26:G:N1	35:BA:513:A:OP2	2.50	0.40
1:AA:881:G:OP2	12:AL:12:ARG:NH2	2.55	0.40
35:DA:151:C:O2'	35:DA:152:G:H5'	2.21	0.40
37:BC:182:PRO:CB	37:BC:185:LYS:HD2	2.50	0.40
47:DP:110:TYR:CE2	47:DP:111:ARG:NH1	2.90	0.40
2:AB:196:LEU:CD1	2:AB:197:VAL:HG23	2.51	0.40
1:AA:264:U:O2'	17:AQ:64:PRO:HB2	2.21	0.40
43:BI:35:LEU:O	43:BI:36:ALA:CB	2.69	0.40
35:DA:2195:C:H2'	35:DA:2196:C:H6	1.86	0.40
35:DA:1882:C:H3'	35:DA:1883:G:H8	1.86	0.40
1:CA:1226:C:N4	13:CM:104:ARG:HG3	2.37	0.40
1:AA:451:A:H2'	1:AA:481:G:O6	2.21	0.40
34:D9:7:VAL:C	34:D9:8:LYS:HG3	2.41	0.40
1:CA:1246:C:O2'	1:CA:1247:U:H5'	2.22	0.40
1:AA:233:C:H2'	1:AA:234:C:C6	2.52	0.40
35:BA:654(A):G:H2'	35:BA:654(B):C:H5'	2.04	0.40
35:DA:176:G:C5	35:DA:177:G:C6	3.09	0.40
7:CG:45:ASP:HB2	7:CG:117:ALA:HB2	2.01	0.40
35:BA:1181:C:H2'	35:BA:1182:A:H8	1.87	0.40
1:AA:394:G:H2'	1:AA:395:C:H6	1.87	0.40
35:BA:2063:C:O2	35:BA:2450:A:N1	2.53	0.40
22:AV:37:A:H2'	22:AV:38:U:H6	1.85	0.40
43:DI:54:GLN:HA	43:DI:57:ARG:HB3	2.02	0.40
38:BD:120:GLY:O	38:BD:131:LEU:HB3	2.22	0.40
38:BD:136:ILE:HA	38:BD:137:PRO:HD3	1.92	0.40
54:BW:20:VAL:CG2	54:BW:21:VAL:N	2.84	0.40
1:AA:54:C:H2'	1:AA:352:C:N4	2.36	0.40
35:DA:52:A:O2'	35:DA:53:A:H5'	2.22	0.40
47:BP:95:VAL:HG22	47:BP:125:VAL:HA	2.03	0.40
6:CF:33:TYR:HD1	6:CF:33:TYR:N	2.19	0.40
1:CA:238:G:O2'	1:CA:239:U:H5'	2.22	0.40
35:BA:2236:C:H2'	35:BA:2237:G:O4'	2.21	0.40
34:D9:19:ARG:O	34:D9:20:HIS:HB2	2.20	0.40
25:D0:7:LEU:HD22	48:DQ:81:VAL:HB	2.03	0.40
10:AJ:46:ARG:NH1	10:AJ:46:ARG:HG2	2.36	0.40
40:BF:72:ARG:HA	40:BF:72:ARG:HH11	1.86	0.40
35:BA:2553:G:H2'	35:BA:2554:U:C4'	2.52	0.40
1:CA:1301:U:H3'	1:CA:1302:U:H5''	2.03	0.40
35:DA:230:U:O2'	35:DA:231:C:H5'	2.21	0.40
18:AR:68:LYS:NZ	18:AR:71:LYS:NZ	2.70	0.40
35:DA:1907:G:O2'	35:DA:1908:C:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:27:GLU:O	27:B2:30:ARG:HG2	2.22	0.40
1:AA:784:C:H4'	35:BA:1837:C:OP1	2.21	0.40
35:BA:417:C:H1'	35:BA:2407:G:N2	2.37	0.40
7:CG:59:LEU:O	7:CG:59:LEU:HG	2.21	0.40
1:AA:1253:G:H2'	1:AA:1254:C:C6	2.56	0.40
1:CA:97:G:O2'	1:CA:98:G:P	2.79	0.40
22:CY:50:C:OP1	22:CY:61:A:H5'	2.22	0.40
23:AW:30:U:C5	23:AW:31:C:N4	2.89	0.40
23:AW:32:G:O2'	23:AW:33:G:H5'	2.21	0.40
22:AY:70:G:C2	22:AY:71:G:C5	3.09	0.40
22:AV:15:G:C8	22:AV:15:G:OP2	2.74	0.40
4:AD:30:LYS:HB2	4:AD:35:ARG:HD2	2.03	0.40
1:CA:1442:G:C5	51:DT:118:ARG:NH2	2.89	0.40
23:AW:26:G:C3'	23:AW:27:C:C6	3.05	0.40
23:AW:67:C:H5''	23:AW:67:C:H6	1.87	0.40
35:DA:806:C:P	47:DP:39:LYS:HG3	2.61	0.40
23:AW:19:G:C6	23:AW:60:A:C6	3.09	0.40
42:BH:41:MET:HG3	42:BH:43:VAL:HG13	2.02	0.40
42:BH:52:VAL:O	42:BH:65:HIS:HE1	2.05	0.40
42:BH:66:GLY:HA2	42:BH:69:ARG:HB3	2.03	0.40
43:DI:133:HIS:O	43:DI:133:HIS:CG	2.74	0.40
35:BA:2092:U:C5	35:BA:2226:C:OP2	2.74	0.40
10:CJ:4:ILE:HB	10:CJ:74:ILE:HG12	2.03	0.40
52:DU:68:ALA:HB2	52:DU:99:ALA:HB1	2.01	0.40
3:CC:110:ASN:O	3:CC:116:VAL:HG21	2.21	0.40
3:AC:112:SER:O	3:AC:116:VAL:HG23	2.22	0.40
1:AA:1442:G:O6	1:AA:1442(B):A:H2	2.04	0.40
29:D4:2:LYS:HZ3	36:DB:39:A:N6	2.19	0.40
28:D3:7:LYS:HE2	28:D3:32:GLN:OE1	2.20	0.40
1:AA:1276:G:H2'	1:AA:1277:C:H5'	2.03	0.40
1:AA:1279:A:H2	10:AJ:43:ARG:NH2	2.19	0.40
35:BA:322:A:P	40:BF:169:ASN:HB2	2.61	0.40
35:DA:1796:U:H2'	35:DA:1797:C:H6	1.86	0.40
50:BS:95:HIS:O	50:BS:98:VAL:HG23	2.21	0.40
9:CI:14:VAL:HG12	9:CI:15:ALA:N	2.36	0.40
28:B3:7:LYS:C	28:B3:54:VAL:HG13	2.42	0.40
40:DF:32:LEU:O	40:DF:36:VAL:HG23	2.21	0.40
2:AB:218:ALA:O	2:AB:222:ILE:HG12	2.21	0.40
1:CA:1228:C:C5	1:CA:1229:A:N7	2.89	0.40
56:DY:47:LYS:O	56:DY:60:PHE:HA	2.21	0.40
57:BZ:104:PHE:CD2	57:BZ:117:LEU:HD21	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D2:10:LEU:O	27:D2:11:GLU:C	2.59	0.40
35:DA:2444:G:P	40:DF:68:LYS:HE2	2.61	0.40
1:CA:373:A:C2	1:CA:482:A:C6	3.09	0.40
5:CE:41:VAL:HG22	5:CE:69:VAL:HG21	2.03	0.40
1:CA:163:C:O2	1:CA:163:C:H2'	2.22	0.40
1:AA:70:G:H1	1:AA:99:U:H3	1.68	0.40
35:BA:1528:A:N1	35:BA:1542:A:C2	2.74	0.40
35:BA:1528(A):A:N6	35:BA:1541:G:N2	2.68	0.40
57:BZ:53:ILE:CD1	57:BZ:99:TYR:HB2	2.51	0.40
1:CA:66:G:C2	1:CA:67:C:C6	3.09	0.40
1:CA:70:G:H1	1:CA:99:U:H3	1.69	0.40
1:AA:346:G:H2'	1:AA:347:G:O4'	2.21	0.40
1:CA:1321:C:H5''	1:CA:1322:C:H5''	1.98	0.40
50:BS:12:PHE:N	50:BS:12:PHE:CD1	2.89	0.40
37:BC:36:ALA:C	37:BC:38:PHE:H	2.23	0.40
2:CB:42:ILE:CD1	2:CB:203:GLY:HA2	2.44	0.40
38:DD:25:THR:O	38:DD:27:THR:HG22	2.21	0.40
57:DZ:166:SER:HB2	57:DZ:167:PRO:C	2.40	0.40
27:B2:48:HIS:CG	27:B2:49:LYS:N	2.88	0.40
38:BD:27:THR:O	38:BD:27:THR:CG2	2.67	0.40
2:CB:173:ALA:O	2:CB:176:GLU:N	2.55	0.40
51:BT:107:ASP:N	51:BT:107:ASP:OD1	2.53	0.40
35:BA:1789:A:OP1	38:BD:221:VAL:HA	2.21	0.40
22:AY:17:C:OP1	22:AY:17:C:H4'	2.21	0.40
35:DA:365:C:C5'	35:DA:365:C:H6	2.29	0.40
2:AB:95:GLN:HB3	2:AB:148:TYR:HD1	1.86	0.40
2:CB:95:GLN:CB	2:CB:148:TYR:HD1	2.34	0.40
51:BT:51:ARG:CG	51:BT:98:LYS:HG3	2.47	0.40
56:BY:86:ARG:NH2	56:BY:95:LYS:HZ2	2.20	0.40
38:DD:110:GLY:O	38:DD:111:LEU:C	2.60	0.40
1:AA:626:U:H2'	1:AA:627:G:H8	1.86	0.40
1:CA:826:C:H2'	1:CA:827:U:C6	2.56	0.40
16:CP:5:ARG:HB2	16:CP:67:THR:OG1	2.22	0.40
11:AK:91:ARG:C	11:AK:91:ARG:HD2	2.41	0.40
35:BA:1009:A:O4'	52:BU:59:ARG:HD3	2.21	0.40
1:CA:1018:C:O2'	1:CA:1019:C:H5'	2.20	0.40
11:AK:126:ARG:CB	11:AK:126:ARG:HH11	2.32	0.40
51:DT:56:GLY:O	51:DT:57:PHE:O	2.39	0.40
1:AA:308:C:H2'	1:AA:309:G:C8	2.51	0.40
1:AA:607:A:O2'	1:AA:608:A:H5'	2.22	0.40
47:DP:78:PRO:HB2	47:DP:111:ARG:HD2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DF:175:THR:HG23	40:DF:176:LEU:N	2.37	0.40
1:AA:814:A:N7	1:AA:816:A:C4	2.90	0.40
12:CL:11:VAL:HG21	17:CQ:34:LYS:HD3	2.04	0.40
1:AA:1470:G:C2'	1:AA:1471:G:H5'	2.50	0.40
1:AA:1471:G:O2'	1:AA:1472:U:H5'	2.22	0.40
45:BN:93:THR:HG23	45:BN:93:THR:O	2.22	0.40
53:BV:36:PRO:O	53:BV:37:VAL:C	2.60	0.40
20:AT:13:LEU:CD1	20:AT:13:LEU:H	2.34	0.40
1:CA:1073:U:O2'	2:CB:104:ASN:ND2	2.53	0.40
2:AB:107:THR:HA	2:AB:110:GLN:NE2	2.36	0.40
35:DA:921:G:C6	35:DA:922:U:C4	3.09	0.40
13:AM:30:ALA:O	13:AM:32:GLU:N	2.54	0.40
1:CA:1245:A:O2'	1:CA:1246:C:H5'	2.21	0.40
4:CD:49:ARG:O	4:CD:51:PRO:HD3	2.21	0.40
1:CA:1500:A:OP1	1:CA:1508:G:OP1	2.39	0.40
49:DR:33:ARG:HD2	49:DR:33:ARG:N	2.36	0.40
1:AA:1284:C:H2'	1:AA:1285:A:C8	2.57	0.40
1:CA:664:G:P	18:CR:64:ARG:HH21	2.45	0.40
35:DA:708:C:O2	35:DA:708:C:H2'	2.21	0.40
1:CA:505:G:C6	1:CA:535:A:C2	3.10	0.40
1:AA:1203:C:H2'	1:AA:1204:A:C8	2.54	0.40
45:DN:21:LYS:HG2	45:DN:22:THR:N	2.36	0.40
54:DW:46:PHE:O	54:DW:50:VAL:HG12	2.22	0.40
1:AA:137:C:H42	1:AA:226:G:H1	1.68	0.40
3:AC:90:GLU:HA	3:AC:93:LYS:HB3	2.03	0.40
55:DX:31:HIS:ND1	55:DX:32:PRO:HD2	2.36	0.40
33:D8:8:LYS:HB3	35:DA:247:G:O6	2.22	0.40
17:CQ:75:ARG:HH12	17:CQ:77:VAL:HG22	1.87	0.40
25:B0:7:LEU:CD2	48:BQ:81:VAL:HB	2.51	0.40
6:CF:27:GLN:HE21	6:CF:27:GLN:HA	1.85	0.40
1:AA:644:G:C2'	1:AA:645:C:H5'	2.52	0.40
25:D0:6:GLY:C	25:D0:7:LEU:HD23	2.42	0.40
35:DA:1375:C:O5'	35:DA:1375:C:H6	2.03	0.40
35:DA:2033:A:H4'	35:DA:2034:U:OP1	2.21	0.40
10:CJ:46:ARG:NH1	10:CJ:46:ARG:HG2	2.36	0.40
35:DA:1672:C:H5''	35:DA:2554:U:OP1	2.21	0.40
35:BA:755:C:H2'	35:BA:756:C:H6	1.86	0.40
35:DA:736:C:H2'	35:DA:737:C:H6	1.85	0.40
14:CN:6:LEU:C	14:CN:8:GLU:N	2.75	0.40
38:BD:227:ASN:HB3	38:BD:228:PRO:HD2	2.03	0.40
35:DA:143(A):C:H4'	55:DX:38:GLU:OE2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:805:C:H2'	1:CA:806:C:H6	1.87	0.40
36:DB:38:C:O2	36:DB:48:A:H1'	2.21	0.40
35:BA:1835:G:N3	35:BA:1835:G:H2'	2.36	0.40
41:BG:164:GLU:OE1	41:BG:164:GLU:N	2.53	0.40
35:DA:2242:G:H2'	35:DA:2243:U:O4'	2.21	0.40
22:CY:15:G:N2	22:CY:61:A:C4	2.89	0.40
22:CY:17:C:H5''	22:CY:18:U:H5	1.83	0.40
22:CY:20:G:C4	22:CY:59:G:C2	3.10	0.40
22:CY:55:G:C2'	22:CY:56:U:C1'	2.94	0.40
22:CY:57:U:C6	57:DZ:181:GLU:O	2.73	0.40
22:CY:59:G:P	57:DZ:181:GLU:O	2.80	0.40
22:AY:23:A:C4	22:AY:50:C:C4	3.10	0.40
22:AY:9:A:C6	22:AY:48:G:C2	3.10	0.40
39:DE:86:PRO:C	39:DE:88:GLY:H	2.25	0.40
23:CW:30:U:O2'	23:CW:31:C:H5'	2.21	0.40
23:CW:40:A:H2'	23:CW:41:C:C6	2.47	0.40
23:CW:45:U:H3'	23:CW:46:U:C5	2.54	0.40
22:AV:27:C:C6	22:AV:27:C:C3'	3.04	0.40
22:AV:67:C:O2'	22:AV:68:A:H5'	2.22	0.40
22:AV:71:G:C2	22:AV:72:C:C6	3.09	0.40
41:BG:85:GLY:C	41:BG:87:PRO:CD	2.89	0.40
4:AD:17:VAL:HG21	4:AD:63:LYS:HZ3	1.86	0.40
35:DA:1902:C:H4'	38:DD:244:ARG:CA	2.48	0.40
51:BT:1:MET:O	51:BT:2:ASN:O	2.40	0.40
47:DP:23:PRO:HD2	47:DP:33:ARG:NE	2.34	0.40
19:AS:15:LEU:O	19:AS:16:LEU:C	2.59	0.40
19:AS:23:ASN:O	19:AS:25:LYS:N	2.54	0.40
56:BY:7:VAL:HB	56:BY:8:LYS:CD	2.52	0.40
1:CA:181:G:N2	1:CA:183:G:N2	2.69	0.40
42:BH:7:LEU:CD2	42:BH:65:HIS:NE2	2.85	0.40
43:BI:85:GLU:O	43:BI:123:LEU:HD13	2.22	0.40
1:AA:1409:C:OP1	35:BA:1916:A:H2	2.04	0.40
12:CL:32:PHE:HB3	12:CL:84:LEU:CD2	2.43	0.40
26:D1:30:VAL:HG23	26:D1:31:GLY:N	2.36	0.40
12:AL:85:ILE:HA	12:AL:85:ILE:HD12	1.81	0.40
10:AJ:32:ALA:HB1	10:AJ:75:ILE:CG1	2.52	0.40
53:DV:38:LEU:O	53:DV:52:VAL:HG12	2.21	0.40
53:DV:47:VAL:C	53:DV:49:THR:N	2.73	0.40
3:AC:117:ALA:C	3:AC:119:ARG:N	2.74	0.40
36:BB:81:G:H2'	36:BB:82:G:H5'	2.02	0.40
39:DE:34:VAL:HG22	39:DE:48:GLN:HE21	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:123:ASN:HB2	41:DG:126:ASP:OD1	2.22	0.40
5:AE:150:ARG:HB2	5:AE:150:ARG:CZ	2.52	0.40
1:CA:448:A:O2'	1:CA:449:C:H5'	2.22	0.40
57:DZ:101:PRO:C	57:DZ:102:LEU:HD23	2.41	0.40
35:BA:806:C:P	47:BP:39:LYS:HG3	2.60	0.40
35:BA:2305:A:C2	35:BA:2306:C:H1'	2.56	0.40
41:BG:41:GLN:HB2	41:BG:90:LEU:HB3	2.03	0.40
47:DP:88:LEU:O	47:DP:90:ARG:N	2.55	0.40
40:BF:185:ASP:HA	40:BF:188:ARG:CD	2.51	0.40
35:DA:478:A:N1	35:DA:500:G:H4'	2.37	0.40
35:DA:480:A:H1'	56:DY:44:ILE:HG21	2.02	0.40
17:AQ:60:ILE:O	17:AQ:61:GLU:C	2.60	0.40
40:DF:28:ILE:CD1	40:DF:28:ILE:H	2.34	0.40
29:B4:4:GLY:O	29:B4:5:ILE:HG23	2.21	0.40
3:CC:52:LEU:HD23	3:CC:52:LEU:N	2.35	0.40
1:AA:587:G:C6	1:AA:755:G:C6	3.09	0.40
2:CB:16:HIS:CD2	2:CB:210:SER:HA	2.56	0.40
4:CD:106:TYR:HE1	4:CD:112:VAL:O	2.04	0.40
4:CD:108:LEU:HD23	4:CD:110:PHE:CE1	2.57	0.40
9:CI:48:GLU:C	9:CI:50:LEU:H	2.24	0.40
9:CI:99:LEU:HD12	9:CI:101:PHE:CE1	2.56	0.40
17:CQ:66:SER:O	17:CQ:67:LYS:C	2.59	0.40
55:BX:12:VAL:HG11	55:BX:27:THR:CG2	2.52	0.40
1:CA:1478:C:H2'	1:CA:1479:C:C6	2.55	0.40
18:CR:58:LEU:HB3	18:CR:62:GLU:CB	2.51	0.40
1:CA:1499:A:H2'	1:CA:1499:A:N3	2.36	0.40
4:AD:118:ARG:O	4:AD:121:VAL:N	2.54	0.40
4:AD:132:ARG:C	4:AD:132:ARG:CD	2.88	0.40
16:CP:20:VAL:HG21	16:CP:32:TYR:CB	2.51	0.40
1:CA:1107:C:P	3:CC:172:ARG:HD2	2.61	0.40
45:DN:42:TRP:HE3	45:DN:48:MET:HE1	1.86	0.40
45:BN:62:VAL:HG23	45:BN:66:LYS:HD2	2.03	0.40
22:CY:2:G:N3	22:CY:2:G:H2'	2.36	0.40
35:BA:7:G:H2'	35:BA:8:A:C8	2.56	0.40
3:CC:173:VAL:N	3:CC:174:PRO:HD3	2.36	0.40
4:AD:152:SER:C	4:AD:155:LEU:HG	2.40	0.40
39:BE:11:MET:HB3	39:BE:24:THR:HB	2.03	0.40
1:AA:1502:A:H2	1:AA:1505:G:N2	2.19	0.40
37:DC:11:LEU:HD13	37:DC:221:PRO:HD2	2.04	0.40
34:D9:4:ARG:HB2	35:DA:2466:C:OP1	2.22	0.40
1:CA:1242:C:OP1	21:CU:10:ARG:NH1	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:34:ALA:HB1	2:CB:36:ARG:HD2	2.04	0.40
11:CK:91:ARG:HD2	11:CK:91:ARG:C	2.42	0.40
35:DA:2784:C:H6	35:DA:2784:C:O5'	2.04	0.40
4:CD:76:ARG:NH1	4:CD:76:ARG:HG2	2.35	0.40
50:DS:85:VAL:CG2	50:DS:106:ARG:HB2	2.51	0.40
15:CO:27:VAL:C	15:CO:29:VAL:N	2.75	0.40
14:CN:3:ARG:O	14:CN:7:ILE:HG23	2.21	0.40
35:DA:2462:U:H2'	35:DA:2463:C:O4'	2.20	0.40
6:CF:10:LEU:N	6:CF:10:LEU:CD1	2.82	0.40
9:CI:46:ALA:HA	9:CI:78:LYS:CB	2.51	0.40
35:DA:1718:G:O2'	35:DA:1719:G:H5'	2.21	0.40
43:DI:31:LEU:N	43:DI:32:PRO:CD	2.85	0.40
35:DA:27:G:N2	35:DA:512:G:H2'	2.35	0.40
1:CA:954:G:O2'	1:CA:955:U:H5'	2.21	0.40
35:DA:2030:A:H4'	35:DA:2031:A:H8	1.87	0.40
34:D9:16:VAL:O	35:DA:1033:U:H5	2.05	0.40
25:B0:36:ILE:HG13	25:B0:36:ILE:O	2.21	0.40
35:DA:1816:G:P	38:DD:39:LYS:HE3	2.60	0.40
1:CA:724:G:C2	1:CA:725:G:C8	3.10	0.40
37:DC:194:ILE:O	37:DC:198:GLU:HG3	2.21	0.40
35:DA:2202:C:H1'	38:DD:151:LYS:HZ3	1.86	0.40
35:BA:781:A:H2	35:BA:1776:G:N3	2.20	0.40
1:AA:1007:C:H2'	1:AA:1008:C:C6	2.55	0.40
38:BD:137:PRO:O	38:BD:138:VAL:C	2.59	0.40
38:BD:138:VAL:O	38:BD:138:VAL:HG13	2.22	0.40
35:BA:851:U:H2'	35:BA:852:G:C8	2.56	0.40
1:AA:1439:C:C5'	20:AT:38:LYS:HZ1	2.34	0.40
18:CR:44:LEU:O	18:CR:45:SER:C	2.60	0.40
47:DP:95:VAL:HG22	47:DP:125:VAL:HA	2.02	0.40
1:AA:1415:G:C4	1:AA:1486:G:C2	3.10	0.40
17:CQ:75:ARG:HG3	17:CQ:75:ARG:NH1	2.36	0.40
47:BP:100:LEU:CD2	47:BP:100:LEU:N	2.84	0.40
1:CA:1236:A:OP1	21:CU:3:LYS:HG3	2.22	0.40
35:DA:2768:C:C2'	35:DA:2769:C:H5'	2.51	0.40
4:CD:3:ARG:HD3	4:CD:3:ARG:N	2.36	0.40
36:BB:74:U:H2'	36:BB:75:G:O4'	2.22	0.40
27:D2:59:ARG:HD3	35:DA:77:C:OP1	2.22	0.40
1:CA:247:G:OP2	17:CQ:100:LYS:N	2.53	0.40
3:AC:87:LEU:C	3:AC:89:GLU:N	2.74	0.40
1:AA:946:A:H2'	1:AA:947:G:C8	2.57	0.40
35:BA:11:G:N2	35:BA:2628:C:OP1	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2508:G:H2'	35:BA:2509:G:O4'	2.22	0.40
16:AP:9:PHE:HB3	16:AP:10:GLY:H	1.69	0.40
1:AA:887:G:C2'	1:AA:888:G:H5'	2.51	0.40
43:DI:60:GLU:HB3	43:DI:61:ARG:NH1	2.36	0.40
8:AH:102:ARG:N	8:AH:102:ARG:HD3	2.36	0.40
16:AP:39:TYR:CG	16:AP:40:ASP:N	2.89	0.40
23:AW:45:U:C4	23:AW:46:U:N3	2.89	0.40
4:CD:36:ARG:O	4:CD:38:TYR:N	2.53	0.40
22:AV:25:A:O2'	22:AV:26:G:C5'	2.62	0.40
35:BA:2302:G:C6	35:BA:2315:G:C6	3.10	0.40
22:CV:14:A:OP1	22:CV:14:A:H4'	2.21	0.40
41:DG:83:ARG:NH2	41:DG:84:LYS:HZ2	2.19	0.40
35:BA:1591:G:O2'	35:BA:1592:C:H5'	2.21	0.40
31:B6:54:ILE:O	31:B6:54:ILE:HD12	2.22	0.40
35:BA:251:A:C5	35:BA:252:G:H1'	2.56	0.40
35:DA:942:G:H5''	47:DP:36:LYS:H	1.87	0.40
19:AS:44:MET:CE	19:AS:44:MET:HA	2.48	0.40
43:BI:93:THR:N	43:BI:96:ASP:HB2	2.32	0.40
12:CL:43:VAL:CG2	12:CL:44:THR:N	2.79	0.40
1:AA:1152:A:C5'	10:AJ:70:ARG:NH2	2.75	0.40
45:BN:57:ALA:C	45:BN:58:ASP:O	2.59	0.40
41:BG:51:ARG:HH11	41:BG:53:LEU:HD21	1.86	0.40
17:AQ:8:GLY:O	17:AQ:56:VAL:HA	2.21	0.40
13:AM:7:VAL:HG12	13:AM:7:VAL:O	2.21	0.40
47:DP:146:VAL:HG13	47:DP:147:LEU:H	1.86	0.40
51:BT:117:ASP:O	51:BT:119:LYS:N	2.55	0.40
51:BT:95:ARG:CB	51:BT:95:ARG:HH11	2.29	0.40
53:BV:47:VAL:O	53:BV:49:THR:N	2.54	0.40
1:CA:1278:U:H4'	1:CA:1279:A:H8	1.86	0.40
41:DG:61:ALA:HB2	41:DG:67:LYS:HA	2.03	0.40
39:BE:76:ARG:O	39:BE:77:ILE:C	2.59	0.40
25:B0:10:THR:CG2	25:B0:11:ARG:H	2.09	0.40
56:BY:3:VAL:N	56:BY:5:MET:HE2	2.36	0.40
57:DZ:111:VAL:O	57:DZ:112:ARG:HB2	2.21	0.40
57:DZ:144:LEU:HD11	57:DZ:149:SER:HA	2.04	0.40
2:CB:52:GLU:HG2	2:CB:56:ARG:NH1	2.35	0.40
55:BX:63:LYS:O	55:BX:64:LYS:HG3	2.22	0.40
41:BG:57:ALA:HA	41:BG:68:PRO:HG3	2.03	0.40
1:CA:1339:A:N3	22:CV:33:G:H1'	2.37	0.40
1:AA:235:C:H1'	17:AQ:61:GLU:OE2	2.21	0.40
3:CC:92:ALA:HA	3:CC:95:THR:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:207:ALA:O	2:AB:209:ARG:N	2.54	0.40
1:CA:1399:C:H5'	1:CA:1401:G:OP2	2.21	0.40
35:BA:198:C:H5'	35:BA:2244:U:OP1	2.22	0.40
5:CE:33:VAL:HG12	5:CE:34:VAL:H	1.83	0.40
46:BO:18:LYS:HD2	46:BO:45:GLU:OE1	2.21	0.40
1:CA:1504:G:H4'	1:CA:1505:G:O5'	2.22	0.40
1:CA:1269:A:H5'	21:CU:18:TYR:O	2.21	0.40
21:CU:24:ARG:O	21:CU:25:LYS:HB3	2.21	0.40
1:CA:66:G:H2'	1:CA:66:G:N3	2.37	0.40
4:AD:134:ASP:OD1	4:AD:134:ASP:N	2.50	0.40
1:CA:781:A:H2	1:CA:1514:C:O4'	2.04	0.40
41:BG:145:THR:HG21	41:BG:148:MET:CB	2.52	0.40
38:DD:24:ILE:HG12	38:DD:25:THR:H	1.75	0.40
38:DD:25:THR:HG22	38:DD:26:LYS:HD2	2.04	0.40
51:BT:107:ASP:OD1	51:BT:108:ARG:N	2.54	0.40
1:CA:52:G:H2'	1:CA:53:A:O4'	2.22	0.40
41:BG:32:PRO:CB	41:BG:163:ALA:HB2	2.46	0.40
26:D1:19:GLN:NE2	26:D1:19:GLN:CA	2.80	0.40
50:BS:16:ASN:O	50:BS:19:LYS:HB2	2.21	0.40
4:CD:61:LYS:NZ	4:CD:72:GLU:OE2	2.51	0.40
51:DT:51:ARG:HB2	51:DT:98:LYS:HG3	2.02	0.40
2:CB:166:ASP:HA	2:CB:167:PRO:HD2	1.88	0.40
1:CA:377:G:H5'	16:CP:5:ARG:NH1	2.37	0.40
17:CQ:12:SER:HB3	17:CQ:20:THR:CB	2.47	0.40
1:AA:1038:C:H6	1:AA:1038:C:O5'	2.03	0.40
1:CA:603:U:H2'	1:CA:604:G:H8	1.86	0.40
1:CA:605:U:H2'	1:CA:606:G:H8	1.86	0.40
1:AA:1018:C:O2'	1:AA:1019:C:H5'	2.22	0.40
1:AA:956:U:C2'	1:AA:957:U:H5'	2.51	0.40
38:DD:72:LYS:HB3	38:DD:72:LYS:HZ3	1.85	0.40
8:AH:91:ARG:NH1	17:AQ:33:GLY:HA3	2.34	0.40
35:DA:1722:A:O2'	35:DA:1739:U:C5'	2.70	0.40
1:AA:189(B):C:N4	1:AA:189(J):G:N1	2.69	0.40
53:BV:5:VAL:HG22	53:BV:6:LYS:N	2.37	0.40
1:AA:1456:G:N3	1:AA:1456:G:H5''	2.37	0.40
5:AE:141:GLN:HA	5:AE:143:ARG:HH21	1.85	0.40
27:B2:68:ARG:HG2	27:B2:68:ARG:HH11	1.84	0.40
1:CA:929:G:H1	1:CA:1388:C:H42	1.68	0.40
1:CA:151:A:C6	1:CA:171:A:N6	2.90	0.40
35:DA:907:U:OP1	48:DQ:24:GLY:N	2.51	0.40
1:CA:696:A:H1'	1:CA:786:G:O2'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:232:G:H2'	1:AA:233:C:H6	1.86	0.40
7:CG:40:ALA:O	7:CG:44:TYR:HD2	2.05	0.40
1:CA:643:C:H5'	8:CH:31:PHE:CE1	2.56	0.40
49:BR:34:ILE:CG2	49:BR:35:THR:N	2.84	0.40
1:AA:1316:G:H2'	1:AA:1317:C:C5'	2.50	0.40
37:DC:23:ILE:CG2	37:DC:190:ILE:HB	2.51	0.40
38:BD:109:ASP:OD2	38:BD:197:GLY:HA2	2.21	0.40
44:DJ:58:UNK:C	44:DJ:59:UNK:O	2.68	0.40
35:BA:900:A:C2	35:BA:901:A:H1'	2.57	0.40
1:CA:26:A:N6	1:CA:558:G:H1'	2.36	0.40
42:DH:61:HIS:O	42:DH:64:LEU:N	2.54	0.40
56:BY:57:GLN:CG	56:BY:58:GLY:N	2.84	0.40
35:BA:1000:A:H2'	35:BA:1001:A:C8	2.57	0.40
1:CA:34:C:H2'	1:CA:35:G:H8	1.87	0.40
35:DA:510:C:H2'	35:DA:511:U:O4'	2.20	0.40
35:BA:35:G:O2'	35:BA:36:G:H5'	2.21	0.40
48:BQ:119:ARG:O	48:BQ:123:HIS:HD2	2.05	0.40
35:BA:2033:A:H4'	35:BA:2034:U:OP1	2.21	0.40
56:DY:23:ARG:O	56:DY:24:VAL:C	2.59	0.40
3:CC:3:ASN:O	3:CC:4:LYS:O	2.40	0.40
16:AP:8:ARG:HG2	16:AP:9:PHE:H	1.87	0.40
55:DX:28:PHE:CE2	55:DX:92:LEU:HD11	2.57	0.40
35:DA:2078:C:H2'	35:DA:2079:U:C6	2.55	0.40
35:DA:945:A:C4	35:DA:2448:A:C2	3.09	0.40
15:CO:8:LYS:HG2	15:CO:12:ILE:HD11	2.03	0.40
2:CB:158:LEU:HA	2:CB:159:PRO:HD3	1.90	0.40
54:DW:82:LEU:HG	54:DW:84:ARG:HH12	1.86	0.40
35:DA:2108:C:O2'	35:DA:2109:U:H5'	2.22	0.40
21:AU:5:ASP:O	21:AU:11:GLY:HA3	2.20	0.40
44:BJ:93:UNK:O	44:BJ:96:UNK:N	2.55	0.40
3:AC:184:TYR:HA	3:AC:200:ALA:O	2.21	0.40
22:AY:34:C:H2'	22:AY:34:C:O2	2.21	0.40
24:CX:15:A:H2'	24:CX:15:A:N3	2.37	0.40
49:BR:54:LEU:HA	49:BR:54:LEU:HD12	1.93	0.40
35:DA:2422:A:HO2'	35:DA:2423:U:P	2.45	0.40
35:DA:125:G:H4'	35:DA:126:A:OP2	2.22	0.40

All (1) 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)
4:AD:27:TYR:OH	6:CF:15:ASP:OD2[4_455]	2.05	0.15

