Full wwPDB X-ray Structure Validation Report ⓘ

Mar 8, 2026 – 01:44 PM UTC

PDB ID	:	4V90 / pdb_00004v90
Title	:	Thermus thermophilus Ribosome
Authors	:	Chen, Y.; Feng, S.; Kumar, V.; Ero, R.; Gao, Y.G.
Deposited on	:	2014-02-22
Resolution	:	2.95 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

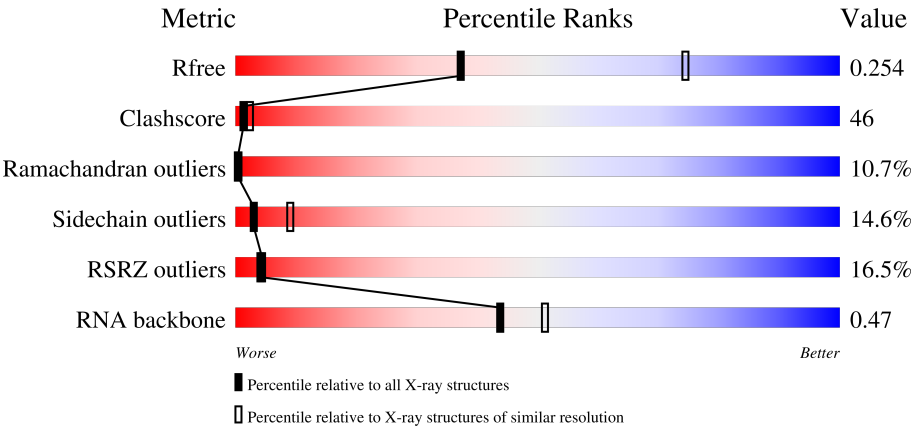
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.95 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1130 (2.98-2.94)
Clashscore	190562	1157 (2.98-2.94)
Ramachandran outliers	187476	1101 (2.98-2.94)
Sidechain outliers	187428	1101 (2.98-2.94)
RSRZ outliers	180081	1130 (2.98-2.94)
RNA backbone	3983	1046 (3.16-2.76)

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 of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	1519	10% 33% 47% 18% ··
2	AB	256	29% 21% 49% 20% · 8%
3	AC	239	16% 21% 45% 18% · 13%
4	AD	209	14% 41% 46% 10% ·

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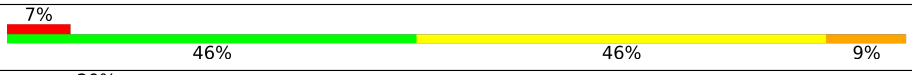
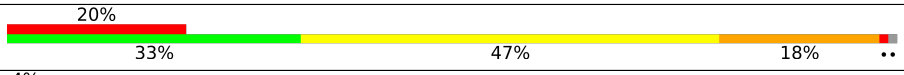
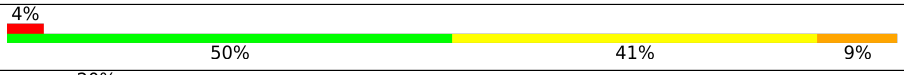
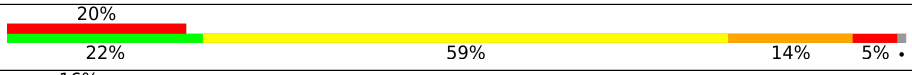
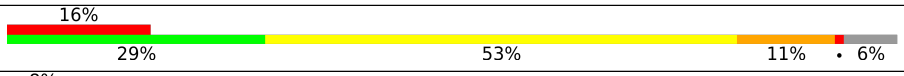
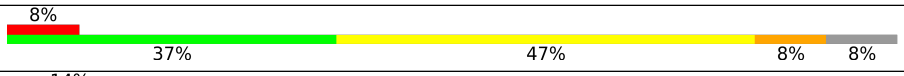
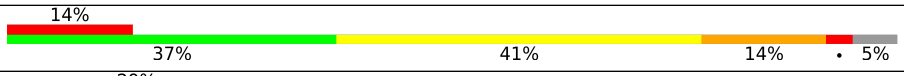
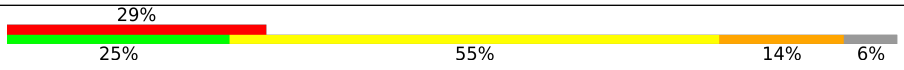
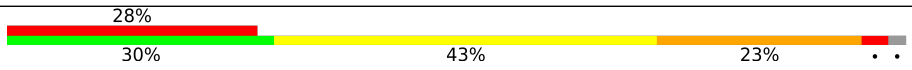
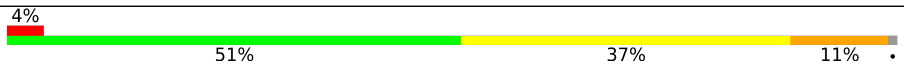
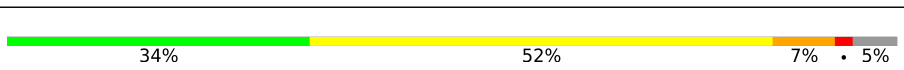
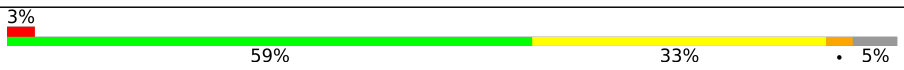
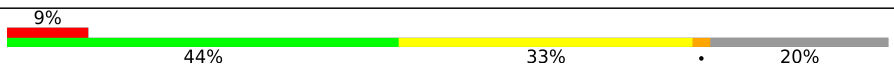
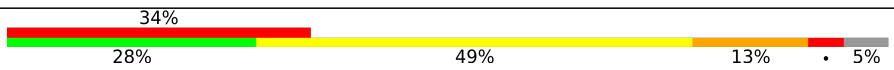
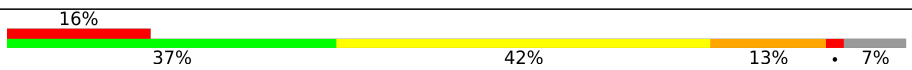
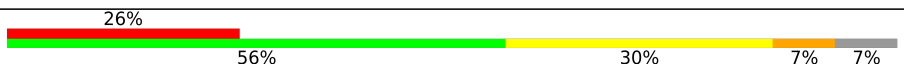
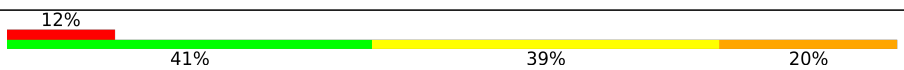
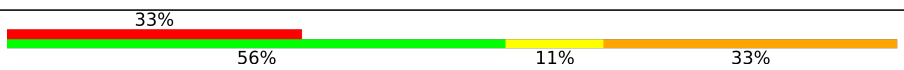
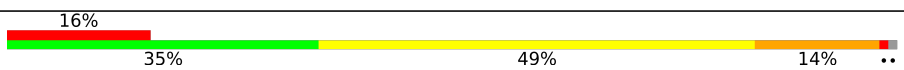
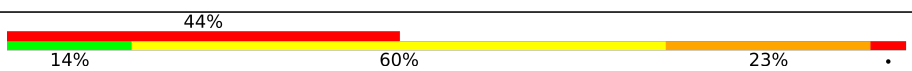
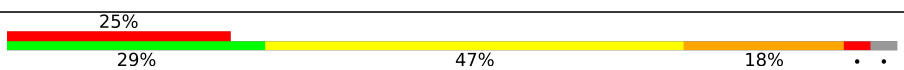
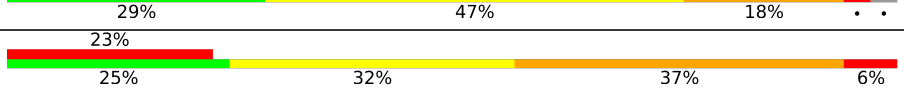
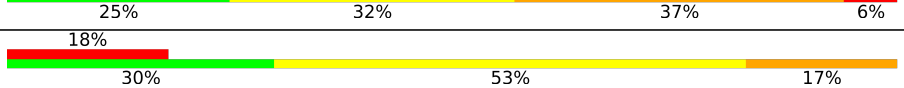
Mol	Chain	Length	Quality of chain
5	AE	162	
6	AF	101	
7	AG	156	
8	AH	138	
9	AI	128	
10	AJ	105	
11	AK	129	
12	AL	132	
13	AM	126	
14	AN	61	
15	AO	89	
16	AP	88	
17	AQ	105	
18	AR	88	
19	AS	93	
20	AT	106	
21	AU	27	
22	AV	76	
23	AX	9	
24	AY	691	
25	B0	84	
26	B1	97	
27	B2	71	
28	B3	60	
29	B4	71	

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Mol	Chain	Length	Quality of chain
30	B5	59	31% 34% 41% 17% 8%
31	B6	53	68% 11% 38% 32% 13% 6%
32	B7	48	12% 63% 29% 8%
33	B8	64	38% 16% 58% 16% 11%
34	B9	37	19% 35% 49% 14%
35	BA	2915	8% 34% 47% 18%
36	BB	122	11% 34% 43% 20%
37	BC	228	30% 22% 48% 25%
38	BD	275	8% 35% 48% 14%
39	BE	206	17% 31% 45% 20%
40	BF	210	19% 27% 53% 19%
41	BG	181	69% 10% 49% 34% 6%
42	BH	180	33% 29% 48% 17%
43	BJ	130	% 77% 23%
44	BK	140	55% 45%
45	BL	71	66% 34%
46	BN	140	15% 38% 41% 18%
47	BO	122	% 41% 52% 7%
48	BP	149	54% 17% 44% 29% 7%
49	BQ	141	8% 42% 44% 14%
50	BR	117	8% 35% 47% 16%
51	BS	111	51% 23% 34% 30% 11%
52	BT	146	32% 19% 49% 18% 8% 5%
53	BU	117	10% 32% 55% 13%
54	BV	101	15% 25% 50% 19% 7%

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Mol	Chain	Length	Quality of chain
55	BW	113	3% 48% 37% 14%
56	BX	95	4% 47% 43% 7%
57	BY	109	47% 17% 39% 28% 9% 7%
58	BZ	205	36% 23% 50% 15% 10%

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
59	MG	AA	1607	-	-	-	X
59	MG	AA	1620	-	-	-	X
59	MG	AA	1666	-	-	-	X
59	MG	AA	1684	-	-	-	X
59	MG	AA	1703	-	-	-	X
59	MG	AA	1740	-	-	-	X
59	MG	AA	1772	-	-	-	X
59	MG	B0	101	-	-	-	X
59	MG	BA	3130	-	-	-	X
59	MG	BA	3239	-	-	-	X
59	MG	BA	3253	-	-	-	X
59	MG	BA	3268	-	-	-	X
59	MG	BA	3280	-	-	-	X
59	MG	BA	3281	-	-	-	X
61	GCP	AY	701	-	-	X	-

2 Entry composition (i)

There are 62 unique types of molecules in this entry. The entry contains 153829 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 RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	AA	1507	32391	14418	6002	10465	1506	0	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AA	1030	C	-	insertion	GB 48256
AA	1034	G	-	insertion	GB 48256
AA	1245	A	-	insertion	GB 48256
AA	1246	C	-	insertion	GB 48256

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	AC	207	1613	1016	315	281	1	0	0	1

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

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

- 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			

- 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			

- 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			

- 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			

- 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			

- 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			

- 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			

- 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			

- 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			

- 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			

- 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			

- 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			

- 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			

- 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			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	88	Total	C	N	O	S	0	0	1
			692	440	128	122	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			

- 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			

- Molecule 22 is a RNA chain called RNA (77-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	76	Total	C	N	O	P	0	0	0
			1619	723	291	530	75			

- Molecule 23 is a RNA chain called 5'-R(*UP*AP*AP*AP*AP*AP*UP*GP*UP)-3'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AX	9	Total	C	N	O	P	0	0	0
			188	86	34	60	8			

- Molecule 24 is a protein called ELONGATION FACTOR G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AY	687	Total	C	N	O	S	0	0	1
			5376	3412	922	1022	20			

- 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			

- 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
			732	460	146	125	1			

- 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			

- 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			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	B4	71	Total	C	N	O	S	0	0	0
			581	364	108	104	5			

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

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

- 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	0
			419	257	104	56	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			

- 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			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BA	2901	Total	C	N	O	P	0	0	0
			62476	27807	11683	20086	2900			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	2155	G	A	conflict	GB 55771382

- 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			

- Molecule 37 is a protein called RIBOSOMAL PROTEIN L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BC	227	Total	C	N	O	S	0	0	0
			1735	1096	318	318	3			

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

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

- 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			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BG	179	Total	C	N	O	S	0	0	0
			1459	931	266	258	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BH	176	Total	C	N	O	S	0	0	1
			1345	853	253	237	2			

- Molecule 43 is a protein called CHAIN J.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
43	BJ	130	Total	C	N	O	0	0	0
			654	393	130	131			

- Molecule 44 is a protein called CHAIN K.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	BK	140	Total	C	N	O	0	0	0
			701	420	140	141			

- Molecule 45 is a protein called CHAIN L.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
45	BL	71	Total	C	N	O	0	0	0
			356	213	71	72			

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	BT	138	Total	C	N	O	S	0	0	1
			1142	710	235	196	1			

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 59 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	AA	198	Total	Mg	0	0
			198	198		
59	AY	1	Total	Mg	0	0
			1	1		
59	B0	1	Total	Mg	0	0
			1	1		

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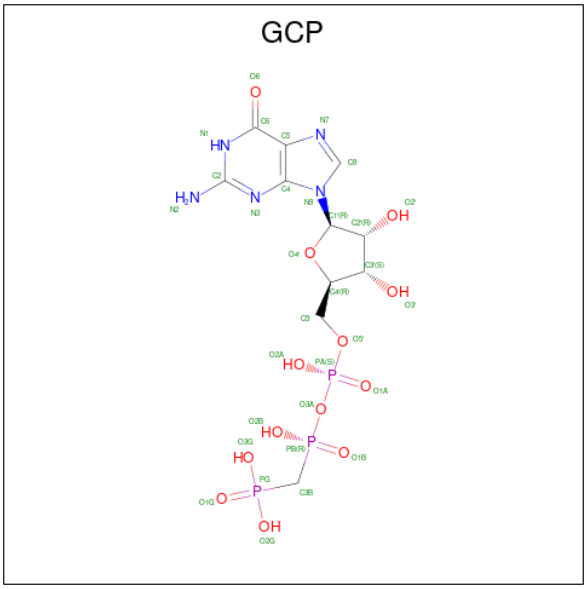
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	B5	1	Total Mg 1 1	0	0
59	BA	320	Total Mg 320 320	0	0
59	BC	1	Total Mg 1 1	0	0
59	BU	1	Total Mg 1 1	0	0

- Molecule 60 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	AD	1	Total Zn 1 1	0	0
60	AN	1	Total Zn 1 1	0	0
60	B9	1	Total Zn 1 1	0	0

- Molecule 61 is PHOSPHOMETHYLPHOSPHONIC ACID GUANYLATE ESTER (CCD ID: GCP) (formula: $C_{11}H_{18}N_5O_{13}P_3$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	AY	1	Total C N O P 32 11 5 13 3	0	0

- Molecule 62 is water.

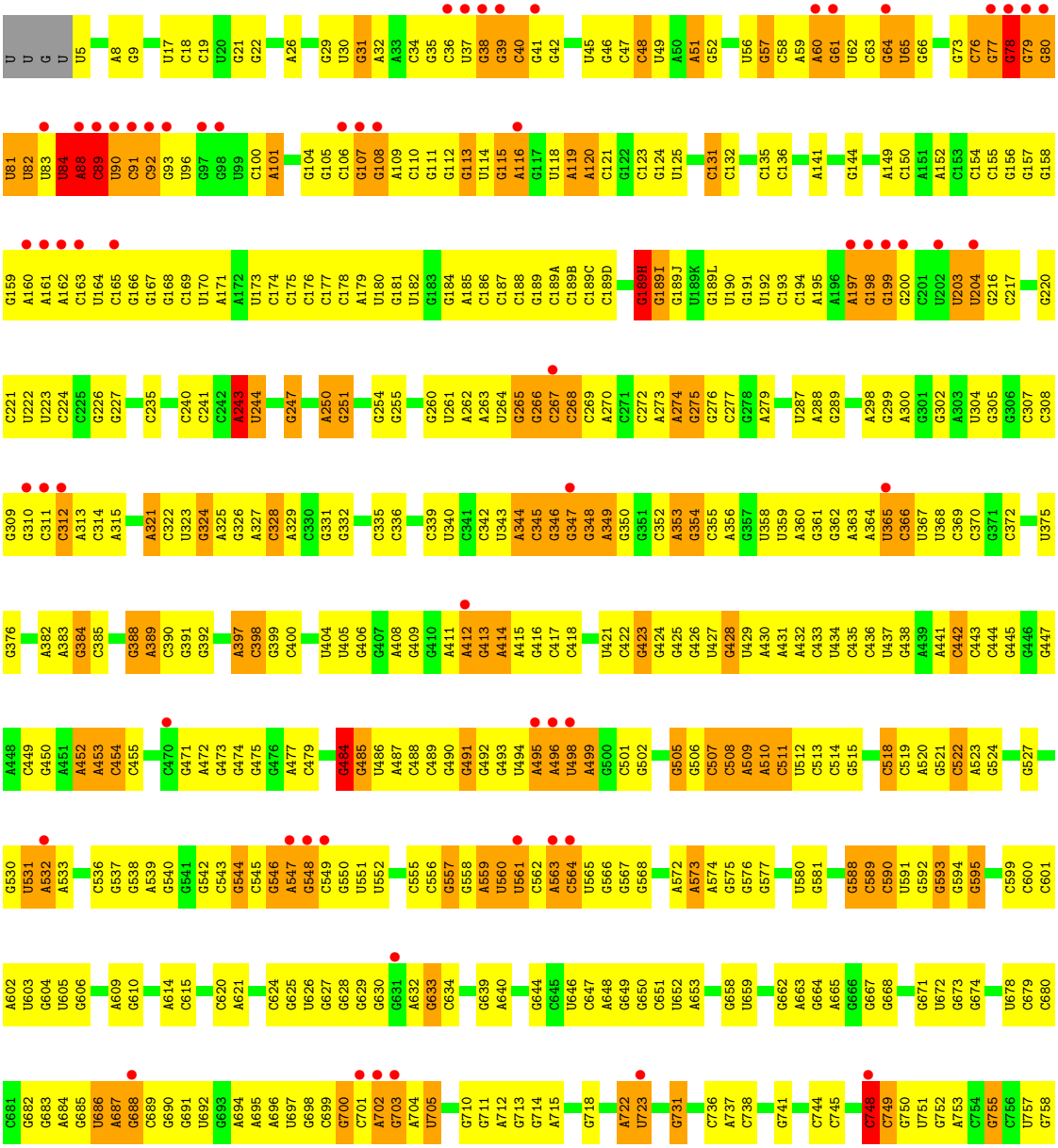
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	AY	2	Total O 2 2	0	0

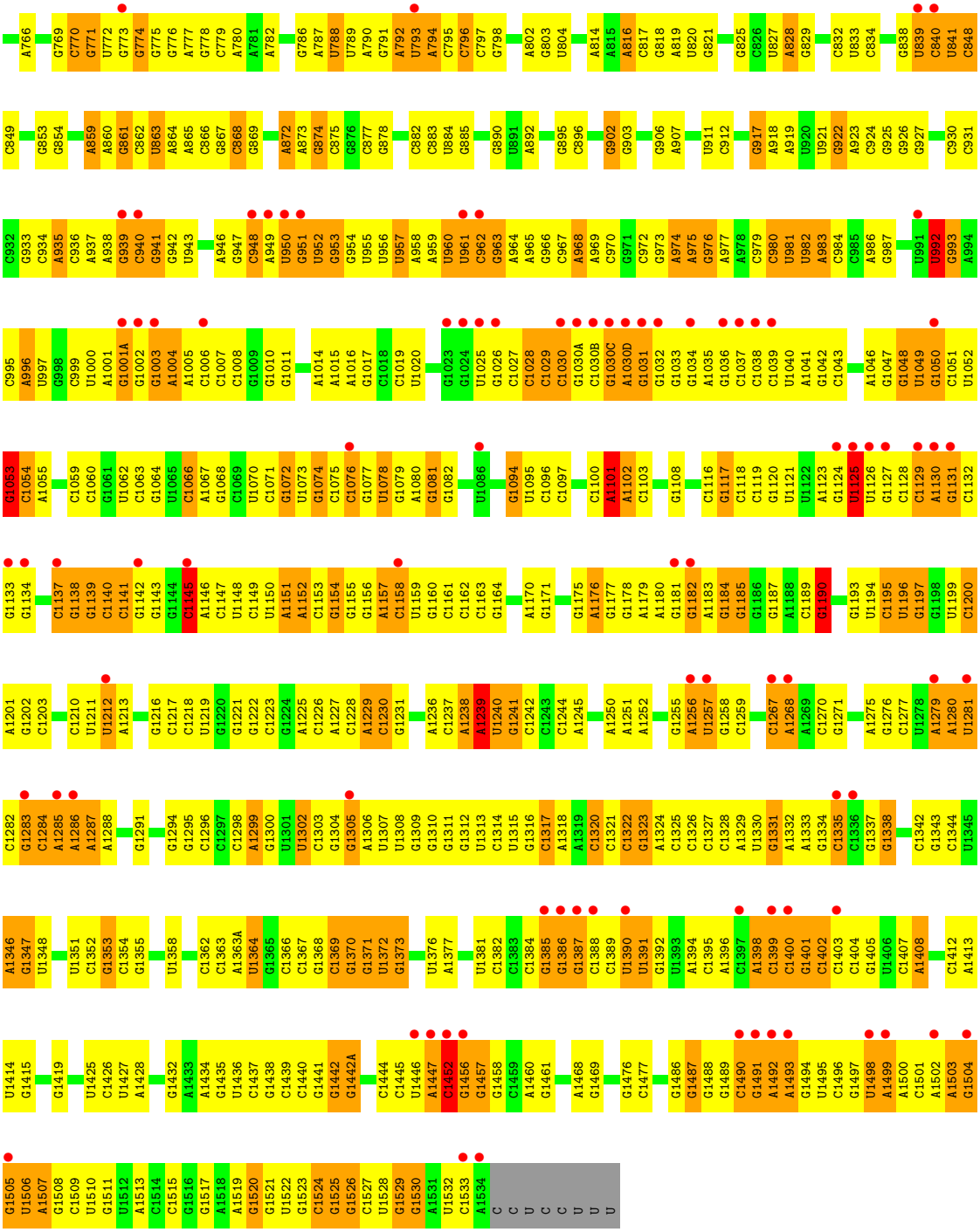
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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 RIBOSOMAL RNA

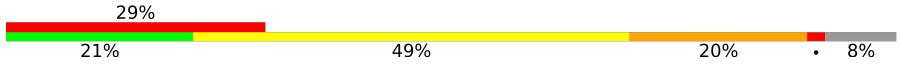
Chain AA: 10% 33% 47% 18%

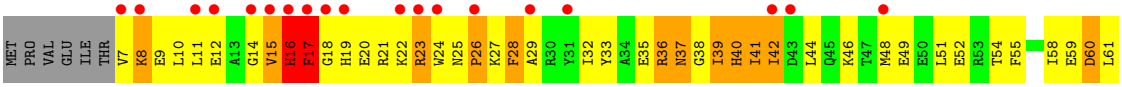


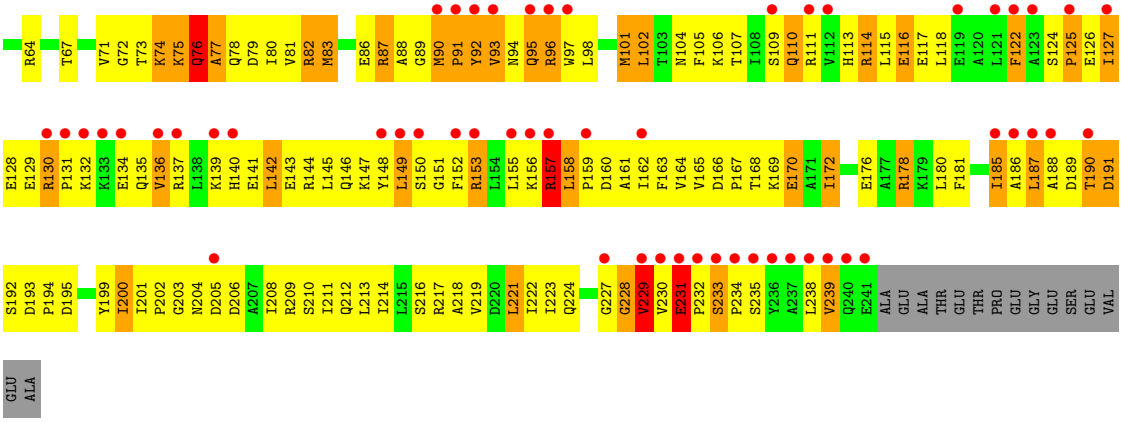


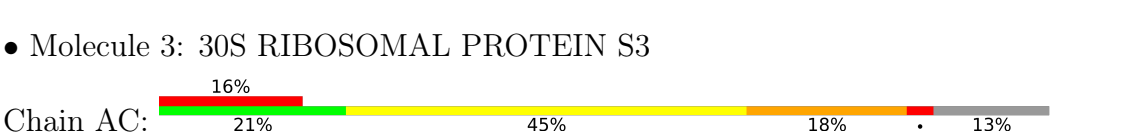
• Molecule 2: 30S RIBOSOMAL PROTEIN S2

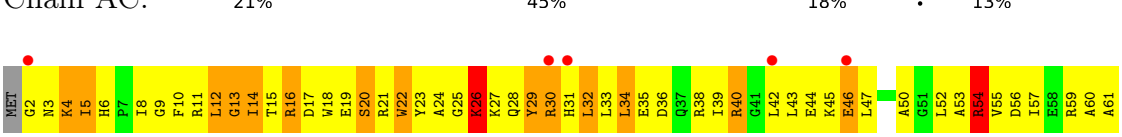
Chain AB:

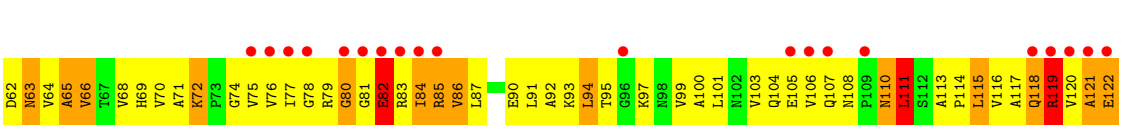


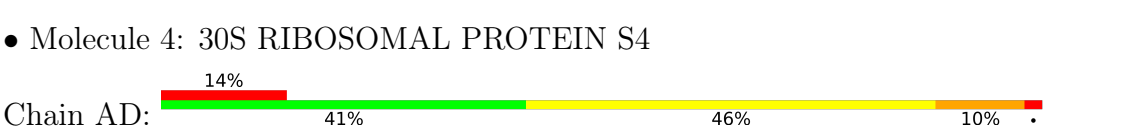


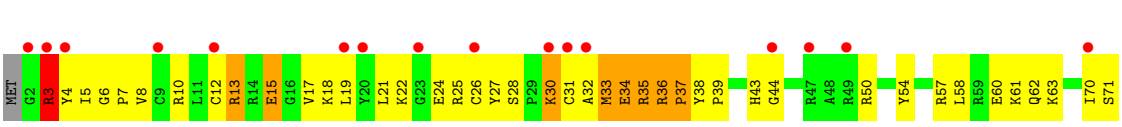


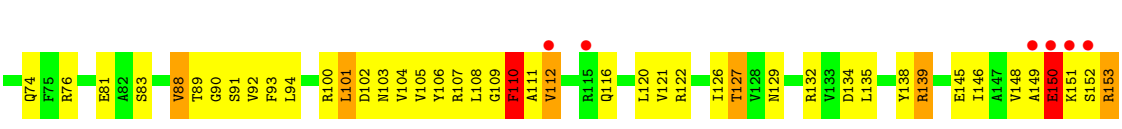


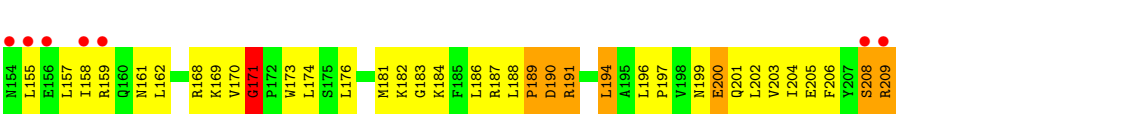


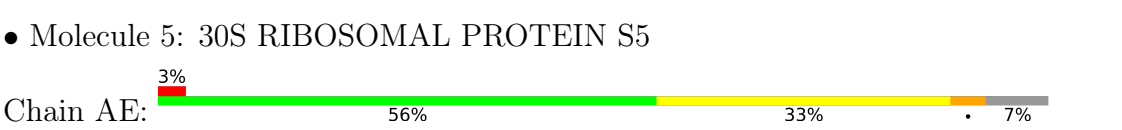


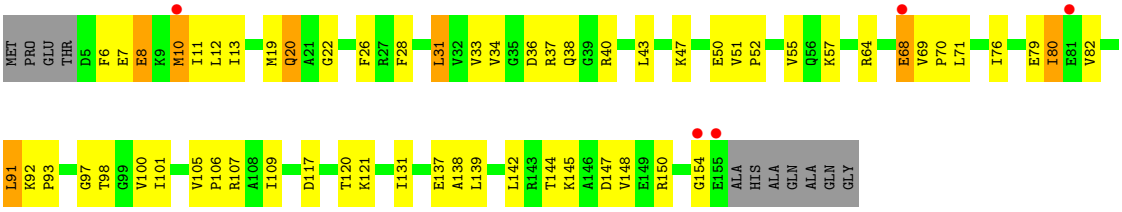




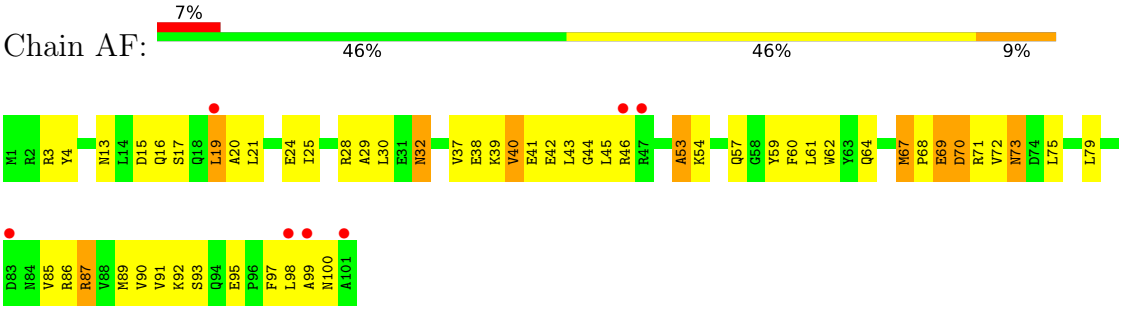




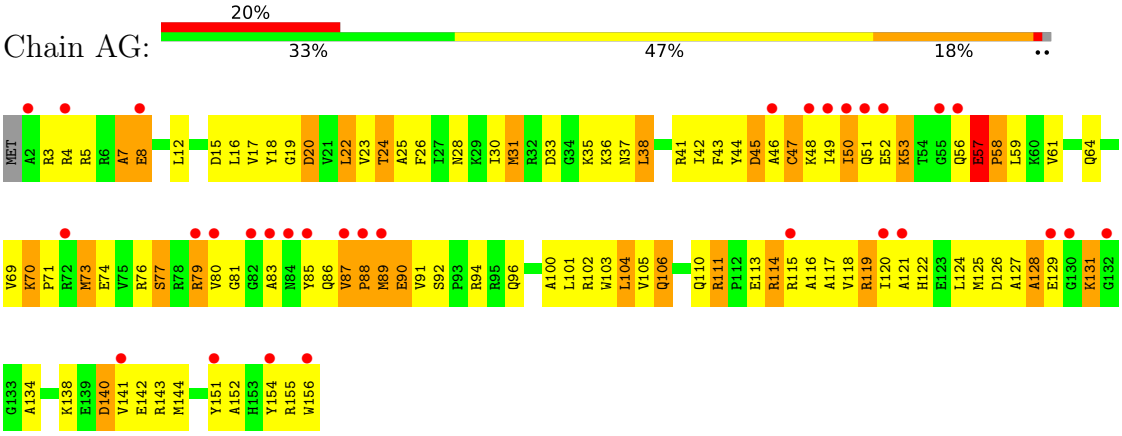




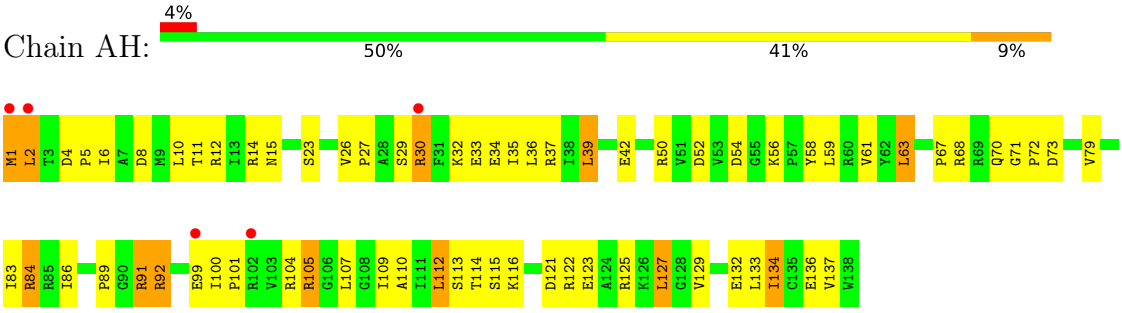
• Molecule 6: 30S RIBOSOMAL PROTEIN S6



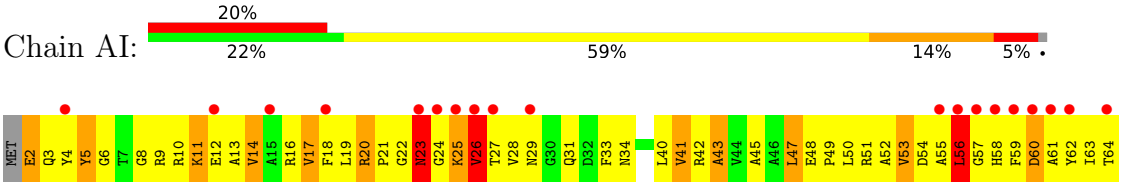
• Molecule 7: 30S RIBOSOMAL PROTEIN S7

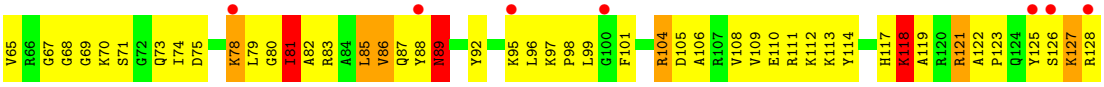


• Molecule 8: 30S RIBOSOMAL PROTEIN S8



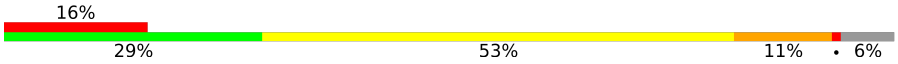
• Molecule 9: 30S RIBOSOMAL PROTEIN S9

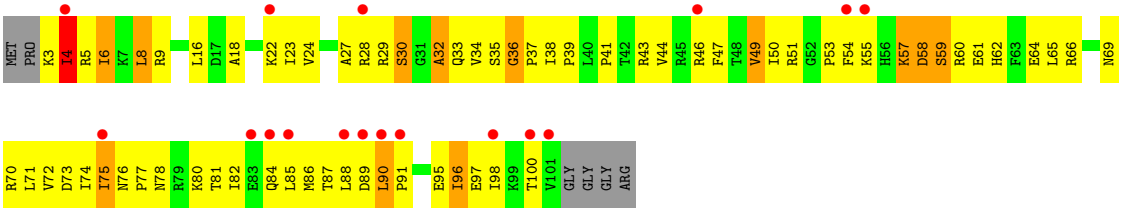




• Molecule 10: 30S RIBOSOMAL PROTEIN S10

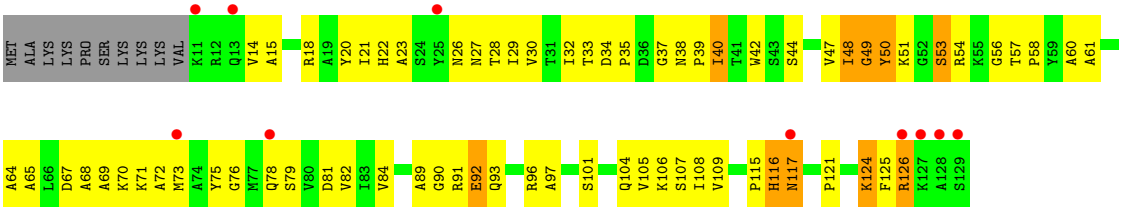
Chain AJ:





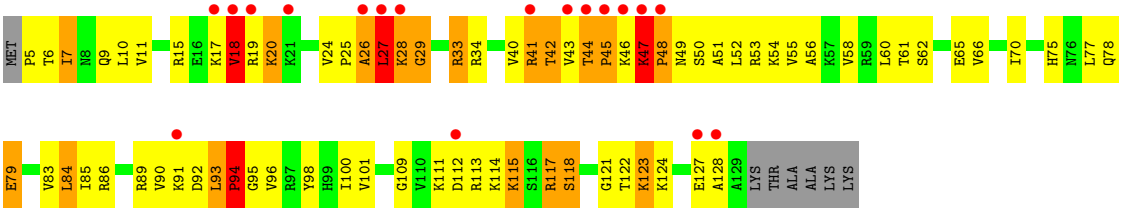
• Molecule 11: 30S RIBOSOMAL PROTEIN S11

Chain AK:



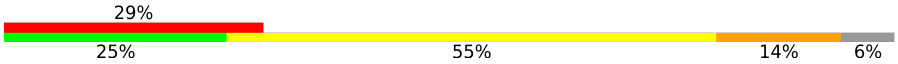
• Molecule 12: 30S RIBOSOMAL PROTEIN S12

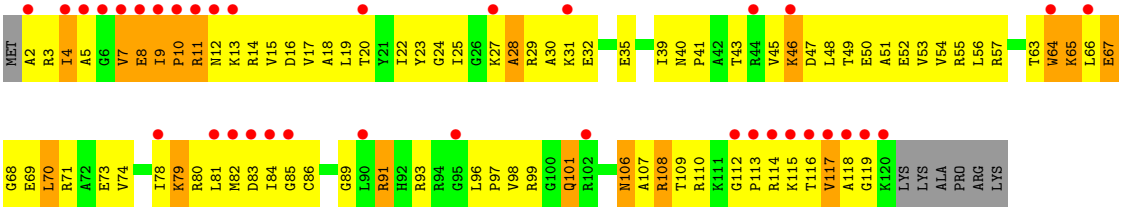
Chain AL:



• Molecule 13: 30S RIBOSOMAL PROTEIN S13

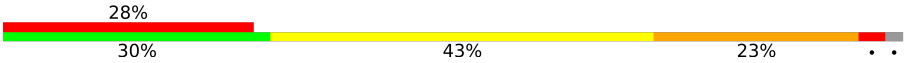
Chain AM:

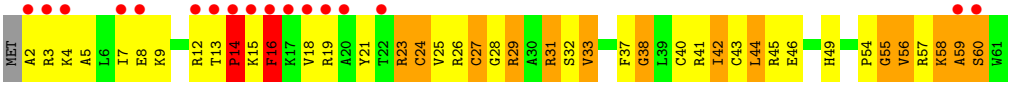




• Molecule 14: 30S RIBOSOMAL PROTEIN S14 TYPE Z

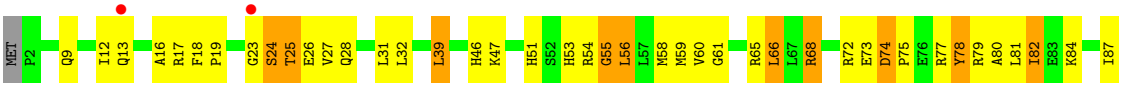
Chain AN:





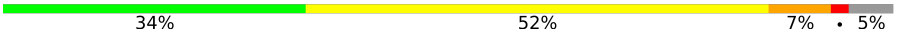
• Molecule 15: 30S RIBOSOMAL PROTEIN S15

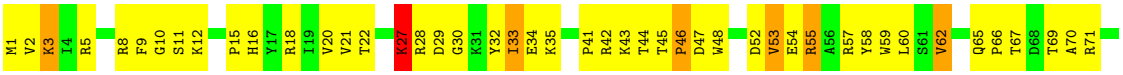
Chain AO:



• Molecule 16: 30S RIBOSOMAL PROTEIN S16

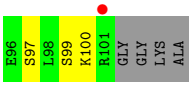
Chain AP:





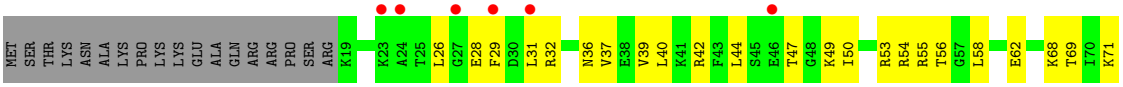
• Molecule 17: 30S RIBOSOMAL PROTEIN S17

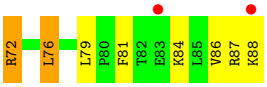
Chain AQ:



• Molecule 18: 30S RIBOSOMAL PROTEIN S18

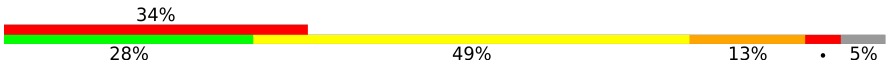
Chain AR:

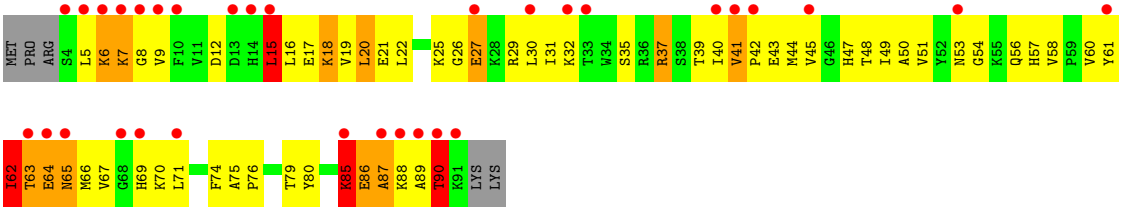




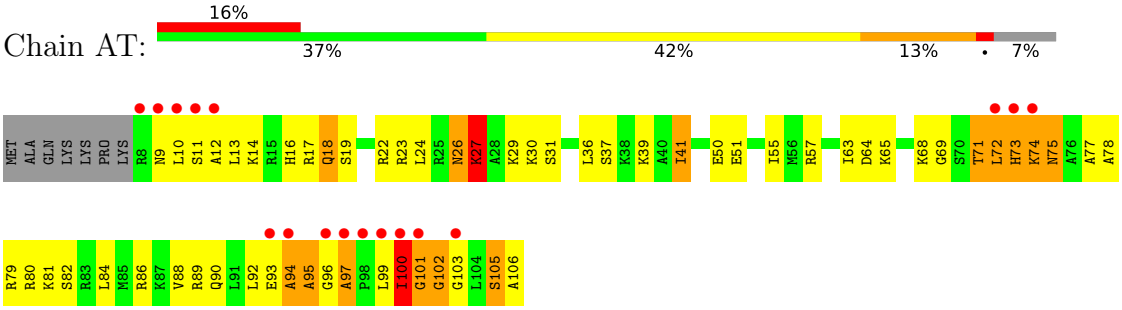
• Molecule 19: 30S RIBOSOMAL PROTEIN S19

Chain AS:



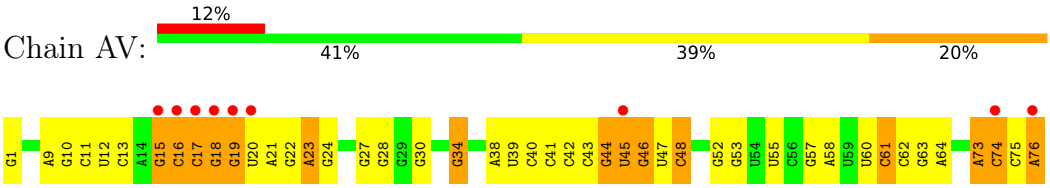


• Molecule 20: 30S RIBOSOMAL PROTEIN S20

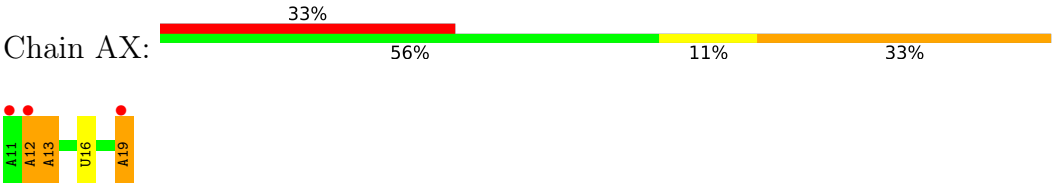


• Molecule 21: 30S RIBOSOMAL PROTEIN THX

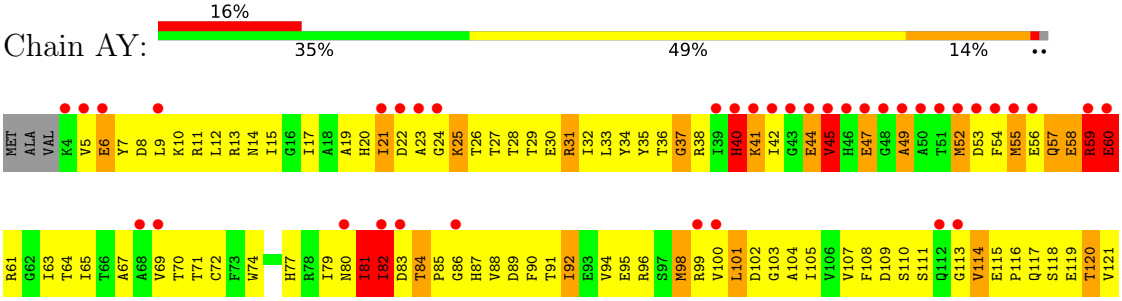
• Molecule 22: RNA (77-MER)

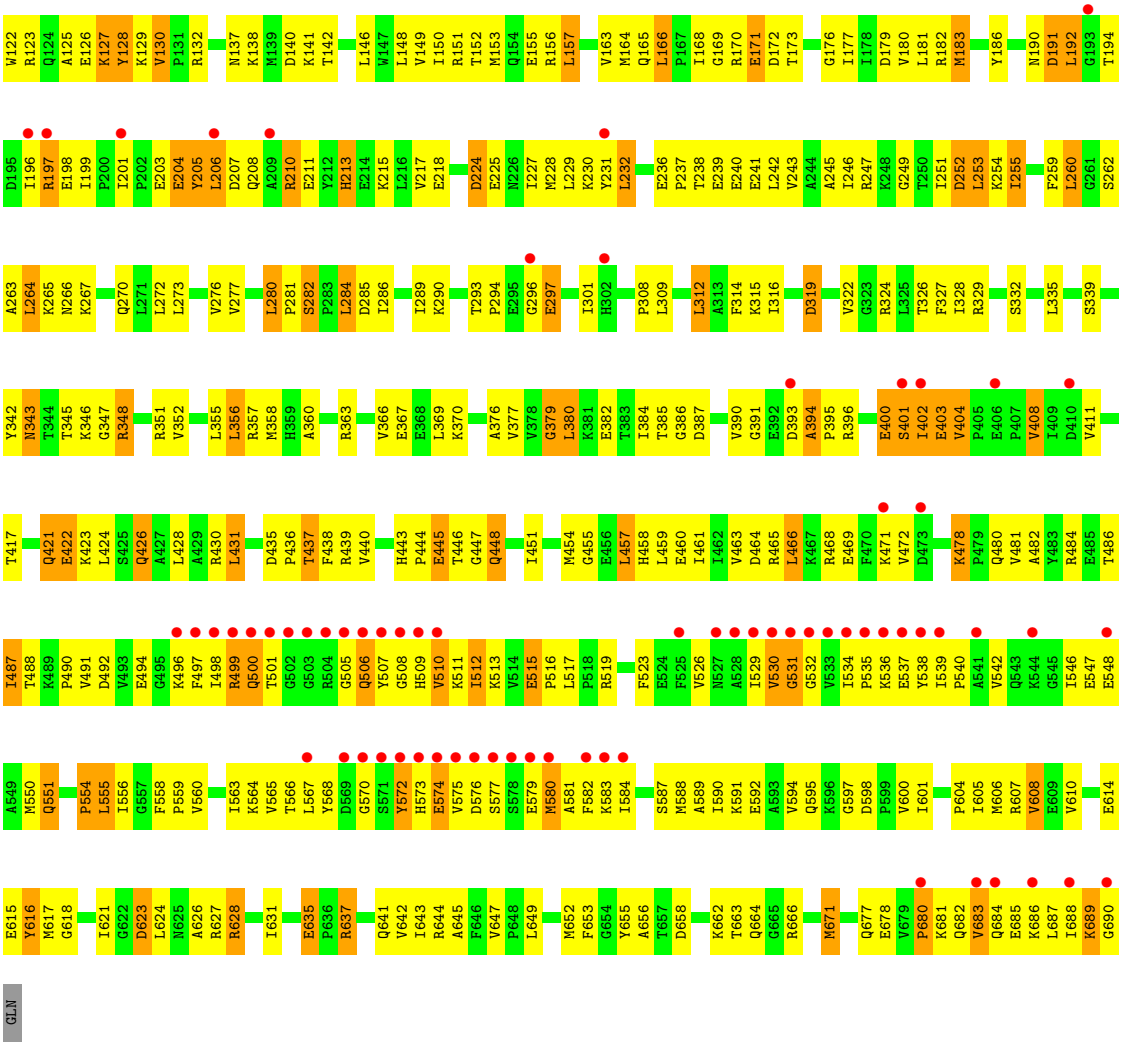


• Molecule 23: 5'-R(*UP*AP*AP*AP*AP*AP*UP*GP*UP)-3'



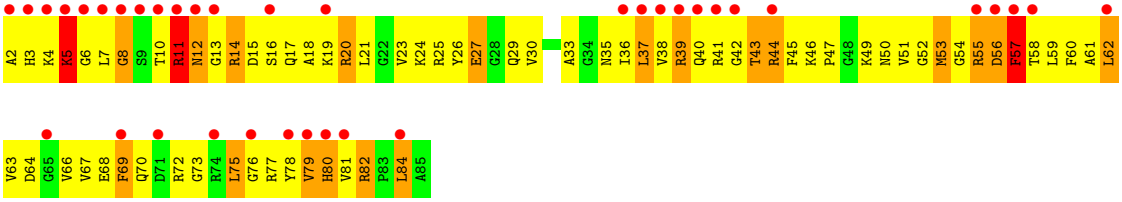
• Molecule 24: ELONGATION FACTOR G





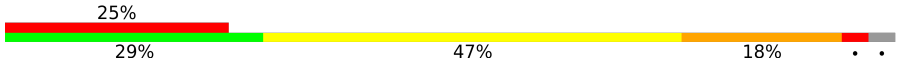
• Molecule 25: 50S RIBOSOMAL PROTEIN L27

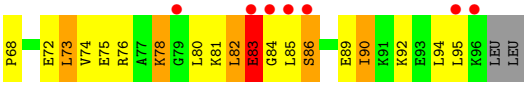
Chain B0:



• Molecule 26: 50S RIBOSOMAL PROTEIN L28

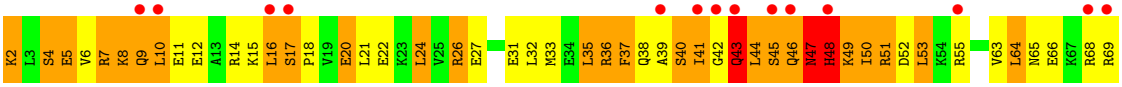
Chain B1:





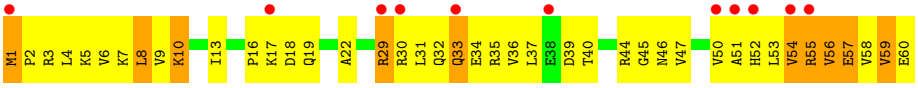
• Molecule 27: 50S RIBOSOMAL PROTEIN L29

Chain B2:



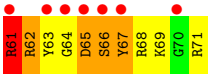
• Molecule 28: 50S RIBOSOMAL PROTEIN L30

Chain B3:



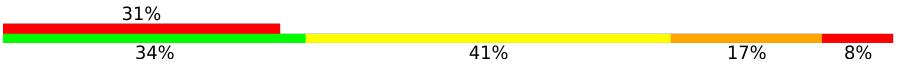
• Molecule 29: 50S RIBOSOMAL PROTEIN L31

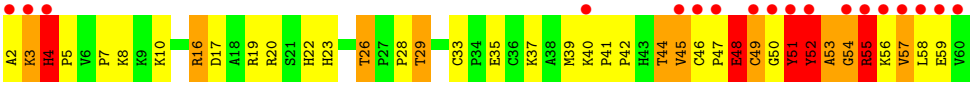
Chain B4:



• Molecule 30: 50S RIBOSOMAL PROTEIN L32

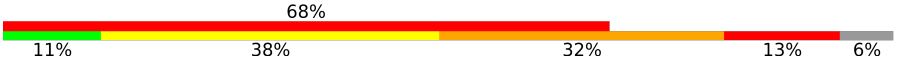
Chain B5:

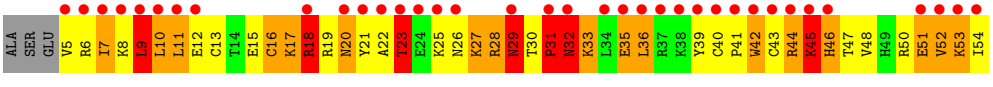




• Molecule 31: 50S RIBOSOMAL PROTEIN L33

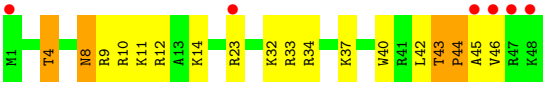
Chain B6:





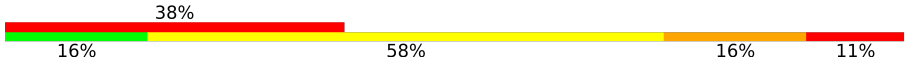
• Molecule 32: 50S RIBOSOMAL PROTEIN L34

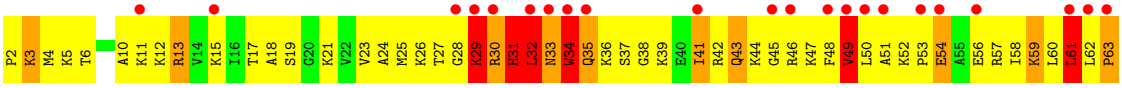
Chain B7:



• Molecule 33: 50S RIBOSOMAL PROTEIN L35

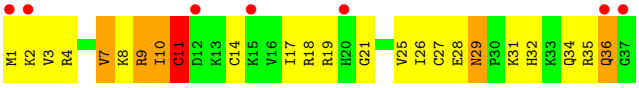
Chain B8:





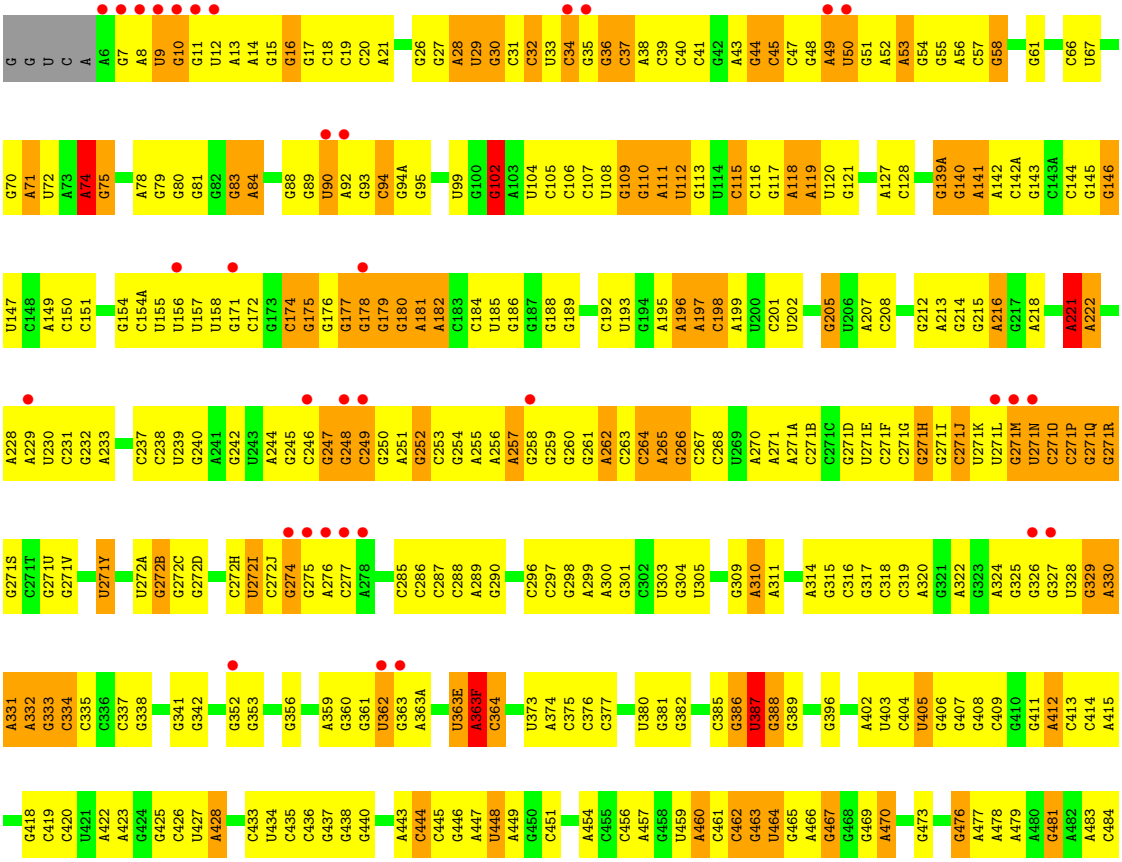
• Molecule 34: 50S RIBOSOMAL PROTEIN L36

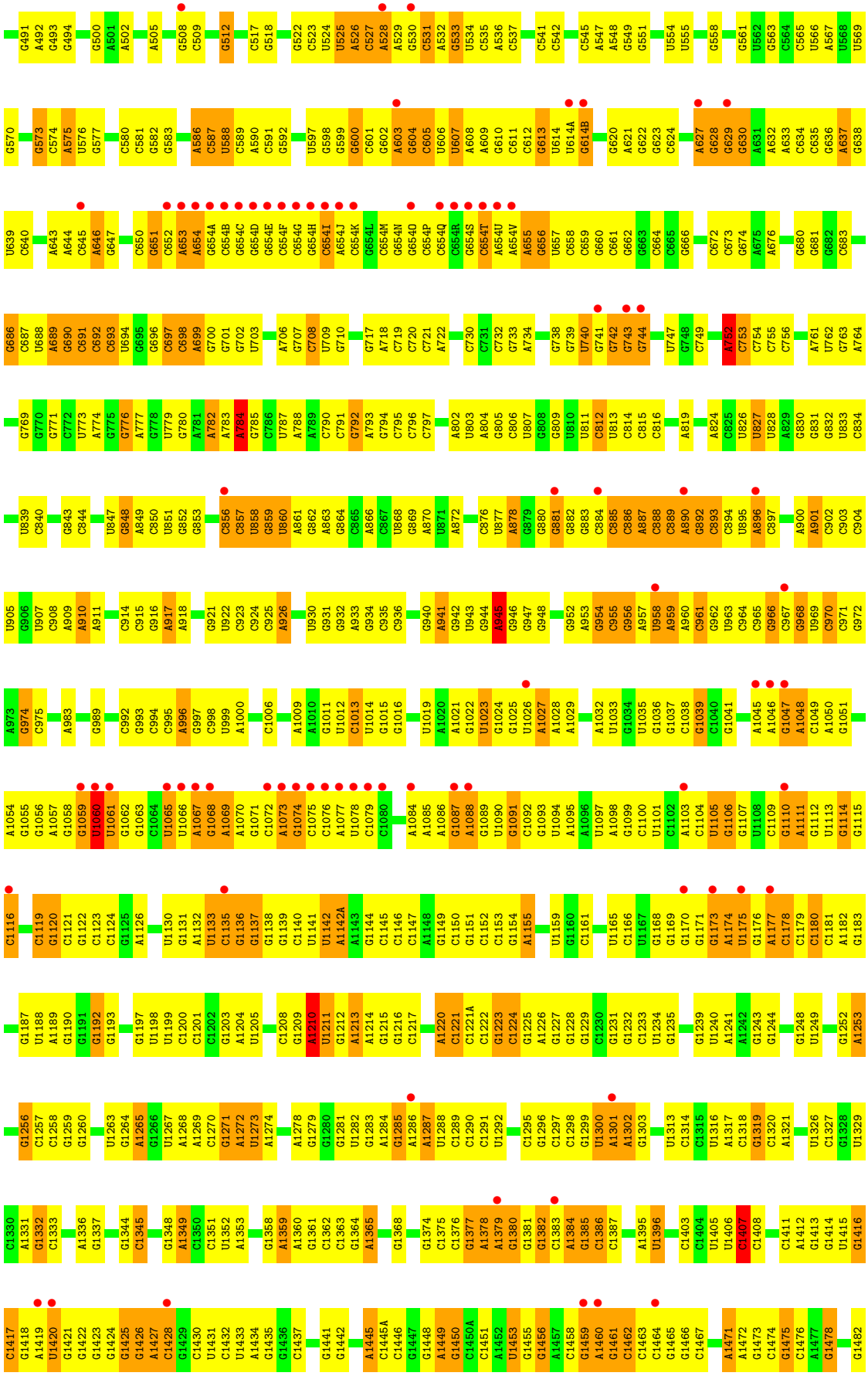
Chain B9:

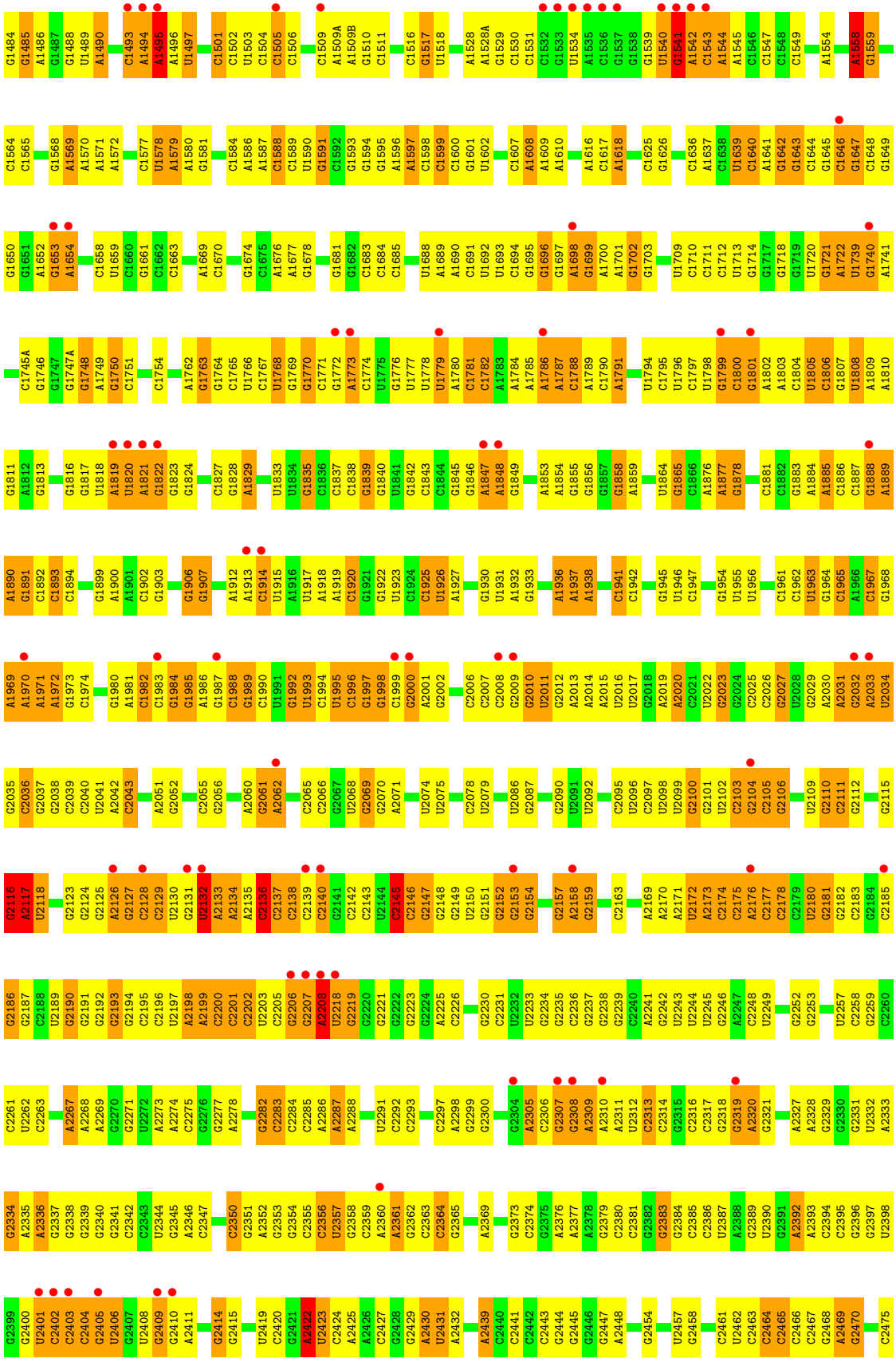


• Molecule 35: 23S RIBOSOMAL RNA

Chain BA:



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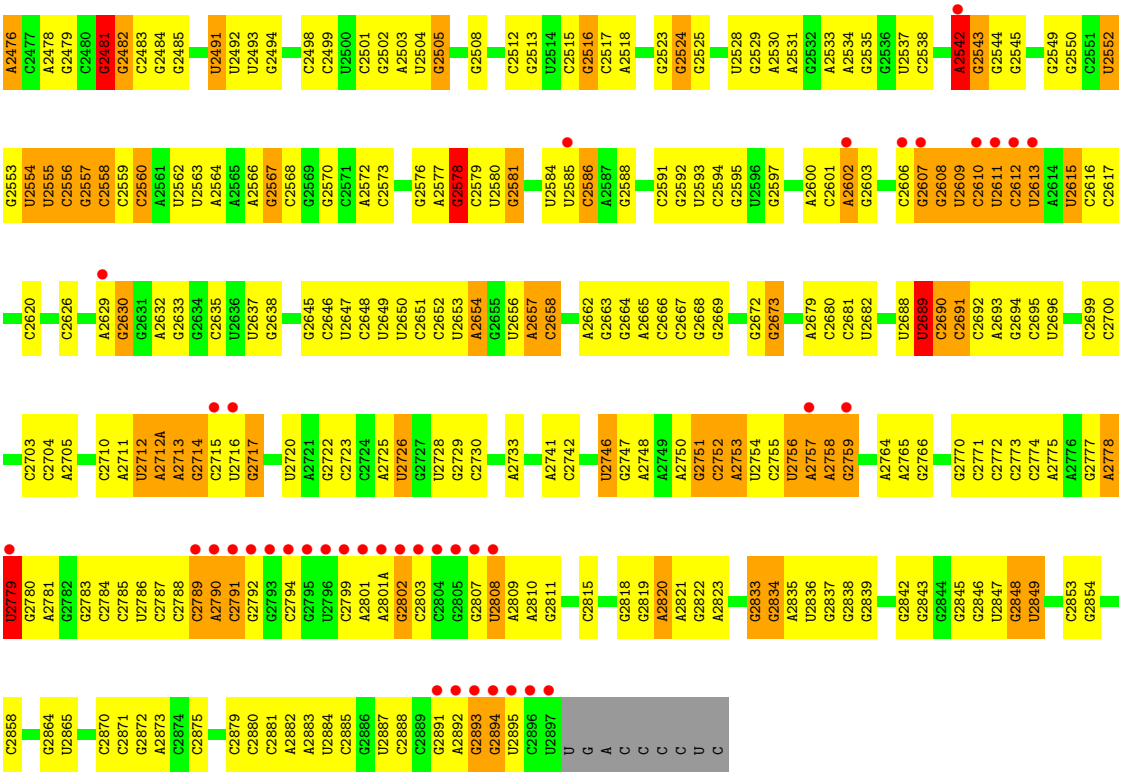
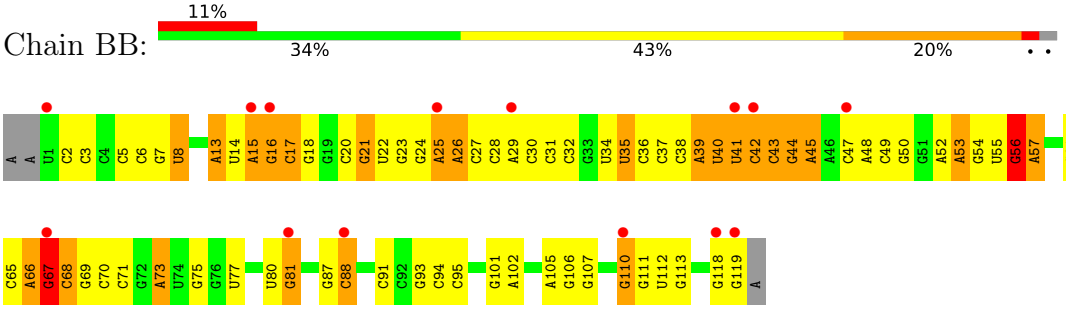
C1564 C1565 G1568 A1569 A1570 A1571 A1572 C1577 U1578 A1579 A1580 G1581 C1584 A1586 A1587 C1588 C1589 U1590 G1591 C1592 G1593 G1594 G1595 A1596 A1597 C1598 C1599 C1600 G1601 U1602 C1607 A1608 A1609 A1610 A1616 C1617 A1618 C1625 G1626 C1636 A1637 C1638 U1639 C1640 A1641 G1642 G1643 C1644 G1645 C1646 G1647 C1648 G1649
G1650 G1651 A1652 G1653 A1654 C1658 U1659 C1660 G1661 C1662 C1663 A1669 C1670 G1674 C1675 A1676 A1677 G1678 G1681 G1682 C1683 C1684 C1685 U1688 A1689 A1690 C1691 U1692 U1693 C1694 G1695 G1696 G1697 A1698 G1699 A1700 A1701 G1702 G1703 U1709 C1710 C1711 C1712 U1713 G1714 G1717 G1718 G1719 U1720 G1721 A1722 U1739 G1740 A1741
C1745A G1746 G1747 G1747A G1748 A1749 G1750 C1751 C1754 A1762 G1763 G1764 C1765 U1766 C1767 U1768 G1769 G1770 C1771 G1772 A1773 C1774 U1775 G1776 U1777 U1778 U1779 A1780 C1781 C1782 A1783 A1784 A1785 A1786 A1787 C1788 A1789 C1790 A1791 U1794 C1795 U1796 C1797 U1798 G1799 C1800 G1801 A1802 A1803 C1804 U1805 C1806 G1807 U1808 A1809 A1810
G1811 A1812 G1813 G1816 G1817 U1818 A1819 U1820 A1821 G1822 G1823 G1824 C1827 G1828 A1829 U1833 U1834 G1835 C1836 C1837 C1838 G1839 G1840 U1841 G1842 C1843 C1844 G1845 G1846 A1847 A1848 G1849 A1853 A1854 G1855 G1856 G1857 G1858 A1859 U1864 G1865 C1866 A1876 A1877 G1878 C1881 C1882 G1883 A1884 A1885 C1886 C1887 G1888 A1889
A1890 G1891 C1892 C1893 C1894 G1899 A1900 A1901 C1902 G1903 G1906 G1907 A1912 A1913 C1914 U1915 A1916 U1917 A1918 A1919 C1920 G1921 G1922 U1923 C1924 C1925 U1926 A1927 G1930 U1931 A1932 G1933 A1936 A1937 A1938 C1941 C1942 G1945 U1946 C1947 G1954 U1955 U1956 C1961 C1962 U1963 G1964 C1965 A1966 C1967 G1968
A1969 A1970 A1971 A1972 G1973 C1974 G1980 A1981 C1982 C1983 G1984 G1985 A1986 G1987 C1988 G1989 C1990 U1991 G1992 U1993 C1994 U1995 C1996 G1997 G1998 C1999 G2000 A2001 C2002 C2006 C2007 C2008 G2009 G2010 U2011 G2012 A2013 A2014 A2015 U2016 U2017 G2018 A2019 A2020 C2021 U2022 G2023 G2024 C2025 C2026 G2027 U2028 G2029 A2030 A2031 G2032 A2033 U2034
G2035 C2036 G2037 G2038 C2039 C2040 U2041 A2042 C2043 A2051 G2052 C2055 G2056 A2060 G2061 A2062 C2065 C2066 G2067 U2068 G2069 G2070 A2071 U2074 U2075 C2078 U2079 U2086 G2087 G2090 U2091 U2092 C2095 U2096 C2097 U2098 U2099 G2100 G2101 U2102 C2103 G2104 C2105 G2106 U2109 G2110 C2111 G2112 G2115
G2116 A2117 U2118 G2123 G2124 G2125 A2126 G2127 C2128 C2129 U2130 G2131 U2132 A2133 A2134 A2135 C2136 C2137 C2138 C2139 C2140 G2141 C2142 C2143 U2144 C2145 C2146 G2147 G2148 G2149 U2150 G2151 G2152 G2153 G2154 G2157 A2158 G2159 C2163 A2169 A2170 A2171 U2172 A2173 C2174 C2175 A2176 C2177 C2178 C2179 U2180 G2181 G2182 C2183 G2184 C2185
G2186 G2187 C2188 U2189 G2190 G2191 G2192 G2193 G2194 C2195 C2196 U2197 A2198 A2199 C2200 C2201 C2202 U2203 C2205 G2206 G2207 A2208 U2218 G2219 G2220 G2221 G2222 G2223 G2224 A2225 C2226 G2230 C2231 U2232 U2233 G2234 G2235 C2236 G2237 G2238 G2239 C2240 A2241 G2242 U2243 U2244 U2245 G2246 A2247 C2248 U2249 G2252 G2253 U2257 C2258 G2259 C2260
C2261 U2262 C2263 A2267 A2268 A2269 G2270 G2271 U2272 A2273 A2274 C2275 G2276 G2277 A2278 G2282 C2283 C2284 C2285 A2286 A2287 A2288 U2291 C2292 C2293 C2297 A2298 G2299 G2300 G2304 A2305 C2306 G2307 G2308 A2309 A2310 A2311 U2312 C2313 C2314 G2315 C2316 C2317 G2318 G2319 A2320 G2321 A2327 A2328 G2329 G2330 G2331 U2332 A2333
G2334 A2335 A2336 G2337 G2338 G2339 G2340 G2341 C2342 C2343 U2344 G2345 A2346 C2347 C2350 G2351 A2352 G2353 G2354 C2355 C2356 U2357 G2358 C2359 A2360 A2361 G2362 C2363 C2364 G2365 A2369 G2373 C2374 G2375 A2376 A2377 A2378 G2379 C2380 C2381 G2382 G2383 G2384 C2385 C2386 U2387 A2388 G2389 U2390 G2391 A2392 A2393 C2394 C2395 G2396 G2397 U2398
G2399 G2400 U2401 C2402 C2403 C2404 G2405 U2406 G2407 U2408 G2409 G2410 A2411 G2414 G2415 U2419 C2420 G2421 A2422 U2423 C2424 A2425 A2426 C2427 G2428 G2429 A2430 U2431 A2432 A2439 C2440 C2441 C2442 C2443 G2444 G2445 G2446 G2447 A2448 G2454 U2457 G2458 C2461 U2462 C2463 C2464 C2465 C2466 C2467 G2468 A2469 G2470 C2475



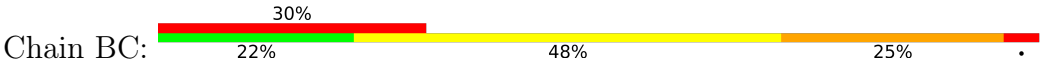
• Molecule 36: 5S RIBOSOMAL RNA

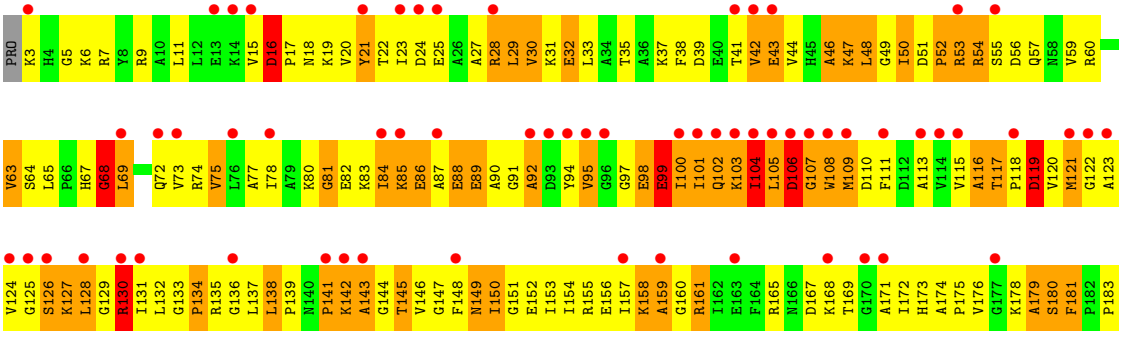
Chain BB:

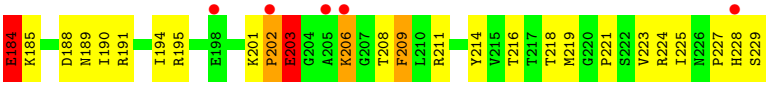


• Molecule 37: RIBOSOMAL PROTEIN L1

Chain BC:

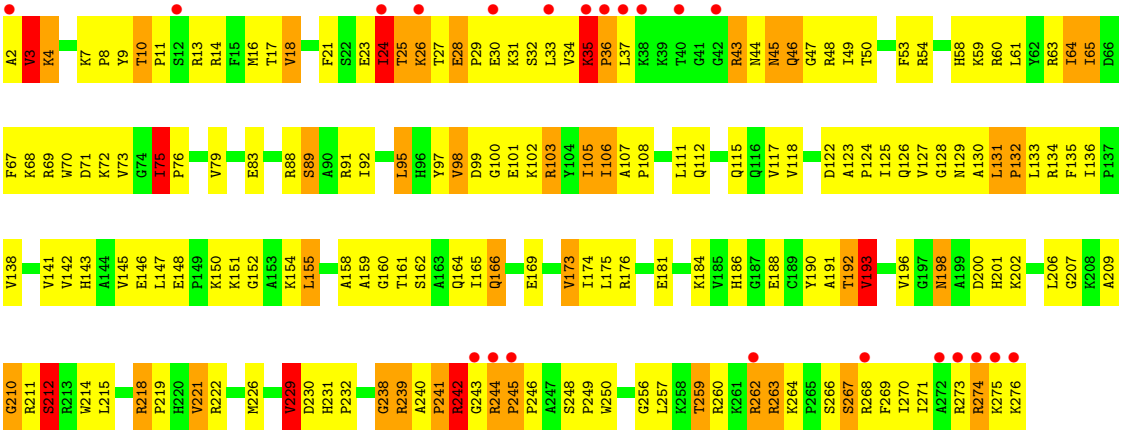






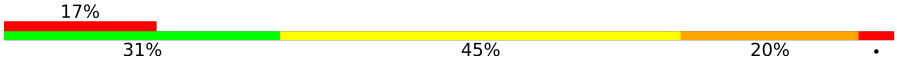
• Molecule 38: 50S RIBOSOMAL PROTEIN L2

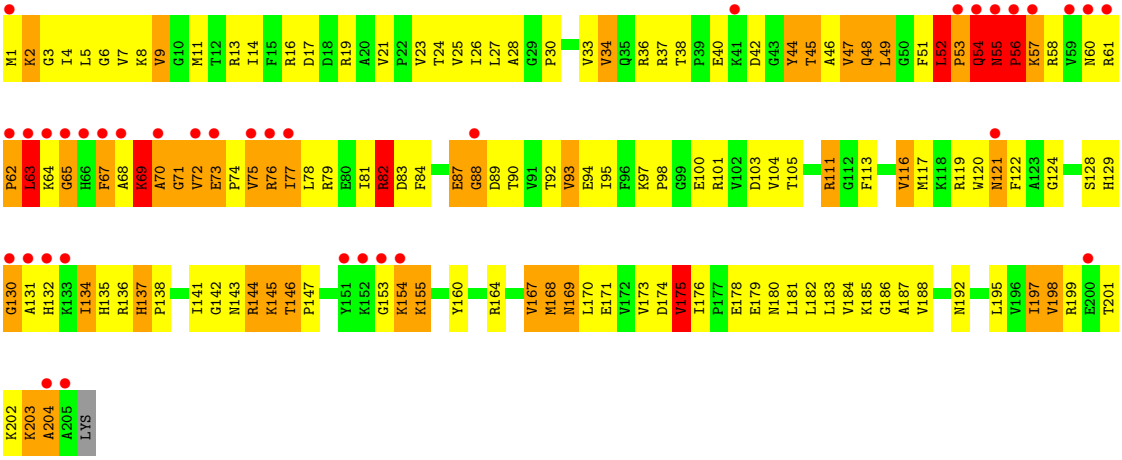
Chain BD:



• Molecule 39: 50S RIBOSOMAL PROTEIN L3

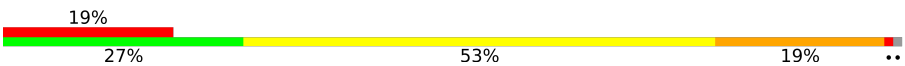
Chain BE:

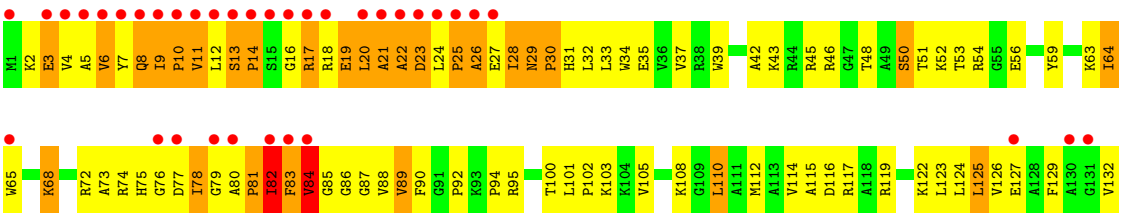


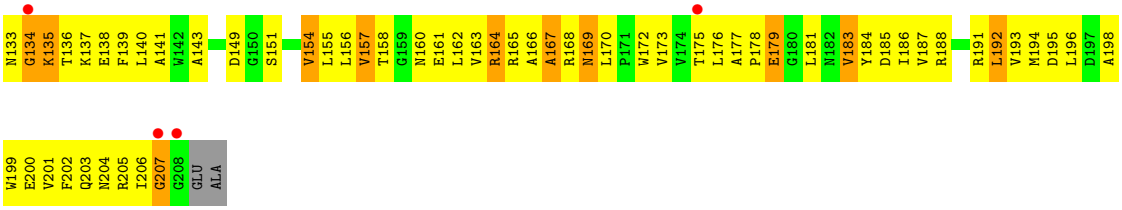


• Molecule 40: 50S RIBOSOMAL PROTEIN L4

Chain BF:

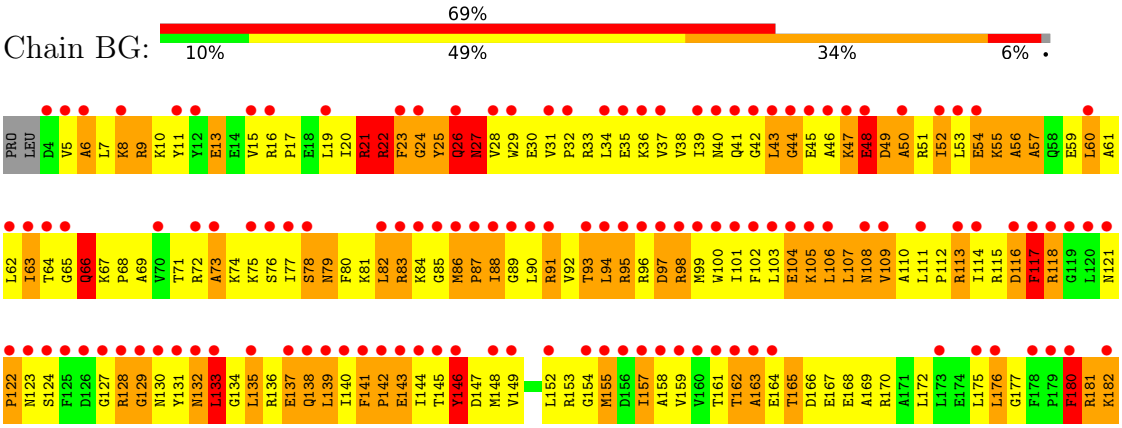






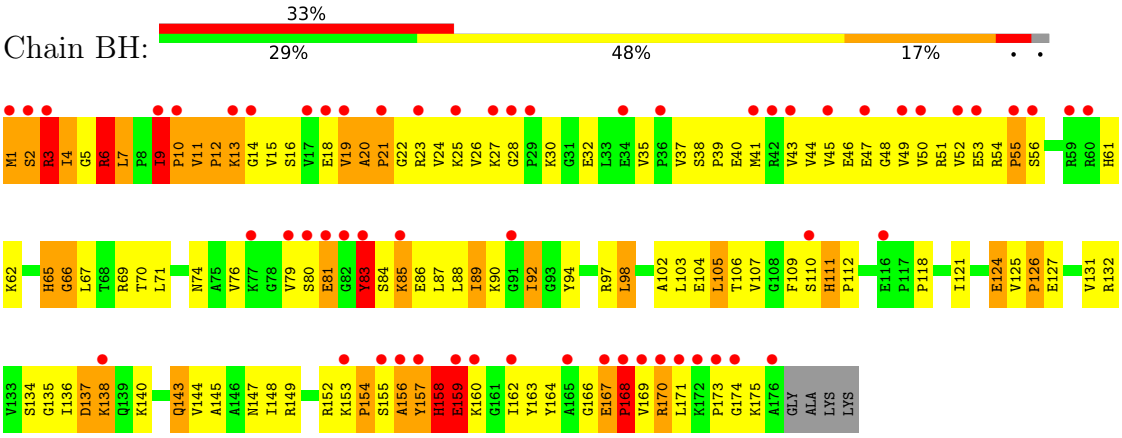
• Molecule 41: 50S RIBOSOMAL PROTEIN L5

Chain BG:



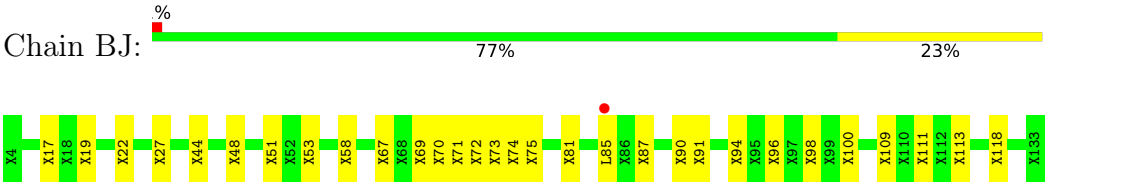
• Molecule 42: 50S RIBOSOMAL PROTEIN L6

Chain BH:



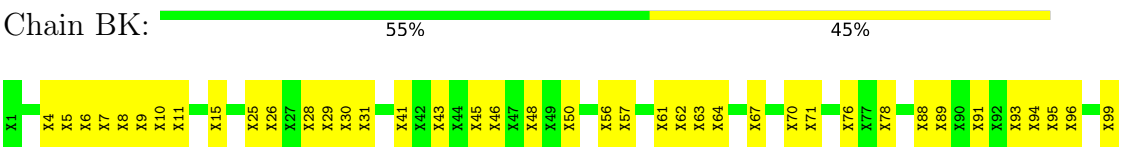
• Molecule 43: CHAIN J

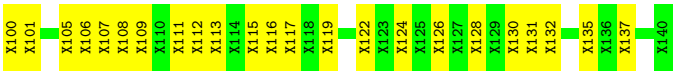
Chain BJ:



• Molecule 44: CHAIN K

Chain BK:



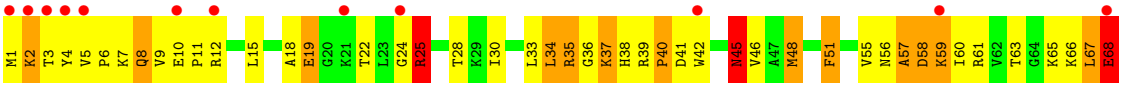


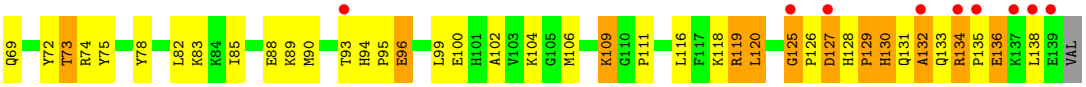
• Molecule 45: CHAIN L

Chain BL:

• Molecule 46: 50S RIBOSOMAL PROTEIN L13

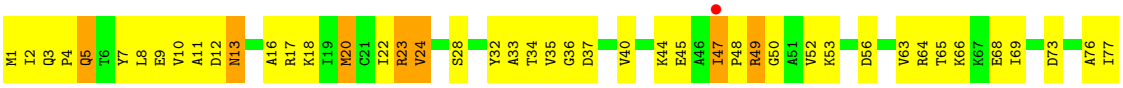
Chain BN:





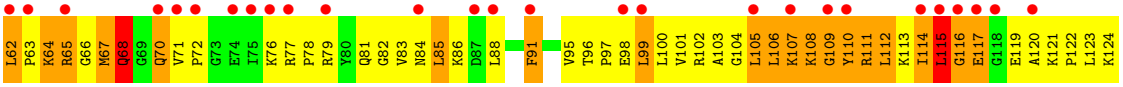
• Molecule 47: 50S RIBOSOMAL PROTEIN L14

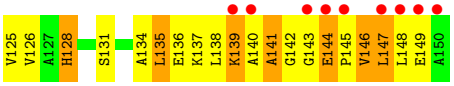
Chain BO:



• Molecule 48: 50S RIBOSOMAL PROTEIN L15

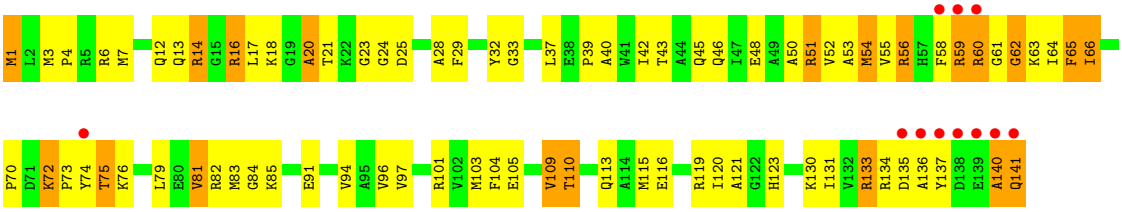
Chain BP:



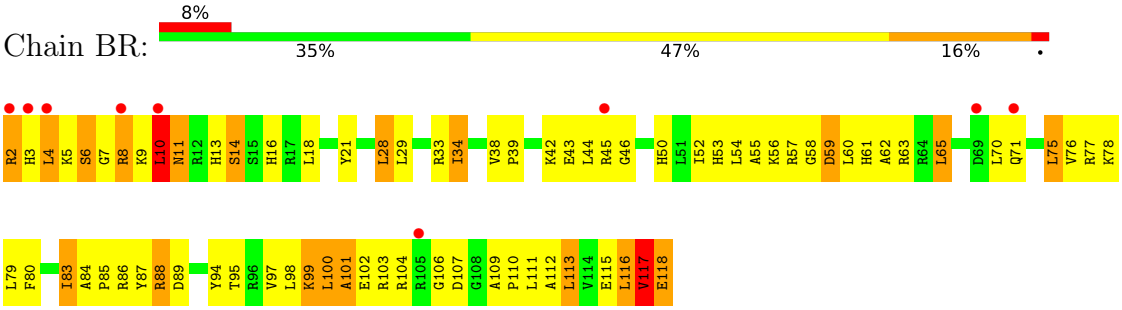


• Molecule 49: 50S RIBOSOMAL PROTEIN L16

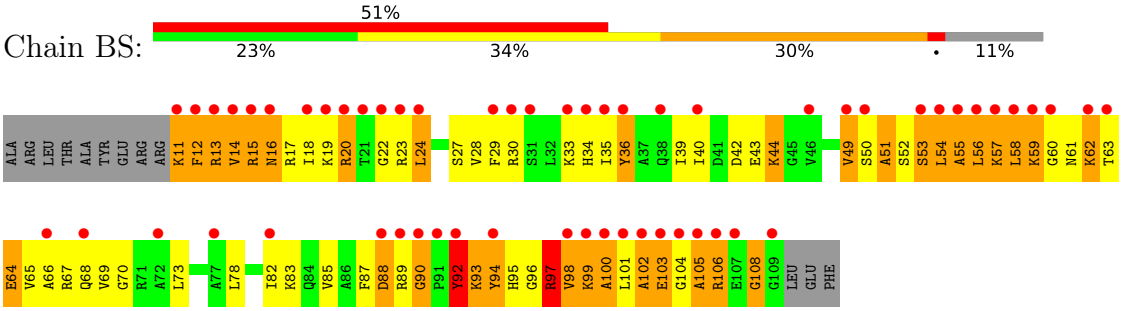
Chain BQ:



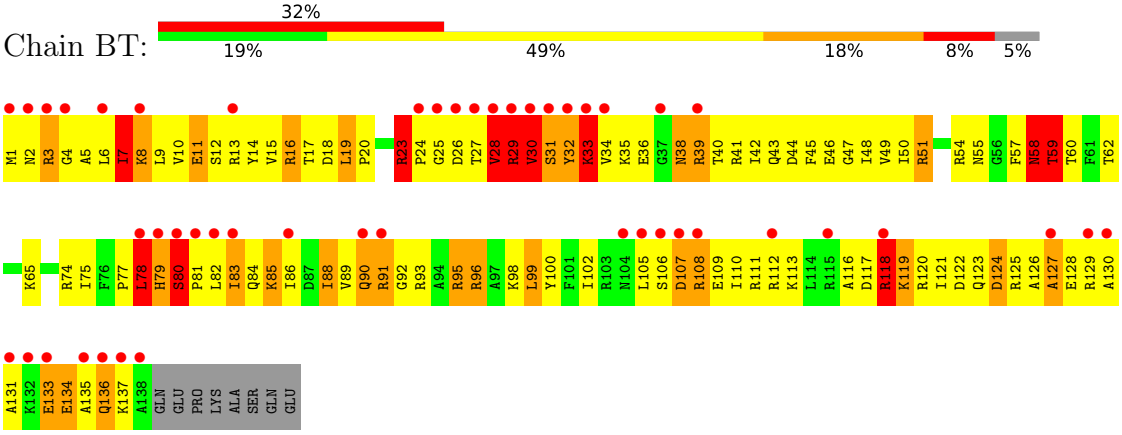
• Molecule 50: 50S RIBOSOMAL PROTEIN L17



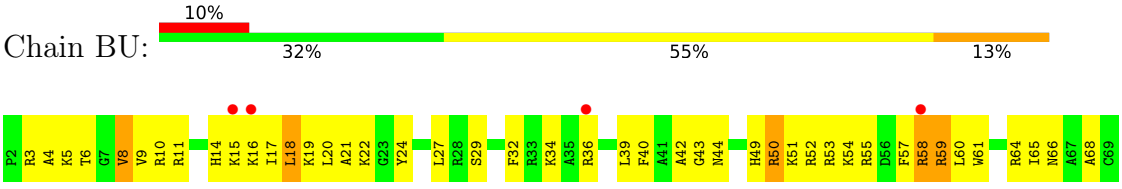
• Molecule 51: 50S RIBOSOMAL PROTEIN L18

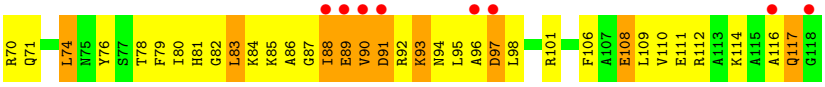


• Molecule 52: 50S RIBOSOMAL PROTEIN L19



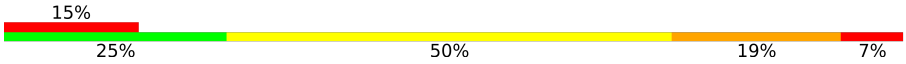
• Molecule 53: 50S RIBOSOMAL PROTEIN L20

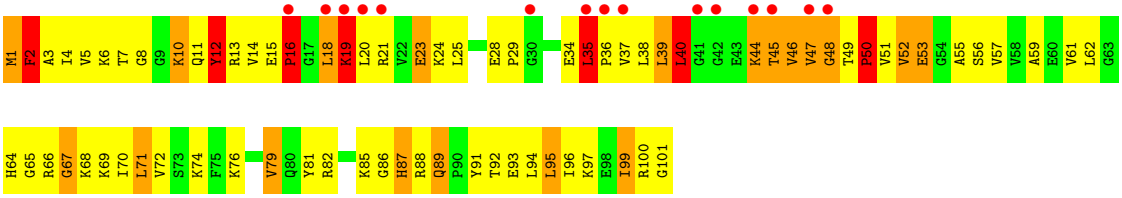




• Molecule 54: 50S RIBOSOMAL PROTEIN L21

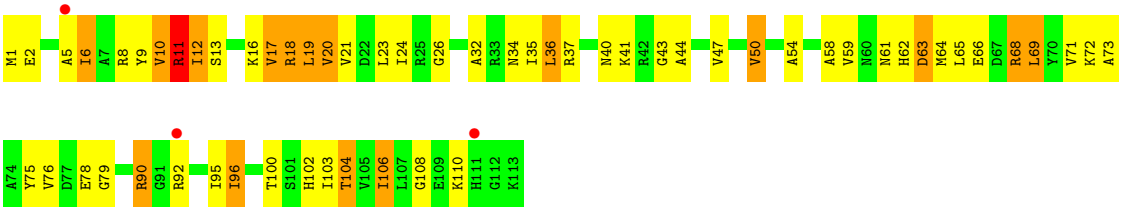
Chain BV:





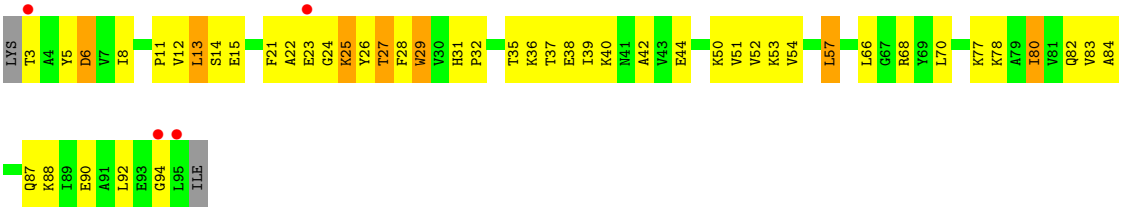
• Molecule 55: 50S RIBOSOMAL PROTEIN L22

Chain BW:



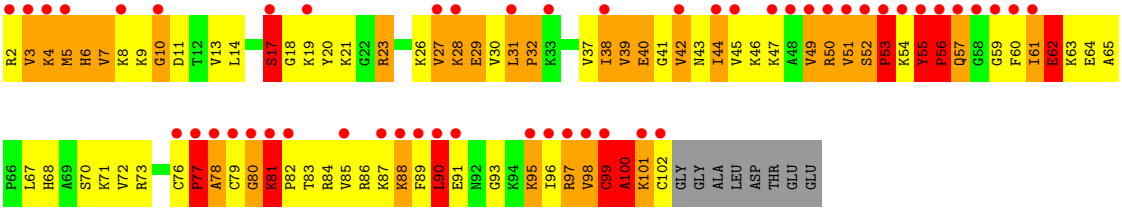
• Molecule 56: 50S RIBOSOMAL PROTEIN L23

Chain BX:



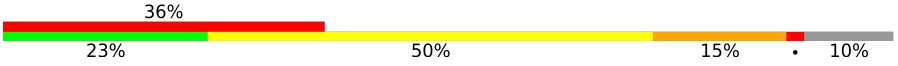
• Molecule 57: 50S RIBOSOMAL PROTEIN L24

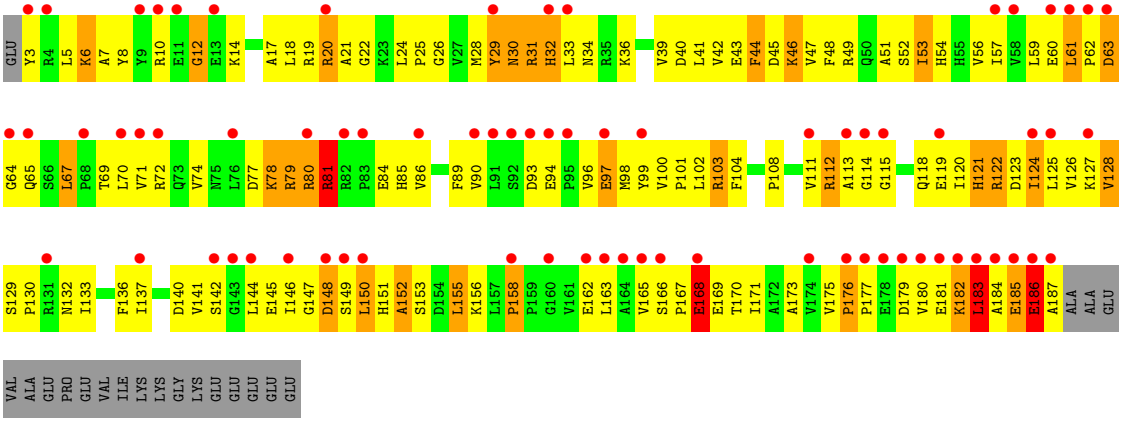
Chain BY:



• Molecule 58: 50S RIBOSOMAL PROTEIN L25

Chain BZ:




GLU Y3 R4 L5 K6 A7 Y8 Y9 R10 E11 G12 E13 K14 A17 L18 R19 R20 A21 G22 K23 L24 P25 G26 V27 M28 Y29 N30 R31 H32 L33 N34 R35 K36 V39 D40 L41 V42 E43 F44 D45 K46 V47 F48 R49 Q50 A51 S52 I53 H54 H55 V56 I57 V58 L59 E60 L61 P62 D63
G64 Q65 S66 L67 P68 T69 L70 V71 R72 Q73 V74 N75 L76 D77 K78 R79 R80 R81 R82 P83 E84 H85 V86 F89 V90 L91 S92 D93 E94 P95 V96 E97 M98 Y99 V100 P101 L102 R103 F104 P108 V111 R112 A113 G114 G115 Q118 E119 I120 H121 R122 D123 I124 L125 V126 K127 V128
S129 P130 R131 N132 I133 F136 I137 D140 V141 S142 G143 L144 E145 I146 G147 D148 S149 L150 H151 A152 S153 D154 L155 K156 L157 P158 P159 G160 V161 E162 L163 A164 V165 S166 P167 E168 E169 T170 I171 A172 A173 V174 V175 P176 P177 E178 D179 V180 E181 K182 L183 A184 E185 E186 A187 ALA ALA GLU
VAL ALA GLU PRO GLU VAL ILE LYS LYS GLY LYS GLU GLU GLU GLU GLU

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	202.90Å 242.63Å 309.32Å 90.00° 99.60° 90.00°	Depositor
Resolution (Å)	49.75 – 2.95 49.75 – 2.95	Depositor EDS
% Data completeness (in resolution range)	99.9 (49.75-2.95) 100.0 (49.75-2.95)	Depositor EDS
R_{merge}	0.26	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.70 (at 2.96Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.210 , 0.244 0.223 , 0.254	Depositor DCC
R_{free} test set	30895 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å^2)	49.6	Xtriage
Anisotropy	0.435	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.30 , 60.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	153829	wwPDB-VP
Average B, all atoms (Å^2)	58.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.73% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, MG, GCP

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	0.38	1/36258 (0.0%)	0.62	18/56589 (0.0%)
2	AB	0.32	0/1936	0.73	2/2611 (0.1%)
3	AC	0.44	0/1637	0.92	6/2207 (0.3%)
4	AD	0.43	0/1733	0.94	8/2318 (0.3%)
5	AE	0.54	1/1163 (0.1%)	1.00	1/1566 (0.1%)
6	AF	0.43	0/856	0.91	1/1154 (0.1%)
7	AG	0.43	0/1276	1.03	10/1709 (0.6%)
8	AH	0.49	0/1136	1.04	7/1527 (0.5%)
9	AI	0.44	0/1029	1.01	7/1379 (0.5%)
10	AJ	0.52	1/808 (0.1%)	0.98	2/1087 (0.2%)
11	AK	0.48	0/900	1.03	6/1213 (0.5%)
12	AL	0.50	1/987 (0.1%)	1.10	5/1322 (0.4%)
13	AM	0.43	1/948 (0.1%)	0.90	1/1272 (0.1%)
14	AN	0.50	0/501	1.11	4/664 (0.6%)
15	AO	0.45	0/745	0.95	3/992 (0.3%)
16	AP	0.50	1/717 (0.1%)	1.07	6/965 (0.6%)
17	AQ	0.49	1/837 (0.1%)	1.00	3/1119 (0.3%)
18	AR	0.41	0/579	0.89	2/768 (0.3%)
19	AS	0.47	1/706 (0.1%)	1.07	6/950 (0.6%)
20	AT	0.53	1/765 (0.1%)	1.19	7/1007 (0.7%)
21	AU	0.56	1/213 (0.5%)	0.91	0/279
22	AV	0.44	0/1809	0.60	0/2819
23	AX	0.53	0/210	0.59	0/325
24	AY	0.42	1/5477 (0.0%)	0.93	20/7415 (0.3%)
25	B0	0.30	0/671	0.68	2/892 (0.2%)
26	B1	0.49	1/739 (0.1%)	0.85	3/983 (0.3%)
27	B2	10.01	1/600 (0.2%)	0.68	0/793
28	B3	0.44	1/473 (0.2%)	0.82	1/636 (0.2%)
29	B4	0.30	0/594	0.57	0/795
30	B5	0.53	0/473	1.07	2/639 (0.3%)
31	B6	0.55	0/440	1.16	5/586 (0.9%)
32	B7	0.53	0/427	0.98	1/561 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	B8	0.62	1/516 (0.2%)	1.20	3/681 (0.4%)
34	B9	0.55	0/310	1.08	2/407 (0.5%)
35	BA	0.40	1/69972 (0.0%)	0.66	43/109230 (0.0%)
36	BB	0.39	0/2853	0.67	4/4451 (0.1%)
37	BC	0.39	0/1766	0.90	8/2380 (0.3%)
38	BD	0.59	0/2195	1.20	20/2955 (0.7%)
39	BE	0.52	1/1597 (0.1%)	1.08	9/2155 (0.4%)
40	BF	0.48	1/1659 (0.1%)	1.06	12/2246 (0.5%)
41	BG	0.54	0/1483	1.12	11/1994 (0.6%)
42	BH	0.57	2/1371 (0.1%)	1.04	7/1853 (0.4%)
43	BJ	0.16	0/7	0.49	0/8
46	BN	0.56	1/1132 (0.1%)	1.14	9/1527 (0.6%)
47	BO	0.55	0/943	1.05	2/1269 (0.2%)
48	BP	0.57	0/1131	1.25	16/1504 (1.1%)
49	BQ	0.49	0/1143	0.99	3/1527 (0.2%)
50	BR	0.57	0/974	1.06	5/1302 (0.4%)
51	BS	0.44	1/779 (0.1%)	0.97	4/1038 (0.4%)
52	BT	0.51	1/1156 (0.1%)	1.04	14/1544 (0.9%)
53	BU	0.53	0/975	1.06	3/1297 (0.2%)
54	BV	0.52	0/790	0.99	3/1057 (0.3%)
55	BW	0.53	0/907	1.01	5/1216 (0.4%)
56	BX	0.56	1/740 (0.1%)	0.98	3/995 (0.3%)
57	BY	0.68	1/789 (0.1%)	1.34	12/1053 (1.1%)
58	BZ	0.40	0/1500	0.97	6/2037 (0.3%)
All	All	0.74	25/164331 (0.0%)	0.77	343/244868 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	0	1
24	AY	0	1
35	BA	0	19
36	BB	0	2
All	All	0	23

All (25) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	B2	72	ALA	C-OXT	245.06	6.13	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	1453	U	O3'-P	-13.64	1.40	1.61
42	BH	1	MET	SD-CE	9.83	2.04	1.79
57	BY	101	LYS	C-N	-5.94	1.25	1.33
51	BS	108	GLY	C-N	-5.77	1.25	1.33
1	AA	1125	U	O5'-C5'	5.69	1.50	1.42
21	AU	25	LYS	C-N	-5.67	1.25	1.33
52	BT	137	LYS	C-N	-5.67	1.25	1.33
13	AM	119	GLY	C-N	-5.60	1.25	1.33
26	B1	95	LEU	C-N	-5.50	1.25	1.33
5	AE	154	GLY	C-N	-5.49	1.25	1.33
42	BH	175	LYS	C-N	-5.49	1.25	1.33
10	AJ	100	THR	C-N	-5.45	1.25	1.33
24	AY	689	LYS	C-N	-5.44	1.25	1.33
12	AL	128	ALA	C-N	-5.44	1.25	1.33
19	AS	90	THR	C-N	-5.43	1.25	1.33
33	B8	64	TYR	C-N	-5.43	1.25	1.33
46	BN	138	LEU	C-N	-5.40	1.25	1.33
16	AP	83	GLU	C-N	-5.38	1.25	1.33
28	B3	59	VAL	C-N	-5.34	1.25	1.33
20	AT	100	ILE	CA-CB	5.29	1.61	1.54
56	BX	94	GLY	C-N	-5.24	1.26	1.33
39	BE	204	ALA	C-N	-5.23	1.26	1.33
17	AQ	100	LYS	C-N	-5.21	1.26	1.33
40	BF	207	GLY	C-N	-5.13	1.26	1.33

All (343) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	26	ALA	N-CA-C	-14.90	97.17	112.97
48	BP	24	GLY	N-CA-C	12.72	126.98	110.45
3	AC	122	GLU	N-CA-C	-11.75	99.42	113.88
20	AT	12	ALA	N-CA-C	-11.41	98.02	113.30
53	BU	58	ARG	N-CA-C	-10.14	99.06	111.33
41	BG	105	LYS	N-CA-C	-9.83	101.22	113.02
41	BG	180	PHE	N-CA-C	9.63	120.96	108.34
53	BU	97	ASP	N-CA-C	-9.56	101.62	113.18
41	BG	116	ASP	N-CA-C	9.44	122.48	108.14
46	BN	132	ALA	N-CA-C	-9.37	99.20	110.44
42	BH	6	ARG	N-CA-C	-9.15	101.38	111.36
20	AT	94	ALA	N-CA-C	-9.11	99.50	110.44
35	BA	387	U	C2'-C3'-O3'	9.10	123.15	109.50
48	BP	59	LEU	N-CA-C	-9.09	101.74	112.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	AS	54	GLY	N-CA-C	-8.88	104.13	114.69
57	BY	49	VAL	N-CA-C	-8.87	104.19	111.81
46	BN	109	LYS	N-CA-C	8.85	124.08	113.28
1	AA	428	G	C2'-C3'-O3'	8.81	122.71	109.50
19	AS	15	LEU	N-CA-C	-8.66	101.56	112.90
31	B6	47	THR	N-CA-C	8.64	121.05	108.86
48	BP	20	GLY	N-CA-C	-8.61	99.34	113.02
38	BD	274	ARG	N-CA-C	8.48	119.13	108.45
38	BD	210	GLY	N-CA-C	-8.47	98.17	111.98
11	AK	40	ILE	N-CA-C	-8.36	105.13	111.90
35	BA	1558	A	C2'-C3'-O3'	8.31	121.97	109.50
35	BA	74	A	C2'-C3'-O3'	8.29	121.94	109.50
38	BD	212	SER	N-CA-C	-8.26	102.36	111.36
39	BE	168	MET	N-CA-C	8.25	123.21	110.42
31	B6	17	LYS	N-CA-C	-8.16	103.31	113.18
39	BE	137	HIS	CA-C-N	8.15	127.88	119.56
39	BE	137	HIS	C-N-CA	8.15	127.88	119.56
42	BH	7	LEU	CA-C-N	8.13	128.13	119.76
42	BH	7	LEU	C-N-CA	8.13	128.13	119.76
19	AS	65	ASN	N-CA-C	-8.07	103.41	113.18
57	BY	7	VAL	N-CA-C	8.07	123.72	112.35
11	AK	116	HIS	N-CA-C	-8.06	101.29	112.25
48	BP	29	LYS	N-CA-C	-8.02	97.01	109.76
10	AJ	75	ILE	N-CA-C	7.98	118.74	110.36
20	AT	72	LEU	N-CA-C	-7.82	97.59	109.79
35	BA	221	A	C2'-C3'-O3'	7.77	121.16	109.50
1	AA	1053	G	C2'-C3'-O3'	7.62	120.92	109.50
35	BA	2208	A	P-O3'-C3'	7.60	131.60	120.20
3	AC	111	LEU	N-CA-C	-7.57	102.35	114.09
35	BA	2116	G	C2'-C3'-O3'	7.56	120.84	109.50
52	BT	108	ARG	N-CA-C	-7.55	103.01	112.90
52	BT	19	LEU	CA-C-N	7.50	127.48	119.76
52	BT	19	LEU	C-N-CA	7.50	127.48	119.76
42	BH	4	ILE	N-CA-C	-7.46	98.89	109.63
48	BP	60	MET	N-CA-C	-7.46	104.18	113.20
48	BP	16	ARG	N-CA-C	-7.43	101.45	113.19
35	BA	587	C	C2'-C3'-O3'	7.37	120.55	109.50
35	BA	752	A	C2'-C3'-O3'	7.35	120.52	109.50
41	BG	22	ARG	N-CA-C	-7.35	95.15	110.80
38	BD	196	VAL	N-CA-C	7.34	118.10	110.62
41	BG	63	ILE	N-CA-C	-7.32	104.38	112.80
1	AA	1101	A	C2'-C3'-O3'	7.31	120.47	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
58	BZ	168	GLU	N-CA-C	-7.31	104.61	113.97
39	BE	58	ARG	N-CA-C	-7.30	101.93	111.71
33	B8	17	THR	N-CA-C	7.26	119.90	110.53
7	AG	53	LYS	N-CA-C	-7.26	104.28	113.72
8	AH	79	VAL	N-CA-C	-7.26	102.12	112.35
41	BG	55	LYS	N-CA-C	-7.24	103.47	111.36
31	B6	32	ASN	N-CA-C	7.06	118.87	108.14
35	BA	1541	G	C2'-C3'-O3'	7.06	120.09	109.50
24	AY	379	GLY	N-CA-C	-7.04	100.32	110.60
41	BG	27	ASN	N-CA-C	7.03	121.31	110.20
55	BW	12	ILE	N-CA-C	-6.99	99.12	108.06
33	B8	54	GLU	N-CA-C	-6.97	102.74	111.11
1	AA	84	U	C2'-C3'-O3'	6.94	119.91	109.50
40	BF	177	ALA	N-CA-C	-6.86	101.42	110.07
4	AD	186	LEU	N-CA-C	6.86	118.65	111.03
16	AP	67	THR	N-CA-C	-6.83	102.00	110.41
16	AP	27	LYS	N-CA-C	-6.74	102.12	110.41
58	BZ	79	ARG	N-CA-C	-6.74	101.05	110.35
38	BD	53	PHE	N-CA-C	6.73	120.86	112.24
4	AD	33	MET	N-CA-C	-6.72	105.07	113.20
37	BC	203	GLU	N-CA-C	-6.72	104.65	114.39
11	AK	38	ASN	CA-C-N	6.69	127.09	119.93
11	AK	38	ASN	C-N-CA	6.69	127.09	119.93
1	AA	748	C	C2'-C3'-O3'	6.69	119.54	109.50
42	BH	65	HIS	N-CA-C	-6.59	102.02	110.19
1	AA	243	A	C2'-C3'-O3'	6.57	119.36	109.50
46	BN	51	PHE	N-CA-C	-6.57	99.87	110.32
1	AA	1452	C	C2'-C3'-O3'	6.55	119.33	109.50
40	BF	64	ILE	N-CA-C	6.55	116.71	110.42
52	BT	14	TYR	N-CA-C	-6.55	103.90	112.41
1	AA	484	G	C2'-C3'-O3'	6.54	119.32	109.50
14	AN	38	GLY	N-CA-C	-6.52	105.03	115.08
12	AL	117	ARG	N-CA-C	6.50	118.90	111.11
37	BC	16	ASP	CA-C-N	6.41	125.63	118.97
37	BC	16	ASP	C-N-CA	6.41	125.63	118.97
50	BR	101	ALA	N-CA-C	-6.40	102.27	110.53
55	BW	18	ARG	N-CA-C	-6.38	103.58	111.75
57	BY	62	GLU	N-CA-C	6.37	124.37	110.80
48	BP	68	GLN	N-CA-C	-6.36	105.28	114.12
50	BR	59	ASP	N-CA-C	6.36	120.05	112.93
35	BA	1495	A	N9-C1'-C2'	6.35	121.53	112.00
24	AY	280	LEU	CA-C-N	6.33	127.76	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	280	LEU	C-N-CA	6.33	127.76	119.84
1	AA	968	A	C2'-C3'-O3'	6.32	118.99	109.50
38	BD	43	ARG	N-CA-C	6.32	120.67	113.15
52	BT	39	ARG	N-CA-C	-6.31	106.28	112.97
19	AS	6	LYS	N-CA-C	6.29	118.17	109.29
5	AE	26	PHE	N-CA-C	6.29	119.83	110.52
36	BB	56	G	C2'-C3'-O3'	6.29	118.93	109.50
1	AA	992	U	C2'-C3'-O3'	6.29	118.93	109.50
34	B9	9	ARG	N-CA-C	6.28	121.18	112.45
39	BE	65	GLY	N-CA-C	-6.27	105.23	115.46
47	BO	112	MET	N-CA-C	6.27	117.92	111.14
40	BF	183	VAL	N-CA-C	6.27	116.44	110.42
9	AI	89	ASN	CA-C-N	6.27	125.95	119.56
9	AI	89	ASN	C-N-CA	6.27	125.95	119.56
48	BP	27	HIS	N-CA-C	6.21	120.68	107.70
58	BZ	93	ASP	N-CA-C	-6.21	106.30	114.31
28	B3	56	VAL	N-CA-C	6.19	118.30	108.89
3	AC	92	ALA	N-CA-C	-6.18	105.90	113.50
1	AA	1239	A	C2'-C3'-O3'	6.17	118.76	109.50
18	AR	81	PHE	N-CA-C	-6.17	104.82	112.90
20	AT	27	LYS	N-CA-C	-6.17	104.47	111.14
42	BH	11	VAL	N-CA-C	6.17	122.21	108.88
1	AA	189(H)	G	N9-C1'-C2'	-6.15	104.77	114.00
48	BP	139	LYS	N-CA-C	-6.15	104.49	111.07
51	BS	55	ALA	N-CA-C	-6.15	104.88	113.37
35	BA	2422	A	C2'-C3'-O3'	6.14	118.71	109.50
35	BA	2481	G	C2'-C3'-O3'	6.13	118.69	109.50
35	BA	1060	U	C2'-C3'-O3'	6.12	118.68	109.50
35	BA	1395	A	C4'-C3'-O3'	-6.12	103.82	113.00
52	BT	58	ASN	N-CA-C	6.11	117.78	109.11
24	AY	119	GLU	N-CA-C	-6.10	104.71	111.36
20	AT	9	ASN	N-CA-C	6.09	119.33	109.40
38	BD	193	VAL	N-CA-C	6.09	117.59	109.37
7	AG	24	THR	N-CA-C	-6.08	104.57	111.14
14	AN	27	CYS	N-CA-C	-6.08	100.99	110.17
35	BA	2689	U	C2'-C3'-O3'	6.08	118.61	109.50
46	BN	45	ASN	N-CA-C	6.07	119.72	112.93
57	BY	81	LYS	CA-C-N	6.04	127.39	119.84
57	BY	81	LYS	C-N-CA	6.04	127.39	119.84
38	BD	230	ASP	N-CA-C	6.03	120.80	112.90
57	BY	55	TYR	CA-C-N	6.03	127.38	119.84
57	BY	55	TYR	C-N-CA	6.03	127.38	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	319	ASP	CA-C-N	6.03	125.65	119.56
24	AY	319	ASP	C-N-CA	6.03	125.65	119.56
41	BG	117	PHE	N-CA-C	6.02	123.63	110.80
24	AY	682	GLN	N-CA-C	-6.02	105.43	112.89
50	BR	61	HIS	N-CA-C	-6.01	104.64	111.07
7	AG	31	MET	N-CA-C	6.01	118.97	110.50
50	BR	117	VAL	N-CA-C	6.01	121.83	109.34
52	BT	90	GLN	N-CA-C	-5.99	104.87	111.82
35	BA	2136	C	C2'-C3'-O3'	5.97	122.66	113.70
48	BP	41	ARG	N-CA-C	-5.95	95.05	107.37
48	BP	64	LYS	N-CA-C	-5.95	99.02	110.56
35	BA	2282	G	C2'-C3'-O3'	5.92	118.38	109.50
24	AY	282	SER	N-CA-C	-5.92	101.94	110.40
12	AL	93	LEU	CA-C-N	5.91	127.23	119.84
12	AL	93	LEU	C-N-CA	5.91	127.23	119.84
47	BO	40	VAL	N-CA-C	-5.91	99.83	108.11
35	BA	363(F)	A	C2'-C3'-O3'	5.90	118.35	109.50
38	BD	271	ILE	N-CA-C	5.90	116.54	110.82
15	AO	66	LEU	N-CA-C	-5.89	104.94	111.36
15	AO	78	TYR	N-CA-C	-5.87	104.80	111.14
46	BN	75	TYR	N-CA-C	5.87	117.98	108.41
20	AT	105	SER	N-CA-C	-5.87	101.72	110.23
37	BC	149	ASN	N-CA-C	-5.87	106.75	112.97
11	AK	92	GLU	N-CA-C	5.85	118.78	111.24
8	AH	99	GLU	N-CA-C	-5.85	105.34	112.88
48	BP	30	THR	N-CA-C	5.83	117.11	108.60
32	B7	4	THR	N-CA-C	5.82	118.57	111.82
36	BB	44	G	N9-C1'-C2'	5.80	120.70	112.00
40	BF	23	ASP	N-CA-C	-5.80	105.31	112.38
38	BD	198	ASN	N-CA-C	-5.79	103.92	111.74
8	AH	84	ARG	N-CA-C	5.78	118.90	109.24
53	BU	44	ASN	N-CA-C	5.78	117.25	111.07
7	AG	45	ASP	N-CA-C	-5.78	104.36	111.75
41	BG	47	LYS	N-CA-C	5.77	117.51	110.41
46	BN	130	HIS	N-CA-C	5.77	118.99	107.62
55	BW	69	LEU	N-CA-C	5.75	118.35	110.24
55	BW	10	VAL	N-CA-C	5.75	116.48	110.62
40	BF	151	SER	N-CA-C	-5.74	105.00	112.23
17	AQ	67	LYS	N-CA-C	-5.74	100.64	109.76
38	BD	132	PRO	N-CA-C	-5.74	102.14	110.80
4	AD	208	SER	N-CA-C	-5.73	105.95	113.12
11	AK	50	TYR	N-CA-C	5.72	118.08	110.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	512	G	C4'-C3'-O3'	-5.72	104.42	113.00
52	BT	9	LEU	N-CA-C	-5.72	105.57	112.54
52	BT	15	VAL	N-CA-C	5.71	116.99	108.54
4	AD	24	GLU	N-CA-C	5.70	117.97	111.02
9	AI	17	VAL	N-CA-C	5.69	116.05	107.80
2	AB	136	VAL	N-CA-C	-5.68	105.19	110.53
35	BA	1015	G	C5'-C4'-C3'	-5.67	107.49	116.00
35	BA	2208	A	O3'-P-O5'	5.67	112.51	104.00
6	AF	53	ALA	N-CA-C	-5.65	105.01	112.24
7	AG	70	LYS	CA-C-N	5.64	125.55	119.85
7	AG	70	LYS	C-N-CA	5.64	125.55	119.85
18	AR	72	ARG	N-CA-C	-5.64	104.50	111.33
1	AA	89	C	C2'-C3'-O3'	5.64	117.96	109.50
38	BD	10	THR	CA-C-N	-5.63	114.46	120.03
38	BD	10	THR	C-N-CA	-5.63	114.46	120.03
49	BQ	136	ALA	N-CA-C	-5.62	106.46	113.15
7	AG	111	ARG	CA-C-N	5.62	125.72	119.87
7	AG	111	ARG	C-N-CA	5.62	125.72	119.87
40	BF	8	GLN	N-CA-C	5.62	116.61	107.23
35	BA	1159	U	C5'-C4'-C3'	-5.61	107.58	116.00
57	BY	63	LYS	N-CA-C	5.61	119.05	110.36
40	BF	13	SER	CA-C-N	5.60	126.84	119.84
40	BF	13	SER	C-N-CA	5.60	126.84	119.84
2	AB	214	ILE	N-CA-C	5.60	115.80	110.42
35	BA	708	C	C5'-C4'-C3'	-5.60	107.60	116.00
35	BA	1947	C	C5'-C4'-C3'	-5.59	107.61	116.00
3	AC	161	GLU	N-CA-C	-5.58	106.14	113.12
24	AY	515	GLU	CA-C-N	5.58	125.49	119.85
24	AY	515	GLU	C-N-CA	5.58	125.49	119.85
40	BF	154	VAL	N-CA-C	5.58	115.92	108.11
10	AJ	58	ASP	N-CA-C	-5.58	100.59	109.96
57	BY	17	SER	N-CA-C	5.58	122.67	110.80
56	BX	25	LYS	N-CA-C	5.55	118.62	107.41
35	BA	2117	A	C2'-C3'-O3'	5.54	117.81	109.50
1	AA	88	A	C2'-C3'-O3'	-5.53	105.41	113.70
57	BY	5	MET	N-CA-C	5.52	118.29	110.50
35	BA	827	U	C2'-C3'-O3'	-5.52	105.42	113.70
54	BV	70	ILE	N-CA-C	-5.52	100.50	108.89
4	AD	153	ARG	N-CA-C	5.52	116.98	110.97
58	BZ	20	ARG	N-CA-C	-5.52	106.25	112.87
14	AN	55	GLY	N-CA-C	-5.52	101.76	112.02
51	BS	44	LYS	N-CA-C	-5.52	107.19	114.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	BW	61	ASN	N-CA-C	5.50	118.46	111.69
38	BD	229	VAL	CB-CA-C	-5.49	103.65	112.16
41	BG	56	ALA	N-CA-C	-5.48	105.31	111.28
30	B5	26	THR	CA-C-N	5.47	126.02	120.38
30	B5	26	THR	C-N-CA	5.47	126.02	120.38
39	BE	44	TYR	N-CA-C	5.46	122.44	110.80
16	AP	44	THR	N-CA-C	-5.46	106.57	113.18
51	BS	100	ALA	N-CA-C	-5.46	103.18	110.55
24	AY	213	HIS	N-CA-C	-5.46	106.12	112.89
35	BA	2132	U	N1-C1'-C2'	5.46	120.19	112.00
35	BA	1549	C	C5'-C4'-C3'	-5.46	107.82	116.00
48	BP	22	GLY	N-CA-C	-5.42	101.28	112.34
35	BA	2145	C	C2'-C3'-O3'	5.42	117.63	109.50
1	AA	1145	C	C4'-C3'-O3'	-5.42	104.87	113.00
24	AY	130	VAL	N-CA-C	5.42	116.27	107.71
58	BZ	29	TYR	N-CA-C	5.41	116.36	108.14
24	AY	44	GLU	CB-CA-C	-5.40	109.89	117.23
7	AG	110	GLN	N-CA-C	-5.40	106.83	113.41
51	BS	16	ASN	N-CA-C	-5.40	106.20	112.89
34	B9	3	VAL	N-CA-C	5.39	114.13	106.53
35	BA	784	A	C4'-C3'-O3'	-5.39	104.91	113.00
24	AY	595	GLN	N-CA-C	5.37	117.56	111.11
52	BT	47	GLY	N-CA-C	5.37	118.42	110.63
35	BA	102	G	N9-C1'-C2'	5.36	120.04	112.00
56	BX	6	ASP	N-CA-C	-5.36	107.11	113.97
9	AI	5	TYR	N-CA-C	5.36	117.96	109.50
25	B0	82	ARG	CA-C-N	5.36	125.28	119.76
25	B0	82	ARG	C-N-CA	5.36	125.28	119.76
33	B8	29	LYS	N-CA-C	5.34	122.18	110.80
35	BA	1210	A	C2'-C3'-O3'	5.34	117.51	109.50
38	BD	91	ARG	N-CA-C	-5.33	102.57	110.46
41	BG	157	ILE	N-CA-C	5.33	116.26	108.58
57	BY	81	LYS	N-CA-C	5.32	121.57	109.81
31	B6	45	LYS	N-CA-C	5.31	122.11	110.80
1	AA	5	U	O5'-C5'-C4'	5.30	119.66	111.70
35	BA	1433	U	C5'-C4'-C3'	-5.30	108.04	116.00
52	BT	59	THR	N-CA-C	-5.30	101.06	109.76
4	AD	188	LEU	N-CA-C	-5.30	102.97	109.65
8	AH	134	ILE	N-CA-C	5.30	115.74	110.23
24	AY	608	VAL	N-CA-C	5.30	116.22	108.53
24	AY	41	LYS	N-CA-C	5.30	116.63	109.11
38	BD	256	GLY	N-CA-C	5.28	120.97	114.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	BB	44	G	C4'-C3'-O3'	-5.28	105.08	113.00
1	AA	78	G	C2'-C3'-O3'	5.26	117.40	109.50
13	AM	106	ASN	CB-CA-C	-5.25	109.54	115.79
35	BA	1763	G	C2'-C3'-O3'	-5.25	105.83	113.70
38	BD	58	HIS	N-CA-C	5.25	117.06	110.24
38	BD	11	PRO	N-CA-C	-5.25	103.54	111.41
37	BC	201	LYS	N-CA-C	-5.24	102.84	110.08
4	AD	171	GLY	CA-C-N	5.24	125.29	119.32
4	AD	171	GLY	C-N-CA	5.24	125.29	119.32
15	AO	55	GLY	N-CA-C	-5.24	106.45	112.73
40	BF	22	ALA	N-CA-C	-5.24	106.57	113.17
16	AP	3	LYS	N-CA-C	5.23	116.24	108.86
48	BP	35	HIS	N-CA-C	-5.23	99.67	110.80
39	BE	17	ASP	N-CA-C	-5.22	99.94	108.67
39	BE	63	LEU	N-CA-C	-5.22	101.09	109.39
37	BC	68	GLY	N-CA-C	5.21	125.52	113.18
52	BT	8	LYS	N-CA-C	-5.20	107.59	114.04
40	BF	29	ASN	CA-C-N	5.20	126.33	119.84
40	BF	29	ASN	C-N-CA	5.20	126.33	119.84
48	BP	99	LEU	N-CA-C	-5.20	106.20	112.54
9	AI	43	ALA	N-CA-C	5.19	117.61	111.33
35	BA	945	A	N9-C1'-C2'	5.19	121.78	114.00
49	BQ	72	LYS	CA-C-N	5.19	126.61	120.23
49	BQ	72	LYS	C-N-CA	5.19	126.61	120.23
35	BA	1072	C	N1-C1'-C2'	5.17	119.76	112.00
56	BX	29	TRP	N-CA-C	-5.17	100.73	108.96
8	AH	115	SER	N-CA-C	-5.17	107.03	113.19
3	AC	40	ARG	N-CA-C	-5.17	106.48	112.89
9	AI	86	VAL	N-CA-C	-5.17	104.80	112.04
16	AP	33	ILE	CB-CA-C	-5.16	105.21	111.87
42	BH	3	ARG	N-CA-C	5.16	117.01	108.13
9	AI	87	GLN	N-CA-C	-5.15	105.31	111.03
35	BA	310	A	C5'-C4'-C3'	-5.15	107.48	115.20
36	BB	119	G	C4'-C3'-O3'	5.14	120.71	113.00
35	BA	1407	C	C5'-C4'-C3'	-5.13	108.31	116.00
7	AG	141	VAL	N-CA-C	-5.12	104.52	111.89
20	AT	13	LEU	N-CA-C	-5.11	105.79	111.36
57	BY	100	ALA	N-CA-C	5.11	121.68	110.80
38	BD	60	ARG	N-CA-C	5.11	117.74	109.06
46	BN	25	ARG	N-CA-C	-5.11	105.41	111.69
52	BT	11	GLU	N-CA-C	-5.10	105.42	111.69
54	BV	12	TYR	N-CA-C	5.10	118.04	110.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	AP	46	PRO	N-CA-C	-5.09	106.45	113.53
26	B1	43	TYR	CA-C-N	-5.09	115.32	120.21
26	B1	43	TYR	C-N-CA	-5.09	115.32	120.21
35	BA	2730	C	C5'-C4'-C3'	-5.09	108.37	116.00
46	BN	118	LYS	N-CA-C	-5.09	106.90	113.01
54	BV	87	HIS	N-CA-C	5.08	117.73	109.24
35	BA	2267	A	N9-C1'-C2'	5.08	119.62	112.00
19	AS	20	LEU	N-CA-C	5.08	117.47	111.33
35	BA	2545	G	C5'-C4'-C3'	-5.08	108.39	116.00
37	BC	86	GLU	N-CA-C	-5.07	105.20	111.90
58	BZ	53	ILE	N-CA-C	-5.07	107.76	112.43
48	BP	128	HIS	N-CA-C	-5.07	106.95	113.23
24	AY	448	GLN	N-CA-C	5.07	117.07	110.43
50	BR	14	SER	N-CA-C	5.07	117.20	111.02
26	B1	90	ILE	N-CA-C	-5.06	105.45	110.62
31	B6	23	THR	N-CA-C	5.06	121.58	110.80
46	BN	67	LEU	N-CA-C	-5.06	101.06	109.46
1	AA	1190	G	N9-C1'-C2'	5.05	119.58	112.00
35	BA	2501	C	N1-C1'-C2'	5.05	119.57	112.00
17	AQ	57	VAL	N-CA-C	5.05	117.28	108.95
19	AS	6	LYS	CB-CA-C	-5.04	108.09	114.40
24	AY	501	THR	N-CA-C	-5.04	105.22	112.13
35	BA	1177	A	N9-C1'-C2'	5.04	119.56	112.00
17	AQ	62	SER	N-CA-C	5.04	115.96	108.60
24	AY	582	PHE	N-CA-C	-5.04	106.97	113.01
8	AH	56	LYS	CA-C-N	5.04	125.19	119.90
8	AH	56	LYS	C-N-CA	5.04	125.19	119.90
37	BC	46	ALA	CA-C-O	5.04	120.86	117.94
24	AY	683	VAL	N-CA-C	-5.03	105.66	113.16
39	BE	48	GLN	N-CA-C	-5.03	101.91	109.15
3	AC	100	ALA	N-CA-C	-5.02	103.96	110.19
14	AN	42	ILE	N-CA-C	-5.02	105.95	110.82
12	AL	18	VAL	N-CA-C	5.01	119.75	109.34
38	BD	75	ILE	CB-CA-C	-5.01	105.35	110.71
52	BT	51	ARG	N-CA-C	5.01	116.13	108.52

There are no chirality outliers.

All (23) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	189(H)	G	Sidechain
24	AY	499	ARG	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	1192	G	Sidechain
35	BA	2414	G	Sidechain
35	BA	2464	C	Sidechain
35	BA	2504	U	Sidechain
35	BA	2508	G	Sidechain
35	BA	2516	G	Sidechain
35	BA	2542	A	Sidechain
35	BA	2578	G	Sidechain
35	BA	2581	G	Sidechain
35	BA	2595	G	Sidechain
35	BA	2597	G	Sidechain
35	BA	2664	G	Sidechain
35	BA	271(H)	G	Sidechain
35	BA	271(Q)	G	Sidechain
35	BA	271(Y)	U	Sidechain
35	BA	2746	U	Sidechain
35	BA	2779	U	Sidechain
35	BA	2848	G	Sidechain
35	BA	476	G	Sidechain
36	BB	16	G	Sidechain
36	BB	67	G	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32391	0	16349	1986	0
2	AB	1901	0	1947	332	1
3	AC	1613	0	1677	229	28
4	AD	1703	0	1765	138	0
5	AE	1147	0	1207	57	0
6	AF	843	0	857	59	0
7	AG	1257	0	1296	147	0
8	AH	1116	0	1177	67	0
9	AI	1010	0	1037	157	0
10	AJ	795	0	840	117	0
11	AK	885	0	904	58	0
12	AL	971	0	1057	115	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
13	AM	938	0	995	131	0
14	AN	492	0	529	71	0
15	AO	734	0	771	53	0
16	AP	701	0	720	60	0
17	AQ	824	0	891	50	0
18	AR	574	0	644	27	0
19	AS	692	0	714	117	0
20	AT	763	0	861	73	11
21	AU	209	0	221	13	0
22	AV	1619	0	823	59	0
23	AX	188	0	98	7	0
24	AY	5376	0	5433	584	0
25	B0	662	0	688	165	0
26	B1	732	0	808	117	0
27	B2	598	0	651	130	11
28	B3	468	0	523	68	0
29	B4	581	0	577	216	0
30	B5	459	0	478	78	0
31	B6	433	0	461	132	0
32	B7	419	0	467	29	0
33	B8	508	0	576	115	0
34	B9	307	0	335	34	0
35	BA	62476	0	31499	3272	28
36	BB	2551	0	1295	106	0
37	BC	1735	0	1790	289	1
38	BD	2145	0	2234	263	0
39	BE	1564	0	1629	239	0
40	BF	1624	0	1677	232	0
41	BG	1459	0	1516	402	0
42	BH	1345	0	1430	194	0
43	BJ	654	0	156	22	0
44	BK	701	0	168	46	0
45	BL	356	0	86	20	0
46	BN	1105	0	1180	120	0
47	BO	933	0	996	74	0
48	BP	1114	0	1186	316	0
49	BQ	1122	0	1179	116	0
50	BR	960	0	1021	107	0
51	BS	771	0	832	163	0
52	BT	1142	0	1200	234	0
53	BU	958	0	1015	128	0
54	BV	779	0	852	153	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	BW	896	0	953	60	0
56	BX	726	0	778	49	0
57	BY	776	0	870	169	0
58	BZ	1468	0	1492	225	0
59	AA	198	0	0	0	0
59	AY	1	0	0	0	0
59	B0	1	0	0	0	0
59	B5	1	0	0	0	0
59	BA	320	0	0	0	0
59	BC	1	0	0	0	0
59	BU	1	0	0	0	0
60	AD	1	0	0	0	0
60	AN	1	0	0	0	0
60	B9	1	0	0	0	0
61	AY	32	0	14	11	0
62	AY	2	0	0	2	0
All	All	153829	0	105425	11884	40

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 46.

All (11884) 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)
30:B5:46:CYS:SG	30:B5:47:PRO:HD2	1.41	1.57
29:B4:12:ALA:H	29:B4:24:THR:CG2	1.16	1.56
9:AI:18:PHE:C	9:AI:61:ALA:HB1	1.27	1.54
9:AI:19:LEU:HA	9:AI:61:ALA:CB	1.39	1.53
52:BT:80:SER:HB3	52:BT:81:PRO:CD	1.40	1.51
9:AI:19:LEU:CA	9:AI:61:ALA:CB	1.85	1.49
2:AB:87:ARG:CZ	2:AB:233:SER:OG	1.63	1.46
42:BH:1:MET:SD	42:BH:1:MET:CE	2.04	1.46
1:AA:311:C:C2'	1:AA:312:C:H5'	1.46	1.45
1:AA:950:U:C2'	1:AA:951:G:H5"	1.41	1.45
48:BP:84:ASN:CG	48:BP:116:GLY:HA3	1.45	1.42
29:B4:12:ALA:N	29:B4:24:THR:CG2	1.79	1.41
9:AI:19:LEU:CB	9:AI:61:ALA:HB2	1.48	1.40
9:AI:19:LEU:CA	9:AI:61:ALA:HB2	0.93	1.39
1:AA:950:U:H2'	1:AA:951:G:C5'	1.51	1.39
9:AI:18:PHE:O	9:AI:61:ALA:CB	1.70	1.39
37:BC:117:THR:HG22	37:BC:118:PRO:C	1.45	1.38