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	233/256 (91%)	153 (66%)	55 (24%)	25 (11%)	0	3
2	CB	233/256 (91%)	152 (65%)	57 (24%)	24 (10%)	1	4
3	AC	205/239 (86%)	141 (69%)	43 (21%)	21 (10%)	1	4
3	CC	205/239 (86%)	142 (69%)	40 (20%)	23 (11%)	0	3
4	AD	206/209 (99%)	133 (65%)	46 (22%)	27 (13%)	0	1
4	CD	206/209 (99%)	135 (66%)	44 (21%)	27 (13%)	0	1
5	AE	149/162 (92%)	111 (74%)	24 (16%)	14 (9%)	1	4
5	CE	149/162 (92%)	110 (74%)	25 (17%)	14 (9%)	1	4
6	AF	99/101 (98%)	77 (78%)	15 (15%)	7 (7%)	1	8
6	CF	99/101 (98%)	76 (77%)	17 (17%)	6 (6%)	2	11
7	AG	153/156 (98%)	108 (71%)	41 (27%)	4 (3%)	7	32
7	CG	153/156 (98%)	110 (72%)	39 (26%)	4 (3%)	7	32
8	AH	136/138 (99%)	100 (74%)	29 (21%)	7 (5%)	2	15
8	CH	136/138 (99%)	99 (73%)	29 (21%)	8 (6%)	2	12
9	AI	121/128 (94%)	90 (74%)	22 (18%)	9 (7%)	1	7
9	CI	121/128 (94%)	91 (75%)	20 (16%)	10 (8%)	1	6
10	AJ	97/105 (92%)	76 (78%)	17 (18%)	4 (4%)	3	20
10	CJ	97/105 (92%)	76 (78%)	17 (18%)	4 (4%)	3	20
11	AK	117/129 (91%)	83 (71%)	26 (22%)	8 (7%)	1	8
11	CK	117/129 (91%)	83 (71%)	26 (22%)	8 (7%)	1	8
12	AL	123/135 (91%)	75 (61%)	28 (23%)	20 (16%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	CL	123/135 (91%)	75 (61%)	28 (23%)	20 (16%)	0	0
13	AM	107/126 (85%)	67 (63%)	25 (23%)	15 (14%)	0	1
13	CM	107/126 (85%)	66 (62%)	26 (24%)	15 (14%)	0	1
14	AN	58/61 (95%)	41 (71%)	9 (16%)	8 (14%)	0	1
14	CN	58/61 (95%)	40 (69%)	9 (16%)	9 (16%)	0	0
15	AO	86/89 (97%)	52 (60%)	25 (29%)	9 (10%)	1	3
15	CO	86/89 (97%)	50 (58%)	27 (31%)	9 (10%)	1	3
16	AP	82/88 (93%)	48 (58%)	24 (29%)	10 (12%)	0	2
16	CP	82/88 (93%)	49 (60%)	24 (29%)	9 (11%)	0	3
17	AQ	98/105 (93%)	70 (71%)	22 (22%)	6 (6%)	2	11
17	CQ	98/105 (93%)	71 (72%)	20 (20%)	7 (7%)	1	8
18	AR	68/88 (77%)	44 (65%)	18 (26%)	6 (9%)	1	5
18	CR	68/88 (77%)	44 (65%)	18 (26%)	6 (9%)	1	5
19	AS	77/93 (83%)	47 (61%)	17 (22%)	13 (17%)	0	0
19	CS	77/93 (83%)	48 (62%)	16 (21%)	13 (17%)	0	0
20	AT	97/106 (92%)	67 (69%)	17 (18%)	13 (13%)	0	1
20	CT	97/106 (92%)	67 (69%)	18 (19%)	12 (12%)	0	1
21	AU	23/27 (85%)	14 (61%)	6 (26%)	3 (13%)	0	1
21	CU	23/27 (85%)	13 (56%)	7 (30%)	3 (13%)	0	1
25	B0	82/85 (96%)	67 (82%)	12 (15%)	3 (4%)	4	23
25	D0	82/85 (96%)	66 (80%)	13 (16%)	3 (4%)	4	23
26	B1	92/98 (94%)	68 (74%)	13 (14%)	11 (12%)	0	2
26	D1	92/98 (94%)	71 (77%)	9 (10%)	12 (13%)	0	1
27	B2	69/72 (96%)	50 (72%)	14 (20%)	5 (7%)	1	7
27	D2	69/72 (96%)	45 (65%)	16 (23%)	8 (12%)	0	2
28	B3	58/60 (97%)	44 (76%)	9 (16%)	5 (9%)	1	5
28	D3	58/60 (97%)	44 (76%)	9 (16%)	5 (9%)	1	5
29	B4	56/71 (79%)	26 (46%)	15 (27%)	15 (27%)	0	0
29	D4	56/71 (79%)	26 (46%)	16 (29%)	14 (25%)	0	0
30	B5	54/60 (90%)	43 (80%)	3 (6%)	8 (15%)	0	1
30	D5	54/60 (90%)	43 (80%)	3 (6%)	8 (15%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
31	B6	48/54 (89%)	22 (46%)	12 (25%)	14 (29%)	0	0
31	D6	48/54 (89%)	22 (46%)	12 (25%)	14 (29%)	0	0
32	B7	46/49 (94%)	43 (94%)	3 (6%)	0	100	100
32	D7	46/49 (94%)	43 (94%)	3 (6%)	0	100	100
33	B8	62/65 (95%)	41 (66%)	13 (21%)	8 (13%)	0	1
33	D8	62/65 (95%)	41 (66%)	13 (21%)	8 (13%)	0	1
34	B9	35/37 (95%)	28 (80%)	7 (20%)	0	100	100
34	D9	35/37 (95%)	28 (80%)	7 (20%)	0	100	100
37	BC	116/229 (51%)	94 (81%)	19 (16%)	3 (3%)	7	32
37	DC	116/229 (51%)	94 (81%)	19 (16%)	3 (3%)	7	32
38	BD	270/276 (98%)	209 (77%)	32 (12%)	29 (11%)	0	3
38	DD	270/276 (98%)	207 (77%)	34 (13%)	29 (11%)	0	3
39	BE	203/206 (98%)	134 (66%)	36 (18%)	33 (16%)	0	0
39	DE	203/206 (98%)	134 (66%)	37 (18%)	32 (16%)	0	0
40	BF	206/210 (98%)	149 (72%)	31 (15%)	26 (13%)	0	1
40	DF	206/210 (98%)	148 (72%)	32 (16%)	26 (13%)	0	1
41	BG	177/182 (97%)	112 (63%)	39 (22%)	26 (15%)	0	1
41	DG	177/182 (97%)	93 (52%)	57 (32%)	27 (15%)	0	0
42	BH	163/180 (91%)	110 (68%)	29 (18%)	24 (15%)	0	1
42	DH	163/180 (91%)	110 (68%)	28 (17%)	25 (15%)	0	0
43	BI	144/148 (97%)	84 (58%)	37 (26%)	23 (16%)	0	0
43	DI	144/148 (97%)	85 (59%)	36 (25%)	23 (16%)	0	0
45	BN	137/140 (98%)	99 (72%)	22 (16%)	16 (12%)	0	2
45	DN	137/140 (98%)	101 (74%)	20 (15%)	16 (12%)	0	2
46	BO	120/122 (98%)	99 (82%)	14 (12%)	7 (6%)	2	12
46	DO	120/122 (98%)	96 (80%)	16 (13%)	8 (7%)	1	9
47	BP	144/150 (96%)	69 (48%)	43 (30%)	32 (22%)	0	0
47	DP	144/150 (96%)	69 (48%)	43 (30%)	32 (22%)	0	0
48	BQ	139/141 (99%)	100 (72%)	27 (19%)	12 (9%)	1	5
48	DQ	139/141 (99%)	99 (71%)	28 (20%)	12 (9%)	1	5
49	BR	115/118 (98%)	88 (76%)	13 (11%)	14 (12%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
49	DR	115/118 (98%)	87 (76%)	14 (12%)	14 (12%)	0	2
50	BS	97/112 (87%)	54 (56%)	24 (25%)	19 (20%)	0	0
50	DS	97/112 (87%)	52 (54%)	26 (27%)	19 (20%)	0	0
51	BT	134/146 (92%)	85 (63%)	19 (14%)	30 (22%)	0	0
51	DT	134/146 (92%)	86 (64%)	18 (13%)	30 (22%)	0	0
52	BU	115/118 (98%)	90 (78%)	19 (16%)	6 (5%)	2	15
52	DU	115/118 (98%)	88 (76%)	20 (17%)	7 (6%)	2	11
53	BV	99/101 (98%)	64 (65%)	22 (22%)	13 (13%)	0	1
53	DV	99/101 (98%)	64 (65%)	22 (22%)	13 (13%)	0	1
54	BW	111/113 (98%)	91 (82%)	12 (11%)	8 (7%)	1	7
54	DW	111/113 (98%)	91 (82%)	13 (12%)	7 (6%)	2	10
55	BX	91/96 (95%)	71 (78%)	15 (16%)	5 (6%)	2	13
55	DX	91/96 (95%)	67 (74%)	19 (21%)	5 (6%)	2	13
56	BY	99/110 (90%)	48 (48%)	26 (26%)	25 (25%)	0	0
56	DY	99/110 (90%)	48 (48%)	26 (26%)	25 (25%)	0	0
57	BZ	183/206 (89%)	111 (61%)	45 (25%)	27 (15%)	0	1
57	DZ	183/206 (89%)	111 (61%)	42 (23%)	30 (16%)	0	0
All	All	11600/12592 (92%)	7946 (68%)	2292 (20%)	1362 (12%)	0	2

All (1362) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	75	LYS
2	AB	101	MET
2	AB	123	ALA
2	AB	165	VAL
2	AB	195	ASP
2	AB	230	VAL
2	AB	238	LEU
2	AB	239	VAL
3	AC	4	LYS
3	AC	47	LEU
3	AC	73	PRO
3	AC	154	SER
3	AC	207	VAL

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Mol	Chain	Res	Type
4	AD	3	ARG
4	AD	4	TYR
4	AD	5	ILE
4	AD	14	ARG
4	AD	30	LYS
4	AD	129	ASN
4	AD	156	GLU
4	AD	179	GLU
5	AE	21	ALA
5	AE	27	ARG
5	AE	37	ARG
5	AE	70	PRO
5	AE	148	VAL
6	AF	40	VAL
7	AG	54	THR
9	AI	89	ASN
10	AJ	57	LYS
11	AK	25	TYR
11	AK	89	ALA
12	AL	19	ARG
12	AL	43	VAL
12	AL	47	LYS
12	AL	51	ALA
12	AL	91	LYS
13	AM	7	VAL
13	AM	63	THR
13	AM	83	ASP
13	AM	91	ARG
13	AM	100	GLY
13	AM	107	ALA
14	AN	15	LYS
15	AO	4	THR
17	AQ	33	GLY
17	AQ	99	SER
18	AR	37	VAL
19	AS	10	PHE
19	AS	26	GLY
19	AS	27	GLU
19	AS	28	LYS
19	AS	30	LEU
19	AS	45	VAL
19	AS	67	VAL

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Mol	Chain	Res	Type
20	AT	73	HIS
20	AT	74	LYS
20	AT	99	LEU
20	AT	100	ILE
21	AU	3	LYS
25	B0	20	ARG
27	B2	44	LEU
27	B2	47	ASN
28	B3	3	ARG
28	B3	13	ILE
29	B4	26	SER
29	B4	40	HIS
29	B4	43	TYR
29	B4	44	THR
29	B4	48	ARG
30	B5	4	HIS
30	B5	35	GLU
30	B5	36	CYS
30	B5	49	CYS
30	B5	53	ALA
31	B6	9	LEU
31	B6	23	THR
31	B6	27	LYS
31	B6	28	ARG
31	B6	31	PRO
31	B6	48	VAL
31	B6	49	HIS
33	B8	33	ASN
33	B8	34	TRP
33	B8	49	VAL
33	B8	61	LEU
38	BD	25	THR
38	BD	27	THR
38	BD	36	PRO
38	BD	122	ASP
38	BD	123	ALA
38	BD	225	ALA
38	BD	246	PRO
38	BD	271	ILE
38	BD	272	ALA
39	BE	2	LYS
39	BE	53	PRO

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Mol	Chain	Res	Type
39	BE	54	GLN
39	BE	64	LYS
39	BE	68	ALA
39	BE	69	LYS
39	BE	72	VAL
39	BE	82	ARG
39	BE	90	THR
39	BE	118	LYS
39	BE	203	LYS
40	BF	21	ALA
40	BF	27	GLU
40	BF	59	TYR
40	BF	89	VAL
40	BF	133	ASN
40	BF	167	ALA
41	BG	6	ALA
41	BG	49	ASP
41	BG	75	LYS
41	BG	81	LYS
41	BG	82	LEU
41	BG	86	MET
41	BG	87	PRO
41	BG	126	ASP
42	BH	8	PRO
42	BH	42	ARG
42	BH	83	TYR
42	BH	126	PRO
42	BH	155	SER
42	BH	156	ALA
42	BH	157	TYR
42	BH	159	GLU
42	BH	160	LYS
42	BH	165	ALA
42	BH	170	ARG
43	BI	15	VAL
43	BI	76	THR
43	BI	85	GLU
43	BI	105	HIS
43	BI	120	ILE
43	BI	132	PRO
45	BN	4	TYR
45	BN	42	TRP

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Mol	Chain	Res	Type
45	BN	58	ASP
45	BN	77	GLY
45	BN	134	ARG
46	BO	48	PRO
47	BP	14	LYS
47	BP	17	LYS
47	BP	31	ALA
47	BP	47	ASP
47	BP	57	THR
47	BP	90	ARG
47	BP	103	ALA
47	BP	107	LYS
47	BP	111	ARG
47	BP	144	GLU
47	BP	147	LEU
48	BQ	2	LEU
48	BQ	27	VAL
48	BQ	88	GLY
49	BR	8	ARG
49	BR	12	ARG
49	BR	14	SER
49	BR	45	ARG
49	BR	58	GLY
49	BR	86	ARG
49	BR	117	VAL
50	BS	13	ARG
50	BS	23	ARG
50	BS	35	ILE
50	BS	53	SER
50	BS	59	LYS
50	BS	97	ARG
51	BT	2	ASN
51	BT	3	ARG
51	BT	12	SER
51	BT	24	PRO
51	BT	26	ASP
51	BT	27	THR
51	BT	28	VAL
51	BT	30	VAL
51	BT	33	LYS
51	BT	35	LYS
51	BT	57	PHE

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Mol	Chain	Res	Type
51	BT	58	ASN
51	BT	80	SER
51	BT	82	LEU
51	BT	83	ILE
51	BT	88	ILE
51	BT	97	ALA
51	BT	107	ASP
51	BT	129	ARG
52	BU	32	PHE
52	BU	93	LYS
53	BV	2	PHE
53	BV	46	VAL
53	BV	53	GLU
54	BW	11	ARG
54	BW	111	HIS
56	BY	5	MET
56	BY	7	VAL
56	BY	24	VAL
56	BY	31	LEU
56	BY	42	VAL
56	BY	45	VAL
56	BY	60	PHE
56	BY	66	PRO
56	BY	77	PRO
56	BY	78	ALA
56	BY	96	ILE
56	BY	98	VAL
57	BZ	13	GLU
57	BZ	152	ALA
57	BZ	168	GLU
57	BZ	183	LEU
2	CB	15	VAL
2	CB	75	LYS
2	CB	101	MET
2	CB	154	LEU
2	CB	165	VAL
2	CB	195	ASP
2	CB	230	VAL
2	CB	238	LEU
2	CB	239	VAL
3	CC	4	LYS
3	CC	47	LEU

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Mol	Chain	Res	Type
3	CC	73	PRO
3	CC	154	SER
3	CC	207	VAL
4	CD	3	ARG
4	CD	4	TYR
4	CD	5	ILE
4	CD	14	ARG
4	CD	30	LYS
4	CD	129	ASN
4	CD	156	GLU
4	CD	179	GLU
5	CE	21	ALA
5	CE	27	ARG
5	CE	37	ARG
5	CE	70	PRO
5	CE	148	VAL
6	CF	40	VAL
7	CG	54	THR
9	CI	89	ASN
10	CJ	57	LYS
11	CK	25	TYR
11	CK	89	ALA
12	CL	19	ARG
12	CL	43	VAL
12	CL	47	LYS
12	CL	51	ALA
12	CL	91	LYS
13	CM	7	VAL
13	CM	63	THR
13	CM	83	ASP
13	CM	91	ARG
13	CM	100	GLY
13	CM	107	ALA
14	CN	15	LYS
15	CO	4	THR
17	CQ	33	GLY
17	CQ	99	SER
18	CR	37	VAL
19	CS	10	PHE
19	CS	26	GLY
19	CS	27	GLU
19	CS	28	LYS

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Mol	Chain	Res	Type
19	CS	30	LEU
19	CS	45	VAL
19	CS	67	VAL
20	CT	73	HIS
20	CT	99	LEU
20	CT	100	ILE
21	CU	3	LYS
25	D0	20	ARG
26	D1	58	ILE
26	D1	86	SER
26	D1	95	LEU
27	D2	43	GLN
27	D2	45	SER
27	D2	48	HIS
27	D2	70	GLN
28	D3	3	ARG
28	D3	13	ILE
29	D4	26	SER
29	D4	40	HIS
29	D4	43	TYR
29	D4	44	THR
29	D4	48	ARG
30	D5	4	HIS
30	D5	35	GLU
30	D5	36	CYS
30	D5	49	CYS
30	D5	53	ALA
31	D6	9	LEU
31	D6	23	THR
31	D6	27	LYS
31	D6	28	ARG
31	D6	31	PRO
31	D6	48	VAL
31	D6	49	HIS
33	D8	33	ASN
33	D8	34	TRP
33	D8	49	VAL
33	D8	61	LEU
38	DD	25	THR
38	DD	27	THR
38	DD	36	PRO
38	DD	122	ASP

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Mol	Chain	Res	Type
38	DD	123	ALA
38	DD	225	ALA
38	DD	241	PRO
38	DD	245	PRO
38	DD	246	PRO
38	DD	271	ILE
38	DD	272	ALA
39	DE	2	LYS
39	DE	53	PRO
39	DE	54	GLN
39	DE	64	LYS
39	DE	68	ALA
39	DE	69	LYS
39	DE	71	GLY
39	DE	72	VAL
39	DE	82	ARG
39	DE	90	THR
39	DE	118	LYS
39	DE	203	LYS
40	DF	21	ALA
40	DF	27	GLU
40	DF	59	TYR
40	DF	89	VAL
40	DF	133	ASN
40	DF	167	ALA
41	DG	49	ASP
41	DG	78	SER
41	DG	82	LEU
41	DG	96	ARG
41	DG	97	ASP
41	DG	110	ALA
41	DG	118	ARG
41	DG	122	PRO
41	DG	126	ASP
41	DG	159	VAL
42	DH	8	PRO
42	DH	42	ARG
42	DH	83	TYR
42	DH	126	PRO
42	DH	155	SER
42	DH	156	ALA
42	DH	157	TYR

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Mol	Chain	Res	Type
42	DH	159	GLU
42	DH	160	LYS
42	DH	165	ALA
42	DH	170	ARG
43	DI	12	LEU
43	DI	15	VAL
43	DI	76	THR
43	DI	85	GLU
43	DI	105	HIS
43	DI	120	ILE
43	DI	132	PRO
45	DN	4	TYR
45	DN	42	TRP
45	DN	58	ASP
45	DN	77	GLY
45	DN	134	ARG
46	DO	27	GLY
46	DO	48	PRO
47	DP	14	LYS
47	DP	17	LYS
47	DP	31	ALA
47	DP	47	ASP
47	DP	48	PRO
47	DP	57	THR
47	DP	90	ARG
47	DP	103	ALA
47	DP	107	LYS
47	DP	111	ARG
47	DP	144	GLU
47	DP	147	LEU
48	DQ	2	LEU
48	DQ	27	VAL
48	DQ	88	GLY
49	DR	8	ARG
49	DR	12	ARG
49	DR	14	SER
49	DR	45	ARG
49	DR	58	GLY
49	DR	86	ARG
49	DR	117	VAL
50	DS	13	ARG
50	DS	23	ARG

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Mol	Chain	Res	Type
50	DS	35	ILE
50	DS	53	SER
50	DS	59	LYS
50	DS	97	ARG
51	DT	2	ASN
51	DT	3	ARG
51	DT	24	PRO
51	DT	26	ASP
51	DT	27	THR
51	DT	28	VAL
51	DT	30	VAL
51	DT	33	LYS
51	DT	35	LYS
51	DT	57	PHE
51	DT	58	ASN
51	DT	80	SER
51	DT	82	LEU
51	DT	83	ILE
51	DT	88	ILE
51	DT	97	ALA
51	DT	107	ASP
51	DT	129	ARG
52	DU	32	PHE
52	DU	93	LYS
53	DV	2	PHE
53	DV	46	VAL
53	DV	53	GLU
54	DW	11	ARG
54	DW	111	HIS
56	DY	5	MET
56	DY	7	VAL
56	DY	24	VAL
56	DY	42	VAL
56	DY	45	VAL
56	DY	60	PHE
56	DY	66	PRO
56	DY	77	PRO
56	DY	78	ALA
56	DY	96	ILE
56	DY	98	VAL
57	DZ	31	ARG
57	DZ	39	VAL

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Mol	Chain	Res	Type
57	DZ	42	VAL
57	DZ	51	ALA
57	DZ	52	SER
57	DZ	112	ARG
57	DZ	117	LEU
57	DZ	136	PHE
57	DZ	137	ILE
57	DZ	138	GLU
57	DZ	163	LEU
2	AB	22	LYS
2	AB	83	MET
2	AB	143	GLU
2	AB	154	LEU
2	AB	194	PRO
3	AC	15	THR
3	AC	45	LYS
3	AC	61	ALA
3	AC	156	ARG
4	AD	24	GLU
4	AD	178	VAL
4	AD	182	LYS
4	AD	195	ALA
5	AE	129	ILE
5	AE	146	ALA
5	AE	149	GLU
5	AE	153	LYS
6	AF	43	LEU
6	AF	62	TRP
6	AF	81	ILE
7	AG	14	PRO
9	AI	95	LYS
9	AI	100	GLY
9	AI	109	VAL
12	AL	12	ARG
12	AL	17	LYS
12	AL	22	SER
12	AL	23	LYS
12	AL	27	LEU
12	AL	37	CYS
12	AL	115	LYS
12	AL	121	GLY
12	AL	123	LYS

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Mol	Chain	Res	Type
13	AM	12	ASN
13	AM	29	ARG
13	AM	108	ARG
14	AN	26	ARG
15	AO	24	SER
15	AO	85	LEU
16	AP	17	TYR
16	AP	44	THR
16	AP	78	GLY
17	AQ	14	LYS
17	AQ	34	LYS
17	AQ	49	GLU
18	AR	31	LEU
20	AT	94	ALA
20	AT	101	GLY
25	B0	74	ARG
26	B1	28	GLY
26	B1	53	VAL
26	B1	56	GLN
26	B1	58	ILE
26	B1	84	GLY
26	B1	85	LEU
26	B1	94	LEU
26	B1	95	LEU
28	B3	17	LYS
28	B3	18	ASP
29	B4	27	THR
30	B5	51	TYR
31	B6	18	ARG
31	B6	44	ARG
38	BD	3	VAL
38	BD	32	SER
38	BD	127	VAL
38	BD	169	GLU
38	BD	241	PRO
39	BE	7	VAL
39	BE	57	LYS
39	BE	66	HIS
39	BE	71	GLY
39	BE	77	ILE
39	BE	130	GLY
39	BE	186	GLY

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Mol	Chain	Res	Type
40	BF	3	GLU
40	BF	11	VAL
40	BF	16	GLY
40	BF	25	PRO
40	BF	60	SER
40	BF	84	VAL
40	BF	127	GLU
40	BF	128	ALA
40	BF	132	VAL
40	BF	134	GLY
41	BG	3	LEU
41	BG	28	VAL
41	BG	70	VAL
41	BG	96	ARG
41	BG	122	PRO
41	BG	155	MET
41	BG	169	ALA
42	BH	24	VAL
42	BH	45	VAL
42	BH	69	ARG
42	BH	92	ILE
42	BH	138	LYS
42	BH	154	PRO
43	BI	12	LEU
43	BI	16	GLY
43	BI	92	VAL
43	BI	99	GLU
43	BI	117	GLU
45	BN	57	ALA
45	BN	60	ILE
45	BN	63	THR
45	BN	127	ASP
45	BN	133	GLN
46	BO	27	GLY
47	BP	11	GLY
47	BP	25	SER
47	BP	30	THR
47	BP	48	PRO
47	BP	49	ARG
47	BP	98	GLU
47	BP	106	LEU
47	BP	108	LYS

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Mol	Chain	Res	Type
47	BP	141	ALA
48	BQ	20	ALA
49	BR	5	LYS
50	BS	32	LEU
50	BS	90	GLY
50	BS	92	TYR
50	BS	96	GLY
50	BS	100	ALA
50	BS	102	ALA
51	BT	17	THR
51	BT	32	TYR
51	BT	105	LEU
51	BT	123	GLN
52	BU	91	ASP
53	BV	16	PRO
53	BV	18	LEU
53	BV	44	LYS
53	BV	79	VAL
54	BW	6	ILE
54	BW	63	ASP
54	BW	93	ALA
55	BX	46	ALA
56	BY	22	GLY
56	BY	27	VAL
56	BY	80	GLY
56	BY	90	LEU
57	BZ	31	ARG
57	BZ	39	VAL
57	BZ	41	LEU
57	BZ	42	VAL
57	BZ	78	LYS
57	BZ	134	PRO
57	BZ	146	ILE
57	BZ	170	THR
2	CB	22	LYS
2	CB	83	MET
2	CB	123	ALA
2	CB	194	PRO
3	CC	15	THR
3	CC	45	LYS
3	CC	61	ALA
4	CD	24	GLU

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Mol	Chain	Res	Type
4	CD	178	VAL
4	CD	182	LYS
4	CD	195	ALA
5	CE	105	VAL
5	CE	129	ILE
5	CE	146	ALA
5	CE	149	GLU
5	CE	153	LYS
6	CF	16	GLN
6	CF	43	LEU
6	CF	62	TRP
6	CF	81	ILE
7	CG	14	PRO
9	CI	95	LYS
9	CI	100	GLY
9	CI	109	VAL
11	CK	48	ILE
12	CL	12	ARG
12	CL	17	LYS
12	CL	22	SER
12	CL	23	LYS
12	CL	27	LEU
12	CL	37	CYS
12	CL	115	LYS
12	CL	121	GLY
12	CL	123	LYS
13	CM	4	ILE
13	CM	12	ASN
13	CM	29	ARG
13	CM	108	ARG
14	CN	26	ARG
15	CO	24	SER
15	CO	85	LEU
16	CP	17	TYR
16	CP	44	THR
16	CP	78	GLY
17	CQ	14	LYS
17	CQ	34	LYS
17	CQ	49	GLU
18	CR	31	LEU
20	CT	74	LYS
20	CT	94	ALA

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Mol	Chain	Res	Type
20	CT	101	GLY
25	D0	74	ARG
26	D1	52	ARG
26	D1	84	GLY
26	D1	85	LEU
26	D1	94	LEU
27	D2	44	LEU
27	D2	47	ASN
28	D3	17	LYS
29	D4	27	THR
30	D5	51	TYR
31	D6	18	ARG
31	D6	44	ARG
33	D8	14	VAL
38	DD	3	VAL
38	DD	32	SER
38	DD	127	VAL
38	DD	169	GLU
39	DE	7	VAL
39	DE	57	LYS
39	DE	66	HIS
39	DE	77	ILE
39	DE	130	GLY
39	DE	186	GLY
40	DF	3	GLU
40	DF	11	VAL
40	DF	16	GLY
40	DF	25	PRO
40	DF	84	VAL
40	DF	127	GLU
40	DF	128	ALA
40	DF	132	VAL
40	DF	134	GLY
41	DG	24	GLY
41	DG	115	ARG
41	DG	127	GLY
42	DH	24	VAL
42	DH	45	VAL
42	DH	69	ARG
42	DH	138	LYS
42	DH	154	PRO
43	DI	16	GLY

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Mol	Chain	Res	Type
43	DI	92	VAL
43	DI	99	GLU
43	DI	117	GLU
45	DN	57	ALA
45	DN	60	ILE
45	DN	63	THR
45	DN	64	GLY
45	DN	127	ASP
45	DN	133	GLN
46	DO	35	VAL
47	DP	11	GLY
47	DP	25	SER
47	DP	30	THR
47	DP	49	ARG
47	DP	98	GLU
47	DP	106	LEU
47	DP	108	LYS
47	DP	141	ALA
48	DQ	20	ALA
48	DQ	29	PHE
49	DR	5	LYS
50	DS	32	LEU
50	DS	90	GLY
50	DS	92	TYR
50	DS	96	GLY
50	DS	100	ALA
50	DS	102	ALA
51	DT	12	SER
51	DT	17	THR
51	DT	29	ARG
51	DT	32	TYR
51	DT	105	LEU
51	DT	123	GLN
52	DU	91	ASP
53	DV	16	PRO
53	DV	18	LEU
53	DV	44	LYS
53	DV	79	VAL
54	DW	6	ILE
54	DW	63	ASP
54	DW	93	ALA
55	DX	19	ALA

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Mol	Chain	Res	Type
55	DX	46	ALA
56	DY	22	GLY
56	DY	27	VAL
56	DY	80	GLY
56	DY	90	LEU
57	DZ	5	LEU
57	DZ	38	TYR
57	DZ	64	GLY
57	DZ	114	GLY
57	DZ	165	VAL
57	DZ	168	GLU
2	AB	130	ARG
2	AB	131	PRO
2	AB	159	PRO
2	AB	198	ASP
3	AC	145	GLY
3	AC	181	ASN
4	AD	31	CYS
4	AD	37	PRO
4	AD	47	ARG
4	AD	73	ARG
4	AD	84	LYS
4	AD	107	ARG
4	AD	110	PHE
5	AE	20	GLN
5	AE	72	GLN
5	AE	105	VAL
6	AF	16	GLN
6	AF	82	ARG
8	AH	51	VAL
9	AI	41	VAL
9	AI	110	GLU
9	AI	121	ARG
10	AJ	82	ILE
11	AK	48	ILE
11	AK	75	TYR
12	AL	89	ARG
13	AM	4	ILE
13	AM	21	TYR
13	AM	31	LYS
14	AN	16	PHE
14	AN	36	PHE

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Mol	Chain	Res	Type
15	AO	19	PRO
15	AO	26	GLU
16	AP	69	THR
18	AR	45	SER
18	AR	58	LEU
19	AS	14	HIS
19	AS	25	LYS
20	AT	9	ASN
20	AT	98	PRO
25	B0	49	LYS
26	B1	76	ARG
27	B2	17	SER
28	B3	38	GLU
29	B4	28	LYS
29	B4	51	ASP
30	B5	48	GLU
33	B8	14	VAL
37	BC	220	GLY
38	BD	242	ARG
38	BD	245	PRO
39	BE	17	ASP
39	BE	46	ALA
40	BF	5	ALA
40	BF	22	ALA
40	BF	161	GLU
41	BG	43	LEU
41	BG	57	ALA
41	BG	97	ASP
41	BG	142	PRO
41	BG	147	ASP
42	BH	152	ARG
43	BI	36	ALA
43	BI	53	ALA
43	BI	91	SER
43	BI	114	LEU
45	BN	64	GLY
45	BN	94	HIS
46	BO	26	LYS
46	BO	35	VAL
46	BO	64	ARG
47	BP	6	LEU
47	BP	9	ASN

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Mol	Chain	Res	Type
47	BP	18	ARG
47	BP	52	GLU
47	BP	55	ARG
47	BP	65	ARG
48	BQ	29	PHE
48	BQ	57	HIS
48	BQ	134	ARG
48	BQ	135	ASP
48	BQ	140	ALA
49	BR	102	GLU
49	BR	106	GLY
50	BS	24	LEU
50	BS	94	TYR
51	BT	29	ARG
52	BU	89	GLU
53	BV	3	ALA
53	BV	19	LYS
54	BW	35	ILE
55	BX	19	ALA
55	BX	40	LYS
55	BX	48	LYS
56	BY	101	LYS
57	BZ	136	PHE
2	CB	130	ARG
2	CB	131	PRO
2	CB	143	GLU
2	CB	198	ASP
3	CC	145	GLY
3	CC	156	ARG
3	CC	181	ASN
4	CD	31	CYS
4	CD	37	PRO
4	CD	47	ARG
4	CD	73	ARG
4	CD	84	LYS
4	CD	110	PHE
5	CE	20	GLN
5	CE	72	GLN
6	CF	82	ARG
8	CH	7	ALA
9	CI	41	VAL
9	CI	110	GLU

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Mol	Chain	Res	Type
9	CI	121	ARG
11	CK	75	TYR
12	CL	89	ARG
12	CL	101	VAL
13	CM	21	TYR
13	CM	31	LYS
14	CN	16	PHE
14	CN	28	GLY
14	CN	36	PHE
15	CO	19	PRO
15	CO	26	GLU
15	CO	76	GLU
16	CP	69	THR
18	CR	45	SER
18	CR	58	LEU
19	CS	14	HIS
19	CS	25	LYS
20	CT	98	PRO
21	CU	24	ARG
25	D0	49	LYS
26	D1	53	VAL
26	D1	69	LYS
28	D3	18	ASP
28	D3	38	GLU
29	D4	28	LYS
29	D4	51	ASP
31	D6	36	LEU
33	D8	57	ARG
37	DC	220	GLY
38	DD	30	GLU
38	DD	156	ALA
38	DD	242	ARG
39	DE	17	ASP
39	DE	46	ALA
40	DF	5	ALA
40	DF	22	ALA
40	DF	60	SER
40	DF	136	THR
40	DF	161	GLU
41	DG	27	ASN
41	DG	48	GLU
41	DG	50	ALA

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Mol	Chain	Res	Type
41	DG	68	PRO
41	DG	87	PRO
41	DG	103	LEU
41	DG	142	PRO
42	DH	92	ILE
42	DH	152	ARG
43	DI	36	ALA
43	DI	53	ALA
43	DI	91	SER
43	DI	114	LEU
45	DN	94	HIS
46	DO	26	LYS
47	DP	6	LEU
47	DP	9	ASN
47	DP	18	ARG
47	DP	52	GLU
47	DP	55	ARG
47	DP	65	ARG
48	DQ	57	HIS
48	DQ	134	ARG
48	DQ	135	ASP
48	DQ	140	ALA
49	DR	102	GLU
50	DS	24	LEU
50	DS	94	TYR
50	DS	107	GLU
53	DV	3	ALA
53	DV	19	LYS
54	DW	35	ILE
55	DX	40	LYS
55	DX	48	LYS
56	DY	53	PRO
56	DY	101	LYS
57	DZ	123	ASP
57	DZ	134	PRO
57	DZ	164	ALA
2	AB	52	GLU
2	AB	190	THR
3	AC	56	ASP
3	AC	74	GLY
3	AC	75	VAL
3	AC	168	ALA