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:111:A:C2'	35:BA:112:U:H5'	1.51	1.38
35:BA:967:C:C2'	35:BA:968:G:H5'	1.53	1.37
35:BA:2555:U:C2'	35:BA:2556:C:H5'	1.56	1.36
29:B4:12:ALA:N	29:B4:24:THR:HG21	1.38	1.36
35:BA:252:G:OP2	48:BP:50:ARG:NH1	1.58	1.35
27:B2:16:LEU:HD22	27:B2:20:GLU:CG	1.58	1.33
48:BP:85:LEU:CD2	48:BP:117:GLU:O	1.76	1.33
1:AA:198:G:O6	1:AA:220:G:C6	1.83	1.32
35:BA:954:G:C2'	35:BA:955:C:H5'	1.62	1.29
29:B4:12:ALA:C	29:B4:24:THR:HG21	1.57	1.29
1:AA:37:U:C2'	1:AA:38:G:H5'	1.63	1.28
35:BA:1988:C:C2'	35:BA:1989:G:H5'	1.61	1.28
29:B4:12:ALA:CA	29:B4:24:THR:HG21	1.63	1.28
9:AI:26:VAL:HG21	9:AI:61:ALA:O	1.32	1.28
49:BQ:60:ARG:HG3	58:BZ:179:ASP:OD1	1.16	1.28
1:AA:545:C:C2'	1:AA:546:G:H5'	1.62	1.27
29:B4:12:ALA:C	29:B4:24:THR:CG2	2.06	1.27
35:BA:108:U:O2'	35:BA:109:G:H5'	1.35	1.27
2:AB:228:GLY:CA	2:AB:229:VAL:HG22	1.65	1.27
31:B6:7:ILE:HG21	31:B6:27:LYS:NZ	1.50	1.26
35:BA:955:C:C2'	35:BA:956:G:H5'	1.66	1.26
35:BA:1417:C:O2'	35:BA:1418:G:H5'	1.34	1.26
2:AB:167:PRO:CD	2:AB:188:ALA:HB2	1.65	1.26
1:AA:1238:A:OP1	1:AA:1335:C:C1'	1.81	1.25
2:AB:89:GLY:O	2:AB:90:MET:HG2	1.35	1.25
35:BA:653:A:H5"	35:BA:654:A:OP2	1.35	1.25
35:BA:1678:G:N2	35:BA:1989:G:H22	1.30	1.25
9:AI:18:PHE:C	9:AI:61:ALA:CB	2.07	1.25
1:AA:773:G:O2'	1:AA:774:G:H5'	1.33	1.25
35:BA:246:C:C2'	35:BA:247:G:H5'	1.67	1.25
35:BA:1596:A:C2'	35:BA:1597:A:H5'	1.64	1.25
1:AA:936:C:O2'	1:AA:937:A:H5'	1.36	1.24
35:BA:697:C:O2'	35:BA:698:C:H5'	1.37	1.24
35:BA:856:C:H2'	35:BA:857:C:C6	1.70	1.24
1:AA:775:G:O2'	1:AA:776:G:H5'	1.36	1.24
1:AA:1371:G:C2'	1:AA:1372:U:H5'	1.68	1.24
35:BA:179:G:C2'	35:BA:180:G:H5'	1.66	1.24
35:BA:953:A:C2'	35:BA:954:G:H5'	1.67	1.24
1:AA:106:C:O2'	1:AA:107:G:H5'	1.34	1.23
1:AA:590:C:O2'	1:AA:591:U:H5'	1.35	1.23
2:AB:231:GLU:HB2	2:AB:232:PRO:CD	1.67	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B3:9:VAL:HG11	28:B3:55:ARG:CD	1.69	1.23
35:BA:702:G:O2'	35:BA:703:U:H5'	1.37	1.23
22:AV:41:C:O2'	22:AV:42:C:H5'	1.38	1.23
1:AA:949:A:H2'	1:AA:950:U:C5'	1.67	1.22
1:AA:266:G:C5'	1:AA:267:C:H5	1.52	1.22
1:AA:543:C:C2'	1:AA:544:G:H5'	1.68	1.22
1:AA:593:G:O2'	1:AA:594:G:H5'	1.36	1.22
1:AA:770:C:O2'	1:AA:771:G:H5'	1.40	1.22
2:AB:145:LEU:O	2:AB:149:LEU:HB2	1.39	1.22
2:AB:228:GLY:HA2	2:AB:229:VAL:CG1	1.68	1.21
1:AA:490:G:O2'	1:AA:491:G:H5'	1.41	1.21
35:BA:523:C:O2'	35:BA:524:U:H5'	1.37	1.21
35:BA:1773:A:C2'	35:BA:1774:C:H5'	1.69	1.21
48:BP:47:ASP:HB3	48:BP:48:PRO:CA	1.71	1.21
1:AA:688:G:O2'	1:AA:689:C:H5'	1.38	1.21
31:B6:10:LEU:H	31:B6:10:LEU:CD2	1.54	1.21
35:BA:2007:C:O2'	35:BA:2008:C:H5'	1.41	1.21
27:B2:16:LEU:CD2	27:B2:20:GLU:HG2	1.71	1.21
35:BA:1902:C:O2'	38:BD:244:ARG:HB2	1.40	1.21
1:AA:359:U:O2'	1:AA:360:A:H5'	1.36	1.21
35:BA:1822:G:O2'	35:BA:1823:G:H5'	1.37	1.21
1:AA:360:A:O2'	1:AA:361:G:H5'	1.37	1.20
35:BA:1984:G:O2'	35:BA:1985:G:H5'	1.41	1.20
9:AI:18:PHE:O	9:AI:61:ALA:HB1	1.08	1.20
35:BA:968:G:O2'	35:BA:969:U:H5'	1.40	1.20
35:BA:2753:A:O2'	35:BA:2754:U:H5'	1.36	1.20
2:AB:187:LEU:HD23	2:AB:201:ILE:O	1.38	1.20
1:AA:685:G:O2'	1:AA:686:U:H5'	1.40	1.20
35:BA:1423:G:O2'	35:BA:1424:G:H5'	1.36	1.19
35:BA:1464:C:O2'	35:BA:1465:G:H5'	1.42	1.19
35:BA:179:G:H2'	35:BA:180:G:H5'	1.24	1.19
1:AA:509:A:H5'	4:AD:54:TYR:CD2	1.76	1.19
3:AC:81:GLY:O	3:AC:82:GLU:HG3	1.42	1.19
35:BA:2555:U:H2'	35:BA:2556:C:C5'	1.72	1.19
35:BA:2606:C:C2'	35:BA:2607:G:H5'	1.72	1.19
35:BA:1720:U:H2'	35:BA:1721:G:H5"	1.25	1.18
1:AA:495:A:H4'	1:AA:496:A:H5'	1.26	1.18
26:B1:29:GLY:HA3	35:BA:2396:G:O2'	1.41	1.18
48:BP:51:PHE:CE2	48:BP:53:GLY:HA2	1.78	1.18
35:BA:39:C:O2'	35:BA:40:C:H5'	1.43	1.18
35:BA:49:A:H5"	35:BA:51:G:O4'	1.44	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:747:U:C2	35:BA:2613:U:O4	1.95	1.18
35:BA:1301:A:O2'	35:BA:1302:A:H2'	1.40	1.18
35:BA:2715:C:O2'	35:BA:2716:U:H5'	1.43	1.18
57:BY:76:CYS:SG	57:BY:77:PRO:HD2	1.83	1.18
35:BA:605:C:O2'	35:BA:606:U:H5'	1.39	1.18
57:BY:28:LYS:H	57:BY:28:LYS:HD2	1.06	1.18
1:AA:265:G:H2'	1:AA:266:G:H5"	1.26	1.17
2:AB:14:GLY:O	2:AB:15:VAL:HG23	1.43	1.17
2:AB:228:GLY:CA	2:AB:229:VAL:HG13	1.75	1.17
48:BP:84:ASN:ND2	48:BP:116:GLY:HA3	1.57	1.17
35:BA:246:C:H2'	35:BA:247:G:C5'	1.73	1.17
37:BC:117:THR:CG2	37:BC:119:ASP:HB2	1.75	1.17
48:BP:47:ASP:HB3	48:BP:48:PRO:C	1.68	1.17
1:AA:556:C:O2'	1:AA:557:G:H5'	1.43	1.17
1:AA:862:C:C2'	1:AA:863:U:H5'	1.74	1.17
35:BA:1222:C:O2'	35:BA:1223:G:H5'	1.45	1.17
35:BA:1778:U:O2'	35:BA:1779:U:H5'	1.40	1.17
1:AA:774:G:O2'	1:AA:775:G:H5'	1.40	1.17
27:B2:44:LEU:HD13	27:B2:44:LEU:C	1.70	1.17
27:B2:38:GLN:O	27:B2:41:ILE:HG13	1.43	1.16
30:B5:4:HIS:HB3	30:B5:5:PRO:HD3	1.23	1.16
35:BA:1999:C:O2'	35:BA:2000:G:H5'	1.43	1.16
1:AA:119:A:O2'	1:AA:120:A:OP2	1.60	1.16
48:BP:57:THR:O	48:BP:59:LEU:N	1.78	1.16
35:BA:2201:C:O2'	35:BA:2202:C:H5'	1.43	1.16
1:AA:687:A:H1'	1:AA:688:G:OP2	1.46	1.16
7:AG:121:ALA:H	7:AG:124:LEU:HD13	1.09	1.16
1:AA:37:U:H2'	1:AA:38:G:H5'	1.21	1.15
1:AA:556:C:C2'	1:AA:557:G:H5'	1.75	1.15
35:BA:1747(A):G:H2'	35:BA:1748:G:H5"	1.25	1.15
1:AA:1502:A:H2	1:AA:1505:G:N2	1.43	1.15
35:BA:259:G:O2'	35:BA:260:G:H5'	1.43	1.15
35:BA:1137:G:O2'	35:BA:1138:G:H5'	1.46	1.15
35:BA:2010:G:O2'	35:BA:2011:U:H5'	1.47	1.15
37:BC:80:LYS:HE3	37:BC:120:VAL:HG12	1.23	1.15
13:AM:11:ARG:HA	13:AM:45:VAL:HB	1.25	1.15
30:B5:51:TYR:O	30:B5:53:ALA:N	1.80	1.15
35:BA:1678:G:N2	35:BA:1989:G:N2	1.95	1.15
40:BF:6:VAL:HG12	40:BF:7:TYR:H	1.12	1.15
1:AA:1179:A:O2'	1:AA:1180:A:H5'	1.47	1.14
35:BA:1821:A:C2'	35:BA:1822:G:H5'	1.76	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:85:LEU:HD21	48:BP:117:GLU:O	1.34	1.14
52:BT:80:SER:HB3	52:BT:81:PRO:HD2	1.21	1.14
33:B8:62:LEU:HD13	35:BA:242:G:H5"	1.22	1.14
35:BA:689:A:C2'	35:BA:690:G:H5'	1.78	1.14
35:BA:742:G:C2'	35:BA:743:G:H5'	1.77	1.14
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.24	1.14
35:BA:1540:U:H3'	35:BA:1541:G:H3'	1.29	1.14
1:AA:266:G:C5'	1:AA:267:C:C5	2.30	1.14
31:B6:41:PRO:HD2	31:B6:46:HIS:H	1.02	1.14
35:BA:2312:U:H2'	35:BA:2313:C:H5"	1.15	1.14
1:AA:1175:G:O2'	1:AA:1176:A:H5'	1.46	1.14
48:BP:51:PHE:CE2	48:BP:53:GLY:CA	2.31	1.14
35:BA:15:G:C2'	35:BA:16:G:H5'	1.77	1.13
35:BA:2010:G:C2'	35:BA:2011:U:H5'	1.78	1.13
35:BA:1038:C:H3'	35:BA:1039:G:H5"	1.30	1.13
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.08	1.13
35:BA:176:G:C2'	35:BA:177:G:H5'	1.76	1.13
35:BA:1023:U:C2'	35:BA:1024:G:H5'	1.79	1.13
35:BA:1988:C:O2'	35:BA:1989:G:H5'	1.49	1.13
1:AA:1490:C:C2'	1:AA:1491:G:H5'	1.79	1.13
29:B4:32:TYR:O	29:B4:33:VAL:HG12	1.49	1.13
35:BA:1890:A:H2'	35:BA:1891:G:H5'	1.25	1.13
37:BC:117:THR:H	37:BC:118:PRO:CA	1.61	1.13
48:BP:23:PRO:HB2	48:BP:33:ARG:HE	1.11	1.13
1:AA:1238:A:OP1	1:AA:1335:C:H1'	1.44	1.12
35:BA:1381:G:C2'	35:BA:1382:G:H5'	1.77	1.12
35:BA:689:A:O2'	35:BA:690:G:H5'	1.47	1.12
42:BH:30:LYS:HE2	42:BH:81:GLU:HG3	1.23	1.12
52:BT:30:VAL:CB	52:BT:31:SER:HB3	1.77	1.12
1:AA:938:A:C2'	1:AA:939:G:H5'	1.78	1.12
2:AB:87:ARG:NE	2:AB:233:SER:OG	1.82	1.12
28:B3:9:VAL:HG11	28:B3:55:ARG:HD3	1.30	1.12
31:B6:9:LEU:O	31:B6:9:LEU:HD13	1.48	1.12
35:BA:954:G:H2'	35:BA:955:C:H5'	1.18	1.12
2:AB:152:PHE:CE1	2:AB:155:LEU:HD12	1.83	1.12
27:B2:8:LYS:O	27:B2:11:GLU:HG2	1.48	1.12
30:B5:46:CYS:SG	30:B5:47:PRO:CD	2.37	1.12
9:AI:18:PHE:O	9:AI:61:ALA:CA	1.97	1.12
9:AI:19:LEU:HB3	9:AI:61:ALA:CB	1.80	1.12
35:BA:743:G:H2'	35:BA:744:G:C8	1.83	1.12
35:BA:2403:C:OP1	35:BA:2403:C:H3'	1.47	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:30:VAL:CG1	52:BT:31:SER:HB3	1.78	1.12
19:AS:40:ILE:HD11	19:AS:62:ILE:HG13	1.32	1.11
1:AA:266:G:H5"	1:AA:267:C:H5	1.10	1.11
1:AA:1488:G:O2'	1:AA:1489:G:H5'	1.47	1.11
2:AB:122:PHE:HE2	2:AB:142:LEU:HD22	1.11	1.11
27:B2:70:GLN:HG2	27:B2:71:ASN:H	1.03	1.11
35:BA:1300:U:H4'	35:BA:1301:A:O5'	1.47	1.11
52:BT:77:PRO:O	52:BT:78:LEU:HB2	1.49	1.11
1:AA:349:A:O2'	1:AA:350:G:H5'	1.46	1.11
1:AA:1490:C:H2'	1:AA:1491:G:H5'	1.15	1.11
24:AY:69:VAL:HB	24:AY:82:ILE:HD11	1.23	1.11
35:BA:2363:C:O2'	35:BA:2364:C:H5'	1.47	1.11
2:AB:228:GLY:HA3	2:AB:229:VAL:CG2	1.81	1.11
1:AA:1526:G:O2'	1:AA:1527:C:H5'	1.49	1.11
9:AI:19:LEU:HA	9:AI:61:ALA:CA	1.79	1.11
35:BA:1590:U:H2'	35:BA:1591:G:H5"	1.30	1.11
27:B2:9:GLN:CD	27:B2:9:GLN:H	1.50	1.10
35:BA:37:C:O2'	35:BA:38:A:H5'	1.50	1.10
35:BA:1596:A:H2'	35:BA:1597:A:H5'	1.26	1.10
51:BS:97:ARG:HH21	51:BS:98:VAL:HA	1.14	1.10
1:AA:1047:G:H2'	1:AA:1048:G:H5'	1.34	1.10
2:AB:230:VAL:HB	2:AB:231:GLU:HA	1.16	1.10
9:AI:19:LEU:N	9:AI:61:ALA:CB	2.15	1.10
35:BA:523:C:C2'	35:BA:524:U:H5'	1.80	1.10
35:BA:1770:G:O2'	35:BA:1771:C:H5'	1.51	1.10
49:BQ:60:ARG:HG3	58:BZ:179:ASP:CG	1.75	1.10
1:AA:88:A:H4'	1:AA:89:C:H5'	1.20	1.10
1:AA:543:C:H2'	1:AA:544:G:H5'	1.15	1.10
22:AV:40:C:O2'	22:AV:41:C:H5'	1.52	1.10
35:BA:612:C:C2'	35:BA:613:G:H5"	1.82	1.10
35:BA:963:U:O2'	35:BA:964:C:H5'	1.51	1.10
37:BC:117:THR:N	37:BC:118:PRO:HA	1.57	1.10
39:BE:52:LEU:HD11	52:BT:1:MET:HE3	1.33	1.10
52:BT:80:SER:HB3	52:BT:81:PRO:HD3	1.24	1.10
1:AA:264:U:C2'	1:AA:265:G:H5'	1.80	1.10
1:AA:938:A:H2'	1:AA:939:G:H5'	1.30	1.10
27:B2:70:GLN:CG	27:B2:71:ASN:H	1.65	1.10
1:AA:112:G:C2'	1:AA:113:G:H5'	1.80	1.09
1:AA:311:C:H2'	1:AA:312:C:C5'	1.82	1.09
35:BA:1892:C:C2'	35:BA:1893:C:H5'	1.81	1.09
35:BA:2189:U:H2'	35:BA:2190:G:H5"	1.28	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1642:G:H2'	35:BA:1643:G:H5'	1.33	1.09
35:BA:1970:A:C5'	35:BA:1972:A:H1'	1.81	1.09
35:BA:2009:G:C2'	35:BA:2010:G:H5'	1.82	1.09
37:BC:117:THR:HG21	37:BC:119:ASP:HB2	1.20	1.09
41:BG:77:ILE:HG13	41:BG:82:LEU:HB2	1.31	1.09
1:AA:949:A:H2'	1:AA:950:U:H5'	1.28	1.09
1:AA:1399:C:H4'	1:AA:1400:C:O5'	1.45	1.09
27:B2:10:LEU:O	27:B2:14:ARG:HD2	1.50	1.09
27:B2:16:LEU:HD22	27:B2:20:GLU:HG2	1.11	1.09
35:BA:747:U:C4	35:BA:2613:U:C4	2.40	1.09
41:BG:38:VAL:HG22	41:BG:93:THR:HG23	1.19	1.09
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.16	1.09
1:AA:1282:C:C2'	1:AA:1283:G:H5'	1.81	1.09
35:BA:461:C:H2'	35:BA:462:C:H5'	1.26	1.09
1:AA:697:U:H2'	1:AA:698:G:H5'	1.34	1.09
1:AA:949:A:C2'	1:AA:950:U:H5"	1.80	1.09
35:BA:15:G:O2'	35:BA:16:G:H5'	1.49	1.09
35:BA:1642:G:C2'	35:BA:1643:G:H5'	1.81	1.09
31:B6:7:ILE:HG21	31:B6:27:LYS:HZ3	0.93	1.08
35:BA:1983:C:H2'	35:BA:1984:G:H5'	1.32	1.08
35:BA:1999:C:C2'	35:BA:2000:G:H5'	1.81	1.08
57:BY:28:LYS:HB2	57:BY:37:VAL:HB	1.32	1.08
1:AA:696:A:O2'	1:AA:697:U:H5'	1.54	1.08
35:BA:2206:G:H21	35:BA:2207:G:H5'	0.97	1.08
1:AA:1277:C:O2'	1:AA:1279:A:H8	1.36	1.08
31:B6:27:LYS:HG3	31:B6:30:THR:HB	1.35	1.08
35:BA:1484:G:H2'	35:BA:1485:G:H5"	1.30	1.08
58:BZ:180:VAL:HG12	58:BZ:181:GLU:H	1.14	1.08
1:AA:197:A:C6	1:AA:221:C:H4'	1.88	1.08
24:AY:55:MET:HG2	24:AY:56:GLU:N	1.64	1.08
35:BA:603:A:H1'	35:BA:604:G:OP2	1.52	1.08
35:BA:890:A:H3'	35:BA:892:G:H5"	1.34	1.08
35:BA:1988:C:H2'	35:BA:1989:G:H5'	1.28	1.08
35:BA:2000:G:N2	35:BA:2001:A:C4	2.21	1.08
35:BA:31:C:C2'	35:BA:32:C:H5"	1.84	1.08
35:BA:1297:C:O2'	35:BA:1298:C:H5'	1.51	1.08
24:AY:55:MET:CG	24:AY:56:GLU:H	1.67	1.07
35:BA:612:C:H2'	35:BA:613:G:H5"	1.14	1.07
35:BA:1806:C:O2'	35:BA:1807:G:H5'	1.52	1.07
35:BA:2757:A:H2'	35:BA:2758:A:H5'	1.32	1.07
39:BE:132:HIS:HA	39:BE:135:HIS:CE1	1.89	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:21:VAL:HG12	29:B4:22:ILE:H	1.00	1.07
35:BA:1215:G:O2'	35:BA:1216:G:H5'	1.52	1.07
35:BA:1799:G:OP1	35:BA:1799:G:H3'	1.53	1.07
42:BH:3:ARG:CB	42:BH:3:ARG:HH11	1.66	1.07
1:AA:1237:C:O2'	1:AA:1335:C:O4'	1.69	1.07
1:AA:1371:G:H2'	1:AA:1372:U:H5'	1.15	1.07
27:B2:44:LEU:HD13	27:B2:45:SER:N	1.70	1.07
42:BH:3:ARG:NH1	42:BH:3:ARG:HB2	1.70	1.07
1:AA:1498:U:H1'	1:AA:1499:A:OP2	1.53	1.07
3:AC:83:ARG:HG3	3:AC:84:ILE:N	1.69	1.07
35:BA:31:C:H2'	35:BA:32:C:H5"	1.31	1.07
35:BA:953:A:H2'	35:BA:954:G:H5'	1.28	1.07
35:BA:1119:C:C2'	35:BA:1120:G:H5'	1.85	1.07
35:BA:2757:A:H2'	35:BA:2758:A:C5'	1.83	1.07
58:BZ:185:GLU:O	58:BZ:185:GLU:HG2	1.54	1.07
1:AA:112:G:H2'	1:AA:113:G:H5'	1.35	1.07
1:AA:1052:U:O4	1:AA:1200:C:H2'	1.55	1.07
35:BA:654(H):G:H2'	35:BA:654(I):C:H5'	1.37	1.07
1:AA:560:U:H4'	1:AA:561:U:C5'	1.85	1.06
1:AA:1157:A:H1'	1:AA:1158:C:OP2	1.52	1.06
1:AA:264:U:H2'	1:AA:265:G:H5'	1.31	1.06
1:AA:311:C:C2'	1:AA:312:C:C5'	2.33	1.06
1:AA:1313:U:H3'	19:AS:6:LYS:HZ2	1.13	1.06
2:AB:23:ARG:HH11	2:AB:23:ARG:CG	1.65	1.06
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.16	1.06
35:BA:627:A:H4'	35:BA:628:G:OP1	1.41	1.06
35:BA:1600:C:O2'	35:BA:1601:G:H5'	1.55	1.06
52:BT:80:SER:CB	52:BT:81:PRO:CD	2.30	1.06
3:AC:81:GLY:C	3:AC:82:GLU:HG3	1.77	1.06
29:B4:12:ALA:H	29:B4:24:THR:HG22	0.96	1.06
35:BA:1427:A:H4'	35:BA:1428:C:O5'	1.55	1.06
35:BA:2126:A:H4'	35:BA:2127:G:O5'	1.54	1.06
36:BB:20:C:H2'	36:BB:21:G:H5"	1.33	1.06
1:AA:521:G:C2'	1:AA:522:C:H5'	1.84	1.06
35:BA:604:G:C2'	35:BA:605:C:H5'	1.86	1.06
35:BA:743:G:H2'	35:BA:744:G:H8	0.92	1.06
35:BA:1174:A:H5"	35:BA:1175:U:H5"	1.31	1.06
35:BA:2105:C:H2'	35:BA:2106:G:H5"	1.38	1.06
35:BA:2645:G:H3'	35:BA:2646:C:H5'	1.37	1.06
46:BN:4:TYR:HB3	53:BU:64:ARG:HH12	1.19	1.06
3:AC:72:LYS:HG2	3:AC:75:VAL:HG23	1.07	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:40:HIS:N	29:B4:41:PRO:HD2	1.71	1.06
35:BA:1890:A:C2'	35:BA:1891:G:H5'	1.85	1.06
54:BV:62:LEU:HD21	54:BV:95:LEU:HB2	1.35	1.06
1:AA:688:G:O6	1:AA:700:G:C6	2.09	1.05
33:B8:13:ARG:HD2	48:BP:61:ARG:HD2	1.37	1.05
35:BA:742:G:H2'	35:BA:743:G:H5'	1.07	1.05
35:BA:1119:C:O2'	35:BA:1120:G:H5'	1.56	1.05
35:BA:1375:C:O2'	35:BA:1376:C:H5'	1.53	1.05
1:AA:266:G:H5"	1:AA:267:C:C5	1.89	1.05
1:AA:266:G:H4'	1:AA:267:C:O5'	1.48	1.05
1:AA:949:A:C2'	1:AA:950:U:C5'	2.34	1.05
1:AA:1281:U:H5'	1:AA:1282:C:C5	1.91	1.05
5:AE:31:LEU:HD21	5:AE:43:LEU:HD11	1.37	1.05
29:B4:2:LYS:HE2	29:B4:5:ILE:HB	1.29	1.05
35:BA:2176:A:H4'	35:BA:2177:C:OP1	1.53	1.05
1:AA:1073:U:C2'	1:AA:1074:G:H5'	1.85	1.05
35:BA:18:C:C2	35:BA:19:C:C5	2.43	1.05
35:BA:955:C:H2'	35:BA:956:G:H5'	1.06	1.05
35:BA:1822:G:H2'	35:BA:1823:G:H8	1.22	1.05
52:BT:29:ARG:O	52:BT:30:VAL:HG23	1.56	1.05
2:AB:15:VAL:O	2:AB:15:VAL:HG12	1.57	1.05
25:B0:36:ILE:O	25:B0:36:ILE:HG13	1.57	1.05
52:BT:54:ARG:HA	52:BT:59:THR:HB	1.34	1.05
58:BZ:166:SER:HB2	58:BZ:168:GLU:N	1.70	1.05
35:BA:953:A:O2'	35:BA:954:G:H5'	1.56	1.05
35:BA:1805:U:O2'	35:BA:1806:C:H5'	1.57	1.05
1:AA:1505:G:H5"	1:AA:1506:U:OP1	1.57	1.04
2:AB:228:GLY:HA3	2:AB:229:VAL:HG22	1.07	1.04
24:AY:55:MET:HG2	24:AY:56:GLU:H	1.10	1.04
35:BA:747:U:N3	35:BA:2613:U:C4	2.25	1.04
35:BA:1773:A:H2'	35:BA:1774:C:H5'	1.06	1.04
35:BA:1797:C:O2	35:BA:1822:G:N2	1.90	1.04
1:AA:495:A:C4'	1:AA:496:A:H5'	1.88	1.04
1:AA:521:G:H2'	1:AA:522:C:H5'	1.35	1.04
35:BA:18:C:H2'	35:BA:19:C:H6	1.19	1.04
35:BA:1596:A:O2'	35:BA:1597:A:H5'	1.54	1.04
1:AA:1047:G:C2'	1:AA:1048:G:H5'	1.87	1.04
42:BH:168:PRO:HA	42:BH:170:ARG:HH22	1.19	1.04
1:AA:495:A:H4'	1:AA:496:A:C5'	1.87	1.04
1:AA:545:C:H2'	1:AA:546:G:H5'	1.07	1.04
15:AO:82:ILE:HD11	15:AO:88:ARG:HB2	1.39	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:10:LEU:H	31:B6:10:LEU:HD22	1.19	1.04
35:BA:31:C:H2'	35:BA:32:C:C5'	1.86	1.04
52:BT:16:ARG:NH2	52:BT:82:LEU:O	1.91	1.04
2:AB:231:GLU:HB2	2:AB:232:PRO:HD2	1.31	1.04
35:BA:179:G:O2'	35:BA:180:G:H5'	1.56	1.04
35:BA:955:C:H2'	35:BA:956:G:C5'	1.87	1.04
35:BA:2189:U:C2'	35:BA:2190:G:H5"	1.88	1.04
1:AA:560:U:H4'	1:AA:561:U:O5'	1.53	1.03
31:B6:19:ARG:HG3	31:B6:20:ASN:H	0.89	1.03
35:BA:176:G:H2'	35:BA:177:G:H5'	1.34	1.03
35:BA:954:G:O2'	35:BA:955:C:H5'	1.56	1.03
52:BT:23:ARG:HB2	52:BT:24:PRO:CD	1.80	1.03
1:AA:975:A:H4'	1:AA:976:G:H5"	1.35	1.03
5:AE:80:ILE:HD12	5:AE:138:ALA:HB1	1.41	1.03
15:AO:68:ARG:HB2	15:AO:68:ARG:HH11	1.20	1.03
24:AY:69:VAL:HA	24:AY:82:ILE:HG12	1.38	1.03
35:BA:462:C:C2'	35:BA:463:G:H5'	1.88	1.03
35:BA:692:C:O2'	35:BA:693:C:H5'	1.58	1.03
35:BA:1023:U:H2'	35:BA:1024:G:H5'	1.04	1.03
35:BA:1997:G:H2'	35:BA:1998:G:H5'	1.34	1.03
52:BT:85:LYS:NZ	52:BT:85:LYS:HB3	1.70	1.03
58:BZ:166:SER:HB2	58:BZ:168:GLU:H	0.88	1.03
1:AA:495:A:O2'	1:AA:496:A:H2'	1.57	1.03
1:AA:704:A:H2'	1:AA:705:U:H5'	1.41	1.03
9:AI:19:LEU:N	9:AI:61:ALA:HB2	1.71	1.03
31:B6:19:ARG:CG	31:B6:20:ASN:H	1.70	1.03
1:AA:699:C:C2'	1:AA:700:G:H5'	1.88	1.03
1:AA:862:C:H2'	1:AA:863:U:H5'	1.06	1.03
35:BA:741:G:O2'	35:BA:742:G:H5'	1.57	1.03
40:BF:9:ILE:HG12	40:BF:14:PRO:HA	1.37	1.03
1:AA:312:C:H2'	1:AA:313:A:H8	1.17	1.03
1:AA:522:C:H41	12:AL:53:ARG:NH2	1.55	1.03
2:AB:190:THR:O	2:AB:191:ASP:HB3	1.59	1.03
28:B3:6:VAL:HG12	28:B3:56:VAL:HG22	1.41	1.03
29:B4:15:ILE:HD13	29:B4:33:VAL:HB	1.39	1.03
35:BA:256:A:H2'	35:BA:257:A:H5'	1.40	1.03
35:BA:2581:G:C4	35:BA:2610:C:N4	2.27	1.03
48:BP:65:ARG:HB3	48:BP:68:GLN:HE22	1.24	1.03
1:AA:979:C:H2'	1:AA:980:C:H5"	1.41	1.02
1:AA:1282:C:H2'	1:AA:1283:G:H5'	1.36	1.02
29:B4:40:HIS:H	29:B4:41:PRO:HD2	1.23	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:673:C:H4'	40:BF:82:ILE:HD11	1.35	1.02
35:BA:1767:C:C2'	35:BA:1768:U:H5'	1.88	1.02
58:BZ:180:VAL:CG1	58:BZ:181:GLU:H	1.71	1.02
58:BZ:185:GLU:O	58:BZ:187:ALA:N	1.91	1.02
35:BA:18:C:H2'	35:BA:19:C:C6	1.92	1.02
35:BA:1747(A):G:C2'	35:BA:1748:G:H5"	1.88	1.02
35:BA:1970:A:H5'	35:BA:1972:A:H1'	1.08	1.02
48:BP:59:LEU:HA	48:BP:61:ARG:HE	1.22	1.02
1:AA:699:C:H2'	1:AA:700:G:H5'	1.35	1.02
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	1.90	1.02
24:AY:82:ILE:O	24:AY:82:ILE:HG22	1.59	1.02
35:BA:605:C:C2'	35:BA:606:U:H5'	1.90	1.02
35:BA:1106:G:O2'	35:BA:1107:G:H5'	1.57	1.02
35:BA:1892:C:H2'	35:BA:1893:C:H5'	1.41	1.02
41:BG:133:LEU:HD11	41:BG:157:ILE:HB	1.41	1.02
58:BZ:180:VAL:HG12	58:BZ:181:GLU:N	1.68	1.02
2:AB:87:ARG:NH2	2:AB:233:SER:OG	1.93	1.02
12:AL:46:LYS:C	12:AL:48:PRO:HD2	1.84	1.02
35:BA:256:A:C2'	35:BA:257:A:H5'	1.90	1.02
35:BA:1048:A:N6	42:BH:1:MET:HE2	1.75	1.02
35:BA:1381:G:H2'	35:BA:1382:G:H5'	1.04	1.02
35:BA:1445:A:C8	35:BA:1460:A:C2	2.48	1.02
35:BA:1982:C:C4	35:BA:1983:C:N4	2.27	1.02
35:BA:2715:C:H2'	35:BA:2716:U:H6	1.23	1.02
52:BT:23:ARG:HB2	52:BT:24:PRO:HD2	1.38	1.02
52:BT:30:VAL:HG12	52:BT:31:SER:CB	1.90	1.02
55:BW:1:MET:HG2	55:BW:2:GLU:H	1.25	1.02
34:B9:17:ILE:HG13	34:B9:26:ILE:HD12	1.41	1.02
35:BA:1103:A:H5'	35:BA:1104:C:OP2	1.60	1.02
37:BC:117:THR:CG2	37:BC:118:PRO:C	2.32	1.02
12:AL:27:LEU:HD13	12:AL:28:LYS:H	1.23	1.01
35:BA:111:A:H2'	35:BA:112:U:C5'	1.90	1.01
35:BA:141:A:H8	35:BA:1408:C:HO2'	1.07	1.01
35:BA:1983:C:C2'	35:BA:1984:G:H5'	1.89	1.01
35:BA:2008:C:H2'	35:BA:2009:G:H8	1.24	1.01
35:BA:2360:A:O2'	35:BA:2361:A:H5"	1.59	1.01
48:BP:88:LEU:HD11	48:BP:95:VAL:HG21	1.40	1.01
1:AA:365:U:H3'	1:AA:365:U:O2	1.60	1.01
35:BA:2402:C:H4'	35:BA:2403:C:O5'	1.57	1.01
48:BP:58:THR:O	48:BP:61:ARG:HG2	1.58	1.01
2:AB:187:LEU:O	2:AB:187:LEU:HD22	1.59	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1273:U:H5”	35:BA:1646:C:N4	1.73	1.01
42:BH:106:THR:HG22	42:BH:112:PRO:HB3	1.42	1.01
2:AB:87:ARG:HD2	2:AB:219:VAL:HG11	1.41	1.01
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.41	1.01
35:BA:742:G:O2’	35:BA:743:G:H5”	1.61	1.01
35:BA:1799:G:H4’	35:BA:1800:C:O5’	1.60	1.01
38:BD:248:SER:HB2	38:BD:249:PRO:HD2	1.39	1.01
48:BP:51:PHE:CZ	48:BP:53:GLY:HA2	1.95	1.01
1:AA:1030(B):C:H2’	1:AA:1030(C):G:H4’	1.39	1.01
1:AA:1388:C:H2’	1:AA:1389:C:C6	1.95	1.01
2:AB:23:ARG:HH11	2:AB:23:ARG:HG3	0.90	1.01
35:BA:326:G:O2’	35:BA:327:G:H5’	1.59	1.01
35:BA:2009:G:H2’	35:BA:2010:G:C5’	1.91	1.01
35:BA:2716:U:O2’	35:BA:2717:G:H5’	1.59	1.01
36:BB:40:U:H3’	36:BB:41:U:H5”	1.41	1.01
41:BG:137:GLU:HG2	41:BG:154:GLY:N	1.75	1.01
2:AB:23:ARG:HG3	2:AB:23:ARG:NH1	1.66	1.00
20:AT:74:LYS:HG3	20:AT:75:ASN:H	1.22	1.00
35:BA:1446:C:N4	35:BA:1465:G:H1	1.59	1.00
35:BA:2128:C:O2’	35:BA:2129:C:H5’	1.58	1.00
37:BC:117:THR:HG21	37:BC:119:ASP:CB	1.91	1.00
51:BS:106:ARG:HB3	51:BS:106:ARG:HH11	1.19	1.00
1:AA:312:C:H2’	1:AA:313:A:C8	1.95	1.00
35:BA:16:G:O2’	35:BA:17:G:H5’	1.60	1.00
35:BA:860:U:O2’	35:BA:861:A:H5’	1.61	1.00
35:BA:1222:C:C2’	35:BA:1223:G:H5’	1.91	1.00
35:BA:2606:C:H2’	35:BA:2607:G:H5’	1.02	1.00
48:BP:51:PHE:HA	48:BP:52:GLU:CB	1.89	1.00
1:AA:547:A:H1’	1:AA:548:G:OP2	1.59	1.00
25:B0:10:THR:HG22	25:B0:11:ARG:H	1.24	1.00
31:B6:19:ARG:HG3	31:B6:20:ASN:N	1.73	1.00
35:BA:462:C:O2’	35:BA:463:G:H5’	1.61	1.00
35:BA:2206:G:N2	35:BA:2207:G:H5’	1.75	1.00
38:BD:44:ASN:HB2	38:BD:48:ARG:O	1.60	1.00
50:BR:42:LYS:O	50:BR:45:ARG:HG2	1.60	1.00
29:B4:39:CYS:HB3	29:B4:41:PRO:HD2	1.38	1.00
35:BA:2009:G:H2’	35:BA:2010:G:H5’	1.03	1.00
1:AA:1285:A:H4’	1:AA:1286:A:C5’	1.91	1.00
4:AD:139:ARG:HG2	4:AD:139:ARG:HH11	0.84	1.00
42:BH:3:ARG:HH11	42:BH:3:ARG:HB2	1.19	1.00
50:BR:2:ARG:HD2	50:BR:2:ARG:O	1.59	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1492:A:H1'	1:AA:1493:A:OP1	1.62	1.00
26:B1:29:GLY:O	26:B1:30:VAL:HG23	1.59	1.00
39:BE:24:THR:HG21	39:BE:188:VAL:HG11	1.44	1.00
4:AD:110:PHE:HD1	4:AD:110:PHE:H	1.04	1.00
35:BA:856:C:H2'	35:BA:857:C:H6	1.02	0.99
41:BG:137:GLU:HG2	41:BG:154:GLY:H	1.27	0.99
1:AA:1154:G:O2'	1:AA:1155:G:H5'	1.62	0.99
57:BY:28:LYS:H	57:BY:28:LYS:CD	1.72	0.99
2:AB:20:GLU:HG3	2:AB:190:THR:O	1.63	0.99
35:BA:702:G:C2'	35:BA:703:U:H5'	1.92	0.99
35:BA:1821:A:H2'	35:BA:1822:G:H5'	1.37	0.99
1:AA:769:G:C2'	1:AA:770:C:H5'	1.91	0.99
39:BE:57:LYS:HA	39:BE:57:LYS:HE3	1.44	0.99
52:BT:27:THR:HG23	52:BT:28:VAL:H	1.24	0.99
53:BU:90:VAL:HG11	54:BV:39:LEU:HG	1.45	0.99
51:BS:35:ILE:H	51:BS:53:SER:HB2	1.25	0.99
3:AC:72:LYS:CG	3:AC:75:VAL:HG23	1.91	0.99
29:B4:12:ALA:CA	29:B4:24:THR:CG2	2.29	0.99
35:BA:29:U:O2'	35:BA:30:G:H5'	1.63	0.99
35:BA:2606:C:H2'	35:BA:2607:G:C5'	1.93	0.99
2:AB:187:LEU:HD22	2:AB:187:LEU:C	1.87	0.99
15:AO:87:ILE:HG22	15:AO:88:ARG:H	1.28	0.99
35:BA:111:A:C2'	35:BA:112:U:C5'	2.41	0.99
58:BZ:128:VAL:HG22	58:BZ:129:SER:H	1.26	0.99
4:AD:139:ARG:HG2	4:AD:139:ARG:NH1	1.63	0.98
35:BA:967:C:H2'	35:BA:968:G:H5'	0.99	0.98
58:BZ:166:SER:CB	58:BZ:168:GLU:H	1.74	0.98
1:AA:37:U:O2'	1:AA:38:G:H5'	1.63	0.98
1:AA:188:C:H2'	1:AA:189:G:C8	1.96	0.98
13:AM:15:VAL:O	13:AM:19:LEU:HD23	1.63	0.98
1:AA:197:A:H4'	1:AA:198:G:O5'	1.57	0.98
35:BA:1820:U:H4'	35:BA:1821:A:OP2	1.57	0.98
1:AA:57:G:H2'	1:AA:58:C:C6	1.98	0.98
1:AA:188:C:H2'	1:AA:189:G:H8	1.23	0.98
35:BA:967:C:C2'	35:BA:968:G:C5'	2.41	0.98
1:AA:119:A:N6	1:AA:287:U:O2	1.97	0.98
1:AA:509:A:H5'	4:AD:54:TYR:HD2	1.23	0.98
35:BA:1817:G:H2'	35:BA:1818:U:H5'	1.42	0.98
37:BC:117:THR:HG22	37:BC:118:PRO:O	1.61	0.98
1:AA:593:G:C2'	1:AA:594:G:H5'	1.94	0.98
10:AJ:90:LEU:H	10:AJ:91:PRO:CD	1.76	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:264:LEU:HB2	61:AY:701:GCP:C5	1.93	0.98
26:B1:5:CYS:SG	26:B1:8:SER:N	2.37	0.98
35:BA:655:A:H4'	35:BA:656:G:H5'	1.42	0.98
35:BA:1048:A:H62	42:BH:1:MET:HE2	1.25	0.98
1:AA:951:G:N2	1:AA:970:C:O2	1.96	0.98
1:AA:792:A:H4'	1:AA:793:U:O5'	1.62	0.98
2:AB:122:PHE:CE2	2:AB:142:LEU:HD22	1.97	0.98
27:B2:5:GLU:HA	27:B2:8:LYS:HD2	1.46	0.98
35:BA:1590:U:C2'	35:BA:1591:G:H5"	1.92	0.98
1:AA:266:G:H5'	1:AA:267:C:C5	1.99	0.98
35:BA:145:G:C2'	35:BA:146:G:H5"	1.94	0.98
2:AB:15:VAL:HG21	2:AB:209:ARG:HH21	1.26	0.97
27:B2:70:GLN:HG2	27:B2:71:ASN:N	1.69	0.97
35:BA:1767:C:H2'	35:BA:1768:U:H5'	1.43	0.97
52:BT:30:VAL:HB	52:BT:31:SER:HB3	1.41	0.97
1:AA:1002:G:H2'	1:AA:1003:G:H8	1.26	0.97
2:AB:17:PHE:HB3	2:AB:44:LEU:HD11	1.47	0.97
31:B6:9:LEU:HD13	31:B6:9:LEU:C	1.88	0.97
35:BA:653:A:C5'	35:BA:654:A:OP2	2.11	0.97
35:BA:743:G:C2'	35:BA:744:G:H8	1.77	0.97
35:BA:1902:C:O2'	38:BD:244:ARG:CB	2.10	0.97
1:AA:1371:G:H2'	1:AA:1372:U:C5'	1.93	0.97
7:AG:36:LYS:HG2	7:AG:37:ASN:H	1.28	0.97
30:B5:4:HIS:HB3	30:B5:5:PRO:CD	1.89	0.97
35:BA:43:A:C2'	35:BA:44:G:H5'	1.93	0.97
35:BA:145:G:H2'	35:BA:146:G:H5"	1.43	0.97
35:BA:692:C:C2'	35:BA:693:C:H5'	1.95	0.97
35:BA:742:G:C2'	35:BA:743:G:C5'	2.40	0.97
35:BA:747:U:C4	35:BA:2613:U:N3	2.32	0.97
35:BA:1417:C:C2'	35:BA:1418:G:H5'	1.93	0.97
2:AB:228:GLY:CA	2:AB:229:VAL:CG2	2.38	0.97
15:AO:54:ARG:HG2	15:AO:58:MET:HE2	1.46	0.97
24:AY:191:ASP:HB3	24:AY:265:LYS:HG3	1.46	0.97
35:BA:742:G:H2'	35:BA:743:G:C5'	1.93	0.97
1:AA:796:C:O2'	1:AA:797:C:H5'	1.65	0.97
4:AD:139:ARG:HH11	4:AD:139:ARG:CG	1.77	0.97
49:BQ:60:ARG:CG	58:BZ:179:ASP:OD1	2.12	0.97
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.63	0.97
2:AB:167:PRO:HD3	2:AB:188:ALA:HB2	1.46	0.97
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.08	0.97
24:AY:31:ARG:NH1	24:AY:31:ARG:HA	1.79	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:676:A:H8	35:BA:2069:G:H21	1.00	0.97
35:BA:890:A:C3'	35:BA:892:G:H5"	1.94	0.97
35:BA:2893:G:H5'	35:BA:2894:G:H5'	1.45	0.97
1:AA:868:C:O2'	1:AA:869:G:H5'	1.64	0.97
1:AA:1388:C:H2'	1:AA:1389:C:H6	1.27	0.97
35:BA:1770:G:C2'	35:BA:1771:C:H5'	1.95	0.97
35:BA:2620:C:H5"	39:BE:153:GLY:HA2	1.45	0.97
27:B2:69:ARG:O	27:B2:70:GLN:HB3	1.65	0.97
35:BA:2068:U:H3	35:BA:2430:A:H2	1.01	0.97
52:BT:30:VAL:HG12	52:BT:31:SER:HB3	1.42	0.97
1:AA:508:C:H4'	1:AA:509:A:O5'	1.62	0.96
35:BA:1291:C:O2'	35:BA:1292:U:H5'	1.64	0.96
1:AA:688:G:C6	1:AA:700:G:N1	2.32	0.96
1:AA:701:C:H5'	1:AA:702:A:OP1	1.63	0.96
24:AY:201:ILE:H	24:AY:201:ILE:HD12	1.29	0.96
1:AA:555:C:C4	1:AA:556:C:N4	2.33	0.96
2:AB:200:ILE:H	2:AB:200:ILE:HD12	1.30	0.96
26:B1:57:GLU:HG2	26:B1:58:ILE:N	1.77	0.96
1:AA:1073:U:H2'	1:AA:1074:G:H5'	1.45	0.96
24:AY:137:ASN:ND2	24:AY:138:LYS:H	1.63	0.96
27:B2:44:LEU:C	27:B2:44:LEU:CD1	2.37	0.96
39:BE:77:ILE:HG22	39:BE:78:LEU:H	1.29	0.96
1:AA:1053:G:H4'	1:AA:1054:C:C5'	1.96	0.96
35:BA:271(L):U:H5"	35:BA:271(M):G:H5'	1.46	0.96
35:BA:741:G:C2'	35:BA:742:G:H5'	1.95	0.96
1:AA:1150:U:H2'	1:AA:1151:A:H5'	1.47	0.96
20:AT:73:HIS:O	20:AT:74:LYS:HG2	1.64	0.96
35:BA:1282:U:O2	35:BA:1286:A:N6	1.99	0.96
35:BA:2207:G:N3	35:BA:2207:G:H5"	1.80	0.96
29:B4:22:ILE:HG12	41:BG:105:LYS:HA	1.47	0.96
31:B6:7:ILE:CG2	31:B6:27:LYS:HZ3	1.79	0.96
35:BA:84:A:H5"	57:BY:9:LYS:HD2	1.47	0.96
40:BF:178:PRO:HB2	40:BF:201:VAL:HG11	1.46	0.96
1:AA:1029:C:H3'	1:AA:1030:C:H5"	1.47	0.96
1:AA:1282:C:O2'	1:AA:1283:G:H5'	1.64	0.96
35:BA:650:C:H3'	35:BA:651:G:H5"	1.45	0.96
35:BA:896:A:H1'	58:BZ:176:PRO:CG	1.95	0.96
35:BA:2358:G:C2'	35:BA:2359:C:H5'	1.95	0.96
35:BA:2713:A:H3'	35:BA:2714:G:H5'	1.47	0.96
29:B4:56:VAL:HA	29:B4:60:GLN:CD	1.91	0.96
35:BA:2010:G:H2'	35:BA:2011:U:H5'	1.43	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:24:ILE:HG23	38:BD:25:THR:H	1.30	0.96
57:BY:101:LYS:HG2	57:BY:102:CYS:N	1.79	0.96
9:AI:19:LEU:HB3	9:AI:61:ALA:HB3	1.46	0.96
35:BA:1997:G:C2'	35:BA:1998:G:H5'	1.96	0.96
58:BZ:149:SER:CB	58:BZ:173:ALA:HA	1.96	0.96
1:AA:106:C:HO2'	1:AA:107:G:H5'	1.21	0.95
1:AA:1303:C:H2'	1:AA:1304:G:H5'	1.47	0.95
19:AS:29:ARG:HB3	19:AS:48:THR:HB	1.48	0.95
26:B1:29:GLY:C	26:B1:30:VAL:HG23	1.89	0.95
35:BA:53:A:H2'	35:BA:54:G:H5'	1.43	0.95
35:BA:330:A:H2	35:BA:1210:A:H2'	1.30	0.95
35:BA:1067:A:H5"	35:BA:1068:G:H5"	1.45	0.95
27:B2:64:LEU:O	27:B2:64:LEU:HD23	1.64	0.95
35:BA:27:G:N2	35:BA:512:G:H2'	1.81	0.95
39:BE:179:GLU:HB3	39:BE:181:LEU:HD23	1.44	0.95
58:BZ:5:LEU:HD23	58:BZ:47:VAL:HG21	1.44	0.95
1:AA:60:A:H4'	1:AA:61:G:O5'	1.64	0.95
40:BF:24:LEU:HB3	40:BF:25:PRO:HD2	1.48	0.95
1:AA:312:C:O2'	1:AA:313:A:H5'	1.67	0.95
1:AA:949:A:O2'	1:AA:950:U:H5"	1.65	0.95
35:BA:689:A:H2'	35:BA:690:G:H5'	1.48	0.95
1:AA:348:G:H2'	1:AA:349:A:H5'	1.47	0.95
13:AM:7:VAL:HG21	41:BG:147:ASP:OD1	1.67	0.95
35:BA:630:G:N2	35:BA:633:A:OP2	1.99	0.95
35:BA:967:C:H2'	35:BA:968:G:C5'	1.96	0.95
39:BE:36:ARG:HH21	39:BE:88:GLY:HA2	1.31	0.95
26:B1:45:ASN:HD21	35:BA:2090:G:H21	1.14	0.95
35:BA:111:A:H2'	35:BA:112:U:H5'	0.97	0.95
35:BA:2355:C:H2'	35:BA:2356:C:H5'	1.46	0.95
48:BP:47:ASP:OD2	48:BP:49:ARG:HB2	1.65	0.95
1:AA:491:G:H2'	1:AA:492:G:H8	1.32	0.95
1:AA:1153:C:O2'	1:AA:1154:G:H5"	1.66	0.95
4:AD:17:VAL:HG12	4:AD:18:LYS:H	1.29	0.95
35:BA:2126:A:H1'	35:BA:2127:G:O4'	1.67	0.95
1:AA:1399:C:H2'	1:AA:1399:C:OP2	1.65	0.95
12:AL:27:LEU:HD12	12:AL:28:LYS:HE2	1.44	0.95
35:BA:604:G:O2'	35:BA:605:C:H5'	1.66	0.95
35:BA:1899:G:H21	35:BA:1902:C:H41	1.00	0.95
35:BA:2606:C:C2'	35:BA:2607:G:C5'	2.44	0.95
35:BA:954:G:H2'	35:BA:955:C:C5'	1.97	0.94
35:BA:53:A:C2'	35:BA:54:G:H5'	1.97	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:461:C:C2'	35:BA:462:C:H5'	1.96	0.94
35:BA:612:C:H2'	35:BA:613:G:C5'	1.96	0.94
35:BA:2756:U:H1'	35:BA:2757:A:OP2	1.67	0.94
3:AC:138:VAL:HG21	3:AC:168:ALA:CB	1.98	0.94
8:AH:89:PRO:HA	8:AH:92:ARG:HH11	1.32	0.94
13:AM:101:GLN:HE21	13:AM:101:GLN:H	1.12	0.94
48:BP:47:ASP:CB	48:BP:48:PRO:HA	1.96	0.94
51:BS:13:ARG:HG3	51:BS:14:VAL:H	1.32	0.94
52:BT:79:HIS:O	52:BT:80:SER:HB2	1.64	0.94
51:BS:54:LEU:HD13	51:BS:57:LYS:HA	1.48	0.94
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.49	0.94
1:AA:173:U:H5'	1:AA:197:A:O4'	1.65	0.94
30:B5:3:LYS:HD3	35:BA:2611:U:O2'	1.68	0.94
35:BA:329:G:H1	57:BY:19:LYS:HE3	1.33	0.94
35:BA:1058:G:H2'	35:BA:1059:G:H5"	1.48	0.94
35:BA:1528(A):A:H62	35:BA:1541:G:N2	1.65	0.94
35:BA:2306:C:O2	41:BG:45:GLU:HA	1.68	0.94
48:BP:23:PRO:CB	48:BP:33:ARG:HE	1.81	0.94
6:AF:24:GLU:HG2	6:AF:28:ARG:HH12	1.30	0.94
24:AY:454:MET:H	24:AY:458:HIS:HD2	1.06	0.94
28:B3:9:VAL:CG1	28:B3:55:ARG:CD	2.44	0.94
40:BF:84:VAL:HG22	40:BF:85:GLY:H	1.31	0.94
1:AA:1368:G:H2'	1:AA:1369:C:H5'	1.49	0.94
30:B5:40:LYS:CE	30:B5:46:CYS:HB3	1.98	0.94
1:AA:198:G:C6	1:AA:220:G:C2	2.55	0.93
1:AA:522:C:C2'	1:AA:523:A:H5'	1.97	0.93
1:AA:769:G:H2'	1:AA:770:C:H5'	1.47	0.93
3:AC:53:ALA:HB2	3:AC:115:LEU:HD13	1.50	0.93
29:B4:40:HIS:N	29:B4:41:PRO:CD	2.30	0.93
48:BP:23:PRO:HB2	48:BP:33:ARG:NE	1.82	0.93
9:AI:19:LEU:CB	9:AI:61:ALA:CB	2.23	0.93
2:AB:228:GLY:HA2	2:AB:229:VAL:HG13	0.94	0.93
17:AQ:9:VAL:HG12	17:AQ:56:VAL:HG22	1.47	0.93
25:B0:51:VAL:HG21	25:B0:79:VAL:O	1.68	0.93
29:B4:39:CYS:O	29:B4:40:HIS:HB2	1.68	0.93
33:B8:56:GLU:HA	33:B8:59:LYS:HZ1	1.30	0.93
35:BA:178:G:C2'	35:BA:179:G:H5'	1.97	0.93
35:BA:327:G:O2'	35:BA:328:U:H5'	1.68	0.93
48:BP:51:PHE:CE2	48:BP:53:GLY:HA3	2.03	0.93
54:BV:24:LYS:HA	54:BV:92:THR:HG23	1.51	0.93
12:AL:33:ARG:HD3	12:AL:62:SER:HB3	1.49	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B3:19:GLN:NE2	28:B3:52:HIS:HE1	1.66	0.93
35:BA:600:G:O2'	35:BA:601:C:H5'	1.67	0.93
39:BE:54:GLN:O	39:BE:55:ASN:HB2	1.68	0.93
1:AA:198:G:O6	1:AA:220:G:N1	2.01	0.93
48:BP:47:ASP:HB3	48:BP:48:PRO:HA	1.48	0.93
57:BY:28:LYS:HA	57:BY:38:ILE:HG22	1.51	0.93
35:BA:693:C:H2'	35:BA:694:U:C6	2.03	0.93
35:BA:1773:A:H2'	35:BA:1774:C:C5'	1.97	0.93
35:BA:2716:U:C2'	35:BA:2717:G:H5'	1.97	0.93
57:BY:3:VAL:H	57:BY:5:MET:HE3	1.34	0.93
1:AA:49:U:C2	1:AA:361:G:N2	2.37	0.93
1:AA:1371:G:O2'	1:AA:1372:U:H5'	1.67	0.93
37:BC:117:THR:CG2	37:BC:119:ASP:CB	2.45	0.93
51:BS:106:ARG:HD2	51:BS:108:GLY:H	1.31	0.93
1:AA:961:U:H1'	1:AA:962:C:H5'	1.49	0.93
31:B6:41:PRO:HD2	31:B6:46:HIS:N	1.82	0.93
1:AA:788:U:O2'	1:AA:789:U:H5'	1.68	0.93
42:BH:171:LEU:O	42:BH:173:PRO:HD3	1.69	0.93
1:AA:1238:A:P	1:AA:1335:C:H1'	2.09	0.92
2:AB:223:ILE:HG22	2:AB:227:GLY:O	1.69	0.92
24:AY:115:GLU:O	24:AY:118:SER:HB3	1.69	0.92
35:BA:2032:G:H21	39:BE:146:THR:CG2	1.80	0.92
1:AA:73:G:H1	1:AA:96:U:H3	0.99	0.92
1:AA:1029:C:H3'	1:AA:1030:C:C5'	2.00	0.92
2:AB:152:PHE:CZ	2:AB:155:LEU:HD12	2.05	0.92
24:AY:99:ARG:HH11	24:AY:402:ILE:N	1.68	0.92
32:B7:8:ASN:HD22	32:B7:8:ASN:C	1.78	0.92
35:BA:27:G:N2	35:BA:512:G:C2'	2.32	0.92
35:BA:673:C:C4'	40:BF:82:ILE:HD11	1.98	0.92
35:BA:1190:G:H5'	48:BP:35:HIS:H	1.31	0.92
35:BA:1416:G:O2'	35:BA:1417:C:H5	1.50	0.92
51:BS:15:ARG:HH11	51:BS:15:ARG:HB2	1.32	0.92
52:BT:85:LYS:HB3	52:BT:85:LYS:HZ2	1.27	0.92
2:AB:230:VAL:CB	2:AB:231:GLU:HA	1.94	0.92
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.49	0.92
19:AS:63:THR:HG23	19:AS:64:GLU:H	1.32	0.92
35:BA:1381:G:H2'	35:BA:1382:G:C5'	1.97	0.92
38:BD:44:ASN:HB3	38:BD:49:ILE:HA	1.51	0.92
53:BU:91:ASP:OD1	53:BU:96:ALA:HB2	1.70	0.92
3:AC:138:VAL:HG21	3:AC:168:ALA:HB1	1.51	0.92
28:B3:9:VAL:HG11	28:B3:55:ARG:HD2	1.48	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:32:LEU:HB2	33:B8:36:LYS:HZ1	1.34	0.92
13:AM:8:GLU:OE1	13:AM:22:ILE:HA	1.70	0.92
35:BA:2008:C:H2'	35:BA:2009:G:C8	2.05	0.92
1:AA:964:A:N6	1:AA:965:A:N6	2.17	0.92
48:BP:47:ASP:CB	48:BP:48:PRO:CA	2.47	0.92
50:BR:3:HIS:O	50:BR:5:LYS:N	2.03	0.92
52:BT:28:VAL:HG13	52:BT:29:ARG:N	1.81	0.92
1:AA:60:A:H1'	1:AA:61:G:O4'	1.70	0.92
1:AA:688:G:C6	1:AA:700:G:C6	2.58	0.92
1:AA:1049:U:H4'	1:AA:1050:G:O5'	1.66	0.92
29:B4:16:CYS:HA	29:B4:33:VAL:HG21	1.52	0.92
35:BA:747:U:N3	35:BA:2613:U:O4	2.01	0.92
35:BA:1649:G:O2'	35:BA:1650:G:H5'	1.69	0.92
35:BA:2176:A:H2'	35:BA:2177:C:C6	2.05	0.92
1:AA:556:C:H2'	1:AA:557:G:H5'	1.51	0.92
2:AB:228:GLY:C	2:AB:229:VAL:HG22	1.91	0.92
24:AY:534:ILE:HD11	24:AY:570:GLY:HA3	1.49	0.92
29:B4:21:VAL:HG12	29:B4:22:ILE:N	1.83	0.92
35:BA:1899:G:N2	35:BA:1902:C:H41	1.68	0.92
37:BC:103:LYS:HE3	37:BC:107:GLY:HA3	1.50	0.92
39:BE:60:ASN:OD1	39:BE:62:PRO:HD2	1.66	0.92
57:BY:7:VAL:HB	57:BY:8:LYS:NZ	1.85	0.92
35:BA:954:G:C2'	35:BA:955:C:C5'	2.47	0.91
1:AA:673:G:H2'	1:AA:674:G:C8	2.05	0.91
1:AA:964:A:N6	1:AA:965:A:H62	1.69	0.91
29:B4:33:VAL:HG13	29:B4:34:GLU:N	1.80	0.91
30:B5:47:PRO:HG2	30:B5:48:GLU:OE1	1.68	0.91
35:BA:1720:U:C2'	35:BA:1721:G:H5"	2.00	0.91
48:BP:146:VAL:HG22	48:BP:147:LEU:H	1.34	0.91
1:AA:704:A:C2'	1:AA:705:U:H5'	1.99	0.91
1:AA:1371:G:C2'	1:AA:1372:U:C5'	2.48	0.91
9:AI:112:LYS:HG3	9:AI:118:LYS:HA	1.50	0.91
35:BA:1104:C:H2'	35:BA:1105:U:H5'	1.49	0.91
35:BA:1540:U:C3'	35:BA:1541:G:H3'	1.98	0.91
48:BP:52:GLU:HG2	48:BP:57:THR:CG2	2.00	0.91
48:BP:84:ASN:ND2	48:BP:116:GLY:CA	2.33	0.91
13:AM:22:ILE:HG21	13:AM:66:LEU:HD23	1.53	0.91
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.33	0.91
35:BA:1104:C:C2'	35:BA:1105:U:H5'	1.99	0.91
50:BR:99:LYS:H	50:BR:99:LYS:HD2	1.35	0.91
2:AB:130:ARG:HH22	2:AB:134:GLU:HG3	1.36	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:497:PHE:O	24:AY:507:TYR:HB2	1.69	0.91
39:BE:36:ARG:HH21	39:BE:88:GLY:CA	1.82	0.91
1:AA:1279:A:H3'	1:AA:1279:A:N3	1.84	0.91
7:AG:15:ASP:HB3	7:AG:19:GLY:O	1.71	0.91
29:B4:56:VAL:HG22	29:B4:57:GLU:H	1.32	0.91
35:BA:2362:G:O2'	35:BA:2363:C:H5'	1.70	0.91
24:AY:99:ARG:HD3	24:AY:401:SER:HA	1.51	0.91
30:B5:53:ALA:HA	30:B5:56:LYS:NZ	1.84	0.91
46:BN:24:GLY:O	46:BN:28:THR:HG23	1.69	0.91
53:BU:34:LYS:HE2	53:BU:34:LYS:HA	1.50	0.91
1:AA:314:C:O2'	1:AA:315:A:H5'	1.70	0.91
1:AA:1148:U:C2'	1:AA:1149:C:H5'	2.00	0.91
1:AA:1368:G:C2'	1:AA:1369:C:H5'	1.99	0.91
12:AL:45:PRO:HG2	12:AL:51:ALA:N	1.86	0.91
29:B4:60:GLN:HB2	29:B4:62:ARG:NH1	1.85	0.91
35:BA:953:A:N6	35:BA:965:C:N4	2.17	0.91
35:BA:2029:G:O6	35:BA:2033:A:OP1	1.88	0.91
1:AA:353:A:H8	1:AA:353:A:H5'	1.34	0.91
1:AA:1386:G:C2	1:AA:1387:G:N7	2.38	0.91
31:B6:7:ILE:CG2	31:B6:27:LYS:NZ	2.32	0.91
35:BA:2312:U:C2'	35:BA:2313:C:H5"	1.98	0.91
35:BA:2409:G:O2'	35:BA:2410:G:H5'	1.71	0.91
22:AV:18:G:O2'	22:AV:57:G:N2	2.02	0.91
28:B3:19:GLN:HE22	28:B3:52:HIS:HE1	1.01	0.91
38:BD:69:ARG:HD3	38:BD:105:ILE:HD11	1.53	0.91
1:AA:186:C:O2'	1:AA:187:C:H5'	1.71	0.90
22:AV:41:C:C2'	22:AV:42:C:H5'	2.00	0.90
35:BA:697:C:C2'	35:BA:698:C:H5'	2.00	0.90
35:BA:1216:G:O2'	35:BA:1217:C:H5'	1.70	0.90
35:BA:1994:C:O2'	35:BA:1995:U:H5'	1.71	0.90
48:BP:16:ARG:NH1	48:BP:16:ARG:HB2	1.85	0.90
1:AA:115:G:H1'	1:AA:116:A:OP2	1.70	0.90
1:AA:1387:G:O2'	1:AA:1388:C:H5'	1.70	0.90
29:B4:15:ILE:O	29:B4:16:CYS:HB2	1.69	0.90
35:BA:2713:A:H3'	35:BA:2714:G:C5'	2.00	0.90
58:BZ:97:GLU:HG3	58:BZ:127:LYS:HB3	1.52	0.90
35:BA:2124:G:H5"	37:BC:175:PRO:HG3	1.54	0.90
52:BT:28:VAL:HG22	52:BT:45:PHE:O	1.30	0.90
53:BU:92:ARG:HD3	53:BU:94:ASN:HB3	1.52	0.90
1:AA:1279:A:H5"	1:AA:1280:A:OP1	1.71	0.90
4:AD:17:VAL:HG12	4:AD:18:LYS:N	1.85	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:176:G:O2'	35:BA:177:G:H5'	1.69	0.90
35:BA:925:C:H2'	35:BA:926:A:H5"	1.53	0.90
35:BA:1984:G:C2'	35:BA:1985:G:H5'	2.01	0.90
48:BP:57:THR:C	48:BP:59:LEU:H	1.79	0.90
35:BA:1484:G:C2'	35:BA:1485:G:H5"	2.02	0.90
1:AA:155:C:H2'	1:AA:156:G:H8	1.35	0.90
9:AI:19:LEU:N	9:AI:61:ALA:HB1	1.84	0.90
25:B0:45:PHE:HE1	25:B0:77:ARG:HE	1.17	0.90
26:B1:75:GLU:O	26:B1:78:LYS:HG2	1.70	0.90
35:BA:1455:G:C2'	35:BA:1456:G:H5'	2.01	0.90
52:BT:16:ARG:HB3	52:BT:16:ARG:HH11	1.35	0.90
58:BZ:165:VAL:HG12	58:BZ:167:PRO:HA	1.54	0.90
2:AB:167:PRO:HD2	2:AB:188:ALA:HB2	1.49	0.90
29:B4:60:GLN:HB2	29:B4:62:ARG:HH11	1.37	0.90
41:BG:59:GLU:HG3	41:BG:60:LEU:H	1.37	0.90
1:AA:187:C:O2'	1:AA:188:C:H5'	1.72	0.90
35:BA:15:G:H2'	35:BA:16:G:H5'	1.53	0.90
35:BA:1884:A:H2'	35:BA:1885:A:H5"	1.50	0.90
50:BR:2:ARG:HH11	50:BR:2:ARG:HG3	1.34	0.90
51:BS:34:HIS:HB3	51:BS:53:SER:HB3	1.53	0.90
1:AA:775:G:C2'	1:AA:776:G:H5'	2.02	0.90
33:B8:59:LYS:HB2	33:B8:59:LYS:NZ	1.85	0.90
35:BA:55:G:N2	35:BA:115:C:O2	2.04	0.90
40:BF:84:VAL:CG2	40:BF:85:GLY:N	2.33	0.90
48:BP:84:ASN:CG	48:BP:116:GLY:CA	2.41	0.90
57:BY:42:VAL:HG21	57:BY:67:LEU:HD13	1.52	0.90
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.07	0.90
20:AT:75:ASN:H	20:AT:75:ASN:HD22	1.15	0.90
35:BA:1786:A:H1'	35:BA:1938:A:N6	1.86	0.90
35:BA:2000:G:C2	35:BA:2001:A:C8	2.60	0.90
35:BA:2656:U:H3	35:BA:2665:A:H2	1.15	0.90
38:BD:27:THR:HG23	38:BD:83:GLU:HG2	1.54	0.90
52:BT:28:VAL:CG2	52:BT:45:PHE:O	2.19	0.90
2:AB:17:PHE:C	2:AB:17:PHE:CD1	2.44	0.89
35:BA:605:C:HO2'	35:BA:606:U:H5'	1.33	0.89
35:BA:629:G:H2'	35:BA:630:G:H5'	1.52	0.89
3:AC:120:VAL:O	3:AC:123:GLN:HB2	1.72	0.89
24:AY:454:MET:H	24:AY:458:HIS:CD2	1.91	0.89
35:BA:27:G:H22	35:BA:512:G:H2'	1.36	0.89
35:BA:1963:U:O2	35:BA:1963:U:H2'	1.70	0.89
40:BF:160:ASN:HD21	40:BF:162:LEU:HD13	1.34	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:52:GLU:HG2	48:BP:57:THR:HG22	1.53	0.89
1:AA:491:G:H2'	1:AA:492:G:C8	2.07	0.89
1:AA:938:A:O2'	1:AA:939:G:H5'	1.73	0.89
35:BA:17:G:H2'	35:BA:18:C:C6	2.06	0.89
1:AA:1152:A:O2'	1:AA:1153:C:H5'	1.72	0.89
9:AI:95:LYS:HE3	9:AI:96:LEU:HD22	1.54	0.89
29:B4:21:VAL:CG1	29:B4:22:ILE:H	1.86	0.89
35:BA:1076:C:H4'	58:BZ:112:ARG:CZ	2.02	0.89
35:BA:2105:C:C2'	35:BA:2106:G:H5"	2.01	0.89
37:BC:31:LYS:NZ	37:BC:181:PHE:O	2.06	0.89
24:AY:526:VAL:HB	24:AY:566:THR:HA	1.51	0.89
1:AA:859:A:C2'	1:AA:860:A:H5'	2.03	0.89
35:BA:1799:G:H1'	35:BA:1800:C:OP2	1.70	0.89
35:BA:1970:A:H5'	35:BA:1972:A:C1'	2.01	0.89
35:BA:2129:C:N4	35:BA:2159:G:O6	2.04	0.89
52:BT:78:LEU:O	52:BT:79:HIS:HD2	1.54	0.89
1:AA:204:U:H4'	1:AA:216:G:O5'	1.72	0.89
30:B5:2:ALA:HA	35:BA:2015:A:H1'	1.55	0.89
2:AB:82:ARG:O	2:AB:86:GLU:HG3	1.71	0.89
35:BA:178:G:H2'	35:BA:179:G:H5'	1.54	0.89
35:BA:2131:G:N2	35:BA:2133:A:C2	2.40	0.89
37:BC:121:MET:HA	37:BC:124:VAL:HG12	1.55	0.89
39:BE:117:MET:HE1	39:BE:136:ARG:HA	1.53	0.89
52:BT:29:ARG:NH1	52:BT:88:ILE:HD11	1.87	0.89
1:AA:364:A:O2'	1:AA:365:U:H5'	1.73	0.89
1:AA:522:C:H2'	1:AA:523:A:H5'	1.53	0.89
3:AC:72:LYS:HG2	3:AC:75:VAL:CG2	1.97	0.89
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.38	0.89
27:B2:9:GLN:CD	27:B2:9:GLN:N	2.30	0.89
33:B8:28:GLY:O	33:B8:32:LEU:HD23	1.70	0.89
35:BA:2032:G:H21	39:BE:146:THR:HG23	1.36	0.89
37:BC:117:THR:H	37:BC:118:PRO:HA	0.74	0.89
41:BG:77:ILE:HG23	41:BG:80:PHE:HB2	1.52	0.89
58:BZ:151:HIS:HB2	58:BZ:170:THR:HA	1.53	0.89
13:AM:4:ILE:HG22	13:AM:5:ALA:N	1.88	0.89
24:AY:546:ILE:HG23	24:AY:590:ILE:HG13	1.54	0.89
35:BA:155:U:H2'	35:BA:156:U:H5"	1.51	0.89
35:BA:910:A:H62	49:BQ:12:GLN:HA	1.37	0.89
38:BD:35:LYS:H	38:BD:36:PRO:CD	1.85	0.89
1:AA:40:C:O2'	1:AA:41:G:H5'	1.73	0.88
25:B0:7:LEU:HD13	49:BQ:85:LYS:HE2	1.53	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:59:LEU:HA	48:BP:61:ARG:NE	1.87	0.88
1:AA:697:U:C2'	1:AA:698:G:H5'	2.02	0.88
25:B0:43:THR:HG23	25:B0:43:THR:O	1.72	0.88
29:B4:12:ALA:C	29:B4:24:THR:HG23	1.97	0.88
35:BA:30:G:H2'	35:BA:31:C:C6	2.08	0.88
35:BA:262:A:O2'	35:BA:263:C:H5'	1.73	0.88
48:BP:50:ARG:O	48:BP:52:GLU:HB2	1.71	0.88
52:BT:23:ARG:CB	52:BT:24:PRO:CD	2.49	0.88
1:AA:322:C:O2'	1:AA:323:U:H5'	1.72	0.88
1:AA:862:C:C2'	1:AA:863:U:C5'	2.52	0.88
48:BP:77:ARG:HD3	48:BP:78:PRO:HD2	1.53	0.88
57:BY:8:LYS:HD2	57:BY:8:LYS:N	1.88	0.88
1:AA:1238:A:OP1	1:AA:1335:C:O2'	1.91	0.88
4:AD:7:PRO:HB2	4:AD:10:ARG:HD2	1.54	0.88
35:BA:856:C:C2'	35:BA:857:C:H6	1.87	0.88
54:BV:15:GLU:HG3	54:BV:16:PRO:HD2	1.56	0.88
1:AA:1285:A:H4'	1:AA:1286:A:H5'	1.55	0.88
35:BA:332:A:H1'	35:BA:333:G:OP1	1.74	0.88
35:BA:743:G:O2'	35:BA:744:G:H5'	1.74	0.88
35:BA:953:A:N6	35:BA:965:C:H42	1.72	0.88
35:BA:1902:C:C2'	38:BD:244:ARG:HB2	2.03	0.88
38:BD:30:GLU:HG3	38:BD:63:ARG:CZ	2.04	0.88
27:B2:10:LEU:O	27:B2:14:ARG:HB2	1.73	0.88
27:B2:70:GLN:HE21	27:B2:71:ASN:N	1.72	0.88
1:AA:548:G:C2'	1:AA:549:C:H5'	2.04	0.88
31:B6:25:LYS:HE2	33:B8:34:TRP:HE1	1.39	0.88
41:BG:139:LEU:HB3	41:BG:153:ARG:O	1.74	0.88
47:BO:4:PRO:O	47:BO:5:GLN:HB2	1.71	0.88
50:BR:9:LYS:C	50:BR:10:LEU:HD23	1.99	0.88
2:AB:17:PHE:C	2:AB:17:PHE:HD1	1.76	0.88
31:B6:52:VAL:HG22	31:B6:53:LYS:H	1.39	0.88
35:BA:2681:C:H5	35:BA:2725:A:H62	1.19	0.88
39:BE:141:ILE:CA	39:BE:154:LYS:HE2	2.03	0.88
41:BG:77:ILE:HG13	41:BG:82:LEU:CB	2.02	0.88
28:B3:9:VAL:CG1	28:B3:55:ARG:HD2	2.03	0.88
1:AA:197:A:N6	1:AA:221:C:H4'	1.88	0.88
35:BA:179:G:C2'	35:BA:180:G:C5'	2.51	0.88
35:BA:179:G:H2'	35:BA:180:G:C5'	2.04	0.88
1:AA:1127:G:H1	1:AA:1145:C:H42	1.20	0.87
1:AA:1184:G:O2'	1:AA:1185:G:H5'	1.74	0.87
1:AA:1229:A:H5'	1:AA:1229:A:H8	1.36	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1330:U:H3'	1:AA:1331:G:O4'	1.74	0.87
28:B3:1:MET:HB3	28:B3:2:PRO:HD2	1.56	0.87
35:BA:1120:G:O2'	35:BA:1121:C:H5'	1.73	0.87
35:BA:2147:G:H2'	35:BA:2148:G:O4'	1.74	0.87
25:B0:14:ARG:HG2	25:B0:14:ARG:HH11	1.39	0.87
31:B6:10:LEU:CD2	31:B6:10:LEU:N	2.30	0.87
35:BA:1332:G:N2	35:BA:1609:A:O2'	2.07	0.87
1:AA:173:U:H5"	1:AA:197:A:H5'	1.57	0.87
20:AT:75:ASN:HD22	20:AT:75:ASN:N	1.66	0.87
24:AY:618:GLY:HA3	35:BA:1095:A:OP1	1.75	0.87
28:B3:9:VAL:CG1	28:B3:55:ARG:HD3	2.02	0.87
35:BA:1890:A:H2'	35:BA:1891:G:C5'	2.03	0.87
35:BA:2127:G:H2'	35:BA:2128:C:H5'	1.54	0.87
35:BA:2029:G:H1	35:BA:2033:A:P	1.98	0.87
35:BA:2180:U:H5'	35:BA:2180:U:H6	1.39	0.87
42:BH:3:ARG:HB3	42:BH:6:ARG:HB2	1.56	0.87
1:AA:522:C:O2'	1:AA:523:A:H5'	1.74	0.87
24:AY:84:THR:HG21	24:AY:94:VAL:HG22	1.56	0.87
35:BA:2393:A:H4'	48:BP:61:ARG:O	1.74	0.87
51:BS:30:ARG:HD3	51:BS:97:ARG:HG2	1.54	0.87
1:AA:1076:C:O2'	1:AA:1077:G:H5'	1.73	0.87
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.09	0.87
24:AY:584:ILE:HG22	24:AY:588:MET:HE2	1.57	0.87
27:B2:41:ILE:HD12	27:B2:43:GLN:HG3	1.56	0.87
50:BR:45:ARG:HG3	50:BR:46:GLY:H	1.37	0.87
58:BZ:48:PHE:HE2	58:BZ:74:VAL:HG21	1.37	0.87
1:AA:1313:U:H3'	19:AS:6:LYS:NZ	1.90	0.87
2:AB:16:HIS:HE1	2:AB:210:SER:O	1.58	0.87
35:BA:896:A:H1'	58:BZ:176:PRO:HG3	1.56	0.87
35:BA:2207:G:O2'	35:BA:2208:A:H5"	1.74	0.87
37:BC:124:VAL:O	37:BC:128:LEU:HB3	1.75	0.87
48:BP:112:LEU:H	48:BP:128:HIS:HD2	1.19	0.87
54:BV:1:MET:O	54:BV:2:PHE:HB3	1.72	0.87
3:AC:83:ARG:HG3	3:AC:84:ILE:H	1.37	0.87
35:BA:462:C:H2'	35:BA:463:G:H5'	1.56	0.87
35:BA:699:A:C2'	35:BA:700:G:H5'	2.05	0.87
35:BA:968:G:HO2'	35:BA:969:U:H5'	1.37	0.87
38:BD:35:LYS:O	38:BD:35:LYS:HD2	1.73	0.87
47:BO:13:ASN:HD21	47:BO:96:THR:H	1.20	0.87
58:BZ:151:HIS:HA	58:BZ:171:ILE:HG12	1.57	0.87
1:AA:688:G:O6	1:AA:700:G:N1	2.08	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:11:LEU:H	31:B6:11:LEU:HD13	1.39	0.87
1:AA:46:G:O2'	1:AA:365:U:H1'	1.75	0.86
1:AA:560:U:H4'	1:AA:561:U:H5"	1.55	0.86
35:BA:272(I):U:H6	35:BA:272(I):U:H5'	1.40	0.86
35:BA:1412:A:O2'	35:BA:1413:G:H5'	1.73	0.86
35:BA:1821:A:O2'	35:BA:1822:G:H5'	1.74	0.86
35:BA:1892:C:O2'	35:BA:1893:C:H5'	1.73	0.86
46:BN:12:ARG:HH21	46:BN:135:PRO:HG2	1.37	0.86
2:AB:155:LEU:HD21	2:AB:159:PRO:HG3	1.57	0.86
6:AF:24:GLU:HG2	6:AF:28:ARG:NH1	1.89	0.86
35:BA:43:A:O2'	35:BA:44:G:H5'	1.75	0.86
35:BA:2000:G:O2'	35:BA:2001:A:H5'	1.73	0.86
1:AA:106:C:C2'	1:AA:107:G:H5'	2.05	0.86
26:B1:57:GLU:HG2	26:B1:58:ILE:H	1.38	0.86
29:B4:39:CYS:HB3	29:B4:41:PRO:CD	2.05	0.86
35:BA:958:U:OP2	49:BQ:14:ARG:NH1	2.07	0.86
35:BA:2715:C:H2'	35:BA:2716:U:C6	2.11	0.86
57:BY:42:VAL:HG12	57:BY:65:ALA:HB3	1.57	0.86
1:AA:112:G:O2'	1:AA:113:G:H5'	1.75	0.86
1:AA:547:A:H4'	1:AA:548:G:O5'	1.76	0.86
1:AA:1305:G:HO2'	1:AA:1306:A:H8	0.91	0.86
7:AG:115:ARG:O	7:AG:118:VAL:HG12	1.76	0.86
35:BA:1023:U:H2'	35:BA:1024:G:C5'	2.00	0.86
35:BA:2392:A:H2	35:BA:2424:C:H42	1.18	0.86
38:BD:24:ILE:HG23	38:BD:25:THR:N	1.86	0.86
57:BY:28:LYS:HB2	57:BY:38:ILE:H	1.41	0.86
1:AA:105:G:H2'	1:AA:106:C:C6	2.11	0.86
29:B4:56:VAL:HA	29:B4:60:GLN:NE2	1.90	0.86
35:BA:528:A:C2	35:BA:2042:A:H2'	2.11	0.86
13:AM:7:VAL:CG2	41:BG:147:ASP:OD1	2.24	0.86
24:AY:238:THR:HG22	24:AY:241:GLU:HG2	1.56	0.86
25:B0:66:VAL:O	25:B0:81:VAL:HG13	1.76	0.86
35:BA:1822:G:H2'	35:BA:1823:G:C8	2.11	0.86
35:BA:2580:U:H5'	39:BE:131:ALA:HB2	1.58	0.86
46:BN:128:HIS:CD2	46:BN:130:HIS:H	1.92	0.86
50:BR:7:GLY:HA3	50:BR:8:ARG:NH2	1.90	0.86
1:AA:558:G:H2'	1:AA:559:A:H2	1.40	0.86
1:AA:940:C:C2'	1:AA:941:G:H5'	2.05	0.86
28:B3:8:LEU:HD13	28:B3:31:LEU:HD23	1.56	0.86
35:BA:2029:G:C6	35:BA:2033:A:OP1	2.28	0.86
35:BA:2787:C:H1'	39:BE:61:ARG:HH11	1.38	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:133:GLN:HG2	46:BN:134:ARG:H	1.41	0.86
1:AA:37:U:C2'	1:AA:38:G:C5'	2.53	0.86
1:AA:61:G:O2'	1:AA:62:U:H5'	1.75	0.86
1:AA:1238:A:OP1	1:AA:1335:C:C2'	2.24	0.86
35:BA:604:G:H2'	35:BA:605:C:H5'	1.54	0.86
35:BA:914:C:H2'	35:BA:915:C:H5'	1.54	0.86
35:BA:1890:A:C3'	35:BA:1891:G:H5'	2.06	0.86
41:BG:39:ILE:HD12	41:BG:157:ILE:HG12	1.55	0.86
50:BR:118:GLU:OE1	50:BR:118:GLU:HA	1.75	0.86
52:BT:32:TYR:O	52:BT:33:LYS:HB2	1.75	0.86
1:AA:308:C:H2'	1:AA:309:G:H8	1.39	0.86
1:AA:1305:G:OP1	21:AU:2:GLY:HA2	1.73	0.86
10:AJ:4:ILE:HD13	10:AJ:77:PRO:HG3	1.57	0.86
35:BA:32:C:O2'	35:BA:33:U:H5'	1.76	0.86
40:BF:11:VAL:HG12	40:BF:12:LEU:HG	1.56	0.86
1:AA:1077:G:N1	1:AA:1081:G:C6	2.44	0.86
1:AA:1388:C:O2'	1:AA:1389:C:H5'	1.75	0.86
37:BC:52:PRO:HG2	37:BC:53:ARG:HD3	1.57	0.86
1:AA:311:C:H2'	1:AA:312:C:H5'	0.86	0.85
35:BA:1494:A:C2'	35:BA:1495:A:H5"	2.06	0.85
12:AL:83:VAL:HG11	12:AL:100:ILE:HG12	1.58	0.85
15:AO:68:ARG:HH11	15:AO:68:ARG:CB	1.89	0.85
31:B6:10:LEU:H	31:B6:10:LEU:HD23	1.40	0.85
35:BA:693:C:O2'	35:BA:694:U:H5'	1.74	0.85
42:BH:83:TYR:HB3	42:BH:134:SER:HA	1.58	0.85
1:AA:522:C:N4	12:AL:53:ARG:NH2	2.24	0.85
1:AA:980:C:H6	1:AA:980:C:H5'	1.40	0.85
1:AA:1523:G:C2'	1:AA:1524:C:H5'	2.06	0.85
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.74	0.85
2:AB:231:GLU:CB	2:AB:232:PRO:CD	2.48	0.85
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HD2	2.09	0.85
31:B6:17:LYS:HB2	31:B6:18:ARG:HH11	1.41	0.85
35:BA:1819:A:OP1	38:BD:158:ALA:N	2.09	0.85
35:BA:1988:C:C2'	35:BA:1989:G:C5'	2.52	0.85
56:BX:8:ILE:HD11	56:BX:42:ALA:HB1	1.56	0.85
1:AA:1498:U:H4'	1:AA:1499:A:O5'	1.76	0.85
19:AS:41:VAL:HB	19:AS:44:MET:HB3	1.56	0.85
27:B2:64:LEU:HD23	27:B2:64:LEU:C	2.02	0.85
35:BA:27:G:N2	35:BA:512:G:O2'	2.08	0.85
35:BA:528:A:N1	35:BA:2042:A:H2'	1.92	0.85
54:BV:39:LEU:HD12	54:BV:47:VAL:HG11	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:89:GLY:C	2:AB:90:MET:HG2	2.00	0.85
24:AY:109:ASP:OD1	24:AY:138:LYS:HD2	1.77	0.85
35:BA:111:A:O2'	35:BA:112:U:H5'	1.73	0.85
35:BA:653:A:H3'	35:BA:653:A:N3	1.91	0.85
35:BA:1988:C:H2'	35:BA:1989:G:C5'	2.07	0.85
48:BP:16:ARG:CZ	48:BP:18:ARG:HG2	2.06	0.85
35:BA:2009:G:OP1	55:BW:41:LYS:HE2	1.76	0.85
35:BA:2757:A:C2'	35:BA:2758:A:C5'	2.54	0.85
36:BB:7:G:H2'	36:BB:8:U:H5"	1.59	0.85
40:BF:89:VAL:HG12	40:BF:90:PHE:N	1.90	0.85
48:BP:16:ARG:HB2	48:BP:16:ARG:HH11	1.37	0.85
1:AA:509:A:H3'	1:AA:509:A:OP2	1.76	0.85
10:AJ:33:GLN:HB2	10:AJ:75:ILE:HG12	1.58	0.85
32:B7:34:ARG:HG3	32:B7:34:ARG:HH11	1.41	0.85
35:BA:526:A:O2'	35:BA:2043:C:O2'	1.93	0.85
35:BA:1779:U:H5	35:BA:1784:A:N7	1.74	0.85
35:BA:629:G:C2'	35:BA:630:G:H5'	2.06	0.85
13:AM:91:ARG:HB3	13:AM:98:VAL:HG12	1.57	0.85
26:B1:29:GLY:CA	35:BA:2396:G:O2'	2.24	0.85
35:BA:1379:A:H4'	35:BA:1380:G:OP2	1.77	0.85
48:BP:51:PHE:CD2	48:BP:52:GLU:O	2.30	0.85
1:AA:495:A:O4'	1:AA:496:A:C8	2.30	0.85
1:AA:1127:G:H1	1:AA:1145:C:N4	1.73	0.85
35:BA:2032:G:N2	39:BE:146:THR:HG23	1.92	0.85
35:BA:2712:U:O2'	35:BA:2713:A:H5'	1.76	0.85
27:B2:16:LEU:O	27:B2:17:SER:HB3	1.75	0.84
35:BA:2127:G:O2'	35:BA:2128:C:H5"	1.76	0.84
52:BT:80:SER:CB	52:BT:81:PRO:HD3	2.01	0.84
1:AA:1157:A:H4'	1:AA:1158:C:O5'	1.77	0.84
61:AY:701:GCP:O1G	62:AY:2002:HOH:O	1.94	0.84
40:BF:25:PRO:HB3	40:BF:119:ARG:HB2	1.59	0.84
41:BG:105:LYS:HE2	41:BG:105:LYS:N	1.92	0.84
1:AA:949:A:H2'	1:AA:950:U:H5"	1.42	0.84
1:AA:1002:G:H2'	1:AA:1003:G:C8	2.12	0.84
3:AC:40:ARG:O	3:AC:44:GLU:HG2	1.77	0.84
25:B0:29:GLN:O	25:B0:67:VAL:HG23	1.76	0.84
41:BG:141:PHE:HD1	41:BG:142:PRO:HA	1.42	0.84
57:BY:28:LYS:CB	57:BY:37:VAL:HB	2.07	0.84
1:AA:682:G:H5"	38:BD:169:GLU:OE1	1.78	0.84
1:AA:1124:G:H5'	10:AJ:35:SER:HB2	1.60	0.84
1:AA:1182:G:C8	1:AA:1182:G:OP2	2.30	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:69:VAL:HA	24:AY:82:ILE:CG1	2.07	0.84
24:AY:614:GLU:HA	24:AY:617:MET:HE3	1.58	0.84
30:B5:40:LYS:NZ	30:B5:46:CYS:HB3	1.91	0.84
40:BF:157:VAL:HG13	40:BF:194:MET:HG2	1.57	0.84
56:BX:35:THR:HG22	56:BX:37:THR:H	1.42	0.84
57:BY:96:ILE:HG21	57:BY:99:CYS:SG	2.18	0.84
1:AA:264:U:H2'	1:AA:265:G:C5'	2.07	0.84
9:AI:23:ASN:HD22	9:AI:23:ASN:N	1.75	0.84
29:B4:12:ALA:H	29:B4:24:THR:CB	1.88	0.84
35:BA:1412:A:C2'	35:BA:1413:G:H5'	2.07	0.84
48:BP:16:ARG:C	48:BP:16:ARG:HD3	2.02	0.84
1:AA:348:G:C2'	1:AA:349:A:H5'	2.08	0.84
2:AB:204:ASN:HD22	2:AB:205:ASP:N	1.76	0.84
3:AC:22:TRP:CE3	3:AC:22:TRP:O	2.30	0.84
7:AG:56:GLN:O	7:AG:57:GLU:HB3	1.78	0.84
35:BA:1455:G:H2'	35:BA:1456:G:H5'	1.57	0.84
35:BA:2009:G:C2'	35:BA:2010:G:C5'	2.51	0.84
40:BF:84:VAL:HG22	40:BF:85:GLY:N	1.91	0.84
58:BZ:149:SER:HB2	58:BZ:173:ALA:HA	1.57	0.84
1:AA:264:U:O2'	1:AA:265:G:H5'	1.76	0.84
2:AB:16:HIS:O	2:AB:17:PHE:CG	2.30	0.84
24:AY:530:VAL:HG22	24:AY:531:GLY:H	1.40	0.84
25:B0:62:LEU:HD23	25:B0:62:LEU:N	1.93	0.84
35:BA:1865:G:H5'	35:BA:1865:G:H8	1.42	0.84
1:AA:1175:G:C2'	1:AA:1176:A:H5'	2.06	0.84
2:AB:82:ARG:HA	2:AB:92:TYR:CZ	2.13	0.84
31:B6:27:LYS:CG	31:B6:30:THR:HB	2.08	0.84
35:BA:699:A:H2'	35:BA:700:G:H5'	1.60	0.84
35:BA:1460:A:O2'	35:BA:1461:G:H5'	1.77	0.84
35:BA:1803:A:O2'	38:BD:259:THR:HG21	1.78	0.84
1:AA:173:U:C2	1:AA:197:A:C2	2.66	0.84
1:AA:1488:G:HO2'	1:AA:1489:G:H5'	1.40	0.84
1:AA:1523:G:H2'	1:AA:1524:C:H5'	1.60	0.84
10:AJ:44:VAL:HG22	10:AJ:66:ARG:HG2	1.59	0.84
25:B0:19:LYS:NZ	25:B0:41:ARG:HH22	1.75	0.84
35:BA:1119:C:H2'	35:BA:1120:G:H5'	1.57	0.84
35:BA:1297:C:O2	35:BA:1643:G:N2	2.11	0.84
38:BD:267:SER:O	38:BD:269:PHE:N	2.11	0.84
1:AA:191:G:C4	20:AT:105:SER:HB3	2.13	0.84
1:AA:773:G:C2'	1:AA:774:G:H5'	2.08	0.84
35:BA:2787:C:H1'	39:BE:61:ARG:HG3	1.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:32:SER:O	38:BD:36:PRO:HD3	1.78	0.84
41:BG:59:GLU:HG3	41:BG:60:LEU:N	1.90	0.84
1:AA:495:A:C1'	1:AA:496:A:C8	2.60	0.83
1:AA:1400:C:H4'	1:AA:1401:G:OP2	1.74	0.83
7:AG:50:ILE:HD11	7:AG:61:VAL:HB	1.58	0.83
24:AY:252:ASP:HB3	24:AY:254:LYS:NZ	1.93	0.83
25:B0:11:ARG:HD3	25:B0:12:ASN:H	1.41	0.83
35:BA:528:A:O2'	35:BA:529:A:H5'	1.78	0.83
35:BA:1106:G:C2'	35:BA:1107:G:H5'	2.07	0.83
35:BA:1228:G:N2	35:BA:1229:G:H1'	1.93	0.83
47:BO:20:MET:HE3	47:BO:44:LYS:HE3	1.60	0.83
51:BS:66:ALA:HA	51:BS:69:VAL:HG12	1.59	0.83
55:BW:2:GLU:OE1	55:BW:72:LYS:HE3	1.77	0.83
58:BZ:51:ALA:HB1	58:BZ:57:ILE:HD11	1.58	0.83
1:AA:1399:C:H5'	1:AA:1400:C:H3'	1.60	0.83
3:AC:22:TRP:CE2	14:AN:54:PRO:HG2	2.13	0.83
26:B1:11:ARG:HB3	26:B1:12:PRO:HD2	1.60	0.83
35:BA:1653:G:H1'	35:BA:1654:A:OP2	1.78	0.83
35:BA:2355:C:C2'	35:BA:2356:C:H5'	2.07	0.83
35:BA:2358:G:H2'	35:BA:2359:C:H5'	1.59	0.83
1:AA:63:C:H5'	1:AA:64:G:OP2	1.78	0.83
1:AA:1073:U:O2'	1:AA:1074:G:H5'	1.77	0.83
4:AD:150:GLU:CD	4:AD:151:LYS:H	1.85	0.83
35:BA:108:U:C2'	35:BA:109:G:H5'	2.08	0.83
35:BA:259:G:H2'	35:BA:260:G:H8	1.42	0.83
35:BA:1640:C:H2'	35:BA:1641:A:H5'	1.59	0.83
24:AY:196:ILE:HG13	24:AY:197:ARG:H	1.43	0.83
35:BA:71:A:H2	56:BX:31:HIS:HE1	1.27	0.83
35:BA:955:C:C2'	35:BA:956:G:C5'	2.51	0.83
37:BC:103:LYS:HA	37:BC:103:LYS:HZ2	1.44	0.83
29:B4:68:ARG:HD3	29:B4:71:ARG:HD3	1.58	0.83
31:B6:17:LYS:HA	31:B6:17:LYS:HE2	1.58	0.83
35:BA:1038:C:C3'	35:BA:1039:G:H5"	2.08	0.83
35:BA:1805:U:C2'	35:BA:1806:C:H5'	2.08	0.83
35:BA:2287:A:H62	35:BA:2344:U:H3	1.27	0.83
35:BA:2403:C:C5	35:BA:2403:C:OP2	2.31	0.83
1:AA:862:C:H2'	1:AA:863:U:C5'	2.00	0.83
1:AA:1495:U:O2'	1:AA:1496:C:H5'	1.78	0.83
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	1.60	0.83
3:AC:152:ILE:HG12	3:AC:167:TRP:HB2	1.60	0.83
9:AI:20:ARG:O	9:AI:59:PHE:CA	2.26	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:24:LYS:HB2	25:B0:37:LEU:O	1.78	0.83
26:B1:59:THR:O	26:B1:60:PHE:CD1	2.30	0.83
35:BA:246:C:C2'	35:BA:247:G:C5'	2.42	0.83
37:BC:80:LYS:CE	37:BC:120:VAL:HG12	2.08	0.83
42:BH:43:VAL:HG12	42:BH:52:VAL:HG22	1.59	0.83
47:BO:107:ARG:HD3	52:BT:36:GLU:HG3	1.60	0.83
2:AB:228:GLY:CA	2:AB:229:VAL:CB	2.56	0.83
7:AG:121:ALA:N	7:AG:124:LEU:HD13	1.92	0.83
11:AK:70:LYS:HA	11:AK:73:MET:HE3	1.59	0.83
13:AM:4:ILE:HG22	13:AM:5:ALA:H	1.41	0.83
19:AS:62:ILE:HD13	19:AS:62:ILE:O	1.78	0.83
35:BA:955:C:O2'	35:BA:956:G:H5'	1.79	0.83
35:BA:1596:A:C2'	35:BA:1597:A:C5'	2.53	0.83
46:BN:3:THR:HG22	46:BN:4:TYR:H	1.43	0.83
10:AJ:58:ASP:O	10:AJ:59:SER:HB3	1.79	0.83
14:AN:25:VAL:HG23	14:AN:38:GLY:O	1.77	0.83
24:AY:99:ARG:HD3	24:AY:401:SER:CA	2.09	0.83
29:B4:14:ILE:O	29:B4:15:ILE:HD12	1.79	0.83
35:BA:953:A:H61	35:BA:965:C:N4	1.77	0.83
39:BE:75:VAL:O	39:BE:77:ILE:N	2.11	0.83
40:BF:110:LEU:HD22	40:BF:202:PHE:HE1	1.41	0.83
41:BG:137:GLU:HG2	41:BG:154:GLY:CA	2.09	0.83
26:B1:26:ARG:HG3	26:B1:27:GLU:H	1.43	0.83
35:BA:523:C:H2'	35:BA:524:U:H5'	1.58	0.83
35:BA:833:U:C4'	48:BP:52:GLU:H	1.91	0.83
35:BA:1697:G:H3'	35:BA:1698:A:H5'	1.59	0.83
1:AA:40:C:H2'	1:AA:41:G:H8	1.44	0.83
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.44	0.83
2:AB:152:PHE:CE1	2:AB:155:LEU:CD1	2.62	0.83
2:AB:185:ILE:HG23	2:AB:199:TYR:HB2	1.61	0.83
9:AI:20:ARG:O	9:AI:59:PHE:HB3	1.77	0.83
24:AY:17:ILE:HG22	24:AY:25:LYS:HG2	1.59	0.83
28:B3:7:LYS:HG3	28:B3:32:GLN:O	1.79	0.83
35:BA:1291:C:H2'	35:BA:1292:U:C6	2.14	0.83
35:BA:2581:G:C6	35:BA:2610:C:N3	2.47	0.83
48:BP:52:GLU:HG2	48:BP:57:THR:CB	2.09	0.83
2:AB:228:GLY:CA	2:AB:229:VAL:CG1	2.45	0.82
35:BA:327:G:H2'	35:BA:328:U:C6	2.14	0.82
35:BA:2010:G:C2'	35:BA:2011:U:C5'	2.57	0.82
57:BY:81:LYS:HD3	57:BY:97:ARG:HG3	1.60	0.82
3:AC:187:ALA:CB	3:AC:198:VAL:HB	2.09	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:148:VAL:HG12	4:AD:149:ALA:H	1.40	0.82
9:AI:23:ASN:ND2	9:AI:23:ASN:H	1.76	0.82
24:AY:507:TYR:CE1	24:AY:572:TYR:HA	2.13	0.82
35:BA:654(N):G:H2'	35:BA:654(O):G:O4'	1.77	0.82
42:BH:168:PRO:CA	42:BH:170:ARG:HH22	1.93	0.82
49:BQ:141:GLN:O	58:BZ:53:ILE:HB	1.79	0.82
57:BY:7:VAL:HB	57:BY:8:LYS:HZ2	1.43	0.82
57:BY:28:LYS:HD2	57:BY:28:LYS:N	1.92	0.82
1:AA:938:A:H2'	1:AA:939:G:C5'	2.09	0.82
1:AA:1129:C:O5'	1:AA:1130:A:H5'	1.79	0.82
31:B6:12:GLU:HG3	31:B6:23:THR:HG22	1.61	0.82
31:B6:53:LYS:HD3	31:B6:54:ILE:H	1.43	0.82
42:BH:30:LYS:HE2	42:BH:81:GLU:CG	2.08	0.82
1:AA:105:G:C5	1:AA:106:C:C4	2.67	0.82
1:AA:1049:U:H4'	1:AA:1050:G:C5'	2.08	0.82
1:AA:1399:C:H5'	1:AA:1401:G:H5'	1.61	0.82
15:AO:87:ILE:HG22	15:AO:88:ARG:N	1.94	0.82
31:B6:12:GLU:CG	31:B6:23:THR:HG22	2.10	0.82
38:BD:108:PRO:HG2	38:BD:111:LEU:HB2	1.60	0.82
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.07	0.82
25:B0:7:LEU:CD1	49:BQ:85:LYS:HE2	2.09	0.82
31:B6:41:PRO:CD	31:B6:46:HIS:H	1.90	0.82
31:B6:44:ARG:O	31:B6:45:LYS:HG2	1.79	0.82
35:BA:1022:G:N2	35:BA:1142(A):A:C2	2.47	0.82
35:BA:2469:A:H2'	35:BA:2470:G:H5'	1.60	0.82
46:BN:58:ASP:O	46:BN:60:ILE:HG13	1.79	0.82
51:BS:97:ARG:HH21	51:BS:98:VAL:CA	1.93	0.82
1:AA:961:U:O2'	1:AA:962:C:H5'	1.79	0.82
1:AA:979:C:C2'	1:AA:980:C:H5"	2.10	0.82
2:AB:16:HIS:CE1	2:AB:210:SER:OG	2.33	0.82
2:AB:75:LYS:HA	2:AB:78:GLN:HE21	1.44	0.82
2:AB:145:LEU:CD2	2:AB:149:LEU:CD2	2.58	0.82
35:BA:2000:G:N2	35:BA:2001:A:N9	2.28	0.82
35:BA:2313:C:H4'	41:BG:40:ASN:ND2	1.95	0.82
52:BT:106:SER:HA	52:BT:110:ILE:HG12	1.61	0.82
54:BV:19:LYS:HG2	54:BV:94:LEU:HB2	1.61	0.82
58:BZ:69:THR:HG22	58:BZ:90:VAL:HA	1.61	0.82
1:AA:375:U:OP1	16:AP:69:THR:HG21	1.79	0.82
2:AB:145:LEU:HD22	2:AB:149:LEU:HD23	1.62	0.82
14:AN:27:CYS:SG	14:AN:29:ARG:HB2	2.20	0.82
26:B1:57:GLU:O	26:B1:58:ILE:HG13	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1747(A):G:H2'	35:BA:1748:G:C5'	2.08	0.82
50:BR:4:LEU:HG	50:BR:4:LEU:O	1.77	0.82
51:BS:97:ARG:C	51:BS:97:ARG:HE	1.88	0.82
1:AA:792:A:H1'	1:AA:793:U:OP2	1.79	0.82
10:AJ:78:ASN:HD22	10:AJ:80:LYS:H	1.27	0.82
20:AT:74:LYS:CG	20:AT:75:ASN:H	1.87	0.82
27:B2:8:LYS:O	27:B2:11:GLU:CG	2.28	0.82
31:B6:33:LYS:HE2	31:B6:33:LYS:HA	1.59	0.82
35:BA:2610:C:O2'	35:BA:2611:U:P	2.38	0.82
36:BB:8:U:H6	36:BB:8:U:H5'	1.43	0.82
37:BC:54:ARG:NH2	37:BC:56:ASP:HB3	1.95	0.82
1:AA:198:G:C4	1:AA:199:G:N7	2.47	0.82
1:AA:1525:G:C2'	1:AA:1526:G:H5'	2.10	0.82
2:AB:114:ARG:HH12	2:AB:118:LEU:HD11	1.43	0.82
33:B8:32:LEU:HD22	35:BA:2392:A:OP1	1.78	0.82
35:BA:43:A:H2'	35:BA:44:G:H5'	1.59	0.82
35:BA:262:A:C2'	35:BA:263:C:H5'	2.10	0.82
35:BA:693:C:H2'	35:BA:694:U:H6	1.43	0.82
50:BR:45:ARG:HG3	50:BR:46:GLY:N	1.95	0.82
53:BU:92:ARG:NH1	53:BU:94:ASN:HD22	1.78	0.82
1:AA:88:A:C4'	1:AA:89:C:H5'	2.08	0.82
9:AI:19:LEU:HA	9:AI:61:ALA:HB2	0.85	0.82
22:AV:44:G:C2'	22:AV:45:U:H5'	2.09	0.82
35:BA:1798:U:OP2	38:BD:274:ARG:NH2	2.12	0.82
35:BA:1820:U:O2'	38:BD:201:HIS:HD2	1.63	0.82
38:BD:35:LYS:NZ	38:BD:35:LYS:HB3	1.93	0.82
1:AA:346:G:H4'	52:BT:41:ARG:NH2	1.95	0.81
20:AT:74:LYS:HG3	20:AT:75:ASN:N	1.94	0.81
31:B6:10:LEU:HD22	31:B6:10:LEU:N	1.94	0.81
35:BA:2358:G:O2'	35:BA:2359:C:H5'	1.80	0.81
2:AB:128:GLU:HG3	2:AB:128:GLU:O	1.80	0.81
27:B2:16:LEU:HD22	27:B2:20:GLU:HG3	1.60	0.81
35:BA:1779:U:C5	35:BA:1784:A:N7	2.49	0.81
35:BA:2127:G:C2'	35:BA:2128:C:H5'	2.10	0.81
35:BA:2415:G:O3'	48:BP:66:GLY:HA3	1.80	0.81
39:BE:69:LYS:HE2	39:BE:69:LYS:H	1.43	0.81
52:BT:129:ARG:NH1	52:BT:131:ALA:HB3	1.95	0.81
58:BZ:74:VAL:HG22	58:BZ:86:VAL:HG13	1.62	0.81
1:AA:697:U:H2'	1:AA:698:G:C5'	2.10	0.81
1:AA:1442(A):G:O6	52:BT:118:ARG:HB2	1.80	0.81
5:AE:68:GLU:HG3	5:AE:68:GLU:O	1.78	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:47:ASN:ND2	35:BA:94(A):G:H21	1.78	0.81
30:B5:29:THR:HG21	35:BA:2815:C:H5'	1.62	0.81
35:BA:29:U:C2'	35:BA:30:G:H5'	2.10	0.81
35:BA:2581:G:H2'	35:BA:2610:C:H41	1.45	0.81
52:BT:102:ILE:HB	52:BT:110:ILE:HD12	1.62	0.81
58:BZ:28:MET:HE3	58:BZ:59:LEU:HD12	1.60	0.81
1:AA:773:G:H2'	1:AA:774:G:H8	1.45	0.81
35:BA:896:A:C1'	58:BZ:176:PRO:HG3	2.10	0.81
36:BB:56:G:H5'	41:BG:27:ASN:HD21	1.44	0.81
37:BC:149:ASN:HD22	37:BC:152:GLU:HB3	1.46	0.81
1:AA:115:G:H4'	1:AA:116:A:O5'	1.80	0.81
1:AA:771:G:C6	1:AA:772:U:O4	2.33	0.81
1:AA:1151:A:C4	1:AA:1152:A:N7	2.49	0.81
27:B2:48:HIS:O	27:B2:52:ASP:HB2	1.81	0.81
29:B4:40:HIS:NE2	41:BG:118:ARG:HA	1.95	0.81
30:B5:53:ALA:HA	30:B5:56:LYS:HZ1	1.42	0.81
35:BA:2010:G:H2'	35:BA:2011:U:C5'	2.09	0.81
47:BO:49:ARG:HA	47:BO:53:LYS:HZ1	1.46	0.81
48:BP:47:ASP:HB3	48:BP:49:ARG:N	1.95	0.81
55:BW:26:GLY:H	55:BW:71:VAL:HG23	1.45	0.81
1:AA:347:G:O2'	1:AA:348:G:H5"	1.80	0.81
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.81	0.81
9:AI:20:ARG:O	9:AI:59:PHE:HA	1.79	0.81
35:BA:666:G:OP1	48:BP:47:ASP:O	1.98	0.81
36:BB:40:U:H3'	36:BB:41:U:C5'	2.11	0.81
37:BC:117:THR:HG22	37:BC:119:ASP:N	1.96	0.81
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.44	0.81
35:BA:1062:G:H1	35:BA:1075:C:H42	1.27	0.81
35:BA:1170:G:H1	35:BA:1179:C:H42	1.28	0.81
35:BA:2201:C:HO2'	35:BA:2202:C:H5'	1.39	0.81
35:BA:2491:U:H5'	35:BA:2570:G:H5"	1.63	0.81
2:AB:145:LEU:HD22	2:AB:149:LEU:CD2	2.11	0.81
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	1.81	0.81
24:AY:572:TYR:HD1	24:AY:572:TYR:H	1.29	0.81
26:B1:53:VAL:HG21	26:B1:58:ILE:HD12	1.63	0.81
26:B1:75:GLU:O	26:B1:78:LYS:HD2	1.80	0.81
35:BA:459:U:C2'	35:BA:460:A:H5'	2.10	0.81
35:BA:1273:U:H5"	35:BA:1646:C:H42	1.44	0.81
42:BH:10:PRO:HB2	42:BH:49:VAL:HG12	1.62	0.81
48:BP:16:ARG:NE	48:BP:18:ARG:HG2	1.96	0.81
48:BP:23:PRO:HG2	48:BP:33:ARG:HH21	1.46	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:737:A:H1'	6:AF:73:ASN:HD21	1.45	0.81
1:AA:543:C:C2'	1:AA:544:G:C5'	2.55	0.81
1:AA:1148:U:H2'	1:AA:1149:C:H5'	1.63	0.81
2:AB:231:GLU:HB2	2:AB:232:PRO:HD3	1.60	0.81
27:B2:10:LEU:HD13	35:BA:78:A:OP1	1.80	0.81
35:BA:1983:C:O2'	35:BA:1984:G:H5"	1.81	0.81
35:BA:1996:C:H4'	35:BA:1997:G:OP1	1.81	0.81
38:BD:35:LYS:N	38:BD:36:PRO:HD2	1.96	0.81
41:BG:66:GLN:NE2	41:BG:94:LEU:HG	1.96	0.81
52:BT:28:VAL:O	52:BT:29:ARG:HB2	1.81	0.81
36:BB:80:U:H2'	36:BB:81:G:H21	1.43	0.80
38:BD:30:GLU:HG3	38:BD:63:ARG:NE	1.94	0.80
41:BG:41:GLN:OE1	41:BG:56:ALA:HB1	1.81	0.80
49:BQ:76:LYS:HB3	49:BQ:91:GLU:HG3	1.62	0.80
58:BZ:81:ARG:HB2	58:BZ:81:ARG:CZ	2.10	0.80
14:AN:12:ARG:C	14:AN:14:PRO:HD2	2.05	0.80
22:AV:44:G:H2'	22:AV:45:U:H5'	1.61	0.80
24:AY:252:ASP:HB3	24:AY:254:LYS:HZ1	1.46	0.80
33:B8:32:LEU:HB2	33:B8:36:LYS:NZ	1.95	0.80
35:BA:1999:C:H2'	35:BA:2000:G:H5'	1.61	0.80
35:BA:2807:G:H3'	35:BA:2808:U:H5"	1.62	0.80
41:BG:102:PHE:O	41:BG:106:LEU:HB3	1.80	0.80
1:AA:360:A:C2'	1:AA:361:G:H5'	2.11	0.80
1:AA:489:C:O2'	1:AA:490:G:H5'	1.81	0.80
1:AA:939:G:H2'	1:AA:940:C:C6	2.17	0.80
36:BB:56:G:C5'	41:BG:27:ASN:HD21	1.95	0.80
37:BC:102:GLN:C	37:BC:104:ILE:H	1.89	0.80
41:BG:55:LYS:HD3	41:BG:148:MET:HE1	1.63	0.80
54:BV:15:GLU:CG	54:BV:16:PRO:HD2	2.11	0.80
1:AA:321:A:O2'	1:AA:322:C:H5'	1.81	0.80
1:AA:936:C:C2'	1:AA:937:A:H5'	2.12	0.80
1:AA:1384:C:C2'	1:AA:1385:G:H5'	2.12	0.80
2:AB:164:VAL:O	2:AB:186:ALA:HA	1.81	0.80
4:AD:101:LEU:HB2	4:AD:138:TYR:HB3	1.62	0.80
9:AI:20:ARG:O	9:AI:59:PHE:CB	2.29	0.80
33:B8:52:LYS:N	33:B8:53:PRO:HD2	1.96	0.80
35:BA:1187:G:H5"	54:BV:81:TYR:CE2	2.16	0.80
1:AA:198:G:O6	1:AA:220:G:C5	2.35	0.80
1:AA:308:C:H2'	1:AA:309:G:C8	2.15	0.80
1:AA:490:G:H2'	1:AA:491:G:H8	1.46	0.80
13:AM:2:ALA:C	13:AM:9:ILE:HG22	2.07	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:142:A:H8	35:BA:1595:G:H21	1.26	0.80
35:BA:179:G:O2'	35:BA:180:G:C5'	2.30	0.80
35:BA:361:G:H2'	35:BA:362:U:H5"	1.61	0.80
35:BA:1021:A:H2'	35:BA:1022:G:H4'	1.62	0.80
35:BA:1517:G:H5'	35:BA:1517:G:H8	1.45	0.80
35:BA:1596:A:H2'	35:BA:1597:A:C5'	2.09	0.80
35:BA:1820:U:O4	38:BD:160:GLY:O	1.99	0.80
35:BA:1899:G:H21	35:BA:1902:C:N4	1.79	0.80
35:BA:2287:A:N6	35:BA:2344:U:H3	1.80	0.80
42:BH:3:ARG:HH11	42:BH:3:ARG:CG	1.94	0.80
1:AA:198:G:N3	1:AA:199:G:N7	2.30	0.80
1:AA:1049:U:OP1	14:AN:3:ARG:HD3	1.81	0.80
2:AB:114:ARG:HH11	2:AB:114:ARG:HG3	1.44	0.80
31:B6:15:GLU:CD	31:B6:18:ARG:CZ	2.55	0.80
35:BA:742:G:O2'	35:BA:743:G:C5'	2.30	0.80
35:BA:963:U:O2'	35:BA:964:C:C5'	2.30	0.80
35:BA:2124:G:H1	35:BA:2174:C:H42	1.30	0.80
42:BH:85:LYS:HE3	42:BH:145:ALA:HB1	1.63	0.80
1:AA:545:C:H2'	1:AA:546:G:C5'	2.02	0.80
12:AL:27:LEU:HD13	12:AL:28:LYS:N	1.95	0.80
34:B9:1:MET:HG2	35:BA:2478:A:OP2	1.82	0.80
35:BA:331:A:C1'	35:BA:332:A:OP1	2.30	0.80
48:BP:84:ASN:OD1	48:BP:116:GLY:HA3	1.81	0.80
1:AA:349:A:O2'	1:AA:350:G:C5'	2.30	0.80
4:AD:17:VAL:CG1	4:AD:18:LYS:H	1.95	0.80
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.16	0.80
19:AS:40:ILE:HD11	19:AS:62:ILE:CG1	2.11	0.80
19:AS:62:ILE:HA	19:AS:66:MET:HE2	1.63	0.80
29:B4:16:CYS:SG	29:B4:19:GLY:O	2.39	0.80
35:BA:1678:G:H22	35:BA:1989:G:N2	1.62	0.80
35:BA:1983:C:C2'	35:BA:1984:G:C5'	2.60	0.80
40:BF:154:VAL:HG22	40:BF:191:ARG:HB3	1.63	0.80
41:BG:66:GLN:HE22	41:BG:94:LEU:HG	1.47	0.80
48:BP:58:THR:O	48:BP:61:ARG:CG	2.29	0.80
48:BP:135:LEU:HD21	48:BP:144:GLU:HG3	1.62	0.80
1:AA:37:U:O2'	1:AA:38:G:C5'	2.30	0.80
1:AA:197:A:C6	1:AA:221:C:C4'	2.64	0.80
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.17	0.80
24:AY:312:LEU:HD11	24:AY:401:SER:HB2	1.64	0.80
29:B4:28:LYS:HD3	41:BG:143:GLU:HA	1.64	0.80
35:BA:2131:G:N2	35:BA:2133:A:N3	2.30	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:47:ASP:OD2	48:BP:49:ARG:CB	2.30	0.80
53:BU:50:ARG:HH12	54:BV:72:VAL:HG12	1.46	0.80
57:BY:26:LYS:HG2	57:BY:27:VAL:H	1.47	0.80
1:AA:39:G:C2'	1:AA:40:C:H5'	2.11	0.80
1:AA:359:U:HO2'	1:AA:360:A:H5'	1.43	0.80
1:AA:718:G:H5'	11:AK:117:ASN:OD1	1.82	0.80
3:AC:123:GLN:NE2	3:AC:128:PHE:HB2	1.97	0.80
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.61	0.80
19:AS:6:LYS:HG3	19:AS:7:LYS:H	1.46	0.80
35:BA:83:G:N2	35:BA:102:G:H2'	1.97	0.80
35:BA:1227:G:H2'	35:BA:1228:G:H8	1.47	0.80
35:BA:2360:A:O2'	35:BA:2361:A:C5'	2.30	0.80
39:BE:111:ARG:HA	50:BR:2:ARG:HG2	1.64	0.80
49:BQ:141:GLN:C	58:BZ:53:ILE:HB	2.06	0.80
51:BS:28:VAL:HG12	51:BS:29:PHE:H	1.47	0.80
58:BZ:53:ILE:HG22	58:BZ:71:VAL:HB	1.62	0.80
1:AA:773:G:C2	1:AA:774:G:C5	2.69	0.79
1:AA:946:A:H2'	1:AA:947:G:C8	2.17	0.79
1:AA:1027:C:H3'	1:AA:1028:C:H5"	1.63	0.79
1:AA:1321:C:H3'	1:AA:1322:C:H5"	1.64	0.79
24:AY:171:GLU:HG3	24:AY:172:ASP:H	1.45	0.79
35:BA:1210:A:H5'	35:BA:1210:A:H8	1.47	0.79
35:BA:2715:C:HO2'	35:BA:2716:U:H5'	1.47	0.79
1:AA:198:G:C6	1:AA:220:G:N1	2.50	0.79
30:B5:41:PRO:HG2	30:B5:44:THR:HG21	1.65	0.79
35:BA:16:G:C2'	35:BA:17:G:H5'	2.12	0.79
35:BA:1227:G:O2'	35:BA:1228:G:H5'	1.83	0.79
35:BA:1983:C:O2'	35:BA:1984:G:C5'	2.30	0.79
41:BG:21:ARG:HA	41:BG:21:ARG:HE	1.47	0.79
41:BG:66:GLN:OE1	41:BG:94:LEU:HG	1.81	0.79
52:BT:78:LEU:C	52:BT:79:HIS:CD2	2.60	0.79
1:AA:509:A:C5'	4:AD:54:TYR:HD2	1.94	0.79
1:AA:685:G:C2'	1:AA:686:U:H5'	2.12	0.79
1:AA:1151:A:C6	1:AA:1152:A:N6	2.51	0.79
1:AA:1286:A:O2'	1:AA:1287:A:C5'	2.30	0.79
2:AB:41:ILE:O	2:AB:41:ILE:HG22	1.82	0.79
2:AB:187:LEU:O	2:AB:187:LEU:HD13	1.81	0.79
35:BA:967:C:O2'	35:BA:968:G:C5'	2.30	0.79
35:BA:1301:A:H4'	35:BA:1302:A:OP1	1.81	0.79
41:BG:21:ARG:HA	41:BG:21:ARG:NE	1.97	0.79
54:BV:49:THR:HB	54:BV:50:PRO:HD2	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:60:A:C1'	1:AA:61:G:O4'	2.31	0.79
1:AA:560:U:C4'	1:AA:561:U:O5'	2.30	0.79
1:AA:975:A:H5'	1:AA:975:A:H8	1.47	0.79
2:AB:82:ARG:HH11	2:AB:82:ARG:HG3	1.46	0.79
2:AB:230:VAL:HB	2:AB:231:GLU:CA	2.06	0.79
24:AY:21:ILE:H	24:AY:21:ILE:HD12	1.46	0.79
25:B0:26:TYR:CE2	35:BA:857:C:H1'	2.17	0.79
35:BA:327:G:O2'	35:BA:328:U:C5'	2.30	0.79
35:BA:1077:A:C5	35:BA:1078:U:H1'	2.17	0.79
35:BA:1381:G:C2'	35:BA:1382:G:C5'	2.58	0.79
35:BA:1777:U:O2'	35:BA:1778:U:H5'	1.82	0.79
35:BA:2068:U:N3	35:BA:2430:A:H2	1.78	0.79
40:BF:20:LEU:HD23	40:BF:21:ALA:H	1.48	0.79
41:BG:38:VAL:HA	41:BG:93:THR:HA	1.64	0.79
41:BG:56:ALA:O	41:BG:60:LEU:HB3	1.83	0.79
58:BZ:28:MET:O	58:BZ:34:ASN:HA	1.82	0.79
1:AA:35:G:O2'	1:AA:36:C:H5'	1.82	0.79
2:AB:15:VAL:O	2:AB:15:VAL:CG1	2.30	0.79
33:B8:23:VAL:HG12	33:B8:46:ARG:HH11	1.45	0.79
35:BA:49:A:H4'	35:BA:50:U:OP2	1.80	0.79
35:BA:271(P):C:O2'	35:BA:271(Q):G:H5'	1.83	0.79
35:BA:1988:C:O2'	35:BA:1989:G:C5'	2.31	0.79
35:BA:1992:G:C1'	35:BA:1993:U:OP2	2.30	0.79
41:BG:65:GLY:O	41:BG:66:GLN:HB3	1.81	0.79
52:BT:93:ARG:HG2	52:BT:117:ASP:HA	1.63	0.79
1:AA:563:A:H5'	1:AA:566:G:N2	1.97	0.79
1:AA:1504:G:C4'	1:AA:1505:G:OP2	2.30	0.79
3:AC:81:GLY:C	3:AC:82:GLU:CG	2.56	0.79
20:AT:75:ASN:H	20:AT:75:ASN:ND2	1.79	0.79
30:B5:57:VAL:HG12	30:B5:58:LEU:H	1.46	0.79
35:BA:953:A:O2'	35:BA:954:G:C5'	2.31	0.79
35:BA:996:A:H4'	53:BU:92:ARG:NE	1.96	0.79
1:AA:106:C:H2'	1:AA:107:G:H8	1.48	0.79
1:AA:266:G:C4'	1:AA:267:C:O5'	2.30	0.79
1:AA:1282:C:C2'	1:AA:1283:G:C5'	2.60	0.79
1:AA:1282:C:H2'	1:AA:1283:G:C5'	2.13	0.79
1:AA:1527:C:O2'	1:AA:1528:U:H5'	1.82	0.79
35:BA:332:A:C1'	35:BA:333:G:OP1	2.30	0.79
35:BA:613:G:H5'	35:BA:613:G:H8	1.45	0.79
35:BA:692:C:H2'	35:BA:693:C:H5'	1.63	0.79
35:BA:2127:G:O2'	35:BA:2128:C:C5'	2.30	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:20:VAL:O	37:BC:21:TYR:HB2	1.83	0.79
40:BF:20:LEU:O	40:BF:24:LEU:HD23	1.82	0.79
1:AA:119:A:H4'	1:AA:120:A:O5'	1.82	0.79
1:AA:686:U:O2	1:AA:704:A:N6	2.16	0.79
1:AA:859:A:H2'	1:AA:860:A:H5'	1.62	0.79
1:AA:1179:A:HO2'	1:AA:1180:A:H5'	1.46	0.79
13:AM:53:VAL:HG12	13:AM:57:ARG:HH21	1.48	0.79
29:B4:35:VAL:HA	41:BG:109:VAL:HA	1.62	0.79
35:BA:743:G:O2'	35:BA:744:G:C5'	2.30	0.79
35:BA:1769:G:C6	35:BA:1984:G:C6	2.70	0.79
35:BA:1820:U:H1'	38:BD:202:LYS:HB3	1.65	0.79
40:BF:157:VAL:CG1	40:BF:194:MET:HG2	2.12	0.79
42:BH:168:PRO:HA	42:BH:170:ARG:NH2	1.97	0.79
1:AA:788:U:C2'	1:AA:789:U:H5'	2.13	0.79
29:B4:12:ALA:N	29:B4:24:THR:HG22	1.67	0.79
35:BA:38:A:H2'	35:BA:39:C:C6	2.18	0.79
35:BA:954:G:O2'	35:BA:955:C:C5'	2.30	0.79
35:BA:1119:C:O2'	35:BA:1120:G:C5'	2.31	0.79
35:BA:1819:A:H5"	38:BD:158:ALA:HB3	1.62	0.79
35:BA:1920:C:H6	35:BA:1920:C:H5'	1.46	0.79
35:BA:2201:C:C2'	35:BA:2202:C:H5'	2.13	0.79
46:BN:90:MET:HE2	46:BN:90:MET:HA	1.64	0.79
1:AA:789:U:H2'	1:AA:791:G:OP2	1.82	0.79
35:BA:629:G:O6	35:BA:634:C:N4	2.16	0.79
35:BA:2033:A:H4'	35:BA:2034:U:OP1	1.81	0.79
36:BB:20:C:C2'	36:BB:21:G:H5"	2.13	0.79
1:AA:115:G:C1'	1:AA:116:A:OP2	2.30	0.78
1:AA:1150:U:C2'	1:AA:1151:A:H5'	2.12	0.78
1:AA:1153:C:O2'	1:AA:1154:G:C5'	2.30	0.78
1:AA:1313:U:C3'	19:AS:6:LYS:HZ2	1.95	0.78
2:AB:114:ARG:NH1	2:AB:118:LEU:HD11	1.97	0.78
35:BA:1596:A:O2'	35:BA:1597:A:C5'	2.30	0.78
41:BG:20:ILE:HA	41:BG:24:GLY:HA3	1.62	0.78
1:AA:547:A:C4'	1:AA:548:G:O5'	2.31	0.78
5:AE:76:ILE:HG13	5:AE:93:PRO:HG3	1.66	0.78
28:B3:19:GLN:HE22	28:B3:52:HIS:CE1	1.93	0.78
35:BA:1494:A:H2'	35:BA:1495:A:H5"	1.63	0.78
48:BP:58:THR:O	48:BP:61:ARG:NE	2.16	0.78
48:BP:112:LEU:H	48:BP:128:HIS:CD2	2.00	0.78
50:BR:104:ARG:HG3	50:BR:111:LEU:HD11	1.64	0.78
55:BW:9:TYR:H	55:BW:102:HIS:HD2	1.29	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:115:GLY:N	58:BZ:177:PRO:HD3	1.98	0.78
58:BZ:151:HIS:CB	58:BZ:170:THR:HA	2.13	0.78
1:AA:59:A:H3'	1:AA:331:G:H22	1.48	0.78
1:AA:1157:A:C1'	1:AA:1158:C:OP2	2.30	0.78
4:AD:3:ARG:HH21	4:AD:5:ILE:HG12	1.48	0.78
24:AY:82:ILE:O	24:AY:82:ILE:CG2	2.32	0.78
24:AY:100:VAL:HG23	24:AY:329:ARG:HB2	1.66	0.78
24:AY:181:LEU:HD23	24:AY:182:ARG:NH1	1.97	0.78
31:B6:12:GLU:HA	31:B6:23:THR:HA	1.64	0.78
35:BA:1419:A:O2'	35:BA:1420:U:H5"	1.82	0.78
35:BA:1434:A:H61	35:BA:1558:A:H62	1.30	0.78
35:BA:2403:C:O2'	35:BA:2404:C:H5'	1.83	0.78
54:BV:29:PRO:HA	54:BV:61:VAL:HG23	1.63	0.78
12:AL:17:LYS:HD3	12:AL:18:VAL:H	1.49	0.78
12:AL:45:PRO:HD3	12:AL:51:ALA:O	1.83	0.78
20:AT:26:ASN:HB3	20:AT:71:THR:OG1	1.84	0.78
24:AY:165:GLN:HE21	24:AY:177:ILE:HG21	1.47	0.78
30:B5:2:ALA:HA	35:BA:2015:A:C1'	2.14	0.78
35:BA:953:A:C2'	35:BA:954:G:C5'	2.56	0.78
35:BA:955:C:OP2	49:BQ:14:ARG:HD2	1.84	0.78
35:BA:1301:A:N3	35:BA:1301:A:H5"	1.99	0.78
35:BA:1475:G:H5'	35:BA:1475:G:H8	1.48	0.78
35:BA:2126:A:C1'	35:BA:2127:G:O4'	2.30	0.78
41:BG:82:LEU:HD13	41:BG:88:ILE:HD13	1.64	0.78
1:AA:495:A:O2'	1:AA:496:A:C2'	2.30	0.78
1:AA:1029:C:C3'	1:AA:1030:C:H5"	2.12	0.78
24:AY:84:THR:HG23	24:AY:85:PRO:HD2	1.65	0.78
24:AY:628:ARG:HG2	24:AY:628:ARG:HH11	1.47	0.78
33:B8:27:THR:HG23	35:BA:2361:A:OP1	1.83	0.78
38:BD:130:ALA:C	38:BD:131:LEU:HD12	2.07	0.78
40:BF:20:LEU:H	40:BF:24:LEU:CD2	1.97	0.78
41:BG:117:PHE:HD2	41:BG:118:ARG:HD3	1.49	0.78
46:BN:22:THR:HG22	46:BN:61:ARG:HD3	1.65	0.78
52:BT:31:SER:N	52:BT:43:GLN:O	2.16	0.78
1:AA:173:U:C5'	1:AA:197:A:H5'	2.14	0.78
2:AB:153:ARG:HG3	2:AB:153:ARG:O	1.82	0.78
14:AN:16:PHE:CD1	14:AN:16:PHE:N	2.51	0.78
26:B1:3:LYS:HB2	26:B1:61:ARG:NH2	1.98	0.78
35:BA:691:C:H2'	35:BA:692:C:H5'	1.66	0.78
35:BA:2036:C:O2'	35:BA:2037:G:H5'	1.83	0.78
38:BD:24:ILE:CD1	38:BD:25:THR:H	1.97	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:81:LYS:HB3	57:BY:96:ILE:HD11	1.63	0.78
12:AL:25:PRO:C	12:AL:27:LEU:H	1.89	0.78
24:AY:95:GLU:OE1	24:AY:403:GLU:HG2	1.83	0.78
35:BA:740:U:H2'	35:BA:741:G:C8	2.18	0.78
35:BA:1646:C:C5'	35:BA:1647:G:H5"	2.14	0.78
35:BA:1887:C:H2'	35:BA:1888:G:H5"	1.66	0.78
36:BB:3:C:H42	36:BB:118:G:H1	1.30	0.78
40:BF:9:ILE:HG12	40:BF:14:PRO:CA	2.13	0.78
1:AA:155:C:H2'	1:AA:156:G:C8	2.18	0.78
1:AA:365:U:O2	1:AA:365:U:C3'	2.31	0.78
1:AA:688:G:H2'	1:AA:689:C:H6	1.48	0.78
1:AA:1148:U:O2'	1:AA:1149:C:H5'	1.84	0.78
25:B0:42:GLY:O	25:B0:57:PHE:CG	2.36	0.78
33:B8:30:ARG:HA	33:B8:30:ARG:HE	1.48	0.78
35:BA:1678:G:H22	35:BA:1989:G:H22	0.79	0.78
35:BA:2123:G:O2'	35:BA:2124:G:H5'	1.83	0.78
41:BG:87:PRO:HG2	41:BG:88:ILE:H	1.48	0.78
53:BU:90:VAL:O	53:BU:92:ARG:N	2.17	0.78
54:BV:40:LEU:HD22	54:BV:46:VAL:HA	1.65	0.78
1:AA:311:C:O2'	1:AA:312:C:C5'	2.32	0.78
1:AA:688:G:H2'	1:AA:689:C:C6	2.19	0.78
1:AA:1030:C:H4'	1:AA:1030(A):G:H5'	1.66	0.78
1:AA:1279:A:C5'	1:AA:1280:A:OP1	2.32	0.78
2:AB:122:PHE:CE2	2:AB:139:LYS:HA	2.17	0.78
3:AC:150:LYS:HE2	3:AC:152:ILE:HD11	1.65	0.78
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.84	0.78
41:BG:172:LEU:O	41:BG:176:LEU:HB2	1.84	0.78
51:BS:30:ARG:HH11	51:BS:97:ARG:HG2	1.49	0.78
1:AA:64:G:C5'	1:AA:65:U:OP1	2.32	0.78
2:AB:172:ILE:HD12	2:AB:172:ILE:N	1.97	0.78
29:B4:39:CYS:O	29:B4:40:HIS:CB	2.32	0.78
35:BA:2206:G:H21	35:BA:2207:G:C5'	1.88	0.78
38:BD:30:GLU:CD	38:BD:63:ARG:HE	1.92	0.78
48:BP:46:LYS:HG2	48:BP:51:PHE:CD1	2.18	0.78
58:BZ:6:LYS:HE3	58:BZ:6:LYS:H	1.47	0.78
1:AA:942:G:C4	1:AA:943:U:C5	2.72	0.77
7:AG:48:LYS:HG2	7:AG:49:ILE:HG12	1.66	0.77
28:B3:19:GLN:NE2	28:B3:52:HIS:CE1	2.49	0.77
35:BA:1375:C:H2'	35:BA:1376:C:H6	1.49	0.77
35:BA:2010:G:O2'	35:BA:2011:U:C5'	2.30	0.77
35:BA:2689:U:H5"	35:BA:2690:C:H5'	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:75:LYS:HG2	41:BG:76:SER:H	1.46	0.77
12:AL:41:ARG:HH11	12:AL:43:VAL:HG22	1.50	0.77
29:B4:12:ALA:O	29:B4:24:THR:HG21	1.84	0.77
35:BA:49:A:N6	35:BA:177:G:C4	2.52	0.77
35:BA:1375:C:H2'	35:BA:1376:C:C6	2.19	0.77
35:BA:2011:U:O2'	35:BA:2012:G:H5'	1.83	0.77
35:BA:2203:U:O3'	35:BA:2205:C:P	2.42	0.77
35:BA:2403:C:OP1	35:BA:2403:C:C3'	2.31	0.77
39:BE:117:MET:O	39:BE:121:ASN:HA	1.83	0.77
52:BT:78:LEU:O	52:BT:79:HIS:CD2	2.37	0.77
58:BZ:115:GLY:HA2	58:BZ:177:PRO:HD3	1.66	0.77
1:AA:197:A:C5	1:AA:221:C:H4'	2.17	0.77
1:AA:633:G:H5'	1:AA:634:C:OP2	1.83	0.77
1:AA:967:C:H4'	9:AI:125:TYR:HE1	1.48	0.77
2:AB:87:ARG:CD	2:AB:219:VAL:HG11	2.14	0.77
24:AY:264:LEU:HB2	61:AY:701:GCP:C6	2.14	0.77
35:BA:1786:A:C1'	35:BA:1938:A:N6	2.46	0.77
35:BA:1902:C:H4'	38:BD:244:ARG:HA	1.65	0.77
35:BA:1984:G:O2'	35:BA:1985:G:C5'	2.30	0.77
35:BA:2713:A:C3'	35:BA:2714:G:C5'	2.62	0.77
47:BO:104:ARG:HH12	47:BO:107:ARG:NH1	1.82	0.77
52:BT:89:VAL:HB	52:BT:91:ARG:HG3	1.66	0.77
1:AA:1502:A:C2	1:AA:1505:G:N2	2.30	0.77
2:AB:139:LYS:O	2:AB:143:GLU:HG3	1.84	0.77
12:AL:18:VAL:HG23	12:AL:19:ARG:N	1.99	0.77
29:B4:1:MET:HB2	36:BB:39:A:H61	1.50	0.77
30:B5:16:ARG:HH11	30:B5:16:ARG:HG2	1.49	0.77
35:BA:1419:A:O2'	35:BA:1421:G:N7	2.16	0.77
35:BA:1640:C:C2'	35:BA:1641:A:H5'	2.14	0.77
37:BC:92:ALA:HB2	37:BC:154:ILE:HD13	1.66	0.77
42:BH:12:PRO:HD2	42:BH:15:VAL:HG21	1.66	0.77
1:AA:39:G:O2'	1:AA:40:C:H5'	1.85	0.77
1:AA:936:C:H2'	1:AA:937:A:H8	1.49	0.77
35:BA:523:C:C2'	35:BA:524:U:C5'	2.61	0.77
35:BA:2715:C:C2'	35:BA:2716:U:H5'	2.14	0.77
41:BG:137:GLU:CG	41:BG:154:GLY:H	1.97	0.77
48:BP:51:PHE:CD2	48:BP:53:GLY:CA	2.68	0.77
49:BQ:1:MET:HE2	49:BQ:1:MET:HA	1.65	0.77
7:AG:23:VAL:HG13	7:AG:43:PHE:CE2	2.19	0.77
9:AI:11:LYS:O	9:AI:12:GLU:HB2	1.83	0.77
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:24:ASP:O	37:BC:28:ARG:HG3	1.85	0.77
48:BP:59:LEU:CA	48:BP:61:ARG:HE	1.95	0.77
1:AA:918:A:H2'	1:AA:919:A:C8	2.20	0.77
1:AA:1321:C:H5"	1:AA:1322:C:H5"	1.64	0.77
2:AB:113:HIS:O	2:AB:117:GLU:HG3	1.84	0.77
27:B2:10:LEU:O	27:B2:14:ARG:CD	2.31	0.77
29:B4:15:ILE:O	29:B4:16:CYS:CB	2.31	0.77
35:BA:146:G:H5'	35:BA:146:G:H8	1.50	0.77
35:BA:605:C:H1'	35:BA:657:U:O2'	1.85	0.77
35:BA:654(S):G:H2'	35:BA:654(T):C:O4'	1.85	0.77
35:BA:997:G:OP1	53:BU:93:LYS:HD3	1.85	0.77
35:BA:1799:G:H8	38:BD:181:GLU:OE2	1.68	0.77
35:BA:2710:C:O2'	35:BA:2711:A:H5'	1.84	0.77
39:BE:9:VAL:HG23	52:BT:4:GLY:HA2	1.66	0.77
39:BE:141:ILE:HA	39:BE:154:LYS:HE2	1.64	0.77
1:AA:973:G:O4'	10:AJ:55:LYS:HG2	1.85	0.77
1:AA:1071:C:O2'	1:AA:1072:G:H5'	1.84	0.77
35:BA:856:C:H4'	35:BA:857:C:OP1	1.82	0.77
35:BA:1459:G:N3	35:BA:1459:G:H3'	1.98	0.77
37:BC:144:GLY:O	37:BC:145:THR:HG23	1.85	0.77
46:BN:133:GLN:HG2	46:BN:135:PRO:HD3	1.67	0.77
52:BT:77:PRO:O	52:BT:78:LEU:CB	2.32	0.77
1:AA:490:G:C2'	1:AA:491:G:H5'	2.14	0.77
3:AC:81:GLY:O	3:AC:82:GLU:CG	2.31	0.77
7:AG:15:ASP:O	7:AG:19:GLY:HA2	1.85	0.77
7:AG:81:GLY:HA3	23:AX:12:A:H4'	1.67	0.77
12:AL:83:VAL:HG13	12:AL:100:ILE:HG23	1.67	0.77
35:BA:607:U:OP1	40:BF:103:LYS:HG3	1.84	0.77
35:BA:962:G:C2'	35:BA:963:U:H5'	2.15	0.77
35:BA:1653:G:C1'	35:BA:1654:A:OP2	2.33	0.77
35:BA:1819:A:H1'	35:BA:1820:U:OP2	1.85	0.77
35:BA:2104:G:H1'	35:BA:2105:C:OP1	1.85	0.77
44:BK:99:UNK:C	44:BK:101:UNK:H	1.98	0.77
48:BP:144:GLU:H	48:BP:145:PRO:HD3	1.49	0.77
52:BT:29:ARG:C	52:BT:30:VAL:CG2	2.58	0.77
1:AA:266:G:H5'	1:AA:267:C:H5	1.36	0.77
1:AA:494:U:O5'	1:AA:494:U:H6	1.67	0.77
9:AI:26:VAL:HG21	9:AI:61:ALA:C	2.10	0.77
24:AY:227:ILE:HG23	24:AY:237:PRO:HG2	1.65	0.77
41:BG:38:VAL:HG22	41:BG:93:THR:CG2	2.08	0.77
41:BG:61:ALA:HB1	41:BG:67:LYS:HA	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:61:ALA:HB2	41:BG:68:PRO:HD3	1.66	0.77
44:BK:46:UNK:C	44:BK:48:UNK:H	1.97	0.77
52:BT:50:ILE:HD11	52:BT:102:ILE:HD11	1.65	0.77
58:BZ:165:VAL:HG12	58:BZ:166:SER:N	1.99	0.77
1:AA:1306:A:H61	1:AA:1331:G:H1'	1.49	0.76
15:AO:28:GLN:O	15:AO:32:LEU:HD23	1.85	0.76
22:AV:27:G:H22	22:AV:43:C:H5	1.32	0.76
24:AY:30:GLU:HB2	24:AY:52:MET:HE2	1.65	0.76
33:B8:62:LEU:HD13	35:BA:242:G:C5'	2.08	0.76
35:BA:195:A:OP1	48:BP:46:LYS:NZ	2.18	0.76
35:BA:743:G:C2'	35:BA:744:G:O5'	2.33	0.76
35:BA:1799:G:C4'	35:BA:1800:C:O5'	2.32	0.76
35:BA:1919:A:H2'	35:BA:1920:C:H5"	1.66	0.76
58:BZ:183:LEU:CD1	58:BZ:183:LEU:C	2.57	0.76
1:AA:548:G:O2'	1:AA:549:C:H5'	1.84	0.76
1:AA:664:G:H22	1:AA:741:G:H1	1.30	0.76
1:AA:973:G:H1'	10:AJ:55:LYS:HZ2	1.49	0.76
20:AT:93:GLU:O	20:AT:93:GLU:HG2	1.84	0.76
35:BA:1767:C:O2'	35:BA:1768:U:H5'	1.86	0.76
38:BD:35:LYS:H	38:BD:36:PRO:HD2	1.46	0.76
39:BE:48:GLN:NE2	39:BE:78:LEU:HD22	2.00	0.76
40:BF:2:LYS:HG3	40:BF:25:PRO:HG2	1.67	0.76
26:B1:11:ARG:HH11	26:B1:11:ARG:HG2	1.49	0.76
35:BA:967:C:O2'	35:BA:968:G:H5'	1.83	0.76
35:BA:1131:G:H21	46:BN:73:THR:HG21	1.48	0.76
41:BG:15:VAL:HG22	41:BG:175:LEU:O	1.85	0.76
42:BH:65:HIS:O	42:BH:67:LEU:N	2.18	0.76
2:AB:122:PHE:HE2	2:AB:142:LEU:CD2	1.95	0.76
27:B2:8:LYS:HG3	27:B2:9:GLN:OE1	1.85	0.76
29:B4:16:CYS:SG	29:B4:21:VAL:CG2	2.73	0.76
38:BD:24:ILE:HD13	38:BD:25:THR:N	2.00	0.76
40:BF:12:LEU:O	40:BF:14:PRO:HD3	1.86	0.76
48:BP:101:VAL:HB	48:BP:107:LYS:HA	1.67	0.76
48:BP:114:ILE:C	48:BP:114:ILE:HD12	2.10	0.76
1:AA:590:C:HO2'	1:AA:591:U:H5'	1.48	0.76
1:AA:1363(A):A:H4'	1:AA:1364:U:H5"	1.68	0.76
1:AA:1498:U:C1'	1:AA:1499:A:OP2	2.31	0.76
2:AB:167:PRO:CD	2:AB:188:ALA:CB	2.58	0.76
13:AM:11:ARG:HA	13:AM:45:VAL:CB	2.12	0.76
13:AM:108:ARG:HH11	13:AM:108:ARG:HG3	1.50	0.76
24:AY:26:THR:HG22	24:AY:52:MET:HG2	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:69:ARG:O	27:B2:70:GLN:CB	2.33	0.76
35:BA:17:G:H2'	35:BA:18:C:H6	1.46	0.76
35:BA:247:G:H3'	35:BA:249:C:C5	2.21	0.76
35:BA:582:G:OP1	53:BU:14:HIS:HD2	1.68	0.76
35:BA:969:U:H2'	35:BA:970:C:C6	2.21	0.76
35:BA:1257:C:O2'	40:BF:83:PHE:HA	1.84	0.76
37:BC:27:ALA:O	37:BC:30:VAL:HG22	1.85	0.76
40:BF:167:ALA:HB1	40:BF:173:VAL:HG11	1.68	0.76
52:BT:60:THR:HG22	52:BT:77:PRO:HA	1.68	0.76
1:AA:107:G:H2'	1:AA:108:G:O5'	1.86	0.76
1:AA:1384:C:H2'	1:AA:1385:G:H5'	1.67	0.76
2:AB:16:HIS:CE1	2:AB:210:SER:HA	2.21	0.76
2:AB:91:PRO:HG3	2:AB:155:LEU:HD23	1.65	0.76
3:AC:47:LEU:HD23	3:AC:68:VAL:HG11	1.68	0.76
9:AI:104:ARG:HD3	9:AI:104:ARG:C	2.10	0.76
35:BA:1019:U:H3	35:BA:1142(A):A:H62	1.34	0.76
35:BA:1087:G:H21	35:BA:1103:A:H61	1.30	0.76
7:AG:49:ILE:O	7:AG:50:ILE:HB	1.86	0.76
22:AV:40:C:H2'	22:AV:41:C:H6	1.51	0.76
27:B2:50:ILE:HG22	27:B2:51:ARG:N	2.00	0.76
35:BA:956:G:OP2	49:BQ:14:ARG:NH2	2.19	0.76
37:BC:153:ILE:HG23	37:BC:161:ARG:HH12	1.49	0.76
1:AA:1399:C:C4'	1:AA:1400:C:O5'	2.31	0.76
1:AA:1504:G:OP1	1:AA:1507:A:H4'	1.84	0.76
2:AB:16:HIS:CE1	2:AB:210:SER:O	2.39	0.76
17:AQ:27:PHE:CZ	17:AQ:36:ILE:HD11	2.20	0.76
20:AT:26:ASN:HA	20:AT:29:LYS:HG3	1.68	0.76
25:B0:10:THR:HG22	25:B0:11:ARG:N	2.01	0.76
35:BA:673:C:H4'	40:BF:82:ILE:CD1	2.14	0.76
35:BA:1283:G:N2	35:BA:1286:A:OP2	2.18	0.76
39:BE:51:PHE:O	39:BE:74:PRO:HB2	1.86	0.76
41:BG:66:GLN:CD	41:BG:94:LEU:HG	2.11	0.76
50:BR:58:GLY:HA2	50:BR:80:PHE:CE2	2.20	0.76
51:BS:78:LEU:HD11	51:BS:103:GLU:CB	2.16	0.76
51:BS:89:ARG:O	51:BS:92:TYR:HB3	1.85	0.76
1:AA:859:A:O2'	1:AA:860:A:H5'	1.86	0.76
1:AA:940:C:O2'	1:AA:941:G:H5'	1.86	0.76
2:AB:33:TYR:HB3	2:AB:41:ILE:O	1.85	0.76
8:AH:1:MET:HE2	8:AH:1:MET:N	1.99	0.76
31:B6:18:ARG:HG2	31:B6:19:ARG:H	1.50	0.76
43:BJ:53:UNK:O	43:BJ:85:LEU:HD12	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:770:C:O2'	1:AA:771:G:C5'	2.30	0.76
3:AC:22:TRP:CZ2	14:AN:54:PRO:HG2	2.20	0.76
9:AI:53:VAL:CG1	9:AI:95:LYS:HE2	2.16	0.76
39:BE:203:LYS:HE3	39:BE:204:ALA:HB2	1.65	0.76
40:BF:80:ALA:HB1	40:BF:81:PRO:HD2	1.68	0.76
48:BP:121:LYS:O	48:BP:123:LEU:HD23	1.85	0.76
1:AA:265:G:C2'	1:AA:266:G:H5"	2.11	0.75
1:AA:696:A:C2'	1:AA:697:U:H5'	2.16	0.75
8:AH:42:GLU:HG3	8:AH:109:ILE:HD12	1.68	0.75
24:AY:138:LYS:HG2	61:AY:701:GCP:C6	2.15	0.75
35:BA:925:C:C2'	35:BA:926:A:H5"	2.16	0.75
42:BH:11:VAL:HG23	42:BH:50:VAL:HG23	1.66	0.75
58:BZ:165:VAL:HG12	58:BZ:166:SER:H	1.52	0.75
1:AA:199:G:O2'	1:AA:200:G:H5'	1.86	0.75
3:AC:117:ALA:HB2	3:AC:200:ALA:CB	2.16	0.75
35:BA:1676:A:C2	35:BA:1993:U:H5'	2.20	0.75
54:BV:19:LYS:HG3	54:BV:20:LEU:O	1.86	0.75
58:BZ:112:ARG:C	58:BZ:112:ARG:HD3	2.11	0.75
1:AA:769:G:O2'	1:AA:770:C:H5'	1.86	0.75
24:AY:308:PRO:HB2	24:AY:394:ALA:HB1	1.69	0.75
35:BA:407:G:H2'	35:BA:408:G:H8	1.51	0.75
35:BA:691:C:C2'	35:BA:692:C:H5'	2.16	0.75
35:BA:1215:G:C2'	35:BA:1216:G:H5'	2.16	0.75
35:BA:1216:G:C2'	35:BA:1217:C:H5'	2.17	0.75
35:BA:1445:A:C8	35:BA:1460:A:N1	2.54	0.75
39:BE:4:ILE:HD13	39:BE:28:ALA:HB1	1.67	0.75
39:BE:132:HIS:CA	39:BE:135:HIS:CE1	2.69	0.75
42:BH:156:ALA:O	42:BH:158:HIS:HD2	1.69	0.75
52:BT:79:HIS:O	52:BT:80:SER:CB	2.33	0.75
52:BT:83:ILE:HG13	52:BT:84:GLN:N	1.99	0.75
1:AA:342:C:O2'	1:AA:343:U:H5'	1.86	0.75
1:AA:495:A:H1'	1:AA:496:A:H2'	1.69	0.75
1:AA:687:A:C1'	1:AA:688:G:OP2	2.30	0.75
1:AA:1282:C:O2'	1:AA:1283:G:C5'	2.34	0.75
2:AB:16:HIS:O	2:AB:17:PHE:CD1	2.40	0.75
2:AB:190:THR:O	2:AB:191:ASP:CB	2.35	0.75
15:AO:79:ARG:O	15:AO:82:ILE:HG22	1.86	0.75
17:AQ:12:SER:HB3	17:AQ:20:THR:HB	1.68	0.75
28:B3:35:ARG:CD	28:B3:37:LEU:HD21	2.16	0.75
35:BA:661:C:H4'	48:BP:16:ARG:HH12	1.51	0.75
35:BA:1222:C:H2'	35:BA:1223:G:H5'	1.66	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:105:LEU:O	37:BC:106:ASP:HB3	1.86	0.75
41:BG:94:LEU:HD12	41:BG:98:ARG:CD	2.16	0.75
48:BP:38:GLN:HG3	48:BP:39:LYS:H	1.51	0.75
1:AA:1390:U:C2'	1:AA:1391:U:H5'	2.16	0.75
2:AB:14:GLY:O	2:AB:15:VAL:CG2	2.30	0.75
12:AL:41:ARG:HG2	12:AL:42:THR:H	1.51	0.75
19:AS:45:VAL:HB	19:AS:64:GLU:HB3	1.68	0.75
35:BA:389:G:H1	48:BP:71:VAL:HG12	1.51	0.75
35:BA:1722:A:O2'	35:BA:1739:U:H5"	1.85	0.75
38:BD:27:THR:CG2	38:BD:83:GLU:HG2	2.16	0.75
41:BG:77:ILE:CG1	41:BG:82:LEU:HB2	2.15	0.75
54:BV:64:HIS:ND1	54:BV:92:THR:HG22	2.01	0.75
57:BY:95:LYS:HD2	57:BY:100:ALA:HA	1.69	0.75
1:AA:521:G:O2'	1:AA:522:C:H5'	1.87	0.75
12:AL:6:THR:N	12:AL:9:GLN:HE21	1.85	0.75
13:AM:10:PRO:HB3	13:AM:18:ALA:HB1	1.69	0.75
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.67	0.75
25:B0:37:LEU:H	25:B0:37:LEU:HD22	1.52	0.75
35:BA:1332:G:N2	35:BA:1610:A:H8	1.83	0.75
35:BA:1396:U:O2	35:BA:1396:U:H2'	1.86	0.75
35:BA:2313:C:H4'	41:BG:40:ASN:HD21	1.52	0.75
1:AA:37:U:H2'	1:AA:38:G:C5'	2.12	0.75
1:AA:949:A:C2'	1:AA:950:U:H5'	2.07	0.75
2:AB:172:ILE:H	2:AB:172:ILE:CD1	1.92	0.75
24:AY:165:GLN:NE2	24:AY:177:ILE:HG21	2.01	0.75
27:B2:2:LYS:HD3	27:B2:5:GLU:OE2	1.87	0.75
31:B6:9:LEU:O	31:B6:9:LEU:CD1	2.31	0.75
33:B8:61:LEU:HD12	33:B8:63:PRO:HD2	1.69	0.75
35:BA:962:G:O2'	35:BA:963:U:H5'	1.86	0.75
35:BA:1464:C:H2'	35:BA:1465:G:H8	1.51	0.75
35:BA:1770:G:H2'	35:BA:1771:C:H5'	1.66	0.75
41:BG:69:ALA:O	41:BG:90:LEU:HA	1.87	0.75
1:AA:737:A:H1'	6:AF:73:ASN:ND2	2.01	0.75
24:AY:127:LYS:HE3	24:AY:128:TYR:HE1	1.51	0.75
25:B0:19:LYS:HB3	25:B0:19:LYS:HZ3	1.52	0.75
27:B2:16:LEU:O	27:B2:17:SER:CB	2.33	0.75
35:BA:145:G:H2'	35:BA:146:G:C5'	2.17	0.75
35:BA:246:C:H2'	35:BA:247:G:H5'	0.82	0.75
35:BA:599:G:C2'	35:BA:600:G:H5'	2.16	0.75
35:BA:1417:C:C2'	35:BA:1418:G:C5'	2.64	0.75
35:BA:1999:C:O2'	35:BA:2000:G:C5'	2.30	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:35:LYS:HB3	38:BD:35:LYS:HZ2	1.52	0.75
48:BP:51:PHE:HA	48:BP:52:GLU:HB3	1.67	0.75
48:BP:52:GLU:HG2	48:BP:57:THR:HB	1.68	0.75
48:BP:124:LYS:HD3	48:BP:143:GLY:HA3	1.68	0.75
3:AC:83:ARG:O	3:AC:86:VAL:HG13	1.87	0.75
22:AV:27:G:H1	22:AV:43:C:H41	1.35	0.75
26:B1:57:GLU:C	26:B1:58:ILE:HG13	2.12	0.75
35:BA:31:C:C2'	35:BA:32:C:C5'	2.55	0.75
35:BA:2245:U:H5'	35:BA:2246:G:H5'	1.68	0.75
42:BH:85:LYS:HZ3	42:BH:87:LEU:HG	1.52	0.75
52:BT:96:ARG:NH1	52:BT:96:ARG:HB2	2.01	0.75
54:BV:38:LEU:O	54:BV:39:LEU:HD13	1.86	0.75
1:AA:359:U:C2'	1:AA:360:A:H5'	2.17	0.74
2:AB:187:LEU:O	2:AB:187:LEU:CD2	2.34	0.74
4:AD:30:LYS:C	4:AD:32:ALA:H	1.94	0.74
9:AI:53:VAL:HG13	9:AI:95:LYS:HE2	1.69	0.74
25:B0:27:GLU:CB	25:B0:68:GLU:HA	2.17	0.74
35:BA:1809:A:H2'	35:BA:1810:A:C8	2.21	0.74
35:BA:2286:A:H4'	35:BA:2287:A:O4'	1.86	0.74
37:BC:117:THR:CG2	37:BC:119:ASP:N	2.50	0.74
38:BD:65:ILE:HD11	38:BD:67:PHE:CE2	2.22	0.74
41:BG:45:GLU:OE2	41:BG:152:LEU:HD21	1.86	0.74
41:BG:71:THR:OG1	41:BG:89:GLY:HA3	1.87	0.74
1:AA:192:U:O4'	20:AT:103:GLY:HA2	1.87	0.74
1:AA:771:G:C6	1:AA:772:U:C4	2.75	0.74
1:AA:1229:A:H5'	1:AA:1229:A:C8	2.20	0.74
2:AB:24:TRP:HE3	2:AB:32:ILE:HD11	1.52	0.74
13:AM:3:ARG:N	13:AM:9:ILE:HG22	2.02	0.74
24:AY:157:LEU:H	24:AY:157:LEU:HD23	1.50	0.74
31:B6:32:ASN:O	31:B6:33:LYS:HG2	1.86	0.74
35:BA:882:G:H2'	35:BA:883:G:H8	1.52	0.74
46:BN:128:HIS:HD2	46:BN:130:HIS:H	1.34	0.74
48:BP:62:LEU:N	48:BP:62:LEU:HD23	2.02	0.74
1:AA:226:G:O2'	1:AA:227:G:H5'	1.88	0.74
1:AA:274:A:O2'	1:AA:275:G:O4'	2.05	0.74
1:AA:690:G:C6	1:AA:691:G:C6	2.75	0.74
1:AA:770:C:C2'	1:AA:771:G:H5'	2.17	0.74
1:AA:774:G:O2'	1:AA:775:G:C5'	2.30	0.74
1:AA:1073:U:O5'	1:AA:1073:U:H6	1.70	0.74
1:AA:1371:G:O2'	1:AA:1372:U:C5'	2.35	0.74
13:AM:101:GLN:H	13:AM:101:GLN:NE2	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:21:VAL:HG21	17:AQ:59:ILE:HD11	1.68	0.74
24:AY:290:LYS:O	24:AY:400:GLU:HG3	1.87	0.74
30:B5:33:CYS:HB2	30:B5:40:LYS:HE3	1.68	0.74
35:BA:673:C:H5"	40:BF:81:PRO:HD2	1.70	0.74
35:BA:743:G:C4	35:BA:744:G:C8	2.75	0.74
35:BA:1041:G:H22	35:BA:1114:G:H22	1.31	0.74
38:BD:35:LYS:N	38:BD:36:PRO:CD	2.49	0.74
41:BG:38:VAL:CG2	41:BG:93:THR:HG23	2.09	0.74
48:BP:85:LEU:HD23	48:BP:86:LYS:N	2.02	0.74
52:BT:27:THR:HG23	52:BT:28:VAL:N	2.02	0.74
25:B0:27:GLU:N	25:B0:27:GLU:CD	2.45	0.74
35:BA:111:A:O2'	35:BA:112:U:C5'	2.35	0.74
35:BA:267:C:H2'	35:BA:268:C:H6	1.52	0.74
35:BA:1079:C:O2	35:BA:1079:C:H2'	1.85	0.74
35:BA:1798:U:H5'	38:BD:259:THR:HG22	1.69	0.74
1:AA:105:G:N7	1:AA:106:C:N4	2.36	0.74
1:AA:490:G:O2'	1:AA:491:G:C5'	2.30	0.74
3:AC:168:ALA:O	3:AC:169:ALA:HB2	1.86	0.74
9:AI:53:VAL:HG22	9:AI:95:LYS:NZ	2.02	0.74
13:AM:14:ARG:HB3	13:AM:16:ASP:OD1	1.86	0.74
35:BA:1332:G:N2	35:BA:1610:A:C8	2.55	0.74
42:BH:28:GLY:HA3	42:BH:79:VAL:HB	1.70	0.74
1:AA:522:C:H2'	1:AA:523:A:C5'	2.17	0.74
1:AA:573:A:H5'	1:AA:573:A:H8	1.52	0.74
22:AV:47:U:O5'	22:AV:47:U:H6	1.68	0.74
26:B1:29:GLY:O	26:B1:30:VAL:CG2	2.35	0.74
29:B4:43:TYR:C	29:B4:45:GLY:H	1.96	0.74
35:BA:330:A:C2	35:BA:1210:A:H2'	2.20	0.74
35:BA:628:G:H2'	35:BA:629:G:H5"	1.70	0.74
35:BA:1464:C:O2'	35:BA:1465:G:C5'	2.30	0.74
35:BA:1503:U:H2'	35:BA:1504:C:C6	2.22	0.74
35:BA:1817:G:C2'	35:BA:1818:U:H5'	2.17	0.74
37:BC:100:ILE:C	37:BC:102:GLN:H	1.96	0.74
50:BR:56:LYS:HE3	50:BR:88:ARG:HA	1.69	0.74
58:BZ:185:GLU:C	58:BZ:187:ALA:N	2.44	0.74
10:AJ:46:ARG:HG2	10:AJ:64:GLU:HB3	1.70	0.74
25:B0:50:ASN:HB3	25:B0:63:VAL:CG2	2.17	0.74
35:BA:1223:G:N1	35:BA:1227:G:C6	2.56	0.74
35:BA:2555:U:C2'	35:BA:2556:C:C5'	2.49	0.74
35:BA:2581:G:C2'	35:BA:2610:C:H41	2.00	0.74
35:BA:2645:G:H3'	35:BA:2646:C:C5'	2.15	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:176:ARG:HG2	38:BD:176:ARG:HH11	1.51	0.74
41:BG:77:ILE:HD12	41:BG:80:PHE:HB2	1.69	0.74
56:BX:3:THR:HA	56:BX:6:ASP:OD2	1.87	0.74
1:AA:190:U:H3	20:AT:105:SER:HB2	1.52	0.74
1:AA:489:C:H2'	1:AA:490:G:H8	1.53	0.74
1:AA:509:A:H5'	4:AD:54:TYR:CE2	2.22	0.74
35:BA:605:C:H2'	35:BA:606:U:H5'	1.68	0.74
42:BH:83:TYR:HB3	42:BH:135:GLY:H	1.52	0.74
48:BP:146:VAL:HG22	48:BP:147:LEU:N	2.02	0.74
1:AA:57:G:O2'	1:AA:58:C:H5'	1.87	0.74
1:AA:186:C:H2'	1:AA:187:C:C6	2.23	0.74
1:AA:492:G:O2'	1:AA:493:G:H5'	1.88	0.74
20:AT:10:LEU:HD12	20:AT:11:SER:H	1.51	0.74
20:AT:16:HIS:O	20:AT:19:SER:HB3	1.87	0.74
24:AY:99:ARG:NH2	24:AY:403:GLU:HB2	2.01	0.74
27:B2:55:ARG:HH11	27:B2:55:ARG:HG3	1.52	0.74
27:B2:55:ARG:NH2	35:BA:75:G:H4'	2.03	0.74
35:BA:1696:G:H2'	35:BA:1697:G:H5'	1.70	0.74
35:BA:1970:A:C5'	35:BA:1972:A:C1'	2.63	0.74
38:BD:35:LYS:HZ3	38:BD:36:PRO:N	1.85	0.74
58:BZ:115:GLY:CA	58:BZ:177:PRO:HD3	2.16	0.74
24:AY:631:ILE:HA	24:AY:645:ALA:HB2	1.69	0.74
25:B0:10:THR:C	25:B0:11:ARG:HG3	2.13	0.74
31:B6:12:GLU:HG3	31:B6:23:THR:CG2	2.18	0.74
35:BA:1822:G:O2'	35:BA:1823:G:C5'	2.30	0.74
35:BA:2403:C:OP2	35:BA:2403:C:C6	2.41	0.74
37:BC:48:LEU:HB3	37:BC:50:ILE:HD12	1.70	0.74
40:BF:9:ILE:CG1	40:BF:14:PRO:HA	2.16	0.74
47:BO:107:ARG:HD3	52:BT:36:GLU:CG	2.18	0.74
52:BT:29:ARG:HG2	52:BT:86:ILE:HG22	1.69	0.74
53:BU:6:THR:O	53:BU:9:VAL:HG22	1.86	0.74
58:BZ:79:ARG:C	58:BZ:81:ARG:H	1.96	0.74
1:AA:198:G:N3	1:AA:199:G:C8	2.56	0.73
1:AA:556:C:O2'	1:AA:557:G:C5'	2.30	0.73
2:AB:187:LEU:CD2	2:AB:201:ILE:O	2.30	0.73
14:AN:16:PHE:H	14:AN:16:PHE:HD1	1.36	0.73
24:AY:69:VAL:CA	24:AY:82:ILE:HG12	2.17	0.73
35:BA:1416:G:N3	35:BA:1417:C:C4	2.55	0.73
35:BA:2555:U:H2'	35:BA:2556:C:H5'	0.76	0.73
1:AA:688:G:C6	1:AA:700:G:C2	2.75	0.73
1:AA:1190:G:OP1	3:AC:4:LYS:HA	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1193:G:O2'	1:AA:1194:U:H5'	1.89	0.73
26:B1:29:GLY:C	26:B1:30:VAL:CG2	2.62	0.73
29:B4:16:CYS:HA	29:B4:33:VAL:HG11	1.70	0.73
35:BA:332:A:C4	35:BA:335:C:N4	2.55	0.73
35:BA:523:C:H2'	35:BA:524:U:C5'	2.17	0.73
35:BA:1041:G:H1	35:BA:1114:G:H1	1.35	0.73
36:BB:43:C:O2'	41:BG:94:LEU:HD13	1.88	0.73
46:BN:1:MET:C	46:BN:2:LYS:HE3	2.13	0.73
52:BT:62:THR:HG22	52:BT:75:ILE:HG12	1.69	0.73
52:BT:80:SER:CB	52:BT:81:PRO:HD2	2.09	0.73
1:AA:243:A:H4'	1:AA:244:U:O5'	1.89	0.73
3:AC:50:ALA:HB2	3:AC:75:VAL:CG1	2.18	0.73
9:AI:53:VAL:HG22	9:AI:95:LYS:HZ3	1.53	0.73
35:BA:880:G:H2'	35:BA:881:G:H5"	1.69	0.73
35:BA:1036:G:C6	35:BA:1120:G:O6	2.41	0.73
35:BA:1423:G:C2'	35:BA:1424:G:H5'	2.18	0.73
35:BA:1494:A:N3	35:BA:1494:A:H5'	2.04	0.73
35:BA:1819:A:H4'	35:BA:1820:U:O5'	1.87	0.73
35:BA:1945:G:C6	35:BA:1946:U:C4	2.76	0.73
51:BS:97:ARG:NH2	51:BS:98:VAL:HA	1.97	0.73
1:AA:950:U:C2'	1:AA:951:G:C5'	2.30	0.73
1:AA:1150:U:O5'	1:AA:1150:U:H6	1.71	0.73
1:AA:1277:C:O2'	1:AA:1279:A:C8	2.22	0.73
2:AB:130:ARG:NH2	2:AB:134:GLU:HG3	2.02	0.73
3:AC:82:GLU:O	3:AC:84:ILE:HG22	1.88	0.73
3:AC:148:GLY:HA2	3:AC:171:GLY:HA3	1.69	0.73
10:AJ:78:ASN:HD21	10:AJ:80:LYS:HB2	1.51	0.73
20:AT:50:GLU:OE2	20:AT:100:ILE:HD13	1.87	0.73
29:B4:21:VAL:HG21	29:B4:35:VAL:CG2	2.18	0.73
34:B9:17:ILE:HG22	34:B9:18:ARG:H	1.52	0.73
35:BA:1041:G:H22	35:BA:1114:G:N2	1.85	0.73
35:BA:2152:G:H5'	35:BA:2153:G:OP2	1.88	0.73
35:BA:2201:C:H2'	35:BA:2202:C:C6	2.24	0.73
35:BA:2751:G:C4	42:BH:2:SER:OG	2.38	0.73
42:BH:156:ALA:O	42:BH:158:HIS:N	2.21	0.73
1:AA:1255:G:C6	1:AA:1283:G:C6	2.75	0.73
1:AA:1402:C:H2'	1:AA:1403:C:H5'	1.70	0.73
7:AG:48:LYS:HE2	7:AG:115:ARG:HH12	1.52	0.73
9:AI:83:ARG:O	9:AI:86:VAL:HG12	1.87	0.73
12:AL:20:LYS:HD3	12:AL:20:LYS:H	1.54	0.73
22:AV:76:A:H4'	22:AV:76:A:OP1	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:14:ILE:C	29:B4:15:ILE:HD12	2.12	0.73
31:B6:7:ILE:HG21	31:B6:27:LYS:HZ2	1.52	0.73
35:BA:1543:C:H3'	35:BA:1544:A:H5"	1.70	0.73
35:BA:2128:C:O2'	35:BA:2129:C:C5'	2.36	0.73
35:BA:2606:C:O2'	35:BA:2607:G:H5"	1.88	0.73
40:BF:64:ILE:N	40:BF:76:GLY:O	2.21	0.73
50:BR:2:ARG:HD2	50:BR:2:ARG:C	2.13	0.73
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.07	0.73
24:AY:680:PRO:HD2	24:AY:683:VAL:HG21	1.70	0.73
27:B2:17:SER:HB2	27:B2:18:PRO:HD2	1.70	0.73
27:B2:70:GLN:CG	27:B2:71:ASN:N	2.35	0.73
29:B4:5:ILE:HG21	41:BG:67:LYS:HD3	1.71	0.73
29:B4:33:VAL:HG13	29:B4:34:GLU:H	1.52	0.73
35:BA:1702:G:H2'	35:BA:1703:G:O4'	1.89	0.73
35:BA:2126:A:C4'	35:BA:2127:G:O5'	2.35	0.73
3:AC:50:ALA:HB2	3:AC:75:VAL:HB	1.71	0.73
3:AC:173:VAL:O	3:AC:175:LEU:HD22	1.87	0.73
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.70	0.73
12:AL:40:VAL:O	12:AL:40:VAL:HG12	1.88	0.73
24:AY:126:GLU:HG2	24:AY:132:ARG:HH22	1.54	0.73
28:B3:17:LYS:HG2	35:BA:969:U:OP1	1.88	0.73
35:BA:1899:G:N2	35:BA:1902:C:N4	2.35	0.73
35:BA:2208:A:H1'	35:BA:2219:G:C5	2.22	0.73
38:BD:43:ARG:HD2	38:BD:44:ASN:OD1	1.88	0.73
42:BH:5:GLY:H	42:BH:69:ARG:HD3	1.54	0.73
48:BP:96:THR:HG22	48:BP:126:VAL:HB	1.69	0.73
49:BQ:60:ARG:CG	58:BZ:179:ASP:CG	2.58	0.73
58:BZ:17:ALA:HA	58:BZ:20:ARG:CD	2.18	0.73
1:AA:1238:A:OP1	1:AA:1335:C:O4'	2.06	0.73
1:AA:1490:C:C2'	1:AA:1491:G:C5'	2.64	0.73
1:AA:1504:G:H4'	1:AA:1505:G:OP2	1.87	0.73
2:AB:60:ASP:O	2:AB:64:ARG:HG2	1.89	0.73
9:AI:18:PHE:O	9:AI:61:ALA:HA	1.88	0.73
12:AL:45:PRO:CD	12:AL:51:ALA:O	2.37	0.73
20:AT:23:ARG:O	20:AT:27:LYS:HB2	1.89	0.73
35:BA:1695:G:H3'	35:BA:1695:G:N3	2.04	0.73
40:BF:8:GLN:HB3	40:BF:126:VAL:HA	1.70	0.73
49:BQ:32:TYR:O	49:BQ:105:GLU:HB2	1.89	0.73
52:BT:83:ILE:CG1	52:BT:84:GLN:N	2.52	0.73
1:AA:311:C:O2'	1:AA:312:C:H5'	1.87	0.73
1:AA:938:A:C2'	1:AA:939:G:C5'	2.64	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:69:VAL:CB	24:AY:82:ILE:HD11	2.11	0.73
24:AY:168:ILE:HG23	24:AY:205:TYR:HE2	1.54	0.73
24:AY:205:TYR:O	24:AY:207:ASP:N	2.22	0.73
33:B8:50:LEU:HD12	33:B8:51:ALA:H	1.53	0.73
35:BA:654(A):G:C2'	35:BA:654(B):C:H5'	2.19	0.73
35:BA:1448:G:H1'	35:BA:1528:A:H62	1.54	0.73
35:BA:1653:G:H4'	35:BA:1654:A:O5'	1.87	0.73
35:BA:1778:U:O2'	35:BA:1779:U:C5'	2.31	0.73
35:BA:1799:G:H3'	35:BA:1799:G:P	2.29	0.73
35:BA:2401:U:C2'	35:BA:2402:C:OP1	2.36	0.73
38:BD:131:LEU:HB2	38:BD:136:ILE:HD11	1.69	0.73
48:BP:64:LYS:O	48:BP:66:GLY:N	2.22	0.73
51:BS:17:ARG:O	51:BS:20:ARG:HB2	1.89	0.73
1:AA:922:G:C6	1:AA:923:A:C6	2.77	0.73
1:AA:1179:A:C2'	1:AA:1180:A:H5'	2.19	0.73
18:AR:36:ASN:ND2	18:AR:39:VAL:HG23	2.03	0.73
35:BA:1464:C:H2'	35:BA:1465:G:C8	2.24	0.73
35:BA:2192:G:O2'	35:BA:2193:G:H5"	1.89	0.73
35:BA:2712:U:H1'	35:BA:2712(A):A:C8	2.23	0.73
41:BG:77:ILE:HG22	41:BG:78:SER:N	2.04	0.73
1:AA:40:C:H2'	1:AA:41:G:C8	2.23	0.72
1:AA:322:C:C2'	1:AA:323:U:H5'	2.19	0.72
1:AA:555:C:H2'	1:AA:556:C:C6	2.24	0.72
24:AY:71:THR:HG21	24:AY:357:ARG:HD3	1.70	0.72
26:B1:59:THR:C	26:B1:60:PHE:CD1	2.67	0.72
35:BA:327:G:H2'	35:BA:328:U:H6	1.51	0.72
35:BA:1291:C:H2'	35:BA:1292:U:H6	1.53	0.72
35:BA:1403:C:H5"	35:BA:1471:A:H1'	1.69	0.72
35:BA:1819:A:C1'	35:BA:1820:U:OP2	2.37	0.72
35:BA:2129:C:OP1	37:BC:7:ARG:HD2	1.89	0.72
36:BB:80:U:O2'	36:BB:81:G:H5"	1.88	0.72
38:BD:44:ASN:CB	38:BD:49:ILE:HA	2.18	0.72
39:BE:132:HIS:CD2	39:BE:135:HIS:CE1	2.77	0.72
1:AA:556:C:C2'	1:AA:557:G:C5'	2.64	0.72
1:AA:773:G:HO2'	1:AA:774:G:H5'	1.52	0.72
1:AA:1074:G:H2'	1:AA:1075:C:C6	2.24	0.72
9:AI:23:ASN:HD22	9:AI:23:ASN:H	1.32	0.72
35:BA:1799:G:N2	35:BA:1800:C:C5	2.57	0.72
35:BA:2007:C:O2'	35:BA:2008:C:C5'	2.30	0.72
35:BA:2103:C:C2'	35:BA:2104:G:H5'	2.19	0.72
35:BA:2463:C:O2'	35:BA:2464:C:H5'	1.87	0.72