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Mol	Chain	Res	Type
4	AD	153	ARG
4	AD	171	GLY
7	AG	6	ARG
8	AH	7	ALA
8	AH	50	ARG
9	AI	44	VAL
10	AJ	59	SER
12	AL	101	VAL
13	AM	16	ASP
13	AM	87	TYR
14	AN	5	ALA
15	AO	22	THR
15	AO	76	GLU
16	AP	9	PHE
16	AP	59	TRP
17	AQ	66	SER
18	AR	59	SER
18	AR	87	ARG
20	AT	48	LYS
20	AT	97	ALA
21	AU	24	ARG
26	B1	69	LYS
27	B2	70	GLN
29	B4	3	GLU
29	B4	5	ILE
29	B4	9	LEU
29	B4	20	ASN
30	B5	56	LYS
31	B6	15	GLU
31	B6	20	ASN
31	B6	36	LEU
31	B6	38	LYS
33	B8	31	HIS
33	B8	57	ARG
37	BC	203	GLU
38	BD	13	ARG
38	BD	156	ALA
38	BD	162	SER
38	BD	262	ARG
39	BE	58	ARG
39	BE	63	LEU
39	BE	76	ARG

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Mol	Chain	Res	Type
39	BE	189	PRO
39	BE	201	THR
40	BF	9	ILE
40	BF	136	THR
40	BF	168	ARG
40	BF	176	LEU
41	BG	143	GLU
41	BG	167	GLU
42	BH	49	VAL
42	BH	141	VAL
43	BI	6	LEU
43	BI	70	GLU
43	BI	87	LYS
43	BI	122	GLU
45	BN	56	ASN
46	BO	5	GLN
47	BP	97	PRO
48	BQ	78	PRO
49	BR	4	LEU
49	BR	6	SER
49	BR	107	ASP
50	BS	104	GLY
50	BS	107	GLU
51	BT	128	GLU
52	BU	90	VAL
56	BY	9	LYS
56	BY	39	VAL
56	BY	53	PRO
57	BZ	23	LYS
57	BZ	38	TYR
57	BZ	65	GLN
57	BZ	81	ARG
57	BZ	111	VAL
57	BZ	122	ARG
57	BZ	166	SER
57	BZ	169	GLU
2	CB	52	GLU
2	CB	80	ILE
2	CB	159	PRO
2	CB	190	THR
2	CB	225	ALA
3	CC	56	ASP

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Mol	Chain	Res	Type
3	CC	74	GLY
3	CC	75	VAL
3	CC	168	ALA
4	CD	107	ARG
4	CD	153	ARG
4	CD	171	GLY
7	CG	6	ARG
8	CH	51	VAL
10	CJ	59	SER
10	CJ	82	ILE
12	CL	6	THR
13	CM	16	ASP
13	CM	87	TYR
14	CN	5	ALA
15	CO	22	THR
16	CP	9	PHE
16	CP	59	TRP
16	CP	63	GLY
18	CR	59	SER
18	CR	87	ARG
20	CT	9	ASN
20	CT	48	LYS
20	CT	97	ALA
26	D1	54	ALA
26	D1	93	GLU
29	D4	3	GLU
29	D4	9	LEU
29	D4	20	ASN
30	D5	48	GLU
31	D6	20	ASN
31	D6	38	LYS
33	D8	31	HIS
37	DC	203	GLU
38	DD	13	ARG
38	DD	162	SER
38	DD	244	ARG
39	DE	58	ARG
39	DE	63	LEU
39	DE	201	THR
40	DF	9	ILE
40	DF	168	ARG
40	DF	176	LEU

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Mol	Chain	Res	Type
41	DG	77	ILE
41	DG	84	LYS
41	DG	111	LEU
42	DH	49	VAL
42	DH	141	VAL
42	DH	143	GLN
43	DI	6	LEU
43	DI	70	GLU
43	DI	87	LYS
45	DN	56	ASN
46	DO	5	GLN
46	DO	64	ARG
47	DP	97	PRO
48	DQ	15	GLY
48	DQ	78	PRO
49	DR	4	LEU
49	DR	6	SER
49	DR	106	GLY
49	DR	107	ASP
50	DS	104	GLY
51	DT	119	LYS
52	DU	89	GLU
52	DU	90	VAL
56	DY	9	LYS
56	DY	39	VAL
57	DZ	37	VAL
57	DZ	41	LEU
57	DZ	135	GLU
2	AB	19	HIS
2	AB	80	ILE
2	AB	95	GLN
3	AC	81	GLY
4	AD	44	GLY
4	AD	63	LYS
4	AD	136	PRO
5	AE	8	GLU
9	AI	34	ASN
11	AK	34	ASP
11	AK	101	SER
11	AK	122	LYS
12	AL	18	VAL
12	AL	82	VAL

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Mol	Chain	Res	Type
13	AM	53	VAL
14	AN	23	ARG
14	AN	28	GLY
16	AP	16	HIS
16	AP	49	LEU
16	AP	63	GLY
16	AP	83	GLU
19	AS	42	PRO
19	AS	64	GLU
19	AS	74	PHE
20	AT	25	ARG
20	AT	50	GLU
27	B2	48	HIS
29	B4	7	PRO
33	B8	3	LYS
38	BD	9	TYR
38	BD	10	THR
38	BD	28	GLU
38	BD	30	GLU
38	BD	244	ARG
38	BD	257	LEU
39	BE	56	PRO
39	BE	61	ARG
40	BF	14	PRO
40	BF	58	ALA
41	BG	14	GLU
41	BG	58	GLN
42	BH	47	GLU
42	BH	143	GLN
43	BI	115	ALA
43	BI	116	LEU
45	BN	135	PRO
47	BP	109	GLY
47	BP	148	LEU
48	BQ	122	GLY
49	BR	85	PRO
50	BS	88	ASP
50	BS	89	ARG
51	BT	39	ARG
51	BT	41	ARG
51	BT	119	LYS
52	BU	99	ALA

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Mol	Chain	Res	Type
53	BV	35	LEU
53	BV	49	THR
54	BW	44	ALA
54	BW	45	TYR
55	BX	22	ALA
56	BY	47	LYS
56	BY	91	GLU
57	BZ	171	ILE
57	BZ	173	ALA
2	CB	95	GLN
3	CC	81	GLY
3	CC	129	ALA
4	CD	44	GLY
4	CD	136	PRO
5	CE	8	GLU
8	CH	2	LEU
9	CI	34	ASN
9	CI	88	TYR
11	CK	34	ASP
11	CK	101	SER
11	CK	122	LYS
12	CL	18	VAL
13	CM	53	VAL
14	CN	23	ARG
16	CP	83	GLU
17	CQ	66	SER
19	CS	42	PRO
19	CS	64	GLU
19	CS	74	PHE
20	CT	25	ARG
20	CT	50	GLU
26	D1	28	GLY
27	D2	10	LEU
29	D4	5	ILE
29	D4	7	PRO
30	D5	56	LYS
31	D6	15	GLU
33	D8	3	LYS
38	DD	9	TYR
38	DD	10	THR
38	DD	28	GLU
38	DD	74	GLY

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Mol	Chain	Res	Type
38	DD	262	ARG
39	DE	56	PRO
39	DE	61	ARG
39	DE	76	ARG
39	DE	117	MET
40	DF	14	PRO
40	DF	58	ALA
42	DH	13	LYS
42	DH	47	GLU
43	DI	115	ALA
43	DI	116	LEU
43	DI	122	GLU
45	DN	135	PRO
47	DP	10	PRO
47	DP	148	LEU
48	DQ	122	GLY
49	DR	85	PRO
50	DS	88	ASP
50	DS	89	ARG
51	DT	39	ARG
51	DT	41	ARG
51	DT	55	ASN
51	DT	128	GLU
51	DT	133	GLU
53	DV	35	LEU
53	DV	49	THR
54	DW	44	ALA
55	DX	22	ALA
56	DY	47	LYS
57	DZ	14	LYS
57	DZ	93	ASP
57	DZ	166	SER
57	DZ	169	GLU
2	AB	13	ALA
2	AB	225	ALA
4	AD	7	PRO
4	AD	172	PRO
6	AF	38	GLU
8	AH	2	LEU
8	AH	26	VAL
10	AJ	36	GLY
12	AL	6	THR

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Mol	Chain	Res	Type
15	AO	74	ASP
15	AO	87	ILE
21	AU	9	ARG
31	B6	52	VAL
38	BD	74	GLY
39	BE	45	THR
39	BE	113	PHE
41	BG	129	GLY
42	BH	13	LYS
42	BH	81	GLU
43	BI	104	GLN
47	BP	10	PRO
47	BP	146	VAL
51	BT	55	ASN
51	BT	133	GLU
56	BY	18	GLY
56	BY	81	LYS
57	BZ	165	VAL
2	CB	19	HIS
3	CC	66	VAL
3	CC	133	ALA
4	CD	7	PRO
4	CD	43	HIS
4	CD	172	PRO
8	CH	6	ILE
8	CH	50	ARG
9	CI	44	VAL
10	CJ	36	GLY
14	CN	35	ARG
15	CO	87	ILE
16	CP	16	HIS
17	CQ	94	ASN
21	CU	9	ARG
31	D6	52	VAL
41	DG	56	ALA
42	DH	81	GLU
43	DI	75	LEU
46	DO	68	GLU
47	DP	109	GLY
47	DP	146	VAL
52	DU	77	SER
52	DU	114	LYS

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Mol	Chain	Res	Type
56	DY	81	LYS
56	DY	91	GLU
57	DZ	118	GLN
57	DZ	159	PRO
3	AC	66	VAL
3	AC	114	PRO
5	AE	128	PRO
8	AH	6	ILE
12	AL	83	VAL
19	AS	9	VAL
26	B1	30	VAL
38	BD	118	VAL
39	BE	39	PRO
40	BF	126	VAL
41	BG	154	GLY
45	BN	129	PRO
48	BQ	15	GLY
53	BV	50	PRO
3	CC	114	PRO
8	CH	26	VAL
12	CL	82	VAL
12	CL	83	VAL
15	CO	74	ASP
19	CS	9	VAL
27	D2	19	VAL
37	DC	176	VAL
38	DD	118	VAL
39	DE	189	PRO
40	DF	126	VAL
41	DG	63	ILE
45	DN	129	PRO
47	DP	83	VAL
7	AG	88	PRO
14	AN	13	THR
37	BC	176	VAL
38	BD	11	PRO
39	BE	55	ASN
46	BO	98	VAL
47	BP	83	VAL
50	BS	14	VAL
57	BZ	62	PRO
5	CE	128	PRO

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Mol	Chain	Res	Type
7	CG	88	PRO
14	CN	13	THR
38	DD	11	PRO
38	DD	236	GLY
39	DE	39	PRO
50	DS	14	VAL
53	DV	50	PRO
56	DY	31	LEU
8	AH	74	PRO
29	B4	50	VAL
39	BE	33	VAL
43	BI	88	ILE
53	BV	22	VAL
3	CC	174	PRO
4	CD	40	PRO
8	CH	74	PRO
11	CK	121	PRO
29	D4	50	VAL
39	DE	33	VAL
39	DE	55	ASN
41	DG	129	GLY
46	DO	98	VAL
57	DZ	15	PRO
3	AC	14	ILE
3	AC	108	ASN
3	AC	174	PRO
4	AD	40	PRO
20	AT	63	ILE
39	BE	175	VAL
56	BY	37	VAL
3	CC	14	ILE
3	CC	108	ASN
8	CH	103	VAL
39	DE	175	VAL
41	DG	28	VAL
43	DI	88	ILE
53	DV	22	VAL
56	DY	18	GLY
11	AK	121	PRO
29	B4	4	GLY
57	BZ	159	PRO
57	BZ	177	PRO

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Mol	Chain	Res	Type
42	DH	12	PRO
56	DY	37	VAL
45	DN	126	PRO
45	BN	126	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	202/220 (92%)	186 (92%)	16 (8%)	15	49
2	CB	202/220 (92%)	187 (93%)	15 (7%)	17	51
3	AC	160/188 (85%)	145 (91%)	15 (9%)	11	39
3	CC	160/188 (85%)	146 (91%)	14 (9%)	12	43
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%)	107 (93%)	8 (7%)	19	54
5	CE	115/123 (94%)	107 (93%)	8 (7%)	19	54
6	AF	90/90 (100%)	87 (97%)	3 (3%)	45	79
6	CF	90/90 (100%)	87 (97%)	3 (3%)	45	79
7	AG	126/127 (99%)	121 (96%)	5 (4%)	38	75
7	CG	126/127 (99%)	121 (96%)	5 (4%)	38	75
8	AH	119/119 (100%)	109 (92%)	10 (8%)	14	46
8	CH	119/119 (100%)	109 (92%)	10 (8%)	14	46
9	AI	98/99 (99%)	90 (92%)	8 (8%)	14	47
9	CI	98/99 (99%)	90 (92%)	8 (8%)	14	47
10	AJ	88/92 (96%)	83 (94%)	5 (6%)	25	62
10	CJ	88/92 (96%)	83 (94%)	5 (6%)	25	62
11	AK	90/99 (91%)	85 (94%)	5 (6%)	26	62
11	CK	90/99 (91%)	85 (94%)	5 (6%)	26	62

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	AL	104/111 (94%)	85 (82%)	19 (18%)	2	9
12	CL	104/111 (94%)	84 (81%)	20 (19%)	2	8
13	AM	94/101 (93%)	84 (89%)	10 (11%)	8	31
13	CM	94/101 (93%)	84 (89%)	10 (11%)	8	31
14	AN	49/50 (98%)	47 (96%)	2 (4%)	37	74
14	CN	49/50 (98%)	47 (96%)	2 (4%)	37	74
15	AO	79/80 (99%)	75 (95%)	4 (5%)	29	66
15	CO	79/80 (99%)	75 (95%)	4 (5%)	29	66
16	AP	72/74 (97%)	66 (92%)	6 (8%)	14	46
16	CP	72/74 (97%)	66 (92%)	6 (8%)	14	46
17	AQ	94/97 (97%)	90 (96%)	4 (4%)	35	72
17	CQ	94/97 (97%)	90 (96%)	4 (4%)	35	72
18	AR	61/77 (79%)	59 (97%)	2 (3%)	45	79
18	CR	61/77 (79%)	59 (97%)	2 (3%)	45	79
19	AS	69/80 (86%)	62 (90%)	7 (10%)	9	33
19	CS	69/80 (86%)	61 (88%)	8 (12%)	7	27
20	AT	76/82 (93%)	71 (93%)	5 (7%)	21	56
20	CT	76/82 (93%)	71 (93%)	5 (7%)	21	56
21	AU	19/22 (86%)	17 (90%)	2 (10%)	8	31
21	CU	19/22 (86%)	18 (95%)	1 (5%)	28	64
25	B0	66/67 (98%)	59 (89%)	7 (11%)	8	31
25	D0	66/67 (98%)	59 (89%)	7 (11%)	8	31
26	B1	78/83 (94%)	70 (90%)	8 (10%)	9	32
26	D1	78/83 (94%)	68 (87%)	10 (13%)	5	21
27	B2	66/67 (98%)	57 (86%)	9 (14%)	5	19
27	D2	66/67 (98%)	60 (91%)	6 (9%)	12	40
28	B3	51/52 (98%)	48 (94%)	3 (6%)	24	60
28	D3	51/52 (98%)	48 (94%)	3 (6%)	24	60
29	B4	51/63 (81%)	42 (82%)	9 (18%)	2	10
29	D4	51/63 (81%)	42 (82%)	9 (18%)	2	10
30	B5	47/52 (90%)	42 (89%)	5 (11%)	8	31

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
30	D5	47/52 (90%)	42 (89%)	5 (11%)	8	31
31	B6	49/52 (94%)	43 (88%)	6 (12%)	6	24
31	D6	49/52 (94%)	43 (88%)	6 (12%)	6	24
32	B7	40/42 (95%)	35 (88%)	5 (12%)	6	22
32	D7	40/42 (95%)	36 (90%)	4 (10%)	9	34
33	B8	53/55 (96%)	44 (83%)	9 (17%)	2	11
33	D8	53/55 (96%)	44 (83%)	9 (17%)	2	11
34	B9	34/34 (100%)	33 (97%)	1 (3%)	50	81
34	D9	34/34 (100%)	33 (97%)	1 (3%)	50	81
37	BC	99/181 (55%)	94 (95%)	5 (5%)	29	66
37	DC	99/181 (55%)	94 (95%)	5 (5%)	29	66
38	BD	213/218 (98%)	185 (87%)	28 (13%)	5	21
38	DD	213/218 (98%)	187 (88%)	26 (12%)	6	24
39	BE	165/166 (99%)	144 (87%)	21 (13%)	5	22
39	DE	165/166 (99%)	143 (87%)	22 (13%)	5	20
40	BF	165/166 (99%)	149 (90%)	16 (10%)	10	36
40	DF	165/166 (99%)	149 (90%)	16 (10%)	10	36
41	BG	155/156 (99%)	140 (90%)	15 (10%)	10	36
41	DG	155/156 (99%)	140 (90%)	15 (10%)	10	36
42	BH	137/148 (93%)	121 (88%)	16 (12%)	7	26
42	DH	137/148 (93%)	121 (88%)	16 (12%)	7	26
43	BI	122/124 (98%)	112 (92%)	10 (8%)	14	47
43	DI	122/124 (98%)	112 (92%)	10 (8%)	14	47
45	BN	117/119 (98%)	101 (86%)	16 (14%)	4	19
45	DN	117/119 (98%)	101 (86%)	16 (14%)	4	19
46	BO	100/100 (100%)	94 (94%)	6 (6%)	24	60
46	DO	100/100 (100%)	94 (94%)	6 (6%)	24	60
47	BP	112/116 (97%)	93 (83%)	19 (17%)	2	11
47	DP	112/116 (97%)	93 (83%)	19 (17%)	2	11
48	BQ	110/111 (99%)	100 (91%)	10 (9%)	12	40
48	DQ	110/111 (99%)	101 (92%)	9 (8%)	14	47

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
49	BR	100/101 (99%)	87 (87%)	13 (13%)	5	21
49	DR	100/101 (99%)	86 (86%)	14 (14%)	4	18
50	BS	77/88 (88%)	64 (83%)	13 (17%)	2	11
50	DS	77/88 (88%)	64 (83%)	13 (17%)	2	11
51	BT	118/127 (93%)	96 (81%)	22 (19%)	2	9
51	DT	118/127 (93%)	95 (80%)	23 (20%)	2	7
52	BU	92/94 (98%)	83 (90%)	9 (10%)	10	36
52	DU	92/94 (98%)	81 (88%)	11 (12%)	6	24
53	BV	82/82 (100%)	67 (82%)	15 (18%)	2	9
53	DV	82/82 (100%)	68 (83%)	14 (17%)	2	11
54	BW	91/92 (99%)	81 (89%)	10 (11%)	8	30
54	DW	91/92 (99%)	81 (89%)	10 (11%)	8	30
55	BX	74/78 (95%)	69 (93%)	5 (7%)	20	55
55	DX	74/78 (95%)	69 (93%)	5 (7%)	20	55
56	BY	84/91 (92%)	70 (83%)	14 (17%)	3	11
56	DY	84/91 (92%)	69 (82%)	15 (18%)	2	10
57	BZ	162/179 (90%)	140 (86%)	22 (14%)	5	19
57	DZ	162/179 (90%)	145 (90%)	17 (10%)	8	31
All	All	9790/10432 (94%)	8794 (90%)	996 (10%)	9	33

All (996) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	17	PHE
2	AB	36	ARG
2	AB	48	MET
2	AB	87	ARG
2	AB	137	ARG
2	AB	140	HIS
2	AB	145	LEU
2	AB	178	ARG
2	AB	187	LEU
2	AB	196	LEU
2	AB	198	ASP
2	AB	204	ASN

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Mol	Chain	Res	Type
2	AB	206	ASP
2	AB	212	GLN
2	AB	221	LEU
3	AC	3	ASN
3	AC	5	ILE
3	AC	16	ARG
3	AC	17	ASP
3	AC	18	TRP
3	AC	22	TRP
3	AC	29	TYR
3	AC	34	LEU
3	AC	69	HIS
3	AC	82	GLU
3	AC	107	GLN
3	AC	127	ARG
3	AC	131	ARG
3	AC	165	THR
3	AC	193	TYR
4	AD	3	ARG
4	AD	7	PRO
4	AD	9	CYS
4	AD	15	GLU
4	AD	24	GLU
4	AD	36	ARG
4	AD	38	TYR
4	AD	53	ASP
4	AD	59	ARG
4	AD	79	PHE
4	AD	110	PHE
4	AD	129	ASN
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	144	ASP
4	AD	168	ARG
4	AD	190	ASP
5	AE	12	LEU
5	AE	20	GLN
5	AE	31	LEU
5	AE	36	ASP
5	AE	73	ASN
5	AE	79	GLU

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Mol	Chain	Res	Type
5	AE	101	ILE
5	AE	112	LEU
6	AF	24	GLU
6	AF	63	TYR
6	AF	69	GLU
7	AG	12	LEU
7	AG	88	PRO
7	AG	124	LEU
7	AG	140	ASP
7	AG	151	TYR
8	AH	1	MET
8	AH	25	ASP
8	AH	52	ASP
8	AH	60	ARG
8	AH	65	TYR
8	AH	83	ILE
8	AH	85	ARG
8	AH	102	ARG
8	AH	112	LEU
8	AH	115	SER
9	AI	10	ARG
9	AI	38	GLN
9	AI	78	LYS
9	AI	95	LYS
9	AI	114	TYR
9	AI	121	ARG
9	AI	125	TYR
9	AI	128	ARG
10	AJ	22	LYS
10	AJ	46	ARG
10	AJ	50	ILE
10	AJ	62	HIS
10	AJ	96	ILE
11	AK	40	ILE
11	AK	110	ASP
11	AK	116	HIS
11	AK	117	ASN
11	AK	124	LYS
12	AL	20	LYS
12	AL	40	VAL
12	AL	41	ARG
12	AL	44	THR

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Mol	Chain	Res	Type
12	AL	45	PRO
12	AL	46	LYS
12	AL	47	LYS
12	AL	48	PRO
12	AL	49	ASN
12	AL	64	TYR
12	AL	66	VAL
12	AL	77	LEU
12	AL	79	GLU
12	AL	83	VAL
12	AL	89	ARG
12	AL	92	ASP
12	AL	102	ARG
12	AL	120	TYR
12	AL	126	LYS
13	AM	47	ASP
13	AM	64	TRP
13	AM	79	LYS
13	AM	82	MET
13	AM	86	CYS
13	AM	92	HIS
13	AM	93	ARG
13	AM	106	ASN
13	AM	108	ARG
13	AM	115	LYS
14	AN	33	VAL
14	AN	41	ARG
15	AO	44	LYS
15	AO	65	ARG
15	AO	82	ILE
15	AO	88	ARG
16	AP	1	MET
16	AP	2	VAL
16	AP	6	LEU
16	AP	47	ASP
16	AP	65	GLN
16	AP	69	THR
17	AQ	38	ARG
17	AQ	42	TYR
17	AQ	52	LYS
17	AQ	55	ASP
18	AR	47	THR

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Mol	Chain	Res	Type
18	AR	76	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	22	LEU
19	AS	29	ARG
19	AS	37	ARG
19	AS	43	GLU
19	AS	70	LYS
20	AT	24	LEU
20	AT	26	ASN
20	AT	73	HIS
20	AT	75	ASN
20	AT	93	GLU
21	AU	5	ASP
21	AU	12	LYS
25	B0	3	HIS
25	B0	11	ARG
25	B0	14	ARG
25	B0	20	ARG
25	B0	36	ILE
25	B0	55	ARG
25	B0	64	ASP
26	B1	20	ARG
26	B1	40	ARG
26	B1	41	ARG
26	B1	45	ASN
26	B1	46	LEU
26	B1	51	VAL
26	B1	59	THR
26	B1	82	LEU
27	B2	2	LYS
27	B2	32	LEU
27	B2	34	GLU
27	B2	45	SER
27	B2	51	ARG
27	B2	64	LEU
27	B2	66	GLU
27	B2	68	ARG
27	B2	71	ASN
28	B3	8	LEU
28	B3	29	ARG
28	B3	30	ARG

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Mol	Chain	Res	Type
29	B4	1	MET
29	B4	5	ILE
29	B4	13	ARG
29	B4	20	ASN
29	B4	25	TYR
29	B4	28	LYS
29	B4	30	GLU
29	B4	32	TYR
29	B4	55	ARG
30	B5	4	HIS
30	B5	25	LEU
30	B5	46	CYS
30	B5	52	TYR
30	B5	55	ARG
31	B6	9	LEU
31	B6	10	LEU
31	B6	11	LEU
31	B6	16	CYS
31	B6	18	ARG
31	B6	42	TRP
32	B7	4	THR
32	B7	8	ASN
32	B7	24	THR
32	B7	41	ARG
32	B7	43	THR
33	B8	6	THR
33	B8	8	LYS
33	B8	30	ARG
33	B8	31	HIS
33	B8	34	TRP
33	B8	44	LYS
33	B8	47	LYS
33	B8	61	LEU
33	B8	64	TYR
34	B9	1	MET
37	BC	29	LEU
37	BC	39	ASP
37	BC	53	ARG
37	BC	173	HIS
37	BC	185	LYS
38	BD	10	THR
38	BD	24	ILE

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Mol	Chain	Res	Type
38	BD	26	LYS
38	BD	35	LYS
38	BD	43	ARG
38	BD	46	GLN
38	BD	49	ILE
38	BD	61	LEU
38	BD	65	ILE
38	BD	94	LEU
38	BD	95	LEU
38	BD	99	ASP
38	BD	103	ARG
38	BD	111	LEU
38	BD	116	GLN
38	BD	122	ASP
38	BD	126	GLN
38	BD	131	LEU
38	BD	166	GLN
38	BD	192	THR
38	BD	228	PRO
38	BD	229	VAL
38	BD	246	PRO
38	BD	257	LEU
38	BD	259	THR
38	BD	260	ARG
38	BD	268	ARG
38	BD	271	ILE
39	BE	7	VAL
39	BE	9	VAL
39	BE	12	THR
39	BE	33	VAL
39	BE	49	LEU
39	BE	53	PRO
39	BE	55	ASN
39	BE	63	LEU
39	BE	67	PHE
39	BE	78	LEU
39	BE	79	ARG
39	BE	87	GLU
39	BE	89	ASP
39	BE	94	GLU
39	BE	119	ARG
39	BE	144	ARG

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Mol	Chain	Res	Type
39	BE	169	ASN
39	BE	175	VAL
39	BE	188	VAL
39	BE	202	LYS
39	BE	203	LYS
40	BF	23	ASP
40	BF	28	ILE
40	BF	38	ARG
40	BF	66	PRO
40	BF	68	LYS
40	BF	74	ARG
40	BF	100	THR
40	BF	110	LEU
40	BF	125	LEU
40	BF	158	THR
40	BF	160	ASN
40	BF	164	ARG
40	BF	175	THR
40	BF	183	VAL
40	BF	196	LEU
40	BF	200	GLU
41	BG	21	ARG
41	BG	22	ARG
41	BG	36	LYS
41	BG	39	ILE
41	BG	40	ASN
41	BG	45	GLU
41	BG	51	ARG
41	BG	80	PHE
41	BG	83	ARG
41	BG	86	MET
41	BG	96	ARG
41	BG	125	PHE
41	BG	126	ASP
41	BG	143	GLU
41	BG	147	ASP
42	BH	9	ILE
42	BH	34	GLU
42	BH	42	ARG
42	BH	46	GLU
42	BH	53	GLU
42	BH	70	THR

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Mol	Chain	Res	Type
42	BH	88	LEU
42	BH	89	ILE
42	BH	94	TYR
42	BH	105	LEU
42	BH	116	GLU
42	BH	143	GLN
42	BH	153	LYS
42	BH	157	TYR
42	BH	163	TYR
42	BH	170	ARG
43	BI	12	LEU
43	BI	20	ASP
43	BI	74	ASN
43	BI	81	VAL
43	BI	92	VAL
43	BI	109	ILE
43	BI	130	TYR
43	BI	132	PRO
43	BI	139	GLN
43	BI	140	LEU
45	BN	4	TYR
45	BN	23	LEU
45	BN	28	THR
45	BN	34	LEU
45	BN	39	ARG
45	BN	41	ASP
45	BN	48	MET
45	BN	50	ASP
45	BN	56	ASN
45	BN	73	THR
45	BN	85	ILE
45	BN	87	LEU
45	BN	93	THR
45	BN	120	LEU
45	BN	121	LYS
45	BN	127	ASP
46	BO	28	SER
46	BO	32	TYR
46	BO	48	PRO
46	BO	73	ASP
46	BO	78	ARG
46	BO	108	GLU

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Mol	Chain	Res	Type
47	BP	6	LEU
47	BP	13	ASN
47	BP	16	ARG
47	BP	18	ARG
47	BP	39	LYS
47	BP	40	SER
47	BP	42	SER
47	BP	45	LEU
47	BP	47	ASP
47	BP	57	THR
47	BP	59	LEU
47	BP	61	ARG
47	BP	85	LEU
47	BP	91	PHE
47	BP	95	VAL
47	BP	98	GLU
47	BP	108	LYS
47	BP	114	ILE
47	BP	135	LEU
48	BQ	18	LYS
48	BQ	29	PHE
48	BQ	45	GLN
48	BQ	56	ARG
48	BQ	67	ARG
48	BQ	79	LEU
48	BQ	89	ASN
48	BQ	110	THR
48	BQ	135	ASP
48	BQ	137	TYR
49	BR	2	ARG
49	BR	9	LYS
49	BR	37	THR
49	BR	54	LEU
49	BR	67	LEU
49	BR	79	LEU
49	BR	81	ASP
49	BR	91	GLN
49	BR	94	TYR
49	BR	97	VAL
49	BR	99	LYS
49	BR	100	LEU
49	BR	113	LEU

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Mol	Chain	Res	Type
50	BS	11	LYS
50	BS	12	PHE
50	BS	15	ARG
50	BS	21	THR
50	BS	26	LEU
50	BS	36	TYR
50	BS	44	LYS
50	BS	67	ARG
50	BS	89	ARG
50	BS	92	TYR
50	BS	97	ARG
50	BS	101	LEU
50	BS	106	ARG
51	BT	3	ARG
51	BT	6	LEU
51	BT	13	ARG
51	BT	14	TYR
51	BT	24	PRO
51	BT	29	ARG
51	BT	41	ARG
51	BT	44	ASP
51	BT	51	ARG
51	BT	58	ASN
51	BT	59	THR
51	BT	64	ARG
51	BT	65	LYS
51	BT	72	VAL
51	BT	78	LEU
51	BT	82	LEU
51	BT	85	LYS
51	BT	93	ARG
51	BT	95	ARG
51	BT	100	TYR
51	BT	124	ASP
51	BT	128	GLU
52	BU	59	ARG
52	BU	66	ASN
52	BU	69	CYS
52	BU	74	LEU
52	BU	83	LEU
52	BU	101	ARG
52	BU	102	GLU

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Mol	Chain	Res	Type
52	BU	104	GLN
52	BU	108	GLU
53	BV	1	MET
53	BV	13	ARG
53	BV	16	PRO
53	BV	18	LEU
53	BV	19	LYS
53	BV	21	ARG
53	BV	39	LEU
53	BV	40	LEU
53	BV	45	THR
53	BV	61	VAL
53	BV	79	VAL
53	BV	82	ARG
53	BV	91	TYR
53	BV	95	LEU
53	BV	99	ILE
54	BW	11	ARG
54	BW	51	LEU
54	BW	52	GLU
54	BW	59	VAL
54	BW	63	ASP
54	BW	70	TYR
54	BW	82	LEU
54	BW	92	ARG
54	BW	96	ILE
54	BW	107	LEU
55	BX	27	THR
55	BX	35	THR
55	BX	57	LEU
55	BX	68	ARG
55	BX	75	ASP
56	BY	2	ARG
56	BY	6	HIS
56	BY	7	VAL
56	BY	9	LYS
56	BY	20	TYR
56	BY	28	LYS
56	BY	29	GLU
56	BY	53	PRO
56	BY	60	PHE
56	BY	64	GLU

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Mol	Chain	Res	Type
56	BY	66	PRO
56	BY	77	PRO
56	BY	83	THR
56	BY	90	LEU
57	BZ	13	GLU
57	BZ	31	ARG
57	BZ	37	VAL
57	BZ	40	ASP
57	BZ	61	LEU
57	BZ	70	LEU
57	BZ	71	VAL
57	BZ	80	ARG
57	BZ	81	ARG
57	BZ	87	ASP
57	BZ	103	ARG
57	BZ	112	ARG
57	BZ	140	ASP
57	BZ	148	ASP
57	BZ	150	LEU
57	BZ	151	HIS
57	BZ	157	LEU
57	BZ	166	SER
57	BZ	171	ILE
57	BZ	180	VAL
57	BZ	181	GLU
57	BZ	182	LYS
2	CB	15	VAL
2	CB	17	PHE
2	CB	36	ARG
2	CB	48	MET
2	CB	87	ARG
2	CB	137	ARG
2	CB	140	HIS
2	CB	145	LEU
2	CB	178	ARG
2	CB	187	LEU
2	CB	196	LEU
2	CB	204	ASN
2	CB	206	ASP
2	CB	212	GLN
2	CB	221	LEU
3	CC	3	ASN

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Mol	Chain	Res	Type
3	CC	5	ILE
3	CC	16	ARG
3	CC	17	ASP
3	CC	18	TRP
3	CC	22	TRP
3	CC	29	TYR
3	CC	34	LEU
3	CC	69	HIS
3	CC	82	GLU
3	CC	107	GLN
3	CC	127	ARG
3	CC	131	ARG
3	CC	193	TYR
4	CD	3	ARG
4	CD	7	PRO
4	CD	9	CYS
4	CD	15	GLU
4	CD	24	GLU
4	CD	36	ARG
4	CD	38	TYR
4	CD	53	ASP
4	CD	59	ARG
4	CD	79	PHE
4	CD	110	PHE
4	CD	129	ASN
4	CD	131	ARG
4	CD	132	ARG
4	CD	135	LEU
4	CD	144	ASP
4	CD	168	ARG
4	CD	190	ASP
5	CE	12	LEU
5	CE	20	GLN
5	CE	31	LEU
5	CE	36	ASP
5	CE	73	ASN
5	CE	79	GLU
5	CE	101	ILE
5	CE	112	LEU
6	CF	24	GLU
6	CF	63	TYR
6	CF	69	GLU

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Mol	Chain	Res	Type
7	CG	12	LEU
7	CG	88	PRO
7	CG	124	LEU
7	CG	140	ASP
7	CG	151	TYR
8	CH	1	MET
8	CH	25	ASP
8	CH	52	ASP
8	CH	60	ARG
8	CH	65	TYR
8	CH	83	ILE
8	CH	85	ARG
8	CH	102	ARG
8	CH	112	LEU
8	CH	115	SER
9	CI	10	ARG
9	CI	38	GLN
9	CI	78	LYS
9	CI	95	LYS
9	CI	114	TYR
9	CI	121	ARG
9	CI	125	TYR
9	CI	128	ARG
10	CJ	22	LYS
10	CJ	46	ARG
10	CJ	50	ILE
10	CJ	62	HIS
10	CJ	96	ILE
11	CK	40	ILE
11	CK	110	ASP
11	CK	116	HIS
11	CK	117	ASN
11	CK	124	LYS
12	CL	20	LYS
12	CL	40	VAL
12	CL	41	ARG
12	CL	44	THR
12	CL	45	PRO
12	CL	46	LYS
12	CL	47	LYS
12	CL	48	PRO
12	CL	49	ASN