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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'	1.71	0.72
38:BD:35:LYS:HZ3	38:BD:35:LYS:C	1.97	0.72
38:BD:79:VAL:HG21	38:BD:111:LEU:HD11	1.70	0.72
41:BG:77:ILE:HB	41:BG:82:LEU:O	1.88	0.72
46:BN:96:GLU:O	46:BN:100:GLU:HG3	1.88	0.72
49:BQ:12:GLN:HG2	49:BQ:73:PRO:HD2	1.71	0.72
1:AA:346:G:H4'	52:BT:41:ARG:CZ	2.18	0.72
1:AA:545:C:C2'	1:AA:546:G:C5'	2.56	0.72
1:AA:1075:C:O5'	1:AA:1075:C:H6	1.72	0.72
6:AF:28:ARG:O	6:AF:32:ASN:HB2	1.88	0.72
6:AF:68:PRO:HG2	6:AF:71:ARG:HG3	1.70	0.72
7:AG:49:ILE:CD1	7:AG:118:VAL:HA	2.18	0.72
7:AG:80:VAL:HB	7:AG:83:ALA:HB3	1.68	0.72
10:AJ:8:LEU:HB3	10:AJ:96:ILE:HG22	1.70	0.72
25:B0:27:GLU:HB3	25:B0:68:GLU:HA	1.70	0.72
27:B2:63:VAL:O	27:B2:66:GLU:HG2	1.89	0.72
29:B4:16:CYS:CA	29:B4:33:VAL:HG21	2.18	0.72
33:B8:59:LYS:HB2	33:B8:59:LYS:HZ3	1.52	0.72
35:BA:31:C:H6	35:BA:31:C:O5'	1.72	0.72
57:BY:95:LYS:NZ	57:BY:99:CYS:O	2.22	0.72
1:AA:89:C:O2'	1:AA:90:U:H2'	1.89	0.72
1:AA:839:U:O2	1:AA:839:U:H2'	1.89	0.72
1:AA:949:A:HO2'	1:AA:950:U:H5"	1.52	0.72
1:AA:1030(B):C:H2'	1:AA:1030(C):G:C4'	2.18	0.72
1:AA:1060:C:C5	3:AC:2:GLY:HA2	2.25	0.72
8:AH:83:ILE:HD12	8:AH:137:VAL:HG22	1.71	0.72
19:AS:64:GLU:HB2	29:B4:48:ARG:HH22	1.53	0.72
24:AY:14:ASN:HD21	24:AY:80:ASN:HD22	1.36	0.72
24:AY:57:GLN:O	24:AY:60:GLU:N	2.20	0.72
35:BA:1796:U:H2'	35:BA:1797:C:C6	2.25	0.72
1:AA:46:G:H2'	1:AA:366:C:N4	2.04	0.72
1:AA:266:G:O2'	1:AA:267:C:C5'	2.37	0.72
1:AA:961:U:C1'	1:AA:962:C:H5'	2.20	0.72
1:AA:1151:A:C2	1:AA:1152:A:C5	2.78	0.72
8:AH:23:SER:HA	8:AH:63:LEU:HD22	1.71	0.72
27:B2:48:HIS:C	27:B2:48:HIS:CD2	2.67	0.72
35:BA:267:C:H2'	35:BA:268:C:C6	2.24	0.72
35:BA:1805:U:H5"	38:BD:250:TRP:CE2	2.25	0.72
35:BA:2023:G:H5'	35:BA:2617:C:H4'	1.70	0.72
35:BA:2123:G:C2'	35:BA:2124:G:H5'	2.19	0.72
35:BA:2811:G:OP1	39:BE:60:ASN:HB2	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:24:LEU:O	40:BF:26:ALA:N	2.21	0.72
47:BO:35:VAL:HG11	47:BO:103:ALA:HB3	1.71	0.72
54:BV:19:LYS:HZ3	54:BV:20:LEU:HB2	1.53	0.72
1:AA:1303:C:C2'	1:AA:1304:G:H5'	2.19	0.72
1:AA:1386:G:N2	1:AA:1387:G:C5	2.57	0.72
12:AL:47:LYS:N	12:AL:48:PRO:HD2	2.02	0.72
24:AY:252:ASP:O	24:AY:254:LYS:HE3	1.89	0.72
24:AY:608:VAL:HG22	24:AY:671:MET:HB2	1.70	0.72
28:B3:22:ALA:HA	28:B3:46:ASN:HD22	1.55	0.72
35:BA:654(H):G:C2'	35:BA:654(I):C:H5'	2.16	0.72
39:BE:69:LYS:C	39:BE:71:GLY:H	1.96	0.72
52:BT:16:ARG:HG2	52:BT:79:HIS:HB3	1.71	0.72
54:BV:2:PHE:C	54:BV:2:PHE:CD1	2.66	0.72
2:AB:192:SER:O	2:AB:194:PRO:HD3	1.90	0.72
9:AI:49:PRO:HG2	9:AI:81:ILE:HG21	1.70	0.72
25:B0:42:GLY:O	25:B0:57:PHE:CD2	2.43	0.72
35:BA:31:C:H2'	35:BA:32:C:H5'	1.72	0.72
35:BA:2443:C:O2'	35:BA:2444:G:H5'	1.89	0.72
35:BA:2716:U:H2'	35:BA:2717:G:H5'	1.71	0.72
35:BA:2807:G:C3'	35:BA:2808:U:H5"	2.19	0.72
36:BB:7:G:C2'	36:BB:8:U:H5"	2.20	0.72
39:BE:203:LYS:HD2	39:BE:203:LYS:O	1.90	0.72
41:BG:55:LYS:O	41:BG:59:GLU:HG2	1.90	0.72
42:BH:149:ARG:HD3	42:BH:164:TYR:CE1	2.25	0.72
1:AA:543:C:O2'	1:AA:544:G:H5'	1.88	0.72
1:AA:590:C:C2'	1:AA:591:U:H5'	2.19	0.72
1:AA:685:G:O2'	1:AA:686:U:C5'	2.31	0.72
2:AB:15:VAL:HG21	2:AB:209:ARG:NH2	2.03	0.72
3:AC:117:ALA:HB2	3:AC:200:ALA:HB2	1.72	0.72
19:AS:7:LYS:H	19:AS:7:LYS:HD3	1.55	0.72
35:BA:115:C:O2'	35:BA:116:C:H5'	1.90	0.72
35:BA:1417:C:H2'	35:BA:1418:G:C5'	2.20	0.72
41:BG:60:LEU:O	41:BG:63:ILE:HG12	1.90	0.72
1:AA:311:C:H6	1:AA:311:C:O5'	1.72	0.72
29:B4:56:VAL:HG23	29:B4:60:GLN:HG3	1.71	0.72
35:BA:2753:A:HO2'	35:BA:2754:U:H5'	1.52	0.72
48:BP:51:PHE:HA	48:BP:52:GLU:HB2	1.70	0.72
1:AA:118:U:O5'	1:AA:118:U:H6	1.73	0.72
1:AA:1280:A:O4'	10:AJ:41:PRO:HG3	1.90	0.72
6:AF:67:MET:HE1	6:AF:75:LEU:HD23	1.72	0.72
26:B1:75:GLU:O	26:B1:78:LYS:CG	2.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:2:LYS:HE2	29:B4:4:GLY:O	1.89	0.72
35:BA:833:U:C5'	48:BP:51:PHE:O	2.38	0.72
35:BA:1133:U:O3'	35:BA:1135:C:P	2.48	0.72
35:BA:1658:C:OP1	39:BE:132:HIS:O	2.07	0.72
35:BA:2206:G:H3'	35:BA:2206:G:N3	2.05	0.72
37:BC:88:GLU:CB	37:BC:92:ALA:HB3	2.19	0.72
42:BH:158:HIS:HA	42:BH:170:ARG:HD2	1.71	0.72
51:BS:106:ARG:HD2	51:BS:108:GLY:N	2.04	0.72
1:AA:60:A:O2'	1:AA:61:G:C5'	2.38	0.71
1:AA:369:C:O2'	1:AA:370:C:H5'	1.88	0.71
1:AA:556:C:H6	1:AA:556:C:O5'	1.73	0.71
29:B4:35:VAL:O	41:BG:112:PRO:HG2	1.88	0.71
30:B5:52:TYR:O	30:B5:53:ALA:CB	2.37	0.71
33:B8:56:GLU:HA	33:B8:59:LYS:NZ	2.04	0.71
35:BA:1097:U:H2'	35:BA:1098:A:H5'	1.70	0.71
35:BA:1224:C:O5'	35:BA:1224:C:H6	1.73	0.71
35:BA:1954:G:N2	35:BA:1986:A:OP1	2.22	0.71
35:BA:2310:A:O2'	35:BA:2311:A:H5"	1.90	0.71
35:BA:2873:A:C2	50:BR:6:SER:HB2	2.25	0.71
38:BD:70:TRP:CH2	38:BD:150:LYS:HA	2.25	0.71
49:BQ:56:ARG:HH11	49:BQ:56:ARG:HG3	1.52	0.71
50:BR:55:ALA:HB2	50:BR:79:LEU:HD11	1.72	0.71
52:BT:95:ARG:NH1	52:BT:95:ARG:HB3	2.05	0.71
1:AA:123:C:OP1	1:AA:311:C:O2'	2.07	0.71
1:AA:1152:A:O2'	1:AA:1153:C:C5'	2.37	0.71
1:AA:1237:C:O2'	1:AA:1335:C:C4'	2.38	0.71
19:AS:32:LYS:HB3	19:AS:50:ALA:HB3	1.72	0.71
20:AT:86:ARG:O	20:AT:90:GLN:HG2	1.90	0.71
25:B0:78:TYR:O	25:B0:79:VAL:HG23	1.90	0.71
35:BA:1405:U:H2'	35:BA:1406:U:C6	2.25	0.71
37:BC:51:ASP:HB3	37:BC:57:GLN:OE1	1.91	0.71
39:BE:134:ILE:C	39:BE:134:ILE:HD12	2.14	0.71
41:BG:7:LEU:O	41:BG:9:ARG:N	2.23	0.71
42:BH:9:ILE:HG22	42:BH:10:PRO:C	2.15	0.71
48:BP:16:ARG:HH11	48:BP:16:ARG:CB	2.03	0.71
3:AC:68:VAL:HG12	3:AC:70:VAL:HG13	1.72	0.71
3:AC:119:ARG:O	3:AC:122:GLU:HB2	1.90	0.71
10:AJ:90:LEU:H	10:AJ:91:PRO:HD3	1.53	0.71
14:AN:13:THR:N	14:AN:14:PRO:HD2	2.04	0.71
24:AY:507:TYR:HE1	24:AY:572:TYR:HA	1.55	0.71
35:BA:652:C:C2	35:BA:653:A:H8	2.08	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:689:A:O2'	35:BA:690:G:C5'	2.32	0.71
35:BA:1646:C:H5'	35:BA:1647:G:H5"	1.70	0.71
35:BA:1994:C:O5'	35:BA:1994:C:H6	1.74	0.71
42:BH:3:ARG:HG2	42:BH:4:ILE:O	1.90	0.71
42:BH:70:THR:HG22	42:BH:74:ASN:HD21	1.55	0.71
51:BS:15:ARG:HH11	51:BS:15:ARG:CB	2.01	0.71
52:BT:29:ARG:N	52:BT:45:PHE:O	2.23	0.71
1:AA:39:G:O6	1:AA:547:A:H2'	1.90	0.71
1:AA:1525:G:H2'	1:AA:1526:G:H5'	1.71	0.71
6:AF:28:ARG:HH11	6:AF:28:ARG:HG3	1.55	0.71
10:AJ:9:ARG:HG2	10:AJ:69:ASN:OD1	1.90	0.71
25:B0:14:ARG:HH11	25:B0:14:ARG:CG	2.01	0.71
28:B3:1:MET:CB	28:B3:2:PRO:HD2	2.19	0.71
29:B4:15:ILE:HD13	29:B4:33:VAL:CB	2.19	0.71
33:B8:48:PHE:O	33:B8:49:VAL:HG22	1.90	0.71
37:BC:133:GLY:C	37:BC:135:ARG:H	1.98	0.71
58:BZ:46:LYS:O	58:BZ:46:LYS:HD2	1.91	0.71
2:AB:20:GLU:HA	2:AB:20:GLU:OE1	1.89	0.71
25:B0:26:TYR:HE2	35:BA:857:C:H1'	1.54	0.71
26:B1:75:GLU:HA	26:B1:78:LYS:HD2	1.71	0.71
35:BA:605:C:C2'	35:BA:606:U:C5'	2.69	0.71
35:BA:859:G:O2'	35:BA:916:G:O6	2.08	0.71
35:BA:1540:U:H3'	35:BA:1541:G:C3'	2.14	0.71
35:BA:1748:G:H5'	35:BA:1748:G:H8	1.56	0.71
35:BA:2756:U:H1'	35:BA:2757:A:P	2.30	0.71
40:BF:6:VAL:HG12	40:BF:7:TYR:N	1.93	0.71
41:BG:104:GLU:HB3	41:BG:105:LYS:CE	2.19	0.71
48:BP:16:ARG:HD3	48:BP:16:ARG:O	1.91	0.71
58:BZ:123:ASP:O	58:BZ:124:ILE:HG23	1.89	0.71
1:AA:89:C:H1'	1:AA:90:U:OP1	1.91	0.71
1:AA:495:A:H1'	1:AA:496:A:N9	2.04	0.71
1:AA:1305:G:OP1	21:AU:2:GLY:CA	2.38	0.71
11:AK:40:ILE:HG23	11:AK:75:TYR:CD2	2.26	0.71
25:B0:79:VAL:O	25:B0:79:VAL:HG12	1.90	0.71
35:BA:39:C:C2'	35:BA:40:C:H5'	2.20	0.71
35:BA:526:A:O2'	35:BA:2043:C:C2'	2.38	0.71
35:BA:688:U:C2'	35:BA:689:A:H5'	2.20	0.71
35:BA:1210:A:H5"	35:BA:1212:G:O4'	1.91	0.71
35:BA:1318:C:H3'	35:BA:1319:G:H5"	1.73	0.71
35:BA:1806:C:C2'	35:BA:1807:G:H5'	2.20	0.71
38:BD:43:ARG:HB3	38:BD:54:ARG:HB2	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:7:LYS:O	46:BN:9:VAL:HG23	1.89	0.71
49:BQ:17:LEU:HD21	49:BQ:96:VAL:HG13	1.71	0.71
53:BU:85:LYS:HD3	53:BU:117:GLN:HE21	1.56	0.71
58:BZ:149:SER:OG	58:BZ:173:ALA:HA	1.90	0.71
1:AA:538:G:H5"	12:AL:114:LYS:HB2	1.72	0.71
1:AA:973:G:C4	10:AJ:55:LYS:HE3	2.25	0.71
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.25	0.71
1:AA:1279:A:C4'	1:AA:1280:A:OP1	2.39	0.71
1:AA:1305:G:O2'	1:AA:1306:A:H8	1.69	0.71
17:AQ:67:LYS:O	17:AQ:68:ARG:HB2	1.90	0.71
27:B2:47:ASN:O	27:B2:49:LYS:N	2.24	0.71
29:B4:15:ILE:HD11	29:B4:31:ILE:HG23	1.71	0.71
33:B8:15:LYS:HB2	48:BP:65:ARG:HH12	1.55	0.71
35:BA:2364:C:O2'	35:BA:2365:G:H5'	1.89	0.71
48:BP:51:PHE:CD2	48:BP:53:GLY:HA3	2.26	0.71
1:AA:185:A:C6	1:AA:186:C:N4	2.58	0.71
1:AA:250:A:H4'	1:AA:251:G:O5'	1.90	0.71
1:AA:360:A:O2'	1:AA:361:G:C5'	2.30	0.71
9:AI:95:LYS:HE3	9:AI:96:LEU:CD2	2.21	0.71
28:B3:22:ALA:HB3	28:B3:50:VAL:HG11	1.72	0.71
31:B6:30:THR:HG23	31:B6:31:PRO:HD2	1.73	0.71
35:BA:404:C:H4'	35:BA:405:U:H5'	1.71	0.71
35:BA:459:U:H2'	35:BA:460:A:H5'	1.72	0.71
35:BA:654(F):C:H2'	35:BA:654(G):C:O4'	1.91	0.71
35:BA:1228:G:H21	35:BA:1229:G:H1'	1.54	0.71
35:BA:1713:U:O2'	35:BA:1714:G:H5'	1.91	0.71
35:BA:1769:G:C6	35:BA:1984:G:O6	2.43	0.71
38:BD:35:LYS:HD3	38:BD:61:LEU:HB3	1.73	0.71
39:BE:87:GLU:OE1	39:BE:87:GLU:O	2.09	0.71
40:BF:132:VAL:HG22	40:BF:133:ASN:H	1.53	0.71
44:BK:57:UNK:HA	44:BK:67:UNK:HA	1.73	0.71
47:BO:87:ILE:CG2	47:BO:91:LEU:HA	2.20	0.71
48:BP:64:LYS:O	48:BP:65:ARG:C	2.34	0.71
53:BU:90:VAL:HG11	54:BV:39:LEU:CG	2.21	0.71
1:AA:356:A:O2'	1:AA:368:U:O2'	2.03	0.71
1:AA:558:G:H2'	1:AA:559:A:C2	2.24	0.71
1:AA:921:U:H2'	1:AA:922:G:O4'	1.91	0.71
1:AA:1049:U:H1'	1:AA:1050:G:OP2	1.90	0.71
2:AB:51:LEU:O	2:AB:55:PHE:HB2	1.91	0.71
2:AB:132:LYS:HA	2:AB:135:GLN:HG3	1.72	0.71
4:AD:13:ARG:HB3	4:AD:38:TYR:O	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:37:LEU:HD21	25:B0:61:ALA:HB2	1.73	0.71
29:B4:1:MET:HB2	36:BB:39:A:N6	2.05	0.71
35:BA:272(H):C:C2'	35:BA:272(I):U:H5"	2.21	0.71
35:BA:500:G:N2	35:BA:502:A:H3'	2.06	0.71
35:BA:630:G:N2	35:BA:632:A:H3'	2.06	0.71
35:BA:930:U:H4'	35:BA:931:G:O5'	1.91	0.71
35:BA:1210:A:H5'	35:BA:1210:A:C8	2.24	0.71
35:BA:1332:G:N2	35:BA:1609:A:HO2'	1.89	0.71
35:BA:1639:U:C2'	35:BA:1640:C:H5"	2.19	0.71
37:BC:55:SER:O	37:BC:57:GLN:N	2.22	0.71
37:BC:72:GLN:HA	37:BC:72:GLN:HE21	1.56	0.71
38:BD:10:THR:OG1	38:BD:13:ARG:HB2	1.89	0.71
48:BP:144:GLU:N	48:BP:145:PRO:HD3	2.06	0.71
50:BR:7:GLY:HA3	50:BR:8:ARG:CZ	2.21	0.71
53:BU:108:GLU:HG3	54:BV:44:LYS:HD3	1.72	0.71
1:AA:199:G:O2'	1:AA:200:G:C5'	2.39	0.71
1:AA:701:C:C5'	1:AA:702:A:OP1	2.37	0.71
1:AA:1176:A:H2'	1:AA:1177:G:H8	1.55	0.71
1:AA:1240:U:OP1	7:AG:116:ALA:HB2	1.91	0.71
1:AA:1408:A:H5'	1:AA:1408:A:H8	1.56	0.71
16:AP:21:VAL:HG13	16:AP:33:ILE:HB	1.73	0.71
24:AY:517:LEU:HD11	24:AY:564:LYS:CB	2.21	0.71
27:B2:42:GLY:O	27:B2:43:GLN:C	2.34	0.71
35:BA:248:G:N7	35:BA:250:G:C4	2.59	0.71
35:BA:415:A:N1	35:BA:2409:G:C6	2.59	0.71
37:BC:88:GLU:HG3	37:BC:89:GLU:H	1.55	0.71
48:BP:71:VAL:HG13	48:BP:72:PRO:HD3	1.73	0.71
52:BT:29:ARG:C	52:BT:30:VAL:HG23	2.15	0.71
1:AA:406:G:H5"	4:AD:5:ILE:HG23	1.73	0.70
1:AA:548:G:H2'	1:AA:549:C:H5'	1.72	0.70
1:AA:563:A:H61	1:AA:884:U:H3	1.39	0.70
1:AA:1176:A:O2'	1:AA:1177:G:H5'	1.91	0.70
1:AA:1498:U:C4'	1:AA:1499:A:O5'	2.39	0.70
2:AB:71:VAL:HG21	2:AB:162:ILE:HD11	1.72	0.70
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.71	0.70
22:AV:73:A:H2'	22:AV:74:C:H5'	1.73	0.70
24:AY:342:TYR:CE2	24:AY:347:GLY:HA2	2.26	0.70
28:B3:59:VAL:HG12	28:B3:60:GLU:N	2.05	0.70
30:B5:52:TYR:O	30:B5:53:ALA:HB3	1.89	0.70
30:B5:56:LYS:HD2	30:B5:59:GLU:OE2	1.89	0.70
35:BA:83:G:H22	35:BA:102:G:H2'	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:603:A:C4'	35:BA:604:G:O5'	2.39	0.70
35:BA:603:A:C1'	35:BA:604:G:OP2	2.36	0.70
35:BA:943:U:OP2	48:BP:38:GLN:CD	2.34	0.70
35:BA:2753:A:C2'	35:BA:2754:U:H5'	2.20	0.70
37:BC:85:LYS:HD2	37:BC:151:GLY:HA3	1.72	0.70
46:BN:39:ARG:HH21	46:BN:41:ASP:CB	2.04	0.70
1:AA:495:A:H1'	1:AA:496:A:C8	2.26	0.70
1:AA:874:G:C6	1:AA:875:C:N4	2.59	0.70
1:AA:1039:C:H2'	1:AA:1040:U:C6	2.26	0.70
1:AA:1399:C:C2	1:AA:1502:A:N6	2.59	0.70
3:AC:167:TRP:CD1	3:AC:168:ALA:O	2.44	0.70
24:AY:530:VAL:HG22	24:AY:531:GLY:N	2.06	0.70
30:B5:20:ARG:HG2	30:B5:23:HIS:CD2	2.26	0.70
35:BA:71:A:C2	56:BX:31:HIS:HE1	2.09	0.70
35:BA:689:A:H2'	35:BA:690:G:C5'	2.21	0.70
35:BA:1808:U:H2'	35:BA:1809:A:H5'	1.72	0.70
41:BG:7:LEU:HD23	41:BG:7:LEU:C	2.16	0.70
41:BG:83:ARG:H	41:BG:83:ARG:HD2	1.56	0.70
41:BG:107:LEU:HD11	41:BG:177:GLY:O	1.90	0.70
52:BT:32:TYR:O	52:BT:33:LYS:CB	2.39	0.70
53:BU:55:ARG:HA	53:BU:58:ARG:HD2	1.72	0.70
1:AA:774:G:H2'	1:AA:775:G:H8	1.56	0.70
1:AA:939:G:H1	1:AA:1344:C:H42	1.37	0.70
1:AA:1305:G:H5'	21:AU:4:GLY:HA3	1.73	0.70
1:AA:1370:G:O2'	1:AA:1371:G:H5'	1.92	0.70
4:AD:105:VAL:HG21	4:AD:126:ILE:HG12	1.72	0.70
35:BA:8:A:H2'	35:BA:9:U:C5	2.26	0.70
35:BA:796:C:H2'	35:BA:797:C:C6	2.26	0.70
35:BA:1416:G:O2'	35:BA:1417:C:C5	2.30	0.70
35:BA:1649:G:C2'	35:BA:1650:G:H5'	2.20	0.70
40:BF:6:VAL:CG1	40:BF:7:TYR:H	1.98	0.70
57:BY:28:LYS:CD	57:BY:28:LYS:N	2.49	0.70
58:BZ:152:ALA:HB2	58:BZ:169:GLU:O	1.91	0.70
1:AA:1001(A):G:H2'	1:AA:1002:G:O4'	1.90	0.70
4:AD:129:ASN:ND2	4:AD:145:GLU:H	1.88	0.70
9:AI:13:ALA:HA	9:AI:67:GLY:O	1.91	0.70
24:AY:122:TRP:CD2	24:AY:157:LEU:HD12	2.26	0.70
26:B1:52:ARG:O	26:B1:53:VAL:HG22	1.92	0.70
35:BA:27:G:H22	35:BA:512:G:C2'	1.97	0.70
35:BA:689:A:C2'	35:BA:690:G:C5'	2.63	0.70
35:BA:774:A:H2	35:BA:787:U:HO2'	1.36	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:893:C:H2'	35:BA:894:C:H6	1.56	0.70
35:BA:1778:U:H2'	35:BA:1784:A:N6	2.07	0.70
35:BA:1808:U:O5'	35:BA:1808:U:H6	1.74	0.70
35:BA:2007:C:H2'	35:BA:2008:C:H6	1.56	0.70
42:BH:9:ILE:HG22	42:BH:10:PRO:CA	2.20	0.70
54:BV:19:LYS:NZ	54:BV:20:LEU:H	1.89	0.70
1:AA:489:C:H2'	1:AA:490:G:C8	2.26	0.70
1:AA:543:C:O2'	1:AA:544:G:C5'	2.39	0.70
1:AA:1103:C:OP1	2:AB:96:ARG:NH2	2.23	0.70
3:AC:118:GLN:O	3:AC:121:ALA:N	2.25	0.70
10:AJ:50:ILE:HA	10:AJ:60:ARG:HG2	1.73	0.70
15:AO:17:ARG:HD3	15:AO:26:GLU:HG3	1.71	0.70
15:AO:82:ILE:CD1	15:AO:88:ARG:HB2	2.19	0.70
26:B1:75:GLU:O	26:B1:78:LYS:CD	2.39	0.70
35:BA:603:A:C8	35:BA:655:A:N6	2.59	0.70
35:BA:743:G:H2'	35:BA:744:G:O5'	1.90	0.70
35:BA:968:G:O2'	35:BA:969:U:C5'	2.30	0.70
35:BA:1884:A:C2'	35:BA:1885:A:H5"	2.21	0.70
37:BC:15:VAL:O	37:BC:16:ASP:HB3	1.92	0.70
52:BT:29:ARG:HH11	52:BT:88:ILE:HD11	1.53	0.70
1:AA:109:A:C6	1:AA:326:G:C6	2.78	0.70
1:AA:946:A:O2'	1:AA:947:G:H5'	1.92	0.70
1:AA:1279:A:H4'	1:AA:1280:A:OP1	1.92	0.70
2:AB:212:GLN:HG2	2:AB:235:SER:HB2	1.73	0.70
24:AY:25:LYS:NZ	24:AY:86:GLY:N	2.40	0.70
35:BA:144:C:H2'	35:BA:145:G:H8	1.56	0.70
35:BA:599:G:H2'	35:BA:600:G:H5'	1.71	0.70
35:BA:1963:U:O2	35:BA:1963:U:C2'	2.39	0.70
35:BA:2362:G:C2'	35:BA:2363:C:H5'	2.21	0.70
37:BC:144:GLY:C	37:BC:161:ARG:HH21	1.99	0.70
42:BH:149:ARG:HD3	42:BH:164:TYR:HE1	1.56	0.70
48:BP:115:LEU:HD23	48:BP:116:GLY:N	2.07	0.70
9:AI:65:VAL:HG21	9:AI:73:GLN:CB	2.13	0.70
15:AO:87:ILE:CG2	15:AO:88:ARG:H	2.03	0.70
24:AY:14:ASN:ND2	24:AY:80:ASN:HD22	1.89	0.70
24:AY:461:ILE:O	24:AY:465:ARG:HB2	1.92	0.70
25:B0:19:LYS:NZ	25:B0:41:ARG:NH2	2.39	0.70
25:B0:53:MET:SD	25:B0:57:PHE:HA	2.31	0.70
34:B9:1:MET:SD	34:B9:31:LYS:HB3	2.31	0.70
34:B9:10:ILE:O	34:B9:11:CYS:HB3	1.91	0.70
35:BA:880:G:C2'	35:BA:881:G:H5"	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:101:LEU:HD12	40:BF:102:PRO:HD2	1.74	0.70
41:BG:61:ALA:CB	41:BG:68:PRO:HD3	2.20	0.70
51:BS:28:VAL:HG12	51:BS:29:PHE:N	2.06	0.70
51:BS:106:ARG:HB3	51:BS:106:ARG:NH1	2.02	0.70
58:BZ:98:MET:HE2	58:BZ:100:VAL:HG22	1.74	0.70
58:BZ:183:LEU:C	58:BZ:183:LEU:HD13	2.15	0.70
1:AA:940:C:H2'	1:AA:941:G:H5'	1.73	0.70
1:AA:1047:G:O2'	1:AA:1048:G:H5'	1.91	0.70
1:AA:1075:C:C2'	1:AA:1076:C:H5'	2.22	0.70
1:AA:1368:G:O2'	1:AA:1369:C:H5'	1.92	0.70
2:AB:36:ARG:O	2:AB:37:ASN:CB	2.40	0.70
2:AB:82:ARG:HA	2:AB:92:TYR:CE1	2.26	0.70
3:AC:187:ALA:HB2	3:AC:198:VAL:HB	1.74	0.70
22:AV:40:C:H2'	22:AV:41:C:C6	2.26	0.70
24:AY:8:ASP:HB3	24:AY:11:ARG:HD2	1.74	0.70
24:AY:86:GLY:O	24:AY:117:GLN:HG2	1.92	0.70
35:BA:658:C:H2'	35:BA:659:C:C6	2.27	0.70
35:BA:968:G:H2'	35:BA:969:U:C6	2.27	0.70
35:BA:1786:A:H1'	35:BA:1938:A:H62	1.54	0.70
35:BA:1941:C:C2'	35:BA:1942:C:H5'	2.22	0.70
58:BZ:19:ARG:NH1	58:BZ:84:GLU:O	2.25	0.70
1:AA:46:G:O2'	1:AA:365:U:C1'	2.40	0.70
24:AY:15:ILE:O	24:AY:81:ILE:HA	1.92	0.70
24:AY:111:SER:OG	24:AY:141:LYS:HD2	1.92	0.70
24:AY:301:ILE:HG22	24:AY:332:SER:HB2	1.73	0.70
31:B6:9:LEU:C	31:B6:9:LEU:CD1	2.63	0.70
33:B8:15:LYS:HD2	48:BP:65:ARG:HH22	1.56	0.70
35:BA:171:G:O2'	35:BA:172:C:H5'	1.91	0.70
35:BA:1058:G:H2'	35:BA:1059:G:C5'	2.22	0.70
35:BA:2870:C:H2'	35:BA:2871:C:O4'	1.92	0.70
37:BC:153:ILE:HG23	37:BC:161:ARG:NH1	2.06	0.70
39:BE:34:VAL:HG22	39:BE:48:GLN:HE21	1.56	0.70
48:BP:34:GLY:O	48:BP:35:HIS:HB2	1.91	0.70
58:BZ:104:PHE:HB3	58:BZ:141:VAL:HG21	1.73	0.70
1:AA:110:C:C2'	1:AA:111:G:H5'	2.22	0.70
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.73	0.70
11:AK:82:VAL:HG13	11:AK:108:ILE:HA	1.74	0.70
12:AL:123:LYS:H	12:AL:123:LYS:HE3	1.56	0.70
24:AY:149:VAL:O	24:AY:153:MET:HG3	1.92	0.70
30:B5:44:THR:HG21	50:BR:101:ALA:HB2	1.74	0.70
35:BA:110:G:C2'	35:BA:111:A:H5'	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:461:C:C2'	35:BA:462:C:C5'	2.69	0.70
35:BA:2176:A:C4'	35:BA:2177:C:OP1	2.37	0.70
41:BG:104:GLU:OE2	41:BG:107:LEU:HD12	1.92	0.70
52:BT:50:ILE:HA	52:BT:99:LEU:CD1	2.22	0.70
55:BW:71:VAL:HG23	55:BW:71:VAL:O	1.90	0.70
57:BY:11:ASP:O	57:BY:28:LYS:HE3	1.92	0.70
1:AA:57:G:H2'	1:AA:58:C:H6	1.52	0.69
1:AA:1442(A):G:C6	52:BT:118:ARG:HB2	2.26	0.69
2:AB:96:ARG:HG3	2:AB:96:ARG:O	1.92	0.69
2:AB:156:LYS:O	2:AB:157:ARG:HB2	1.91	0.69
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.26	0.69
19:AS:63:THR:HG23	19:AS:64:GLU:N	2.06	0.69
24:AY:386:GLY:CA	24:AY:402:ILE:HG12	2.21	0.69
25:B0:10:THR:O	25:B0:11:ARG:HG3	1.92	0.69
25:B0:19:LYS:HZ3	25:B0:41:ARG:NH2	1.90	0.69
27:B2:16:LEU:HD23	27:B2:20:GLU:HG2	1.71	0.69
28:B3:35:ARG:HD3	28:B3:37:LEU:HD21	1.73	0.69
29:B4:14:ILE:O	29:B4:14:ILE:HG22	1.92	0.69
31:B6:41:PRO:HD2	31:B6:45:LYS:HA	1.74	0.69
33:B8:33:ASN:CG	33:B8:34:TRP:N	2.50	0.69
35:BA:89:G:H3'	35:BA:90:U:C5'	2.21	0.69
35:BA:630:G:C4	35:BA:632:A:OP2	2.45	0.69
35:BA:702:G:H2'	35:BA:703:U:H5'	1.74	0.69
35:BA:1696:G:C2'	35:BA:1697:G:H5'	2.22	0.69
47:BO:77:ILE:HD13	52:BT:74:ARG:HD3	1.74	0.69
49:BQ:54:MET:HB3	49:BQ:64:ILE:HD13	1.72	0.69
1:AA:264:U:C2'	1:AA:265:G:C5'	2.65	0.69
12:AL:46:LYS:O	12:AL:47:LYS:C	2.35	0.69
24:AY:84:THR:HG23	24:AY:85:PRO:CD	2.22	0.69
27:B2:70:GLN:NE2	27:B2:71:ASN:H	1.90	0.69
29:B4:31:ILE:HG12	29:B4:32:TYR:N	2.07	0.69
34:B9:10:ILE:HD13	34:B9:34:GLN:HE22	1.56	0.69
35:BA:1221(A):C:O2'	35:BA:1222:C:H5'	1.93	0.69
35:BA:1289:C:O2'	35:BA:1290:C:H5'	1.92	0.69
35:BA:1300:U:C4'	35:BA:1301:A:O5'	2.34	0.69
35:BA:1516:C:H2'	35:BA:1517:G:H5'	1.73	0.69
35:BA:2580:U:H5'	39:BE:131:ALA:CB	2.23	0.69
35:BA:2836:U:H2'	35:BA:2837:G:C8	2.27	0.69
37:BC:183:PRO:HG2	37:BC:184:GLU:OE2	1.92	0.69
42:BH:168:PRO:CA	42:BH:170:ARG:NH2	2.54	0.69
1:AA:100:C:H2'	1:AA:101:A:C8	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:551:GLN:O	24:AY:559:PRO:HA	1.93	0.69
35:BA:1539:G:C5	35:BA:1540:U:H1'	2.27	0.69
35:BA:1998:G:H2'	35:BA:1999:C:C6	2.27	0.69
35:BA:2404:C:H1'	48:BP:67:MET:HE1	1.74	0.69
37:BC:80:LYS:HE3	37:BC:120:VAL:CG1	2.14	0.69
41:BG:5:VAL:HG21	41:BG:8:LYS:HZ2	1.57	0.69
41:BG:136:ARG:HG3	41:BG:136:ARG:O	1.92	0.69
58:BZ:17:ALA:HA	58:BZ:20:ARG:HG2	1.74	0.69
1:AA:542:G:H2'	1:AA:543:C:C6	2.28	0.69
1:AA:982:U:H4'	1:AA:983:A:O5'	1.92	0.69
25:B0:43:THR:H	35:BA:2331:G:H4'	1.57	0.69
25:B0:53:MET:CG	25:B0:57:PHE:HA	2.23	0.69
26:B1:37:ILE:C	26:B1:37:ILE:HD12	2.17	0.69
29:B4:56:VAL:HG13	29:B4:57:GLU:HG3	1.75	0.69
35:BA:1104:C:O2'	35:BA:1105:U:H5'	1.92	0.69
35:BA:2645:G:C3'	35:BA:2646:C:H5'	2.20	0.69
56:BX:35:THR:HG22	56:BX:37:THR:N	2.07	0.69
1:AA:346:G:C5'	52:BT:35:LYS:HZ1	2.06	0.69
1:AA:1027:C:H2'	1:AA:1028:C:O4'	1.92	0.69
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	1.92	0.69
26:B1:82:LEU:C	26:B1:83:GLU:HG3	2.17	0.69
29:B4:15:ILE:CD1	29:B4:33:VAL:HB	2.18	0.69
35:BA:1290:C:O2'	35:BA:1291:C:H5'	1.93	0.69
35:BA:2875:C:O2'	52:BT:5:ALA:HB3	1.92	0.69
47:BO:2:ILE:HB	47:BO:33:ALA:HB3	1.75	0.69
48:BP:61:ARG:C	48:BP:62:LEU:HD23	2.18	0.69
51:BS:13:ARG:CG	51:BS:14:VAL:H	2.04	0.69
1:AA:60:A:C4'	1:AA:61:G:O5'	2.40	0.69
1:AA:360:A:HO2'	1:AA:361:G:H5'	1.58	0.69
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.26	0.69
1:AA:1139:G:H5'	1:AA:1140:C:OP1	1.92	0.69
7:AG:50:ILE:HG23	7:AG:58:PRO:HG3	1.74	0.69
25:B0:43:THR:O	25:B0:43:THR:CG2	2.40	0.69
26:B1:45:ASN:ND2	35:BA:2090:G:H21	1.89	0.69
26:B1:82:LEU:O	26:B1:83:GLU:CB	2.40	0.69
27:B2:2:LYS:HD2	27:B2:5:GLU:HG3	1.74	0.69
35:BA:176:G:C2'	35:BA:177:G:C5'	2.65	0.69
35:BA:806:C:OP2	48:BP:39:LYS:HG3	1.91	0.69
42:BH:3:ARG:CB	42:BH:3:ARG:NH1	2.41	0.69
42:BH:85:LYS:C	42:BH:85:LYS:HD3	2.18	0.69
1:AA:688:G:C2'	1:AA:689:C:H5'	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:942:G:H2'	1:AA:943:U:C6	2.28	0.69
1:AA:973:G:H1'	10:AJ:55:LYS:NZ	2.07	0.69
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.07	0.69
1:AA:1337:G:H5"	1:AA:1338:G:OP1	1.93	0.69
2:AB:16:HIS:CE1	2:AB:210:SER:CA	2.76	0.69
6:AF:97:PHE:HD2	18:AR:31:LEU:HD21	1.57	0.69
24:AY:138:LYS:HG2	61:AY:701:GCP:C5	2.22	0.69
27:B2:16:LEU:CD2	27:B2:20:GLU:CG	2.45	0.69
35:BA:1301:A:H2'	35:BA:1302:A:H3'	1.75	0.69
37:BC:80:LYS:HG3	37:BC:120:VAL:CG1	2.22	0.69
37:BC:117:THR:HG21	37:BC:119:ASP:CG	2.18	0.69
57:BY:84:ARG:NH2	57:BY:97:ARG:HB3	2.07	0.69
58:BZ:152:ALA:O	58:BZ:155:LEU:HD22	1.93	0.69
1:AA:114:U:O5'	1:AA:114:U:H6	1.75	0.69
1:AA:199:G:H2'	1:AA:200:G:C8	2.28	0.69
1:AA:505:G:H2'	1:AA:506:G:C8	2.28	0.69
1:AA:688:G:O2'	1:AA:689:C:C5'	2.31	0.69
1:AA:921:U:O2'	5:AE:19:MET:O	2.11	0.69
1:AA:961:U:H5'	1:AA:984:C:H1'	1.75	0.69
1:AA:1157:A:C4'	1:AA:1158:C:O5'	2.40	0.69
2:AB:33:TYR:HB3	2:AB:41:ILE:HG22	1.75	0.69
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.23	0.69
3:AC:130:VAL:HG13	3:AC:157:ILE:HG22	1.74	0.69
6:AF:67:MET:HE1	6:AF:75:LEU:CD2	2.23	0.69
11:AK:56:GLY:O	11:AK:89:ALA:HB1	1.92	0.69
24:AY:98:MET:HG2	24:AY:125:ALA:HA	1.74	0.69
29:B4:7:PRO:HD3	41:BG:66:GLN:HA	1.74	0.69
29:B4:66:SER:O	29:B4:67:TYR:HB2	1.93	0.69
35:BA:652:C:C2	35:BA:653:A:C8	2.81	0.69
35:BA:1222:C:O2'	35:BA:1223:G:C5'	2.35	0.69
35:BA:1301:A:O2'	35:BA:1302:A:C2'	2.30	0.69
35:BA:2201:C:H2'	35:BA:2202:C:H6	1.57	0.69
37:BC:122:GLY:O	37:BC:127:LYS:CE	2.41	0.69
41:BG:7:LEU:HD13	41:BG:100:TRP:CE3	2.27	0.69
47:BO:4:PRO:O	47:BO:5:GLN:CB	2.40	0.69
47:BO:9:GLU:HG3	47:BO:18:LYS:HZ2	1.58	0.69
48:BP:115:LEU:CG	48:BP:116:GLY:H	2.05	0.69
1:AA:170:U:O2'	1:AA:171:A:H5'	1.91	0.69
3:AC:11:ARG:O	3:AC:12:LEU:C	2.35	0.69
3:AC:83:ARG:CG	3:AC:84:ILE:H	2.05	0.69
9:AI:25:LYS:O	9:AI:26:VAL:HG12	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:70:LYS:O	9:AI:74:ILE:HG13	1.92	0.69
13:AM:81:LEU:O	13:AM:86:CYS:HB3	1.92	0.69
19:AS:88:LYS:O	19:AS:90:THR:HG22	1.92	0.69
31:B6:15:GLU:OE2	31:B6:41:PRO:HB3	1.92	0.69
35:BA:285:C:H2'	35:BA:286:C:C6	2.28	0.69
35:BA:465:G:H2'	35:BA:466:A:C8	2.28	0.69
35:BA:860:U:C2'	35:BA:861:A:H5'	2.22	0.69
35:BA:1041:G:N2	35:BA:1114:G:H22	1.91	0.69
35:BA:1446:C:N4	35:BA:1465:G:N1	2.39	0.69
48:BP:30:THR:HG22	48:BP:31:ALA:N	2.08	0.69
50:BR:103:ARG:HH12	50:BR:110:PRO:HD3	1.58	0.69
1:AA:539:A:H2'	1:AA:540:G:C8	2.28	0.69
1:AA:698:G:H2'	1:AA:699:C:C6	2.27	0.69
4:AD:162:LEU:HG	4:AD:181:MET:HE2	1.74	0.69
9:AI:47:LEU:C	9:AI:49:PRO:HD2	2.18	0.69
29:B4:24:THR:O	29:B4:25:TYR:CG	2.46	0.69
31:B6:25:LYS:HZ1	33:B8:34:TRP:HZ2	1.40	0.69
33:B8:33:ASN:CG	33:B8:34:TRP:H	2.01	0.69
35:BA:259:G:C2'	35:BA:260:G:H5'	2.22	0.69
35:BA:907:U:OP1	49:BQ:24:GLY:N	2.26	0.69
35:BA:2291:U:H2'	35:BA:2292:C:C6	2.28	0.69
38:BD:76:PRO:HG2	38:BD:98:VAL:HG21	1.75	0.69
44:BK:100:UNK:HA	44:BK:137:UNK:O	1.93	0.69
48:BP:115:LEU:HG	48:BP:116:GLY:H	1.58	0.69
49:BQ:76:LYS:HB3	49:BQ:91:GLU:CG	2.23	0.69
51:BS:66:ALA:HB1	51:BS:99:LYS:HG2	1.74	0.69
52:BT:30:VAL:HG12	52:BT:31:SER:HB2	1.73	0.69
54:BV:38:LEU:C	54:BV:39:LEU:HD13	2.18	0.69
58:BZ:165:VAL:CG1	58:BZ:166:SER:H	2.06	0.69
1:AA:593:G:C2'	1:AA:594:G:C5'	2.71	0.68
1:AA:593:G:H2'	1:AA:594:G:H5'	1.75	0.68
9:AI:95:LYS:HZ2	9:AI:96:LEU:HD13	1.58	0.68
29:B4:22:ILE:CG2	41:BG:105:LYS:HD3	2.23	0.68
33:B8:50:LEU:C	33:B8:52:LYS:H	2.01	0.68
35:BA:34:C:O5'	35:BA:34:C:H6	1.76	0.68
42:BH:30:LYS:HG2	42:BH:79:VAL:O	1.93	0.68
49:BQ:54:MET:HB3	49:BQ:64:ILE:CD1	2.23	0.68
51:BS:23:ARG:HB3	51:BS:24:LEU:HD22	1.74	0.68
52:BT:29:ARG:O	52:BT:30:VAL:CG2	2.37	0.68
1:AA:353:A:H5'	1:AA:353:A:C8	2.23	0.68
11:AK:82:VAL:HG11	11:AK:108:ILE:HG12	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:65:LYS:HD3	13:AM:69:GLU:HG3	1.75	0.68
24:AY:53:ASP:HB3	24:AY:58:GLU:OE1	1.92	0.68
25:B0:64:ASP:O	25:B0:84:LEU:HG	1.94	0.68
35:BA:45:C:O2	35:BA:179:G:N2	2.26	0.68
35:BA:262:A:H2'	35:BA:263:C:H5'	1.75	0.68
35:BA:1383:C:O5'	35:BA:1383:C:H6	1.75	0.68
35:BA:1864:U:C2'	35:BA:1865:G:H5"	2.23	0.68
35:BA:2524:G:H8	35:BA:2524:G:H5'	1.57	0.68
37:BC:25:GLU:HA	37:BC:28:ARG:HD2	1.74	0.68
52:BT:102:ILE:HB	52:BT:110:ILE:CD1	2.22	0.68
1:AA:166:G:H2'	1:AA:167:G:H8	1.56	0.68
1:AA:267:C:P	17:AQ:67:LYS:HB2	2.33	0.68
1:AA:311:C:HO2'	1:AA:312:C:C5'	2.07	0.68
2:AB:145:LEU:HD23	2:AB:149:LEU:CD2	2.22	0.68
7:AG:49:ILE:HD13	7:AG:118:VAL:HA	1.76	0.68
7:AG:120:ILE:O	7:AG:121:ALA:HB3	1.94	0.68
24:AY:153:MET:HA	24:AY:157:LEU:HD21	1.76	0.68
24:AY:246:ILE:HG23	24:AY:255:ILE:HD11	1.75	0.68
35:BA:326:G:C2'	35:BA:327:G:H5'	2.22	0.68
35:BA:1296:G:O2'	35:BA:1297:C:H5'	1.93	0.68
35:BA:1941:C:H2'	35:BA:1942:C:H5'	1.75	0.68
35:BA:1989:G:O2'	35:BA:1990:C:H5'	1.93	0.68
35:BA:2409:G:H2'	35:BA:2410:G:H8	1.57	0.68
41:BG:48:GLU:CD	41:BG:49:ASP:H	2.00	0.68
49:BQ:21:THR:HG22	49:BQ:23:GLY:O	1.93	0.68
58:BZ:81:ARG:HG3	58:BZ:81:ARG:O	1.92	0.68
1:AA:112:G:C2'	1:AA:113:G:C5'	2.67	0.68
1:AA:1281:U:C5'	1:AA:1282:C:H5	1.98	0.68
4:AD:3:ARG:H	4:AD:3:ARG:HD3	1.57	0.68
8:AH:1:MET:HE2	8:AH:1:MET:H3	1.57	0.68
29:B4:34:GLU:O	29:B4:35:VAL:C	2.36	0.68
31:B6:11:LEU:HD13	31:B6:11:LEU:N	2.09	0.68
31:B6:53:LYS:CD	31:B6:54:ILE:H	2.05	0.68
35:BA:141:A:H8	35:BA:1408:C:O2'	1.73	0.68
35:BA:248:G:N7	35:BA:250:G:N3	2.41	0.68
35:BA:1054:A:C6	35:BA:1106:G:O6	2.46	0.68
35:BA:1062:G:H1	35:BA:1075:C:N4	1.91	0.68
35:BA:1223:G:C6	35:BA:1227:G:O6	2.47	0.68
37:BC:117:THR:HG22	37:BC:119:ASP:HB2	1.69	0.68
39:BE:65:GLY:HA2	39:BE:70:ALA:HB2	1.76	0.68
40:BF:123:LEU:HD12	40:BF:124:LEU:H	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:38:GLN:O	48:BP:39:LYS:HB2	1.91	0.68
50:BR:4:LEU:O	50:BR:4:LEU:CG	2.41	0.68
50:BR:59:ASP:O	50:BR:60:LEU:HB3	1.94	0.68
51:BS:104:GLY:O	51:BS:106:ARG:N	2.27	0.68
52:BT:3:ARG:O	52:BT:7:ILE:HG13	1.93	0.68
7:AG:47:CYS:HA	7:AG:50:ILE:HG22	1.76	0.68
12:AL:75:HIS:HD2	12:AL:77:LEU:H	1.40	0.68
13:AM:11:ARG:C	13:AM:13:LYS:H	2.01	0.68
13:AM:101:GLN:HE21	13:AM:101:GLN:N	1.90	0.68
20:AT:74:LYS:CG	20:AT:75:ASN:N	2.49	0.68
24:AY:238:THR:HG22	24:AY:241:GLU:CG	2.24	0.68
25:B0:66:VAL:CG1	25:B0:67:VAL:N	2.57	0.68
26:B1:25:LYS:HD3	35:BA:2396:G:O5’	1.94	0.68
29:B4:33:VAL:O	29:B4:34:GLU:CB	2.40	0.68
35:BA:15:G:O2’	35:BA:16:G:C5’	2.36	0.68
35:BA:699:A:O2’	35:BA:700:G:H5’	1.94	0.68
35:BA:896:A:C1’	58:BZ:176:PRO:CG	2.69	0.68
38:BD:210:GLY:O	38:BD:211:ARG:HB3	1.92	0.68
40:BF:3:GLU:CA	40:BF:24:LEU:HG	2.24	0.68
57:BY:76:CYS:HG	57:BY:77:PRO:HD2	1.58	0.68
58:BZ:63:ASP:HB2	58:BZ:65:GLN:HE21	1.59	0.68
2:AB:168:THR:HG21	2:AB:191:ASP:O	1.93	0.68
7:AG:125:MET:O	7:AG:128:ALA:HB3	1.93	0.68
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.58	0.68
35:BA:1642:G:O2’	35:BA:1643:G:H5’	1.94	0.68
35:BA:2009:G:C2	35:BA:2010:G:C8	2.82	0.68
38:BD:65:ILE:HD11	38:BD:67:PHE:CD2	2.28	0.68
38:BD:166:GLN:N	38:BD:166:GLN:HE21	1.92	0.68
39:BE:34:VAL:CG2	39:BE:48:GLN:HE21	2.06	0.68
41:BG:6:ALA:HB1	41:BG:105:LYS:HZ2	1.58	0.68
48:BP:85:LEU:HD22	48:BP:117:GLU:O	1.88	0.68
53:BU:95:LEU:C	53:BU:97:ASP:H	2.02	0.68
58:BZ:44:PHE:CZ	58:BZ:48:PHE:HD2	2.11	0.68
1:AA:88:A:H5”	1:AA:89:C:OP1	1.93	0.68
1:AA:1218:C:H2’	1:AA:1219:U:C6	2.28	0.68
1:AA:1305:G:N2	1:AA:1331:G:H2’	2.09	0.68
1:AA:1402:C:C2’	1:AA:1403:C:H5’	2.23	0.68
12:AL:93:LEU:HB3	12:AL:96:VAL:HG21	1.76	0.68
30:B5:16:ARG:NH1	30:B5:17:ASP:OD1	2.26	0.68
31:B6:43:CYS:O	31:B6:44:ARG:HB2	1.92	0.68
35:BA:697:C:O2’	35:BA:698:C:C5’	2.30	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2007:C:H2'	35:BA:2008:C:C6	2.28	0.68
35:BA:2208:A:H1'	35:BA:2219:G:C4	2.28	0.68
35:BA:2783:G:H2'	35:BA:2784:C:C6	2.28	0.68
37:BC:46:ALA:HB3	37:BC:172:ILE:CG2	2.23	0.68
37:BC:101:ILE:C	37:BC:103:LYS:H	1.99	0.68
52:BT:3:ARG:HD2	52:BT:6:LEU:HB2	1.75	0.68
57:BY:3:VAL:N	57:BY:5:MET:HE3	2.07	0.68
2:AB:10:LEU:C	2:AB:10:LEU:HD23	2.19	0.68
2:AB:145:LEU:CD2	2:AB:149:LEU:HD23	2.23	0.68
7:AG:38:LEU:O	7:AG:38:LEU:HD22	1.93	0.68
30:B5:44:THR:CG2	50:BR:101:ALA:HB2	2.23	0.68
35:BA:175:G:C2'	35:BA:176:G:H5'	2.23	0.68
35:BA:1461:G:C2'	35:BA:1462:C:H5'	2.24	0.68
35:BA:1821:A:O2'	35:BA:1822:G:C5'	2.39	0.68
35:BA:1887:C:H2'	35:BA:1888:G:C5'	2.24	0.68
41:BG:94:LEU:HD12	41:BG:98:ARG:HD3	1.76	0.68
49:BQ:12:GLN:CG	49:BQ:73:PRO:HD2	2.23	0.68
50:BR:38:VAL:HB	50:BR:39:PRO:HD3	1.76	0.68
1:AA:593:G:O2'	1:AA:594:G:C5'	2.30	0.68
12:AL:45:PRO:HG3	12:AL:53:ARG:HD3	1.75	0.68
13:AM:108:ARG:HG3	13:AM:108:ARG:NH1	2.08	0.68
25:B0:7:LEU:HB3	49:BQ:85:LYS:HG3	1.76	0.68
27:B2:70:GLN:NE2	27:B2:71:ASN:N	2.42	0.68
35:BA:1352:U:O2'	35:BA:1353:A:H5'	1.94	0.68
35:BA:1646:C:H5"	35:BA:1647:G:C5'	2.24	0.68
37:BC:57:GLN:HG3	37:BC:57:GLN:O	1.93	0.68
37:BC:123:ALA:O	37:BC:127:LYS:HG2	1.94	0.68
41:BG:37:VAL:HG21	41:BG:99:MET:HG3	1.76	0.68
48:BP:29:LYS:N	48:BP:29:LYS:HD2	2.09	0.68
51:BS:49:VAL:HG12	51:BS:50:SER:H	1.57	0.68
52:BT:92:GLY:HA3	52:BT:120:ARG:HH21	1.59	0.68
55:BW:64:MET:O	55:BW:65:LEU:HB2	1.92	0.68
1:AA:198:G:C6	1:AA:220:G:C6	2.80	0.68
1:AA:309:G:O2'	1:AA:310:G:H5'	1.94	0.68
1:AA:563:A:H2	12:AL:15:ARG:CZ	2.06	0.68
2:AB:25:ASN:O	2:AB:26:PRO:C	2.36	0.68
10:AJ:54:PHE:CE1	10:AJ:55:LYS:NZ	2.56	0.68
12:AL:70:ILE:HG12	12:AL:100:ILE:HD12	1.74	0.68
13:AM:118:ALA:HB1	19:AS:88:LYS:NZ	2.09	0.68
24:AY:169:GLY:HA3	24:AY:173:THR:O	1.93	0.68
29:B4:33:VAL:O	29:B4:34:GLU:HB2	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:12:GLU:CB	31:B6:23:THR:HG22	2.24	0.68
35:BA:261:G:H2'	35:BA:262:A:H5'	1.76	0.68
37:BC:30:VAL:HG23	37:BC:31:LYS:N	2.09	0.68
37:BC:176:VAL:HG11	37:BC:190:ILE:HD13	1.76	0.68
52:BT:28:VAL:CG1	52:BT:29:ARG:N	2.54	0.68
52:BT:109:GLU:O	52:BT:112:ARG:HG2	1.94	0.68
58:BZ:128:VAL:HG22	58:BZ:129:SER:N	2.01	0.68
1:AA:35:G:N2	1:AA:549:C:O2	2.17	0.67
1:AA:39:G:N7	1:AA:547:A:C8	2.62	0.67
1:AA:490:G:C4	1:AA:491:G:N7	2.62	0.67
3:AC:83:ARG:O	3:AC:84:ILE:C	2.37	0.67
19:AS:40:ILE:HG12	19:AS:66:MET:O	1.93	0.67
24:AY:56:GLU:O	24:AY:57:GLN:C	2.37	0.67
25:B0:62:LEU:HD23	25:B0:62:LEU:H	1.59	0.67
30:B5:16:ARG:HD2	30:B5:20:ARG:NH1	2.10	0.67
30:B5:40:LYS:HE2	30:B5:46:CYS:HB3	1.75	0.67
31:B6:15:GLU:OE1	31:B6:18:ARG:NE	2.27	0.67
35:BA:953:A:H2'	35:BA:954:G:C5'	2.13	0.67
35:BA:1415:U:H6	35:BA:1415:U:O5'	1.76	0.67
38:BD:142:VAL:HG23	38:BD:192:THR:C	2.19	0.67
38:BD:241:PRO:O	38:BD:242:ARG:HB2	1.92	0.67
1:AA:107:G:C2'	1:AA:108:G:O5'	2.40	0.67
1:AA:495:A:H4'	1:AA:496:A:OP1	1.94	0.67
1:AA:687:A:H4'	1:AA:688:G:O5'	1.94	0.67
1:AA:1504:G:H4'	1:AA:1505:G:O4'	1.93	0.67
3:AC:22:TRP:HZ3	3:AC:24:ALA:HB2	1.58	0.67
26:B1:41:ARG:HH12	35:BA:1365:A:H5"	1.58	0.67
27:B2:70:GLN:HE21	27:B2:71:ASN:H	1.40	0.67
29:B4:11:PRO:CB	29:B4:24:THR:HB	2.25	0.67
35:BA:833:U:C4'	48:BP:52:GLU:N	2.56	0.67
35:BA:900:A:H3'	35:BA:901:A:H8	1.58	0.67
35:BA:967:C:O5'	35:BA:967:C:H6	1.77	0.67
35:BA:2128:C:OP1	37:BC:37:LYS:HG2	1.94	0.67
35:BA:2562:U:H1'	47:BO:23:ARG:HH11	1.58	0.67
39:BE:24:THR:HG21	39:BE:188:VAL:CG1	2.23	0.67
39:BE:197:ILE:HD11	39:BE:199:ARG:NE	2.09	0.67
57:BY:28:LYS:CB	57:BY:38:ILE:H	2.07	0.67
3:AC:16:ARG:CD	3:AC:17:ASP:H	2.07	0.67
29:B4:11:PRO:CA	29:B4:24:THR:HB	2.24	0.67
31:B6:6:ARG:HB3	31:B6:6:ARG:NH1	2.07	0.67
35:BA:52:A:C2'	35:BA:53:A:H5'	2.23	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1446:C:C5	35:BA:1465:G:N2	2.59	0.67
35:BA:1769:G:C5	35:BA:1984:G:C6	2.83	0.67
48:BP:14:LYS:O	48:BP:15:ARG:HB2	1.94	0.67
48:BP:97:PRO:O	48:BP:98:GLU:HB3	1.94	0.67
51:BS:36:TYR:N	51:BS:36:TYR:HD1	1.92	0.67
1:AA:61:G:O6	1:AA:107:G:C6	2.48	0.67
2:AB:42:ILE:CD1	2:AB:202:PRO:HB2	2.25	0.67
3:AC:129:ALA:HB1	3:AC:132:ARG:HG3	1.76	0.67
6:AF:99:ALA:O	6:AF:100:ASN:HB2	1.93	0.67
17:AQ:67:LYS:HA	17:AQ:70:ARG:NH1	2.08	0.67
26:B1:25:LYS:HD3	35:BA:2396:G:C5'	2.24	0.67
27:B2:40:SER:O	56:BX:13:LEU:CD1	2.43	0.67
30:B5:51:TYR:O	30:B5:52:TYR:C	2.37	0.67
33:B8:15:LYS:CD	48:BP:65:ARG:HH22	2.07	0.67
35:BA:37:C:C2'	35:BA:38:A:H5'	2.24	0.67
35:BA:461:C:H2'	35:BA:462:C:C5'	2.14	0.67
35:BA:603:A:H4'	35:BA:604:G:O5'	1.94	0.67
35:BA:1028:A:H2'	35:BA:1029:A:C8	2.30	0.67
35:BA:2007:C:C2	35:BA:2008:C:C5	2.82	0.67
35:BA:2103:C:H42	35:BA:2186:G:H1	1.41	0.67
35:BA:2657:A:H2'	35:BA:2658:C:H5'	1.76	0.67
40:BF:52:LYS:O	40:BF:88:VAL:HG12	1.95	0.67
42:BH:54:ARG:HH11	42:BH:65:HIS:CD2	2.13	0.67
50:BR:2:ARG:HG3	50:BR:2:ARG:NH1	2.05	0.67
57:BY:17:SER:HB2	57:BY:71:LYS:HE2	1.75	0.67
57:BY:82:PRO:O	57:BY:96:ILE:HG13	1.94	0.67
1:AA:36:C:H2'	1:AA:37:U:C6	2.30	0.67
1:AA:179:A:H2'	1:AA:180:U:H6	1.58	0.67
1:AA:197:A:C4'	1:AA:198:G:O5'	2.34	0.67
14:AN:15:LYS:O	14:AN:16:PHE:O	2.13	0.67
31:B6:11:LEU:C	31:B6:11:LEU:HD22	2.19	0.67
35:BA:1902:C:H5'	38:BD:246:PRO:HD3	1.76	0.67
35:BA:2033:A:H2'	35:BA:2035:G:OP2	1.95	0.67
37:BC:30:VAL:HG23	37:BC:31:LYS:H	1.58	0.67
37:BC:46:ALA:HB3	37:BC:172:ILE:HG22	1.75	0.67
41:BG:152:LEU:HD23	41:BG:152:LEU:H	1.60	0.67
1:AA:37:U:O5'	1:AA:37:U:H6	1.78	0.67
1:AA:687:A:C4'	1:AA:688:G:O5'	2.43	0.67
1:AA:792:A:C1'	1:AA:793:U:OP2	2.43	0.67
2:AB:129:GLU:O	2:AB:130:ARG:C	2.38	0.67
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:31:LEU:CD2	5:AE:43:LEU:HD11	2.21	0.67
9:AI:26:VAL:CG2	9:AI:61:ALA:O	2.27	0.67
13:AM:64:TRP:HD1	13:AM:66:LEU:HD11	1.59	0.67
25:B0:46:LYS:HE3	25:B0:75:LEU:O	1.92	0.67
35:BA:36:G:C2'	35:BA:37:C:H5'	2.25	0.67
35:BA:285:C:H2'	35:BA:286:C:H6	1.60	0.67
35:BA:1446:C:C5	35:BA:1466:G:C2	2.83	0.67
38:BD:35:LYS:HD2	38:BD:35:LYS:C	2.19	0.67
40:BF:20:LEU:H	40:BF:24:LEU:HD23	1.57	0.67
41:BG:59:GLU:CG	41:BG:60:LEU:H	2.06	0.67
50:BR:10:LEU:HD23	50:BR:10:LEU:N	2.09	0.67
54:BV:61:VAL:HG23	54:BV:61:VAL:O	1.94	0.67
1:AA:274:A:O2'	1:AA:275:G:C8	2.48	0.67
7:AG:81:GLY:O	23:AX:13:A:P	2.52	0.67
24:AY:92:ILE:O	24:AY:96:ARG:HG2	1.95	0.67
24:AY:487:ILE:HD13	24:AY:487:ILE:H	1.59	0.67
24:AY:539:ILE:HB	24:AY:540:PRO:HD3	1.76	0.67
29:B4:38:LYS:O	29:B4:38:LYS:HD2	1.95	0.67
33:B8:23:VAL:CG1	33:B8:46:ARG:HH11	2.07	0.67
33:B8:29:LYS:HD3	33:B8:44:LYS:CB	2.25	0.67
35:BA:1270:C:H5"	35:BA:1271:G:O5'	1.94	0.67
35:BA:2469:A:H2	35:BA:2481:G:H21	1.40	0.67
41:BG:24:GLY:O	41:BG:25:TYR:HB2	1.95	0.67
41:BG:104:GLU:C	41:BG:105:LYS:HE2	2.20	0.67
42:BH:143:GLN:NE2	42:BH:147:ASN:HD21	1.92	0.67
46:BN:96:GLU:CD	46:BN:96:GLU:H	2.00	0.67
1:AA:1052:U:O4	1:AA:1200:C:C2'	2.39	0.67
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.76	0.67
7:AG:111:ARG:NH2	7:AG:126:ASP:OD2	2.28	0.67
7:AG:115:ARG:O	7:AG:119:ARG:HD3	1.94	0.67
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.76	0.67
24:AY:42:ILE:HG22	24:AY:44:GLU:H	1.60	0.67
35:BA:39:C:O5'	35:BA:39:C:H6	1.76	0.67
35:BA:1358:G:O2'	35:BA:1359:A:H5"	1.94	0.67
35:BA:1858:G:H2'	35:BA:1883:G:H22	1.60	0.67
35:BA:1926:U:H2'	35:BA:1927:A:C8	2.29	0.67
41:BG:142:PRO:O	41:BG:143:GLU:C	2.37	0.67
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.76	0.67
1:AA:547:A:C1'	1:AA:548:G:OP2	2.40	0.67
12:AL:27:LEU:O	12:AL:29:GLY:N	2.28	0.67
14:AN:15:LYS:HB3	14:AN:16:PHE:CE1	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:358:MET:SD	24:AY:363:ARG:HD3	2.34	0.67
24:AY:423:LYS:HD3	24:AY:472:VAL:HG22	1.77	0.67
25:B0:49:LYS:H	25:B0:80:HIS:HD1	1.42	0.67
26:B1:82:LEU:O	26:B1:83:GLU:HG3	1.94	0.67
29:B4:1:MET:O	29:B4:2:LYS:HB3	1.94	0.67
35:BA:893:C:H2'	35:BA:894:C:C6	2.29	0.67
35:BA:902:C:H2'	35:BA:903:C:C6	2.29	0.67
35:BA:1773:A:C2'	35:BA:1774:C:C5'	2.62	0.67
35:BA:2345:G:N3	35:BA:2381:C:H2'	2.10	0.67
35:BA:2403:C:H3'	35:BA:2403:C:P	2.34	0.67
36:BB:43:C:H4'	41:BG:94:LEU:HD11	1.77	0.67
43:BJ:72:UNK:O	43:BJ:74:UNK:N	2.28	0.67
48:BP:71:VAL:CG1	48:BP:72:PRO:HD3	2.24	0.67
49:BQ:43:THR:OG1	49:BQ:46:GLN:HG3	1.94	0.67
53:BU:49:HIS:C	53:BU:51:LYS:H	2.03	0.67
54:BV:52:VAL:CG1	54:BV:55:ALA:HB3	2.24	0.67
55:BW:36:LEU:H	55:BW:36:LEU:HD22	1.59	0.67
1:AA:64:G:H4'	1:AA:65:U:O5'	1.95	0.67
15:AO:68:ARG:HB2	15:AO:68:ARG:NH1	2.03	0.67
24:AY:26:THR:CG2	24:AY:52:MET:HG2	2.25	0.67
35:BA:1331:A:O2'	35:BA:1332:G:H5"	1.95	0.67
35:BA:2157:G:H4'	35:BA:2158:A:OP1	1.95	0.67
46:BN:58:ASP:O	46:BN:59:LYS:C	2.38	0.67
49:BQ:140:ALA:HB1	58:BZ:99:TYR:CE2	2.30	0.67
55:BW:37:ARG:HH11	55:BW:37:ARG:HG3	1.59	0.67
1:AA:116:A:OP2	1:AA:116:A:C8	2.47	0.66
1:AA:321:A:C2'	1:AA:322:C:H5'	2.24	0.66
1:AA:1160:G:O6	1:AA:1181:G:O6	2.13	0.66
1:AA:1255:G:C6	1:AA:1283:G:O6	2.48	0.66
1:AA:1490:C:H2'	1:AA:1491:G:C5'	2.09	0.66
3:AC:116:VAL:HG11	3:AC:202:ILE:HD11	1.77	0.66
7:AG:36:LYS:HG2	7:AG:37:ASN:N	2.04	0.66
9:AI:19:LEU:HA	9:AI:61:ALA:HA	1.75	0.66
24:AY:535:PRO:C	24:AY:537:GLU:H	2.03	0.66
29:B4:30:GLU:HG2	29:B4:31:ILE:N	2.08	0.66
35:BA:49:A:O2'	35:BA:50:U:P	2.53	0.66
35:BA:942:G:H5'	48:BP:35:HIS:HA	1.76	0.66
35:BA:1646:C:C5'	35:BA:1647:G:C5'	2.73	0.66
35:BA:1770:G:C2'	35:BA:1771:C:C5'	2.73	0.66
35:BA:1890:A:C2'	35:BA:1891:G:C5'	2.66	0.66
35:BA:1892:C:H2'	35:BA:1893:C:C5'	2.23	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:136:ARG:HB3	41:BG:138:GLN:OE1	1.94	0.66
42:BH:149:ARG:HA	42:BH:162:ILE:CD1	2.24	0.66
51:BS:42:ASP:C	51:BS:44:LYS:H	2.03	0.66
1:AA:185:A:O2'	1:AA:186:C:H5'	1.95	0.66
1:AA:961:U:O2'	1:AA:962:C:C5'	2.44	0.66
1:AA:1399:C:H4'	1:AA:1400:C:C5'	2.25	0.66
3:AC:91:LEU:HB3	3:AC:99:VAL:HG21	1.77	0.66
7:AG:43:PHE:O	7:AG:46:ALA:HB3	1.95	0.66
13:AM:17:VAL:HG22	13:AM:27:LYS:HE3	1.77	0.66
13:AM:65:LYS:HB2	13:AM:69:GLU:HG2	1.77	0.66
16:AP:20:VAL:HG23	16:AP:34:GLU:O	1.93	0.66
26:B1:76:ARG:HD2	35:BA:271(R):G:OP1	1.96	0.66
26:B1:82:LEU:O	26:B1:83:GLU:CG	2.43	0.66
35:BA:607:U:C4	35:BA:620:G:C5	2.83	0.66
35:BA:1886:C:O2'	35:BA:1887:C:H5'	1.95	0.66
35:BA:2117:A:O2'	35:BA:2118:U:H3'	1.95	0.66
35:BA:2552:U:O5'	35:BA:2552:U:H6	1.78	0.66
36:BB:56:G:H5'	41:BG:27:ASN:ND2	2.10	0.66
37:BC:31:LYS:NZ	37:BC:180:SER:O	2.28	0.66
37:BC:109:MET:HE3	37:BC:132:LEU:HD23	1.76	0.66
41:BG:7:LEU:HD12	41:BG:104:GLU:CD	2.20	0.66
52:BT:32:TYR:CD2	52:BT:81:PRO:O	1.95	0.66
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.29	0.66
9:AI:69:GLY:O	9:AI:73:GLN:HG3	1.94	0.66
10:AJ:43:ARG:HH11	10:AJ:43:ARG:HG3	1.61	0.66
11:AK:21:ILE:HD13	11:AK:82:VAL:HG23	1.78	0.66
35:BA:688:U:O5'	35:BA:688:U:H6	1.78	0.66
35:BA:1019:U:HO2'	35:BA:1021:A:H2	1.40	0.66
35:BA:1105:U:O2'	35:BA:1106:G:H5'	1.95	0.66
35:BA:1151:G:H5"	53:BU:81:HIS:CE1	2.30	0.66
35:BA:1416:G:C2	35:BA:1417:C:N3	2.64	0.66
35:BA:1799:G:C1'	35:BA:1800:C:OP2	2.43	0.66
35:BA:2334:G:H21	51:BS:18:ILE:HG12	1.60	0.66
41:BG:137:GLU:C	41:BG:138:GLN:HG2	2.20	0.66
55:BW:9:TYR:H	55:BW:102:HIS:CD2	2.11	0.66
1:AA:532:A:N1	3:AC:193:TYR:HB3	2.11	0.66
2:AB:7:VAL:O	2:AB:11:LEU:HB2	1.95	0.66
2:AB:24:TRP:CE3	2:AB:32:ILE:HD11	2.31	0.66
2:AB:76:GLN:O	2:AB:77:ALA:HB2	1.94	0.66
24:AY:84:THR:CG2	24:AY:85:PRO:N	2.57	0.66
25:B0:25:ARG:HB2	25:B0:37:LEU:HD12	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:741:G:H2'	35:BA:742:G:H5'	1.75	0.66
35:BA:1221:C:H2'	35:BA:1221(A):C:H6	1.59	0.66
35:BA:1412:A:H2'	35:BA:1413:G:H5'	1.76	0.66
35:BA:2145:C:H5'	35:BA:2146:C:C5	2.30	0.66
35:BA:2195:C:O2'	35:BA:2196:C:H5'	1.96	0.66
35:BA:2401:U:H2'	35:BA:2402:C:OP1	1.95	0.66
37:BC:65:LEU:HB3	37:BC:189:ASN:ND2	2.11	0.66
39:BE:76:ARG:HG3	39:BE:195:LEU:HD22	1.76	0.66
39:BE:134:ILE:C	39:BE:134:ILE:CD1	2.68	0.66
41:BG:72:ARG:HA	41:BG:87:PRO:O	1.95	0.66
1:AA:722:A:H2'	1:AA:722:A:N3	2.08	0.66
1:AA:1386:G:H2'	1:AA:1387:G:H5'	1.76	0.66
1:AA:1401:G:N2	1:AA:1501:C:O2	2.18	0.66
5:AE:10:MET:N	5:AE:10:MET:SD	2.69	0.66
9:AI:18:PHE:O	9:AI:61:ALA:C	2.39	0.66
13:AM:27:LYS:HG3	13:AM:31:LYS:HE3	1.76	0.66
13:AM:45:VAL:HG13	13:AM:48:LEU:HD12	1.77	0.66
16:AP:20:VAL:HG21	16:AP:32:TYR:CB	2.26	0.66
31:B6:10:LEU:HD12	33:B8:34:TRP:HB2	1.76	0.66
35:BA:36:G:H2'	35:BA:37:C:H5'	1.76	0.66
35:BA:607:U:C4	35:BA:620:G:C4	2.82	0.66
35:BA:650:C:C3'	35:BA:651:G:H5"	2.24	0.66
35:BA:1058:G:C2'	35:BA:1059:G:H5"	2.24	0.66
35:BA:2845:G:O2'	35:BA:2846:G:H5'	1.95	0.66
37:BC:63:VAL:O	37:BC:161:ARG:HA	1.96	0.66
47:BO:66:LYS:H	47:BO:82:ASN:ND2	1.94	0.66
51:BS:14:VAL:HG12	51:BS:15:ARG:N	2.10	0.66
52:BT:11:GLU:CD	52:BT:11:GLU:N	2.53	0.66
52:BT:91:ARG:HA	52:BT:116:ALA:HA	1.78	0.66
1:AA:699:C:O2'	1:AA:700:G:H5'	1.94	0.66
1:AA:748:C:H1'	1:AA:749:C:H5	1.61	0.66
1:AA:774:G:C2'	1:AA:775:G:H5'	2.25	0.66
1:AA:975:A:H5'	1:AA:975:A:C8	2.28	0.66
35:BA:1222:C:C2'	35:BA:1223:G:C5'	2.72	0.66
35:BA:1587:A:H3'	35:BA:1588:C:H6	1.60	0.66
39:BE:68:ALA:C	39:BE:70:ALA:H	2.02	0.66
40:BF:155:LEU:HD11	40:BF:176:LEU:HD13	1.76	0.66
41:BG:147:ASP:O	41:BG:149:VAL:HG13	1.95	0.66
48:BP:115:LEU:HD23	48:BP:115:LEU:C	2.21	0.66
50:BR:3:HIS:C	50:BR:5:LYS:H	2.02	0.66
52:BT:16:ARG:HH11	52:BT:16:ARG:CB	2.07	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:85:LYS:HB3	52:BT:85:LYS:HZ3	1.59	0.66
1:AA:522:C:C2'	1:AA:523:A:C5'	2.74	0.66
1:AA:522:C:N4	12:AL:53:ARG:HH22	1.92	0.66
1:AA:792:A:C4'	1:AA:793:U:O5'	2.41	0.66
2:AB:228:GLY:C	2:AB:229:VAL:CG2	2.62	0.66
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	2.06	0.66
24:AY:44:GLU:O	24:AY:45:VAL:HG22	1.96	0.66
24:AY:228:MET:O	24:AY:231:TYR:HB3	1.96	0.66
24:AY:685:GLU:HA	24:AY:688:ILE:HD13	1.78	0.66
35:BA:259:G:H21	35:BA:621:A:H8	1.43	0.66
35:BA:833:U:H4'	48:BP:51:PHE:O	1.96	0.66
35:BA:1782:C:H1'	35:BA:2609:U:H5'	1.78	0.66
35:BA:2006:C:C4	35:BA:2007:C:N4	2.64	0.66
35:BA:2033:A:O2'	35:BA:2034:U:P	2.54	0.66
36:BB:48:A:H4'	51:BS:95:HIS:HD2	1.60	0.66
42:BH:159:GLU:OE1	42:BH:159:GLU:HA	1.96	0.66
1:AA:917:G:O2'	1:AA:918:A:H5'	1.96	0.66
14:AN:15:LYS:HB3	14:AN:16:PHE:CD1	2.30	0.66
24:AY:114:VAL:HG23	24:AY:152:THR:HG23	1.76	0.66
24:AY:199:ILE:HD12	24:AY:199:ILE:O	1.95	0.66
34:B9:17:ILE:HG22	34:B9:18:ARG:N	2.10	0.66
35:BA:49:A:P	35:BA:51:G:H5'	2.36	0.66
35:BA:110:G:H2'	35:BA:111:A:H5'	1.76	0.66
35:BA:674:G:H1'	40:BF:74:ARG:HD2	1.78	0.66
35:BA:952:G:C6	35:BA:953:A:N7	2.64	0.66
35:BA:1273:U:H5"	35:BA:1646:C:H41	1.60	0.66
35:BA:2408:U:H2'	35:BA:2409:G:C8	2.30	0.66
35:BA:2656:U:H2'	35:BA:2657:A:H5"	1.77	0.66
39:BE:111:ARG:HG3	39:BE:160:TYR:CD2	2.31	0.66
42:BH:44:VAL:HG12	42:BH:46:GLU:H	1.61	0.66
52:BT:19:LEU:HD22	52:BT:85:LYS:HB2	1.78	0.66
1:AA:939:G:N2	1:AA:1344:C:N3	2.42	0.66
1:AA:1003:G:H2'	1:AA:1004:A:O4'	1.96	0.66
19:AS:62:ILE:HA	19:AS:66:MET:CE	2.26	0.66
24:AY:5:VAL:C	24:AY:7:TYR:H	2.04	0.66
27:B2:5:GLU:HA	27:B2:8:LYS:CD	2.25	0.66
35:BA:176:G:O2'	35:BA:177:G:C5'	2.44	0.66
35:BA:1982:C:N4	35:BA:1983:C:N4	2.44	0.66
35:BA:2305:A:C6	41:BG:137:GLU:OE2	2.49	0.66
37:BC:41:THR:O	37:BC:42:VAL:HB	1.94	0.66
41:BG:39:ILE:HD11	41:BG:155:MET:CG	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:117:PHE:CD2	41:BG:118:ARG:HD3	2.31	0.66
41:BG:124:SER:HB3	41:BG:131:TYR:CE1	2.31	0.66
49:BQ:1:MET:HA	49:BQ:1:MET:CE	2.26	0.66
50:BR:87:TYR:O	50:BR:89:ASP:N	2.27	0.66
53:BU:85:LYS:HD3	53:BU:117:GLN:NE2	2.10	0.66
1:AA:344:A:H4'	1:AA:345:C:OP1	1.94	0.66
1:AA:1370:G:C2'	1:AA:1371:G:H5'	2.26	0.66
11:AK:126:ARG:NH1	11:AK:126:ARG:HB3	2.11	0.66
35:BA:108:U:H2'	35:BA:109:G:H8	1.61	0.66
35:BA:144:C:H2'	35:BA:145:G:C8	2.31	0.66
35:BA:271(L):U:H5"	35:BA:271(M):G:C5'	2.25	0.66
35:BA:271(M):G:H2'	35:BA:271(N):U:H5"	1.78	0.66
35:BA:1961:C:O5'	35:BA:1961:C:H6	1.79	0.66
35:BA:2131:G:OP1	35:BA:2132:U:H5"	1.96	0.66
37:BC:42:VAL:HG13	37:BC:43:GLU:N	2.10	0.66
48:BP:6:LEU:HD23	48:BP:6:LEU:H	1.60	0.66
49:BQ:141:GLN:H	58:BZ:53:ILE:HD12	1.61	0.66
57:BY:2:ARG:HD3	57:BY:3:VAL:HG23	1.78	0.66
57:BY:13:VAL:HG21	57:BY:72:VAL:HB	1.77	0.66
1:AA:113:G:H2'	1:AA:114:U:C6	2.31	0.65
12:AL:17:LYS:CD	12:AL:18:VAL:H	2.08	0.65
33:B8:50:LEU:C	33:B8:53:PRO:HD2	2.20	0.65
35:BA:48:G:H2'	35:BA:49:A:H2	1.61	0.65
35:BA:247:G:C2'	35:BA:248:G:O5'	2.44	0.65
35:BA:535:C:O2'	35:BA:536:A:H5'	1.96	0.65
35:BA:1375:C:O2'	35:BA:1376:C:C5'	2.38	0.65
35:BA:2123:G:C6	35:BA:2176:A:N6	2.64	0.65
35:BA:2401:U:O2'	35:BA:2402:C:P	2.54	0.65
35:BA:2422:A:H4'	35:BA:2423:U:OP1	1.96	0.65
35:BA:2611:U:OP2	35:BA:2611:U:H6	1.79	0.65
37:BC:129:GLY:O	37:BC:132:LEU:N	2.29	0.65
40:BF:10:PRO:HA	40:BF:127:GLU:HG2	1.78	0.65
41:BG:94:LEU:HD12	41:BG:98:ARG:HD2	1.77	0.65
49:BQ:134:ARG:HA	49:BQ:137:TYR:HD2	1.60	0.65
52:BT:28:VAL:HG11	52:BT:46:GLU:HG3	1.76	0.65
1:AA:1195:C:O5'	1:AA:1195:C:H6	1.79	0.65
3:AC:173:VAL:O	3:AC:173:VAL:HG13	1.94	0.65
3:AC:187:ALA:HB3	3:AC:198:VAL:HB	1.77	0.65
10:AJ:66:ARG:HH11	10:AJ:66:ARG:HB2	1.60	0.65
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.61	0.65
12:AL:41:ARG:O	12:AL:55:VAL:O	2.14	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:137:ASN:ND2	24:AY:138:LYS:N	2.42	0.65
24:AY:627:ARG:O	24:AY:628:ARG:HB2	1.96	0.65
35:BA:1797:C:O5'	35:BA:1797:C:H6	1.79	0.65
35:BA:1984:G:HO2'	35:BA:1985:G:H5'	1.60	0.65
35:BA:2103:C:O2'	35:BA:2104:G:H5'	1.96	0.65
35:BA:2134:A:C8	35:BA:2158:A:H2	2.14	0.65
35:BA:2356:C:C2'	35:BA:2357:U:O5'	2.43	0.65
35:BA:2392:A:H2	35:BA:2424:C:N4	1.94	0.65
37:BC:84:ILE:HG13	37:BC:84:ILE:O	1.95	0.65
37:BC:206:LYS:NZ	37:BC:206:LYS:HB3	2.12	0.65
39:BE:87:GLU:O	39:BE:89:ASP:N	2.28	0.65
47:BO:10:VAL:HG21	47:BO:16:ALA:O	1.96	0.65
48:BP:112:LEU:HD23	48:BP:113:LYS:N	2.11	0.65
1:AA:17:U:H2'	1:AA:18:C:C6	2.30	0.65
1:AA:255:G:H1'	17:AQ:16:GLN:NE2	2.11	0.65
1:AA:311:C:O2'	1:AA:312:C:H5"	1.96	0.65
1:AA:1116:C:H2'	1:AA:1117:G:H5'	1.75	0.65
3:AC:25:GLY:C	3:AC:27:LYS:H	2.03	0.65
3:AC:123:GLN:HE22	3:AC:128:PHE:HB2	1.61	0.65
24:AY:238:THR:CG2	24:AY:241:GLU:HG2	2.24	0.65
33:B8:4:MET:HG2	33:B8:61:LEU:HD23	1.77	0.65
35:BA:2777:G:H5"	35:BA:2778:A:H5'	1.77	0.65
36:BB:56:G:H4'	36:BB:57:A:O5'	1.96	0.65
40:BF:24:LEU:HB3	40:BF:25:PRO:CD	2.24	0.65
41:BG:75:LYS:HG2	41:BG:76:SER:N	2.10	0.65
42:BH:12:PRO:HD3	42:BH:76:VAL:CG1	2.26	0.65
57:BY:9:LYS:O	57:BY:28:LYS:HD3	1.96	0.65
1:AA:56:U:O2'	1:AA:57:G:H5'	1.97	0.65
1:AA:62:U:O5'	1:AA:62:U:H6	1.79	0.65
1:AA:112:G:O2'	1:AA:113:G:C5'	2.45	0.65
1:AA:1384:C:O2'	1:AA:1385:G:H5'	1.96	0.65
1:AA:1488:G:H2'	1:AA:1489:G:C8	2.31	0.65
3:AC:191:THR:HG22	3:AC:192:THR:N	2.12	0.65
9:AI:71:SER:HA	9:AI:74:ILE:HD12	1.78	0.65
17:AQ:68:ARG:H	17:AQ:70:ARG:HH11	1.45	0.65
25:B0:12:ASN:HB2	35:BA:2278:A:N7	2.11	0.65
29:B4:32:TYR:O	29:B4:33:VAL:CG1	2.35	0.65
35:BA:688:U:H2'	35:BA:689:A:H5'	1.76	0.65
35:BA:702:G:C2'	35:BA:703:U:C5'	2.72	0.65
35:BA:856:C:O2'	35:BA:857:C:P	2.54	0.65
35:BA:971:C:H2'	35:BA:972:G:O4'	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1025:G:C4	35:BA:1135:C:H1'	2.31	0.65
35:BA:1653:G:OP1	35:BA:2822:G:N1	2.30	0.65
35:BA:1990:C:O5'	35:BA:1990:C:H6	1.78	0.65
35:BA:2308:G:H2'	35:BA:2309:A:C8	2.31	0.65
35:BA:2653:U:H5"	35:BA:2654:A:H2'	1.78	0.65
39:BE:16:ARG:HH21	39:BE:173:VAL:HG13	1.62	0.65
39:BE:51:PHE:CE2	39:BE:52:LEU:HD13	2.32	0.65
42:BH:157:TYR:HE1	42:BH:171:LEU:HD22	1.61	0.65
1:AA:39:G:H2'	1:AA:40:C:H5'	1.78	0.65
9:AI:21:PRO:HA	9:AI:58:HIS:O	1.97	0.65
12:AL:78:GLN:NE2	24:AY:444:PRO:HA	2.12	0.65
13:AM:91:ARG:CB	13:AM:98:VAL:HG12	2.25	0.65
15:AO:80:ALA:O	15:AO:84:LYS:HG3	1.97	0.65
24:AY:282:SER:HB3	24:AY:285:ASP:OD1	1.97	0.65
31:B6:35:GLU:H	31:B6:51:GLU:HG3	1.60	0.65
35:BA:49:A:N6	35:BA:177:G:N3	2.44	0.65
35:BA:155:U:C2'	35:BA:156:U:H5"	2.23	0.65
35:BA:332:A:C2	35:BA:335:C:C5	2.84	0.65
35:BA:523:C:O2'	35:BA:524:U:C5'	2.31	0.65
35:BA:627:A:N6	48:BP:116:GLY:HA2	2.11	0.65
35:BA:743:G:O6	35:BA:755:C:N4	2.29	0.65
35:BA:1062:G:H2'	35:BA:1063:G:C8	2.32	0.65
35:BA:2000:G:N2	35:BA:2001:A:C5	2.65	0.65
37:BC:84:ILE:O	37:BC:86:GLU:N	2.30	0.65
38:BD:43:ARG:CB	38:BD:54:ARG:HB2	2.26	0.65
40:BF:125:LEU:HD23	40:BF:125:LEU:H	1.61	0.65
40:BF:161:GLU:O	40:BF:165:ARG:HG3	1.96	0.65
41:BG:83:ARG:HD2	41:BG:83:ARG:N	2.11	0.65
56:BX:80:ILE:O	56:BX:80:ILE:HG12	1.97	0.65
1:AA:193:C:O2'	1:AA:194:C:H5'	1.95	0.65
1:AA:204:U:H2'	1:AA:204:U:O2	1.97	0.65
1:AA:773:G:H2'	1:AA:774:G:C8	2.28	0.65
1:AA:1026:G:N3	1:AA:1026:G:H2'	2.12	0.65
1:AA:1304:G:H1'	1:AA:1333:A:H61	1.62	0.65
1:AA:1492:A:H1'	1:AA:1493:A:P	2.35	0.65
3:AC:16:ARG:HH11	3:AC:16:ARG:HB2	1.61	0.65
14:AN:58:LYS:NZ	14:AN:58:LYS:HB3	2.12	0.65
16:AP:20:VAL:HG21	16:AP:32:TYR:HB2	1.78	0.65
18:AR:26:LEU:HD21	18:AR:42:ARG:NH2	2.12	0.65
24:AY:156:ARG:HH22	24:AY:666:ARG:NH1	1.93	0.65
24:AY:683:VAL:O	24:AY:687:LEU:HG	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B5:51:TYR:O	30:B5:54:GLY:N	2.30	0.65
35:BA:459:U:O2'	35:BA:460:A:H5'	1.95	0.65
35:BA:1983:C:H5"	35:BA:2607:G:OP1	1.95	0.65
35:BA:2124:G:C2'	35:BA:2125:G:H5'	2.27	0.65
39:BE:132:HIS:HA	39:BE:135:HIS:HE1	1.57	0.65
46:BN:120:LEU:O	46:BN:120:LEU:HD13	1.96	0.65
54:BV:25:LEU:H	54:BV:92:THR:HG21	1.61	0.65
1:AA:509:A:OP2	1:AA:509:A:C3'	2.44	0.65
1:AA:1148:U:H2'	1:AA:1149:C:C5'	2.27	0.65
1:AA:1151:A:N3	1:AA:1152:A:C5	2.64	0.65
1:AA:1151:A:N3	1:AA:1152:A:N7	2.43	0.65
2:AB:149:LEU:O	2:AB:151:GLY:N	2.30	0.65
9:AI:23:ASN:N	9:AI:60:ASP:OD1	2.29	0.65
20:AT:69:GLY:O	20:AT:73:HIS:CD2	2.49	0.65
29:B4:14:ILE:O	29:B4:15:ILE:C	2.39	0.65
35:BA:1773:A:N7	35:BA:1829:A:C1'	2.60	0.65
35:BA:2512:C:H2'	35:BA:2513:G:O4'	1.97	0.65
41:BG:103:LEU:O	41:BG:104:GLU:HG2	1.96	0.65
41:BG:145:THR:O	41:BG:146:TYR:O	2.15	0.65
51:BS:54:LEU:HD21	51:BS:59:LYS:O	1.96	0.65
57:BY:44:ILE:HG22	57:BY:45:VAL:N	2.11	0.65
1:AA:179:A:H2'	1:AA:180:U:C6	2.31	0.65
1:AA:1005:A:H2'	1:AA:1006:C:H5'	1.79	0.65
1:AA:1255:G:O6	1:AA:1283:G:O6	2.15	0.65
3:AC:64:VAL:HG12	3:AC:66:VAL:HG23	1.77	0.65
13:AM:116:THR:HG22	13:AM:117:VAL:H	1.61	0.65
25:B0:19:LYS:HZ2	25:B0:41:ARG:HH22	1.45	0.65
35:BA:629:G:N1	35:BA:634:C:N3	2.43	0.65
35:BA:769:G:H4'	35:BA:1379:A:C6	2.32	0.65
35:BA:1892:C:O5'	35:BA:1892:C:H6	1.79	0.65
35:BA:1994:C:C2'	35:BA:1995:U:H5'	2.26	0.65
35:BA:2104:G:H1'	35:BA:2105:C:P	2.36	0.65
35:BA:2145:C:H4'	35:BA:2146:C:OP2	1.96	0.65
42:BH:55:PRO:HG2	42:BH:56:SER:H	1.60	0.65
51:BS:36:TYR:N	51:BS:36:TYR:CD1	2.64	0.65
52:BT:96:ARG:HB2	52:BT:96:ARG:CZ	2.26	0.65
54:BV:52:VAL:HG11	54:BV:55:ALA:HB3	1.79	0.65
57:BY:98:VAL:HG12	57:BY:99:CYS:N	2.11	0.65
1:AA:110:C:H2'	1:AA:111:G:H5'	1.79	0.65
1:AA:189(L):G:H2'	1:AA:190:U:C6	2.32	0.65
1:AA:1228:C:OP1	13:AM:115:LYS:HB2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1285:A:C4'	1:AA:1286:A:O5'	2.39	0.65
1:AA:1526:G:C2'	1:AA:1527:C:H5'	2.26	0.65
2:AB:187:LEU:C	2:AB:187:LEU:CD2	2.61	0.65
24:AY:99:ARG:HD3	24:AY:401:SER:CB	2.26	0.65
29:B4:38:LYS:HD2	29:B4:38:LYS:C	2.22	0.65
31:B6:8:LYS:HG3	31:B6:26:ASN:O	1.96	0.65
35:BA:28:A:H2'	35:BA:29:U:H5'	1.79	0.65
35:BA:272(H):C:H2'	35:BA:272(I):U:H5"	1.79	0.65
37:BC:69:LEU:O	37:BC:178:LYS:HG3	1.97	0.65
42:BH:5:GLY:N	42:BH:69:ARG:HD3	2.12	0.65
1:AA:495:A:C2'	1:AA:496:A:H2'	2.27	0.65
6:AF:4:TYR:HD1	6:AF:92:LYS:HA	1.60	0.65
7:AG:12:LEU:HD13	7:AG:24:THR:HG22	1.80	0.65
13:AM:15:VAL:HG11	13:AM:48:LEU:HD21	1.79	0.65
29:B4:7:PRO:HB3	41:BG:62:LEU:HG	1.78	0.65
29:B4:7:PRO:HG2	29:B4:9:LEU:CD1	2.26	0.65
35:BA:267:C:O2'	35:BA:268:C:H5'	1.97	0.65
35:BA:811:U:OP2	48:BP:33:ARG:NH1	2.30	0.65
35:BA:856:C:C2'	35:BA:857:C:C6	2.63	0.65
35:BA:944:G:H5'	35:BA:945:A:O5'	1.97	0.65
35:BA:1902:C:H4'	38:BD:244:ARG:CA	2.26	0.65
35:BA:2779:U:H1'	35:BA:2781:A:C5	2.32	0.65
52:BT:34:VAL:HG22	52:BT:39:ARG:HB3	1.79	0.65
52:BT:50:ILE:HA	52:BT:99:LEU:HD11	1.79	0.65
1:AA:64:G:H5'	1:AA:65:U:OP1	1.96	0.64
1:AA:738:C:H5"	6:AF:69:GLU:HB2	1.79	0.64
1:AA:838:G:H2'	1:AA:839:U:H5"	1.79	0.64
1:AA:1237:C:HO2'	1:AA:1335:C:C4'	2.07	0.64
1:AA:1385:G:H2'	1:AA:1386:G:H8	1.61	0.64
2:AB:178:ARG:HH22	8:AH:68:ARG:HH12	1.45	0.64
2:AB:200:ILE:H	2:AB:200:ILE:CD1	2.08	0.64
3:AC:83:ARG:O	3:AC:85:ARG:N	2.30	0.64
10:AJ:66:ARG:HB2	10:AJ:66:ARG:NH1	2.11	0.64
12:AL:90:VAL:HG11	12:AL:93:LEU:HD12	1.77	0.64
35:BA:2389:G:H5"	35:BA:2390:U:H5'	1.79	0.64
39:BE:97:LYS:O	39:BE:100:GLU:HG3	1.97	0.64
48:BP:78:PRO:HA	48:BP:110:TYR:CE2	2.32	0.64
54:BV:67:GLY:O	54:BV:88:ARG:HD2	1.97	0.64
1:AA:346:G:H5"	52:BT:35:LYS:HZ1	1.62	0.64
1:AA:545:C:O2'	1:AA:546:G:H5'	1.98	0.64
1:AA:1216:G:O2'	1:AA:1217:C:H5'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:20:GLU:HB2	2:AB:190:THR:OG1	1.97	0.64
2:AB:82:ARG:HB2	2:AB:92:TYR:OH	1.97	0.64
4:AD:150:GLU:CG	4:AD:151:LYS:N	2.60	0.64
24:AY:21:ILE:HD12	24:AY:21:ILE:N	2.12	0.64
24:AY:401:SER:O	24:AY:402:ILE:HG13	1.97	0.64
29:B4:34:GLU:O	29:B4:36:CYS:N	2.30	0.64
35:BA:197:A:C8	35:BA:197:A:H5'	2.32	0.64
35:BA:271(Q):G:HO2'	35:BA:271(R):G:H8	1.45	0.64
35:BA:605:C:H2'	35:BA:606:U:C5'	2.27	0.64
35:BA:1992:G:H1'	35:BA:1993:U:OP2	1.96	0.64
37:BC:102:GLN:O	37:BC:104:ILE:HG13	1.97	0.64
37:BC:122:GLY:O	37:BC:127:LYS:HE3	1.96	0.64
39:BE:36:ARG:NH2	39:BE:88:GLY:HA2	2.07	0.64
39:BE:117:MET:CE	39:BE:136:ARG:HA	2.27	0.64
52:BT:29:ARG:NH1	52:BT:88:ILE:CD1	2.60	0.64
53:BU:101:ARG:HG3	53:BU:101:ARG:HH11	1.61	0.64
54:BV:51:VAL:HG12	54:BV:52:VAL:N	2.12	0.64
58:BZ:119:GLU:HG3	58:BZ:122:ARG:HH12	1.62	0.64
1:AA:362:G:N2	1:AA:365:U:OP2	2.30	0.64
1:AA:589:C:O5'	1:AA:589:C:H6	1.79	0.64
1:AA:1040:U:H2'	1:AA:1041:A:C8	2.32	0.64
1:AA:1075:C:H2'	1:AA:1076:C:H5'	1.79	0.64
1:AA:1153:C:O2'	1:AA:1154:G:P	2.55	0.64
2:AB:218:ALA:O	2:AB:222:ILE:HG12	1.95	0.64
6:AF:19:LEU:HD23	6:AF:19:LEU:C	2.23	0.64
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.79	0.64
24:AY:69:VAL:HB	24:AY:82:ILE:CD1	2.14	0.64
24:AY:86:GLY:O	24:AY:117:GLN:CG	2.45	0.64
32:B7:8:ASN:C	32:B7:8:ASN:ND2	2.52	0.64
33:B8:52:LYS:H	33:B8:53:PRO:HD2	1.62	0.64
35:BA:36:G:H4'	35:BA:451:C:C2	2.32	0.64
35:BA:2469:A:C2'	35:BA:2470:G:H5'	2.27	0.64
35:BA:2579:C:O3'	39:BE:131:ALA:HB2	1.97	0.64
35:BA:2757:A:C2'	35:BA:2758:A:H5'	2.19	0.64
48:BP:58:THR:O	48:BP:61:ARG:CD	2.45	0.64
48:BP:66:GLY:O	48:BP:67:MET:HB2	1.96	0.64
50:BR:7:GLY:O	50:BR:8:ARG:HB2	1.97	0.64
57:BY:42:VAL:HG21	57:BY:67:LEU:CD1	2.26	0.64
1:AA:46:G:O2'	1:AA:365:U:C2'	2.46	0.64
1:AA:408:A:H4'	4:AD:112:VAL:HG11	1.78	0.64
1:AA:960:U:O2'	1:AA:1223:C:H4'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1390:U:H2'	1:AA:1391:U:H5'	1.78	0.64
2:AB:167:PRO:CG	2:AB:188:ALA:HB2	2.25	0.64
3:AC:129:ALA:HB3	3:AC:133:ALA:HB2	1.79	0.64
6:AF:3:ARG:CZ	6:AF:3:ARG:HB2	2.25	0.64
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.63	0.64
19:AS:67:VAL:HB	29:B4:50:VAL:HG13	1.79	0.64
21:AU:5:ASP:O	21:AU:11:GLY:HA3	1.97	0.64
35:BA:962:G:H2'	35:BA:963:U:H5'	1.77	0.64
35:BA:1075:C:H2'	35:BA:1076:C:C6	2.31	0.64
35:BA:1984:G:H2'	35:BA:1985:G:H5'	1.79	0.64
35:BA:2105:C:C3'	35:BA:2106:G:H5"	2.27	0.64
47:BO:104:ARG:HH21	52:BT:33:LYS:HE3	1.62	0.64
57:BY:17:SER:HB2	57:BY:71:LYS:NZ	2.11	0.64
58:BZ:108:PRO:HB3	58:BZ:141:VAL:HG12	1.78	0.64
1:AA:39:G:C8	1:AA:498:U:N3	2.44	0.64
1:AA:1432:G:OP1	52:BT:107:ASP:HB2	1.98	0.64
11:AK:97:ALA:O	11:AK:101:SER:HB3	1.97	0.64
12:AL:27:LEU:CD1	12:AL:28:LYS:HG3	2.27	0.64
24:AY:98:MET:CG	24:AY:125:ALA:HA	2.28	0.64
35:BA:37:C:H2'	35:BA:38:A:H8	1.63	0.64
35:BA:49:A:O5'	35:BA:51:G:H5'	1.97	0.64
35:BA:53:A:H2'	35:BA:54:G:C5'	2.24	0.64
35:BA:1036:G:C6	35:BA:1120:G:C6	2.86	0.64
35:BA:1984:G:C2'	35:BA:1985:G:C5'	2.75	0.64
35:BA:2360:A:HO2'	35:BA:2361:A:H5"	1.58	0.64
35:BA:2756:U:C1'	35:BA:2757:A:P	2.86	0.64
36:BB:13:A:O2'	36:BB:14:U:H3'	1.98	0.64
39:BE:11:MET:HB2	39:BE:23:VAL:O	1.96	0.64
41:BG:96:ARG:O	41:BG:99:MET:HB3	1.97	0.64
41:BG:131:TYR:O	41:BG:132:ASN:HB2	1.96	0.64
50:BR:50:HIS:NE2	50:BR:54:LEU:HD11	2.13	0.64
54:BV:65:GLY:HA3	54:BV:91:TYR:CZ	2.32	0.64
58:BZ:145:GLU:HG3	58:BZ:146:ILE:H	1.63	0.64
3:AC:25:GLY:O	3:AC:27:LYS:N	2.31	0.64
12:AL:86:ARG:O	12:AL:86:ARG:HG2	1.98	0.64
24:AY:438:PHE:CZ	24:AY:451:ILE:HG13	2.32	0.64
24:AY:546:ILE:HD13	24:AY:565:VAL:HG11	1.79	0.64
27:B2:46:GLN:O	27:B2:47:ASN:C	2.41	0.64
29:B4:33:VAL:CG1	29:B4:34:GLU:N	2.54	0.64
30:B5:16:ARG:NH2	35:BA:517:C:OP1	2.31	0.64
35:BA:325:G:H2'	35:BA:326:G:H8	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1797:C:O2'	35:BA:1798:U:H5'	1.97	0.64
36:BB:2:C:H2'	36:BB:3:C:H6	1.63	0.64
37:BC:89:GLU:C	37:BC:91:GLY:H	2.06	0.64
39:BE:48:GLN:HE21	39:BE:78:LEU:HD22	1.62	0.64
50:BR:97:VAL:O	50:BR:98:LEU:HD23	1.96	0.64
57:BY:44:ILE:HD12	57:BY:44:ILE:N	2.12	0.64
1:AA:188:C:C2	1:AA:189:G:N7	2.66	0.64
1:AA:1184:G:C2'	1:AA:1185:G:H5'	2.28	0.64
2:AB:87:ARG:NH2	2:AB:233:SER:H	1.96	0.64
9:AI:4:TYR:CD2	9:AI:88:TYR:HB2	2.33	0.64
26:B1:50:ARG:HA	26:B1:59:THR:HA	1.80	0.64
35:BA:52:A:O2'	35:BA:53:A:H5'	1.97	0.64
35:BA:465:G:C6	35:BA:466:A:N6	2.65	0.64
35:BA:607:U:O4	35:BA:620:G:C4	2.51	0.64
35:BA:699:A:H2'	35:BA:700:G:C5'	2.28	0.64
35:BA:1221:C:H2'	35:BA:1221(A):C:C6	2.32	0.64
35:BA:2124:G:O2'	35:BA:2125:G:H5'	1.96	0.64
35:BA:2555:U:C3'	35:BA:2556:C:H5'	2.27	0.64
41:BG:104:GLU:HB3	41:BG:105:LYS:HE2	1.79	0.64
42:BH:98:LEU:HD12	42:BH:102:ALA:O	1.98	0.64
42:BH:136:ILE:HD12	42:BH:136:ILE:N	2.13	0.64
46:BN:57:ALA:O	46:BN:58:ASP:O	2.15	0.64
49:BQ:52:VAL:O	49:BQ:56:ARG:HB2	1.97	0.64
51:BS:66:ALA:HA	51:BS:69:VAL:CG1	2.26	0.64
1:AA:58:C:H6	1:AA:58:C:O5'	1.80	0.64
1:AA:710:G:OP1	6:AF:54:LYS:HE3	1.98	0.64
3:AC:11:ARG:HH11	3:AC:11:ARG:HG2	1.63	0.64
19:AS:49:ILE:O	19:AS:60:VAL:HG12	1.98	0.64
24:AY:99:ARG:HG2	24:AY:401:SER:OG	1.97	0.64
25:B0:44:ARG:NH2	35:BA:858:U:OP1	2.29	0.64
25:B0:53:MET:HG3	25:B0:57:PHE:HA	1.79	0.64
27:B2:2:LYS:HE3	27:B2:52:ASP:OD1	1.97	0.64
28:B3:1:MET:HB3	28:B3:2:PRO:CD	2.22	0.64
29:B4:22:ILE:HG23	41:BG:105:LYS:HD3	1.79	0.64
29:B4:43:TYR:C	29:B4:45:GLY:N	2.56	0.64
33:B8:52:LYS:N	33:B8:53:PRO:CD	2.60	0.64
35:BA:1701:A:H2'	35:BA:1702:G:H5'	1.80	0.64
35:BA:2123:G:N1	35:BA:2176:A:C6	2.66	0.64
35:BA:2581:G:C5	35:BA:2610:C:N4	2.66	0.64
38:BD:123:ALA:HB3	38:BD:131:LEU:HG	1.80	0.64
40:BF:89:VAL:HG12	40:BF:90:PHE:H	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:144:ILE:HG23	41:BG:145:THR:N	2.12	0.64
48:BP:81:GLN:NE2	48:BP:106:LEU:HA	2.12	0.64
48:BP:108:LYS:C	48:BP:110:TYR:H	2.05	0.64
52:BT:126:ALA:C	52:BT:128:GLU:H	2.05	0.64
55:BW:69:LEU:HA	55:BW:108:GLY:O	1.98	0.64
55:BW:90:ARG:HH11	55:BW:90:ARG:HG3	1.62	0.64
57:BY:88:LYS:NZ	57:BY:93:GLY:HA3	2.13	0.64
1:AA:263:A:O2'	1:AA:264:U:H5'	1.98	0.64
2:AB:17:PHE:CB	2:AB:44:LEU:HD11	2.24	0.64
10:AJ:90:LEU:H	10:AJ:91:PRO:HD2	1.61	0.64
24:AY:17:ILE:CD1	24:AY:81:ILE:CG2	2.76	0.64
24:AY:386:GLY:HA3	24:AY:402:ILE:HG12	1.77	0.64
25:B0:69:PHE:CG	25:B0:79:VAL:HG22	2.33	0.64
35:BA:37:C:H2'	35:BA:38:A:C8	2.33	0.64
35:BA:654(O):G:H2'	35:BA:654(P):C:C5	2.33	0.64
35:BA:1113:U:P	42:BH:1:MET:H1	2.21	0.64
35:BA:1173:G:H5'	35:BA:1174:A:O5'	1.98	0.64
35:BA:1770:G:H2'	35:BA:1771:C:C5'	2.27	0.64
48:BP:9:ASN:H	48:BP:10:PRO:CD	2.11	0.64
48:BP:65:ARG:CB	48:BP:68:GLN:HE22	2.06	0.64
51:BS:24:LEU:HB3	51:BS:85:VAL:HG12	1.78	0.64
55:BW:1:MET:HG2	55:BW:2:GLU:N	2.03	0.64
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.33	0.64
24:AY:31:ARG:HA	24:AY:31:ARG:HH11	1.61	0.64
27:B2:70:GLN:CD	27:B2:71:ASN:H	2.05	0.64
29:B4:16:CYS:HA	29:B4:33:VAL:CG2	2.26	0.64
29:B4:56:VAL:HG22	29:B4:57:GLU:N	2.11	0.64
35:BA:247:G:OP2	35:BA:249:C:N4	2.30	0.64
35:BA:696:G:C2'	35:BA:697:C:H5'	2.28	0.64
35:BA:1449:A:H5'	35:BA:1450:G:OP2	1.97	0.64
35:BA:1808:U:C2'	35:BA:1809:A:H5'	2.28	0.64
35:BA:1847:A:H4'	35:BA:1848:A:OP2	1.97	0.64
35:BA:2361:A:C2'	35:BA:2362:G:H5'	2.28	0.64
35:BA:2567:G:H2'	35:BA:2568:C:C6	2.32	0.64
38:BD:30:GLU:HG3	38:BD:63:ARG:NH2	2.12	0.64
40:BF:3:GLU:HA	40:BF:24:LEU:CB	2.28	0.64
40:BF:165:ARG:HB3	40:BF:165:ARG:HH11	1.64	0.64
47:BO:65:THR:HA	47:BO:82:ASN:HD22	1.63	0.64
54:BV:19:LYS:CE	54:BV:20:LEU:H	2.11	0.64
57:BY:50:ARG:C	57:BY:52:SER:H	2.06	0.64
1:AA:60:A:O2'	1:AA:61:G:P	2.56	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:163:C:H2'	1:AA:164:U:C6	2.33	0.63
1:AA:361:G:O2'	1:AA:362:G:H5'	1.98	0.63
1:AA:1077:G:N1	1:AA:1081:G:O6	2.30	0.63
1:AA:1199:U:H4'	10:AJ:54:PHE:CE1	2.33	0.63
10:AJ:65:LEU:HD13	14:AN:56:VAL:HG23	1.80	0.63
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.80	0.63
34:B9:10:ILE:CD1	34:B9:34:GLN:HE22	2.10	0.63
35:BA:331:A:H1'	35:BA:332:A:OP1	1.96	0.63
35:BA:389:G:N1	48:BP:70:GLN:HG3	2.13	0.63
35:BA:2581:G:N9	35:BA:2610:C:N4	2.46	0.63
35:BA:2681:C:H5	35:BA:2725:A:N6	1.93	0.63
35:BA:2756:U:C4	35:BA:2759:G:O6	2.51	0.63
37:BC:121:MET:HA	37:BC:124:VAL:CG1	2.27	0.63
38:BD:108:PRO:HB3	38:BD:143:HIS:CE1	2.33	0.63
41:BG:93:THR:HG22	41:BG:94:LEU:N	2.12	0.63
41:BG:106:LEU:O	41:BG:110:ALA:HB3	1.97	0.63
24:AY:431:LEU:HD11	24:AY:465:ARG:NH1	2.12	0.63
32:B7:32:LYS:NZ	35:BA:181:A:OP1	2.32	0.63
34:B9:36:GLN:HG2	35:BA:1124:C:O2'	1.99	0.63
35:BA:605:C:O2'	35:BA:606:U:C5'	2.33	0.63
35:BA:627:A:C4'	35:BA:628:G:OP1	2.31	0.63
35:BA:1170:G:H1	35:BA:1179:C:N4	1.94	0.63
35:BA:2036:C:C2'	35:BA:2037:G:H5'	2.29	0.63
35:BA:2189:U:H2'	35:BA:2190:G:C5'	2.17	0.63
37:BC:68:GLY:N	37:BC:189:ASN:HD21	1.96	0.63
37:BC:118:PRO:C	37:BC:120:VAL:H	2.04	0.63
41:BG:66:GLN:HE22	41:BG:94:LEU:CG	2.11	0.63
54:BV:39:LEU:CD1	54:BV:47:VAL:HG11	2.27	0.63
58:BZ:71:VAL:HG11	58:BZ:74:VAL:HG23	1.78	0.63
1:AA:190:U:N3	20:AT:105:SER:HB2	2.13	0.63
1:AA:539:A:H2'	1:AA:540:G:H8	1.64	0.63
1:AA:592:G:C2	1:AA:593:G:C8	2.86	0.63
3:AC:15:THR:HG23	3:AC:181:ASN:HA	1.80	0.63
3:AC:71:ALA:HB2	3:AC:115:LEU:HD21	1.78	0.63
3:AC:84:ILE:O	3:AC:86:VAL:N	2.31	0.63
19:AS:7:LYS:O	19:AS:7:LYS:HG2	1.98	0.63
24:AY:17:ILE:HD13	24:AY:81:ILE:CG2	2.29	0.63
33:B8:13:ARG:HD2	48:BP:61:ARG:CD	2.20	0.63
35:BA:310:A:OP1	57:BY:17:SER:O	2.16	0.63
35:BA:654(T):C:O2'	35:BA:654(U):A:O4'	2.16	0.63
35:BA:967:C:O2'	35:BA:968:G:H5"	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1022:G:O6	46:BN:66:LYS:HE3	1.99	0.63
35:BA:1282:U:C2	35:BA:1286:A:N6	2.66	0.63
35:BA:2363:C:H2'	35:BA:2364:C:C6	2.33	0.63
39:BE:132:HIS:O	39:BE:132:HIS:ND1	2.30	0.63
48:BP:136:GLU:O	48:BP:139:LYS:HB2	1.98	0.63
51:BS:61:ASN:HB3	51:BS:64:GLU:HB2	1.78	0.63
54:BV:12:TYR:N	54:BV:12:TYR:CD1	2.66	0.63
58:BZ:30:ASN:O	58:BZ:32:HIS:N	2.31	0.63
1:AA:60:A:O2'	1:AA:61:G:H5"	1.98	0.63
1:AA:1158:C:O2	1:AA:1158:C:C2'	2.47	0.63
2:AB:19:HIS:CE1	2:AB:206:ASP:HB2	2.33	0.63
10:AJ:78:ASN:ND2	10:AJ:80:LYS:HB2	2.14	0.63
12:AL:123:LYS:H	12:AL:123:LYS:CE	2.11	0.63
26:B1:52:ARG:NH1	35:BA:2218:U:O2'	2.32	0.63
33:B8:43:GLN:C	33:B8:44:LYS:HD2	2.23	0.63
35:BA:463:G:N2	35:BA:466:A:OP2	2.30	0.63
35:BA:694:U:H6	35:BA:694:U:O5'	1.80	0.63
35:BA:702:G:O2'	35:BA:703:U:C5'	2.30	0.63
35:BA:2757:A:O2'	35:BA:2758:A:H5"	1.98	0.63
40:BF:53:THR:HG22	40:BF:56:GLU:CD	2.24	0.63
47:BO:104:ARG:HH21	52:BT:33:LYS:CE	2.12	0.63
1:AA:942:G:N3	1:AA:943:U:C6	2.67	0.63
1:AA:973:G:H3'	1:AA:974:A:H5"	1.81	0.63
9:AI:28:VAL:O	9:AI:29:ASN:HB2	1.99	0.63
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.12	0.63
24:AY:84:THR:CG2	24:AY:94:VAL:HG22	2.27	0.63
29:B4:30:GLU:C	29:B4:31:ILE:HG22	2.23	0.63
29:B4:53:GLU:CD	29:B4:54:GLY:N	2.57	0.63
34:B9:9:ARG:C	34:B9:10:ILE:HD12	2.24	0.63
35:BA:327:G:C2'	35:BA:328:U:O5'	2.47	0.63
35:BA:1301:A:O2'	35:BA:1302:A:P	2.55	0.63
35:BA:1434:A:H61	35:BA:1558:A:N6	1.95	0.63
37:BC:115:VAL:HA	37:BC:139:PRO:HB3	1.80	0.63
38:BD:186:HIS:CD2	38:BD:188:GLU:H	2.16	0.63
56:BX:53:LYS:HB3	56:BX:82:GLN:HB3	1.79	0.63
1:AA:1116:C:H2'	1:AA:1117:G:C5'	2.29	0.63
1:AA:1195:C:H5"	1:AA:1196:U:O5'	1.99	0.63
3:AC:22:TRP:CZ3	3:AC:24:ALA:HB2	2.33	0.63
3:AC:180:ALA:O	3:AC:181:ASN:HB3	1.99	0.63
16:AP:45:THR:HG22	16:AP:47:ASP:N	2.14	0.63
24:AY:15:ILE:HG22	24:AY:103:GLY:C	2.24	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:20:ARG:NH1	35:BA:2357:U:OP1	2.32	0.63
35:BA:28:A:C2'	35:BA:29:U:H5'	2.28	0.63
35:BA:860:U:H5	35:BA:917:A:N7	1.96	0.63
35:BA:1223:G:N2	35:BA:1226:A:OP2	2.31	0.63
35:BA:1543:C:H3'	35:BA:1544:A:C5'	2.28	0.63
35:BA:1698:A:H4'	35:BA:1699:G:OP1	1.97	0.63
35:BA:1925:C:H5'	35:BA:1926:U:OP2	1.98	0.63
35:BA:2313:C:C4'	41:BG:40:ASN:ND2	2.60	0.63
35:BA:2606:C:O2'	35:BA:2607:G:C5'	2.46	0.63
41:BG:33:ARG:HA	41:BG:172:LEU:HD11	1.81	0.63
41:BG:38:VAL:HG13	41:BG:93:THR:HA	1.81	0.63
48:BP:78:PRO:HA	48:BP:110:TYR:HE2	1.64	0.63
58:BZ:108:PRO:HG2	58:BZ:111:VAL:HG23	1.80	0.63
1:AA:56:U:H2'	1:AA:57:G:C8	2.33	0.63
1:AA:314:C:O5'	1:AA:314:C:H6	1.82	0.63
1:AA:961:U:H1'	1:AA:962:C:C5'	2.28	0.63
5:AE:147:ASP:HB3	5:AE:150:ARG:NH1	2.14	0.63
7:AG:121:ALA:H	7:AG:124:LEU:CD1	1.99	0.63
9:AI:126:SER:O	9:AI:127:LYS:HB3	1.96	0.63
10:AJ:22:LYS:HD2	10:AJ:90:LEU:HD22	1.80	0.63
35:BA:848:G:H2'	35:BA:849:A:C8	2.34	0.63
35:BA:1086:A:O2'	35:BA:1103:A:N6	2.31	0.63
35:BA:1461:G:H2'	35:BA:1462:C:H5'	1.81	0.63
35:BA:2423:U:H5'	35:BA:2423:U:H6	1.63	0.63
37:BC:44:VAL:CG2	37:BC:176:VAL:HG21	2.28	0.63
37:BC:158:LYS:O	37:BC:159:ALA:HB3	1.99	0.63
39:BE:48:GLN:HE22	39:BE:64:LYS:HE3	1.62	0.63
41:BG:65:GLY:O	41:BG:66:GLN:CB	2.46	0.63
57:BY:28:LYS:HB2	57:BY:38:ILE:N	2.10	0.63
58:BZ:79:ARG:HG3	58:BZ:80:ARG:HG2	1.81	0.63
1:AA:105:G:C5	1:AA:106:C:N4	2.67	0.63
1:AA:491:G:O2'	1:AA:492:G:H5'	1.98	0.63
1:AA:942:G:H2'	1:AA:943:U:H6	1.63	0.63
1:AA:1321:C:C3'	1:AA:1322:C:H5"	2.29	0.63
13:AM:108:ARG:HD2	13:AM:108:ARG:N	2.14	0.63
24:AY:96:ARG:HD3	24:AY:314:PHE:O	1.99	0.63
25:B0:66:VAL:HG12	25:B0:67:VAL:N	2.13	0.63
26:B1:34:THR:HG22	26:B1:36:GLY:H	1.63	0.63
29:B4:7:PRO:HG2	29:B4:9:LEU:HD11	1.80	0.63
29:B4:16:CYS:SG	29:B4:21:VAL:HG23	2.37	0.63
35:BA:848:G:H5'	35:BA:848:G:H8	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1695:G:H1'	38:BD:8:PRO:O	1.98	0.63
35:BA:1839:G:H8	35:BA:1839:G:H5'	1.64	0.63
35:BA:1890:A:C3'	35:BA:1891:G:C5'	2.77	0.63
35:BA:2492:U:O2'	35:BA:2493:U:H5'	1.99	0.63
37:BC:7:ARG:O	37:BC:11:LEU:HD23	1.99	0.63
41:BG:144:ILE:HG23	41:BG:145:THR:H	1.62	0.63
42:BH:22:GLY:O	42:BH:37:VAL:N	2.27	0.63
54:BV:5:VAL:HG23	54:BV:37:VAL:O	1.98	0.63
1:AA:313:A:H2'	1:AA:314:C:C6	2.34	0.63
1:AA:349:A:HO2'	1:AA:350:G:H5'	1.62	0.63
1:AA:1049:U:C1'	1:AA:1050:G:OP2	2.46	0.63
1:AA:1281:U:C5'	1:AA:1282:C:C5	2.77	0.63
1:AA:1286:A:O2'	1:AA:1287:A:H4'	1.99	0.63
1:AA:1320:C:H6	1:AA:1320:C:H5'	1.64	0.63
1:AA:1348:U:C5	1:AA:1373:G:N2	2.67	0.63
3:AC:55:VAL:O	3:AC:55:VAL:HG12	1.97	0.63
32:B7:8:ASN:ND2	32:B7:11:LYS:H	1.97	0.63
35:BA:89:G:OP2	35:BA:90:U:H2'	1.99	0.63
35:BA:1646:C:H5"	35:BA:1647:G:O5'	1.99	0.63
35:BA:2126:A:H1'	35:BA:2127:G:C1'	2.29	0.63
36:BB:28:C:H42	36:BB:56:G:H1	1.45	0.63
37:BC:133:GLY:O	37:BC:135:ARG:N	2.32	0.63
48:BP:6:LEU:HD12	48:BP:9:ASN:OD1	1.99	0.63
48:BP:55:ARG:HG2	48:BP:56:SER:N	2.14	0.63
50:BR:50:HIS:O	50:BR:54:LEU:HD12	1.99	0.63
57:BY:27:VAL:HB	57:BY:29:GLU:OE1	1.98	0.63
1:AA:166:G:H2'	1:AA:167:G:C8	2.34	0.62
1:AA:198:G:C2	1:AA:199:G:C5	2.88	0.62
1:AA:521:G:C2'	1:AA:522:C:C5'	2.72	0.62
1:AA:936:C:C2'	1:AA:937:A:C5'	2.76	0.62
1:AA:1287:A:C6	1:AA:1288:A:C6	2.86	0.62
13:AM:3:ARG:CZ	13:AM:7:VAL:HG13	2.29	0.62
19:AS:42:PRO:HB3	19:AS:67:VAL:CG1	2.29	0.62
20:AT:71:THR:HG22	20:AT:72:LEU:N	2.13	0.62
24:AY:343:ASN:HD22	24:AY:343:ASN:C	2.06	0.62
25:B0:57:PHE:N	25:B0:57:PHE:CD1	2.67	0.62
35:BA:247:G:H4'	35:BA:386:G:C5	2.34	0.62
35:BA:408:G:O2'	35:BA:409:C:H5'	1.99	0.62
35:BA:968:G:H2'	35:BA:969:U:H6	1.64	0.62
35:BA:2029:G:N1	35:BA:2033:A:P	2.71	0.62
35:BA:2445:G:OP1	40:BF:74:ARG:NH2	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:6:LYS:HG3	37:BC:7:ARG:N	2.14	0.62
40:BF:51:THR:HB	40:BF:88:VAL:HG11	1.80	0.62
41:BG:129:GLY:HA3	41:BG:169:ALA:HB2	1.81	0.62
46:BN:57:ALA:C	46:BN:58:ASP:O	2.41	0.62
53:BU:95:LEU:HD13	54:BV:4:ILE:HG23	1.80	0.62
58:BZ:18:LEU:O	58:BZ:21:ALA:HB3	1.99	0.62
1:AA:61:G:C6	1:AA:107:G:C6	2.88	0.62
1:AA:200:G:H1	1:AA:217:C:H42	1.46	0.62
1:AA:788:U:H2'	1:AA:789:U:H5'	1.80	0.62
1:AA:1305:G:H5'	21:AU:4:GLY:CA	2.28	0.62
2:AB:82:ARG:HG3	2:AB:82:ARG:NH1	2.13	0.62
2:AB:204:ASN:HD22	2:AB:205:ASP:H	1.44	0.62
24:AY:262:SER:OG	24:AY:265:LYS:HB2	1.98	0.62
26:B1:3:LYS:NZ	35:BA:1364:G:C8	2.65	0.62
28:B3:4:LEU:HD11	28:B3:44:ARG:CZ	2.29	0.62
28:B3:7:LYS:CG	28:B3:32:GLN:O	2.45	0.62
35:BA:146:G:H5'	35:BA:146:G:C8	2.32	0.62
35:BA:363(E):U:H5'	35:BA:363(F):A:OP2	1.98	0.62
35:BA:2134:A:H5'	35:BA:2134:A:H8	1.64	0.62
36:BB:34:U:O4	36:BB:44:G:H2'	1.99	0.62
37:BC:29:LEU:O	37:BC:32:GLU:N	2.31	0.62
38:BD:24:ILE:CD1	38:BD:25:THR:N	2.61	0.62
41:BG:85:GLY:O	41:BG:86:MET:HB2	1.99	0.62
42:BH:18:GLU:HG3	42:BH:25:LYS:HB2	1.81	0.62
47:BO:10:VAL:HG21	47:BO:16:ALA:C	2.24	0.62
47:BO:104:ARG:HE	52:BT:33:LYS:HE3	1.63	0.62
52:BT:98:LYS:HB3	52:BT:100:TYR:CE2	2.34	0.62
52:BT:102:ILE:O	52:BT:106:SER:HB3	1.99	0.62
1:AA:192:U:C1'	20:AT:103:GLY:HA2	2.28	0.62
1:AA:560:U:H5'	1:AA:561:U:H3'	1.80	0.62
1:AA:963:G:H21	10:AJ:55:LYS:CE	2.11	0.62
9:AI:52:ALA:HB3	9:AI:95:LYS:NZ	2.13	0.62
14:AN:13:THR:N	14:AN:14:PRO:CD	2.61	0.62
24:AY:25:LYS:NZ	24:AY:86:GLY:CA	2.62	0.62
24:AY:104:ALA:C	24:AY:105:ILE:HD12	2.24	0.62
25:B0:36:ILE:O	25:B0:36:ILE:CG1	2.41	0.62
26:B1:29:GLY:HA3	35:BA:2396:G:HO2'	1.63	0.62
35:BA:752:A:O2'	35:BA:753:C:OP2	2.16	0.62
35:BA:2130:U:O3'	35:BA:2133:A:H5'	2.00	0.62
35:BA:2822:G:O6	50:BR:4:LEU:HD22	2.00	0.62
37:BC:73:VAL:HG13	37:BC:74:ARG:N	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:3:GLU:HA	40:BF:24:LEU:HB3	1.80	0.62
51:BS:106:ARG:HH11	51:BS:106:ARG:CB	2.05	0.62
1:AA:495:A:C1'	1:AA:496:A:H2'	2.28	0.62
1:AA:559:A:H4'	1:AA:560:U:H5"	1.80	0.62
1:AA:863:U:C5'	1:AA:863:U:O2	2.47	0.62
1:AA:1042:G:O2'	1:AA:1043:C:H5'	2.00	0.62
1:AA:1076:C:C2'	1:AA:1077:G:H5'	2.29	0.62
3:AC:131:ARG:HH11	3:AC:131:ARG:HB2	1.65	0.62
22:AV:12:U:H3	22:AV:23:A:N6	1.97	0.62
24:AY:57:GLN:O	24:AY:58:GLU:C	2.42	0.62
25:B0:45:PHE:HZ	25:B0:77:ARG:HH21	1.47	0.62
27:B2:64:LEU:C	27:B2:64:LEU:CD2	2.72	0.62
28:B3:8:LEU:HD23	28:B3:53:LEU:O	2.00	0.62
35:BA:48:G:O3'	35:BA:51:G:H5'	1.99	0.62
35:BA:518:G:H4'	55:BW:18:ARG:NH1	2.15	0.62
35:BA:774:A:H2	35:BA:787:U:O2'	1.81	0.62
35:BA:1107:G:H4'	43:BJ:81:UNK:HA	1.80	0.62
35:BA:2137:C:H2'	35:BA:2138:C:C6	2.35	0.62
35:BA:2580:U:C5'	39:BE:131:ALA:HB2	2.29	0.62
42:BH:70:THR:HG22	42:BH:74:ASN:ND2	2.13	0.62
46:BN:25:ARG:HG3	46:BN:25:ARG:HH11	1.65	0.62
50:BR:87:TYR:C	50:BR:89:ASP:H	2.07	0.62
52:BT:27:THR:O	52:BT:28:VAL:HG12	2.00	0.62
54:BV:49:THR:HB	54:BV:50:PRO:CD	2.28	0.62
57:BY:39:VAL:O	57:BY:40:GLU:HG2	1.99	0.62
1:AA:505:G:H2'	1:AA:506:G:H8	1.65	0.62
1:AA:564:C:O2'	8:AH:91:ARG:NH2	2.33	0.62
1:AA:946:A:H2'	1:AA:947:G:H8	1.61	0.62
2:AB:73:THR:HA	2:AB:94:ASN:O	2.00	0.62
9:AI:95:LYS:HD2	9:AI:95:LYS:C	2.25	0.62
24:AY:590:ILE:HG22	24:AY:594:VAL:HG23	1.82	0.62
35:BA:1093:G:H1'	35:BA:1099:G:H22	1.65	0.62
35:BA:1902:C:C5'	38:BD:246:PRO:HD3	2.30	0.62
35:BA:1925:C:H3'	35:BA:1926:U:C5'	2.29	0.62
35:BA:2123:G:O6	35:BA:2176:A:N6	2.31	0.62
35:BA:2185:C:HO2'	35:BA:2186:G:H8	1.48	0.62
40:BF:185:ASP:HA	40:BF:188:ARG:CG	2.30	0.62
47:BO:13:ASN:HD22	47:BO:13:ASN:H	1.46	0.62
47:BO:66:LYS:H	47:BO:82:ASN:HD21	1.47	0.62
55:BW:36:LEU:HD22	55:BW:36:LEU:N	2.15	0.62
56:BX:87:GLN:O	56:BX:88:LYS:HD3	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:17:SER:HB2	57:BY:71:LYS:CE	2.29	0.62
58:BZ:165:VAL:CG1	58:BZ:166:SER:N	2.61	0.62
1:AA:274:A:O2'	1:AA:275:G:H8	1.83	0.62
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.34	0.62
3:AC:130:VAL:HG13	3:AC:157:ILE:CG2	2.29	0.62
15:AO:53:HIS:O	15:AO:56:LEU:HB3	2.00	0.62
35:BA:1786:A:N9	35:BA:1938:A:N6	2.47	0.62
35:BA:1906:G:H3'	35:BA:1907:G:H5"	1.80	0.62
35:BA:2581:G:C4	35:BA:2610:C:C4	2.88	0.62
38:BD:276:LYS:OXT	38:BD:276:LYS:HD3	1.99	0.62
39:BE:47:VAL:HG23	39:BE:84:PHE:HB3	1.81	0.62
40:BF:54:ARG:CZ	40:BF:80:ALA:HB2	2.29	0.62
40:BF:135:LYS:H	40:BF:166:ALA:HB2	1.64	0.62
55:BW:20:VAL:CG2	55:BW:47:VAL:HG21	2.29	0.62
1:AA:312:C:O2'	1:AA:313:A:C5'	2.46	0.62
1:AA:942:G:N2	1:AA:943:U:C2	2.67	0.62
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.64	0.62
1:AA:1160:G:C6	1:AA:1181:G:O6	2.52	0.62
4:AD:110:PHE:CD1	4:AD:110:PHE:N	2.56	0.62
13:AM:53:VAL:CG1	13:AM:57:ARG:HH21	2.13	0.62
24:AY:100:VAL:HG21	24:AY:314:PHE:CE1	2.35	0.62
24:AY:471:LYS:O	24:AY:471:LYS:HG2	1.98	0.62
27:B2:5:GLU:CA	27:B2:8:LYS:HD2	2.27	0.62
35:BA:2887:U:H2'	35:BA:2888:C:C6	2.34	0.62
37:BC:108:TRP:C	37:BC:110:ASP:H	2.07	0.62
38:BD:4:LYS:HB3	38:BD:18:VAL:HG13	1.82	0.62
39:BE:111:ARG:CA	50:BR:2:ARG:HG2	2.30	0.62
40:BF:10:PRO:HA	40:BF:127:GLU:HB3	1.82	0.62
52:BT:106:SER:HA	52:BT:110:ILE:CG1	2.29	0.62
1:AA:92:C:H2'	1:AA:93:G:H5'	1.82	0.62
1:AA:405:U:H3'	1:AA:406:G:H5'	1.82	0.62
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.13	0.62
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.30	0.62
1:AA:1152:A:C6	1:AA:1153:C:N4	2.68	0.62
2:AB:25:ASN:O	2:AB:27:LYS:N	2.33	0.62
13:AM:66:LEU:HD12	13:AM:66:LEU:N	2.14	0.62
17:AQ:65:ILE:HD12	17:AQ:65:ILE:N	2.14	0.62
22:AV:41:C:O2'	22:AV:42:C:C5'	2.32	0.62
24:AY:459:LEU:H	24:AY:459:LEU:HD12	1.65	0.62
25:B0:12:ASN:HA	25:B0:14:ARG:HH12	1.64	0.62
25:B0:56:ASP:O	25:B0:58:THR:N	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:41:C:H42	35:BA:437:G:H1	1.47	0.62
35:BA:247:G:O2'	35:BA:248:G:C5'	2.47	0.62
35:BA:389:G:N1	48:BP:71:VAL:HG12	2.15	0.62
35:BA:965:C:C2'	35:BA:966:G:H5'	2.30	0.62
35:BA:1019:U:O2'	35:BA:1021:A:H2	1.82	0.62
35:BA:1932:A:H2'	35:BA:1933:G:O4'	1.99	0.62
35:BA:2305:A:C2	35:BA:2306:C:H1'	2.35	0.62
37:BC:11:LEU:HD12	37:BC:33:LEU:HA	1.82	0.62
41:BG:147:ASP:O	41:BG:148:MET:C	2.42	0.62
42:BH:89:ILE:CD1	42:BH:94:TYR:HB3	2.29	0.62
56:BX:8:ILE:HD12	56:BX:8:ILE:N	2.15	0.62
58:BZ:17:ALA:HA	58:BZ:20:ARG:CG	2.30	0.62
1:AA:359:U:O2'	1:AA:360:A:C5'	2.30	0.62
1:AA:436:C:H2'	1:AA:437:U:C6	2.35	0.62
1:AA:556:C:H2'	1:AA:557:G:C5'	2.27	0.62
1:AA:688:G:O6	1:AA:700:G:O6	2.17	0.62
1:AA:936:C:H2'	1:AA:937:A:C8	2.32	0.62
2:AB:91:PRO:O	2:AB:92:TYR:HB3	2.00	0.62
3:AC:50:ALA:HB2	3:AC:75:VAL:CB	2.29	0.62
7:AG:92:SER:O	7:AG:96:GLN:HG3	2.00	0.62
10:AJ:54:PHE:C	10:AJ:55:LYS:HG3	2.25	0.62
12:AL:6:THR:H	12:AL:9:GLN:NE2	1.89	0.62
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.29	0.62
20:AT:100:ILE:O	20:AT:101:GLY:C	2.42	0.62
24:AY:523:PHE:CE1	24:AY:550:MET:HE1	2.35	0.62
33:B8:51:ALA:N	33:B8:53:PRO:HD2	2.15	0.62
35:BA:833:U:H4'	48:BP:52:GLU:N	2.15	0.62
35:BA:1227:G:N3	35:BA:1228:G:C8	2.68	0.62
35:BA:1803:A:H4'	38:BD:259:THR:HG23	1.82	0.62
35:BA:2207:G:C2'	35:BA:2208:A:H5"	2.29	0.62
37:BC:125:GLY:O	37:BC:127:LYS:N	2.31	0.62
41:BG:164:GLU:HG3	41:BG:165:THR:H	1.65	0.62
56:BX:40:LYS:HG2	56:BX:51:VAL:HB	1.82	0.62
1:AA:775:G:C2'	1:AA:776:G:C5'	2.76	0.62
1:AA:1390:U:O2'	1:AA:1391:U:H5'	1.99	0.62
1:AA:1492:A:C1'	1:AA:1493:A:OP1	2.45	0.62
10:AJ:4:ILE:CD1	10:AJ:77:PRO:HG3	2.28	0.62
24:AY:539:ILE:O	24:AY:542:VAL:HG12	2.00	0.62
27:B2:10:LEU:CD1	35:BA:78:A:OP1	2.48	0.62
29:B4:12:ALA:O	29:B4:24:THR:CG2	2.43	0.62
31:B6:15:GLU:HG2	31:B6:18:ARG:HH11	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:105:C:H2'	35:BA:106:C:C6	2.34	0.62
35:BA:221:A:C8	35:BA:266:G:O6	2.52	0.62
35:BA:1428:C:N4	35:BA:1570:A:OP2	2.29	0.62
35:BA:1999:C:C2'	35:BA:2000:G:C5'	2.71	0.62
35:BA:2773:C:H5"	39:BE:164:ARG:HG2	1.82	0.62
38:BD:174:ILE:HG12	38:BD:184:LYS:HG2	1.82	0.62
46:BN:56:ASN:C	46:BN:57:ALA:O	2.42	0.62
48:BP:24:GLY:N	48:BP:33:ARG:NE	2.47	0.62
52:BT:28:VAL:HG13	52:BT:29:ARG:H	1.60	0.62
52:BT:58:ASN:H	52:BT:58:ASN:ND2	1.97	0.62
57:BY:28:LYS:HA	57:BY:39:VAL:H	1.64	0.62
1:AA:861:G:O2'	1:AA:862:C:H5'	2.00	0.61
1:AA:1047:G:C2'	1:AA:1048:G:C5'	2.72	0.61
1:AA:1270:C:O2'	1:AA:1314:C:H5'	2.00	0.61
2:AB:87:ARG:O	2:AB:87:ARG:HG2	1.99	0.61
3:AC:64:VAL:HB	3:AC:99:VAL:HG12	1.82	0.61
13:AM:40:ASN:HD22	13:AM:43:THR:HG23	1.64	0.61
26:B1:40:ARG:NH2	26:B1:42:GLN:HG2	2.15	0.61
32:B7:8:ASN:HD22	32:B7:9:ARG:N	1.98	0.61
35:BA:262:A:H2'	35:BA:263:C:C5'	2.29	0.61
35:BA:328:U:H6	35:BA:328:U:O5'	1.82	0.61
35:BA:331:A:O2'	35:BA:332:A:P	2.58	0.61
35:BA:1141:U:H4'	35:BA:1142(A):A:O4'	2.00	0.61
35:BA:1300:U:H5"	35:BA:1301:A:C2	2.35	0.61
41:BG:101:ILE:HA	41:BG:105:LYS:HG2	1.82	0.61
49:BQ:137:TYR:HE1	58:BZ:81:ARG:NH2	1.97	0.61
51:BS:88:ASP:CG	51:BS:89:ARG:H	2.07	0.61
51:BS:89:ARG:HG2	51:BS:92:TYR:HA	1.83	0.61
52:BT:58:ASN:H	52:BT:58:ASN:HD22	1.48	0.61
54:BV:19:LYS:HB3	54:BV:94:LEU:O	2.00	0.61
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.35	0.61
3:AC:168:ALA:O	3:AC:169:ALA:CB	2.46	0.61
5:AE:148:VAL:HG21	8:AH:107:LEU:HD13	1.82	0.61
6:AF:4:TYR:CD1	6:AF:92:LYS:HA	2.35	0.61
15:AO:82:ILE:O	15:AO:82:ILE:HD13	2.01	0.61
25:B0:43:THR:HG22	35:BA:2331:G:O3'	1.99	0.61
28:B3:22:ALA:HB3	28:B3:50:VAL:CG1	2.29	0.61
35:BA:12:U:O2	35:BA:2626:C:H4'	2.00	0.61
35:BA:271(A):A:H5'	35:BA:271(B):C:OP2	2.00	0.61
35:BA:548:A:H2'	35:BA:549:G:O4'	2.00	0.61
35:BA:674:G:O2'	40:BF:74:ARG:HD3	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1065:U:H2'	35:BA:1067:A:OP1	1.99	0.61
35:BA:1798:U:C5'	38:BD:259:THR:HG22	2.29	0.61
35:BA:1820:U:C1'	38:BD:202:LYS:HB3	2.29	0.61
35:BA:2408:U:H2'	35:BA:2409:G:H8	1.65	0.61
41:BG:11:TYR:O	41:BG:16:ARG:HB2	2.00	0.61
41:BG:66:GLN:HE22	41:BG:94:LEU:CD2	2.13	0.61
46:BN:3:THR:HG22	46:BN:4:TYR:N	2.14	0.61
48:BP:6:LEU:HD23	48:BP:6:LEU:N	2.14	0.61
57:BY:81:LYS:CB	57:BY:96:ILE:HD11	2.30	0.61
58:BZ:44:PHE:CD1	58:BZ:44:PHE:C	2.79	0.61
1:AA:77:G:H1	1:AA:92:C:N4	1.99	0.61
1:AA:110:C:O2'	1:AA:111:G:H5'	2.00	0.61
1:AA:828:A:N3	2:AB:26:PRO:HG2	2.15	0.61
1:AA:975:A:H4'	1:AA:976:G:C5'	2.21	0.61
1:AA:1151:A:C2	1:AA:1152:A:C6	2.89	0.61
1:AA:1286:A:O2'	1:AA:1287:A:H5"	1.98	0.61
1:AA:1492:A:C1'	1:AA:1493:A:P	2.88	0.61
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.81	0.61
15:AO:47:LYS:H	15:AO:47:LYS:HD2	1.64	0.61
24:AY:9:LEU:HD23	24:AY:9:LEU:C	2.26	0.61
24:AY:100:VAL:CG2	24:AY:329:ARG:HB2	2.29	0.61
24:AY:127:LYS:HE3	24:AY:128:TYR:CE1	2.34	0.61
24:AY:210:ARG:HG2	24:AY:210:ARG:HH11	1.65	0.61
27:B2:33:MET:O	27:B2:37:PHE:HB2	1.99	0.61
28:B3:1:MET:CB	28:B3:2:PRO:CD	2.77	0.61
29:B4:42:PHE:CE1	41:BG:180:PHE:HE1	2.18	0.61
35:BA:696:G:H2'	35:BA:697:C:H5'	1.81	0.61
35:BA:1460:A:O2'	35:BA:1461:G:C5'	2.48	0.61
35:BA:1599:C:O2'	35:BA:1600:C:H5'	2.01	0.61
35:BA:2712:U:O2'	35:BA:2712(A):A:P	2.58	0.61
37:BC:127:LYS:N	37:BC:127:LYS:HD3	2.15	0.61
46:BN:6:PRO:O	46:BN:7:LYS:HB3	2.00	0.61
1:AA:384:G:H2'	1:AA:385:C:C6	2.35	0.61
1:AA:961:U:H3'	1:AA:961:U:OP1	2.01	0.61
1:AA:1399:C:C5'	1:AA:1400:C:H3'	2.29	0.61
2:AB:15:VAL:O	2:AB:16:HIS:ND1	2.31	0.61
2:AB:27:LYS:HD2	2:AB:193:ASP:OD1	2.00	0.61
2:AB:80:ILE:H	2:AB:80:ILE:HD12	1.66	0.61
3:AC:191:THR:HG21	3:AC:193:TYR:CZ	2.35	0.61
4:AD:148:VAL:HG12	4:AD:149:ALA:N	2.14	0.61
5:AE:100:VAL:HG23	5:AE:107:ARG:NH2	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:44:MET:HE2	19:AS:44:MET:HA	1.80	0.61
24:AY:99:ARG:HH11	24:AY:401:SER:C	2.08	0.61
30:B5:55:ARG:HA	30:B5:55:ARG:NE	2.15	0.61
34:B9:10:ILE:HD13	34:B9:34:GLN:NE2	2.15	0.61
35:BA:1153:C:H2'	35:BA:1154:G:O4'	2.00	0.61
35:BA:1474:C:H2'	35:BA:1475:G:H5"	1.81	0.61
35:BA:1964:G:H4'	35:BA:1965:C:OP2	2.00	0.61
35:BA:2062:A:H5'	35:BA:2062:A:H8	1.65	0.61
35:BA:2185:C:O2'	35:BA:2186:G:H8	1.83	0.61
35:BA:2359:C:N4	35:BA:2360:A:N6	2.49	0.61
42:BH:89:ILE:HB	42:BH:162:ILE:HG22	1.83	0.61
45:BL:113:UNK:C	45:BL:115:UNK:N	2.62	0.61
48:BP:51:PHE:CA	48:BP:52:GLU:HB2	2.30	0.61
51:BS:42:ASP:O	51:BS:43:GLU:HB3	1.99	0.61
1:AA:1048:G:N3	1:AA:1050:G:N7	2.49	0.61
1:AA:1124:G:O2'	1:AA:1145:C:N4	2.33	0.61
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.14	0.61
33:B8:30:ARG:NH2	35:BA:2419:U:O4	2.34	0.61
35:BA:118:A:H5'	35:BA:119:A:H8	1.65	0.61
35:BA:1227:G:C2'	35:BA:1228:G:H5'	2.29	0.61
35:BA:1600:C:C2'	35:BA:1601:G:H5'	2.30	0.61
35:BA:2620:C:OP1	39:BE:153:GLY:N	2.34	0.61
38:BD:248:SER:HB2	38:BD:249:PRO:CD	2.22	0.61
40:BF:136:THR:HG23	40:BF:170:LEU:HD21	1.82	0.61
41:BG:129:GLY:HA3	41:BG:169:ALA:CB	2.31	0.61
46:BN:90:MET:O	46:BN:93:THR:O	2.19	0.61
51:BS:34:HIS:HB2	51:BS:36:TYR:HE1	1.65	0.61
52:BT:34:VAL:HG22	52:BT:39:ARG:CB	2.31	0.61
53:BU:88:ILE:O	53:BU:90:VAL:N	2.33	0.61
53:BU:91:ASP:O	53:BU:92:ARG:HB3	1.99	0.61
1:AA:936:C:O2'	1:AA:937:A:C5'	2.30	0.61
12:AL:45:PRO:HG2	12:AL:51:ALA:H	1.63	0.61
13:AM:49:THR:O	13:AM:53:VAL:HG23	2.01	0.61
19:AS:22:LEU:HD13	19:AS:26:GLY:HA2	1.82	0.61
24:AY:276:VAL:HA	24:AY:280:LEU:HD23	1.81	0.61
27:B2:2:LYS:O	27:B2:6:VAL:HG23	1.99	0.61
27:B2:35:LEU:O	27:B2:37:PHE:N	2.33	0.61
29:B4:31:ILE:HG12	29:B4:33:VAL:H	1.65	0.61
30:B5:3:LYS:HD2	35:BA:747:U:OP2	2.00	0.61
35:BA:654(C):G:H2'	35:BA:654(D):G:H5'	1.82	0.61
35:BA:1019:U:O2'	35:BA:1021:A:C2	2.52	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1113:U:OP1	42:BH:1:MET:N	2.34	0.61
35:BA:2126:A:O2'	35:BA:2127:G:P	2.59	0.61
35:BA:2130:U:O5'	35:BA:2130:U:H6	1.83	0.61
35:BA:2492:U:H2'	35:BA:2493:U:H6	1.65	0.61
38:BD:8:PRO:HB3	38:BD:14:ARG:HB3	1.81	0.61
38:BD:134:ARG:NH1	38:BD:135:PHE:HE1	1.98	0.61
42:BH:118:PRO:HG2	42:BH:121:ILE:HD12	1.81	0.61
42:BH:144:VAL:O	42:BH:148:ILE:HG12	2.00	0.61
1:AA:267:C:OP2	17:AQ:67:LYS:HD2	2.00	0.61
1:AA:925:G:H1'	1:AA:1502:A:C4	2.35	0.61
1:AA:1285:A:O2'	1:AA:1286:A:P	2.57	0.61
1:AA:1286:A:O2'	1:AA:1287:A:C4'	2.48	0.61
1:AA:1494:G:O2'	1:AA:1495:U:H5'	2.01	0.61
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.81	0.61
5:AE:147:ASP:HB3	5:AE:150:ARG:HH12	1.65	0.61
10:AJ:50:ILE:HD11	10:AJ:57:LYS:HD3	1.82	0.61
24:AY:252:ASP:O	24:AY:253:LEU:HB2	1.99	0.61
24:AY:681:LYS:HD2	24:AY:681:LYS:O	1.99	0.61
32:B7:12:ARG:HD3	32:B7:46:VAL:HG21	1.82	0.61
35:BA:45:C:C2	35:BA:47:C:C5	2.89	0.61
35:BA:271(U):G:O2'	35:BA:271(V):G:H5'	2.01	0.61
35:BA:622:G:O2'	35:BA:623:G:H5'	2.00	0.61
35:BA:1475:G:O2'	35:BA:1476:C:H5'	2.01	0.61
35:BA:1810:A:H8	35:BA:1810:A:O5'	1.82	0.61
35:BA:2031:A:O2'	35:BA:2454:G:N2	2.33	0.61
35:BA:2317:C:C2'	35:BA:2318:G:H5'	2.31	0.61
36:BB:25:A:H2'	36:BB:25:A:N3	2.15	0.61
40:BF:108:LYS:O	40:BF:112:MET:HG3	2.01	0.61
41:BG:7:LEU:O	41:BG:10:LYS:N	2.33	0.61
48:BP:125:VAL:O	48:BP:145:PRO:HD2	2.00	0.61
49:BQ:61:GLY:O	49:BQ:62:GLY:O	2.18	0.61
56:BX:24:GLY:O	56:BX:82:GLN:HA	2.00	0.61
58:BZ:79:ARG:O	58:BZ:81:ARG:N	2.34	0.61
58:BZ:156:LYS:O	58:BZ:158:PRO:HD3	2.00	0.61
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.34	0.61