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Mol	Chain	Res	Type
12	CL	64	TYR
12	CL	66	VAL
12	CL	77	LEU
12	CL	79	GLU
12	CL	83	VAL
12	CL	89	ARG
12	CL	92	ASP
12	CL	102	ARG
12	CL	110	VAL
12	CL	120	TYR
12	CL	126	LYS
13	CM	47	ASP
13	CM	64	TRP
13	CM	79	LYS
13	CM	82	MET
13	CM	86	CYS
13	CM	92	HIS
13	CM	93	ARG
13	CM	106	ASN
13	CM	108	ARG
13	CM	115	LYS
14	CN	33	VAL
14	CN	41	ARG
15	CO	44	LYS
15	CO	65	ARG
15	CO	82	ILE
15	CO	88	ARG
16	CP	1	MET
16	CP	2	VAL
16	CP	6	LEU
16	CP	47	ASP
16	CP	65	GLN
16	CP	69	THR
17	CQ	38	ARG
17	CQ	42	TYR
17	CQ	52	LYS
17	CQ	55	ASP
18	CR	47	THR
18	CR	76	LEU
19	CS	5	LEU
19	CS	6	LYS
19	CS	7	LYS

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Mol	Chain	Res	Type
19	CS	22	LEU
19	CS	29	ARG
19	CS	37	ARG
19	CS	43	GLU
19	CS	70	LYS
20	CT	24	LEU
20	CT	26	ASN
20	CT	73	HIS
20	CT	75	ASN
20	CT	93	GLU
21	CU	5	ASP
25	D0	3	HIS
25	D0	11	ARG
25	D0	14	ARG
25	D0	20	ARG
25	D0	36	ILE
25	D0	55	ARG
25	D0	64	ASP
26	D1	14	VAL
26	D1	39	LYS
26	D1	40	ARG
26	D1	41	ARG
26	D1	45	ASN
26	D1	46	LEU
26	D1	52	ARG
26	D1	72	GLU
26	D1	73	LEU
26	D1	82	LEU
27	D2	3	LEU
27	D2	21	LEU
27	D2	44	LEU
27	D2	47	ASN
27	D2	52	ASP
27	D2	57	ILE
28	D3	8	LEU
28	D3	29	ARG
28	D3	30	ARG
29	D4	1	MET
29	D4	5	ILE
29	D4	13	ARG
29	D4	20	ASN
29	D4	25	TYR

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Mol	Chain	Res	Type
29	D4	28	LYS
29	D4	30	GLU
29	D4	32	TYR
29	D4	55	ARG
30	D5	4	HIS
30	D5	25	LEU
30	D5	46	CYS
30	D5	52	TYR
30	D5	55	ARG
31	D6	9	LEU
31	D6	10	LEU
31	D6	11	LEU
31	D6	16	CYS
31	D6	18	ARG
31	D6	42	TRP
32	D7	4	THR
32	D7	8	ASN
32	D7	24	THR
32	D7	43	THR
33	D8	6	THR
33	D8	8	LYS
33	D8	30	ARG
33	D8	31	HIS
33	D8	34	TRP
33	D8	44	LYS
33	D8	47	LYS
33	D8	61	LEU
33	D8	64	TYR
34	D9	1	MET
37	DC	29	LEU
37	DC	39	ASP
37	DC	53	ARG
37	DC	173	HIS
37	DC	185	LYS
38	DD	10	THR
38	DD	24	ILE
38	DD	26	LYS
38	DD	35	LYS
38	DD	43	ARG
38	DD	46	GLN
38	DD	49	ILE
38	DD	61	LEU

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Mol	Chain	Res	Type
38	DD	65	ILE
38	DD	94	LEU
38	DD	95	LEU
38	DD	99	ASP
38	DD	103	ARG
38	DD	111	LEU
38	DD	116	GLN
38	DD	122	ASP
38	DD	126	GLN
38	DD	131	LEU
38	DD	166	GLN
38	DD	228	PRO
38	DD	229	VAL
38	DD	257	LEU
38	DD	259	THR
38	DD	260	ARG
38	DD	268	ARG
38	DD	271	ILE
39	DE	7	VAL
39	DE	9	VAL
39	DE	12	THR
39	DE	33	VAL
39	DE	49	LEU
39	DE	53	PRO
39	DE	55	ASN
39	DE	63	LEU
39	DE	67	PHE
39	DE	76	ARG
39	DE	78	LEU
39	DE	79	ARG
39	DE	87	GLU
39	DE	89	ASP
39	DE	94	GLU
39	DE	119	ARG
39	DE	144	ARG
39	DE	169	ASN
39	DE	175	VAL
39	DE	188	VAL
39	DE	202	LYS
39	DE	203	LYS
40	DF	23	ASP
40	DF	28	ILE

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Mol	Chain	Res	Type
40	DF	38	ARG
40	DF	66	PRO
40	DF	68	LYS
40	DF	74	ARG
40	DF	100	THR
40	DF	110	LEU
40	DF	125	LEU
40	DF	158	THR
40	DF	160	ASN
40	DF	164	ARG
40	DF	175	THR
40	DF	183	VAL
40	DF	196	LEU
40	DF	200	GLU
41	DG	22	ARG
41	DG	26	GLN
41	DG	29	TRP
41	DG	40	ASN
41	DG	67	LYS
41	DG	77	ILE
41	DG	83	ARG
41	DG	96	ARG
41	DG	97	ASP
41	DG	125	PHE
41	DG	126	ASP
41	DG	143	GLU
41	DG	152	LEU
41	DG	155	MET
41	DG	170	ARG
42	DH	9	ILE
42	DH	34	GLU
42	DH	42	ARG
42	DH	46	GLU
42	DH	53	GLU
42	DH	70	THR
42	DH	88	LEU
42	DH	89	ILE
42	DH	94	TYR
42	DH	105	LEU
42	DH	116	GLU
42	DH	143	GLN
42	DH	153	LYS

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Mol	Chain	Res	Type
42	DH	157	TYR
42	DH	163	TYR
42	DH	170	ARG
43	DI	12	LEU
43	DI	20	ASP
43	DI	74	ASN
43	DI	81	VAL
43	DI	92	VAL
43	DI	109	ILE
43	DI	130	TYR
43	DI	132	PRO
43	DI	139	GLN
43	DI	140	LEU
45	DN	4	TYR
45	DN	23	LEU
45	DN	28	THR
45	DN	34	LEU
45	DN	39	ARG
45	DN	41	ASP
45	DN	48	MET
45	DN	50	ASP
45	DN	56	ASN
45	DN	73	THR
45	DN	85	ILE
45	DN	87	LEU
45	DN	93	THR
45	DN	120	LEU
45	DN	121	LYS
45	DN	127	ASP
46	DO	28	SER
46	DO	32	TYR
46	DO	48	PRO
46	DO	73	ASP
46	DO	78	ARG
46	DO	108	GLU
47	DP	6	LEU
47	DP	13	ASN
47	DP	16	ARG
47	DP	18	ARG
47	DP	39	LYS
47	DP	40	SER
47	DP	42	SER

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Mol	Chain	Res	Type
47	DP	45	LEU
47	DP	47	ASP
47	DP	57	THR
47	DP	59	LEU
47	DP	61	ARG
47	DP	85	LEU
47	DP	91	PHE
47	DP	95	VAL
47	DP	98	GLU
47	DP	108	LYS
47	DP	114	ILE
47	DP	135	LEU
48	DQ	18	LYS
48	DQ	29	PHE
48	DQ	45	GLN
48	DQ	56	ARG
48	DQ	79	LEU
48	DQ	89	ASN
48	DQ	110	THR
48	DQ	135	ASP
48	DQ	137	TYR
49	DR	2	ARG
49	DR	9	LYS
49	DR	37	THR
49	DR	54	LEU
49	DR	67	LEU
49	DR	76	VAL
49	DR	79	LEU
49	DR	81	ASP
49	DR	91	GLN
49	DR	94	TYR
49	DR	97	VAL
49	DR	99	LYS
49	DR	100	LEU
49	DR	113	LEU
50	DS	11	LYS
50	DS	12	PHE
50	DS	15	ARG
50	DS	21	THR
50	DS	26	LEU
50	DS	36	TYR
50	DS	44	LYS

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Mol	Chain	Res	Type
50	DS	67	ARG
50	DS	89	ARG
50	DS	92	TYR
50	DS	97	ARG
50	DS	101	LEU
50	DS	106	ARG
51	DT	3	ARG
51	DT	6	LEU
51	DT	13	ARG
51	DT	14	TYR
51	DT	16	ARG
51	DT	24	PRO
51	DT	29	ARG
51	DT	41	ARG
51	DT	44	ASP
51	DT	51	ARG
51	DT	58	ASN
51	DT	59	THR
51	DT	64	ARG
51	DT	65	LYS
51	DT	72	VAL
51	DT	78	LEU
51	DT	82	LEU
51	DT	85	LYS
51	DT	93	ARG
51	DT	95	ARG
51	DT	100	TYR
51	DT	124	ASP
51	DT	128	GLU
52	DU	8	VAL
52	DU	59	ARG
52	DU	66	ASN
52	DU	69	CYS
52	DU	74	LEU
52	DU	83	LEU
52	DU	97	ASP
52	DU	101	ARG
52	DU	102	GLU
52	DU	104	GLN
52	DU	108	GLU
53	DV	1	MET
53	DV	13	ARG

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Mol	Chain	Res	Type
53	DV	16	PRO
53	DV	18	LEU
53	DV	19	LYS
53	DV	21	ARG
53	DV	39	LEU
53	DV	40	LEU
53	DV	45	THR
53	DV	61	VAL
53	DV	79	VAL
53	DV	91	TYR
53	DV	95	LEU
53	DV	99	ILE
54	DW	11	ARG
54	DW	51	LEU
54	DW	52	GLU
54	DW	59	VAL
54	DW	63	ASP
54	DW	70	TYR
54	DW	82	LEU
54	DW	92	ARG
54	DW	96	ILE
54	DW	107	LEU
55	DX	27	THR
55	DX	35	THR
55	DX	57	LEU
55	DX	68	ARG
55	DX	75	ASP
56	DY	2	ARG
56	DY	6	HIS
56	DY	7	VAL
56	DY	9	LYS
56	DY	20	TYR
56	DY	28	LYS
56	DY	29	GLU
56	DY	32	PRO
56	DY	53	PRO
56	DY	60	PHE
56	DY	64	GLU
56	DY	66	PRO
56	DY	77	PRO
56	DY	83	THR
56	DY	90	LEU

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Mol	Chain	Res	Type
57	DZ	6	LYS
57	DZ	29	TYR
57	DZ	34	ASN
57	DZ	41	LEU
57	DZ	43	GLU
57	DZ	44	PHE
57	DZ	70	LEU
57	DZ	79	ARG
57	DZ	81	ARG
57	DZ	87	ASP
57	DZ	89	PHE
57	DZ	112	ARG
57	DZ	121	HIS
57	DZ	123	ASP
57	DZ	145	GLU
57	DZ	157	LEU
57	DZ	169	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (311) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	37	ASN
2	AB	40	HIS
2	AB	78	GLN
2	AB	95	GLN
2	AB	104	ASN
2	AB	110	GLN
2	AB	135	GLN
2	AB	146	GLN
2	AB	204	ASN
3	AC	69	HIS
3	AC	107	GLN
3	AC	136	GLN
3	AC	139	GLN
3	AC	170	GLN
3	AC	181	ASN
4	AD	42	GLN
4	AD	62	GLN
4	AD	77	ASN
4	AD	129	ASN
4	AD	161	ASN
5	AE	73	ASN

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Mol	Chain	Res	Type
5	AE	130	ASN
5	AE	141	GLN
6	AF	7	ASN
6	AF	18	GLN
6	AF	27	GLN
6	AF	32	ASN
6	AF	64	GLN
6	AF	100	ASN
7	AG	11	GLN
7	AG	13	GLN
7	AG	28	ASN
7	AG	64	GLN
7	AG	68	ASN
7	AG	84	ASN
7	AG	106	GLN
7	AG	109	ASN
7	AG	122	HIS
9	AI	3	GLN
9	AI	31	GLN
9	AI	58	HIS
9	AI	124	GLN
10	AJ	13	HIS
10	AJ	78	ASN
11	AK	13	GLN
11	AK	78	GLN
11	AK	117	ASN
12	AL	8	ASN
12	AL	49	ASN
13	AM	40	ASN
13	AM	92	HIS
13	AM	101	GLN
15	AO	9	GLN
15	AO	13	GLN
15	AO	37	ASN
15	AO	46	HIS
16	AP	76	GLN
17	AQ	16	GLN
17	AQ	26	GLN
17	AQ	94	ASN
18	AR	36	ASN
19	AS	23	ASN
19	AS	47	HIS

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Mol	Chain	Res	Type
19	AS	57	HIS
20	AT	16	HIS
20	AT	18	GLN
20	AT	26	ASN
20	AT	42	GLN
20	AT	73	HIS
20	AT	75	ASN
25	B0	12	ASN
25	B0	29	GLN
25	B0	70	GLN
26	B1	45	ASN
26	B1	47	GLN
27	B2	46	GLN
27	B2	47	ASN
28	B3	19	GLN
28	B3	46	ASN
28	B3	52	HIS
29	B4	6	HIS
29	B4	20	ASN
29	B4	40	HIS
30	B5	4	HIS
30	B5	43	HIS
31	B6	32	ASN
32	B7	8	ASN
32	B7	36	GLN
33	B8	31	HIS
33	B8	33	ASN
33	B8	43	GLN
34	B9	32	HIS
34	B9	34	GLN
37	BC	57	GLN
37	BC	166	ASN
38	BD	44	ASN
38	BD	58	HIS
38	BD	126	GLN
38	BD	166	GLN
38	BD	186	HIS
38	BD	198	ASN
39	BE	48	GLN
39	BE	54	GLN
39	BE	55	ASN
39	BE	129	HIS

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Mol	Chain	Res	Type
39	BE	169	ASN
39	BE	192	ASN
40	BF	40	GLN
40	BF	75	HIS
40	BF	133	ASN
40	BF	160	ASN
40	BF	169	ASN
41	BG	40	ASN
41	BG	130	ASN
42	BH	65	HIS
42	BH	74	ASN
42	BH	147	ASN
43	BI	74	ASN
43	BI	104	GLN
43	BI	105	HIS
43	BI	139	GLN
45	BN	56	ASN
45	BN	69	GLN
45	BN	128	HIS
45	BN	130	HIS
46	BO	5	GLN
46	BO	82	ASN
47	BP	13	ASN
47	BP	68	GLN
47	BP	84	ASN
47	BP	128	HIS
48	BQ	12	GLN
48	BQ	45	GLN
48	BQ	123	HIS
49	BR	23	ASN
49	BR	24	GLN
49	BR	31	HIS
49	BR	71	GLN
50	BS	34	HIS
51	BT	58	ASN
51	BT	90	GLN
51	BT	123	GLN
52	BU	49	HIS
52	BU	66	ASN
52	BU	117	GLN
53	BV	11	GLN
53	BV	80	GLN

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Mol	Chain	Res	Type
54	BW	61	ASN
54	BW	62	HIS
54	BW	102	HIS
55	BX	31	HIS
55	BX	41	ASN
55	BX	55	ASN
57	BZ	55	HIS
57	BZ	118	GLN
57	BZ	132	ASN
57	BZ	151	HIS
2	CB	37	ASN
2	CB	40	HIS
2	CB	78	GLN
2	CB	95	GLN
2	CB	104	ASN
2	CB	110	GLN
2	CB	135	GLN
2	CB	146	GLN
2	CB	204	ASN
3	CC	69	HIS
3	CC	107	GLN
3	CC	136	GLN
3	CC	139	GLN
3	CC	162	GLN
3	CC	170	GLN
3	CC	181	ASN
4	CD	42	GLN
4	CD	62	GLN
4	CD	77	ASN
4	CD	129	ASN
4	CD	161	ASN
5	CE	73	ASN
5	CE	78	HIS
5	CE	141	GLN
6	CF	7	ASN
6	CF	18	GLN
6	CF	27	GLN
6	CF	32	ASN
6	CF	64	GLN
6	CF	100	ASN
7	CG	11	GLN
7	CG	13	GLN

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Mol	Chain	Res	Type
7	CG	28	ASN
7	CG	64	GLN
7	CG	68	ASN
7	CG	106	GLN
7	CG	109	ASN
7	CG	122	HIS
9	CI	31	GLN
9	CI	58	HIS
9	CI	73	GLN
9	CI	124	GLN
10	CJ	78	ASN
11	CK	13	GLN
11	CK	78	GLN
11	CK	117	ASN
12	CL	8	ASN
12	CL	49	ASN
13	CM	40	ASN
13	CM	92	HIS
13	CM	101	GLN
15	CO	9	GLN
15	CO	13	GLN
15	CO	37	ASN
15	CO	46	HIS
16	CP	76	GLN
17	CQ	16	GLN
17	CQ	26	GLN
17	CQ	94	ASN
18	CR	36	ASN
19	CS	23	ASN
19	CS	47	HIS
20	CT	16	HIS
20	CT	18	GLN
20	CT	26	ASN
20	CT	42	GLN
20	CT	73	HIS
20	CT	75	ASN
25	D0	12	ASN
25	D0	29	GLN
25	D0	70	GLN
26	D1	19	GLN
26	D1	45	ASN
27	D2	46	GLN

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Mol	Chain	Res	Type
27	D2	70	GLN
28	D3	19	GLN
28	D3	46	ASN
28	D3	52	HIS
29	D4	6	HIS
29	D4	20	ASN
29	D4	40	HIS
30	D5	4	HIS
30	D5	43	HIS
32	D7	8	ASN
32	D7	36	GLN
33	D8	31	HIS
33	D8	33	ASN
33	D8	43	GLN
34	D9	32	HIS
34	D9	34	GLN
37	DC	57	GLN
37	DC	166	ASN
38	DD	44	ASN
38	DD	58	HIS
38	DD	126	GLN
38	DD	166	GLN
38	DD	186	HIS
38	DD	198	ASN
39	DE	48	GLN
39	DE	54	GLN
39	DE	55	ASN
39	DE	129	HIS
39	DE	169	ASN
39	DE	192	ASN
40	DF	40	GLN
40	DF	75	HIS
40	DF	133	ASN
40	DF	160	ASN
40	DF	169	ASN
41	DG	40	ASN
41	DG	66	GLN
41	DG	132	ASN
42	DH	65	HIS
42	DH	74	ASN
42	DH	147	ASN
43	DI	74	ASN

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Mol	Chain	Res	Type
43	DI	104	GLN
43	DI	139	GLN
45	DN	56	ASN
45	DN	69	GLN
45	DN	128	HIS
45	DN	130	HIS
46	DO	5	GLN
46	DO	82	ASN
47	DP	13	ASN
47	DP	68	GLN
47	DP	84	ASN
47	DP	128	HIS
48	DQ	12	GLN
48	DQ	45	GLN
48	DQ	123	HIS
49	DR	23	ASN
49	DR	24	GLN
49	DR	71	GLN
50	DS	34	HIS
51	DT	38	ASN
51	DT	58	ASN
51	DT	90	GLN
51	DT	123	GLN
52	DU	49	HIS
52	DU	66	ASN
52	DU	117	GLN
53	DV	11	GLN
53	DV	80	GLN
54	DW	57	ASN
54	DW	61	ASN
54	DW	62	HIS
54	DW	102	HIS
55	DX	31	HIS
55	DX	41	ASN
55	DX	55	ASN
57	DZ	32	HIS
57	DZ	75	ASN
57	DZ	118	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	215 (14%)	29 (1%)
1	CA	1503/1522 (98%)	218 (14%)	31 (2%)
22	AV	76/78 (97%)	25 (32%)	0
22	AY	76/78 (97%)	24 (31%)	2 (2%)
22	CV	76/78 (97%)	24 (31%)	0
22	CY	76/78 (97%)	23 (30%)	2 (2%)
23	AW	77/78 (98%)	41 (53%)	4 (5%)
23	CW	77/78 (98%)	39 (50%)	3 (3%)
24	AX	11/24 (45%)	2 (18%)	0
24	CX	11/24 (45%)	2 (18%)	0
35	BA	2847/2915 (97%)	498 (17%)	49 (1%)
35	DA	2847/2915 (97%)	498 (17%)	49 (1%)
36	BB	118/122 (96%)	18 (15%)	1 (0%)
36	DB	118/122 (96%)	17 (14%)	1 (0%)
All	All	9416/9634 (97%)	1644 (17%)	171 (1%)

All (1644) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	61	G
1	AA	77	G
1	AA	79	G
1	AA	80	G
1	AA	81	U
1	AA	89	C
1	AA	90	U
1	AA	97	G
1	AA	98	G
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

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Mol	Chain	Res	Type
1	AA	150	C
1	AA	172	A
1	AA	173	U
1	AA	189(F)	U
1	AA	189(H)	G
1	AA	195	A
1	AA	197	A
1	AA	203	U
1	AA	204	U
1	AA	217	C
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	281	G
1	AA	289	G
1	AA	316	G
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	342	C
1	AA	345	C
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	397	A
1	AA	412	A
1	AA	413	G
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	437	U
1	AA	439	A
1	AA	452	A

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Mol	Chain	Res	Type
1	AA	455	C
1	AA	461	A
1	AA	471	G
1	AA	484	G
1	AA	485	G
1	AA	496	A
1	AA	498	U
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	512	U
1	AA	518	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	547	A
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	577	G
1	AA	588	G
1	AA	619	U
1	AA	630	G
1	AA	631	G
1	AA	632	A
1	AA	653	A
1	AA	665	A
1	AA	687	A
1	AA	688	G
1	AA	703	G
1	AA	724	G
1	AA	731	G
1	AA	749	C
1	AA	755	G
1	AA	793	U
1	AA	794	A
1	AA	817	C
1	AA	818	G

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Mol	Chain	Res	Type
1	AA	819	A
1	AA	821	G
1	AA	828	A
1	AA	833	U
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	902	G
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	966	G
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1001(A)	G
1	AA	1026	G
1	AA	1050	G
1	AA	1054	C
1	AA	1055	A
1	AA	1068	G
1	AA	1085	U
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1108	G
1	AA	1117	G

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Mol	Chain	Res	Type
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1129	C
1	AA	1131	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1146	A
1	AA	1152	A
1	AA	1159	U
1	AA	1184	G
1	AA	1196	U
1	AA	1197	G
1	AA	1202	G
1	AA	1212	U
1	AA	1213	A
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1238	A
1	AA	1249	C
1	AA	1255	G
1	AA	1256	A
1	AA	1257	U
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1286	A
1	AA	1287	A
1	AA	1294	G
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1305	G
1	AA	1317	C
1	AA	1319	A
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G

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Mol	Chain	Res	Type
1	AA	1347	G
1	AA	1364	U
1	AA	1365	G
1	AA	1370	G
1	AA	1398	A
1	AA	1419	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1452	C
1	AA	1487	G
1	AA	1492	A
1	AA	1497	G
1	AA	1499	A
1	AA	1503	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
22	AV	3	G
22	AV	5	C
22	AV	7	U
22	AV	8	U
22	AV	12	U
22	AV	13	U
22	AV	14	A
22	AV	15	G
22	AV	17	C
22	AV	18	U
22	AV	19	G
22	AV	20	G
22	AV	21	U
22	AV	23	A
22	AV	24	A
22	AV	49	G
22	AV	50	C
22	AV	51	G
22	AV	62	U

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Mol	Chain	Res	Type
22	AV	63	C
22	AV	65	G
22	AV	69	G
22	AV	71	G
22	AV	77	C
22	AV	78	A
23	AW	3	G
23	AW	4	C
23	AW	5	C
23	AW	7	U
23	AW	8	U
23	AW	9	A
23	AW	12	U
23	AW	13	U
23	AW	14	A
23	AW	17	C
23	AW	18	U
23	AW	19	G
23	AW	20	G
23	AW	21	U
23	AW	23	A
23	AW	24	A
23	AW	28	G
23	AW	29	A
23	AW	34	C
23	AW	35	U
23	AW	37	A
23	AW	39	A
23	AW	40	A
23	AW	41	C
23	AW	45	U
23	AW	47	G
23	AW	48	G
23	AW	49	G
23	AW	50	C
23	AW	51	G
23	AW	52	C
23	AW	59	G
23	AW	62	U
23	AW	63	C
23	AW	65	G
23	AW	69	G

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Mol	Chain	Res	Type
23	AW	70	G
23	AW	73	C
23	AW	74	C
23	AW	75	A
23	AW	78	A
24	AX	15	A
24	AX	19	A
22	AY	2	G
22	AY	3	G
22	AY	4	C
22	AY	5	C
22	AY	7	U
22	AY	14	A
22	AY	17	C
22	AY	18	U
22	AY	19	G
22	AY	20	G
22	AY	21	U
22	AY	23	A
22	AY	24	A
22	AY	28	G
22	AY	30	U
22	AY	32	G
22	AY	35	U
22	AY	47	G
22	AY	49	G
22	AY	50	C
22	AY	51	G
22	AY	56	U
22	AY	65	G
22	AY	77	C
35	BA	9	U
35	BA	10	G
35	BA	34	C
35	BA	35	G
35	BA	45	C
35	BA	49	A
35	BA	50	U
35	BA	61	G
35	BA	71	A
35	BA	72	U
35	BA	74	A

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Mol	Chain	Res	Type
35	BA	75	G
35	BA	88	G
35	BA	90	U
35	BA	94	C
35	BA	100	G
35	BA	102	G
35	BA	118	A
35	BA	119	A
35	BA	120	U
35	BA	129	C
35	BA	139(A)	G
35	BA	141	A
35	BA	146	G
35	BA	154(A)	C
35	BA	155	U
35	BA	156	U
35	BA	171	G
35	BA	173	G
35	BA	174	C
35	BA	181	A
35	BA	196	A
35	BA	197	A
35	BA	199	A
35	BA	204	A
35	BA	205	G
35	BA	215	G
35	BA	216	A
35	BA	221	A
35	BA	222	A
35	BA	228	A
35	BA	229	A
35	BA	230	U
35	BA	233	A
35	BA	248	G
35	BA	252	G
35	BA	266	G
35	BA	271(J)	C
35	BA	271(N)	U
35	BA	271(O)	C
35	BA	271(P)	C
35	BA	271(R)	G
35	BA	272	G

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Mol	Chain	Res	Type
35	BA	272(B)	G
35	BA	272(H)	C
35	BA	272(I)	U
35	BA	274	G
35	BA	276	A
35	BA	277	C
35	BA	288	C
35	BA	311	A
35	BA	329	G
35	BA	330	A
35	BA	332	A
35	BA	333	G
35	BA	352	G
35	BA	353	G
35	BA	356	G
35	BA	358	U
35	BA	363(B)	G
35	BA	363(E)	U
35	BA	363(F)	A
35	BA	365	C
35	BA	372	G
35	BA	386	G
35	BA	388	G
35	BA	396	G
35	BA	405	U
35	BA	406	G
35	BA	411	G
35	BA	412	A
35	BA	428	A
35	BA	444	C
35	BA	448	U
35	BA	456	C
35	BA	457	A
35	BA	470	A
35	BA	475	U
35	BA	481	G
35	BA	494	G
35	BA	505	A
35	BA	508	G
35	BA	509	C
35	BA	528	A
35	BA	531	C

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Mol	Chain	Res	Type
35	BA	532	A
35	BA	533	G
35	BA	544	G
35	BA	547	A
35	BA	548	A
35	BA	549	G
35	BA	556	G
35	BA	563	G
35	BA	573	G
35	BA	575	A
35	BA	588	U
35	BA	603	A
35	BA	604	G
35	BA	607	U
35	BA	613	G
35	BA	614(B)	G
35	BA	615	G
35	BA	622	G
35	BA	627	A
35	BA	637	A
35	BA	645	C
35	BA	646	A
35	BA	653	A
35	BA	654	A
35	BA	654(C)	G
35	BA	654(I)	C
35	BA	654(J)	A
35	BA	654(K)	C
35	BA	654(L)	G
35	BA	654(M)	C
35	BA	654(N)	G
35	BA	654(T)	C
35	BA	669	G
35	BA	673	C
35	BA	686	G
35	BA	708	C
35	BA	722	A
35	BA	730	C
35	BA	753	C
35	BA	764	A
35	BA	765	G
35	BA	776	G

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Mol	Chain	Res	Type
35	BA	782	A
35	BA	784	A
35	BA	785	G
35	BA	790	C
35	BA	791	C
35	BA	792	G
35	BA	805	G
35	BA	812	C
35	BA	819	A
35	BA	827	U
35	BA	828	U
35	BA	830	G
35	BA	848	G
35	BA	856	C
35	BA	859	G
35	BA	878	A
35	BA	890	A
35	BA	896	A
35	BA	897	C
35	BA	910	A
35	BA	917	A
35	BA	927	G
35	BA	932	G
35	BA	941	A
35	BA	945	A
35	BA	946	G
35	BA	958	U
35	BA	959	A
35	BA	961	C
35	BA	965	C
35	BA	974	G
35	BA	975	C
35	BA	983	A
35	BA	991	C
35	BA	996	A
35	BA	1005	C
35	BA	1012	U
35	BA	1013	C
35	BA	1015	G
35	BA	1022	G
35	BA	1023	U
35	BA	1025	G

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Mol	Chain	Res	Type
35	BA	1026	U
35	BA	1039	G
35	BA	1041	C
35	BA	1045	A
35	BA	1046	A
35	BA	1047	G
35	BA	1049	C
35	BA	1052	C
35	BA	1053	C
35	BA	1054	A
35	BA	1110	G
35	BA	1112	G
35	BA	1113	U
35	BA	1114	G
35	BA	1116	C
35	BA	1129	A
35	BA	1130	U
35	BA	1135	C
35	BA	1136	G
35	BA	1142	U
35	BA	1143	A
35	BA	1155	A
35	BA	1171	G
35	BA	1173	G
35	BA	1174	A
35	BA	1175	U
35	BA	1176	G
35	BA	1178	C
35	BA	1180	C
35	BA	1195	G
35	BA	1205	U
35	BA	1210	A
35	BA	1211	U
35	BA	1221	C
35	BA	1247	A
35	BA	1248	G
35	BA	1250	G
35	BA	1253	A
35	BA	1256	G
35	BA	1265	A
35	BA	1271	G
35	BA	1272	A

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Mol	Chain	Res	Type
35	BA	1273	U
35	BA	1275	A
35	BA	1281	G
35	BA	1286	A
35	BA	1300	U
35	BA	1301	A
35	BA	1302	A
35	BA	1314	C
35	BA	1319	G
35	BA	1321	A
35	BA	1332	G
35	BA	1345	C
35	BA	1349	A
35	BA	1359	A
35	BA	1360	A
35	BA	1368	G
35	BA	1379	A
35	BA	1380	G
35	BA	1384	A
35	BA	1385	G
35	BA	1386	C
35	BA	1407	C
35	BA	1416	G
35	BA	1417	C
35	BA	1419	A
35	BA	1420	U
35	BA	1428	C
35	BA	1445	A
35	BA	1449	A
35	BA	1450	G
35	BA	1460	A
35	BA	1461	G
35	BA	1467	C
35	BA	1471	A
35	BA	1475	G
35	BA	1478	G
35	BA	1481	U
35	BA	1482	G
35	BA	1485	G
35	BA	1488	G
35	BA	1490	A
35	BA	1493	C

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Mol	Chain	Res	Type
35	BA	1494	A
35	BA	1495	A
35	BA	1497	U
35	BA	1502	C
35	BA	1505	C
35	BA	1508	A
35	BA	1509	C
35	BA	1509(A)	A
35	BA	1520	G
35	BA	1528(A)	A
35	BA	1534	U
35	BA	1541	G
35	BA	1542	A
35	BA	1544	A
35	BA	1554	A
35	BA	1558	A
35	BA	1559	G
35	BA	1569	A
35	BA	1578	U
35	BA	1579	A
35	BA	1584	C
35	BA	1586	A
35	BA	1588	C
35	BA	1591	G
35	BA	1603	A
35	BA	1608	A
35	BA	1617	C
35	BA	1618	A
35	BA	1640	C
35	BA	1648	C
35	BA	1653	G
35	BA	1654	A
35	BA	1674	G
35	BA	1694	C
35	BA	1696	G
35	BA	1722	A
35	BA	1739	U
35	BA	1740	G
35	BA	1742	G
35	BA	1745(A)	C
35	BA	1746	G
35	BA	1748	G

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Mol	Chain	Res	Type
35	BA	1756	G
35	BA	1763	G
35	BA	1764	G
35	BA	1773	A
35	BA	1780	A
35	BA	1791	A
35	BA	1799	G
35	BA	1800	C
35	BA	1801	G
35	BA	1816	G
35	BA	1820	U
35	BA	1821	A
35	BA	1835	G
35	BA	1846	G
35	BA	1847	A
35	BA	1848	A
35	BA	1858	G
35	BA	1865	G
35	BA	1866	C
35	BA	1878	G
35	BA	1881	C
35	BA	1882	C
35	BA	1885	A
35	BA	1888	G
35	BA	1889	A
35	BA	1900	A
35	BA	1903	G
35	BA	1906	G
35	BA	1912	A
35	BA	1913	A
35	BA	1914	C
35	BA	1915	U
35	BA	1916	A
35	BA	1929	G
35	BA	1930	G
35	BA	1938	A
35	BA	1955	U
35	BA	1963	U
35	BA	1965	C
35	BA	1967	C
35	BA	1969	A
35	BA	1970	A

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Mol	Chain	Res	Type
35	BA	1971	A
35	BA	1972	A
35	BA	1982	C
35	BA	1987	G
35	BA	1993	U
35	BA	1997	G
35	BA	2023	G
35	BA	2031	A
35	BA	2033	A
35	BA	2034	U
35	BA	2036	C
35	BA	2043	C
35	BA	2055	C
35	BA	2056	G
35	BA	2060	A
35	BA	2061	G
35	BA	2062	A
35	BA	2063	C
35	BA	2069	G
35	BA	2093	G
35	BA	2096	U
35	BA	2100	G
35	BA	2103	C
35	BA	2104	G
35	BA	2116	G
35	BA	2118	U
35	BA	2127	G
35	BA	2131	G
35	BA	2133	G
35	BA	2172	U
35	BA	2173	A
35	BA	2177	C
35	BA	2179	C
35	BA	2180	U
35	BA	2185	C
35	BA	2187	G
35	BA	2189	U
35	BA	2190	G
35	BA	2192	G
35	BA	2193	G
35	BA	2198	A
35	BA	2199	A

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Mol	Chain	Res	Type
35	BA	2200	C
35	BA	2206	G
35	BA	2207	G
35	BA	2208	A
35	BA	2218	U
35	BA	2219	G
35	BA	2225	A
35	BA	2226	C
35	BA	2238	G
35	BA	2239	G
35	BA	2268	A
35	BA	2275	C
35	BA	2283	C
35	BA	2287	A
35	BA	2288	A
35	BA	2302	G
35	BA	2305	A
35	BA	2307	G
35	BA	2308	G
35	BA	2309	A
35	BA	2311	A
35	BA	2313	C
35	BA	2316	C
35	BA	2319	G
35	BA	2320	A
35	BA	2327	A
35	BA	2334	G
35	BA	2336	A
35	BA	2345	G
35	BA	2347	C
35	BA	2350	C
35	BA	2361	A
35	BA	2383	G
35	BA	2385	C
35	BA	2400	G
35	BA	2402	C
35	BA	2406	U
35	BA	2423	U
35	BA	2424	C
35	BA	2425	A
35	BA	2429	G
35	BA	2430	A

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Mol	Chain	Res	Type
35	BA	2435	A
35	BA	2439	A
35	BA	2441	C
35	BA	2448	A
35	BA	2465	C
35	BA	2468	G
35	BA	2469	A
35	BA	2470	G
35	BA	2476	A
35	BA	2477	C
35	BA	2478	A
35	BA	2482	G
35	BA	2484	G
35	BA	2491	U
35	BA	2502	G
35	BA	2505	G
35	BA	2518	A
35	BA	2524	G
35	BA	2529	G
35	BA	2542	A
35	BA	2543	G
35	BA	2554	U
35	BA	2566	A
35	BA	2567	G
35	BA	2572	A
35	BA	2573	C
35	BA	2582	G
35	BA	2602	A
35	BA	2609	U
35	BA	2611	U
35	BA	2612	C
35	BA	2615	U
35	BA	2630	G
35	BA	2657	A
35	BA	2673	G
35	BA	2690	C
35	BA	2691	C
35	BA	2712	U
35	BA	2712(A)	A
35	BA	2713	A
35	BA	2720	U
35	BA	2726	U

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Mol	Chain	Res	Type
35	BA	2733	A
35	BA	2752	C
35	BA	2762	G
35	BA	2765	A
35	BA	2766	G
35	BA	2778	A
35	BA	2780	G
35	BA	2787	C
35	BA	2789	C
35	BA	2790	A
35	BA	2791	C
35	BA	2794	C
35	BA	2802	G
35	BA	2803	C
35	BA	2804	C
35	BA	2808	U
35	BA	2820	A
35	BA	2821	A
35	BA	2833	G
35	BA	2834	G
35	BA	2849	U
35	BA	2872	G
35	BA	2879	C
35	BA	2880	C
35	BA	2893	G
36	BB	2	C
36	BB	8	U
36	BB	15	A
36	BB	16	G
36	BB	22	U
36	BB	27	C
36	BB	33	G
36	BB	41	U
36	BB	42	C
36	BB	45	A
36	BB	52	A
36	BB	53	A
36	BB	67	G
36	BB	73	A
36	BB	81	G
36	BB	88	C
36	BB	110	G

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Mol	Chain	Res	Type
36	BB	113	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	61	G
1	CA	77	G
1	CA	79	G
1	CA	80	G
1	CA	81	U
1	CA	89	C
1	CA	90	U
1	CA	97	G
1	CA	98	G
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	150	C
1	CA	172	A
1	CA	173	U
1	CA	189(F)	U
1	CA	189(H)	G
1	CA	195	A
1	CA	197	A
1	CA	203	U
1	CA	204	U
1	CA	217	C
1	CA	244	U
1	CA	247	G
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	281	G
1	CA	289	G

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Mol	Chain	Res	Type
1	CA	316	G
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	332	G
1	CA	342	C
1	CA	345	C
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	397	A
1	CA	412	A
1	CA	413	G
1	CA	421	U
1	CA	422	C
1	CA	423	G
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	437	U
1	CA	439	A
1	CA	452	A
1	CA	455	C
1	CA	461	A
1	CA	471	G
1	CA	484	G
1	CA	485	G
1	CA	496	A
1	CA	498	U
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	512	U
1	CA	518	C
1	CA	527	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	547	A

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Mol	Chain	Res	Type
1	CA	561	U
1	CA	562	C
1	CA	572	A
1	CA	573	A
1	CA	575	G
1	CA	576	G
1	CA	577	G
1	CA	588	G
1	CA	630	G
1	CA	631	G
1	CA	632	A
1	CA	653	A
1	CA	665	A
1	CA	687	A
1	CA	688	G
1	CA	703	G
1	CA	724	G
1	CA	731	G
1	CA	749	C
1	CA	755	G
1	CA	793	U
1	CA	794	A
1	CA	817	C
1	CA	818	G
1	CA	819	A
1	CA	821	G
1	CA	828	A
1	CA	833	U
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	885	G
1	CA	902	G
1	CA	914	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	966	G

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Mol	Chain	Res	Type
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	1001(A)	G
1	CA	1026	G
1	CA	1050	G
1	CA	1054	C
1	CA	1055	A
1	CA	1068	G
1	CA	1085	U
1	CA	1095	U
1	CA	1101	A
1	CA	1108	G
1	CA	1117	G
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1129	C
1	CA	1131	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1146	A
1	CA	1152	A
1	CA	1159	U
1	CA	1184	G
1	CA	1196	U
1	CA	1197	G
1	CA	1202	G
1	CA	1212	U
1	CA	1213	A

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Mol	Chain	Res	Type
1	CA	1225	A
1	CA	1226	C
1	CA	1238	A
1	CA	1249	C
1	CA	1255	G
1	CA	1256	A
1	CA	1257	U
1	CA	1280	A
1	CA	1281	U
1	CA	1282	C
1	CA	1286	A
1	CA	1287	A
1	CA	1294	G
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1305	G
1	CA	1317	C
1	CA	1319	A
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1347	G
1	CA	1364	U
1	CA	1365	G
1	CA	1370	G
1	CA	1398	A
1	CA	1401	G
1	CA	1419	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1447	A
1	CA	1452	C
1	CA	1491	G
1	CA	1492	A
1	CA	1493	A
1	CA	1494	G
1	CA	1497	G
1	CA	1498	U
1	CA	1499	A

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Mol	Chain	Res	Type
1	CA	1503	A
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1508	G
1	CA	1517	G
1	CA	1529	G
1	CA	1530	G
22	CV	3	G
22	CV	5	C
22	CV	7	U
22	CV	8	U
22	CV	12	U
22	CV	13	U
22	CV	15	G
22	CV	17	C
22	CV	18	U
22	CV	19	G
22	CV	20	G
22	CV	21	U
22	CV	23	A
22	CV	24	A
22	CV	49	G
22	CV	50	C
22	CV	51	G
22	CV	62	U
22	CV	63	C
22	CV	65	G
22	CV	69	G
22	CV	71	G
22	CV	77	C
22	CV	78	A
23	CW	3	G
23	CW	4	C
23	CW	5	C
23	CW	7	U
23	CW	8	U
23	CW	9	A
23	CW	12	U
23	CW	13	U
23	CW	14	A

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Mol	Chain	Res	Type
23	CW	17	C
23	CW	18	U
23	CW	19	G
23	CW	20	G
23	CW	21	U
23	CW	23	A
23	CW	24	A
23	CW	28	G
23	CW	34	C
23	CW	35	U
23	CW	39	A
23	CW	40	A
23	CW	41	C
23	CW	45	U
23	CW	47	G
23	CW	48	G
23	CW	49	G
23	CW	50	C
23	CW	51	G
23	CW	52	C
23	CW	59	G
23	CW	62	U
23	CW	63	C
23	CW	65	G
23	CW	69	G
23	CW	70	G
23	CW	73	C
23	CW	74	C
23	CW	75	A
23	CW	78	A
24	CX	15	A
24	CX	19	A
22	CY	2	G
22	CY	3	G
22	CY	4	C
22	CY	5	C
22	CY	7	U
22	CY	14	A
22	CY	17	C
22	CY	18	U
22	CY	19	G
22	CY	20	G

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Mol	Chain	Res	Type
22	CY	21	U
22	CY	23	A
22	CY	24	A
22	CY	28	G
22	CY	30	U
22	CY	32	G
22	CY	35	U
22	CY	47	G
22	CY	49	G
22	CY	50	C
22	CY	51	G
22	CY	65	G
22	CY	77	C
35	DA	9	U
35	DA	10	G
35	DA	34	C
35	DA	35	G
35	DA	45	C
35	DA	49	A
35	DA	50	U
35	DA	61	G
35	DA	71	A
35	DA	72	U
35	DA	74	A
35	DA	75	G
35	DA	88	G
35	DA	90	U
35	DA	94	C
35	DA	100	G
35	DA	102	G
35	DA	118	A
35	DA	119	A
35	DA	120	U
35	DA	129	C
35	DA	139(A)	G
35	DA	141	A
35	DA	142(A)	C
35	DA	146	G
35	DA	154(A)	C
35	DA	155	U
35	DA	156	U
35	DA	171	G

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Mol	Chain	Res	Type
35	DA	173	G
35	DA	174	C
35	DA	181	A
35	DA	196	A
35	DA	197	A
35	DA	199	A
35	DA	204	A
35	DA	205	G
35	DA	215	G
35	DA	216	A
35	DA	221	A
35	DA	222	A
35	DA	228	A
35	DA	229	A
35	DA	230	U
35	DA	233	A
35	DA	248	G
35	DA	252	G
35	DA	266	G
35	DA	271(J)	C
35	DA	271(N)	U
35	DA	271(O)	C
35	DA	271(P)	C
35	DA	271(R)	G
35	DA	272	G
35	DA	272(B)	G
35	DA	272(H)	C
35	DA	272(I)	U
35	DA	274	G
35	DA	276	A
35	DA	277	C
35	DA	288	C
35	DA	311	A
35	DA	329	G
35	DA	330	A
35	DA	332	A
35	DA	333	G
35	DA	352	G
35	DA	353	G
35	DA	356	G
35	DA	358	U
35	DA	363(B)	G

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Mol	Chain	Res	Type
35	DA	363(E)	U
35	DA	363(F)	A
35	DA	365	C
35	DA	372	G
35	DA	386	G
35	DA	388	G
35	DA	396	G
35	DA	405	U
35	DA	406	G
35	DA	411	G
35	DA	412	A
35	DA	428	A
35	DA	444	C
35	DA	448	U
35	DA	456	C
35	DA	457	A
35	DA	470	A
35	DA	475	U
35	DA	481	G
35	DA	494	G
35	DA	505	A
35	DA	508	G
35	DA	509	C
35	DA	528	A
35	DA	531	C
35	DA	532	A
35	DA	533	G
35	DA	544	G
35	DA	547	A
35	DA	548	A
35	DA	549	G
35	DA	556	G
35	DA	563	G
35	DA	573	G
35	DA	575	A
35	DA	588	U
35	DA	603	A
35	DA	604	G
35	DA	607	U
35	DA	613	G
35	DA	614(B)	G
35	DA	615	G

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Mol	Chain	Res	Type
35	DA	622	G
35	DA	627	A
35	DA	637	A
35	DA	645	C
35	DA	646	A
35	DA	653	A
35	DA	654	A
35	DA	654(C)	G
35	DA	654(I)	C
35	DA	654(J)	A
35	DA	654(K)	C
35	DA	654(L)	G
35	DA	654(M)	C
35	DA	654(N)	G
35	DA	654(T)	C
35	DA	669	G
35	DA	673	C
35	DA	686	G
35	DA	708	C
35	DA	717	G
35	DA	722	A
35	DA	730	C
35	DA	753	C
35	DA	764	A
35	DA	765	G
35	DA	776	G
35	DA	782	A
35	DA	784	A
35	DA	785	G
35	DA	790	C
35	DA	791	C
35	DA	792	G
35	DA	805	G
35	DA	812	C
35	DA	819	A
35	DA	827	U
35	DA	828	U
35	DA	830	G
35	DA	848	G
35	DA	856	C
35	DA	859	G
35	DA	878	A

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Mol	Chain	Res	Type
35	DA	890	A
35	DA	896	A
35	DA	897	C
35	DA	910	A
35	DA	917	A
35	DA	927	G
35	DA	932	G
35	DA	941	A
35	DA	945	A
35	DA	946	G
35	DA	958	U
35	DA	959	A
35	DA	961	C
35	DA	965	C
35	DA	974	G
35	DA	975	C
35	DA	983	A
35	DA	991	C
35	DA	996	A
35	DA	1005	C
35	DA	1012	U
35	DA	1013	C
35	DA	1015	G
35	DA	1022	G
35	DA	1023	U
35	DA	1025	G
35	DA	1026	U
35	DA	1039	G
35	DA	1041	C
35	DA	1045	A
35	DA	1046	A
35	DA	1047	G
35	DA	1049	C
35	DA	1052	C
35	DA	1053	C
35	DA	1054	A
35	DA	1110	G
35	DA	1112	G
35	DA	1113	U
35	DA	1114	G
35	DA	1116	C
35	DA	1129	A

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Mol	Chain	Res	Type
35	DA	1130	U
35	DA	1135	C
35	DA	1136	G
35	DA	1142	U
35	DA	1143	A
35	DA	1155	A
35	DA	1171	G
35	DA	1173	G
35	DA	1174	A
35	DA	1175	U
35	DA	1176	G
35	DA	1178	C
35	DA	1180	C
35	DA	1195	G
35	DA	1205	U
35	DA	1210	A
35	DA	1211	U
35	DA	1221	C
35	DA	1247	A
35	DA	1248	G
35	DA	1250	G
35	DA	1253	A
35	DA	1256	G
35	DA	1265	A
35	DA	1271	G
35	DA	1272	A
35	DA	1273	U
35	DA	1275	A
35	DA	1281	G
35	DA	1300	U
35	DA	1301	A
35	DA	1302	A
35	DA	1314	C
35	DA	1319	G
35	DA	1321	A
35	DA	1332	G
35	DA	1345	C
35	DA	1349	A
35	DA	1359	A
35	DA	1360	A
35	DA	1368	G
35	DA	1379	A

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Mol	Chain	Res	Type
35	DA	1380	G
35	DA	1384	A
35	DA	1385	G
35	DA	1386	C
35	DA	1407	C
35	DA	1416	G
35	DA	1417	C
35	DA	1419	A
35	DA	1420	U
35	DA	1428	C
35	DA	1445	A
35	DA	1449	A
35	DA	1450	G
35	DA	1460	A
35	DA	1461	G
35	DA	1467	C
35	DA	1471	A
35	DA	1475	G
35	DA	1478	G
35	DA	1481	U
35	DA	1482	G
35	DA	1485	G
35	DA	1488	G
35	DA	1490	A
35	DA	1493	C
35	DA	1494	A
35	DA	1495	A
35	DA	1497	U
35	DA	1502	C
35	DA	1505	C
35	DA	1508	A
35	DA	1509	C
35	DA	1509(A)	A
35	DA	1520	G
35	DA	1528(A)	A
35	DA	1534	U
35	DA	1541	G
35	DA	1542	A
35	DA	1544	A
35	DA	1554	A
35	DA	1558	A
35	DA	1559	G

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Mol	Chain	Res	Type
35	DA	1569	A
35	DA	1578	U
35	DA	1579	A
35	DA	1584	C
35	DA	1586	A
35	DA	1588	C
35	DA	1591	G
35	DA	1603	A
35	DA	1608	A
35	DA	1617	C
35	DA	1618	A
35	DA	1640	C
35	DA	1648	C
35	DA	1653	G
35	DA	1654	A
35	DA	1674	G
35	DA	1694	C
35	DA	1696	G
35	DA	1698	A
35	DA	1722	A
35	DA	1739	U
35	DA	1740	G
35	DA	1742	G
35	DA	1745(A)	C
35	DA	1746	G
35	DA	1748	G
35	DA	1756	G
35	DA	1763	G
35	DA	1764	G
35	DA	1773	A
35	DA	1780	A
35	DA	1791	A
35	DA	1799	G
35	DA	1800	C
35	DA	1801	G
35	DA	1816	G
35	DA	1820	U
35	DA	1821	A
35	DA	1835	G
35	DA	1846	G
35	DA	1847	A
35	DA	1848	A

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Mol	Chain	Res	Type
35	DA	1858	G
35	DA	1865	G
35	DA	1866	C
35	DA	1878	G
35	DA	1881	C
35	DA	1882	C
35	DA	1885	A
35	DA	1888	G
35	DA	1889	A
35	DA	1900	A
35	DA	1903	G
35	DA	1906	G
35	DA	1912	A
35	DA	1913	A
35	DA	1914	C
35	DA	1915	U
35	DA	1916	A
35	DA	1929	G
35	DA	1930	G
35	DA	1938	A
35	DA	1955	U
35	DA	1963	U
35	DA	1965	C
35	DA	1967	C
35	DA	1969	A
35	DA	1970	A
35	DA	1971	A
35	DA	1972	A
35	DA	1982	C
35	DA	1987	G
35	DA	1993	U
35	DA	1997	G
35	DA	2023	G
35	DA	2031	A
35	DA	2033	A
35	DA	2034	U
35	DA	2036	C
35	DA	2043	C
35	DA	2055	C
35	DA	2056	G
35	DA	2060	A
35	DA	2061	G

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Mol	Chain	Res	Type
35	DA	2062	A
35	DA	2063	C
35	DA	2069	G
35	DA	2093	G
35	DA	2096	U
35	DA	2100	G
35	DA	2103	C
35	DA	2104	G
35	DA	2116	G
35	DA	2118	U
35	DA	2127	G
35	DA	2131	G
35	DA	2133	G
35	DA	2172	U
35	DA	2173	A
35	DA	2177	C
35	DA	2179	C
35	DA	2180	U
35	DA	2185	C
35	DA	2187	G
35	DA	2189	U
35	DA	2190	G
35	DA	2192	G
35	DA	2193	G
35	DA	2198	A
35	DA	2200	C
35	DA	2206	G
35	DA	2207	G
35	DA	2208	A
35	DA	2218	U
35	DA	2219	G
35	DA	2225	A
35	DA	2226	C
35	DA	2238	G
35	DA	2239	G
35	DA	2268	A
35	DA	2275	C
35	DA	2283	C
35	DA	2287	A
35	DA	2288	A
35	DA	2302	G
35	DA	2305	A

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Mol	Chain	Res	Type
35	DA	2307	G
35	DA	2308	G
35	DA	2309	A
35	DA	2311	A
35	DA	2313	C
35	DA	2316	C
35	DA	2319	G
35	DA	2320	A
35	DA	2327	A
35	DA	2334	G
35	DA	2336	A
35	DA	2345	G
35	DA	2347	C
35	DA	2350	C
35	DA	2361	A
35	DA	2383	G
35	DA	2385	C
35	DA	2400	G
35	DA	2402	C
35	DA	2406	U
35	DA	2423	U
35	DA	2424	C
35	DA	2425	A
35	DA	2429	G
35	DA	2430	A
35	DA	2435	A
35	DA	2439	A
35	DA	2441	C
35	DA	2448	A
35	DA	2465	C
35	DA	2468	G
35	DA	2469	A
35	DA	2470	G
35	DA	2476	A
35	DA	2477	C
35	DA	2478	A
35	DA	2482	G
35	DA	2484	G
35	DA	2491	U
35	DA	2502	G
35	DA	2505	G
35	DA	2518	A

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Mol	Chain	Res	Type
35	DA	2524	G
35	DA	2529	G
35	DA	2542	A
35	DA	2543	G
35	DA	2554	U
35	DA	2566	A
35	DA	2567	G
35	DA	2572	A
35	DA	2573	C
35	DA	2582	G
35	DA	2602	A
35	DA	2609	U
35	DA	2611	U
35	DA	2612	C
35	DA	2615	U
35	DA	2630	G
35	DA	2657	A
35	DA	2673	G
35	DA	2690	C
35	DA	2691	C
35	DA	2712	U
35	DA	2712(A)	A
35	DA	2713	A
35	DA	2720	U
35	DA	2726	U
35	DA	2752	C
35	DA	2762	G
35	DA	2765	A
35	DA	2766	G
35	DA	2778	A
35	DA	2780	G
35	DA	2787	C
35	DA	2789	C
35	DA	2790	A
35	DA	2791	C
35	DA	2794	C
35	DA	2802	G
35	DA	2803	C
35	DA	2804	C
35	DA	2808	U
35	DA	2820	A
35	DA	2821	A

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Mol	Chain	Res	Type
35	DA	2833	G
35	DA	2834	G
35	DA	2849	U
35	DA	2872	G
35	DA	2879	C
35	DA	2880	C
35	DA	2893	G
36	DB	8	U
36	DB	15	A
36	DB	16	G
36	DB	22	U
36	DB	27	C
36	DB	33	G
36	DB	41	U
36	DB	42	C
36	DB	45	A
36	DB	52	A
36	DB	53	A
36	DB	67	G
36	DB	73	A
36	DB	81	G
36	DB	88	C
36	DB	110	G
36	DB	113	G

All (171) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	30	U
1	AA	60	A
1	AA	115	G
1	AA	119	A
1	AA	243	A
1	AA	250	A
1	AA	266	G
1	AA	328	C
1	AA	366	C
1	AA	428	G
1	AA	429	U
1	AA	438	G
1	AA	484	G
1	AA	509	A

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Mol	Chain	Res	Type
1	AA	560	U
1	AA	575	G
1	AA	687	A
1	AA	748	C
1	AA	913	A
1	AA	992	U
1	AA	1049	U
1	AA	1054	C
1	AA	1067	A
1	AA	1201	A
1	AA	1281	U
1	AA	1285	A
1	AA	1300	G
1	AA	1498	U
1	AA	1504	G
23	AW	7	U
23	AW	39	A
23	AW	40	A
23	AW	74	C
22	AY	4	C
22	AY	27	C
35	BA	49	A
35	BA	71	A
35	BA	74	A
35	BA	128	C
35	BA	146	G
35	BA	221	A
35	BA	272	G
35	BA	331	A
35	BA	332	A
35	BA	387	U
35	BA	474	G
35	BA	587	C
35	BA	603	A
35	BA	613	G
35	BA	614(C)	A
35	BA	669	G
35	BA	752	A
35	BA	764	A
35	BA	790	C
35	BA	1022	G
35	BA	1210	A

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Mol	Chain	Res	Type
35	BA	1286	A
35	BA	1395	A
35	BA	1427	A
35	BA	1558	A
35	BA	1608	A
35	BA	1652	A
35	BA	1653	G
35	BA	1799	G
35	BA	1819	A
35	BA	1820	U
35	BA	1846	G
35	BA	1885	A
35	BA	1970	A
35	BA	1992	G
35	BA	2033	A
35	BA	2062	A
35	BA	2126	A
35	BA	2171	A
35	BA	2225	A
35	BA	2282	G
35	BA	2360	A
35	BA	2405	G
35	BA	2422	A
35	BA	2439	A
35	BA	2481	G
35	BA	2542	A
35	BA	2611	U
35	BA	2689	U
36	BB	66	A
1	CA	30	U
1	CA	60	A
1	CA	115	G
1	CA	119	A
1	CA	243	A
1	CA	250	A
1	CA	266	G
1	CA	328	C
1	CA	366	C
1	CA	428	G
1	CA	429	U
1	CA	438	G
1	CA	484	G

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Mol	Chain	Res	Type
1	CA	509	A
1	CA	560	U
1	CA	575	G
1	CA	687	A
1	CA	748	C
1	CA	913	A
1	CA	992	U
1	CA	1049	U
1	CA	1054	C
1	CA	1067	A
1	CA	1201	A
1	CA	1281	U
1	CA	1285	A
1	CA	1300	G
1	CA	1400	C
1	CA	1492	A
1	CA	1498	U
1	CA	1504	G
23	CW	7	U
23	CW	40	A
23	CW	74	C
22	CY	4	C
22	CY	27	C
35	DA	49	A
35	DA	71	A
35	DA	74	A
35	DA	128	C
35	DA	221	A
35	DA	272	G
35	DA	331	A
35	DA	332	A
35	DA	387	U
35	DA	474	G
35	DA	587	C
35	DA	603	A
35	DA	613	G
35	DA	614(C)	A
35	DA	669	G
35	DA	685	A
35	DA	752	A
35	DA	764	A
35	DA	790	C

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Mol	Chain	Res	Type
35	DA	1022	G
35	DA	1210	A
35	DA	1286	A
35	DA	1395	A
35	DA	1427	A
35	DA	1558	A
35	DA	1608	A
35	DA	1652	A
35	DA	1653	G
35	DA	1799	G
35	DA	1819	A
35	DA	1820	U
35	DA	1846	G
35	DA	1885	A
35	DA	1970	A
35	DA	1992	G
35	DA	2033	A
35	DA	2062	A
35	DA	2126	A
35	DA	2171	A
35	DA	2225	A
35	DA	2282	G
35	DA	2360	A
35	DA	2405	G
35	DA	2422	A
35	DA	2439	A
35	DA	2481	G
35	DA	2542	A
35	DA	2611	U
35	DA	2689	U
36	DB	66	A

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

4 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
22	AG9	AV	36	22	20,29,30	0.77	1 (5%)	27,39,42	1.40	3 (11%)
22	AG9	AY	36	22	20,29,30	1.38	2 (10%)	27,39,42	1.53	4 (14%)
22	AG9	CV	36	22	20,29,30	1.55	2 (10%)	27,39,42	1.40	3 (11%)
22	AG9	CY	36	22	20,29,30	1.88	4 (20%)	27,39,42	1.39	4 (14%)

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
22	AG9	AV	36	22	1/1/9/13	0/14/47/48	0/2/2/2
22	AG9	AY	36	22	1/1/9/13	0/14/47/48	0/2/2/2
22	AG9	CV	36	22	1/1/9/13	0/14/47/48	0/2/2/2
22	AG9	CY	36	22	1/1/9/13	0/14/47/48	0/2/2/2

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	AV	36	AG9	C2-N3	2.44	1.35	1.30
22	CY	36	AG9	C2-N2	2.74	1.38	1.34
22	AY	36	AG9	C2-N3	2.89	1.36	1.30
22	CY	36	AG9	C1'-N1	2.90	1.56	1.47
22	CY	36	AG9	C2-N3	3.23	1.36	1.30
22	CV	36	AG9	C2-N3	3.66	1.37	1.30
22	AY	36	AG9	C2-N1	5.02	1.42	1.38
22	CV	36	AG9	C2-N1	5.50	1.43	1.38
22	CY	36	AG9	C2-N1	5.98	1.43	1.38

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	AY	36	AG9	N1-C2-N3	-4.92	118.76	124.16
22	CV	36	AG9	N1-C2-N3	-4.82	118.87	124.16
22	AV	36	AG9	N1-C2-N3	-4.78	118.92	124.16
22	CY	36	AG9	N1-C2-N3	-4.52	119.20	124.16
22	AY	36	AG9	C2'-C1'-N1	2.48	120.41	113.08
22	CY	36	AG9	N2-C2-N3	2.60	123.03	118.72
22	CY	36	AG9	C2'-C1'-N1	2.63	120.86	113.08
22	CY	36	AG9	CD-NE-CZ	2.94	124.17	115.09
22	AV	36	AG9	CD-NE-CZ	3.01	124.38	115.09

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	CV	36	AG9	CD-NE-CZ	3.03	124.45	115.09
22	AY	36	AG9	CD-NE-CZ	3.12	124.72	115.09
22	CV	36	AG9	N2-C2-N1	3.61	119.54	117.33
22	AV	36	AG9	N2-C2-N1	3.64	119.56	117.33
22	AY	36	AG9	N2-C2-N1	3.88	119.71	117.33

All (4) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
22	AV	36	AG9	C4
22	AY	36	AG9	C4
22	CV	36	AG9	C4
22	CY	36	AG9	C4

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 36 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	AV	36	AG9	6	0
22	AY	36	AG9	11	0
22	CV	36	AG9	12	0
22	CY	36	AG9	7	0

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 4 ligands modelled in this entry, 4 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
13	CM	5
13	AM	5
9	AI	2
9	CI	2
41	DG	1
41	BG	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AM	112:GLY	C	113:PRO	N	4.84
1	CM	112:GLY	C	113:PRO	N	4.84
1	AM	69:GLU	C	70:LEU	N	4.24
1	CM	69:GLU	C	70:LEU	N	4.23
1	DG	112:PRO	C	113:ARG	N	4.14
1	BG	112:PRO	C	113:ARG	N	3.98
1	AI	53:VAL	C	54:ASP	N	3.80
1	CI	53:VAL	C	54:ASP	N	3.77
1	CM	118:ALA	C	119:GLY	N	3.12
1	AM	118:ALA	C	119:GLY	N	3.10
1	CM	97:PRO	C	98:VAL	N	3.10
1	AM	97:PRO	C	98:VAL	N	3.09
1	AI	104:ARG	C	105:ASP	N	2.79
1	CM	65:LYS	C	66:LEU	N	2.79
1	CI	104:ARG	C	105:ASP	N	2.78
1	AM	65:LYS	C	66:LEU	N	2.77

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1504/1522 (98%)	0.62	103 (6%) 20 7	44, 101, 184, 200	0
1	CA	1504/1522 (98%)	0.61	114 (7%) 17 6	55, 115, 186, 200	0
2	AB	235/256 (91%)	0.73	32 (13%) 4 2	75, 134, 176, 198	0
2	CB	235/256 (91%)	1.28	57 (24%) 1 0	94, 148, 183, 200	0
3	AC	207/239 (86%)	0.84	28 (13%) 4 2	82, 127, 157, 179	0
3	CC	207/239 (86%)	1.26	54 (26%) 1 0	92, 141, 170, 185	0
4	AD	208/209 (99%)	0.67	17 (8%) 14 5	64, 112, 142, 179	0
4	CD	208/209 (99%)	0.30	8 (3%) 44 21	56, 99, 135, 157	0
5	AE	151/162 (93%)	0.45	8 (5%) 30 13	65, 95, 142, 167	0
5	CE	151/162 (93%)	0.99	28 (18%) 2 1	69, 119, 151, 160	0
6	AF	101/101 (100%)	0.12	0 100 100	59, 98, 138, 173	0
6	CF	101/101 (100%)	0.12	3 (2%) 54 29	64, 110, 133, 173	0
7	AG	155/156 (99%)	1.26	36 (23%) 1 0	76, 123, 155, 198	0
7	CG	155/156 (99%)	1.19	37 (23%) 1 0	94, 131, 160, 194	0
8	AH	138/138 (100%)	0.39	7 (5%) 32 13	61, 101, 128, 144	0
8	CH	138/138 (100%)	0.77	14 (10%) 9 3	83, 121, 148, 166	0
9	AI	127/128 (99%)	1.72	44 (34%) 0 0	81, 148, 176, 191	0
9	CI	127/128 (99%)	2.13	62 (48%) 0 0	99, 153, 181, 193	0
10	AJ	99/105 (94%)	1.88	45 (45%) 0 0	71, 149, 177, 185	0
10	CJ	99/105 (94%)	2.45	55 (55%) 0 0	97, 159, 182, 189	0
11	AK	119/129 (92%)	0.56	10 (8%) 14 4	63, 94, 136, 187	0
11	CK	119/129 (92%)	0.60	14 (11%) 6 2	78, 108, 141, 176	0
12	AL	125/135 (92%)	1.10	24 (19%) 2 1	53, 93, 146, 180	0
12	CL	125/135 (92%)	1.16	28 (22%) 1 0	63, 111, 149, 177	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å²)		Q<0.9	
13	AM	119/126 (94%)	1.37	35 (29%)	1	0	75, 129, 161, 178	0
13	CM	119/126 (94%)	2.06	50 (42%)	0	0	96, 150, 169, 186	0
14	AN	60/61 (98%)	1.43	16 (26%)	1	0	71, 118, 145, 157	0
14	CN	60/61 (98%)	1.59	23 (38%)	0	0	108, 143, 166, 187	0
15	AO	88/89 (98%)	0.44	4 (4%)	37	17	60, 97, 130, 148	0
15	CO	88/89 (98%)	0.70	9 (10%)	9	3	67, 110, 138, 146	0
16	AP	84/88 (95%)	1.11	15 (17%)	2	1	67, 112, 156, 178	0
16	CP	84/88 (95%)	0.52	4 (4%)	34	15	60, 87, 137, 157	0
17	AQ	100/105 (95%)	0.67	10 (10%)	9	3	74, 109, 138, 151	0
17	CQ	100/105 (95%)	0.81	12 (12%)	6	2	70, 109, 139, 165	0
18	AR	70/88 (79%)	0.63	5 (7%)	19	7	69, 98, 139, 157	0
18	CR	70/88 (79%)	0.82	7 (10%)	9	3	77, 111, 148, 156	0
19	AS	79/93 (84%)	1.97	29 (36%)	0	0	89, 137, 171, 185	0
19	CS	79/93 (84%)	2.49	39 (49%)	0	0	112, 154, 178, 200	0
20	AT	99/106 (93%)	1.16	17 (17%)	2	1	65, 117, 160, 167	0
20	CT	99/106 (93%)	0.93	12 (12%)	6	2	66, 107, 151, 163	0
21	AU	25/27 (92%)	2.19	14 (56%)	0	0	84, 120, 146, 156	0
21	CU	25/27 (92%)	4.05	19 (76%)	0	0	91, 135, 171, 188	0
22	AV	77/78 (98%)	1.51	23 (29%)	1	0	65, 141, 179, 199	0
22	AY	77/78 (98%)	1.64	26 (33%)	0	0	90, 140, 185, 189	0
22	CV	77/78 (98%)	2.26	37 (48%)	0	0	94, 175, 196, 200	0
22	CY	77/78 (98%)	2.93	47 (61%)	0	0	138, 176, 197, 200	0
23	AW	78/78 (100%)	2.28	39 (50%)	0	0	70, 173, 191, 199	0
23	CW	78/78 (100%)	3.41	56 (71%)	0	0	99, 188, 200, 200	0
24	AX	12/24 (50%)	1.12	1 (8%)	14	5	59, 88, 157, 160	0
24	CX	12/24 (50%)	1.99	5 (41%)	0	0	92, 163, 185, 185	0
25	B0	84/85 (98%)	0.79	8 (9%)	10	4	39, 66, 124, 167	0
25	D0	84/85 (98%)	1.31	21 (25%)	1	0	71, 105, 146, 165	0
26	B1	94/98 (95%)	0.09	0	100	100	33, 61, 114, 141	0
26	D1	94/98 (95%)	0.25	3 (3%)	51	27	43, 74, 127, 149	0
27	B2	71/72 (98%)	-0.06	1 (1%)	78	60	41, 70, 122, 160	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å ²)	Q<0.9
27	D2	71/72 (98%)	0.26	4 (5%)	28 11	57, 97, 139, 178	0
28	B3	60/60 (100%)	0.42	2 (3%)	50 26	42, 63, 108, 167	0
28	D3	60/60 (100%)	1.36	15 (25%)	1 0	65, 109, 149, 175	0
29	B4	58/71 (81%)	1.37	12 (20%)	1 0	96, 144, 171, 187	0
29	D4	58/71 (81%)	1.37	15 (25%)	1 0	86, 165, 194, 200	0
30	B5	56/60 (93%)	-0.09	0	100 100	25, 63, 126, 148	0
30	D5	56/60 (93%)	0.20	1 (1%)	71 50	48, 80, 128, 146	0
31	B6	50/54 (92%)	3.64	39 (78%)	0 0	99, 140, 171, 180	0
31	D6	50/54 (92%)	4.81	41 (82%)	0 0	113, 150, 174, 191	0
32	B7	48/49 (97%)	0.17	1 (2%)	67 44	23, 42, 83, 129	0
32	D7	48/49 (97%)	0.34	1 (2%)	67 44	35, 54, 98, 131	0
33	B8	64/65 (98%)	0.42	2 (3%)	52 28	30, 61, 107, 123	0
33	D8	64/65 (98%)	0.74	7 (10%)	7 2	46, 89, 134, 177	0
34	B9	37/37 (100%)	5.44	35 (94%)	0 0	91, 136, 157, 159	0
34	D9	37/37 (100%)	6.17	36 (97%)	0 0	126, 149, 172, 183	0
35	BA	2848/2915 (97%)	0.37	129 (4%)	37 17	20, 56, 184, 200	0
35	DA	2848/2915 (97%)	0.43	158 (5%)	29 12	39, 82, 186, 200	0
36	BB	119/122 (97%)	0.67	1 (0%)	87 75	52, 81, 149, 178	0
36	DB	119/122 (97%)	0.92	10 (8%)	14 4	102, 151, 183, 195	0
37	BC	120/229 (52%)	3.80	88 (73%)	0 0	119, 168, 189, 200	0
37	DC	120/229 (52%)	3.55	82 (68%)	0 0	132, 170, 187, 199	0
38	BD	272/276 (98%)	0.01	5 (1%)	71 50	24, 55, 93, 150	0
38	DD	272/276 (98%)	0.13	4 (1%)	76 58	37, 73, 110, 144	0
39	BE	205/206 (99%)	0.20	8 (3%)	43 21	20, 62, 129, 165	0
39	DE	205/206 (99%)	0.34	6 (2%)	55 31	41, 82, 136, 159	0
40	BF	208/210 (99%)	0.31	13 (6%)	23 9	22, 63, 144, 195	0
40	DF	208/210 (99%)	0.26	7 (3%)	49 24	38, 90, 145, 184	0
41	BG	181/182 (99%)	1.05	29 (16%)	3 1	51, 103, 155, 182	0
41	DG	181/182 (99%)	1.36	54 (29%)	1 0	102, 141, 167, 183	0
42	BH	165/180 (91%)	0.64	16 (9%)	10 3	49, 86, 136, 174	0
42	DH	165/180 (91%)	2.06	69 (41%)	0 0	102, 139, 167, 182	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
43	BI	146/148 (98%)	1.82	51 (34%) 0 0	55, 147, 187, 200	0
43	DI	146/148 (98%)	1.71	48 (32%) 0 0	59, 139, 183, 200	0
44	BJ	0/173	-	-	-	-
44	DJ	0/173	-	-	-	-
45	BN	139/140 (99%)	0.05	2 (1%) 78 60	36, 64, 118, 147	0
45	DN	139/140 (99%)	0.43	3 (2%) 65 42	69, 104, 136, 155	0
46	BO	122/122 (100%)	-0.10	0 100 100	33, 60, 94, 116	0
46	DO	122/122 (100%)	0.09	0 100 100	54, 83, 110, 141	0
47	BP	146/150 (97%)	0.55	5 (3%) 49 24	29, 74, 128, 189	0
47	DP	146/150 (97%)	0.72	11 (7%) 17 6	41, 98, 144, 173	0
48	BQ	141/141 (100%)	0.32	2 (1%) 78 60	38, 67, 109, 143	0
48	DQ	141/141 (100%)	0.86	15 (10%) 8 3	63, 113, 153, 178	0
49	BR	117/118 (99%)	0.12	0 100 100	36, 62, 103, 136	0
49	DR	117/118 (99%)	0.20	2 (1%) 73 52	42, 76, 118, 151	0
50	BS	99/112 (88%)	1.26	26 (26%) 1 0	52, 95, 141, 160	0
50	DS	99/112 (88%)	2.00	40 (40%) 0 0	101, 137, 163, 186	0
51	BT	136/146 (93%)	0.09	4 (2%) 55 31	47, 78, 140, 181	0
51	DT	136/146 (93%)	0.35	7 (5%) 32 13	58, 92, 151, 176	0
52	BU	117/118 (99%)	0.05	2 (1%) 73 52	27, 53, 102, 144	0
52	DU	117/118 (99%)	0.48	7 (5%) 25 10	46, 97, 137, 163	0
53	BV	101/101 (100%)	0.06	2 (1%) 68 46	24, 72, 124, 168	0
53	DV	101/101 (100%)	1.03	17 (16%) 2 1	53, 116, 146, 171	0
54	BW	113/113 (100%)	0.08	3 (2%) 58 34	28, 52, 105, 180	0
54	DW	113/113 (100%)	0.10	2 (1%) 71 50	49, 71, 119, 165	0
55	BX	93/96 (96%)	-0.13	0 100 100	29, 63, 100, 141	0
55	DX	93/96 (96%)	0.19	2 (2%) 65 42	55, 83, 115, 138	0
56	BY	101/110 (91%)	0.38	6 (5%) 26 11	47, 89, 131, 157	0
56	DY	101/110 (91%)	1.08	20 (19%) 1 0	60, 106, 149, 164	0
57	BZ	185/206 (89%)	1.64	56 (30%) 1 0	51, 113, 163, 188	0
57	DZ	185/206 (89%)	1.81	65 (35%) 0 0	99, 144, 171, 189	0
All	All	21266/22572 (94%)	0.77	2703 (12%) 5 2	20, 98, 177, 200	0