1:AA:590:C:O2'	1:AA:591:U:C5'	2.30	0.61
1:AA:1354:C:O2'	1:AA:1355:G:H5'	2.01	0.61
2:AB:187:LEU:O	2:AB:187:LEU:CD1	2.48	0.61
7:AG:47:CYS:SG	7:AG:48:LYS:N	2.73	0.61
13:AM:15:VAL:HG22	13:AM:41:PRO:O	2.01	0.61
24:AY:198:GLU:HG3	24:AY:198:GLU:O	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B5:57:VAL:HG12	30:B5:58:LEU:N	2.12	0.61
33:B8:48:PHE:C	33:B8:49:VAL:HG22	2.25	0.61
34:B9:35:ARG:O	34:B9:36:GLN:HB2	1.99	0.61
35:BA:175:G:O2'	35:BA:176:G:H5'	1.99	0.61
35:BA:1417:C:H2'	35:BA:1418:G:H5'	1.76	0.61
35:BA:1995:U:H3'	35:BA:1996:C:H2'	1.82	0.61
35:BA:2753:A:O2'	35:BA:2754:U:C5'	2.30	0.61
36:BB:87:G:H2'	36:BB:88:C:H5"	1.81	0.61
37:BC:117:THR:O	37:BC:147:GLY:O	2.19	0.61
51:BS:54:LEU:C	51:BS:56:LEU:H	2.07	0.61
54:BV:47:VAL:HG12	54:BV:52:VAL:HB	1.82	0.61
1:AA:787:A:H2'	1:AA:788:U:H5'	1.82	0.61
1:AA:1305:G:N2	1:AA:1332:A:OP2	2.34	0.61
1:AA:1457:G:OP2	1:AA:1457:G:H8	1.84	0.61
2:AB:189:ASP:HB3	2:AB:203:GLY:O	2.01	0.61
4:AD:33:MET:O	4:AD:37:PRO:HG3	2.00	0.61
13:AM:5:ALA:HB2	13:AM:66:LEU:HD22	1.82	0.61
33:B8:43:GLN:O	33:B8:44:LYS:HD2	2.00	0.61
35:BA:1204:A:N1	35:BA:1241:A:H2	1.98	0.61
35:BA:1925:C:C3'	35:BA:1926:U:H5"	2.30	0.61
35:BA:2359:C:N4	35:BA:2360:A:C6	2.68	0.61
35:BA:2492:U:H2'	35:BA:2493:U:C6	2.35	0.61
38:BD:43:ARG:HH11	38:BD:44:ASN:CG	2.08	0.61
38:BD:70:TRP:HZ3	38:BD:146:GLU:OE2	1.83	0.61
39:BE:141:ILE:HA	39:BE:154:LYS:CE	2.30	0.61
39:BE:201:THR:C	39:BE:202:LYS:HD2	2.26	0.61
40:BF:10:PRO:HA	40:BF:127:GLU:CB	2.31	0.61
40:BF:175:THR:C	40:BF:176:LEU:HD12	2.24	0.61
41:BG:118:ARG:NH1	41:BG:182:LYS:HD3	2.15	0.61
41:BG:127:GLY:C	41:BG:129:GLY:H	2.08	0.61
1:AA:119:A:HO2'	1:AA:120:A:P	2.23	0.61
1:AA:1193:G:C2'	1:AA:1194:U:H5'	2.30	0.61
1:AA:1386:G:C2'	1:AA:1387:G:H5'	2.30	0.61
8:AH:116:LYS:HD3	8:AH:127:LEU:HD12	1.82	0.61
12:AL:18:VAL:CG2	12:AL:19:ARG:H	2.13	0.61
24:AY:21:ILE:H	24:AY:21:ILE:CD1	2.12	0.61
24:AY:191:ASP:CB	24:AY:265:LYS:HG3	2.27	0.61
26:B1:89:GLU:HA	26:B1:92:LYS:HG2	1.83	0.61
33:B8:59:LYS:HB2	33:B8:59:LYS:HZ2	1.64	0.61
35:BA:7:G:H2'	35:BA:8:A:O4'	2.01	0.61
35:BA:582:G:H2'	35:BA:583:G:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1181:C:O2'	35:BA:1182:A:H5'	2.00	0.61
35:BA:1646:C:H5"	35:BA:1647:G:H5"	1.79	0.61
35:BA:1945:G:C5	35:BA:1946:U:C4	2.88	0.61
35:BA:2620:C:C5'	39:BE:153:GLY:HA2	2.27	0.61
35:BA:2787:C:H1'	39:BE:61:ARG:NH1	2.14	0.61
38:BD:248:SER:CB	38:BD:249:PRO:HD2	2.23	0.61
39:BE:76:ARG:O	39:BE:77:ILE:O	2.19	0.61
40:BF:80:ALA:O	40:BF:81:PRO:C	2.43	0.61
40:BF:183:VAL:O	40:BF:187:VAL:HG23	1.99	0.61
41:BG:83:ARG:C	41:BG:85:GLY:H	2.08	0.61
50:BR:99:LYS:HD2	50:BR:99:LYS:N	2.11	0.61
52:BT:41:ARG:C	52:BT:41:ARG:HD3	2.26	0.61
54:BV:19:LYS:HZ3	54:BV:20:LEU:H	1.47	0.61
57:BY:96:ILE:CG2	57:BY:99:CYS:SG	2.89	0.61
58:BZ:183:LEU:HD13	58:BZ:184:ALA:N	2.15	0.61
1:AA:877:C:O2'	1:AA:878:G:H5'	2.01	0.60
1:AA:957:U:H2'	1:AA:959:A:OP2	2.01	0.60
2:AB:127:ILE:O	2:AB:127:ILE:HD13	2.01	0.60
3:AC:120:VAL:C	3:AC:122:GLU:H	2.09	0.60
9:AI:22:GLY:N	9:AI:58:HIS:O	2.33	0.60
12:AL:20:LYS:HD3	12:AL:20:LYS:N	2.16	0.60
13:AM:116:THR:O	13:AM:117:VAL:HB	2.01	0.60
17:AQ:68:ARG:H	17:AQ:70:ARG:NH1	1.99	0.60
22:AV:45:U:O2	22:AV:45:U:C5'	2.49	0.60
33:B8:6:THR:HA	33:B8:61:LEU:HD11	1.82	0.60
34:B9:9:ARG:O	34:B9:14:CYS:SG	2.59	0.60
35:BA:1107:G:OP1	43:BJ:58:UNK:HA	2.00	0.60
35:BA:1445:A:H5'	35:BA:1460:A:H1'	1.83	0.60
35:BA:1709:U:H2'	35:BA:1710:C:C6	2.36	0.60
35:BA:1820:U:C2	38:BD:159:ALA:O	2.54	0.60
38:BD:35:LYS:NZ	38:BD:35:LYS:CB	2.64	0.60
51:BS:34:HIS:HB3	51:BS:53:SER:CB	2.29	0.60
53:BU:86:ALA:HB2	53:BU:116:ALA:HB2	1.83	0.60
57:BY:44:ILE:HG22	57:BY:45:VAL:H	1.64	0.60
57:BY:52:SER:O	57:BY:53:PRO:C	2.44	0.60
58:BZ:122:ARG:HB3	58:BZ:122:ARG:HH11	1.66	0.60
1:AA:358:U:H2'	1:AA:359:U:C6	2.36	0.60
1:AA:688:G:N1	1:AA:700:G:C5	2.68	0.60
1:AA:874:G:C6	1:AA:875:C:C4	2.89	0.60
5:AE:100:VAL:HG23	5:AE:107:ARG:HH21	1.65	0.60
7:AG:22:LEU:HD21	7:AG:101:LEU:HD11	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:27:THR:HA	9:AI:31:GLN:O	2.01	0.60
24:AY:31:ARG:HH12	24:AY:34:TYR:HB3	1.67	0.60
24:AY:201:ILE:H	24:AY:201:ILE:CD1	2.08	0.60
25:B0:53:MET:HE3	25:B0:57:PHE:CD2	2.36	0.60
33:B8:32:LEU:CB	33:B8:36:LYS:NZ	2.64	0.60
35:BA:261:G:C2'	35:BA:262:A:H5'	2.30	0.60
35:BA:271(Q):G:O2'	35:BA:271(R):G:H8	1.84	0.60
35:BA:896:A:H1'	58:BZ:176:PRO:CB	2.30	0.60
35:BA:1403:C:H5"	35:BA:1471:A:C1'	2.31	0.60
37:BC:53:ARG:HD3	37:BC:53:ARG:H	1.65	0.60
40:BF:29:ASN:H	40:BF:112:MET:HE1	1.63	0.60
40:BF:42:ALA:O	40:BF:45:ARG:HG3	2.01	0.60
51:BS:63:THR:O	51:BS:67:ARG:HG3	2.01	0.60
58:BZ:128:VAL:CG2	58:BZ:129:SER:H	2.08	0.60
58:BZ:183:LEU:HD11	58:BZ:186:GLU:N	2.16	0.60
1:AA:189(H):G:O2'	1:AA:189(I):G:H8	1.83	0.60
1:AA:501:C:H2'	1:AA:502:G:H8	1.66	0.60
1:AA:1281:U:OP2	1:AA:1282:C:N4	2.34	0.60
1:AA:1305:G:H1'	1:AA:1332:A:N6	2.16	0.60
1:AA:1385:G:H2'	1:AA:1386:G:C8	2.36	0.60
2:AB:27:LYS:O	2:AB:29:ALA:N	2.32	0.60
25:B0:21:LEU:CD1	25:B0:41:ARG:HG2	2.31	0.60
26:B1:25:LYS:HD3	35:BA:2396:G:H5'	1.82	0.60
30:B5:47:PRO:O	30:B5:48:GLU:C	2.44	0.60
32:B7:37:LYS:HE2	35:BA:469:G:O6	2.01	0.60
33:B8:27:THR:HG22	48:BP:62:LEU:HD22	1.82	0.60
33:B8:30:ARG:CZ	35:BA:2419:U:O4	2.49	0.60
35:BA:31:C:O2'	35:BA:32:C:H5"	2.00	0.60
35:BA:108:U:HO2'	35:BA:109:G:H5'	1.62	0.60
35:BA:1348:G:H2'	35:BA:1349:A:H5"	1.83	0.60
35:BA:2356:C:H2'	35:BA:2357:U:O5'	2.00	0.60
35:BA:2405:G:H8	35:BA:2405:G:O5'	1.85	0.60
39:BE:69:LYS:HE2	39:BE:69:LYS:N	2.15	0.60
40:BF:116:ASP:OD2	48:BP:5:ASP:N	2.34	0.60
41:BG:7:LEU:HD12	41:BG:104:GLU:CG	2.31	0.60
51:BS:97:ARG:C	51:BS:97:ARG:NE	2.58	0.60
52:BT:35:LYS:HE2	52:BT:41:ARG:HD2	1.82	0.60
1:AA:199:G:H2'	1:AA:200:G:H8	1.66	0.60
1:AA:313:A:O2'	1:AA:314:C:H5'	2.01	0.60
1:AA:937:A:O2'	1:AA:938:A:H5'	2.00	0.60
1:AA:1488:G:H2'	1:AA:1489:G:H8	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:118:GLN:O	3:AC:120:VAL:N	2.34	0.60
4:AD:31:CYS:C	4:AD:33:MET:H	2.08	0.60
9:AI:95:LYS:O	9:AI:98:PRO:HD2	2.00	0.60
10:AJ:89:ASP:HB3	10:AJ:91:PRO:CD	2.31	0.60
12:AL:46:LYS:O	12:AL:48:PRO:HD2	1.99	0.60
31:B6:10:LEU:N	31:B6:10:LEU:HD23	2.06	0.60
35:BA:141:A:C8	35:BA:1408:C:O2'	2.52	0.60
35:BA:1446:C:H5	35:BA:1466:G:N3	1.99	0.60
35:BA:1528(A):A:N6	35:BA:1541:G:N2	2.45	0.60
35:BA:1820:U:C4'	35:BA:1821:A:OP2	2.40	0.60
35:BA:1894:C:O5'	35:BA:1894:C:H6	1.85	0.60
35:BA:2298:A:H62	35:BA:2318:G:H8	1.47	0.60
37:BC:121:MET:SD	37:BC:124:VAL:HG11	2.41	0.60
37:BC:214:TYR:CE2	37:BC:224:ARG:HG2	2.37	0.60
38:BD:30:GLU:CG	38:BD:63:ARG:NH2	2.64	0.60
38:BD:186:HIS:HD2	38:BD:188:GLU:H	1.50	0.60
40:BF:3:GLU:HB2	40:BF:24:LEU:HG	1.84	0.60
40:BF:84:VAL:HG23	40:BF:85:GLY:N	2.16	0.60
48:BP:122:PRO:HA	48:BP:141:ALA:O	2.01	0.60
50:BR:97:VAL:HA	50:BR:113:LEU:O	2.02	0.60
58:BZ:130:PRO:O	58:BZ:133:ILE:HG12	2.01	0.60
1:AA:1108:G:H5'	3:AC:176:HIS:CD2	2.35	0.60
2:AB:17:PHE:HD1	2:AB:17:PHE:O	1.83	0.60
7:AG:73:MET:HE2	7:AG:89:MET:C	2.25	0.60
10:AJ:4:ILE:HD12	10:AJ:4:ILE:N	2.16	0.60
10:AJ:89:ASP:HB3	10:AJ:91:PRO:HD2	1.84	0.60
11:AK:82:VAL:CG1	11:AK:108:ILE:HG12	2.31	0.60
15:AO:26:GLU:OE2	15:AO:77:ARG:HD2	2.01	0.60
19:AS:64:GLU:HB2	29:B4:48:ARG:NH2	2.16	0.60
20:AT:96:GLY:O	20:AT:97:ALA:HB3	2.00	0.60
27:B2:40:SER:O	56:BX:13:LEU:HD11	2.02	0.60
35:BA:37:C:HO2'	35:BA:38:A:H5'	1.65	0.60
35:BA:1225:G:O2'	35:BA:1226:A:H5'	2.02	0.60
35:BA:1769:G:C2'	35:BA:1770:G:H5'	2.31	0.60
35:BA:1821:A:C2'	35:BA:1822:G:C5'	2.68	0.60
37:BC:80:LYS:HE2	37:BC:99:GLU:HG2	1.84	0.60
38:BD:232:PRO:HD2	38:BD:249:PRO:HA	1.83	0.60
39:BE:134:ILE:CD1	39:BE:134:ILE:O	2.48	0.60
40:BF:8:GLN:O	40:BF:9:ILE:C	2.44	0.60
41:BG:182:LYS:OXT	41:BG:182:LYS:HD2	2.02	0.60
1:AA:167:G:O2'	1:AA:168:G:H5'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:265:G:H2'	1:AA:266:G:C5'	2.18	0.60
1:AA:328:C:H4'	1:AA:329:A:H5'	1.82	0.60
1:AA:563:A:O2'	1:AA:566:G:O3'	2.19	0.60
1:AA:1158:C:O2	1:AA:1181:G:N2	2.34	0.60
1:AA:1170:A:H2'	1:AA:1171:G:O4'	2.02	0.60
2:AB:106:LYS:O	2:AB:110:GLN:HB3	2.02	0.60
24:AY:8:ASP:O	24:AY:9:LEU:HB3	1.99	0.60
29:B4:6:HIS:CE1	41:BG:66:GLN:HB2	2.37	0.60
35:BA:947:G:H2'	35:BA:948:G:C8	2.36	0.60
35:BA:1067:A:H5"	35:BA:1068:G:C5'	2.28	0.60
35:BA:1422:G:C6	35:BA:1423:G:C6	2.90	0.60
35:BA:1864:U:H2'	35:BA:1865:G:H5"	1.83	0.60
38:BD:68:LYS:HG3	38:BD:68:LYS:O	2.01	0.60
39:BE:134:ILE:O	39:BE:134:ILE:HD13	2.02	0.60
40:BF:132:VAL:HG13	40:BF:133:ASN:ND2	2.16	0.60
46:BN:12:ARG:NH2	46:BN:135:PRO:HG2	2.13	0.60
48:BP:85:LEU:HD23	48:BP:117:GLU:O	1.91	0.60
51:BS:97:ARG:O	51:BS:99:LYS:HG3	2.01	0.60
58:BZ:17:ALA:O	58:BZ:20:ARG:HG2	2.00	0.60
1:AA:328:C:O2	1:AA:328:C:H2'	2.01	0.60
1:AA:490:G:C2'	1:AA:491:G:C5'	2.80	0.60
1:AA:545:C:C3'	1:AA:546:G:H5'	2.32	0.60
1:AA:755:G:OP2	15:AO:65:ARG:HD2	2.02	0.60
1:AA:796:C:H2'	1:AA:797:C:H6	1.67	0.60
1:AA:1279:A:O2'	1:AA:1282:C:N4	2.34	0.60
1:AA:1321:C:H5"	1:AA:1322:C:C5'	2.32	0.60
3:AC:28:GLN:O	3:AC:29:TYR:C	2.44	0.60
3:AC:124:ILE:HD11	3:AC:196:LEU:HG	1.84	0.60
10:AJ:78:ASN:HD22	10:AJ:80:LYS:N	1.95	0.60
10:AJ:80:LYS:NZ	10:AJ:80:LYS:HB3	2.16	0.60
10:AJ:96:ILE:HD13	10:AJ:96:ILE:H	1.66	0.60
24:AY:227:ILE:HG23	24:AY:237:PRO:CG	2.30	0.60
25:B0:4:LYS:HD3	35:BA:2252:G:O6	2.01	0.60
35:BA:15:G:C2'	35:BA:16:G:C5'	2.69	0.60
35:BA:258:G:O2'	35:BA:259:G:H5'	2.01	0.60
35:BA:652:C:C6	35:BA:653:A:N7	2.70	0.60
35:BA:654(A):G:H2'	35:BA:654(B):C:H5'	1.83	0.60
35:BA:2653:U:H5'	35:BA:2654:A:OP2	2.02	0.60
35:BA:2808:U:O2'	35:BA:2809:A:H5'	2.01	0.60
37:BC:68:GLY:H	37:BC:189:ASN:HD21	1.47	0.60
37:BC:121:MET:CE	37:BC:139:PRO:O	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:103:LEU:HD11	41:BG:107:LEU:HG	1.84	0.60
48:BP:23:PRO:C	48:BP:33:ARG:NE	2.60	0.60
50:BR:99:LYS:H	50:BR:99:LYS:CD	2.08	0.60
53:BU:87:GLY:C	53:BU:89:GLU:H	2.09	0.60
56:BX:8:ILE:HD12	56:BX:8:ILE:H	1.66	0.60
57:BY:101:LYS:CG	57:BY:102:CYS:N	2.56	0.60
1:AA:89:C:O2	1:AA:89:C:H2'	2.00	0.60
1:AA:936:C:H6	1:AA:936:C:O5'	1.85	0.60
1:AA:979:C:C3'	1:AA:980:C:H5"	2.32	0.60
1:AA:1154:G:C2'	1:AA:1155:G:H5'	2.31	0.60
1:AA:1179:A:C2'	1:AA:1180:A:C5'	2.79	0.60
1:AA:1286:A:C2	21:AU:18:TYR:OH	2.54	0.60
1:AA:1305:G:H5'	21:AU:4:GLY:C	2.26	0.60
1:AA:1387:G:C6	1:AA:1388:C:N4	2.69	0.60
13:AM:23:TYR:HE2	13:AM:70:LEU:HD22	1.67	0.60
13:AM:56:LEU:HD13	13:AM:56:LEU:C	2.27	0.60
15:AO:9:GLN:O	15:AO:13:GLN:HG3	2.01	0.60
25:B0:27:GLU:N	25:B0:27:GLU:OE1	2.34	0.60
26:B1:90:ILE:O	26:B1:94:LEU:HD13	2.01	0.60
27:B2:35:LEU:O	27:B2:38:GLN:N	2.32	0.60
32:B7:10:ARG:O	32:B7:14:LYS:HG2	2.02	0.60
35:BA:274:G:H3'	35:BA:274:G:OP2	2.00	0.60
35:BA:676:A:H8	35:BA:2069:G:N2	1.86	0.60
35:BA:1865:G:H5'	35:BA:1865:G:C8	2.31	0.60
35:BA:2633:G:H1'	39:BE:61:ARG:HD2	1.84	0.60
35:BA:2682:U:H5'	35:BA:2682:U:H6	1.67	0.60
39:BE:203:LYS:HD2	39:BE:203:LYS:C	2.26	0.60
42:BH:83:TYR:HB3	42:BH:135:GLY:N	2.17	0.60
42:BH:89:ILE:HD13	42:BH:94:TYR:HB3	1.83	0.60
42:BH:153:LYS:HG3	42:BH:154:PRO:HD2	1.83	0.60
48:BP:146:VAL:HG13	48:BP:147:LEU:N	2.17	0.60
49:BQ:56:ARG:HH11	49:BQ:56:ARG:CG	2.15	0.60
56:BX:8:ILE:CD1	56:BX:42:ALA:HB1	2.30	0.60
1:AA:109:A:N6	1:AA:326:G:C6	2.69	0.60
1:AA:1037:C:H2'	1:AA:1038:C:C2	2.36	0.60
1:AA:1285:A:O4'	1:AA:1286:A:C8	2.55	0.60
3:AC:50:ALA:CB	3:AC:75:VAL:HB	2.31	0.60
7:AG:49:ILE:HD12	7:AG:121:ALA:HB3	1.84	0.60
8:AH:116:LYS:HD2	8:AH:129:VAL:HG11	1.84	0.60
10:AJ:28:ARG:C	10:AJ:30:SER:H	2.09	0.60
13:AM:97:PRO:HA	13:AM:110:ARG:HD3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:58:TYR:O	16:AP:62:VAL:HG22	2.01	0.60
24:AY:61:ARG:HB3	35:BA:2663:G:OP1	2.02	0.60
24:AY:99:ARG:NH1	24:AY:402:ILE:N	2.46	0.60
24:AY:293:THR:HB	24:AY:294:PRO:HD2	1.82	0.60
26:B1:41:ARG:NH2	35:BA:1365:A:OP1	2.34	0.60
29:B4:28:LYS:HE3	41:BG:145:THR:OG1	2.00	0.60
31:B6:15:GLU:O	31:B6:17:LYS:N	2.31	0.60
33:B8:25:MET:HG3	48:BP:64:LYS:HD3	1.84	0.60
33:B8:50:LEU:O	33:B8:51:ALA:HB3	2.02	0.60
35:BA:221:A:C5	35:BA:266:G:N7	2.70	0.60
35:BA:1119:C:H2'	35:BA:1120:G:H8	1.67	0.60
35:BA:1797:C:O2'	38:BD:259:THR:CG2	2.50	0.60
35:BA:1819:A:OP1	38:BD:158:ALA:CB	2.49	0.60
35:BA:2409:G:C2'	35:BA:2410:G:H5'	2.31	0.60
36:BB:56:G:C5'	41:BG:27:ASN:ND2	2.65	0.60
38:BD:28:GLU:HB2	38:BD:29:PRO:CD	2.32	0.60
40:BF:164:ARG:HG2	40:BF:164:ARG:HH11	1.67	0.60
51:BS:96:GLY:C	51:BS:98:VAL:H	2.10	0.60
53:BU:106:PHE:O	53:BU:109:LEU:HB2	2.01	0.60
54:BV:15:GLU:O	54:BV:18:LEU:HD13	2.02	0.60
1:AA:197:A:C6	1:AA:221:C:C5'	2.85	0.60
1:AA:198:G:N1	1:AA:220:G:C4	2.69	0.60
1:AA:438:G:O2'	1:AA:494:U:O4	2.19	0.60
16:AP:66:PRO:HD2	16:AP:71:ARG:HH12	1.67	0.60
26:B1:21:ARG:HG2	26:B1:22:GLY:N	2.16	0.60
27:B2:16:LEU:HD22	27:B2:20:GLU:CB	2.29	0.60
29:B4:2:LYS:CE	29:B4:5:ILE:HB	2.19	0.60
34:B9:19:ARG:NH1	35:BA:2755:C:C4	2.70	0.60
35:BA:644:A:C2	35:BA:2369:A:H1'	2.36	0.60
35:BA:654(V):A:OP2	35:BA:655:A:H3'	2.02	0.60
35:BA:886:C:H3'	35:BA:887:A:H5"	1.83	0.60
35:BA:995:C:C2	46:BN:1:MET:HG2	2.37	0.60
35:BA:1113:U:H2'	35:BA:1114:G:C8	2.37	0.60
35:BA:1297:C:H2'	35:BA:1298:C:C6	2.37	0.60
35:BA:1837:C:H2'	35:BA:1838:C:H5"	1.82	0.60
35:BA:1925:C:C4	35:BA:1926:U:C5	2.90	0.60
35:BA:2127:G:C2'	35:BA:2128:C:C5'	2.79	0.60
35:BA:2580:U:H4'	39:BE:130:GLY:CA	2.32	0.60
36:BB:21:G:H2'	36:BB:22:U:O4'	2.01	0.60
39:BE:71:GLY:C	39:BE:73:GLU:H	2.10	0.60
39:BE:167:VAL:HG22	39:BE:170:LEU:HD11	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:70:PRO:HA	49:BQ:94:VAL:O	2.01	0.60
50:BR:84:ALA:HB3	50:BR:85:PRO:HD3	1.82	0.60
52:BT:6:LEU:C	52:BT:8:LYS:H	2.08	0.60
52:BT:39:ARG:H	52:BT:39:ARG:HD2	1.67	0.60
57:BY:73:ARG:NH2	57:BY:82:PRO:HD3	2.16	0.60
57:BY:88:LYS:HZ1	57:BY:93:GLY:HA3	1.66	0.60
1:AA:592:G:C2	1:AA:593:G:N7	2.70	0.59
1:AA:639:G:O2'	1:AA:640:A:H5'	2.02	0.59
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.37	0.59
1:AA:1154:G:HO2'	1:AA:1155:G:H5'	1.65	0.59
1:AA:1306:A:C2'	1:AA:1307:U:H5'	2.32	0.59
2:AB:41:ILE:O	2:AB:41:ILE:CG2	2.50	0.59
3:AC:25:GLY:C	3:AC:27:LYS:N	2.60	0.59
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.01	0.59
7:AG:47:CYS:O	7:AG:51:GLN:N	2.35	0.59
19:AS:42:PRO:C	19:AS:44:MET:H	2.09	0.59
24:AY:526:VAL:CG1	24:AY:566:THR:HG23	2.32	0.59
24:AY:554:PRO:HG2	24:AY:555:LEU:H	1.66	0.59
25:B0:50:ASN:HB3	25:B0:63:VAL:HG22	1.83	0.59
30:B5:7:PRO:HG2	35:BA:2016:U:O2	2.02	0.59
33:B8:32:LEU:CD2	35:BA:2392:A:OP1	2.49	0.59
35:BA:61:G:H1	35:BA:94:C:H42	1.49	0.59
35:BA:784:A:C5	38:BD:229:VAL:HG21	2.37	0.59
35:BA:1106:G:C2'	35:BA:1107:G:C5'	2.78	0.59
35:BA:1264:G:H2'	35:BA:2014:A:N6	2.16	0.59
35:BA:2128:C:H1'	35:BA:2129:C:H5"	1.83	0.59
37:BC:121:MET:SD	37:BC:124:VAL:CG1	2.89	0.59
39:BE:37:ARG:HA	39:BE:42:ASP:OD2	2.02	0.59
39:BE:44:TYR:O	39:BE:45:THR:HB	2.02	0.59
39:BE:120:TRP:O	39:BE:121:ASN:C	2.45	0.59
39:BE:132:HIS:C	39:BE:135:HIS:NE2	2.60	0.59
41:BG:59:GLU:O	41:BG:63:ILE:HG23	2.02	0.59
41:BG:159:VAL:O	41:BG:159:VAL:HG13	2.03	0.59
42:BH:85:LYS:CE	42:BH:145:ALA:HB1	2.32	0.59
42:BH:143:GLN:HE22	42:BH:147:ASN:HD21	1.48	0.59
1:AA:629:G:H2'	1:AA:630:G:O4'	2.02	0.59
1:AA:1308:U:OP1	13:AM:98:VAL:HG22	2.02	0.59
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.83	0.59
3:AC:108:ASN:OD1	3:AC:110:ASN:ND2	2.35	0.59
3:AC:130:VAL:O	3:AC:131:ARG:CB	2.50	0.59
7:AG:49:ILE:CD1	7:AG:121:ALA:HB3	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:11:ARG:O	13:AM:13:LYS:N	2.35	0.59
24:AY:637:ARG:HD2	24:AY:642:VAL:HG21	1.84	0.59
25:B0:10:THR:C	25:B0:11:ARG:CG	2.75	0.59
27:B2:44:LEU:HD13	27:B2:45:SER:CA	2.32	0.59
31:B6:44:ARG:C	31:B6:45:LYS:HG2	2.27	0.59
35:BA:15:G:N3	35:BA:16:G:C8	2.70	0.59
35:BA:18:C:O2'	35:BA:19:C:H5'	2.02	0.59
35:BA:49:A:H5"	35:BA:51:G:C4'	2.32	0.59
35:BA:176:G:H2'	35:BA:177:G:C5'	2.22	0.59
35:BA:676:A:H2	35:BA:802:A:H61	1.49	0.59
35:BA:947:G:H2'	35:BA:948:G:H8	1.66	0.59
35:BA:1516:C:H2'	35:BA:1517:G:C5'	2.32	0.59
35:BA:2746:U:O2'	35:BA:2747:G:H5'	2.02	0.59
38:BD:71:ASP:HB2	38:BD:103:ARG:HH22	1.67	0.59
40:BF:185:ASP:OD1	40:BF:188:ARG:NH1	2.34	0.59
53:BU:92:ARG:NH2	54:BV:11:GLN:H	2.00	0.59
54:BV:18:LEU:C	54:BV:18:LEU:HD22	2.27	0.59
1:AA:788:U:H2'	1:AA:789:U:C5'	2.31	0.59
1:AA:1288:A:H8	1:AA:1288:A:O5'	1.85	0.59
12:AL:113:ARG:O	12:AL:114:LYS:HD2	2.01	0.59
22:AV:43:C:O2	22:AV:43:C:O4'	2.20	0.59
25:B0:55:ARG:HD3	35:BA:2384:G:OP2	2.03	0.59
29:B4:4:GLY:O	29:B4:5:ILE:HB	2.02	0.59
31:B6:15:GLU:OE1	31:B6:18:ARG:CD	2.51	0.59
35:BA:483:A:H5"	57:BY:49:VAL:HG22	1.83	0.59
35:BA:654(E):G:H2'	35:BA:654(F):C:O4'	2.02	0.59
35:BA:755:C:H2'	35:BA:756:C:C6	2.37	0.59
35:BA:1087:G:H21	35:BA:1103:A:N6	1.99	0.59
35:BA:1106:G:H2'	35:BA:1107:G:C5'	2.32	0.59
35:BA:1301:A:C2'	35:BA:1302:A:H2'	2.31	0.59
35:BA:1503:U:H2'	35:BA:1504:C:H6	1.64	0.59
35:BA:1529:G:C2	35:BA:1541:G:N2	2.71	0.59
35:BA:1571:A:H2'	35:BA:1572:A:C8	2.37	0.59
35:BA:1663:C:N4	35:BA:1998:G:O6	2.35	0.59
35:BA:1805:U:H2'	35:BA:1806:C:H5'	1.83	0.59
35:BA:2312:U:OP1	41:BG:74:LYS:HG2	2.02	0.59
37:BC:122:GLY:O	37:BC:127:LYS:HE2	2.02	0.59
40:BF:3:GLU:C	40:BF:24:LEU:HG	2.26	0.59
41:BG:113:ARG:NE	41:BG:113:ARG:HA	2.17	0.59
44:BK:41:UNK:C	44:BK:43:UNK:H	2.14	0.59
48:BP:107:LYS:O	48:BP:109:GLY:N	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:59:ARG:HG2	53:BU:59:ARG:HH11	1.67	0.59
57:BY:13:VAL:HG23	57:BY:73:ARG:C	2.28	0.59
57:BY:17:SER:CB	57:BY:71:LYS:HE2	2.32	0.59
57:BY:26:LYS:O	57:BY:28:LYS:HE2	2.03	0.59
1:AA:326:G:O5'	1:AA:326:G:H8	1.85	0.59
1:AA:397:A:N7	1:AA:548:G:OP2	2.35	0.59
1:AA:522:C:H41	12:AL:53:ARG:HH21	1.46	0.59
1:AA:865:A:H8	1:AA:865:A:O5'	1.83	0.59
1:AA:946:A:C6	1:AA:947:G:C6	2.91	0.59
1:AA:1049:U:H4'	1:AA:1050:G:H5'	1.82	0.59
2:AB:97:TRP:CZ3	2:AB:176:GLU:OE2	2.55	0.59
5:AE:69:VAL:O	5:AE:71:LEU:N	2.35	0.59
19:AS:40:ILE:HG22	19:AS:69:HIS:O	2.01	0.59
24:AY:688:ILE:O	24:AY:688:ILE:HG22	2.02	0.59
26:B1:82:LEU:O	26:B1:83:GLU:HB3	2.03	0.59
35:BA:28:A:H61	35:BA:512:G:H1'	1.65	0.59
35:BA:178:G:O2'	35:BA:179:G:H5'	2.02	0.59
35:BA:476:G:H4'	35:BA:502:A:N1	2.18	0.59
35:BA:1578:U:O2'	35:BA:1579:A:H5"	2.02	0.59
35:BA:1652:A:N6	35:BA:1653:G:N1	2.51	0.59
35:BA:1822:G:C2'	35:BA:1823:G:H5'	2.30	0.59
35:BA:1887:C:C2'	35:BA:1888:G:H5"	2.32	0.59
35:BA:2469:A:H2'	35:BA:2470:G:C5'	2.29	0.59
41:BG:132:ASN:OD1	41:BG:158:ALA:HA	2.02	0.59
41:BG:133:LEU:HD13	41:BG:134:GLY:H	1.66	0.59
42:BH:169:VAL:HG13	42:BH:170:ARG:N	2.18	0.59
43:BJ:27:UNK:CB	43:BJ:113:UNK:HA	2.32	0.59
48:BP:23:PRO:HB2	48:BP:33:ARG:HG2	1.82	0.59
51:BS:83:LYS:O	51:BS:105:ALA:HB3	2.02	0.59
1:AA:359:U:H2'	1:AA:360:A:H8	1.66	0.59
1:AA:512:U:H2'	1:AA:513:C:C6	2.38	0.59
1:AA:563:A:O4'	1:AA:566:G:N3	2.36	0.59
2:AB:24:TRP:CE3	2:AB:32:ILE:CD1	2.84	0.59
4:AD:205:GLU:OE2	5:AE:100:VAL:HG22	2.02	0.59
7:AG:15:ASP:OD1	7:AG:44:TYR:OH	2.20	0.59
24:AY:5:VAL:O	24:AY:7:TYR:N	2.34	0.59
24:AY:81:ILE:O	24:AY:82:ILE:HG13	2.02	0.59
24:AY:616:TYR:HE2	24:AY:664:GLN:HG3	1.66	0.59
33:B8:13:ARG:CD	48:BP:61:ARG:HD2	2.24	0.59
35:BA:1445:A:O4'	35:BA:1460:A:N3	2.36	0.59
35:BA:1999:C:H6	35:BA:1999:C:O5'	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:41:THR:HG22	37:BC:42:VAL:N	2.17	0.59
37:BC:194:ILE:HD11	37:BC:227:PRO:CB	2.32	0.59
39:BE:141:ILE:C	39:BE:154:LYS:HE2	2.26	0.59
40:BF:20:LEU:H	40:BF:24:LEU:HD21	1.67	0.59
41:BG:88:ILE:O	41:BG:88:ILE:HG22	2.02	0.59
41:BG:107:LEU:HD23	41:BG:111:LEU:HD11	1.84	0.59
41:BG:146:TYR:O	41:BG:147:ASP:HB2	2.02	0.59
46:BN:56:ASN:H	46:BN:125:GLY:HA3	1.68	0.59
47:BO:18:LYS:HD2	47:BO:45:GLU:OE1	2.02	0.59
51:BS:78:LEU:HD11	51:BS:103:GLU:HB2	1.83	0.59
54:BV:39:LEU:HA	54:BV:47:VAL:HG13	1.84	0.59
58:BZ:5:LEU:O	58:BZ:59:LEU:HA	2.01	0.59
1:AA:519:C:N4	1:AA:520:A:C6	2.71	0.59
1:AA:530:G:H3'	1:AA:531:U:C5'	2.33	0.59
1:AA:941:G:C2'	1:AA:942:G:O5'	2.51	0.59
1:AA:961:U:C2'	1:AA:962:C:H5'	2.33	0.59
1:AA:1005:A:C2'	1:AA:1006:C:H5'	2.33	0.59
1:AA:1281:U:H4'	1:AA:1282:C:OP2	2.02	0.59
1:AA:1286:A:O2'	1:AA:1287:A:P	2.60	0.59
2:AB:204:ASN:HD21	2:AB:206:ASP:H	1.47	0.59
4:AD:120:LEU:HB3	4:AD:126:ILE:CD1	2.32	0.59
7:AG:16:LEU:HD12	9:AI:42:ARG:HA	1.83	0.59
12:AL:27:LEU:CD1	12:AL:28:LYS:HE2	2.25	0.59
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.82	0.59
16:AP:18:ARG:HD3	16:AP:35:LYS:HD2	1.84	0.59
33:B8:50:LEU:HD12	33:B8:51:ALA:N	2.17	0.59
35:BA:651:G:C6	35:BA:652:C:N4	2.71	0.59
35:BA:1027:A:N6	35:BA:1126:A:C4	2.70	0.59
35:BA:1267:U:C5	35:BA:2012:G:N2	2.70	0.59
35:BA:1445:A:O2'	35:BA:1445(A):C:H5'	2.02	0.59
35:BA:1504:C:O2'	35:BA:1505:C:H5'	2.02	0.59
35:BA:1517:G:H5'	35:BA:1517:G:C8	2.34	0.59
35:BA:1639:U:H2'	35:BA:1640:C:H5"	1.83	0.59
37:BC:214:TYR:CZ	37:BC:224:ARG:HG2	2.37	0.59
1:AA:185:A:C6	1:AA:186:C:C4	2.90	0.59
1:AA:266:G:H4'	1:AA:267:C:C6	2.38	0.59
1:AA:266:G:H4'	1:AA:267:C:H6	1.68	0.59
1:AA:360:A:C2'	1:AA:361:G:C5'	2.80	0.59
1:AA:701:C:O2'	1:AA:703:G:C5	2.50	0.59
1:AA:1306:A:H2'	1:AA:1307:U:H5'	1.84	0.59
7:AG:102:ARG:O	7:AG:106:GLN:HB2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:48:GLU:OE2	9:AI:51:ARG:HD3	2.03	0.59
12:AL:43:VAL:HG12	12:AL:44:THR:N	2.18	0.59
20:AT:99:LEU:O	20:AT:100:ILE:C	2.46	0.59
22:AV:39:U:H2'	22:AV:40:C:C6	2.38	0.59
25:B0:10:THR:HG21	35:BA:2277:G:OP2	2.02	0.59
31:B6:45:LYS:O	31:B6:46:HIS:HB3	2.02	0.59
34:B9:7:VAL:HG21	34:B9:35:ARG:O	2.02	0.59
35:BA:237:C:O2'	35:BA:238:C:H5'	2.02	0.59
35:BA:860:U:O2	35:BA:860:U:C5'	2.50	0.59
35:BA:890:A:C2'	35:BA:892:G:H5"	2.32	0.59
35:BA:1062:G:H21	44:BK:132:UNK:CB	2.15	0.59
35:BA:1997:G:C2'	35:BA:1998:G:C5'	2.77	0.59
35:BA:2298:A:H2'	35:BA:2299:G:O4'	2.02	0.59
38:BD:35:LYS:O	38:BD:37:LEU:N	2.35	0.59
41:BG:48:GLU:HG2	41:BG:87:PRO:HD2	1.84	0.59
41:BG:81:LYS:HG3	41:BG:82:LEU:HD23	1.84	0.59
57:BY:50:ARG:HG3	57:BY:52:SER:O	2.03	0.59
1:AA:956:U:C2'	1:AA:957:U:H5'	2.33	0.59
7:AG:50:ILE:HD11	7:AG:61:VAL:CB	2.30	0.59
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.28	0.59
14:AN:33:VAL:HA	14:AN:40:CYS:HA	1.83	0.59
19:AS:5:LEU:HD23	19:AS:5:LEU:H	1.67	0.59
19:AS:35:SER:C	19:AS:37:ARG:H	2.09	0.59
24:AY:309:LEU:HB3	24:AY:391:GLY:H	1.66	0.59
32:B7:12:ARG:HG3	35:BA:686:G:O6	2.03	0.59
35:BA:108:U:O2'	35:BA:109:G:C5'	2.30	0.59
35:BA:1474:C:C2'	35:BA:1475:G:H5"	2.33	0.59
35:BA:1804:C:O5'	35:BA:1804:C:H6	1.85	0.59
35:BA:2000:G:C2	35:BA:2001:A:N7	2.70	0.59
35:BA:2379:G:H2'	35:BA:2380:C:C6	2.38	0.59
35:BA:2581:G:C5	35:BA:2610:C:N3	2.70	0.59
50:BR:78:LYS:HE2	50:BR:83:ILE:HD11	1.85	0.59
52:BT:128:GLU:OE1	52:BT:130:ALA:HB2	2.03	0.59
1:AA:31:G:N1	1:AA:48:C:H5"	2.18	0.59
1:AA:956:U:H2'	1:AA:957:U:H5'	1.83	0.59
1:AA:1386:G:N2	1:AA:1387:G:N7	2.51	0.59
7:AG:74:GLU:HG2	7:AG:91:VAL:HG22	1.84	0.59
22:AV:41:C:C2'	22:AV:42:C:C5'	2.79	0.59
24:AY:530:VAL:HG13	24:AY:531:GLY:N	2.18	0.59
25:B0:50:ASN:HB3	25:B0:63:VAL:HG21	1.83	0.59
26:B1:3:LYS:CB	26:B1:61:ARG:NH2	2.65	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:47:ASN:O	27:B2:48:HIS:C	2.45	0.59
32:B7:23:ARG:HG3	32:B7:23:ARG:HH11	1.67	0.59
35:BA:466:A:C2	35:BA:796:C:O4'	2.55	0.59
35:BA:613:G:H5'	35:BA:613:G:C8	2.34	0.59
35:BA:674:G:H1'	40:BF:74:ARG:CD	2.32	0.59
35:BA:1568:G:O5'	38:BD:61:LEU:HD23	2.03	0.59
35:BA:2202:C:H2'	35:BA:2203:U:H6	1.66	0.59
35:BA:2415:G:O3'	48:BP:66:GLY:CA	2.50	0.59
39:BE:197:ILE:HD11	39:BE:199:ARG:HE	1.65	0.59
46:BN:133:GLN:O	46:BN:134:ARG:HB3	2.02	0.59
49:BQ:63:LYS:HD2	58:BZ:175:VAL:HG21	1.85	0.59
53:BU:20:LEU:H	53:BU:20:LEU:HD22	1.67	0.59
53:BU:83:LEU:CD1	53:BU:88:ILE:HD11	2.33	0.59
54:BV:2:PHE:CD1	54:BV:13:ARG:NH1	2.71	0.59
57:BY:50:ARG:O	57:BY:52:SER:N	2.36	0.59
1:AA:501:C:H2'	1:AA:502:G:C8	2.38	0.59
1:AA:951:G:O6	1:AA:1230:C:N3	2.36	0.59
2:AB:9:GLU:OE1	2:AB:9:GLU:N	2.30	0.59
4:AD:36:ARG:N	4:AD:37:PRO:HD3	2.17	0.59
13:AM:45:VAL:C	13:AM:47:ASP:H	2.11	0.59
13:AM:118:ALA:HB1	19:AS:88:LYS:HZ3	1.68	0.59
16:AP:45:THR:HG22	16:AP:47:ASP:H	1.66	0.59
24:AY:327:PHE:CE1	24:AY:376:ALA:HB2	2.38	0.59
24:AY:580:MET:O	24:AY:584:ILE:HG12	2.02	0.59
26:B1:4:VAL:HA	26:B1:10:LYS:O	2.02	0.59
31:B6:25:LYS:HD2	35:BA:2285:C:H41	1.66	0.59
35:BA:270:A:O2'	35:BA:271:A:H5'	2.03	0.59
35:BA:547:A:H2'	35:BA:548:A:C8	2.37	0.59
35:BA:824:A:O2'	35:BA:2358:G:O6	2.09	0.59
35:BA:952:G:C6	35:BA:966:G:C6	2.91	0.59
35:BA:1430:C:H6	35:BA:1430:C:O5'	1.85	0.59
35:BA:1455:G:O2'	35:BA:1456:G:H5'	2.01	0.59
35:BA:2000:G:C2	35:BA:2001:A:C5	2.91	0.59
35:BA:2394:C:OP1	48:BP:63:PRO:HD2	2.03	0.59
35:BA:2726:U:H4'	47:BO:1:MET:HE1	1.84	0.59
35:BA:2787:C:O2	39:BE:61:ARG:NH1	2.35	0.59
38:BD:26:LYS:HA	38:BD:26:LYS:CE	2.33	0.59
39:BE:53:PRO:C	39:BE:54:GLN:HG2	2.28	0.59
42:BH:149:ARG:HA	42:BH:162:ILE:HG13	1.85	0.59
48:BP:39:LYS:HD2	48:BP:40:SER:H	1.68	0.59
49:BQ:131:ILE:HD12	49:BQ:131:ILE:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:29:GLU:OE1	57:BY:29:GLU:N	2.32	0.59
57:BY:52:SER:O	57:BY:54:LYS:N	2.35	0.59
58:BZ:5:LEU:HD21	58:BZ:44:PHE:HA	1.85	0.59
58:BZ:19:ARG:NH1	58:BZ:84:GLU:HG2	2.18	0.59
1:AA:177:C:O2'	1:AA:178:C:H5'	2.02	0.58
1:AA:324:G:N2	1:AA:327:A:OP2	2.37	0.58
2:AB:89:GLY:C	2:AB:90:MET:CG	2.75	0.58
24:AY:47:GLU:HG3	24:AY:52:MET:SD	2.43	0.58
26:B1:75:GLU:CA	26:B1:78:LYS:HD2	2.33	0.58
29:B4:35:VAL:O	29:B4:36:CYS:SG	2.58	0.58
33:B8:34:TRP:HA	35:BA:2420:C:OP1	2.03	0.58
35:BA:32:C:HO2'	35:BA:33:U:H5'	1.68	0.58
35:BA:1980:G:O2'	35:BA:1982:C:OP2	2.20	0.58
35:BA:2406:U:O4	48:BP:70:GLN:HB2	2.03	0.58
35:BA:2581:G:C5	35:BA:2610:C:C4	2.91	0.58
39:BE:7:VAL:HG12	39:BE:27:LEU:HB3	1.85	0.58
41:BG:53:LEU:O	41:BG:55:LYS:N	2.36	0.58
41:BG:93:THR:HG22	41:BG:94:LEU:H	1.68	0.58
44:BK:122:UNK:C	44:BK:124:UNK:N	2.65	0.58
46:BN:133:GLN:HG2	46:BN:134:ARG:N	2.16	0.58
49:BQ:141:GLN:HG3	58:BZ:72:ARG:NH1	2.18	0.58
51:BS:89:ARG:CG	51:BS:92:TYR:HA	2.32	0.58
1:AA:190:U:H3	20:AT:105:SER:CB	2.16	0.58
1:AA:452:A:H1'	1:AA:453:A:H5"	1.85	0.58
1:AA:942:G:N3	1:AA:943:U:C5	2.71	0.58
1:AA:1279:A:N3	1:AA:1279:A:C3'	2.62	0.58
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.02	0.58
16:AP:18:ARG:CG	16:AP:35:LYS:HE3	2.32	0.58
19:AS:7:LYS:O	19:AS:7:LYS:NZ	2.33	0.58
24:AY:443:HIS:HB3	24:AY:446:THR:O	2.04	0.58
25:B0:16:SER:OG	35:BA:2261:C:H3'	2.02	0.58
25:B0:36:ILE:HD11	35:BA:2355:C:C4'	2.33	0.58
26:B1:6:GLU:O	26:B1:7:ILE:CG1	2.51	0.58
26:B1:53:VAL:CG2	26:B1:58:ILE:HD12	2.32	0.58
35:BA:259:G:H2'	35:BA:260:G:C8	2.32	0.58
35:BA:316:C:H2'	35:BA:317:G:O5'	2.03	0.58
35:BA:528:A:H2	35:BA:2043:C:H5'	1.67	0.58
41:BG:57:ALA:O	41:BG:61:ALA:HB2	2.03	0.58
48:BP:97:PRO:HG3	48:BP:112:LEU:HD12	1.86	0.58
54:BV:72:VAL:HG23	54:BV:85:LYS:HB3	1.84	0.58
58:BZ:180:VAL:CG1	58:BZ:181:GLU:N	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:89:C:O2'	1:AA:90:U:O5'	2.19	0.58
1:AA:690:G:H8	1:AA:690:G:O5'	1.86	0.58
1:AA:950:U:O2'	1:AA:951:G:H5"	2.01	0.58
1:AA:1078:U:H6	1:AA:1078:U:O5'	1.85	0.58
1:AA:1532:U:O5'	1:AA:1532:U:H6	1.87	0.58
2:AB:39:ILE:O	2:AB:40:HIS:C	2.46	0.58
10:AJ:62:HIS:HB2	14:AN:59:ALA:HB3	1.85	0.58
19:AS:64:GLU:O	29:B4:50:VAL:HG21	2.02	0.58
20:AT:18:GLN:O	20:AT:22:ARG:HG3	2.02	0.58
20:AT:27:LYS:HD3	20:AT:27:LYS:C	2.29	0.58
29:B4:43:TYR:O	29:B4:45:GLY:N	2.36	0.58
29:B4:61:ARG:HB2	29:B4:61:ARG:HH11	1.68	0.58
31:B6:15:GLU:CD	31:B6:18:ARG:NH1	2.62	0.58
35:BA:296:C:O2'	35:BA:297:C:H5'	2.04	0.58
35:BA:1593:G:C6	35:BA:1594:G:C6	2.91	0.58
35:BA:1970:A:H4'	35:BA:1972:A:O4'	2.03	0.58
35:BA:2243:U:H2'	35:BA:2244:U:C6	2.39	0.58
35:BA:2327:A:H2'	35:BA:2328:A:C8	2.37	0.58
40:BF:199:TRP:O	40:BF:203:GLN:HG2	2.02	0.58
41:BG:112:PRO:O	41:BG:113:ARG:HB3	2.03	0.58
41:BG:172:LEU:O	41:BG:172:LEU:HD23	2.03	0.58
46:BN:4:TYR:HB3	53:BU:64:ARG:NH1	2.04	0.58
50:BR:55:ALA:HB2	50:BR:79:LEU:CD1	2.32	0.58
51:BS:28:VAL:HB	51:BS:89:ARG:HB2	1.86	0.58
51:BS:34:HIS:CB	51:BS:53:SER:HB3	2.32	0.58
1:AA:204:U:O4'	1:AA:216:G:C8	2.57	0.58
1:AA:555:C:N4	1:AA:556:C:N4	2.51	0.58
1:AA:594:G:O2'	1:AA:595:G:H5'	2.04	0.58
1:AA:940:C:O5'	1:AA:940:C:H6	1.85	0.58
7:AG:70:LYS:HD3	7:AG:96:GLN:HB3	1.85	0.58
7:AG:76:ARG:HD2	7:AG:156:TRP:CZ2	2.39	0.58
24:AY:600:VAL:CG2	24:AY:678:GLU:HG3	2.34	0.58
29:B4:13:ARG:N	29:B4:24:THR:CG2	2.64	0.58
29:B4:56:VAL:CG2	29:B4:60:GLN:HG3	2.33	0.58
33:B8:61:LEU:HD12	33:B8:61:LEU:N	2.18	0.58
33:B8:62:LEU:C	33:B8:64:TYR:H	2.11	0.58
35:BA:18:C:H2'	35:BA:19:C:C5	2.37	0.58
35:BA:47:C:C4	35:BA:179:G:N1	2.71	0.58
35:BA:692:C:C2'	35:BA:693:C:C5'	2.77	0.58
35:BA:2784:C:H1'	39:BE:37:ARG:HH12	1.68	0.58
39:BE:13:ARG:O	52:BT:57:PHE:HE2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:185:ASP:HA	40:BF:188:ARG:HG2	1.84	0.58
41:BG:6:ALA:HB3	41:BG:105:LYS:CE	2.33	0.58
48:BP:16:ARG:NH1	48:BP:16:ARG:O	2.35	0.58
53:BU:76:TYR:OH	53:BU:93:LYS:HE3	2.03	0.58
1:AA:1163:C:H2'	1:AA:1164:G:H8	1.67	0.58
1:AA:1296:C:H4'	1:AA:1302:U:C4	2.38	0.58
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.66	0.58
10:AJ:74:ILE:HG13	10:AJ:74:ILE:O	2.03	0.58
15:AO:39:LEU:HB3	15:AO:56:LEU:HD23	1.85	0.58
24:AY:25:LYS:HZ2	24:AY:86:GLY:N	1.99	0.58
27:B2:9:GLN:O	27:B2:11:GLU:N	2.37	0.58
34:B9:32:HIS:O	34:B9:34:GLN:HG3	2.03	0.58
35:BA:1778:U:C2'	35:BA:1779:U:H5'	2.32	0.58
35:BA:1999:C:H2'	35:BA:2000:G:H8	1.68	0.58
35:BA:2523:G:C2'	35:BA:2524:G:H5"	2.32	0.58
49:BQ:141:GLN:N	58:BZ:53:ILE:HD12	2.18	0.58
53:BU:74:LEU:HD11	53:BU:79:PHE:HB2	1.85	0.58
53:BU:90:VAL:O	53:BU:91:ASP:C	2.47	0.58
58:BZ:51:ALA:HB1	58:BZ:57:ILE:CD1	2.32	0.58
1:AA:840:C:H5'	1:AA:841:U:OP1	2.02	0.58
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.67	0.58
1:AA:1306:A:N6	1:AA:1331:G:O2'	2.36	0.58
2:AB:122:PHE:CE2	2:AB:142:LEU:CD2	2.79	0.58
2:AB:166:ASP:OD2	2:AB:169:LYS:HB2	2.03	0.58
2:AB:167:PRO:HD2	2:AB:188:ALA:CB	2.26	0.58
8:AH:122:ARG:HB2	8:AH:122:ARG:NH1	2.18	0.58
14:AN:32:SER:HB3	14:AN:41:ARG:HG3	1.84	0.58
24:AY:137:ASN:HD21	24:AY:263:ALA:H	1.51	0.58
24:AY:516:PRO:C	24:AY:517:LEU:HD12	2.28	0.58
24:AY:517:LEU:N	24:AY:517:LEU:HD12	2.18	0.58
25:B0:50:ASN:O	25:B0:62:LEU:CD2	2.52	0.58
26:B1:6:GLU:O	26:B1:7:ILE:HG12	2.03	0.58
26:B1:11:ARG:HG2	26:B1:11:ARG:NH1	2.17	0.58
33:B8:41:ILE:HD12	35:BA:2419:U:OP1	2.03	0.58
35:BA:184:C:H2'	35:BA:185:U:C6	2.38	0.58
35:BA:272(C):G:H2'	35:BA:272(D):G:H8	1.69	0.58
35:BA:554:U:O2'	35:BA:555:U:H5'	2.04	0.58
35:BA:1676:A:H2	35:BA:1993:U:H5'	1.66	0.58
35:BA:2150:U:H2'	35:BA:2151:G:H8	1.68	0.58
37:BC:73:VAL:HG13	37:BC:74:ARG:H	1.67	0.58
39:BE:132:HIS:CG	39:BE:135:HIS:CE1	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:46:GLU:OE2	42:BH:51:ARG:HD2	2.04	0.58
42:BH:88:LEU:HD23	42:BH:164:TYR:O	2.04	0.58
46:BN:63:THR:O	46:BN:66:LYS:HG3	2.04	0.58
48:BP:139:LYS:O	48:BP:141:ALA:N	2.30	0.58
51:BS:101:LEU:HD12	51:BS:101:LEU:O	2.04	0.58
54:BV:25:LEU:N	54:BV:92:THR:HG21	2.17	0.58
1:AA:502:G:OP1	12:AL:118:SER:HB3	2.03	0.58
1:AA:682:G:C5'	38:BD:169:GLU:OE1	2.52	0.58
1:AA:954:G:H2'	1:AA:955:U:C6	2.39	0.58
1:AA:962:C:H2'	1:AA:963:G:H8	1.66	0.58
1:AA:1029:C:N4	1:AA:1033:G:H1	2.01	0.58
1:AA:1221:G:O2'	1:AA:1222:G:H5'	2.02	0.58
1:AA:1388:C:O2'	1:AA:1389:C:C5'	2.50	0.58
3:AC:167:TRP:NE1	3:AC:168:ALA:O	2.37	0.58
4:AD:70:ILE:HG22	4:AD:71:SER:O	2.03	0.58
11:AK:84:VAL:HG11	11:AK:91:ARG:HD3	1.84	0.58
19:AS:40:ILE:HG23	19:AS:67:VAL:O	2.02	0.58
21:AU:12:LYS:HB3	21:AU:22:ARG:HD2	1.85	0.58
25:B0:11:ARG:O	25:B0:13:GLY:N	2.31	0.58
25:B0:46:LYS:CE	25:B0:75:LEU:O	2.52	0.58
26:B1:4:VAL:HG23	26:B1:10:LYS:O	2.03	0.58
35:BA:271(L):U:H4'	35:BA:271(M):G:C8	2.38	0.58
35:BA:272(J):C:H2'	35:BA:274:G:C5'	2.34	0.58
35:BA:527:C:H1'	35:BA:528:A:N7	2.18	0.58
35:BA:654(O):G:H2'	35:BA:654(P):C:C6	2.38	0.58
35:BA:747:U:C5	35:BA:2613:U:N3	2.72	0.58
35:BA:1516:C:O2'	35:BA:1517:G:H5"	2.04	0.58
35:BA:1701:A:C3'	35:BA:1702:G:H5'	2.34	0.58
35:BA:1798:U:O2	35:BA:1821:A:H2	1.87	0.58
37:BC:106:ASP:O	37:BC:107:GLY:C	2.46	0.58
39:BE:52:LEU:CD1	52:BT:1:MET:HE3	2.23	0.58
41:BG:141:PHE:CD1	41:BG:142:PRO:HA	2.30	0.58
1:AA:536:C:H2'	1:AA:537:G:C8	2.39	0.58
1:AA:796:C:C2'	1:AA:797:C:H5'	2.34	0.58
3:AC:46:GLU:OE1	3:AC:83:ARG:NH2	2.37	0.58
7:AG:88:PRO:O	7:AG:89:MET:CB	2.51	0.58
25:B0:66:VAL:O	25:B0:81:VAL:CG1	2.51	0.58
35:BA:407:G:H2'	35:BA:408:G:C8	2.37	0.58
35:BA:1914:C:H5'	35:BA:1915:U:OP2	2.04	0.58
35:BA:2145:C:H5'	35:BA:2146:C:H5	1.66	0.58
35:BA:2710:C:C2'	35:BA:2711:A:H5'	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:25:VAL:CG1	39:BE:181:LEU:HD12	2.33	0.58
39:BE:47:VAL:O	39:BE:49:LEU:HD23	2.04	0.58
40:BF:24:LEU:CB	40:BF:25:PRO:HD2	2.30	0.58
41:BG:73:ALA:HB3	41:BG:85:GLY:HA2	1.85	0.58
41:BG:104:GLU:C	41:BG:106:LEU:H	2.12	0.58
46:BN:126:PRO:O	46:BN:127:ASP:O	2.21	0.58
52:BT:35:LYS:CE	52:BT:41:ARG:HD2	2.34	0.58
57:BY:17:SER:OG	57:BY:18:GLY:N	2.30	0.58
57:BY:44:ILE:HD12	57:BY:44:ILE:H	1.68	0.58
58:BZ:67:LEU:HD12	58:BZ:67:LEU:O	2.04	0.58
1:AA:874:G:C4	1:AA:875:C:C5	2.92	0.58
1:AA:1154:G:H2'	1:AA:1155:G:H8	1.69	0.58
3:AC:22:TRP:O	3:AC:22:TRP:CD2	2.56	0.58
4:AD:150:GLU:HG2	4:AD:151:LYS:N	2.18	0.58
11:AK:92:GLU:HG3	11:AK:96:ARG:NH2	2.18	0.58
17:AQ:63:ARG:O	17:AQ:65:ILE:HD12	2.03	0.58
24:AY:98:MET:HA	24:AY:98:MET:HE3	1.86	0.58
24:AY:156:ARG:NH2	24:AY:666:ARG:CZ	2.67	0.58
24:AY:478:LYS:HA	24:AY:653:PHE:CE1	2.38	0.58
31:B6:51:GLU:O	31:B6:52:VAL:HB	2.04	0.58
35:BA:15:G:H2'	35:BA:16:G:H8	1.69	0.58
35:BA:600:G:C2'	35:BA:601:C:H5'	2.34	0.58
35:BA:1076:C:H4'	58:BZ:112:ARG:NH2	2.17	0.58
35:BA:1299:G:H8	35:BA:1299:G:O5'	1.86	0.58
35:BA:1422:G:H2'	35:BA:1423:G:H8	1.69	0.58
35:BA:2124:G:H2'	35:BA:2125:G:H5'	1.86	0.58
35:BA:2754:U:O5'	35:BA:2754:U:H6	1.86	0.58
35:BA:2836:U:H2'	35:BA:2837:G:H8	1.65	0.58
50:BR:58:GLY:HA2	50:BR:80:PHE:HE2	1.69	0.58
56:BX:35:THR:O	56:BX:39:ILE:HG13	2.04	0.58
58:BZ:10:ARG:NH2	58:BZ:26:GLY:O	2.36	0.58
58:BZ:48:PHE:CE1	58:BZ:52:SER:HA	2.39	0.58
1:AA:1049:U:C2'	14:AN:2:ALA:N	2.67	0.58
1:AA:1118:C:OP1	9:AI:104:ARG:NH1	2.37	0.58
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.19	0.58
2:AB:12:GLU:O	2:AB:16:HIS:HB2	2.04	0.58
2:AB:74:LYS:O	2:AB:75:LYS:C	2.46	0.58
3:AC:19:GLU:O	3:AC:56:ASP:HA	2.03	0.58
3:AC:35:GLU:HG2	3:AC:39:ILE:CD1	2.34	0.58
3:AC:53:ALA:O	3:AC:54:ARG:CB	2.51	0.58
8:AH:83:ILE:HG23	8:AH:83:ILE:O	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:121:ARG:HG2	9:AI:121:ARG:HH11	1.68	0.58
13:AM:40:ASN:ND2	13:AM:43:THR:HG23	2.19	0.58
24:AY:488:THR:OG1	24:AY:598:ASP:HB3	2.04	0.58
32:B7:12:ARG:CD	32:B7:46:VAL:HG21	2.34	0.58
35:BA:107:C:O2'	35:BA:108:U:H5'	2.03	0.58
35:BA:195:A:H5"	48:BP:46:LYS:NZ	2.18	0.58
35:BA:752:A:C5	35:BA:1781:C:O4'	2.57	0.58
35:BA:857:C:N4	35:BA:858:U:O4	2.36	0.58
35:BA:1027:A:C6	35:BA:1126:A:C4	2.92	0.58
35:BA:1463:C:O2'	35:BA:1464:C:H5'	2.03	0.58
35:BA:1652:A:N6	35:BA:1653:G:H1	2.00	0.58
35:BA:1798:U:C5	38:BD:274:ARG:NH2	2.71	0.58
35:BA:2199:A:C5'	35:BA:2200:C:OP2	2.52	0.58
39:BE:9:VAL:HG13	39:BE:25:VAL:HB	1.86	0.58
46:BN:10:GLU:OE2	46:BN:11:PRO:HD2	2.03	0.58
51:BS:35:ILE:H	51:BS:53:SER:CB	2.08	0.58
51:BS:88:ASP:CG	51:BS:89:ARG:N	2.61	0.58
53:BU:65:ILE:HD11	53:BU:96:ALA:HB3	1.85	0.58
58:BZ:48:PHE:CE2	58:BZ:74:VAL:HG21	2.28	0.58
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.69	0.57
3:AC:12:LEU:O	3:AC:13:GLY:C	2.47	0.57
4:AD:158:ILE:HG22	4:AD:181:MET:HE1	1.86	0.57
10:AJ:51:ARG:HG3	10:AJ:60:ARG:HA	1.85	0.57
19:AS:7:LYS:HD3	19:AS:7:LYS:N	2.19	0.57
24:AY:99:ARG:NH1	24:AY:402:ILE:C	2.62	0.57
24:AY:379:GLY:O	24:AY:380:LEU:HB2	2.03	0.57
24:AY:496:LYS:HE2	24:AY:498:ILE:HD13	1.85	0.57
25:B0:4:LYS:O	25:B0:5:LYS:C	2.47	0.57
30:B5:16:ARG:HG2	30:B5:16:ARG:NH1	2.17	0.57
31:B6:20:ASN:CG	31:B6:21:TYR:H	2.12	0.57
31:B6:40:CYS:SG	31:B6:45:LYS:NZ	2.71	0.57
35:BA:272(J):C:H2'	35:BA:274:G:H5'	1.84	0.57
35:BA:300:A:H2'	35:BA:334:C:H1'	1.86	0.57
35:BA:1458:C:H5'	35:BA:1459:G:C8	2.39	0.57
35:BA:1484:G:C3'	35:BA:1485:G:H5"	2.34	0.57
35:BA:1528(A):A:H62	35:BA:1541:G:H21	1.50	0.57
36:BB:25:A:H3'	36:BB:26:A:H8	1.69	0.57
36:BB:56:G:O2'	36:BB:57:A:OP2	2.22	0.57
37:BC:103:LYS:HA	37:BC:103:LYS:NZ	2.15	0.57
37:BC:103:LYS:HG3	37:BC:103:LYS:O	2.03	0.57
37:BC:103:LYS:O	37:BC:105:LEU:N	2.36	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:53:LEU:C	41:BG:55:LYS:H	2.11	0.57
42:BH:3:ARG:NH1	42:BH:3:ARG:CG	2.63	0.57
47:BO:9:GLU:HG3	47:BO:18:LYS:NZ	2.19	0.57
48:BP:79:ARG:H	48:BP:110:TYR:HD2	1.52	0.57
51:BS:35:ILE:O	51:BS:35:ILE:HG23	2.03	0.57
52:BT:81:PRO:O	52:BT:82:LEU:HG	2.04	0.57
58:BZ:97:GLU:HA	58:BZ:127:LYS:HA	1.85	0.57
1:AA:109:A:H3'	1:AA:110:C:H5'	1.85	0.57
1:AA:563:A:N3	1:AA:563:A:H3'	2.19	0.57
1:AA:651:C:O2'	1:AA:652:U:H5'	2.04	0.57
1:AA:723:U:O2	1:AA:723:U:H2'	2.04	0.57
1:AA:757:U:H2'	1:AA:758:G:O4'	2.04	0.57
1:AA:919:A:O5'	1:AA:919:A:H8	1.87	0.57
17:AQ:67:LYS:O	17:AQ:68:ARG:CB	2.53	0.57
19:AS:86:GLU:O	19:AS:87:ALA:HB3	2.03	0.57
24:AY:55:MET:HG3	24:AY:56:GLU:H	1.66	0.57
25:B0:80:HIS:CD2	25:B0:80:HIS:H	2.21	0.57
26:B1:40:ARG:HG2	26:B1:40:ARG:HH11	1.69	0.57
28:B3:45:GLY:HA3	35:BA:851:U:O2'	2.04	0.57
31:B6:20:ASN:O	31:B6:21:TYR:CG	2.57	0.57
33:B8:63:PRO:O	33:B8:64:TYR:O	2.22	0.57
35:BA:332:A:H3'	35:BA:332:A:OP2	2.03	0.57
35:BA:461:C:H6	35:BA:461:C:O5'	1.86	0.57
35:BA:588:U:H2'	35:BA:589:C:C6	2.39	0.57
35:BA:621:A:H2'	35:BA:622:G:H5'	1.85	0.57
35:BA:651:G:H2'	35:BA:652:C:H5'	1.85	0.57
35:BA:697:C:C2'	35:BA:698:C:C5'	2.78	0.57
35:BA:1462:C:H2'	35:BA:1463:C:C6	2.39	0.57
35:BA:1607:C:H4'	35:BA:1608:A:O5'	2.03	0.57
35:BA:1914:C:H5"	35:BA:1915:U:H5	1.68	0.57
35:BA:2029:G:N1	35:BA:2033:A:OP1	2.37	0.57
37:BC:6:LYS:HG3	37:BC:7:ARG:H	1.69	0.57
38:BD:2:ALA:O	38:BD:3:VAL:HG23	2.04	0.57
38:BD:24:ILE:CG2	38:BD:25:THR:N	2.59	0.57
41:BG:5:VAL:CG1	41:BG:8:LYS:HB2	2.34	0.57
41:BG:9:ARG:H	41:BG:9:ARG:HD2	1.69	0.57
41:BG:48:GLU:O	41:BG:49:ASP:HB2	2.05	0.57
52:BT:25:GLY:O	52:BT:48:ILE:HG23	2.05	0.57
52:BT:46:GLU:HB3	52:BT:65:LYS:HE3	1.85	0.57
52:BT:106:SER:C	52:BT:107:ASP:OD1	2.47	0.57
52:BT:125:ARG:HG2	52:BT:125:ARG:HH11	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:1:MET:HA	54:BV:1:MET:HE2	1.85	0.57
56:BX:26:TYR:OH	56:BX:88:LYS:HD2	2.04	0.57
1:AA:180:U:H2'	1:AA:181:G:H5'	1.86	0.57
1:AA:952:U:C2'	1:AA:953:G:H5'	2.34	0.57
2:AB:87:ARG:CD	2:AB:219:VAL:CG1	2.82	0.57
3:AC:191:THR:HG22	3:AC:192:THR:H	1.69	0.57
5:AE:12:LEU:C	5:AE:13:ILE:HD12	2.28	0.57
20:AT:37:SER:O	20:AT:41:ILE:HG12	2.03	0.57
24:AY:57:GLN:O	24:AY:60:GLU:CB	2.53	0.57
24:AY:57:GLN:O	24:AY:60:GLU:HB2	2.03	0.57
24:AY:385:THR:HG21	24:AY:436:PRO:HD3	1.86	0.57
29:B4:17:GLY:H	29:B4:33:VAL:HG11	1.69	0.57
31:B6:9:LEU:CD1	31:B6:11:LEU:HD12	2.34	0.57
34:B9:27:CYS:SG	34:B9:28:GLU:N	2.76	0.57
35:BA:604:G:C6	35:BA:605:C:N4	2.73	0.57
35:BA:1060:U:C5	35:BA:1062:G:H4'	2.39	0.57
35:BA:2267:A:H5"	35:BA:2268:A:H5'	1.86	0.57
35:BA:2715:C:C2	35:BA:2716:U:C5	2.91	0.57
36:BB:45:A:H1'	41:BG:95:ARG:NH2	2.19	0.57
46:BN:22:THR:HA	46:BN:61:ARG:O	2.05	0.57
1:AA:942:G:C6	1:AA:943:U:C4	2.92	0.57
1:AA:1000:U:H2'	1:AA:1001:A:C8	2.39	0.57
1:AA:1203:C:OP1	14:AN:3:ARG:HD2	2.04	0.57
1:AA:1216:G:H5"	14:AN:5:ALA:CB	2.33	0.57
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.39	0.57
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.04	0.57
2:AB:168:THR:CG2	2:AB:192:SER:HA	2.34	0.57
8:AH:33:GLU:OE1	8:AH:50:ARG:NH1	2.37	0.57
24:AY:600:VAL:HG21	24:AY:678:GLU:HG3	1.86	0.57
35:BA:272(I):U:H6	35:BA:272(I):U:C5'	2.16	0.57
35:BA:654(A):G:O2'	35:BA:654(B):C:H5'	2.05	0.57
35:BA:826:U:O2'	48:BP:54:GLY:HA3	2.03	0.57
35:BA:1038:C:H3'	35:BA:1039:G:C5'	2.20	0.57
35:BA:1464:C:H1'	35:BA:1528:A:H8	1.69	0.57
35:BA:1891:G:H2'	35:BA:1892:C:C6	2.40	0.57
35:BA:2748:A:C4	35:BA:2757:A:C6	2.92	0.57
37:BC:117:THR:N	37:BC:118:PRO:CA	2.35	0.57
42:BH:7:LEU:CD2	42:BH:69:ARG:HE	2.16	0.57
42:BH:19:VAL:O	42:BH:20:ALA:HB3	2.03	0.57
54:BV:47:VAL:O	54:BV:47:VAL:HG23	2.03	0.57
54:BV:49:THR:O	54:BV:50:PRO:C	2.47	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:50:LYS:H	56:BX:87:GLN:HE22	1.52	0.57
1:AA:324:G:H22	1:AA:327:A:P	2.27	0.57
1:AA:488:C:O2'	1:AA:489:C:H5'	2.05	0.57
1:AA:832:C:O2'	1:AA:833:U:H5'	2.05	0.57
1:AA:1054:C:OP1	1:AA:1197:G:OP1	2.22	0.57
1:AA:1237:C:HO2'	1:AA:1335:C:C1'	2.12	0.57
1:AA:1302:U:C5	13:AM:17:VAL:HG21	2.39	0.57
2:AB:75:LYS:O	2:AB:77:ALA:N	2.37	0.57
2:AB:97:TRP:HZ3	2:AB:176:GLU:OE2	1.86	0.57
3:AC:72:LYS:HE3	3:AC:74:GLY:HA3	1.86	0.57
4:AD:116:GLN:NE2	4:AD:157:LEU:HD21	2.19	0.57
5:AE:11:ILE:HD11	5:AE:31:LEU:HD22	1.86	0.57
10:AJ:22:LYS:NZ	10:AJ:90:LEU:HD22	2.19	0.57
16:AP:8:ARG:HB3	16:AP:28:ARG:NH1	2.19	0.57
24:AY:137:ASN:ND2	24:AY:263:ALA:H	2.03	0.57
24:AY:232:LEU:HD13	24:AY:232:LEU:N	2.20	0.57
24:AY:517:LEU:HD11	24:AY:564:LYS:HB2	1.85	0.57
25:B0:14:ARG:CG	25:B0:14:ARG:NH1	2.63	0.57
30:B5:3:LYS:HA	30:B5:3:LYS:HE3	1.86	0.57
35:BA:8:A:H2'	35:BA:9:U:C6	2.40	0.57
35:BA:16:G:H2'	35:BA:17:G:H8	1.69	0.57
35:BA:221:A:N6	35:BA:265:A:H8	2.03	0.57
35:BA:1068:G:H2'	35:BA:1068:G:N3	2.19	0.57
35:BA:1422:G:C5	35:BA:1423:G:N7	2.72	0.57
35:BA:1864:U:C3'	35:BA:1865:G:H5"	2.34	0.57
38:BD:142:VAL:HG21	38:BD:191:ALA:HB1	1.87	0.57
39:BE:77:ILE:HG22	39:BE:78:LEU:N	2.09	0.57
40:BF:63:LYS:HA	40:BF:76:GLY:O	2.04	0.57
42:BH:20:ALA:HB1	42:BH:21:PRO:HD2	1.85	0.57
44:BK:57:UNK:HA	44:BK:67:UNK:CA	2.34	0.57
57:BY:95:LYS:HD2	57:BY:100:ALA:CA	2.34	0.57
58:BZ:122:ARG:HB3	58:BZ:122:ARG:NH1	2.19	0.57
1:AA:119:A:O2'	1:AA:120:A:P	2.62	0.57
1:AA:872:A:O2'	1:AA:873:A:H3'	2.04	0.57
2:AB:71:VAL:HB	2:AB:164:VAL:HG22	1.85	0.57
3:AC:86:VAL:CG2	3:AC:87:LEU:N	2.68	0.57