All (2703) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
43	BI	88	ILE	22.7
37	BC	171	ALA	19.8
35	BA	277	C	19.1
34	D9	34	GLN	17.7
48	DQ	141	GLN	16.5
37	BC	177	GLY	15.3
57	BZ	184	ALA	15.2
35	DA	2802	G	14.6
43	DI	72	LEU	13.7
37	DC	229	SER	13.6
31	D6	45	LYS	13.5
31	D6	47	THR	13.0
34	D9	14	CYS	12.7
34	D9	21	GLY	12.7
22	CY	78	A	12.2
37	BC	170	GLY	11.7
31	D6	46	HIS	11.7
21	CU	18	TYR	11.5
23	CW	36	C	11.5
31	D6	26	ASN	11.2
31	D6	13	CYS	11.0
13	CM	120	LYS	11.0
42	DH	96	ALA	11.0
35	BA	2802	G	10.9
43	DI	145	VAL	10.7
37	DC	35	THR	10.6
57	BZ	147	GLY	10.6
35	BA	2795	G	10.5
7	CG	82	GLY	10.4
20	AT	106	ALA	10.3
34	D9	25	VAL	10.2
35	BA	654(E)	G	10.0
35	DA	654(N)	G	10.0
35	BA	2799	C	10.0
19	CS	82	GLY	10.0
35	BA	2113	U	10.0
22	CY	49	G	9.8
1	AA	78	G	9.8
35	BA	2112	G	9.6
37	DC	34	ALA	9.6
22	CV	21	U	9.4
37	BC	190	ILE	9.4
11	AK	129	SER	9.4

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Mol	Chain	Res	Type	RSRZ
34	B9	34	GLN	9.3
34	D9	22	ARG	9.3
43	BI	90	GLY	9.3
10	CJ	34	VAL	9.3
7	AG	82	GLY	9.3
35	DA	654(E)	G	9.2
41	BG	2	PRO	9.2
1	AA	79	G	9.1
35	BA	654(D)	G	9.1
35	BA	654(K)	C	9.0
34	B9	5	ALA	9.0
31	D6	38	LYS	9.0
51	DT	136	GLN	8.9
20	CT	106	ALA	8.9
7	AG	81	GLY	8.9
43	DI	146	ALA	8.9
19	CS	81	ARG	8.9
31	D6	42	TRP	8.8
57	DZ	114	GLY	8.8
34	D9	20	HIS	8.7
37	BC	166	ASN	8.6
57	BZ	114	GLY	8.6
13	CM	84	ILE	8.6
37	DC	49	GLY	8.6
43	BI	130	TYR	8.5
34	D9	36	GLN	8.5
50	DS	43	GLU	8.5
7	AG	84	ASN	8.5
22	CY	77	C	8.5
42	DH	170	ARG	8.4
31	D6	40	CYS	8.4
9	AI	7	THR	8.4
37	DC	3	LYS	8.4
37	BC	179	ALA	8.3
21	CU	26	LYS	8.3
34	B9	7	VAL	8.3
35	DA	654(A)	G	8.3
10	CJ	74	ILE	8.3
37	BC	44	VAL	8.3
37	DC	4	HIS	8.2
37	BC	46	ALA	8.2
7	AG	83	ALA	8.2

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Mol	Chain	Res	Type	RSRZ
43	DI	61	ARG	8.1
35	DA	654(I)	C	8.1
56	DY	44	ILE	8.1
35	DA	2795	G	8.1
34	B9	6	SER	8.1
42	DH	24	VAL	8.1
23	CW	57	U	8.1
37	BC	178	LYS	8.0
19	CS	80	TYR	8.0
10	CJ	29	ARG	8.0
22	CY	76	C	8.0
23	CW	1	G	7.9
35	BA	654(H)	G	7.9
19	AS	82	GLY	7.9
57	DZ	120	ILE	7.9
37	DC	2	PRO	7.8
3	CC	189	ALA	7.8
19	AS	40	ILE	7.8
34	D9	1	MET	7.8
37	BC	176	VAL	7.8
12	AL	127	GLU	7.8
37	BC	2	PRO	7.7
35	DA	2796	U	7.7
35	BA	2119	A	7.7
19	AS	12	ASP	7.7
43	BI	91	SER	7.7
13	CM	39	ILE	7.7
2	CB	163	PHE	7.7
23	CW	18	U	7.7
57	BZ	143	GLY	7.7
23	CW	19	G	7.6
9	CI	19	LEU	7.6
37	BC	219	MET	7.6
1	AA	77	G	7.6
42	DH	36	PRO	7.5
37	DC	33	LEU	7.5
35	BA	896	A	7.5
35	BA	2115	G	7.5
37	DC	227	PRO	7.5
29	D4	58	ARG	7.5
34	D9	35	ARG	7.5
31	B6	42	TRP	7.4

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Mol	Chain	Res	Type	RSRZ
23	AW	49	G	7.4
34	D9	29	ASN	7.4
9	AI	85	LEU	7.4
57	DZ	156	LYS	7.4
37	BC	14	LYS	7.4
31	D6	50	ARG	7.4
37	DC	221	PRO	7.4
34	B9	12	ASP	7.4
9	CI	29	ASN	7.4
34	B9	29	ASN	7.3
10	CJ	84	GLN	7.3
51	DT	1	MET	7.3
35	BA	654(F)	C	7.3
43	BI	120	ILE	7.3
31	D6	22	ALA	7.3
13	CM	119	GLY	7.3
31	D6	51	GLU	7.3
35	BA	1913	A	7.3
37	DC	228	HIS	7.2
43	DI	78	THR	7.2
1	CA	83	U	7.2
34	B9	36	GLN	7.2
31	B6	47	THR	7.2
2	CB	133	LYS	7.2
31	B6	45	LYS	7.2
28	D3	1	MET	7.2
31	D6	31	PRO	7.2
35	DA	2803	C	7.2
31	D6	52	VAL	7.1
7	CG	84	ASN	7.1
7	CG	83	ALA	7.1
34	D9	2	LYS	7.1
34	D9	37	GLY	7.1
31	B6	26	ASN	7.1
19	CS	5	LEU	7.1
37	DC	189	ASN	7.1
34	D9	24	TYR	7.0
1	CA	89	C	7.0
20	CT	104	LEU	7.0
35	DA	654(M)	C	7.0
9	CI	61	ALA	7.0
1	AA	80	G	6.9

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Mol	Chain	Res	Type	RSRZ
35	DA	654(O)	G	6.9
35	BA	1509	C	6.9
23	AW	1	G	6.9
34	D9	33	LYS	6.9
34	B9	13	LYS	6.9
23	CW	17	C	6.9
23	CW	49	G	6.9
9	CI	103	THR	6.9
41	BG	49	ASP	6.8
34	B9	10	ILE	6.8
19	AS	29	ARG	6.8
57	BZ	149	SER	6.8
22	CY	73	C	6.8
1	CA	1026	G	6.8
35	BA	2117	A	6.8
50	BS	108	GLY	6.8
35	DA	654(T)	C	6.7
37	DC	216	THR	6.7
1	CA	1039	C	6.7
9	CI	4	TYR	6.7
42	BH	44	VAL	6.7
34	B9	37	GLY	6.6
50	DS	105	ALA	6.6
19	CS	36	ARG	6.6
37	BC	213	VAL	6.6
31	D6	39	TYR	6.6
31	B6	43	CYS	6.6
9	AI	4	TYR	6.6
19	CS	12	ASP	6.6
35	DA	896	A	6.6
57	BZ	185	GLU	6.6
22	AV	1	G	6.6
19	AS	69	HIS	6.5
34	B9	22	ARG	6.5
56	DY	47	LYS	6.5
23	CW	58	C	6.5
42	DH	89	ILE	6.5
23	AW	22	U	6.5
35	DA	654(J)	A	6.5
34	D9	18	ARG	6.5
31	D6	41	PRO	6.5
34	B9	23	VAL	6.4

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Mol	Chain	Res	Type	RSRZ
31	B6	50	ARG	6.4
3	CC	206	GLU	6.4
37	BC	193	PHE	6.4
13	CM	116	THR	6.4
14	AN	2	ALA	6.4
22	CY	22	U	6.4
37	DC	51	ASP	6.4
57	DZ	149	SER	6.4
19	CS	40	ILE	6.3
35	BA	654(G)	C	6.3
34	B9	18	ARG	6.3
21	CU	8	THR	6.3
34	D9	28	GLU	6.3
35	DA	1173	G	6.3
35	DA	654(F)	C	6.3
23	CW	74	C	6.3
35	DA	2155	G	6.3
20	CT	103	GLY	6.3
1	AA	1129	C	6.3
13	CM	65	LYS	6.3
34	D9	13	LYS	6.3
31	B6	29	ASN	6.2
43	DI	68	LEU	6.2
42	DH	49	VAL	6.2
35	BA	654(L)	G	6.2
57	DZ	147	GLY	6.2
50	DS	37	ALA	6.2
39	BE	205	ALA	6.2
1	CA	92	C	6.2
42	BH	45	VAL	6.2
1	CA	81	U	6.2
29	B4	17	GLY	6.2
21	CU	17	THR	6.2
21	CU	25	LYS	6.2
43	BI	92	VAL	6.2
50	DS	49	VAL	6.2
34	B9	17	ILE	6.1
37	BC	42	VAL	6.1
56	DY	45	VAL	6.1
34	D9	27	CYS	6.1
12	AL	61	THR	6.1
31	B6	28	ARG	6.1

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Mol	Chain	Res	Type	RSRZ
47	BP	149	GLU	6.1
35	DA	2894	G	6.1
35	DA	885	C	6.1
57	BZ	140	ASP	6.1
50	DS	52	SER	6.1
37	BC	183	PRO	6.1
34	B9	1	MET	6.1
57	BZ	180	VAL	6.1
3	AC	87	LEU	6.1
31	D6	37	ARG	6.1
35	DA	2138	C	6.1
50	DS	104	GLY	6.1
3	CC	53	ALA	6.1
35	BA	654(S)	G	6.1
42	DH	129	THR	6.1
37	DC	12	LEU	6.1
57	DZ	176	PRO	6.1
29	B4	30	GLU	6.1
37	BC	208	THR	6.1
2	CB	35	GLU	6.0
43	BI	70	GLU	6.0
13	CM	60	VAL	6.0
57	BZ	141	VAL	6.0
3	AC	193	TYR	6.0
41	BG	75	LYS	6.0
37	DC	171	ALA	6.0
37	BC	33	LEU	6.0
35	DA	654(U)	A	6.0
22	CV	1	G	6.0
51	BT	39	ARG	5.9
22	CY	47	G	5.9
34	B9	3	VAL	5.9
31	B6	14	THR	5.9
20	AT	102	GLY	5.9
29	D4	57	GLU	5.9
34	B9	4	ARG	5.9
35	BA	654(T)	C	5.9
16	AP	35	LYS	5.9
42	DH	67	LEU	5.9
50	DS	59	LYS	5.9
34	D9	23	VAL	5.9
53	DV	12	TYR	5.9

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Mol	Chain	Res	Type	RSRZ
43	BI	134	PRO	5.8
23	CW	21	U	5.8
10	CJ	55	LYS	5.8
54	BW	113	LYS	5.8
37	DC	172	ILE	5.8
13	CM	5	ALA	5.8
37	DC	186	LEU	5.8
57	DZ	118	GLN	5.8
39	BE	204	ALA	5.8
35	DA	654(C)	G	5.8
34	B9	35	ARG	5.8
43	BI	63	ALA	5.7
42	DH	40	GLU	5.7
34	D9	12	ASP	5.7
34	D9	19	ARG	5.7
40	BF	24	LEU	5.7
31	D6	21	TYR	5.7
35	DA	654(L)	G	5.7
41	DG	48	GLU	5.7
50	DS	36	TYR	5.7
1	CA	77	G	5.7
35	DA	2799	C	5.7
37	BC	189	ASN	5.7
37	BC	173	HIS	5.7
9	CI	125	TYR	5.7
34	B9	27	CYS	5.7
52	DU	91	ASP	5.7
29	B4	56	VAL	5.7
35	BA	2114	A	5.7
57	DZ	177	PRO	5.7
37	BC	172	ILE	5.6
41	DG	2	PRO	5.6
43	DI	111	PRO	5.6
21	CU	22	ARG	5.6
48	DQ	140	ALA	5.6
57	BZ	176	PRO	5.6
1	AA	93	G	5.6
18	CR	88	LYS	5.6
35	DA	2122	U	5.6
37	DC	52	PRO	5.6
45	DN	62	VAL	5.6
1	CA	1257	U	5.6

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Mol	Chain	Res	Type	RSRZ
23	CW	15	G	5.6
1	AA	1257	U	5.6
31	D6	14	THR	5.6
1	CA	1020	U	5.6
37	DC	175	PRO	5.6
50	DS	50	SER	5.6
35	DA	654(B)	C	5.6
22	AV	49	G	5.6
13	CM	46	LYS	5.6
1	AA	1260	C	5.6
22	CY	3	G	5.5
37	BC	180	SER	5.5
9	CI	28	VAL	5.5
1	AA	1001(A)	G	5.5
57	BZ	179	ASP	5.5
22	AY	78	A	5.5
35	BA	2796	U	5.5
37	DC	188	ASP	5.5
35	DA	654(H)	G	5.5
10	AJ	5	ARG	5.5
10	CJ	35	SER	5.5
35	DA	2146	C	5.5
35	BA	2310	A	5.5
52	DU	118	GLY	5.5
37	BC	57	GLN	5.5
31	D6	12	GLU	5.5
41	DG	41	GLN	5.5
35	BA	654(I)	C	5.5
41	DG	34	LEU	5.5
19	CS	41	VAL	5.5
37	DC	32	GLU	5.4
31	D6	29	ASN	5.4
37	BC	3	LYS	5.4
57	BZ	148	ASP	5.4
37	BC	229	SER	5.4
35	BA	2145	C	5.4
31	D6	49	HIS	5.4
22	CY	20	G	5.4
35	DA	1048	A	5.4
22	AY	22	U	5.4
53	DV	36	PRO	5.4
37	DC	43	GLU	5.4

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Mol	Chain	Res	Type	RSRZ
35	BA	654(J)	A	5.4
34	D9	5	ALA	5.4
43	BI	143	SER	5.4
7	AG	33	ASP	5.4
37	DC	40	GLU	5.4
41	DG	50	ALA	5.4
35	BA	883	G	5.4
51	DT	115	ARG	5.4
7	CG	130	GLY	5.4
43	BI	59	ALA	5.4
1	AA	1033	G	5.4
35	DA	654(S)	G	5.4
3	AC	71	ALA	5.4
20	AT	9	ASN	5.4
22	CY	72	C	5.4
35	DA	654(R)	C	5.4
43	DI	108	THR	5.3
11	CK	129	SER	5.3
56	DY	89	PHE	5.3
35	BA	2136	C	5.3
7	CG	80	VAL	5.3
50	DS	94	TYR	5.3
1	AA	1034	G	5.3
1	CA	1001(A)	G	5.3
37	BC	198	GLU	5.3
37	BC	212	SER	5.3
7	AG	85	TYR	5.3
13	AM	100	GLY	5.3
9	AI	15	ALA	5.3
1	CA	82	U	5.3
35	DA	2801(A)	A	5.3
37	BC	192	ALA	5.3
1	CA	1286	A	5.3
19	CS	15	LEU	5.3
37	DC	8	TYR	5.3
13	CM	34	LEU	5.3
2	AB	133	LYS	5.3
31	D6	23	THR	5.3
34	B9	21	GLY	5.3
9	CI	15	ALA	5.3
1	CA	1001	A	5.2
37	BC	29	LEU	5.2

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Mol	Chain	Res	Type	RSRZ
57	DZ	170	THR	5.2
20	AT	98	PRO	5.2
51	DT	39	ARG	5.2
1	AA	92	C	5.2
1	CA	1130	A	5.2
42	DH	33	LEU	5.2
35	DA	1534	U	5.2
8	CH	1	MET	5.2
50	DS	48	LEU	5.2
7	AG	156	TRP	5.2
34	D9	26	ILE	5.2
31	B6	20	ASN	5.2
40	DF	208	GLY	5.2
43	DI	112	LYS	5.2
23	CW	55	G	5.2
35	BA	654(A)	G	5.2
2	CB	134	GLU	5.2
21	CU	16	GLY	5.2
35	BA	654(O)	G	5.2
37	DC	15	VAL	5.2
57	DZ	146	ILE	5.2
9	CI	20	ARG	5.2
3	AC	192	THR	5.2
15	CO	15	PHE	5.2
18	AR	88	LYS	5.2
47	DP	149	GLU	5.1
52	BU	118	GLY	5.1
4	AD	23	GLY	5.1
35	BA	2116	G	5.1
35	DA	2156	G	5.1
28	D3	2	PRO	5.1
27	D2	72	ALA	5.1
37	BC	181	PHE	5.1
1	AA	98	G	5.1
23	CW	59	G	5.1
35	BA	654(V)	A	5.1
19	CS	9	VAL	5.1
37	DC	56	ASP	5.1
2	CB	92	TYR	5.1
21	CU	10	ARG	5.1
35	BA	884	C	5.1
41	DG	25	TYR	5.1

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Mol	Chain	Res	Type	RSRZ
10	CJ	10	GLY	5.1
13	CM	61	GLU	5.1
9	CI	85	LEU	5.1
2	CB	214	ILE	5.1
37	BC	197	LEU	5.0
1	CA	1021	G	5.0
13	CM	53	VAL	5.0
2	CB	77	ALA	5.0
43	BI	94	ALA	5.0
10	CJ	28	ARG	5.0
1	AA	97	G	5.0
35	BA	654(N)	G	5.0
31	B6	49	HIS	5.0
22	CV	54	G	5.0
23	AW	52	C	5.0
29	B4	1	MET	5.0
37	BC	30	VAL	5.0
14	CN	2	ALA	5.0
37	BC	13	GLU	5.0
41	DG	84	LYS	5.0
57	DZ	141	VAL	5.0
2	AB	222	ILE	5.0
43	DI	4	ILE	5.0
34	D9	17	ILE	5.0
25	B0	6	GLY	5.0
35	DA	654(V)	A	5.0
42	DH	51	ARG	5.0
22	CV	48	G	5.0
37	BC	174	ALA	4.9
14	AN	7	ILE	4.9
14	AN	5	ALA	4.9
28	D3	46	ASN	4.9
57	DZ	155	LEU	4.9
2	AB	152	PHE	4.9
35	DA	1535	A	4.9
2	CB	218	ALA	4.9
3	CC	177	THR	4.9
19	AS	18	LYS	4.9
43	DI	58	LEU	4.9
35	DA	2110	G	4.9
39	DE	205	ALA	4.9
34	B9	30	PRO	4.9

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Mol	Chain	Res	Type	RSRZ
2	CB	132	LYS	4.9
37	BC	182	PRO	4.9
43	BI	119	PRO	4.9
35	DA	1913	A	4.9
31	B6	39	TYR	4.9
47	DP	150	ALA	4.9
35	DA	2476	A	4.8
37	DC	217	THR	4.8
42	DH	52	VAL	4.8
1	AA	217	C	4.8
50	DS	51	ALA	4.8
8	CH	4	ASP	4.8
42	DH	57	ASP	4.8
10	CJ	24	VAL	4.8
21	CU	11	GLY	4.8
1	CA	1034	G	4.8
23	CW	54	G	4.8
9	AI	56	LEU	4.8
2	CB	131	PRO	4.8
1	AA	96	U	4.8
42	BH	42	ARG	4.8
19	AS	36	ARG	4.8
56	DY	60	PHE	4.8
9	CI	7	THR	4.8
29	D4	47	GLN	4.8
42	DH	17	VAL	4.8
1	CA	84	U	4.8
37	DC	41	THR	4.8
43	BI	89	TYR	4.8
37	BC	43	GLU	4.8
40	BF	1	MET	4.8
57	DZ	121	HIS	4.8
2	AB	132	LYS	4.7
23	AW	57	U	4.7
21	CU	24	ARG	4.7
31	B6	37	ARG	4.7
12	AL	94	PRO	4.7
1	CA	1129	C	4.7
37	DC	168	LYS	4.7
1	AA	81	U	4.7
26	D1	85	LEU	4.7
14	CN	8	GLU	4.7

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Mol	Chain	Res	Type	RSRZ
13	CM	102	ARG	4.7
57	DZ	97	GLU	4.7
23	CW	61	A	4.7
50	DS	103	GLU	4.7
34	B9	9	ARG	4.7
7	AG	86	GLN	4.7
13	AM	102	ARG	4.7
23	CW	48	G	4.7
35	DA	2131	G	4.7
35	DA	2154	G	4.7
3	CC	158	GLY	4.7
13	CM	64	TRP	4.7
29	B4	57	GLU	4.7
22	AV	55	G	4.7
42	BH	169	VAL	4.7
37	BC	210	LEU	4.7
37	BC	25	GLU	4.7
40	BF	208	GLY	4.7
23	CW	47	G	4.6
23	AW	18	U	4.6
31	B6	22	ALA	4.6
35	DA	654(P)	C	4.6
23	CW	23	A	4.6
50	BS	107	GLU	4.6
13	AM	7	VAL	4.6
23	CW	5	C	4.6
40	BF	25	PRO	4.6
42	DH	10	PRO	4.6
19	CS	71	LEU	4.6
35	BA	1536	C	4.6
35	BA	2169	A	4.6
10	CJ	54	PHE	4.6
42	DH	26	VAL	4.6
10	CJ	85	LEU	4.6
37	BC	169	THR	4.6
22	CV	65	G	4.6
42	DH	103	LEU	4.6
1	CA	1040	U	4.6
2	CB	228	GLY	4.6
3	AC	207	VAL	4.6
43	DI	16	GLY	4.6
2	CB	36	ARG	4.6

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Mol	Chain	Res	Type	RSRZ
12	AL	28	LYS	4.6
24	CX	22	A	4.6
35	BA	654	A	4.6
4	CD	23	GLY	4.6
14	AN	30	ALA	4.6
31	B6	40	CYS	4.6
37	BC	186	LEU	4.6
41	BG	88	ILE	4.6
2	CB	161	ALA	4.6
13	CM	6	GLY	4.6
42	DH	47	GLU	4.6
2	CB	46	LYS	4.6
1	CA	1002	G	4.6
22	CV	17	C	4.5
37	BC	40	GLU	4.5
43	DI	65	ALA	4.5
57	BZ	186	GLU	4.5
1	CA	1035	A	4.5
40	DF	10	PRO	4.5
50	BS	53	SER	4.5
34	B9	25	VAL	4.5
37	DC	181	PHE	4.5
3	CC	94	LEU	4.5
33	D8	65	GLU	4.5
34	D9	9	ARG	4.5
22	CV	20	G	4.5
57	DZ	113	ALA	4.5
14	AN	31	ARG	4.5
57	BZ	123	ASP	4.5
12	AL	126	LYS	4.5
35	DA	899	A	4.5
34	B9	32	HIS	4.5
23	AW	47	G	4.5
2	CB	41	ILE	4.5
9	CI	65	VAL	4.5
13	CM	69	GLU	4.5
42	DH	95	ARG	4.5
37	DC	14	LYS	4.5
9	AI	82	ALA	4.5
9	CI	78	LYS	4.5
34	B9	24	TYR	4.5
34	B9	16	VAL	4.5

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Mol	Chain	Res	Type	RSRZ
50	DS	58	LEU	4.5
11	AK	128	ALA	4.5
43	BI	71	ILE	4.5
22	AY	21	U	4.4
48	DQ	33	GLY	4.4
56	DY	58	GLY	4.4
57	DZ	158	PRO	4.4
21	CU	14	TRP	4.4
13	CM	7	VAL	4.4
35	DA	654	A	4.4
35	DA	654(G)	C	4.4
41	DG	75	LYS	4.4
57	DZ	112	ARG	4.4
34	B9	11	CYS	4.4
9	AI	98	PRO	4.4
37	BC	28	ARG	4.4
22	CY	51	G	4.4
2	AB	77	ALA	4.4
41	DG	78	SER	4.4
43	DI	71	ILE	4.4
35	BA	654(P)	C	4.4
42	DH	43	VAL	4.4
37	BC	220	GLY	4.4
3	AC	101	LEU	4.4
7	CG	85	TYR	4.4
43	BI	75	LEU	4.4
20	AT	101	GLY	4.4
1	AA	71	C	4.4
1	AA	1028	C	4.4
35	DA	2137	C	4.4
57	BZ	107	THR	4.4
22	CV	18	U	4.4
1	CA	470	C	4.4
23	CW	52	C	4.4
35	BA	1535	A	4.4
35	DA	884	C	4.4
35	DA	1509	C	4.4
43	BI	122	GLU	4.4
1	AA	220	G	4.4
23	CW	20	G	4.4
34	B9	14	CYS	4.4
20	CT	98	PRO	4.4

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Mol	Chain	Res	Type	RSRZ
1	AA	216	G	4.4
21	AU	22	ARG	4.4
22	AY	49	G	4.4
13	AM	105	THR	4.4
13	CM	117	VAL	4.4
50	BS	48	LEU	4.4
57	DZ	98	MET	4.4
2	CB	53	ARG	4.4
37	DC	42	VAL	4.4
37	DC	180	SER	4.4
3	CC	103	VAL	4.3
35	DA	2310	A	4.3
1	AA	204	U	4.3
14	AN	32	SER	4.3
23	CW	56	U	4.3
43	DI	60	GLU	4.3
43	DI	140	LEU	4.3
2	CB	130	ARG	4.3
37	DC	53	ARG	4.3
19	CS	76	PRO	4.3
13	AM	116	THR	4.3
19	CS	14	HIS	4.3
22	CY	1	G	4.3
43	BI	67	ARG	4.3
34	B9	8	LYS	4.3
10	AJ	85	LEU	4.3
23	CW	40	A	4.3
57	BZ	161	VAL	4.3
2	CB	240	GLN	4.3
30	D5	2	ALA	4.3
41	DG	49	ASP	4.3
22	CY	65	G	4.3
57	BZ	166	SER	4.3
33	D8	64	TYR	4.3
29	D4	1	MET	4.3
45	DN	139	GLU	4.3
3	CC	87	LEU	4.3
42	DH	169	VAL	4.3
20	AT	52	ALA	4.3
23	CW	50	C	4.3
13	CM	8	GLU	4.3
21	CU	5	ASP	4.3

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Mol	Chain	Res	Type	RSRZ
50	DS	39	ILE	4.3
1	CA	1131	G	4.3
31	B6	9	LEU	4.3
43	DI	136	VAL	4.3
35	DA	2794	C	4.3
19	CS	79	THR	4.3
57	DZ	99	TYR	4.3
34	B9	33	LYS	4.3
22	CV	11	C	4.3
41	BG	178	PHE	4.3
12	CL	28	LYS	4.3
14	CN	34	TYR	4.3
35	BA	654(C)	G	4.3
43	BI	87	LYS	4.3
35	DA	2133	G	4.2
35	DA	2892	A	4.2
22	CV	51	G	4.2
37	BC	211	ARG	4.2
43	DI	121	LYS	4.2
22	CY	6	C	4.2
23	AW	17	C	4.2
43	DI	96	ASP	4.2
37	BC	47	LYS	4.2
19	AS	66	MET	4.2
43	BI	80	PRO	4.2
35	BA	1174	A	4.2
2	AB	215	LEU	4.2
10	CJ	20	ALA	4.2
9	AI	26	VAL	4.2
35	DA	645	C	4.2
4	AD	44	GLY	4.2
1	CA	994	A	4.2
43	DI	100	ALA	4.2
29	D4	33	VAL	4.2
31	D6	5	VAL	4.2
2	CB	138	LEU	4.2
37	DC	55	SER	4.2
9	CI	54	ASP	4.2
35	DA	883	G	4.2
37	DC	28	ARG	4.2
37	DC	11	LEU	4.2
57	BZ	144	LEU	4.2

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Mol	Chain	Res	Type	RSRZ
31	B6	25	LYS	4.2
37	BC	26	ALA	4.2
11	CK	11	LYS	4.1
4	AD	2	GLY	4.1
42	DH	105	LEU	4.1
35	DA	654(K)	C	4.1
35	DA	2132	U	4.1
41	DG	81	LYS	4.1
2	CB	40	HIS	4.1
47	DP	92	GLU	4.1
37	DC	7	ARG	4.1
57	BZ	118	GLN	4.1
10	AJ	71	LEU	4.1
17	AQ	43	LEU	4.1
35	BA	1048	A	4.1
42	DH	29	PRO	4.1
43	DI	80	PRO	4.1
43	BI	113	ARG	4.1
22	CY	71	G	4.1
10	AJ	81	THR	4.1
35	BA	278	A	4.1
35	DA	2790	A	4.1
23	CW	7	U	4.1
5	CE	155	GLU	4.1
9	AI	93	ARG	4.1
3	CC	155	GLY	4.1
7	AG	26	PHE	4.1
9	CI	30	GLY	4.1
23	CW	53	U	4.1
9	CI	123	PRO	4.1
15	CO	17	ARG	4.1
2	CB	31	TYR	4.1
7	AG	87	VAL	4.1
35	DA	932	G	4.1
10	CJ	33	GLN	4.1
13	CM	103	THR	4.1
3	CC	207	VAL	4.1
13	AM	30	ALA	4.1
1	CA	80	G	4.1
7	CG	81	GLY	4.1
37	BC	18	ASN	4.1
10	AJ	59	SER	4.1

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Mol	Chain	Res	Type	RSRZ
21	AU	24	ARG	4.1
22	AY	76	C	4.1
37	DC	176	VAL	4.1
31	B6	11	LEU	4.1
31	D6	25	LYS	4.1
35	BA	1534	U	4.1
57	BZ	96	VAL	4.1
1	AA	1024	G	4.1
9	AI	8	GLY	4.1
22	CV	55	G	4.1
13	CM	97	PRO	4.1
34	D9	11	CYS	4.0
43	DI	109	ILE	4.0
31	B6	6	ARG	4.0
9	CI	109	VAL	4.0
12	AL	73	GLU	4.0
31	D6	20	ASN	4.0
57	DZ	174	VAL	4.0
10	AJ	28	ARG	4.0
37	DC	194	ILE	4.0
37	DC	178	LYS	4.0
16	AP	36	ILE	4.0
19	CS	10	PHE	4.0
35	DA	2161	C	4.0
9	AI	128	ARG	4.0
23	AW	19	G	4.0
35	BA	2168	G	4.0
7	CG	26	PHE	4.0
47	DP	110	TYR	4.0
57	BZ	110	GLY	4.0
22	CV	66	G	4.0
37	BC	4	HIS	4.0
25	D0	22	GLY	4.0
31	D6	18	ARG	4.0
35	BA	2153	G	4.0
1	CA	1390	U	4.0
14	CN	32	SER	4.0
19	CS	35	SER	4.0
10	AJ	34	VAL	4.0
42	DH	15	VAL	4.0
7	CG	42	ILE	4.0
31	D6	28	ARG	4.0

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Mol	Chain	Res	Type	RSRZ
23	CW	51	G	4.0
35	DA	155	U	4.0
35	DA	654(D)	G	4.0
35	DA	2793	G	4.0
7	CG	79	ARG	4.0
56	BY	44	ILE	4.0
37	DC	170	GLY	4.0
37	DC	182	PRO	4.0
9	CI	81	ILE	4.0
23	CW	4	C	4.0
17	CQ	51	TYR	4.0
29	B4	32	TYR	4.0
13	AM	84	ILE	3.9
57	BZ	121	HIS	3.9
23	AW	10	G	3.9
31	B6	21	TYR	3.9
3	CC	79	ARG	3.9
7	AG	32	ARG	3.9
35	DA	1174	A	3.9
42	DH	76	VAL	3.9
10	CJ	71	LEU	3.9
57	DZ	151	HIS	3.9
41	DG	83	ARG	3.9
9	CI	17	VAL	3.9
42	DH	115	VAL	3.9
12	CL	50	SER	3.9
57	BZ	142	SER	3.9
2	CB	230	VAL	3.9
9	CI	52	ALA	3.9
57	DZ	96	VAL	3.9
2	CB	115	LEU	3.9
5	CE	125	SER	3.9
50	BS	30	ARG	3.9
23	AW	66	G	3.9
57	DZ	173	ALA	3.9
14	CN	31	ARG	3.9
22	CV	22	U	3.9
22	CV	49	G	3.9
35	BA	2793	G	3.9
37	DC	183	PRO	3.9
57	BZ	169	GLU	3.9
7	AG	53	LYS	3.9

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Mol	Chain	Res	Type	RSRZ
37	BC	209	PHE	3.9
48	DQ	25	ASP	3.9
1	AA	1031	G	3.9
1	CA	1033	G	3.9
9	CI	106	ALA	3.9
20	AT	80	ARG	3.9
56	DY	59	GLY	3.9
2	AB	153	ARG	3.9
34	B9	20	HIS	3.9
43	BI	105	HIS	3.9
14	AN	6	LEU	3.9
35	BA	2133	G	3.9
40	BF	12	LEU	3.9
20	AT	103	GLY	3.9
21	CU	23	PRO	3.9
21	AU	21	TYR	3.9
37	DC	174	ALA	3.9
35	BA	2170	A	3.9
42	DH	35	VAL	3.9
19	AS	5	LEU	3.9
35	DA	2113	U	3.9
37	DC	210	LEU	3.9
42	DH	158	HIS	3.9
9	CI	16	ARG	3.9
43	BI	16	GLY	3.9
43	BI	84	GLY	3.9
57	DZ	107	THR	3.8
7	CG	153	HIS	3.8
42	DH	48	GLY	3.8
19	AS	65	ASN	3.8
43	BI	66	GLU	3.8
1	CA	91	C	3.8
1	CA	1271	G	3.8
14	CN	60	SER	3.8
22	CY	5	C	3.8
37	DC	211	ARG	3.8
57	BZ	177	PRO	3.8
10	CJ	62	HIS	3.8
35	DA	887	A	3.8
4	AD	3	ARG	3.8
8	AH	25	ASP	3.8
41	BG	156	ASP	3.8

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Mol	Chain	Res	Type	RSRZ
3	CC	80	GLY	3.8
16	AP	82	GLN	3.8
31	B6	32	ASN	3.8
56	BY	92	ASN	3.8
1	AA	82	U	3.8
35	DA	156	U	3.8
37	BC	184	GLU	3.8
7	AG	34	GLY	3.8
35	DA	2141	G	3.8
7	CG	39	ALA	3.8
19	CS	42	PRO	3.8
7	CG	78	ARG	3.8
22	CV	64	C	3.8
35	BA	2188	C	3.8
53	DV	5	VAL	3.8
13	AM	31	LYS	3.8
1	AA	218	C	3.8
21	CU	9	ARG	3.8
43	BI	82	ARG	3.8
35	DA	508	G	3.8
35	DA	2120	G	3.8
35	DA	2127	G	3.8
1	CA	1289	A	3.8
3	CC	91	LEU	3.8
42	DH	171	LEU	3.8
35	DA	2117	A	3.8
39	BE	54	GLN	3.8
19	CS	69	HIS	3.8
56	DY	61	ILE	3.8
57	DZ	140	ASP	3.8
1	CA	982	U	3.8
19	AS	39	THR	3.8
25	D0	2	ALA	3.8
22	AV	54	G	3.7
42	DH	45	VAL	3.7
47	BP	107	LYS	3.7
13	CM	43	THR	3.7
22	CY	8	U	3.7
37	DC	54	ARG	3.7
22	CV	69	G	3.7
23	CW	66	G	3.7
37	BC	200	HIS	3.7

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Mol	Chain	Res	Type	RSRZ
3	AC	78	GLY	3.7
12	CL	68	ALA	3.7
35	BA	654(Q)	C	3.7
37	BC	12	LEU	3.7
4	AD	169	LYS	3.7
38	BD	26	LYS	3.7
1	CA	1003	G	3.7
3	CC	196	LEU	3.7
21	CU	6	ARG	3.7
23	AW	15	G	3.7
50	DS	56	LEU	3.7
13	AM	8	GLU	3.7
7	AG	7	ALA	3.7
40	BF	13	SER	3.7
11	AK	11	LYS	3.7
9	AI	2	GLU	3.7
12	AL	45	PRO	3.7
12	AL	74	GLY	3.7
57	DZ	115	GLY	3.7
37	DC	5	GLY	3.7
13	AM	56	LEU	3.7
35	DA	352	G	3.7
57	DZ	46	LYS	3.7
1	AA	90	U	3.7
2	AB	7	VAL	3.7
23	CW	14	A	3.7
20	AT	60	GLU	3.7
57	DZ	55	HIS	3.7
14	CN	61	TRP	3.7
22	CV	58	C	3.7
20	CT	9	ASN	3.7
1	AA	1141	C	3.7
37	DC	167	ASP	3.7
35	DA	2187	G	3.7
19	CS	37	ARG	3.7
57	DZ	34	ASN	3.7
1	CA	1159	U	3.7
1	AA	1286	A	3.7
1	CA	1442(B)	A	3.7
10	CJ	12	ASP	3.7
12	AL	95	GLY	3.7
25	D0	7	LEU	3.7

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Mol	Chain	Res	Type	RSRZ
35	DA	654(Q)	C	3.7
40	DF	12	LEU	3.7
49	DR	3	HIS	3.7
35	BA	275	G	3.7
35	BA	2141	G	3.7
1	AA	83	U	3.6
41	DG	23	PHE	3.6
9	CI	14	VAL	3.6
9	CI	95	LYS	3.6
10	CJ	45	ARG	3.6
18	CR	54	ARG	3.6
19	CS	11	VAL	3.6
57	BZ	111	VAL	3.6
9	CI	5	TYR	3.6
1	CA	1221	G	3.6
43	DI	142	VAL	3.6
50	DS	38	GLN	3.6
35	DA	2134	A	3.6
16	AP	71	ARG	3.6
1	AA	1190	G	3.6
23	AW	65	G	3.6
10	CJ	76	ASN	3.6
13	CM	45	VAL	3.6
23	AW	11	C	3.6
10	AJ	89	ASP	3.6
50	DS	93	LYS	3.6
37	BC	175	PRO	3.6
41	DG	19	LEU	3.6
1	CA	78	G	3.6
31	D6	48	VAL	3.6
36	DB	18	G	3.6
35	DA	1045	A	3.6
57	DZ	169	GLU	3.6
35	DA	2123	G	3.6
12	AL	93	LEU	3.6
10	CJ	32	ALA	3.6
2	CB	38	GLY	3.6
3	AC	94	LEU	3.6
7	AG	80	VAL	3.6
57	BZ	175	VAL	3.6
57	DZ	175	VAL	3.6
22	CY	7	U	3.6

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Mol	Chain	Res	Type	RSRZ
23	AW	56	U	3.6
10	CJ	25	GLU	3.6
31	D6	24	GLU	3.6
50	BS	32	LEU	3.6
1	CA	461	A	3.6
7	CG	86	GLN	3.6
10	AJ	43	ARG	3.6
10	CJ	72	VAL	3.6
23	CW	60	A	3.6
57	BZ	99	TYR	3.6
1	AA	471	G	3.6
9	AI	126	SER	3.6
23	CW	9	A	3.5
25	D0	5	LYS	3.5
35	BA	276	A	3.5
50	BS	59	LYS	3.5
3	AC	83	ARG	3.5
23	AW	51	G	3.5
35	BA	2151	G	3.5
3	AC	99	VAL	3.5
12	CL	55	VAL	3.5
20	AT	56	MET	3.5
35	DA	877	U	3.5
43	DI	95	LYS	3.5
37	BC	38	PHE	3.5
31	B6	12	GLU	3.5
35	DA	2114	A	3.5
43	BI	114	LEU	3.5
21	CU	21	TYR	3.5
41	DG	5	VAL	3.5
41	BG	50	ALA	3.5
56	DY	98	VAL	3.5
1	CA	88	A	3.5
1	AA	70	G	3.5
4	AD	135	LEU	3.5
10	AJ	22	LYS	3.5
10	AJ	93	GLY	3.5
35	DA	2112	G	3.5
22	AY	74	C	3.5
33	B8	64	TYR	3.5
42	DH	102	ALA	3.5
7	AG	78	ARG	3.5

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Mol	Chain	Res	Type	RSRZ
25	D0	74	ARG	3.5
1	CA	93	G	3.5
22	CY	48	G	3.5
23	AW	26	G	3.5
3	CC	90	GLU	3.5
3	CC	63	ASN	3.5
31	B6	18	ARG	3.5
35	BA	2135	A	3.5
35	DA	2135	A	3.5
19	CS	13	ASP	3.5
21	AU	18	TYR	3.5
10	AJ	8	LEU	3.5
37	DC	198	GLU	3.5
50	DS	73	LEU	3.5
1	AA	1003	G	3.5
35	BA	352	G	3.5
35	BA	1173	G	3.5
1	CA	1260	C	3.5
23	AW	58	C	3.5
23	CW	64	C	3.5
2	AB	128	GLU	3.5
10	AJ	95	GLU	3.5
19	CS	22	LEU	3.5
42	DH	58	GLU	3.5
43	DI	57	ARG	3.5
19	AS	71	LEU	3.5
7	AG	42	ILE	3.5
35	DA	229	A	3.5
22	CY	21	U	3.5
9	AI	95	LYS	3.5
43	BI	56	LYS	3.5
10	CJ	48	THR	3.5
34	D9	4	ARG	3.5
34	D9	30	PRO	3.5
5	AE	23	GLY	3.5
9	CI	8	GLY	3.5
21	AU	19	GLY	3.5
3	AC	79	ARG	3.5
9	CI	36	TYR	3.5
20	CT	100	ILE	3.4
37	DC	226	ASN	3.4
40	BF	14	PRO	3.4

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Mol	Chain	Res	Type	RSRZ
25	B0	5	LYS	3.4
41	DG	74	LYS	3.4
35	BA	2121	G	3.4
35	DA	2148	G	3.4
14	CN	6	LEU	3.4
14	AN	14	PRO	3.4
15	AO	88	ARG	3.4
35	BA	2801(A)	A	3.4
51	DT	135	ALA	3.4
57	DZ	180	VAL	3.4
13	AM	27	LYS	3.4
53	DV	94	LEU	3.4
22	CY	16	U	3.4
37	BC	167	ASP	3.4
41	BG	40	ASN	3.4
47	BP	150	ALA	3.4
9	CI	31	GLN	3.4
9	CI	128	ARG	3.4
41	DG	42	GLY	3.4
9	AI	94	ALA	3.4
22	CY	41	C	3.4
7	CG	3	ARG	3.4
40	DF	1	MET	3.4
22	CY	9	A	3.4
35	DA	2153	G	3.4
13	CM	98	VAL	3.4
7	CG	33	ASP	3.4
31	B6	35	GLU	3.4
10	CJ	70	ARG	3.4
25	B0	7	LEU	3.4
31	D6	6	ARG	3.4
41	DG	138	GLN	3.4
42	DH	148	ILE	3.4
3	CC	205	GLY	3.4
35	DA	897	C	3.4
2	CB	229	VAL	3.4
37	BC	187	ALA	3.4
37	BC	224	ARG	3.4
4	AD	42	GLN	3.4
13	AM	87	TYR	3.4
31	D6	32	ASN	3.4
13	CM	94	ARG	3.4

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Mol	Chain	Res	Type	RSRZ
31	B6	17	LYS	3.4
22	AY	23	A	3.4
23	AW	37	A	3.4
57	DZ	161	VAL	3.4
7	AG	8	GLU	3.4
7	CG	32	ARG	3.4
11	CK	128	ALA	3.4
23	AW	36	C	3.4
37	DC	222	SER	3.4
37	DC	23	ILE	3.4
2	AB	15	VAL	3.4
9	AI	3	GLN	3.4
19	CS	78	ARG	3.4
42	DH	141	VAL	3.4
3	CC	95	THR	3.4
35	DA	1578	U	3.4
42	BH	171	LEU	3.4
1	CA	1036	G	3.3
7	CG	4	ARG	3.3
35	DA	2139	C	3.3
13	AM	12	ASN	3.3
13	AM	85	GLY	3.3
13	CM	13	LYS	3.3
4	AD	134	ASP	3.3
9	CI	18	PHE	3.3
20	AT	104	LEU	3.3
22	CV	70	G	3.3
22	CY	10	G	3.3
35	BA	2894	G	3.3
12	CL	61	THR	3.3
13	AM	117	VAL	3.3
1	AA	140	A	3.3
35	BA	2126	A	3.3
37	DC	184	GLU	3.3
53	DV	50	PRO	3.3
1	CA	1027	C	3.3
10	CJ	26	ALA	3.3
35	DA	1536	C	3.3
35	DA	2804	C	3.3
57	BZ	109	ALA	3.3
42	DH	85	LYS	3.3
54	BW	112	GLY	3.3

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Mol	Chain	Res	Type	RSRZ
10	CJ	66	ARG	3.3
39	DE	69	LYS	3.3
13	AM	45	VAL	3.3
43	BI	107	VAL	3.3
13	AM	82	MET	3.3
2	AB	131	PRO	3.3
1	CA	1220	G	3.3
19	AS	81	ARG	3.3
22	CY	35	U	3.3
29	D4	3	GLU	3.3
37	DC	37	LYS	3.3
42	DH	27	LYS	3.3
35	BA	271(N)	U	3.3
35	DA	362	U	3.3
57	DZ	92	SER	3.3
9	CI	92	TYR	3.3
35	DA	2111	C	3.3
36	BB	88	C	3.3
9	CI	9	ARG	3.3
20	CT	102	GLY	3.3
21	CU	7	ARG	3.3
56	BY	84	ARG	3.3
1	CA	973	G	3.3
35	DA	2801	A	3.3
3	AC	179	ARG	3.3
9	CI	83	ARG	3.3
22	AV	50	C	3.3
43	DI	118	LYS	3.3
2	CB	85	ALA	3.3
20	CT	75	ASN	3.3
10	CJ	77	PRO	3.3
3	CC	124	ILE	3.3
10	CJ	101	VAL	3.3
11	CK	51	LYS	3.3
42	DH	44	VAL	3.3
1	AA	88	A	3.3
23	CW	24	A	3.3
23	CW	37	A	3.3
23	CW	8	U	3.3
35	BA	897	C	3.3
35	BA	2189	U	3.3
35	DA	898	C	3.3

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Mol	Chain	Res	Type	RSRZ
5	CE	78	HIS	3.3
25	B0	3	HIS	3.3
34	D9	15	LYS	3.3
13	CM	56	LEU	3.3
1	CA	1283	G	3.2
35	BA	2896	C	3.2
35	DA	2188	C	3.2
28	B3	59	VAL	3.2
37	BC	226	ASN	3.2
37	DC	44	VAL	3.2
43	BI	108	THR	3.2
57	BZ	170	THR	3.2
23	CW	35	U	3.2
1	CA	993	G	3.2
10	AJ	77	PRO	3.2
35	DA	2125	G	3.2
37	DC	193	PHE	3.2
57	BZ	163	LEU	3.2
54	DW	1	MET	3.2
9	CI	105	ASP	3.2
20	AT	64	ASP	3.2
23	CW	22	U	3.2
4	CD	36	ARG	3.2
40	BF	156	LEU	3.2
5	CE	98	THR	3.2
35	BA	654(R)	C	3.2
35	BA	2161	C	3.2
35	BA	2155	G	3.2
2	AB	76	GLN	3.2
29	D4	53	GLU	3.2
3	CC	64	VAL	3.2
10	AJ	4	ILE	3.2
41	DG	160	VAL	3.2
43	DI	79	ILE	3.2
42	DH	18	GLU	3.2
2	CB	211	ILE	3.2
2	CB	222	ILE	3.2
1	AA	446	G	3.2
13	CM	24	GLY	3.2
29	D4	32	TYR	3.2
35	BA	1541	G	3.2
1	AA	84	U	3.2

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Mol	Chain	Res	Type	RSRZ
41	DG	71	THR	3.2
3	CC	78	GLY	3.2
27	B2	72	ALA	3.2
1	AA	1027	C	3.2
35	DA	363(F)	A	3.2
37	BC	188	ASP	3.2
13	AM	29	ARG	3.2
31	B6	13	CYS	3.2
10	CJ	67	THR	3.2
13	CM	33	ALA	3.2
50	DS	55	ALA	3.2
41	DG	76	SER	3.2
15	CO	2	PRO	3.2
56	BY	2	ARG	3.2
20	AT	55	ILE	3.2
25	D0	85	ALA	3.2
31	B6	36	LEU	3.2
35	BA	2162	G	3.2
50	BS	45	GLY	3.2
22	AV	8	U	3.2
22	AY	75	A	3.2
35	BA	894	C	3.2
34	D9	3	VAL	3.2
35	BA	2801	A	3.2
3	CC	50	ALA	3.2
16	AP	7	ALA	3.2
43	DI	77	LEU	3.2
10	AJ	33	GLN	3.2
31	D6	43	CYS	3.2
35	BA	156	U	3.2
22	AY	1	G	3.2
22	CV	26	G	3.2
40	BF	23	ASP	3.2
19	AS	11	VAL	3.2
50	BS	46	VAL	3.2
2	CB	34	ALA	3.2
37	BC	214	TYR	3.2
43	BI	123	LEU	3.2
23	AW	39	A	3.2
13	AM	37	THR	3.2
19	AS	38	SER	3.2
11	CK	12	ARG	3.2

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Mol	Chain	Res	Type	RSRZ
14	AN	23	ARG	3.2
16	CP	84	ALA	3.2
23	CW	65	G	3.2
34	D9	8	LYS	3.2
57	BZ	127	LYS	3.2
45	BN	139	GLU	3.1
19	CS	32	LYS	3.1
35	BA	2132	U	3.1
17	CQ	101	ARG	3.1
1	AA	1036	G	3.1
1	CA	1124	G	3.1
23	AW	59	G	3.1
9	AI	65	VAL	3.1
10	CJ	4	ILE	3.1
11	AK	42	TRP	3.1
31	B6	23	THR	3.1
34	B9	15	LYS	3.1
35	DA	888	C	3.1
50	DS	29	PHE	3.1
12	AL	27	LEU	3.1
1	CA	1000	U	3.1
14	CN	30	ALA	3.1
3	CC	191	THR	3.1
28	B3	1	MET	3.1
1	AA	219	C	3.1
35	BA	1176	G	3.1
35	DA	2140	C	3.1
35	DA	2893	G	3.1
12	CL	108	ALA	3.1
42	DH	104	GLU	3.1
41	DG	37	VAL	3.1
42	BH	60	ARG	3.1
57	BZ	139	VAL	3.1
13	AM	18	ALA	3.1
1	AA	442	C	3.1
35	DA	2143	C	3.1
1	CA	1285	A	3.1
12	CL	82	VAL	3.1
13	AM	98	VAL	3.1
34	B9	26	ILE	3.1
41	DG	70	VAL	3.1
56	DY	55	TYR	3.1

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Mol	Chain	Res	Type	RSRZ
2	CB	122	PHE	3.1
10	CJ	65	LEU	3.1
43	DI	138	ILE	3.1
8	CH	98	LYS	3.1
35	BA	2152	G	3.1
35	DA	2126	A	3.1
35	DA	2169	A	3.1
10	CJ	92	THR	3.1
43	BI	76	THR	3.1
57	BZ	130	PRO	3.1
2	CB	136	VAL	3.1
12	AL	43	VAL	3.1
19	CS	30	LEU	3.1
8	CH	116	LYS	3.1
53	DV	24	LYS	3.1
1	AA	1030	C	3.1
22	CY	50	C	3.1
35	BA	888	C	3.1
36	DB	3	C	3.1
41	DG	155	MET	3.1
35	DA	2318	G	3.1
45	DN	72	TYR	3.1
18	CR	85	LEU	3.1
34	D9	16	VAL	3.1
41	BG	176	LEU	3.1
42	DH	128	PRO	3.1
50	BS	40	ILE	3.1
22	AV	64	C	3.1
37	DC	173	HIS	3.1
3	AC	91	LEU	3.1
10	AJ	99	LYS	3.1
18	AR	76	LEU	3.1
36	DB	54	G	3.1
42	DH	59	ARG	3.1
5	CE	19	MET	3.1
9	CI	12	GLU	3.1
34	D9	6	SER	3.1
12	AL	114	LYS	3.1
35	BA	1026	U	3.1
35	BA	2172	U	3.1
17	CQ	19	VAL	3.1
10	CJ	6	ILE	3.1

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Mol	Chain	Res	Type	RSRZ
15	CO	87	ILE	3.1
29	B4	22	ILE	3.1
42	BH	168	PRO	3.1
1	AA	346	G	3.1
10	CJ	8	LEU	3.1
13	CM	112	GLY	3.1
41	BG	150	ASP	3.1
28	D3	25	ALA	3.0
12	AL	77	LEU	3.0
35	BA	654(U)	A	3.0
41	BG	136	ARG	3.0
41	DG	47	LYS	3.0
42	DH	168	PRO	3.0
1	AA	72	C	3.0
22	CY	4	C	3.0
35	BA	2178	C	3.0
2	AB	136	VAL	3.0
41	DG	124	SER	3.0
57	BZ	97	GLU	3.0
42	DH	97	ARG	3.0
9	AI	17	VAL	3.0
22	AV	67	C	3.0
34	B9	31	LYS	3.0
35	BA	2146	C	3.0
31	B6	51	GLU	3.0
42	DH	86	GLU	3.0
14	CN	41	ARG	3.0
37	DC	191	ARG	3.0
27	D2	44	LEU	3.0
37	DC	46	ALA	3.0
51	BT	135	ALA	3.0
53	DV	35	LEU	3.0
41	BG	127	GLY	3.0
50	DS	60	GLY	3.0
4	AD	34	GLU	3.0
2	AB	40	HIS	3.0
23	AW	48	G	3.0
38	BD	262	ARG	3.0
50	BS	52	SER	3.0
42	DH	73	ALA	3.0
22	AV	13	U	3.0
1	AA	141	A	3.0

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Mol	Chain	Res	Type	RSRZ
35	DA	2602	A	3.0
1	AA	89	C	3.0
31	B6	5	VAL	3.0
35	BA	2159	G	3.0
57	BZ	113	ALA	3.0
57	BZ	173	ALA	3.0
28	D3	29	ARG	3.0
25	D0	3	HIS	3.0
9	AI	84	ALA	3.0
41	BG	169	ALA	3.0
13	CM	4	ILE	3.0
13	CM	9	ILE	3.0
13	CM	57	ARG	3.0
35	BA	2402	C	3.0
35	DA	894	C	3.0
37	BC	225	ILE	3.0
43	DI	103	ARG	3.0
23	CW	41	C	3.0
12	AL	42	THR	3.0
29	D4	6	HIS	3.0
1	CA	996	A	3.0
9	AI	61	ALA	3.0
41	DG	43	LEU	3.0
17	CQ	75	ARG	3.0
24	CX	23	A	3.0
35	DA	2176	A	3.0
9	CI	57	GLY	3.0
4	CD	161	ASN	3.0
1	AA	490	G	3.0
5	AE	18	ARG	3.0
19	CS	16	LEU	3.0
2	AB	12	GLU	3.0
16	AP	38	TYR	3.0
35	DA	900	A	3.0
43	DI	14	ASP	3.0
1	AA	1007	C	3.0
1	CA	1389	C	3.0
50	BS	47	THR	3.0
23	CW	12	U	3.0
57	DZ	119	GLU	3.0
22	AV	26	G	3.0
1	CA	1044	A	3.0

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Mol	Chain	Res	Type	RSRZ
9	AI	79	LEU	3.0
24	AX	13	A	3.0
35	DA	1046	A	3.0
2	AB	18	GLY	3.0
7	AG	90	GLU	3.0
34	B9	28	GLU	3.0
23	CW	63	C	3.0
35	DA	1049	C	3.0
53	DV	65	GLY	3.0
18	AR	43	PHE	2.9
3	CC	86	VAL	2.9
50	DS	76	LYS	2.9
5	AE	97	GLY	2.9
2	CB	152	PHE	2.9
3	CC	10	PHE	2.9
12	CL	32	PHE	2.9
35	BA	2129	C	2.9
17	AQ	69	LYS	2.9
43	DI	128	LEU	2.9
57	BZ	155	LEU	2.9
8	CH	61	VAL	2.9
57	BZ	126	VAL	2.9
6	CF	101	ALA	2.9
12	CL	51	ALA	2.9
42	DH	156	ALA	2.9
7	AG	153	HIS	2.9
1	CA	1047	G	2.9
18	CR	43	PHE	2.9
1	CA	1388	C	2.9
41	DG	26	GLN	2.9
3	CC	77	ILE	2.9
50	DS	74	ALA	2.9
57	BZ	106	GLY	2.9
41	DG	8	LYS	2.9
9	AI	102	LEU	2.9
37	DC	38	PHE	2.9
1	CA	1186	G	2.9
23	CW	13	U	2.9
8	CH	54	ASP	2.9
48	DQ	3	MET	2.9
1	CA	1043	C	2.9
37	DC	185	LYS	2.9

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Mol	Chain	Res	Type	RSRZ
43	BI	74	ASN	2.9
19	AS	10	PHE	2.9
2	AB	126	GLU	2.9
35	BA	2790	A	2.9
50	DS	34	HIS	2.9
7	AG	79	ARG	2.9
50	DS	46	VAL	2.9
10	AJ	23	ILE	2.9
10	CJ	36	GLY	2.9
56	DY	88	LYS	2.9
42	DH	56	SER	2.9
53	DV	4	ILE	2.9
3	CC	201	TYR	2.9
5	CE	24	ARG	2.9
31	B6	10	LEU	2.9
21	AU	10	ARG	2.9
37	BC	56	ASP	2.9
57	DZ	88	PHE	2.9
29	B4	53	GLU	2.9
9	CI	68	GLY	2.9
22	CY	37	A	2.9
4	AD	118	ARG	2.9
35	DA	2121	G	2.9
35	BA	2130	U	2.9
42	DH	53	GLU	2.9
57	DZ	126	VAL	2.9
19	AS	53	ASN	2.9
14	CN	7	ILE	2.9
26	D1	81	ARG	2.9
40	BF	2	LYS	2.9
2	AB	229	VAL	2.9
3	AC	76	VAL	2.9
3	AC	206	GLU	2.9
19	AS	27	GLU	2.9
43	DI	144	VAL	2.9
31	D6	19	ARG	2.9
11	CK	127	LYS	2.9
57	DZ	25	PRO	2.9
3	CC	154	SER	2.9
19	CS	27	GLU	2.9
1	CA	723	U	2.8
22	AV	48	G	2.8

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Mol	Chain	Res	Type	RSRZ
35	DA	2805	G	2.8
37	DC	197	LEU	2.8
14	CN	18	VAL	2.8
19	CS	19	VAL	2.8
42	DH	37	VAL	2.8
31	B6	8	LYS	2.8
42	BH	170	ARG	2.8
43	DI	82	ARG	2.8
9	AI	59	PHE	2.8
36	DB	4	C	2.8
37	BC	48	LEU	2.8
33	D8	63	PRO	2.8
35	DA	2189	U	2.8
35	DA	2897	U	2.8
20	AT	14	LYS	2.8
22	CY	66	G	2.8
3	AC	77	ILE	2.8
10	CJ	21	GLN	2.8
13	AM	5	ALA	2.8
5	CE	70	PRO	2.8
11	AK	92	GLU	2.8
22	CV	78	A	2.8
23	AW	23	A	2.8
18	AR	54	ARG	2.8
11	CK	32	ILE	2.8
37	BC	35	THR	2.8
37	BC	49	GLY	2.8
1	AA	485	G	2.8
25	D0	56	ASP	2.8
12	AL	129	ALA	2.8
9	CI	87	GLN	2.8
29	B4	3	GLU	2.8
37	BC	17	PRO	2.8
53	DV	37	VAL	2.8
35	BA	271(K)	U	2.8
35	DA	2313	C	2.8
37	BC	194	ILE	2.8
11	AK	65	ALA	2.8
43	DI	62	LYS	2.8
42	DH	108	GLY	2.8
43	BI	106	GLY	2.8
1	CA	1030(B)	C	2.8

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Mol	Chain	Res	Type	RSRZ
13	CM	27	LYS	2.8
19	AS	37	ARG	2.8
41	DG	94	LEU	2.8
12	CL	128	ALA	2.8
25	B0	85	ALA	2.8
19	CS	38	SER	2.8
5	CE	77	PRO	2.8
12	CL	49	ASN	2.8
37	BC	52	PRO	2.8
3	CC	179	ARG	2.8
7	CG	76	ARG	2.8
10	CJ	83	GLU	2.8
22	AY	71	G	2.8
8	AH	24	THR	2.8
13	CM	30	ALA	2.8
22	CY	13	U	2.8
35	DA	2145	C	2.8
10	AJ	70	ARG	2.8
10	AJ	82	ILE	2.8
47	BP	118	GLY	2.8
25	D0	61	ALA	2.8
2	CB	164	VAL	2.8
43	BI	139	GLN	2.8
52	BU	117	GLN	2.8
35	BA	898	C	2.8
37	BC	168	LYS	2.8
39	BE	76	ARG	2.8
7	AG	38	LEU	2.8
17	CQ	44	ALA	2.8
10	CJ	68	HIS	2.8
41	BG	135	LEU	2.8
1	AA	144	G	2.8
22	CV	72	C	2.8
35	BA	2157	G	2.8
43	BI	85	GLU	2.8
43	BI	117	GLU	2.8
43	DI	64	GLU	2.8
9	AI	29	ASN	2.8
8	AH	61	VAL	2.8
29	B4	46	GLN	2.8
10	CJ	63	PHE	2.8
43	BI	102	SER	2.8

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Mol	Chain	Res	Type	RSRZ
9	AI	86	VAL	2.8
10	CJ	27	ALA	2.8
39	DE	76	ARG	2.8
22	AV	70	G	2.8
35	BA	2123	G	2.8
35	DA	919	G	2.8
8	CH	130	GLY	2.7
2	AB	134	GLU	2.7
19	CS	77	THR	2.7
31	B6	24	GLU	2.7
41	BG	48	GLU	2.7
51	BT	115	ARG	2.7
41	DG	69	ALA	2.7
12	CL	93	LEU	2.7
23	AW	29	A	2.7
35	DA	653	A	2.7
52	DU	89	GLU	2.7
22	AV	66	G	2.7
10	AJ	73	ASP	2.7
35	BA	2138	C	2.7
42	DH	157	TYR	2.7
1	CA	572	A	2.7
40	DF	128	ALA	2.7
22	AY	48	G	2.7
2	CB	39	ILE	2.7
37	DC	209	PHE	2.7
3	AC	90	GLU	2.7
10	CJ	9	ARG	2.7
5	CE	67	VAL	2.7
1	AA	76	C	2.7
16	AP	70	ALA	2.7
35	BA	654(M)	C	2.7
42	DH	25	LYS	2.7
7	AG	74	GLU	2.7
7	CG	123	GLU	2.7
23	AW	38	U	2.7
35	DA	2130	U	2.7
9	AI	21	PRO	2.7
1	CA	1028	C	2.7
12	CL	109	GLY	2.7
37	BC	5	GLY	2.7
41	DG	139	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
43	DI	75	LEU	2.7
1	CA	977	A	2.7
43	DI	15	VAL	2.7
50	DS	30	ARG	2.7
2	AB	127	ILE	2.7
9	CI	110	GLU	2.7
10	AJ	21	GLN	2.7
1	AA	63	C	2.7
1	AA	470	C	2.7
21	AU	26	LYS	2.7
22	CV	50	C	2.7
48	BQ	140	ALA	2.7
16	AP	54	GLU	2.7
1	AA	1026	G	2.7
8	CH	64	LYS	2.7
15	AO	22	THR	2.7
2	CB	21	ARG	2.7
17	CQ	42	TYR	2.7
52	DU	76	TYR	2.7
1	CA	1086	U	2.7
48	DQ	38	GLU	2.7
24	CX	13	A	2.7
37	DC	39	ASP	2.7
50	BS	35	ILE	2.7
42	DH	50	VAL	2.7
1	CA	1048	G	2.7
3	CC	194	GLY	2.7
9	CI	82	ALA	2.7
10	AJ	69	ASN	2.7
35	DA	275	G	2.7
37	DC	205	ALA	2.7
23	AW	6	C	2.7
39	BE	69	LYS	2.7
56	DY	46	LYS	2.7
35	DA	1108	U	2.7
43	DI	119	PRO	2.7
17	CQ	20	THR	2.7
35	BA	2171	A	2.7
10	AJ	10	GLY	2.7
14	CN	38	GLY	2.7
33	B8	65	GLU	2.7
37	DC	10	ALA	2.7

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Mol	Chain	Res	Type	RSRZ
42	BH	87	LEU	2.7
42	DH	124	GLU	2.7
57	DZ	157	LEU	2.7
19	AS	78	ARG	2.7
51	DT	91	ARG	2.7
1	AA	1032	G	2.7
8	CH	129	VAL	2.7
10	AJ	72	VAL	2.7
35	DA	893	C	2.7
57	BZ	108	PRO	2.7
56	DY	102	CYS	2.6
42	DH	54	ARG	2.6
17	CQ	100	LYS	2.6
19	AS	76	PRO	2.6
48	DQ	31	ASP	2.6
22	AV	22	U	2.6
1	AA	1006	C	2.6
1	CA	1338	G	2.6
3	CC	146	ALA	2.6
19	AS	15	LEU	2.6
35	DA	1043	C	2.6
19	AS	77	THR	2.6
10	CJ	38	ILE	2.6
31	B6	46	HIS	2.6
50	DS	82	ILE	2.6
17	AQ	15	MET	2.6
3	CC	198	VAL	2.6
12	CL	54	LYS	2.6
25	D0	64	ASP	2.6
1	CA	90	U	2.6
22	AV	12	U	2.6
22	CY	38	U	2.6
32	D7	23	ARG	2.6
1	AA	91	C	2.6
10	AJ	74	ILE	2.6
37	BC	218	THR	2.6
9	AI	14	VAL	2.6
12	CL	36	VAL	2.6
50	DS	61	ASN	2.6
1	CA	195	A	2.6
2	CB	141	GLU	2.6
9	AI	19	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
16	AP	46	PRO	2.6
20	CT	99	LEU	2.6
35	DA	878	A	2.6
22	CV	7	U	2.6
57	DZ	78	LYS	2.6
5	CE	115	VAL	2.6
17	CQ	79	SER	2.6
23	CW	27	C	2.6
35	DA	2477	C	2.6
7	AG	6	ARG	2.6
10	CJ	47	PHE	2.6
6	CF	55	ASP	2.6
35	DA	11	G	2.6
5	CE	76	ILE	2.6
7	CG	53	LYS	2.6
15	CO	3	ILE	2.6
35	DA	2173	A	2.6
37	BC	36	ALA	2.6
5	CE	18	ARG	2.6
14	AN	29	ARG	2.6
12	CL	127	GLU	2.6
31	D6	35	GLU	2.6
35	BA	2794	C	2.6
37	DC	187	ALA	2.6
7	CG	5	ARG	2.6
40	DF	24	LEU	2.6
41	DG	178	PHE	2.6
13	AM	36	LYS	2.6
57	DZ	150	LEU	2.6
19	CS	65	ASN	2.6
37	BC	34	ALA	2.6
14	CN	29	ARG	2.6
19	CS	34	TRP	2.6
42	DH	19	VAL	2.6
50	DS	95	HIS	2.6
1	AA	495	A	2.6
1	AA	1030(D)	A	2.6
1	CA	998	G	2.6
4	CD	44	GLY	2.6
9	CI	71	SER	2.6
22	CY	75	A	2.6
24	CX	18	A	2.6

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Mol	Chain	Res	Type	RSRZ
2	AB	214	ILE	2.6
9	AI	81	ILE	2.6
5	CE	93	PRO	2.6
14	CN	14	PRO	2.6
17	AQ	42	TYR	2.6
16	AP	48	TRP	2.6
22	AY	77	C	2.6
36	DB	5	C	2.6
10	CJ	15	THR	2.6
11	CK	126	ARG	2.6
12	CL	33	ARG	2.6
14	CN	59	ALA	2.6
37	DC	27	ALA	2.6
57	DZ	52	SER	2.6
12	CL	83	VAL	2.6
35	BA	2156	G	2.6
35	DA	1176	G	2.6
37	DC	20	VAL	2.6
42	BH	160	LYS	2.6
57	BZ	128	VAL	2.6
7	AG	155	ARG	2.6
57	BZ	80	ARG	2.6
35	DA	2109	U	2.6
9	CI	59	PHE	2.6
35	DA	2158	A	2.6
51	BT	1	MET	2.6
56	BY	5	MET	2.6
43	BI	34	GLY	2.6
1	AA	1039	C	2.6
3	CC	193	TYR	2.6
22	AY	34	C	2.6
3	AC	68	VAL	2.6
57	BZ	174	VAL	2.6
1	AA	65	U	2.6
2	CB	114	ARG	2.5
23	CW	16	U	2.6
12	AL	112	ASP	2.5
10	AJ	75	ILE	2.5
35	BA	363(F)	A	2.5
47	DP	124	LYS	2.5
1	CA	97	G	2.5
1	CA	929	G	2.5

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Mol	Chain	Res	Type	RSRZ
23	AW	28	G	2.5
50	BS	49	VAL	2.5
1	AA	1163	C	2.5
7	CG	88	PRO	2.5
23	AW	34	C	2.5
23	AW	64	C	2.5
41	DG	90	LEU	2.5
50	BS	23	ARG	2.5
37	DC	57	GLN	2.5
1	AA	1447	A	2.5
5	CE	27	ARG	2.5
20	CT	88	VAL	2.5
22	AY	24	A	2.5
28	D3	47	VAL	2.5
37	BC	195	ARG	2.5
50	DS	26	LEU	2.5
57	DZ	102	LEU	2.5
13	CM	41	PRO	2.5
1	AA	447	G	2.5
1	CA	927	G	2.5
1	CA	1019	C	2.5
22	CY	33	G	2.5
22	AV	21	U	2.5
53	DV	99	ILE	2.5
56	DY	43	ASN	2.5
57	BZ	120	ILE	2.5
3	CC	30	ARG	2.5
8	AH	97	VAL	2.5
8	AH	46	LYS	2.5
1	CA	983	A	2.5
23	AW	61	A	2.5
31	B6	41	PRO	2.5
35	BA	1509(A)	A	2.5
1	AA	381	C	2.5
1	CA	1128	C	2.5
22	CV	73	C	2.5
9	AI	41	VAL	2.5
15	CO	16	ALA	2.5
35	BA	2131	G	2.5
41	DG	169	ALA	2.5
37	DC	206	LYS	2.5
10	AJ	6	ILE	2.5

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Mol	Chain	Res	Type	RSRZ
13	CM	37	THR	2.5
37	DC	177	GLY	2.5
42	DH	66	GLY	2.5
13	CM	47	ASP	2.5
43	DI	19	VAL	2.5
53	DV	22	VAL	2.5
22	CV	31	C	2.5
22	CY	67	C	2.5
35	BA	895	U	2.5
35	DA	279	C	2.5
37	BC	8	TYR	2.5
1	CA	1222	G	2.5
19	CS	44	MET	2.5
16	AP	19	ILE	2.5
50	DS	35	ILE	2.5
3	AC	93	LYS	2.5
5	CE	69	VAL	2.5
10	AJ	24	VAL	2.5
11	CK	50	TYR	2.5
1	AA	153	C	2.5
1	CA	1214	C	2.5
1	CA	1270	C	2.5
23	CW	6	C	2.5
57	DZ	80	ARG	2.5
5	CE	118	ILE	2.5
35	BA	363	G	2.5
57	DZ	128	VAL	2.5
12	AL	52	LEU	2.5
55	DX	69	TYR	2.5
2	CB	64	ARG	2.5
9	CI	115	GLY	2.5
14	CN	58	LYS	2.5
1	CA	1161	C	2.5
35	BA	2137	C	2.5
37	DC	29	LEU	2.5
41	DG	97	ASP	2.5
35	DA	272(B)	G	2.5
31	D6	11	LEU	2.5
8	CH	58	TYR	2.5
22	AY	4	C	2.5
56	DY	54	LYS	2.5
31	D6	54	ILE	2.5

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Mol	Chain	Res	Type	RSRZ
43	BI	79	ILE	2.5
1	CA	1368	G	2.5
10	CJ	60	ARG	2.5
12	AL	40	VAL	2.5
22	CV	47	G	2.5
22	CY	59	G	2.5
35	DA	2159	G	2.5
53	DV	38	LEU	2.5
19	CS	50	ALA	2.5
1	CA	999	C	2.5
1	CA	1045	C	2.5
13	AM	112	GLY	2.5
19	AS	48	THR	2.5
4	AD	165	MET	2.5
23	CW	72	C	2.5
25	D0	9	SER	2.5
43	DI	133	HIS	2.5
57	DZ	148	ASP	2.5
9	CI	10	ARG	2.5
53	DV	20	LEU	2.5
18	CR	52	PRO	2.4
35	BA	362	U	2.4
1	AA	66	G	2.4
1	CA	1117	G	2.4
9	CI	24	GLY	2.4
22	AV	51	G	2.4
35	DA	2162	G	2.4
37	BC	207	GLY	2.4
22	CY	23	A	2.4
19	CS	28	LYS	2.4
23	AW	50	C	2.4
43	BI	144	VAL	2.4
57	DZ	136	PHE	2.4
43	BI	49	ALA	2.4
42	DH	46	GLU	2.4
52	DU	58	ARG	2.4
2	CB	210	SER	2.4
4	AD	133	VAL	2.4
7	CG	38	LEU	2.4
22	CV	67	C	2.4
37	DC	166	ASN	2.4
11	AK	12	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
41	DG	11	TYR	2.4
57	DZ	22	GLY	2.4
11	AK	95	ILE	2.4
13	AM	13	LYS	2.4
22	CV	8	U	2.4
35	BA	2122	U	2.4
13	CM	105	THR	2.4
57	DZ	71	VAL	2.4
1	CA	1009	G	2.4
3	AC	26	LYS	2.4
3	CC	72	LYS	2.4
21	AU	7	ARG	2.4
41	DG	91	ARG	2.4
4	AD	37	PRO	2.4
22	AV	65	G	2.4
35	BA	2139	C	2.4
35	DA	2128	C	2.4
35	DA	2147	G	2.4
35	DA	2308	G	2.4
47	DP	10	PRO	2.4
49	DR	102	GLU	2.4
56	DY	91	GLU	2.4
7	AG	43	PHE	2.4
10	AJ	58	ASP	2.4
57	DZ	87	ASP	2.4
13	AM	33	ALA	2.4
25	D0	77	ARG	2.4
16	AP	37	GLY	2.4
12	CL	73	GLU	2.4
1	AA	930	C	2.4
1	CA	79	G	2.4
2	AB	16	HIS	2.4
22	AY	5	C	2.4
22	CV	23	A	2.4
22	CY	55	G	2.4
35	DA	880	G	2.4
35	DA	916	G	2.4
10	AJ	7	LYS	2.4
3	CC	60	ALA	2.4
9	AI	55	ALA	2.4
10	CJ	73	ASP	2.4
17	CQ	18	THR	2.4

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Mol	Chain	Res	Type	RSRZ
41	DG	150	ASP	2.4
57	BZ	69	THR	2.4
2	CB	90	MET	2.4
9	AI	96	LEU	2.4
29	D4	9	LEU	2.4
50	BS	12	PHE	2.4
2	CB	24	TRP	2.4
13	CM	31	LYS	2.4
38	BD	263	ARG	2.4
3	AC	169	ALA	2.4
22	CY	42	C	2.4
9	AI	54	ASP	2.4
35	BA	1046	A	2.4
1	AA	1138	G	2.4
2	CB	12	GLU	2.4
9	CI	126	SER	2.4
14	AN	60	SER	2.4
22	CY	18	U	2.4
22	CY	26	G	2.4
22	CY	45	U	2.4
23	CW	30	U	2.4
35	BA	2120	G	2.4
39	DE	73	GLU	2.4
43	BI	138	ILE	2.4
53	BV	99	ILE	2.4
4	CD	37	PRO	2.4
13	CM	48	LEU	2.4
19	AS	45	VAL	2.4
48	DQ	6	ARG	2.4
50	BS	54	LEU	2.4
52	DU	90	VAL	2.4
48	DQ	103	MET	2.4
21	AU	14	TRP	2.4
3	CC	160	ALA	2.4
3	CC	180	ALA	2.4
37	BC	27	ALA	2.4
39	DE	204	ALA	2.4
48	DQ	24	GLY	2.4
7	CG	18	TYR	2.4
22	CY	11	C	2.4
31	B6	54	ILE	2.4
37	BC	21	TYR	2.4

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Mol	Chain	Res	Type	RSRZ
41	DG	39	ILE	2.4
7	CG	16	LEU	2.4
12	CL	52	LEU	2.4
21	CU	15	ARG	2.4
22	CV	12	U	2.4
23	AW	35	U	2.4
48	DQ	104	PHE	2.4
1	AA	347	G	2.4
12	AL	128	ALA	2.4
37	BC	10	ALA	2.4
14	CN	15	LYS	2.4
3	CC	138	VAL	2.4
20	AT	18	GLN	2.4
20	AT	105	SER	2.4
34	D9	7	VAL	2.4
42	DH	63	SER	2.4
5	AE	19	MET	2.4
7	AG	150	ALA	2.4
9	CI	69	GLY	2.4
10	CJ	56	HIS	2.4
7	AG	72	ARG	2.4
22	AV	19	G	2.4
22	CY	69	G	2.4
48	BQ	62	GLY	2.4
57	DZ	110	GLY	2.4
10	AJ	98	ILE	2.4
28	D3	30	ARG	2.4
3	AC	75	VAL	2.4
41	BG	12	TYR	2.4
41	BG	19	LEU	2.4
8	CH	3	THR	2.4
29	D4	29	PRO	2.4
57	BZ	25	PRO	2.4
2	CB	231	GLU	2.4
4	AD	124	GLY	2.4
7	AG	52	GLU	2.4
17	CQ	96	GLU	2.4
22	AY	72	C	2.4
22	CV	74	C	2.4
25	D0	25	ARG	2.4
29	D4	8	LYS	2.4
34	D9	32	HIS	2.4

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Mol	Chain	Res	Type	RSRZ
10	CJ	49	VAL	2.4
1	CA	861	G	2.3
1	CA	1094	G	2.3
9	CI	49	PRO	2.3
47	DP	111	ARG	2.3
2	CB	99	GLY	2.3
1	AA	1008	C	2.3
3	CC	176	HIS	2.3
13	CM	118	ALA	2.3
28	D3	42	ALA	2.3
50	DS	108	GLY	2.3
33	D8	48	PHE	2.3
42	BH	107	VAL	2.3
17	AQ	101	ARG	2.3
3	CC	81	GLY	2.3
11	CK	31	THR	2.3
15	AO	73	GLU	2.3
22	CY	2	G	2.3
31	D6	16	CYS	2.3
42	DH	94	TYR	2.3
19	CS	66	MET	2.3
37	BC	9	ARG	2.3
41	DG	113	ARG	2.3
23	CW	39	A	2.3
11	AK	68	ALA	2.3
14	AN	59	ALA	2.3
2	CB	7	VAL	2.3
42	DH	65	HIS	2.3
1	CA	1182	G	2.3
22	AY	10	G	2.3
35	BA	2166	G	2.3
38	DD	262	ARG	2.3
56	DY	35	TYR	2.3
8	CH	25	ASP	2.3
35	DA	2179	C	2.3
50	BS	29	PHE	2.3
7	AG	5	ARG	2.3
2	AB	240	GLN	2.3
7	CG	73	MET	2.3
43	DI	73	GLU	2.3
25	D0	71	ASP	2.3
53	DV	101	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
2	CB	108	ILE	2.3
9	AI	119	ALA	2.3
2	CB	137	ARG	2.3
3	CC	88	ARG	2.3
12	CL	85	ILE	2.3
41	BG	23	PHE	2.3
22	AV	27	C	2.3
35	DA	2164	C	2.3
37	DC	202	PRO	2.3
7	AG	77	SER	2.3
43	BI	57	ARG	2.3
53	DV	57	VAL	2.3
1	AA	461	A	2.3
3	CC	184	TYR	2.3
41	DG	29	TRP	2.3
35	DA	1033	U	2.3
10	CJ	43	ARG	2.3
29	B4	55	ARG	2.3
35	BA	2477	C	2.3
42	DH	38	SER	2.3
7	AG	151	TYR	2.3
7	CG	129	GLU	2.3
13	AM	101	GLN	2.3
20	CT	46	GLU	2.3
28	D3	38	GLU	2.3
1	AA	472	A	2.3
35	DA	1544	A	2.3
3	CC	33	LEU	2.3
25	B0	2	ALA	2.3
31	B6	16	CYS	2.3
41	BG	173	LEU	2.3
57	DZ	125	LEU	2.3
23	CW	45	U	2.3
9	CI	114	TYR	2.3
13	CM	21	TYR	2.3
17	AQ	12	SER	2.3
9	AI	6	GLY	2.3
9	CI	93	ARG	2.3
22	CV	63	C	2.3
23	AW	41	C	2.3
35	DA	2163	C	2.3
1	AA	1224	G	2.3

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Mol	Chain	Res	Type	RSRZ
15	CO	56	LEU	2.3
23	CW	2	G	2.3
7	CG	40	ALA	2.3
23	AW	40	A	2.3
2	AB	232	PRO	2.3
9	AI	97	LYS	2.3
9	CI	127	LYS	2.3
34	D9	31	LYS	2.3
35	BA	2144	U	2.3
12	AL	72	GLY	2.3
18	CR	51	LEU	2.3
40	DF	207	GLY	2.3
41	DG	120	LEU	2.3
57	BZ	98	MET	2.3
10	AJ	32	ALA	2.3
3	AC	72	LYS	2.3
21	AU	12	LYS	2.3
37	BC	31	LYS	2.3
3	CC	54	ARG	2.3
14	AN	12	ARG	2.3
25	D0	39	ARG	2.3
57	BZ	145	GLU	2.3
23	CW	46	U	2.3
9	CI	63	ILE	2.3
31	B6	7	ILE	2.3
10	AJ	26	ALA	2.3
54	BW	5	ALA	2.3
1	AA	165	C	2.3
1	CA	1259	C	2.3
5	CE	63	ARG	2.3
14	AN	8	GLU	2.3
29	D4	55	ARG	2.3
32	B7	47	ARG	2.3
35	BA	885	C	2.3
36	DB	6	C	2.3
1	AA	324	G	2.3
1	AA	1002	G	2.3
1	AA	1025	U	2.3
1	CA	1205	U	2.3
5	CE	43	LEU	2.3
25	D0	69	PHE	2.3
7	CG	156	TRP	2.3

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Mol	Chain	Res	Type	RSRZ
9	AI	78	LYS	2.3
23	CW	75	A	2.3
35	DA	1541	G	2.3
35	DA	2115	G	2.3
13	AM	54	VAL	2.3
41	DG	144	ILE	2.3
7	CG	127	ALA	2.2
43	DI	86	THR	2.3
43	BI	52	ARG	2.2
43	BI	64	GLU	2.2
37	BC	39	ASP	2.2
10	AJ	40	LEU	2.2
13	CM	82	MET	2.2
50	DS	57	LYS	2.2
11	CK	42	TRP	2.2
22	AV	18	U	2.2
48	DQ	60	ARG	2.2
35	BA	1508	A	2.2
3	AC	2	GLY	2.2
9	CI	62	TYR	2.2
41	BG	68	PRO	2.2
5	CE	80	ILE	2.2
1	CA	1054	C	2.2
2	AB	36	ARG	2.2
7	AG	4	ARG	2.2
11	CK	65	ALA	2.2
53	DV	34	GLU	2.2
57	DZ	145	GLU	2.2
31	D6	30	THR	2.2
3	AC	52	LEU	2.2
50	BS	58	LEU	2.2
50	BS	60	GLY	2.2
1	AA	112	G	2.2
1	AA	1022	G	2.2
2	CB	101	MET	2.2
10	AJ	60	ARG	2.2
35	DA	2168	G	2.2
50	DS	89	ARG	2.2
9	CI	119	ALA	2.2
10	AJ	97	GLU	2.2
16	CP	54	GLU	2.2
41	BG	30	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
35	BA	2163	C	2.2
2	CB	144	ARG	2.2
9	CI	51	ARG	2.2
10	AJ	90	LEU	2.2
12	CL	35	GLY	2.2
40	BF	133	ASN	2.2
41	DG	82	LEU	2.2
50	DS	25	ARG	2.2
1	AA	1531	A	2.2
2	AB	125	PRO	2.2
23	AW	14	A	2.2
13	AM	107	ALA	2.2
22	CY	70	G	2.2
2	AB	28	PHE	2.2
19	AS	4	SER	2.2
1	AA	455	C	2.2
22	AY	11	C	2.2
33	D8	62	LEU	2.2
43	BI	78	THR	2.2
57	BZ	183	LEU	2.2
50	BS	16	ASN	2.2
9	CI	124	GLN	2.2
38	DD	101	GLU	2.2
42	BH	167	GLU	2.2
54	DW	113	LYS	2.2
57	DZ	73	GLN	2.2
57	DZ	127	LYS	2.2
1	CA	913	A	2.2
15	AO	17	ARG	2.2
1	CA	1068	G	2.2
23	CW	26	G	2.2
23	CW	71	G	2.2
41	BG	74	LYS	2.2
27	D2	43	GLN	2.2
57	BZ	187	ALA	2.2
57	DZ	59	LEU	2.2
2	CB	42	ILE	2.2
2	CB	199	TYR	2.2
8	AH	23	SER	2.2
12	CL	70	ILE	2.2
25	B0	4	LYS	2.2
12	CL	44	THR	2.2

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Mol	Chain	Res	Type	RSRZ
15	CO	26	GLU	2.2
14	CN	19	ARG	2.2
21	AU	15	ARG	2.2
23	AW	12	U	2.2
29	B4	47	GLN	2.2
1	AA	456	C	2.2
1	CA	1160	G	2.2
1	CA	1187	G	2.2
1	CA	1190	G	2.2
13	CM	83	ASP	2.2
22	AY	20	G	2.2
35	BA	508	G	2.2
36	DB	88	C	2.2
6	CF	97	PHE	2.2
8	CH	2	LEU	2.2
10	CJ	90	LEU	2.2
28	D3	28	LEU	2.2
42	BH	111	HIS	2.2
10	CJ	7	LYS	2.2
14	AN	28	GLY	2.2
21	CU	4	GLY	2.2
3	AC	201	TYR	2.2
4	AD	70	ILE	2.2
28	D3	15	TYR	2.2
42	DH	99	VAL	2.2
1	CA	1398	A	2.2
14	AN	13	THR	2.2
7	AG	58	PRO	2.2
8	CH	124	ALA	2.2
56	DY	57	GLN	2.2
3	CC	203	PHE	2.2
10	AJ	63	PHE	2.2
22	CY	53	U	2.2
23	AW	62	U	2.2
57	DZ	117	LEU	2.2
25	D0	76	GLY	2.2
1	AA	1389	C	2.2
2	CB	239	VAL	2.2
9	CI	86	VAL	2.2
13	AM	60	VAL	2.2
35	BA	1171	G	2.2
35	BA	2803	C	2.2

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Mol	Chain	Res	Type	RSRZ
35	DA	2345	G	2.2
3	AC	82	GLU	2.2
5	AE	7	GLU	2.2
13	AM	94	ARG	2.2
18	AR	28	GLU	2.2
38	BD	244	ARG	2.2
43	DI	99	GLU	2.2
57	DZ	9	TYR	2.2
17	AQ	99	SER	2.2
21	AU	8	THR	2.2
48	DQ	20	ALA	2.2
1	CA	1339	A	2.2
42	DH	112	PRO	2.2
1	AA	99	U	2.2
2	CB	203	GLY	2.2
5	AE	22	GLY	2.2
35	DA	1026	U	2.2
31	D6	44	ARG	2.2
41	DG	38	VAL	2.2
57	DZ	10	ARG	2.2
35	BA	893	C	2.2
35	BA	2179	C	2.2
12	CL	78	GLN	2.2
35	BA	2154	G	2.2
37	DC	179	ALA	2.2
2	CB	190	THR	2.2
1	AA	1044	A	2.1
1	AA	1252	A	2.1
1	CA	1531	A	2.1
5	CE	8	GLU	2.1
13	AM	53	VAL	2.2
50	DS	88	ASP	2.2
22	CV	9	A	2.1
57	BZ	165	VAL	2.2
16	AP	59	TRP	2.1
48	DQ	32	TYR	2.1
3	CC	28	GLN	2.1
4	CD	21	LEU	2.1
5	CE	31	LEU	2.1
9	CI	102	LEU	2.1
13	CM	2	ALA	2.1
43	DI	9	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
55	DX	92	LEU	2.1
5	CE	23	GLY	2.1
12	AL	38	THR	2.1
13	CM	100	GLY	2.1
19	AS	63	THR	2.1
21	AU	6	ARG	2.1
31	B6	44	ARG	2.1
57	BZ	12	GLY	2.1
57	DZ	142	SER	2.1
47	DP	97	PRO	2.1
2	CB	195	ASP	2.1
13	AM	32	GLU	2.1
22	CV	10	G	2.1
43	BI	127	VAL	2.1
12	CL	69	TYR	2.1
14	CN	17	LYS	2.1
56	DY	87	LYS	2.1
1	CA	1261	A	2.1
41	BG	86	MET	2.1
5	CE	71	LEU	2.1
5	CE	114	GLY	2.1
9	CI	120	ARG	2.1
16	CP	82	GLN	2.1
25	D0	21	LEU	2.1
42	DH	123	PHE	2.1
47	DP	15	ARG	2.1
29	D4	5	ILE	2.1
36	DB	92	C	2.1
40	BF	15	SER	2.1
2	AB	129	GLU	2.1
10	CJ	22	LYS	2.1
31	D6	8	LYS	2.1
9	AI	88	TYR	2.1
1	AA	1042	G	2.1
1	AA	1117	G	2.1
1	CA	1310	G	2.1
33	D8	34	TRP	2.1
35	BA	892	G	2.1
47	DP	81	GLN	2.1
51	DT	126	ALA	2.1
1	AA	1005	A	2.1
3	AC	166	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
50	BS	11	LYS	2.1
10	AJ	96	ILE	2.1
19	CS	4	SER	2.1
35	BA	645	C	2.1
37	DC	24	ASP	2.1
57	DZ	75	ASN	2.1
13	CM	114	ARG	2.1
17	AQ	71	PHE	2.1
42	DH	64	LEU	2.1
1	CA	1358	U	2.1
22	AY	13	U	2.1
25	D0	40	GLN	2.1
1	AA	168	G	2.1
1	AA	1187	G	2.1
28	D3	50	VAL	2.1
2	AB	124	SER	2.1
3	CC	49	SER	2.1
35	BA	2476	A	2.1
39	BE	53	PRO	2.1
39	BE	56	PRO	2.1
41	BG	76	SER	2.1
41	BG	87	PRO	2.1
8	AH	62	TYR	2.1
41	DG	22	ARG	2.1
5	CE	119	LEU	2.1
10	CJ	11	PHE	2.1
12	CL	27	LEU	2.1
17	AQ	98	LEU	2.1
28	D3	26	LEU	2.1
41	BG	90	LEU	2.1
1	AA	1115	C	2.1
33	D8	29	LYS	2.1
35	DA	2136	C	2.1
1	AA	1000	U	2.1
7	CG	77	SER	2.1
1	AA	64	G	2.1
1	CA	1272	G	2.1
14	CN	39	LEU	2.1
35	DA	1418	G	2.1
22	CY	68	A	2.1
42	DH	70	THR	2.1
45	BN	3	THR	2.1

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Mol	Chain	Res	Type	RSRZ
3	CC	75	VAL	2.1
4	AD	45	GLN	2.1
4	CD	2	GLY	2.1
16	AP	83	GLU	2.1
35	DA	1052	C	2.1
37	BC	32	GLU	2.1
10	CJ	82	ILE	2.1
50	DS	28	VAL	2.1
38	DD	263	ARG	2.1
48	DQ	56	ARG	2.1
5	CE	45	PHE	2.1
7	AG	99	LEU	2.1
9	AI	70	LYS	2.1
9	CI	101	PHE	2.1
37	DC	200	HIS	2.1
41	BG	133	LEU	2.1
10	CJ	81	THR	2.1
42	BH	41	MET	2.1
3	CC	143	GLU	2.1
41	BG	26	GLN	2.1
57	DZ	178	GLU	2.1
1	CA	196	A	2.1
1	CA	1030(D)	A	2.1
22	AY	26	G	2.1
23	CW	29	A	2.1
41	DG	128	ARG	2.1
43	BI	4	ILE	2.1
52	DU	64	ARG	2.1
56	DY	50	ARG	2.1
57	BZ	133	ILE	2.1
1	CA	526	C	2.1
22	AV	17	C	2.1
9	AI	49	PRO	2.1
9	CI	79	LEU	2.1
21	AU	23	PRO	2.1
22	CV	53	U	2.1
23	AW	21	U	2.1
35	BA	272(I)	U	2.1
4	AD	143	GLY	2.1
9	CI	107	ARG	2.1
11	CK	90	GLY	2.1
13	CM	26	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
39	DE	75	VAL	2.1
42	BH	104	GLU	2.1
19	CS	53	ASN	2.1
28	D3	19	GLN	2.1
10	AJ	55	LYS	2.1
47	BP	76	LYS	2.1
1	AA	1124	G	2.1
1	CA	413	G	2.1
1	CA	1164	G	2.1
16	AP	80	PHE	2.1
19	AS	30	LEU	2.1
22	AV	23	A	2.1
1	AA	189(A)	C	2.1
7	CG	151	TYR	2.1
22	AY	70	G	2.1
35	DA	2160	G	2.1
36	DB	72	G	2.1
53	BV	36	PRO	2.1
16	CP	75	ARG	2.1
28	D3	27	GLY	2.1
41	DG	9	ARG	2.1
3	CC	192	THR	2.1
7	CG	131	LYS	2.1
10	CJ	58	ASP	2.1
31	D6	7	ILE	2.1
43	DI	20	ASP	2.1
2	CB	57	PHE	2.1
7	AG	18	TYR	2.1
10	AJ	79	ARG	2.1
2	AB	19	HIS	2.1
5	AE	155	GLU	2.1
17	CQ	2	PRO	2.1
3	CC	68	VAL	2.1
19	CS	47	HIS	2.1
1	AA	1370	G	2.1
1	CA	1006	C	2.1
22	CV	27	C	2.1
37	BC	50	ILE	2.1
7	CG	99	LEU	2.1
20	AT	72	LEU	2.1
27	D2	21	LEU	2.1
50	BS	56	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
41	BG	170	ARG	2.1
5	CE	68	GLU	2.1
11	CK	109	VAL	2.1
19	AS	59	PRO	2.1
47	DP	104	GLY	2.1
1	CA	1123	A	2.0
1	CA	1252	A	2.0
35	DA	918	A	2.0
37	BC	55	SER	2.0
1	AA	1223	C	2.0
1	CA	1215	G	2.0
3	CC	98	ASN	2.0
7	CG	155	ARG	2.0
57	BZ	112	ARG	2.0
35	DA	2792	G	2.0
3	CC	44	GLU	2.0
9	AI	92	TYR	2.0
10	AJ	64	GLU	2.0
38	DD	236	GLY	2.0
2	AB	188	ALA	2.0
4	CD	17	VAL	2.0
25	D0	79	VAL	2.0
50	BS	28	VAL	2.0
57	DZ	109	ALA	2.0
2	CB	140	HIS	2.0
12	AL	75	HIS	2.0
42	BH	158	HIS	2.0
13	CM	101	GLN	2.0
43	DI	139	GLN	2.0
7	CG	43	PHE	2.0
18	CR	79	LEU	2.0
11	AK	127	LYS	2.0
12	AL	111	LYS	2.0
35	DA	2895	U	2.0
50	DS	44	LYS	2.0
1	AA	439	A	2.0
10	AJ	48	THR	2.0
1	CA	980	C	2.0
1	CA	1163	C	2.0
9	AI	115	GLY	2.0
17	AQ	58	GLU	2.0
43	BI	125	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
57	DZ	69	THR	2.0
22	AY	50	C	2.0
25	D0	36	ILE	2.0
36	DB	7	G	2.0
41	DG	46	ALA	2.0
9	AI	20	ARG	2.0
37	BC	191	ARG	2.0
43	BI	103	ARG	2.0
42	DH	90	LYS	2.0
50	BS	31	SER	2.0
1	AA	101	A	2.0
1	CA	532	A	2.0
5	CE	94	ALA	2.0
10	AJ	45	ARG	2.0
20	CT	86	ARG	2.0
22	AY	14	A	2.0
35	BA	229	A	2.0
35	DA	1177	A	2.0
38	BD	36	PRO	2.0
56	BY	86	ARG	2.0
57	DZ	5	LEU	2.0
35	DA	1537	G	2.0
35	DA	1740	G	2.0
26	D1	17	SER	2.0
41	DG	89	GLY	2.0
5	AE	133	TYR	2.0
13	AM	17	VAL	2.0
39	BE	75	VAL	2.0
41	DG	126	ASP	2.0
29	D4	25	TYR	2.0
35	BA	1033	U	2.0
35	BA	2118	U	2.0
37	BC	41	THR	2.0
40	BF	18	ARG	2.0
50	BS	36	TYR	2.0
50	DS	69	VAL	2.0
41	DG	86	MET	2.0
2	AB	11	LEU	2.0
41	DG	68	PRO	2.0
1	AA	433	C	2.0
24	CX	19	A	2.0
35	BA	1178	C	2.0

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Mol	Chain	Res	Type	RSRZ
9	AI	71	SER	2.0
13	AM	99	ARG	2.0
43	DI	81	VAL	2.0
57	BZ	115	GLY	2.0
14	CN	4	LYS	2.0
14	CN	21	TYR	2.0
25	B0	56	ASP	2.0
37	DC	16	ASP	2.0
1	CA	144	G	2.0
12	CL	129	ALA	2.0
15	CO	22	THR	2.0
22	AY	66	G	2.0
22	CV	13	U	2.0
35	DA	1142	U	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, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
22	AG9	AY	36	28/29	0.88	0.34	1.83	43,59,79,79	0
22	AG9	CY	36	28/29	0.75	0.51	1.44	33,49,70,70	0
22	AG9	CV	36	28/29	0.81	0.42	0.75	33,49,70,70	0
22	AG9	AV	36	28/29	0.90	0.26	-0.17	43,59,79,79	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, 95th percentile and maximum values of B factors

of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	ZN	CD	1000	1/1	0.95	0.29	-0.26	200,200,200,200	0
58	ZN	AD	1000	1/1	0.84	0.25	-0.95	165,165,165,165	0
58	ZN	AN	1000	1/1	0.95	0.08	-1.47	88,88,88,88	0
58	ZN	CN	1000	1/1	0.84	0.07	-1.60	178,178,178,178	0

6.5 Other polymers [i](#)

There are no such residues in this entry.