3:AC:116:VAL:C	3:AC:118:GLN:H	2.12	0.57
7:AG:59:LEU:HD23	7:AG:59:LEU:C	2.29	0.57
7:AG:88:PRO:HG2	7:AG:152:ALA:HB2	1.86	0.57
24:AY:229:LEU:C	24:AY:231:TYR:H	2.12	0.57
27:B2:17:SER:CB	27:B2:18:PRO:HD2	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:33:VAL:HG22	29:B4:34:GLU:H	1.69	0.57
33:B8:61:LEU:CD1	33:B8:63:PRO:HD2	2.34	0.57
35:BA:309:G:N3	35:BA:329:G:O2'	2.37	0.57
35:BA:1022:G:N2	35:BA:1142(A):A:H2	1.99	0.57
35:BA:1701:A:C2'	35:BA:1702:G:H5'	2.34	0.57
35:BA:1769:G:H2'	35:BA:1770:G:H5'	1.84	0.57
39:BE:56:PRO:O	39:BE:57:LYS:CE	2.53	0.57
41:BG:85:GLY:O	41:BG:86:MET:CB	2.51	0.57
41:BG:122:PRO:O	41:BG:124:SER:N	2.37	0.57
41:BG:122:PRO:HD3	41:BG:181:ARG:HA	1.87	0.57
46:BN:34:LEU:HD21	46:BN:120:LEU:HB2	1.87	0.57
50:BR:52:ILE:O	50:BR:55:ALA:HB3	2.04	0.57
51:BS:92:TYR:CG	51:BS:93:LYS:N	2.65	0.57
1:AA:35:G:H2'	1:AA:36:C:C6	2.39	0.57
1:AA:573:A:H5'	1:AA:573:A:C8	2.38	0.57
1:AA:593:G:H2'	1:AA:594:G:C5'	2.32	0.57
1:AA:1313:U:C6	19:AS:6:LYS:NZ	2.73	0.57
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.38	0.57
2:AB:91:PRO:HA	2:AB:151:GLY:O	2.05	0.57
3:AC:103:VAL:HG12	3:AC:104:GLN:N	2.20	0.57
10:AJ:58:ASP:O	10:AJ:59:SER:CB	2.49	0.57
18:AR:26:LEU:HD21	18:AR:42:ARG:HH22	1.67	0.57
19:AS:67:VAL:HB	29:B4:50:VAL:CG1	2.34	0.57
20:AT:84:LEU:O	20:AT:88:VAL:HG23	2.05	0.57
24:AY:9:LEU:HD21	24:AY:284:LEU:HD13	1.86	0.57
29:B4:21:VAL:CG2	29:B4:35:VAL:CG2	2.83	0.57
31:B6:29:ASN:O	31:B6:30:THR:C	2.48	0.57
33:B8:54:GLU:O	33:B8:58:ILE:HG12	2.04	0.57
35:BA:90:U:O2'	35:BA:92:A:OP2	2.21	0.57
35:BA:221:A:H61	35:BA:265:A:H8	1.50	0.57
35:BA:462:C:C2'	35:BA:463:G:C5'	2.75	0.57
35:BA:862:G:H2'	35:BA:863:A:O4'	2.04	0.57
35:BA:963:U:HO2'	35:BA:964:C:H5'	1.64	0.57
35:BA:1054:A:O2'	35:BA:1055:G:H5'	2.05	0.57
35:BA:1906:G:H2'	35:BA:1907:G:O4'	2.05	0.57
35:BA:1970:A:C4'	35:BA:1972:A:O4'	2.52	0.57
35:BA:2340:G:O2'	35:BA:2341:G:H5'	2.05	0.57
35:BA:2690:C:OP2	50:BR:14:SER:HB3	2.04	0.57
36:BB:2:C:H2'	36:BB:3:C:C6	2.39	0.57
39:BE:117:MET:HE2	39:BE:124:GLY:HA3	1.85	0.57
42:BH:89:ILE:O	42:BH:89:ILE:HG13	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:23:PRO:C	48:BP:33:ARG:HE	2.12	0.57
51:BS:30:ARG:CD	51:BS:97:ARG:HG2	2.32	0.57
54:BV:5:VAL:HG22	54:BV:6:LYS:N	2.20	0.57
1:AA:937:A:C2'	1:AA:938:A:H5'	2.35	0.57
1:AA:1296:C:H5'	1:AA:1302:U:O4	2.05	0.57
1:AA:1385:G:C2	1:AA:1386:G:C4	2.93	0.57
2:AB:231:GLU:CB	2:AB:232:PRO:HD2	2.20	0.57
2:AB:239:VAL:O	2:AB:239:VAL:HG12	2.03	0.57
7:AG:48:LYS:CG	7:AG:49:ILE:N	2.67	0.57
7:AG:48:LYS:HG3	7:AG:49:ILE:HG23	1.84	0.57
7:AG:76:ARG:O	7:AG:77:SER:HB2	2.05	0.57
24:AY:357:ARG:NH1	24:AY:366:VAL:HG11	2.20	0.57
25:B0:20:ARG:HG2	25:B0:20:ARG:HH11	1.68	0.57
27:B2:69:ARG:O	27:B2:70:GLN:CD	2.47	0.57
33:B8:37:SER:O	33:B8:41:ILE:HG22	2.05	0.57
33:B8:62:LEU:CD1	35:BA:242:G:H5"	2.15	0.57
35:BA:81:G:H21	57:BY:2:ARG:NH1	2.02	0.57
35:BA:248:G:H2'	35:BA:249:C:OP1	2.04	0.57
35:BA:651:G:O6	35:BA:652:C:N4	2.38	0.57
35:BA:1131:G:N2	46:BN:73:THR:HG21	2.19	0.57
35:BA:1423:G:O2'	35:BA:1424:G:C5'	2.30	0.57
35:BA:1889:A:N1	35:BA:2234:G:H1'	2.19	0.57
35:BA:1945:G:C4	35:BA:1946:U:C5	2.92	0.57
35:BA:2397:G:O2'	35:BA:2398:U:H5'	2.05	0.57
35:BA:2662:A:H2'	35:BA:2663:G:O4'	2.04	0.57
39:BE:8:LYS:HE2	39:BE:192:ASN:ND2	2.20	0.57
41:BG:152:LEU:H	41:BG:152:LEU:CD2	2.17	0.57
42:BH:156:ALA:C	42:BH:158:HIS:H	2.11	0.57
1:AA:493:G:O5'	1:AA:493:G:H8	1.87	0.57
1:AA:518:C:H4'	1:AA:519:C:H5"	1.87	0.57
1:AA:649:G:O2'	1:AA:650:G:H5'	2.05	0.57
1:AA:1003:G:C2	1:AA:1004:A:H1'	2.39	0.57
3:AC:14:ILE:O	3:AC:15:THR:HB	2.03	0.57
3:AC:195:VAL:O	3:AC:196:LEU:HD22	2.04	0.57
10:AJ:38:ILE:HG12	10:AJ:71:LEU:HB3	1.87	0.57
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.18	0.57
24:AY:316:ILE:CD1	24:AY:326:THR:HG23	2.35	0.57
27:B2:4:SER:C	27:B2:6:VAL:H	2.12	0.57
35:BA:271(G):C:O2'	35:BA:271(H):G:H5'	2.05	0.57
35:BA:462:C:H2'	35:BA:463:G:C5'	2.32	0.57
35:BA:598:G:H5'	48:BP:15:ARG:HB3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:599:G:O2'	35:BA:600:G:H5'	2.05	0.57
35:BA:702:G:H2'	35:BA:703:U:C5'	2.35	0.57
35:BA:832:G:OP1	48:BP:40:SER:HB3	2.04	0.57
35:BA:1771:C:C1'	35:BA:1786:A:C8	2.87	0.57
35:BA:1902:C:C1'	38:BD:244:ARG:HB2	2.35	0.57
35:BA:2052:G:H4'	39:BE:143:ASN:O	2.05	0.57
35:BA:2123:G:C6	35:BA:2176:A:C6	2.93	0.57
35:BA:2409:G:H2'	35:BA:2410:G:C8	2.39	0.57
38:BD:176:ARG:HG2	38:BD:176:ARG:NH1	2.20	0.57
40:BF:134:GLY:HA2	40:BF:166:ALA:HB2	1.86	0.57
40:BF:138:GLU:O	40:BF:141:ALA:HB3	2.05	0.57
41:BG:77:ILE:HG21	41:BG:82:LEU:H	1.70	0.57
42:BH:156:ALA:O	42:BH:158:HIS:CD2	2.54	0.57
48:BP:6:LEU:HG	48:BP:9:ASN:CG	2.29	0.57
49:BQ:74:TYR:HD1	49:BQ:75:THR:N	2.03	0.57
52:BT:30:VAL:HB	52:BT:31:SER:CB	2.27	0.57
53:BU:83:LEU:HD12	53:BU:88:ILE:HD11	1.86	0.57
54:BV:79:VAL:O	54:BV:79:VAL:HG12	2.04	0.57
1:AA:60:A:H1'	1:AA:61:G:C1'	2.34	0.57
1:AA:986:A:H2'	1:AA:987:G:C8	2.39	0.57
1:AA:992:U:O2	1:AA:992:U:H2'	2.05	0.57
1:AA:1447:A:C2'	1:AA:1452:C:O5'	2.53	0.57
10:AJ:8:LEU:HD13	10:AJ:70:ARG:HB2	1.87	0.57
16:AP:28:ARG:NH1	16:AP:29:ASP:OD1	2.38	0.57
18:AR:58:LEU:HD22	18:AR:62:GLU:HB3	1.86	0.57
19:AS:26:GLY:O	19:AS:27:GLU:HG3	2.04	0.57
24:AY:81:ILE:HG22	24:AY:82:ILE:H	1.69	0.57
25:B0:69:PHE:CD2	25:B0:79:VAL:CG2	2.88	0.57
29:B4:13:ARG:N	29:B4:24:THR:HG23	2.19	0.57
29:B4:23:GLU:O	29:B4:24:THR:C	2.48	0.57
30:B5:2:ALA:CA	35:BA:2015:A:H1'	2.31	0.57
31:B6:8:LYS:HE3	31:B6:25:LYS:HG3	1.87	0.57
35:BA:271(L):U:H4'	35:BA:271(M):G:N7	2.19	0.57
35:BA:470:A:OP1	40:BF:59:TYR:HE1	1.88	0.57
35:BA:852:G:O2'	35:BA:853:G:H5'	2.04	0.57
35:BA:1062:G:H2'	35:BA:1063:G:H8	1.70	0.57
35:BA:1088:A:H3'	35:BA:1088:A:N3	2.20	0.57
35:BA:1119:C:C2'	35:BA:1120:G:C5'	2.74	0.57
35:BA:1316:U:H2'	35:BA:1317:A:C8	2.40	0.57
35:BA:1422:G:C6	35:BA:1423:G:C5	2.92	0.57
35:BA:1721:G:H5'	35:BA:1721:G:N3	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2118:U:O4	35:BA:2149:G:H1'	2.04	0.57
35:BA:2790:A:N3	35:BA:2790:A:H2'	2.20	0.57
37:BC:124:VAL:HG13	37:BC:125:GLY:N	2.20	0.57
38:BD:142:VAL:HG23	38:BD:192:THR:O	2.04	0.57
39:BE:2:LYS:HD3	39:BE:95:ILE:HG22	1.86	0.57
42:BH:5:GLY:CA	42:BH:69:ARG:HD3	2.35	0.57
3:AC:12:LEU:O	3:AC:14:ILE:N	2.38	0.56
3:AC:117:ALA:HB2	3:AC:200:ALA:HB3	1.87	0.56
4:AD:3:ARG:HE	4:AD:5:ILE:CG1	2.18	0.56
19:AS:63:THR:CG2	19:AS:64:GLU:H	2.07	0.56
24:AY:183:MET:O	24:AY:201:ILE:HD11	2.05	0.56
24:AY:297:GLU:O	24:AY:297:GLU:HG3	2.05	0.56
28:B3:50:VAL:O	28:B3:54:VAL:HG13	2.05	0.56
31:B6:15:GLU:HB2	31:B6:20:ASN:HB3	1.85	0.56
35:BA:174:C:H5'	35:BA:175:G:OP2	2.05	0.56
35:BA:604:G:O2'	35:BA:605:C:C5'	2.48	0.56
35:BA:1427:A:H1'	35:BA:1428:C:OP2	2.05	0.56
35:BA:1540:U:O3'	35:BA:1541:G:H3'	2.05	0.56
35:BA:1800:C:OP1	38:BD:266:SER:OG	2.18	0.56
35:BA:2668:G:O2'	35:BA:2669:G:H5'	2.05	0.56
40:BF:192:LEU:CD2	40:BF:194:MET:HG3	2.35	0.56
41:BG:84:LYS:HG3	41:BG:84:LYS:O	2.04	0.56
41:BG:114:ILE:O	41:BG:114:ILE:HG23	2.04	0.56
43:BJ:67:UNK:C	43:BJ:69:UNK:H	2.17	0.56
47:BO:13:ASN:HD22	47:BO:13:ASN:N	2.01	0.56
1:AA:189:G:O2'	1:AA:189(A):C:H5'	2.05	0.56
1:AA:190:U:C2	20:AT:105:SER:HB2	2.40	0.56
1:AA:511:C:O2'	1:AA:512:U:H5"	2.05	0.56
1:AA:684:A:O2'	11:AK:39:PRO:O	2.21	0.56
1:AA:1100:C:C4	2:AB:96:ARG:NH2	2.74	0.56
9:AI:24:GLY:O	9:AI:26:VAL:N	2.38	0.56
13:AM:39:ILE:HD11	13:AM:56:LEU:HB2	1.87	0.56
26:B1:45:ASN:ND2	26:B1:47:GLN:HE21	2.02	0.56
29:B4:46:GLN:C	29:B4:48:ARG:H	2.10	0.56
31:B6:52:VAL:HG22	31:B6:53:LYS:N	2.14	0.56
35:BA:16:G:H2'	35:BA:17:G:H5'	1.87	0.56
35:BA:93:G:H2'	35:BA:94:C:C6	2.40	0.56
35:BA:197:A:H5'	35:BA:197:A:H8	1.68	0.56
35:BA:272(I):U:H5'	35:BA:272(I):U:C6	2.30	0.56
35:BA:833:U:H4'	48:BP:52:GLU:H	1.65	0.56
35:BA:896:A:H5'	58:BZ:146:ILE:HD12	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1213:A:O2'	35:BA:1214:A:H5'	2.04	0.56
35:BA:1441:G:O2'	35:BA:1442:G:H5'	2.04	0.56
35:BA:1465:G:H5'	35:BA:1528:A:H1'	1.87	0.56
35:BA:1771:C:O4'	35:BA:1786:A:C8	2.58	0.56
35:BA:1789:A:OP2	38:BD:222:ARG:NH1	2.36	0.56
35:BA:2306:C:N4	35:BA:2311:A:N7	2.53	0.56
35:BA:2610:C:H4'	35:BA:2611:U:OP2	2.05	0.56
37:BC:102:GLN:C	37:BC:104:ILE:N	2.58	0.56
37:BC:133:GLY:N	37:BC:134:PRO:HD2	2.19	0.56
41:BG:7:LEU:HB2	41:BG:104:GLU:OE1	2.05	0.56
41:BG:29:TRP:C	41:BG:31:VAL:H	2.13	0.56
41:BG:66:GLN:NE2	41:BG:92:VAL:CG2	2.67	0.56
48:BP:115:LEU:CG	48:BP:116:GLY:N	2.68	0.56
51:BS:58:LEU:HD21	51:BS:68:GLN:HB2	1.87	0.56
51:BS:102:ALA:HB3	51:BS:103:GLU:OE1	2.05	0.56
1:AA:123:C:OP1	1:AA:312:C:H5"	2.05	0.56
1:AA:197:A:N6	1:AA:221:C:C4'	2.67	0.56
1:AA:490:G:C4	1:AA:491:G:C8	2.93	0.56
1:AA:862:C:O2'	1:AA:863:U:H5"	2.06	0.56
1:AA:882:C:O2'	1:AA:883:C:H5'	2.06	0.56
1:AA:1001:A:H2'	1:AA:1001:A:N3	2.20	0.56
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.04	0.56
3:AC:131:ARG:O	3:AC:134:ILE:HB	2.05	0.56
4:AD:145:GLU:OE1	4:AD:182:LYS:HD3	2.05	0.56
12:AL:27:LEU:HD13	12:AL:28:LYS:HG3	1.86	0.56
14:AN:58:LYS:HB3	14:AN:58:LYS:HZ2	1.69	0.56
19:AS:40:ILE:HG23	19:AS:67:VAL:C	2.30	0.56
22:AV:73:A:C2'	22:AV:74:C:H5'	2.36	0.56
24:AY:534:ILE:CD1	24:AY:570:GLY:HA3	2.30	0.56
26:B1:45:ASN:HD21	35:BA:2090:G:N2	1.93	0.56
29:B4:28:LYS:HZ2	41:BG:144:ILE:H	1.52	0.56
29:B4:32:TYR:CE2	29:B4:34:GLU:HB2	2.40	0.56
31:B6:30:THR:O	31:B6:31:PRO:C	2.46	0.56
33:B8:30:ARG:HA	33:B8:30:ARG:NE	2.19	0.56
35:BA:258:G:C2'	35:BA:259:G:H5'	2.35	0.56
35:BA:412:A:N7	35:BA:2411:A:H2	2.03	0.56
35:BA:492:A:H2'	35:BA:493:G:O4'	2.04	0.56
35:BA:652:C:N1	35:BA:653:A:C8	2.73	0.56
35:BA:693:C:O2'	35:BA:694:U:C5'	2.50	0.56
35:BA:697:C:H2'	35:BA:698:C:H5'	1.84	0.56
35:BA:1047:G:H2'	35:BA:1110:G:H21	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1077:A:C6	35:BA:1078:U:H1'	2.40	0.56
35:BA:1137:G:C2'	35:BA:1138:G:H5'	2.33	0.56
35:BA:1257:C:H4'	40:BF:83:PHE:CD2	2.40	0.56
35:BA:1268:A:H2'	35:BA:1269:A:O4'	2.06	0.56
35:BA:1416:G:HO2'	35:BA:1417:C:H5	0.70	0.56
35:BA:1461:G:C6	35:BA:1462:C:C4	2.93	0.56
35:BA:1688:U:H1'	35:BA:1701:A:C6	2.40	0.56
35:BA:2401:U:H3'	35:BA:2402:C:C6	2.40	0.56
35:BA:2408:U:C2	35:BA:2409:G:N7	2.73	0.56
37:BC:88:GLU:HB2	37:BC:92:ALA:HB3	1.85	0.56
37:BC:109:MET:HA	37:BC:111:PHE:CZ	2.40	0.56
38:BD:211:ARG:HD3	38:BD:214:TRP:CZ3	2.41	0.56
40:BF:160:ASN:ND2	40:BF:162:LEU:HD13	2.14	0.56
41:BG:48:GLU:CD	41:BG:49:ASP:N	2.62	0.56
41:BG:110:ALA:CB	41:BG:142:PRO:HB3	2.35	0.56
42:BH:166:GLY:O	42:BH:167:GLU:CB	2.53	0.56
44:BK:56:UNK:O	44:BK:67:UNK:HA	2.05	0.56
47:BO:35:VAL:HG23	47:BO:69:ILE:HD11	1.86	0.56
49:BQ:14:ARG:HG2	49:BQ:14:ARG:HH11	1.70	0.56
51:BS:12:PHE:C	51:BS:12:PHE:CD1	2.82	0.56
54:BV:81:TYR:C	54:BV:82:ARG:HD2	2.29	0.56
55:BW:24:ILE:O	55:BW:71:VAL:HG21	2.04	0.56
57:BY:17:SER:CA	57:BY:71:LYS:HE2	2.35	0.56
57:BY:39:VAL:HG12	57:BY:40:GLU:N	2.21	0.56
58:BZ:103:ARG:HH11	58:BZ:103:ARG:HB2	1.70	0.56
1:AA:89:C:C2	1:AA:90:U:H5	2.23	0.56
1:AA:685:G:H8	1:AA:685:G:O5'	1.87	0.56
1:AA:1175:G:H2'	1:AA:1176:A:H5'	1.87	0.56
1:AA:1366:C:O2'	1:AA:1367:C:H5'	2.05	0.56
2:AB:19:HIS:NE2	2:AB:206:ASP:HB2	2.20	0.56
4:AD:126:ILE:HD12	4:AD:126:ILE:N	2.20	0.56
5:AE:64:ARG:O	5:AE:64:ARG:HG2	2.05	0.56
13:AM:97:PRO:HB2	13:AM:101:GLN:NE2	2.19	0.56
24:AY:5:VAL:HG13	24:AY:6:GLU:N	2.21	0.56
24:AY:151:ARG:O	24:AY:155:GLU:HB2	2.05	0.56
24:AY:604:PRO:C	24:AY:605:ILE:HD12	2.31	0.56
24:AY:631:ILE:HA	24:AY:645:ALA:CB	2.34	0.56
29:B4:12:ALA:N	29:B4:24:THR:CB	2.55	0.56
29:B4:48:ARG:HG2	29:B4:48:ARG:HH11	1.70	0.56
33:B8:28:GLY:O	33:B8:30:ARG:N	2.35	0.56
35:BA:252:G:O2'	35:BA:253:C:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:965:C:H2'	35:BA:966:G:H5'	1.87	0.56
35:BA:1445:A:C8	35:BA:1460:A:C6	2.94	0.56
35:BA:2106:G:H5'	35:BA:2106:G:H8	1.70	0.56
35:BA:2410:G:N2	35:BA:2411:A:H1'	2.20	0.56
41:BG:52:ILE:O	41:BG:53:LEU:HG	2.06	0.56
56:BX:11:PRO:HB3	56:BX:92:LEU:HD21	1.86	0.56
58:BZ:56:VAL:HG13	58:BZ:69:THR:O	2.05	0.56
1:AA:197:A:N6	1:AA:221:C:C5'	2.68	0.56
1:AA:501:C:OP1	12:AL:117:ARG:NH2	2.37	0.56
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.88	0.56
1:AA:1077:G:C6	1:AA:1081:G:O6	2.59	0.56
1:AA:1488:G:C2'	1:AA:1489:G:H5'	2.35	0.56
2:AB:20:GLU:OE1	2:AB:20:GLU:CA	2.54	0.56
2:AB:204:ASN:ND2	2:AB:205:ASP:N	2.50	0.56
3:AC:190:ARG:HH11	3:AC:190:ARG:HG3	1.71	0.56
13:AM:65:LYS:HD2	13:AM:73:GLU:HG3	1.86	0.56
17:AQ:40:LYS:HD3	17:AQ:42:TYR:OH	2.05	0.56
24:AY:38:ARG:HH22	24:AY:270:GLN:NE2	2.03	0.56
24:AY:431:LEU:HD11	24:AY:465:ARG:HH12	1.71	0.56
35:BA:89:G:H3'	35:BA:90:U:H5'	1.88	0.56
35:BA:692:C:H2'	35:BA:693:C:C5'	2.36	0.56
35:BA:885:C:O2	35:BA:885:C:H2'	2.05	0.56
35:BA:1486:A:N1	35:BA:1504:C:N4	2.53	0.56
35:BA:1493:C:H2'	35:BA:1493:C:O2	2.05	0.56
35:BA:1797:C:O2'	38:BD:259:THR:HG22	2.04	0.56
35:BA:1893:C:O2'	35:BA:1894:C:H5'	2.06	0.56
35:BA:2363:C:C2	35:BA:2364:C:C5	2.93	0.56
35:BA:2756:U:C1'	35:BA:2757:A:OP2	2.47	0.56
37:BC:29:LEU:O	37:BC:30:VAL:C	2.48	0.56
37:BC:74:ARG:HG2	37:BC:111:PHE:HA	1.87	0.56
39:BE:101:ARG:HD2	39:BE:169:ASN:ND2	2.19	0.56
40:BF:132:VAL:HG22	40:BF:133:ASN:N	2.20	0.56
50:BR:2:ARG:C	50:BR:2:ARG:CD	2.79	0.56
1:AA:36:C:O5'	1:AA:36:C:H6	1.88	0.56
1:AA:322:C:H41	1:AA:328:C:H6	1.53	0.56
1:AA:327:A:C2	1:AA:329:A:C4	2.94	0.56
1:AA:555:C:N3	1:AA:556:C:C4	2.74	0.56
1:AA:961:U:OP1	1:AA:961:U:H2'	2.05	0.56
2:AB:145:LEU:O	2:AB:149:LEU:CB	2.32	0.56
29:B4:42:PHE:N	29:B4:42:PHE:HD1	2.03	0.56
35:BA:108:U:C2'	35:BA:109:G:C5'	2.83	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:145:G:O2'	35:BA:146:G:H5"	2.05	0.56
35:BA:256:A:O2'	35:BA:257:A:H5'	2.04	0.56
35:BA:259:G:O2'	35:BA:260:G:C5'	2.36	0.56
35:BA:692:C:O2'	35:BA:693:C:C5'	2.45	0.56
35:BA:1137:G:O2'	35:BA:1138:G:C5'	2.38	0.56
35:BA:1821:A:H2'	35:BA:1822:G:H8	1.71	0.56
35:BA:2001:A:H2'	35:BA:2002:G:C8	2.40	0.56
35:BA:2361:A:H2'	35:BA:2362:G:H5'	1.86	0.56
35:BA:2439:A:H5'	35:BA:2439:A:C8	2.41	0.56
35:BA:2556:C:C2'	35:BA:2557:G:O5'	2.52	0.56
35:BA:2699:C:O2'	35:BA:2700:C:H5'	2.06	0.56
35:BA:2751:G:C6	42:BH:1:MET:HG2	2.41	0.56
39:BE:34:VAL:HG21	39:BE:78:LEU:CD2	2.35	0.56
41:BG:68:PRO:HB3	41:BG:92:VAL:HB	1.87	0.56
53:BU:52:ARG:NH1	53:BU:52:ARG:HB3	2.20	0.56
57:BY:8:LYS:N	57:BY:8:LYS:CD	2.65	0.56
1:AA:39:G:N7	1:AA:547:A:H8	2.03	0.56
1:AA:614:A:H2'	1:AA:615:C:C6	2.41	0.56
3:AC:167:TRP:CD1	3:AC:167:TRP:C	2.83	0.56
4:AD:36:ARG:HA	4:AD:38:TYR:CE1	2.40	0.56
7:AG:38:LEU:C	7:AG:38:LEU:HD13	2.31	0.56
10:AJ:35:SER:OG	10:AJ:73:ASP:HB2	2.05	0.56
26:B1:72:GLU:O	26:B1:76:ARG:HG3	2.05	0.56
35:BA:30:G:OP2	53:BU:5:LYS:NZ	2.39	0.56
35:BA:659:C:H4'	40:BF:100:THR:O	2.06	0.56
35:BA:747:U:N1	35:BA:2613:U:O4	2.35	0.56
35:BA:1804:C:O2'	35:BA:1805:U:H5'	2.05	0.56
35:BA:1806:C:C2'	35:BA:1807:G:C5'	2.84	0.56
35:BA:2784:C:H1'	39:BE:37:ARG:NH1	2.21	0.56
37:BC:100:ILE:C	37:BC:102:GLN:N	2.64	0.56
39:BE:14:ILE:HD11	39:BE:173:VAL:HG11	1.86	0.56
41:BG:6:ALA:CB	41:BG:105:LYS:NZ	2.69	0.56
41:BG:52:ILE:HB	41:BG:54:GLU:HG3	1.88	0.56
46:BN:45:ASN:HD22	46:BN:45:ASN:N	2.03	0.56
48:BP:96:THR:O	48:BP:100:LEU:HD23	2.05	0.56
51:BS:53:SER:OG	51:BS:54:LEU:N	2.38	0.56
51:BS:68:GLN:C	51:BS:70:GLY:H	2.14	0.56
51:BS:89:ARG:HB3	51:BS:92:TYR:HB3	1.87	0.56
51:BS:93:LYS:O	51:BS:94:TYR:C	2.47	0.56
1:AA:61:G:H2'	1:AA:62:U:C6	2.41	0.56
1:AA:118:U:H3'	1:AA:288:A:H61	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:154:C:H2'	1:AA:155:C:C6	2.41	0.56
1:AA:592:G:H2'	1:AA:593:G:H5'	1.86	0.56
1:AA:698:G:O2'	1:AA:699:C:H5'	2.05	0.56
1:AA:1275:A:O2'	1:AA:1276:G:H5'	2.05	0.56
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.88	0.56
16:AP:45:THR:HG23	16:AP:46:PRO:HD2	1.87	0.56
24:AY:686:LYS:O	24:AY:686:LYS:HD3	2.06	0.56
35:BA:54:G:C6	35:BA:117:G:N2	2.74	0.56
35:BA:627:A:H62	48:BP:116:GLY:HA2	1.70	0.56
35:BA:644:A:H2	35:BA:2369:A:H1'	1.69	0.56
35:BA:925:C:C3'	35:BA:926:A:H5"	2.36	0.56
35:BA:1222:C:H2'	35:BA:1223:G:C5'	2.33	0.56
35:BA:1459:G:N3	35:BA:1459:G:C3'	2.68	0.56
38:BD:106:ILE:O	38:BD:106:ILE:HG12	2.05	0.56
41:BG:7:LEU:C	41:BG:7:LEU:CD2	2.79	0.56
41:BG:135:LEU:C	41:BG:137:GLU:H	2.11	0.56
42:BH:137:ASP:O	42:BH:138:LYS:HB2	2.05	0.56
46:BN:2:LYS:HE3	46:BN:2:LYS:N	2.19	0.56
52:BT:6:LEU:O	52:BT:10:VAL:HG23	2.06	0.56
57:BY:42:VAL:HG12	57:BY:42:VAL:O	2.06	0.56
57:BY:43:ASN:HA	57:BY:64:GLU:HA	1.88	0.56
1:AA:788:U:N3	1:AA:792:A:O2'	2.34	0.56
1:AA:953:G:H2'	1:AA:954:G:O4'	2.06	0.56
1:AA:967:C:H4'	9:AI:125:TYR:CE1	2.36	0.56
1:AA:1036:G:H5"	1:AA:1037:C:C5	2.41	0.56
1:AA:1179:A:H2'	1:AA:1180:A:C5'	2.35	0.56
1:AA:1239:A:H4'	1:AA:1240:U:O5'	2.06	0.56
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.41	0.56
1:AA:1386:G:C2	1:AA:1387:G:C8	2.94	0.56
1:AA:1490:C:C3'	1:AA:1491:G:H5'	2.34	0.56
2:AB:59:GLU:HB2	2:AB:221:LEU:HD21	1.86	0.56
7:AG:152:ALA:HB1	7:AG:155:ARG:HH21	1.70	0.56
13:AM:40:ASN:HD22	13:AM:43:THR:CG2	2.18	0.56
15:AO:17:ARG:HG3	15:AO:17:ARG:NH1	2.20	0.56
24:AY:348:ARG:HH11	24:AY:348:ARG:HG3	1.69	0.56
24:AY:506:GLN:HB2	24:AY:576:ASP:O	2.05	0.56
35:BA:49:A:O4'	35:BA:51:G:C4	2.59	0.56
38:BD:8:PRO:HB3	38:BD:14:ARG:CB	2.36	0.56
46:BN:94:HIS:N	46:BN:95:PRO:CD	2.69	0.56
48:BP:115:LEU:HA	48:BP:134:ALA:HB2	1.86	0.56
48:BP:126:VAL:HG12	48:BP:148:LEU:HD11	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:55:ALA:CB	54:BV:101:GLY:HA2	2.35	0.56
57:BY:7:VAL:C	57:BY:8:LYS:HD2	2.30	0.56
58:BZ:60:GLU:O	58:BZ:61:LEU:CB	2.54	0.56
1:AA:453:A:O2'	1:AA:454:C:C6	2.58	0.56
1:AA:1029:C:H42	1:AA:1033:G:H1	1.54	0.56
1:AA:1041:A:H2'	1:AA:1042:G:H8	1.70	0.56
1:AA:1447:A:H2'	1:AA:1452:C:O5'	2.06	0.56
1:AA:1505:G:H4'	1:AA:1506:U:H5"	1.88	0.56
2:AB:77:ALA:O	2:AB:81:VAL:HG23	2.06	0.56
2:AB:102:LEU:HB3	2:AB:180:LEU:HD12	1.87	0.56
7:AG:47:CYS:O	7:AG:48:LYS:C	2.48	0.56
13:AM:11:ARG:H	13:AM:45:VAL:HG21	1.70	0.56
17:AQ:9:VAL:HG11	17:AQ:84:LEU:CD1	2.36	0.56
22:AV:39:U:H2'	22:AV:40:C:H6	1.69	0.56
22:AV:41:C:H2'	22:AV:42:C:H5'	1.85	0.56
24:AY:7:TYR:CE2	24:AY:370:LYS:HD2	2.40	0.56
24:AY:228:MET:O	24:AY:232:LEU:HD22	2.06	0.56
35:BA:1695:G:N3	35:BA:1695:G:H5"	2.20	0.56
39:BE:16:ARG:NH2	39:BE:171:GLU:OE2	2.39	0.56
41:BG:34:LEU:HG	41:BG:161:THR:HG22	1.87	0.56
41:BG:93:THR:O	41:BG:94:LEU:HB2	2.06	0.56
48:BP:77:ARG:HG2	48:BP:77:ARG:HH11	1.71	0.56
48:BP:115:LEU:HB2	48:BP:131:SER:OG	2.05	0.56
52:BT:28:VAL:O	52:BT:29:ARG:CB	2.51	0.56
54:BV:5:VAL:CG2	54:BV:6:LYS:N	2.69	0.56
1:AA:106:C:C2'	1:AA:107:G:C5'	2.83	0.55
1:AA:359:U:H2'	1:AA:360:A:C8	2.41	0.55
1:AA:683:G:C6	1:AA:684:A:C6	2.94	0.55
1:AA:775:G:O2'	1:AA:776:G:C5'	2.30	0.55
1:AA:788:U:C2'	1:AA:789:U:C5'	2.83	0.55
1:AA:792:A:H1'	1:AA:794:A:N7	2.21	0.55
1:AA:948:C:H6	1:AA:948:C:O5'	1.89	0.55
1:AA:959:A:O3'	1:AA:960:U:H4'	2.06	0.55
1:AA:1033:G:H2'	1:AA:1034:G:H8	1.71	0.55
3:AC:106:VAL:O	3:AC:107:GLN:C	2.48	0.55
3:AC:164:ARG:HG2	3:AC:164:ARG:HH11	1.71	0.55
7:AG:71:PRO:HD3	7:AG:103:TRP:CZ3	2.41	0.55
7:AG:83:ALA:HB1	7:AG:85:TYR:CZ	2.40	0.55
9:AI:126:SER:O	9:AI:127:LYS:CB	2.53	0.55
12:AL:83:VAL:CG1	12:AL:100:ILE:HG23	2.35	0.55
19:AS:32:LYS:CB	19:AS:50:ALA:HB3	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:73:HIS:O	20:AT:74:LYS:CG	2.48	0.55
24:AY:610:VAL:HG22	24:AY:643:ILE:HB	1.89	0.55
25:B0:45:PHE:CE1	25:B0:77:ARG:NE	2.71	0.55
25:B0:56:ASP:C	25:B0:58:THR:N	2.63	0.55
29:B4:42:PHE:N	29:B4:42:PHE:CD1	2.74	0.55
30:B5:40:LYS:HD3	30:B5:46:CYS:HB2	1.87	0.55
35:BA:49:A:N6	35:BA:177:G:C2	2.74	0.55
35:BA:848:G:N3	35:BA:933:A:H1'	2.21	0.55
35:BA:894:C:O2'	35:BA:895:U:H5'	2.06	0.55
35:BA:1192:G:O2'	35:BA:1193:G:H5'	2.06	0.55
35:BA:1424:G:H2'	35:BA:1425:G:O5'	2.06	0.55
35:BA:1835:G:H1'	35:BA:1931:U:C2	2.41	0.55
35:BA:1902:C:C4'	38:BD:244:ARG:HB2	2.35	0.55
35:BA:1970:A:C4'	35:BA:1972:A:C1'	2.83	0.55
35:BA:2464:C:O2'	35:BA:2465:C:H6	1.88	0.55
36:BB:7:G:C3'	36:BB:8:U:H5"	2.36	0.55
36:BB:111:G:O2'	36:BB:112:U:H5'	2.06	0.55
37:BC:42:VAL:O	37:BC:216:THR:O	2.24	0.55
37:BC:109:MET:HE3	37:BC:132:LEU:CD2	2.36	0.55
43:BJ:69:UNK:O	43:BJ:70:UNK:O	2.24	0.55
44:BK:28:UNK:O	44:BK:29:UNK:C	2.52	0.55
44:BK:128:UNK:O	44:BK:130:UNK:N	2.39	0.55
48:BP:107:LYS:C	48:BP:109:GLY:H	2.14	0.55
58:BZ:141:VAL:O	58:BZ:144:LEU:HD23	2.06	0.55
1:AA:591:U:C2'	1:AA:592:G:O5'	2.54	0.55
1:AA:867:G:C2'	1:AA:868:C:H5'	2.36	0.55
2:AB:37:ASN:O	2:AB:39:ILE:HG13	2.06	0.55
9:AI:3:GLN:OE1	9:AI:20:ARG:NH1	2.38	0.55
9:AI:80:GLY:O	9:AI:81:ILE:C	2.49	0.55
10:AJ:49:VAL:O	10:AJ:60:ARG:HB3	2.05	0.55
11:AK:124:LYS:HZ3	11:AK:125:PHE:HE1	1.50	0.55
24:AY:84:THR:HG23	24:AY:85:PRO:N	2.20	0.55
24:AY:264:LEU:CB	61:AY:701:GCP:C6	2.84	0.55
24:AY:506:GLN:HG2	24:AY:573:HIS:CE1	2.41	0.55
25:B0:33:ALA:N	25:B0:64:ASP:OD1	2.34	0.55
35:BA:247:G:H2'	35:BA:248:G:O5'	2.06	0.55
35:BA:889:C:H2'	35:BA:890:A:O4'	2.06	0.55
35:BA:896:A:N3	58:BZ:176:PRO:HB3	2.21	0.55
35:BA:1204:A:N1	35:BA:1241:A:C2	2.74	0.55
35:BA:1216:G:H2'	35:BA:1217:C:H5'	1.88	0.55
35:BA:1773:A:O2'	35:BA:1774:C:H5'	2.03	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1804:C:C2'	35:BA:1805:U:H5'	2.36	0.55
35:BA:2182:G:O2'	35:BA:2183:C:H5'	2.06	0.55
37:BC:129:GLY:O	37:BC:131:ILE:N	2.38	0.55
41:BG:39:ILE:HD11	41:BG:155:MET:HG3	1.88	0.55
49:BQ:110:THR:HG23	49:BQ:113:GLN:OE1	2.06	0.55
52:BT:42:ILE:HG13	52:BT:42:ILE:O	2.05	0.55
53:BU:91:ASP:CG	53:BU:96:ALA:HB2	2.30	0.55
55:BW:10:VAL:O	55:BW:11:ARG:CB	2.54	0.55
57:BY:55:TYR:N	57:BY:56:PRO:HD3	2.22	0.55
58:BZ:100:VAL:HG11	58:BZ:137:ILE:HD11	1.89	0.55
1:AA:197:A:N6	1:AA:221:C:H5"	2.21	0.55
1:AA:356:A:H1'	1:AA:368:U:O2'	2.06	0.55
1:AA:588:G:H2'	1:AA:589:C:C6	2.41	0.55
1:AA:775:G:HO2'	1:AA:776:G:H5'	1.64	0.55
1:AA:951:G:O6	1:AA:1230:C:C4	2.59	0.55
1:AA:1396:A:O4'	1:AA:1398:A:H1'	2.07	0.55
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.41	0.55
1:AA:1505:G:C5'	1:AA:1506:U:OP1	2.42	0.55
2:AB:168:THR:HG23	2:AB:192:SER:CB	2.36	0.55
4:AD:150:GLU:CG	4:AD:151:LYS:H	2.19	0.55
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.88	0.55
24:AY:348:ARG:HH11	24:AY:348:ARG:CG	2.19	0.55
28:B3:39:ASP:CG	28:B3:44:ARG:HH21	2.13	0.55
29:B4:53:GLU:CD	29:B4:54:GLY:H	2.13	0.55
35:BA:658:C:H2'	35:BA:659:C:H6	1.72	0.55
35:BA:1041:G:H1	35:BA:1114:G:H22	1.54	0.55
35:BA:1297:C:H2'	35:BA:1298:C:H6	1.71	0.55
35:BA:1313:U:H2'	35:BA:1610:A:C2	2.41	0.55
35:BA:1798:U:O2	35:BA:1821:A:C2	2.59	0.55
35:BA:2461:C:H2'	35:BA:2462:U:C6	2.42	0.55
40:BF:3:GLU:CB	40:BF:24:LEU:HG	2.36	0.55
41:BG:11:TYR:OH	41:BG:33:ARG:HB3	2.07	0.55
41:BG:54:GLU:O	41:BG:57:ALA:HB3	2.06	0.55
44:BK:61:UNK:O	44:BK:62:UNK:CB	2.54	0.55
50:BR:9:LYS:C	50:BR:10:LEU:CD2	2.75	0.55
51:BS:29:PHE:HD1	51:BS:30:ARG:N	2.04	0.55
52:BT:28:VAL:HG11	52:BT:46:GLU:CG	2.36	0.55
52:BT:34:VAL:CG1	52:BT:39:ARG:HG3	2.36	0.55
54:BV:59:ALA:HB2	54:BV:96:ILE:HD13	1.88	0.55
1:AA:91:C:O2	1:AA:91:C:H2'	2.07	0.55
1:AA:186:C:O2'	1:AA:187:C:C5'	2.48	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:495:A:H1'	1:AA:496:A:C2'	2.36	0.55
1:AA:1048:G:O6	1:AA:1210:C:N4	2.39	0.55
1:AA:1282:C:H6	1:AA:1282:C:O5'	1.89	0.55
2:AB:187:LEU:O	2:AB:187:LEU:CG	2.52	0.55
3:AC:169:ALA:O	3:AC:170:GLN:HB2	2.05	0.55
7:AG:121:ALA:O	7:AG:125:MET:N	2.38	0.55
12:AL:83:VAL:HG11	12:AL:100:ILE:CG1	2.35	0.55
14:AN:32:SER:HB3	14:AN:41:ARG:CG	2.37	0.55
33:B8:2:PRO:O	33:B8:3:LYS:C	2.49	0.55
33:B8:31:HIS:O	33:B8:32:LEU:C	2.48	0.55
35:BA:657:U:H2'	35:BA:658:C:C6	2.41	0.55
35:BA:1142(A):A:C4	35:BA:1144:G:N7	2.74	0.55
35:BA:2129:C:N3	35:BA:2159:G:N1	2.39	0.55
35:BA:2169:A:H5'	37:BC:130:ARG:NH2	2.21	0.55
35:BA:2360:A:O2'	35:BA:2361:A:P	2.63	0.55
35:BA:2559:C:C2'	35:BA:2560:C:H5'	2.36	0.55
38:BD:30:GLU:CG	38:BD:63:ARG:NE	2.67	0.55
40:BF:110:LEU:HD22	40:BF:202:PHE:CE1	2.32	0.55
41:BG:6:ALA:HB1	41:BG:105:LYS:NZ	2.21	0.55
41:BG:71:THR:H	41:BG:90:LEU:H	1.54	0.55
48:BP:33:ARG:O	48:BP:34:GLY:O	2.24	0.55
51:BS:83:LYS:O	51:BS:105:ALA:N	2.39	0.55
51:BS:85:VAL:O	51:BS:106:ARG:HG2	2.06	0.55
52:BT:118:ARG:O	52:BT:119:LYS:HB2	2.07	0.55
58:BZ:129:SER:OG	58:BZ:132:ASN:HB3	2.07	0.55
1:AA:774:G:C2'	1:AA:775:G:C5'	2.84	0.55
2:AB:104:ASN:CG	2:AB:107:THR:HB	2.31	0.55
4:AD:13:ARG:HA	4:AD:33:MET:HE1	1.88	0.55
4:AD:34:GLU:O	4:AD:35:ARG:CB	2.55	0.55
7:AG:121:ALA:HA	7:AG:124:LEU:HB2	1.88	0.55
16:AP:82:GLN:O	16:AP:84:ALA:N	2.39	0.55
20:AT:72:LEU:O	20:AT:73:HIS:HB2	2.06	0.55
24:AY:8:ASP:CB	24:AY:11:ARG:HD2	2.36	0.55
24:AY:122:TRP:CH2	24:AY:132:ARG:HD2	2.41	0.55
24:AY:469:GLU:O	24:AY:469:GLU:HG2	2.07	0.55
29:B4:21:VAL:HG21	29:B4:35:VAL:HG23	1.88	0.55
31:B6:5:VAL:O	31:B6:6:ARG:HB2	2.05	0.55
33:B8:4:MET:CE	33:B8:61:LEU:HD23	2.36	0.55
35:BA:18:C:O2	35:BA:19:C:C6	2.60	0.55
35:BA:363(F):A:H1'	35:BA:364:C:H5	1.72	0.55
35:BA:603:A:N7	35:BA:655:A:C6	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:655:A:C4'	35:BA:656:G:H5'	2.29	0.55
35:BA:914:C:C2'	35:BA:915:C:H5'	2.30	0.55
35:BA:1144:G:O2'	35:BA:1145:C:H5'	2.07	0.55
35:BA:1377:G:O5'	35:BA:1377:G:H8	1.90	0.55
35:BA:1877:A:H5'	35:BA:1878:G:OP2	2.07	0.55
35:BA:1945:G:C5	35:BA:1946:U:C5	2.94	0.55
35:BA:1983:C:O5'	35:BA:1983:C:H6	1.89	0.55
35:BA:2849:U:P	52:BT:95:ARG:HH12	2.29	0.55
40:BF:125:LEU:HA	40:BF:194:MET:O	2.06	0.55
50:BR:4:LEU:C	50:BR:6:SER:H	2.14	0.55
53:BU:92:ARG:HH11	53:BU:94:ASN:HD22	1.52	0.55
53:BU:101:ARG:HG3	53:BU:101:ARG:NH1	2.20	0.55
54:BV:19:LYS:HG3	54:BV:20:LEU:N	2.22	0.55
57:BY:60:PHE:C	57:BY:61:ILE:HG13	2.32	0.55
1:AA:560:U:C4'	1:AA:561:U:H5"	2.32	0.55
2:AB:98:LEU:HG	2:AB:101:MET:HE3	1.89	0.55
8:AH:113:SER:HB2	8:AH:134:ILE:HD11	1.89	0.55
9:AI:78:LYS:HD3	9:AI:79:LEU:N	2.21	0.55
12:AL:27:LEU:O	12:AL:28:LYS:C	2.49	0.55
13:AM:84:ILE:HD12	19:AS:66:MET:SD	2.46	0.55
18:AR:53:ARG:C	18:AR:55:ARG:H	2.13	0.55
24:AY:157:LEU:HD23	24:AY:157:LEU:N	2.21	0.55
24:AY:232:LEU:HD12	45:BL:87:UNK:CB	2.36	0.55
26:B1:86:SER:OG	26:B1:89:GLU:HG3	2.07	0.55
29:B4:42:PHE:CE1	41:BG:180:PHE:CE1	2.95	0.55
32:B7:34:ARG:HG3	32:B7:34:ARG:NH1	2.18	0.55
35:BA:47:C:N3	35:BA:179:G:N1	2.54	0.55
35:BA:49:A:HO2'	35:BA:50:U:P	2.28	0.55
35:BA:762:U:H4'	35:BA:763:G:O5'	2.06	0.55
35:BA:858:U:O2	35:BA:2268:A:H2'	2.07	0.55
35:BA:1144:G:H2'	35:BA:1145:C:C6	2.41	0.55
35:BA:1385:G:H4'	35:BA:1386:C:OP1	2.05	0.55
35:BA:1426:G:H8	35:BA:1426:G:O5'	1.90	0.55
35:BA:2523:G:H2'	35:BA:2524:G:C5'	2.36	0.55
37:BC:121:MET:CA	37:BC:124:VAL:HG12	2.34	0.55
38:BD:132:PRO:HG3	38:BD:190:TYR:CE1	2.42	0.55
38:BD:146:GLU:HG2	38:BD:152:GLY:C	2.31	0.55
39:BE:69:LYS:C	39:BE:71:GLY:N	2.58	0.55
42:BH:106:THR:CG2	42:BH:112:PRO:HB3	2.29	0.55
46:BN:133:GLN:O	46:BN:134:ARG:CB	2.54	0.55
48:BP:115:LEU:HD22	48:BP:115:LEU:N	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:66:LEU:HD23	56:BX:66:LEU:O	2.06	0.55
58:BZ:30:ASN:O	58:BZ:31:ARG:C	2.50	0.55
58:BZ:48:PHE:HD1	58:BZ:48:PHE:O	1.90	0.55
58:BZ:150:LEU:O	58:BZ:151:HIS:HB3	2.06	0.55
1:AA:472:A:H2'	1:AA:473:G:O4'	2.07	0.55
1:AA:555:C:N3	1:AA:556:C:N4	2.55	0.55
1:AA:714:G:H2'	1:AA:715:A:C8	2.41	0.55
1:AA:1030:C:H4'	1:AA:1030(A):G:C5'	2.36	0.55
1:AA:1100:C:C5	2:AB:96:ARG:NH2	2.75	0.55
2:AB:71:VAL:CG1	2:AB:170:GLU:HG2	2.37	0.55
2:AB:164:VAL:O	2:AB:186:ALA:CA	2.53	0.55
2:AB:165:VAL:HG23	2:AB:166:ASP:N	2.22	0.55
3:AC:16:ARG:HB2	3:AC:16:ARG:NH1	2.20	0.55
13:AM:3:ARG:N	13:AM:9:ILE:CG2	2.70	0.55
24:AY:47:GLU:HB3	24:AY:52:MET:HB2	1.89	0.55
26:B1:75:GLU:C	26:B1:78:LYS:HD2	2.32	0.55
27:B2:47:ASN:ND2	35:BA:94(A):G:N2	2.51	0.55
30:B5:45:VAL:HG13	30:B5:51:TYR:CD1	2.42	0.55
35:BA:70:G:H2'	35:BA:113:G:O2'	2.06	0.55
35:BA:188:G:H2'	35:BA:189:G:H5'	1.88	0.55
35:BA:1106:G:H2'	35:BA:1107:G:O4'	2.06	0.55
35:BA:1223:G:C2	35:BA:1227:G:C6	2.95	0.55
35:BA:1416:G:C4	35:BA:1417:C:C4	2.95	0.55
35:BA:1543:C:C3'	35:BA:1544:A:H5"	2.37	0.55
35:BA:1599:C:H2'	35:BA:1600:C:C6	2.42	0.55
35:BA:1845:G:O2'	35:BA:1846:G:H5'	2.06	0.55
35:BA:1971:A:H1'	38:BD:240:ALA:O	2.07	0.55
35:BA:2111:C:C2	35:BA:2147:G:N2	2.74	0.55
35:BA:2136:C:H2'	35:BA:2137:C:C6	2.42	0.55
35:BA:2360:A:O2'	35:BA:2361:A:H8	1.89	0.55
35:BA:2581:G:C2'	35:BA:2610:C:N4	2.68	0.55
36:BB:17:C:O2'	36:BB:18:G:H5'	2.06	0.55
36:BB:24:G:H4'	36:BB:25:A:C8	2.42	0.55
37:BC:52:PRO:HB2	37:BC:168:LYS:O	2.07	0.55
39:BE:104:VAL:HG22	39:BE:198:VAL:HG13	1.88	0.55
41:BG:133:LEU:CD1	41:BG:134:GLY:N	2.70	0.55
42:BH:5:GLY:C	42:BH:65:HIS:HE1	2.14	0.55
48:BP:23:PRO:CB	48:BP:33:ARG:HG2	2.37	0.55
51:BS:89:ARG:HG2	51:BS:89:ARG:HH11	1.72	0.55
52:BT:16:ARG:HG3	52:BT:79:HIS:HA	1.88	0.55
52:BT:90:GLN:O	52:BT:92:GLY:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:84:LYS:CD	53:BU:89:GLU:HG3	2.37	0.55
54:BV:51:VAL:HG12	54:BV:52:VAL:H	1.72	0.55
58:BZ:43:GLU:O	58:BZ:47:VAL:HG23	2.07	0.55
1:AA:187:C:H2'	1:AA:188:C:C6	2.41	0.55
1:AA:187:C:H2'	1:AA:188:C:H6	1.72	0.55
1:AA:191:G:H1'	20:AT:105:SER:HA	1.87	0.55
1:AA:688:G:N2	1:AA:699:C:O2	2.36	0.55
1:AA:775:G:H2'	1:AA:776:G:H5'	1.87	0.55
1:AA:795:C:O5'	1:AA:795:C:H6	1.90	0.55
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.41	0.55
1:AA:1081:G:O2'	1:AA:1082:G:H5'	2.07	0.55
3:AC:11:ARG:HB3	3:AC:15:THR:HB	1.89	0.55
14:AN:7:ILE:HG13	14:AN:8:GLU:HG3	1.88	0.55
24:AY:146:LEU:HD23	24:AY:146:LEU:C	2.32	0.55
24:AY:264:LEU:HD12	61:AY:701:GCP:C2	2.37	0.55
24:AY:309:LEU:HB3	24:AY:391:GLY:N	2.22	0.55
24:AY:556:ILE:HD13	24:AY:601:ILE:HD13	1.89	0.55
31:B6:26:ASN:HD21	31:B6:32:ASN:ND2	2.05	0.55
35:BA:28:A:N6	35:BA:512:G:H1'	2.21	0.55
35:BA:363(F):A:H4'	35:BA:364:C:O5'	2.07	0.55
35:BA:573:G:O2'	35:BA:574:C:H3'	2.07	0.55
35:BA:637:A:N1	35:BA:652:C:H5'	2.22	0.55
35:BA:747:U:H5	35:BA:2014:A:N3	2.04	0.55
35:BA:858:U:O2'	35:BA:859:G:C4	2.60	0.55
35:BA:1021:A:H61	35:BA:1142(A):A:N6	2.04	0.55
35:BA:1827:C:C2'	35:BA:1828:G:H5'	2.36	0.55
35:BA:2126:A:O2'	35:BA:2127:G:C5'	2.54	0.55
35:BA:2757:A:H2'	35:BA:2758:A:O5'	2.06	0.55
38:BD:218:ARG:HB3	38:BD:219:PRO:HD2	1.88	0.55
39:BE:55:ASN:O	39:BE:56:PRO:C	2.50	0.55
40:BF:184:TYR:O	40:BF:188:ARG:HG2	2.07	0.55
41:BG:7:LEU:HB2	41:BG:104:GLU:HG3	1.88	0.55
46:BN:48:MET:C	46:BN:48:MET:HE3	2.32	0.55
51:BS:12:PHE:O	51:BS:14:VAL:HG23	2.07	0.55
52:BT:25:GLY:HA2	52:BT:92:GLY:HA2	1.89	0.55
53:BU:17:ILE:HA	53:BU:20:LEU:HD23	1.88	0.55
54:BV:21:ARG:HG2	54:BV:91:TYR:CD1	2.42	0.55
1:AA:490:G:C5	1:AA:491:G:N7	2.74	0.55
1:AA:561:U:OP1	1:AA:561:U:C6	2.59	0.55
1:AA:751:U:O2'	1:AA:752:G:H5'	2.06	0.55
1:AA:862:C:O2'	1:AA:863:U:C5'	2.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:936:C:H2'	1:AA:937:A:C5'	2.37	0.55
1:AA:996:A:H2'	1:AA:997:U:C6	2.42	0.55
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.87	0.55
3:AC:131:ARG:HD3	3:AC:166:GLU:HG2	1.89	0.55
6:AF:28:ARG:NH1	6:AF:28:ARG:HG3	2.21	0.55
16:AP:75:ARG:HH11	16:AP:75:ARG:HG3	1.72	0.55
24:AY:192:LEU:HD12	24:AY:194:THR:HG23	1.89	0.55
24:AY:505:GLY:O	24:AY:506:GLN:HG3	2.07	0.55
26:B1:37:ILE:HD12	26:B1:38:SER:N	2.22	0.55
34:B9:31:LYS:HE2	35:BA:2478:A:H5'	1.87	0.55
35:BA:175:G:H2'	35:BA:176:G:H5'	1.88	0.55
35:BA:541:C:O2'	35:BA:542:C:H5'	2.07	0.55
35:BA:1050:A:H2'	35:BA:1051:G:C8	2.41	0.55
35:BA:1301:A:HO2'	35:BA:1302:A:P	2.30	0.55
35:BA:1684:C:H2'	35:BA:1685:C:C6	2.42	0.55
40:BF:64:ILE:HD12	40:BF:78:ILE:CG2	2.37	0.55
41:BG:7:LEU:O	41:BG:8:LYS:C	2.50	0.55
41:BG:41:GLN:HG3	41:BG:154:GLY:O	2.07	0.55
41:BG:128:ARG:O	41:BG:128:ARG:HG3	2.05	0.55
43:BJ:22:UNK:O	43:BJ:118:UNK:HA	2.06	0.55
46:BN:57:ALA:O	46:BN:58:ASP:C	2.48	0.55
52:BT:126:ALA:O	52:BT:128:GLU:N	2.39	0.55
54:BV:47:VAL:C	54:BV:49:THR:N	2.65	0.55
57:BY:76:CYS:SG	57:BY:77:PRO:CD	2.77	0.55
1:AA:21:G:H2'	1:AA:22:G:C8	2.41	0.55
1:AA:163:C:H2'	1:AA:164:U:H6	1.70	0.55
1:AA:184:G:O2'	1:AA:185:A:H5'	2.06	0.55
1:AA:495:A:O2'	1:AA:496:A:C3'	2.55	0.55
1:AA:828:A:H2'	1:AA:829:G:O4'	2.07	0.55
1:AA:848:C:H2'	1:AA:849:C:H6	1.71	0.55
1:AA:1281:U:P	1:AA:1282:C:H41	2.30	0.55
1:AA:1329:A:P	13:AM:28:ALA:HB3	2.47	0.55
1:AA:1499:A:N3	1:AA:1500:A:C8	2.75	0.55
3:AC:13:GLY:HA3	14:AN:57:ARG:NH1	2.22	0.55
4:AD:173:TRP:HB2	4:AD:187:ARG:O	2.06	0.55
7:AG:69:VAL:HG21	7:AG:134:ALA:HB1	1.89	0.55
7:AG:131:LYS:H	7:AG:131:LYS:HD2	1.71	0.55
19:AS:22:LEU:O	19:AS:26:GLY:N	2.40	0.55
24:AY:36:THR:O	24:AY:38:ARG:N	2.40	0.55
24:AY:454:MET:N	24:AY:458:HIS:HD2	1.90	0.55
29:B4:5:ILE:O	29:B4:6:HIS:C	2.50	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:15:GLU:CG	31:B6:18:ARG:NH1	2.70	0.55
34:B9:4:ARG:O	34:B9:36:GLN:HA	2.07	0.55
35:BA:81:G:H21	57:BY:2:ARG:CZ	2.20	0.55
35:BA:968:G:C2'	35:BA:969:U:H5'	2.33	0.55
35:BA:1445:A:H8	35:BA:1460:A:C2	2.18	0.55
35:BA:1658:C:OP1	39:BE:132:HIS:CE1	2.60	0.55
35:BA:1902:C:H1'	38:BD:244:ARG:HG3	1.89	0.55
35:BA:2115:G:H5'	35:BA:2116:G:OP2	2.07	0.55
36:BB:28:C:H2'	36:BB:29:A:C8	2.42	0.55
38:BD:45:ASN:CG	38:BD:46:GLN:H	2.14	0.55
38:BD:148:GLU:HB2	38:BD:151:LYS:HD2	1.89	0.55
42:BH:10:PRO:HB2	42:BH:49:VAL:CG1	2.36	0.55
47:BO:87:ILE:HG23	47:BO:91:LEU:HA	1.88	0.55
52:BT:38:ASN:ND2	52:BT:38:ASN:H	2.04	0.55
58:BZ:81:ARG:HB2	58:BZ:81:ARG:NH1	2.22	0.55
1:AA:298:A:H2'	1:AA:299:G:O4'	2.08	0.54
1:AA:859:A:H2'	1:AA:860:A:C5'	2.34	0.54
1:AA:875:C:H1'	8:AH:15:ASN:OD1	2.07	0.54
1:AA:1051:C:O5'	1:AA:1051:C:H6	1.90	0.54
1:AA:1216:G:H5"	14:AN:5:ALA:HB2	1.89	0.54
3:AC:94:LEU:C	3:AC:94:LEU:HD12	2.32	0.54
4:AD:70:ILE:HD11	4:AD:100:ARG:HD2	1.89	0.54
9:AI:59:PHE:HZ	9:AI:88:TYR:CE2	2.25	0.54
22:AV:45:U:O2	22:AV:45:U:H3'	2.07	0.54
24:AY:99:ARG:HH22	24:AY:403:GLU:HB2	1.70	0.54
24:AY:490:PRO:HG3	24:AY:516:PRO:HD2	1.89	0.54
25:B0:45:PHE:HZ	25:B0:77:ARG:NH2	2.04	0.54
27:B2:10:LEU:O	27:B2:14:ARG:CB	2.50	0.54
27:B2:70:GLN:O	27:B2:71:ASN:C	2.50	0.54
31:B6:13:CYS:O	31:B6:21:TYR:HA	2.07	0.54
31:B6:15:GLU:C	31:B6:17:LYS:H	2.13	0.54
33:B8:13:ARG:NH2	35:BA:250:G:OP2	2.40	0.54
35:BA:35:G:C6	35:BA:446:G:N2	2.75	0.54
35:BA:248:G:C2'	35:BA:249:C:OP1	2.55	0.54
35:BA:536:A:H2'	35:BA:537:C:C6	2.42	0.54
35:BA:603:A:C1'	35:BA:604:G:P	2.96	0.54
35:BA:831:G:O3'	48:BP:40:SER:CB	2.56	0.54
35:BA:856:C:HO2'	35:BA:857:C:P	2.30	0.54
35:BA:1168:G:O2'	35:BA:1169:G:H5'	2.07	0.54
35:BA:2466:C:O2'	35:BA:2467:C:H5'	2.07	0.54
35:BA:2481:G:O2'	35:BA:2482:G:P	2.65	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:21:PHE:C	38:BD:24:ILE:HG22	2.31	0.54
38:BD:210:GLY:O	38:BD:211:ARG:CB	2.53	0.54
41:BG:104:GLU:CB	41:BG:105:LYS:HE2	2.37	0.54
42:BH:81:GLU:HG2	42:BH:83:TYR:OH	2.07	0.54
44:BK:131:UNK:O	44:BK:132:UNK:C	2.54	0.54
51:BS:15:ARG:CB	51:BS:15:ARG:NH1	2.70	0.54
52:BT:106:SER:O	52:BT:107:ASP:CB	2.54	0.54
53:BU:84:LYS:HD3	53:BU:89:GLU:HG3	1.89	0.54
54:BV:79:VAL:O	54:BV:79:VAL:CG1	2.54	0.54
1:AA:348:G:C2	1:AA:349:A:C8	2.94	0.54
1:AA:368:U:H6	1:AA:368:U:H3'	1.73	0.54
1:AA:792:A:H4'	1:AA:793:U:C5'	2.37	0.54
2:AB:132:LYS:HA	2:AB:135:GLN:CG	2.37	0.54
3:AC:43:LEU:HD22	3:AC:47:LEU:HD22	1.90	0.54
3:AC:187:ALA:O	3:AC:188:LEU:HB2	2.07	0.54
4:AD:61:LYS:HA	4:AD:203:VAL:HG22	1.89	0.54
7:AG:50:ILE:CG2	7:AG:58:PRO:HG3	2.37	0.54
7:AG:89:MET:HG3	7:AG:90:GLU:OE2	2.08	0.54
8:AH:110:ALA:HB3	8:AH:121:ASP:HB3	1.89	0.54
10:AJ:22:LYS:CD	10:AJ:90:LEU:HD22	2.37	0.54
13:AM:4:ILE:CG2	13:AM:5:ALA:N	2.58	0.54
13:AM:10:PRO:HB2	13:AM:18:ALA:CB	2.37	0.54
19:AS:22:LEU:HD13	19:AS:22:LEU:O	2.06	0.54
22:AV:40:C:C2'	22:AV:41:C:H5'	2.36	0.54
24:AY:25:LYS:HZ1	24:AY:86:GLY:H	1.53	0.54
24:AY:156:ARG:NH2	24:AY:666:ARG:NH1	2.55	0.54
27:B2:35:LEU:C	27:B2:37:PHE:N	2.64	0.54
29:B4:64:GLY:HA3	29:B4:67:TYR:CE2	2.42	0.54
31:B6:15:GLU:HG2	31:B6:18:ARG:NH1	2.22	0.54
35:BA:109:G:C2'	35:BA:110:G:O5'	2.55	0.54
35:BA:433:C:H2'	35:BA:434:U:C6	2.42	0.54
35:BA:833:U:H4'	48:BP:51:PHE:C	2.32	0.54
35:BA:1313:U:H2'	35:BA:1610:A:N1	2.21	0.54
35:BA:1722:A:C2	35:BA:1740:G:H2'	2.42	0.54
35:BA:1813:G:H1'	38:BD:50:THR:OG1	2.06	0.54
35:BA:2403:C:C2'	35:BA:2404:C:H5'	2.37	0.54
37:BC:144:GLY:C	37:BC:161:ARG:NH2	2.65	0.54
38:BD:186:HIS:HD2	38:BD:188:GLU:HB2	1.72	0.54
40:BF:172:TRP:H	40:BF:172:TRP:CD1	2.25	0.54
41:BG:108:ASN:O	41:BG:109:VAL:HB	2.07	0.54
46:BN:128:HIS:CD2	46:BN:128:HIS:C	2.84	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:30:ARG:NH1	51:BS:97:ARG:HG2	2.19	0.54
52:BT:30:VAL:HG13	52:BT:84:GLN:O	2.07	0.54
52:BT:92:GLY:HA3	52:BT:120:ARG:NH2	2.22	0.54
1:AA:40:C:O2'	1:AA:41:G:C5'	2.53	0.54
1:AA:46:G:O2'	1:AA:365:U:O2'	2.25	0.54
1:AA:266:G:O2'	1:AA:267:C:P	2.66	0.54
1:AA:1048:G:C2	1:AA:1050:G:N7	2.75	0.54
1:AA:1351:U:H4'	7:AG:33:ASP:OD2	2.07	0.54
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.07	0.54
2:AB:104:ASN:ND2	2:AB:107:THR:HB	2.22	0.54
2:AB:223:ILE:CG2	2:AB:227:GLY:O	2.50	0.54
4:AD:30:LYS:C	4:AD:32:ALA:N	2.63	0.54
6:AF:20:ALA:O	6:AF:24:GLU:HB2	2.07	0.54
6:AF:69:GLU:CD	6:AF:69:GLU:H	2.16	0.54
9:AI:18:PHE:O	9:AI:62:TYR:N	2.41	0.54
9:AI:26:VAL:HG13	9:AI:27:THR:N	2.21	0.54
31:B6:25:LYS:CE	33:B8:34:TRP:HE1	2.18	0.54
35:BA:54:G:O6	35:BA:117:G:N2	2.40	0.54
35:BA:718:A:H2'	35:BA:719:C:O4'	2.06	0.54
35:BA:858:U:O2'	35:BA:859:G:C5	2.60	0.54
35:BA:942:G:O2'	35:BA:943:U:H5'	2.06	0.54
35:BA:1092:C:H2'	35:BA:1093:G:O4'	2.07	0.54
35:BA:1541:G:O2'	35:BA:1542:A:H5"	2.08	0.54
35:BA:1995:U:H2'	35:BA:1996:C:C5	2.42	0.54
35:BA:2203:U:H1'	35:BA:2221:G:N2	2.23	0.54
35:BA:2894:G:H2'	35:BA:2894:G:N3	2.23	0.54
37:BC:6:LYS:HA	37:BC:9:ARG:HH11	1.72	0.54
37:BC:88:GLU:HG3	37:BC:89:GLU:N	2.22	0.54
37:BC:108:TRP:C	37:BC:110:ASP:N	2.62	0.54
40:BF:203:GLN:C	40:BF:205:ARG:H	2.15	0.54
42:BH:39:PRO:C	42:BH:41:MET:H	2.14	0.54
47:BO:68:GLU:HB3	47:BO:78:ARG:HD3	1.90	0.54
48:BP:115:LEU:N	48:BP:115:LEU:CD2	2.70	0.54
51:BS:28:VAL:CG1	51:BS:29:PHE:H	2.19	0.54
51:BS:66:ALA:CA	51:BS:69:VAL:HG12	2.33	0.54
1:AA:47:C:OP2	1:AA:366:C:N4	2.36	0.54
1:AA:106:C:H2'	1:AA:107:G:C8	2.36	0.54
1:AA:113:G:O4'	1:AA:354:G:H4'	2.06	0.54
1:AA:690:G:O6	1:AA:691:G:C6	2.61	0.54
1:AA:773:G:N3	1:AA:774:G:C8	2.76	0.54
2:AB:167:PRO:HG2	2:AB:192:SER:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:185:ILE:HG23	2:AB:199:TYR:CB	2.36	0.54
10:AJ:87:THR:OG1	10:AJ:88:LEU:N	2.40	0.54
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.40	0.54
19:AS:17:GLU:O	19:AS:18:LYS:C	2.50	0.54
19:AS:20:LEU:HD13	29:B4:61:ARG:HH21	1.73	0.54
19:AS:39:THR:HA	19:AS:70:LYS:HD3	1.90	0.54
20:AT:36:LEU:CD1	20:AT:55:ILE:HG23	2.37	0.54
25:B0:26:TYR:CD2	35:BA:857:C:H1'	2.42	0.54
26:B1:19:GLN:O	26:B1:35:THR:HG22	2.06	0.54
27:B2:47:ASN:O	27:B2:50:ILE:N	2.41	0.54
31:B6:15:GLU:HG2	31:B6:18:ARG:HD3	1.89	0.54
33:B8:53:PRO:HA	33:B8:56:GLU:HB2	1.88	0.54
35:BA:654(A):G:H1	35:BA:654(S):G:N2	2.05	0.54
35:BA:1416:G:C2	35:BA:1417:C:C4	2.95	0.54
35:BA:2101:G:H2'	35:BA:2102:U:O4'	2.08	0.54
35:BA:2579:C:O2'	39:BE:131:ALA:HB3	2.07	0.54
37:BC:117:THR:HG23	37:BC:119:ASP:OD1	2.07	0.54
41:BG:141:PHE:HA	41:BG:142:PRO:O	2.08	0.54
42:BH:86:GLU:HA	42:BH:132:ARG:HA	1.88	0.54
51:BS:14:VAL:HG12	51:BS:15:ARG:H	1.72	0.54
58:BZ:60:GLU:O	58:BZ:61:LEU:HG	2.08	0.54
1:AA:346:G:H2'	1:AA:346:G:N3	2.22	0.54
1:AA:867:G:H2'	1:AA:868:C:H5'	1.89	0.54
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.20	0.54
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.43	0.54
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.43	0.54
2:AB:35:GLU:O	2:AB:35:GLU:HG2	2.07	0.54
2:AB:167:PRO:CG	2:AB:188:ALA:CB	2.86	0.54
5:AE:47:LYS:O	5:AE:57:LYS:HE3	2.06	0.54
9:AI:95:LYS:C	9:AI:98:PRO:HD2	2.32	0.54
11:AK:22:HIS:HB3	11:AK:29:ILE:HG23	1.89	0.54
14:AN:7:ILE:HG13	14:AN:8:GLU:N	2.23	0.54
15:AO:17:ARG:NH1	15:AO:77:ARG:NH1	2.55	0.54
25:B0:36:ILE:HD11	35:BA:2355:C:O4'	2.08	0.54
25:B0:56:ASP:C	25:B0:58:THR:H	2.15	0.54
28:B3:7:LYS:HB2	28:B3:34:GLU:HB3	1.90	0.54
28:B3:29:ARG:NH1	35:BA:1183:G:O3'	2.37	0.54
30:B5:37:LYS:HG3	30:B5:37:LYS:O	2.07	0.54
35:BA:272(H):C:H2'	35:BA:272(I):U:C5'	2.37	0.54
35:BA:794:G:H2'	35:BA:795:C:C6	2.43	0.54
35:BA:1092:C:C2'	35:BA:1093:G:H5'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1382:G:H2'	35:BA:1383:C:C6	2.43	0.54
35:BA:1982:C:N3	35:BA:1983:C:C4	2.76	0.54
37:BC:30:VAL:HG23	37:BC:31:LYS:HG2	1.89	0.54
37:BC:44:VAL:HG23	37:BC:176:VAL:HG21	1.89	0.54
37:BC:118:PRO:C	37:BC:120:VAL:N	2.66	0.54
38:BD:79:VAL:CG2	38:BD:111:LEU:HD11	2.37	0.54
39:BE:21:VAL:O	39:BE:23:VAL:HG13	2.07	0.54
40:BF:20:LEU:N	40:BF:24:LEU:CD2	2.69	0.54
40:BF:133:ASN:HA	40:BF:162:LEU:HD23	1.88	0.54
46:BN:67:LEU:HB3	46:BN:88:GLU:HG2	1.88	0.54
50:BR:7:GLY:CA	50:BR:8:ARG:NH2	2.67	0.54
53:BU:90:VAL:HG21	54:BV:47:VAL:HG21	1.90	0.54
54:BV:25:LEU:H	54:BV:92:THR:CG2	2.20	0.54
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.41	0.54
1:AA:690:G:C6	1:AA:691:G:N1	2.76	0.54
1:AA:773:G:N2	1:AA:774:G:C4	2.76	0.54
1:AA:1035:A:H2'	1:AA:1036:G:O4'	2.08	0.54
1:AA:1256:A:H2	1:AA:1277:C:N3	2.06	0.54
2:AB:16:HIS:O	2:AB:17:PHE:CB	2.54	0.54
3:AC:130:VAL:O	3:AC:130:VAL:HG12	2.07	0.54
9:AI:117:HIS:C	9:AI:118:LYS:HG3	2.33	0.54
10:AJ:53:PRO:HA	14:AN:42:ILE:CD1	2.37	0.54
13:AM:20:THR:HA	13:AM:25:ILE:O	2.08	0.54
24:AY:122:TRP:CZ3	24:AY:132:ARG:HD2	2.42	0.54
28:B3:31:LEU:O	28:B3:33:GLN:N	2.31	0.54
33:B8:4:MET:HB3	33:B8:61:LEU:HD22	1.89	0.54
35:BA:484:C:OP1	57:BY:49:VAL:HG13	2.07	0.54
35:BA:963:U:H2'	35:BA:964:C:C6	2.43	0.54
35:BA:1516:C:C2'	35:BA:1517:G:C5'	2.86	0.54
37:BC:49:GLY:N	37:BC:209:PHE:O	2.39	0.54
37:BC:194:ILE:HD11	37:BC:227:PRO:HB3	1.89	0.54
42:BH:11:VAL:HG13	42:BH:15:VAL:CG2	2.38	0.54
46:BN:99:LEU:O	46:BN:99:LEU:HD13	2.08	0.54
47:BO:7:TYR:CZ	47:BO:44:LYS:HG3	2.42	0.54
48:BP:114:ILE:HD12	48:BP:114:ILE:O	2.08	0.54
50:BR:88:ARG:O	50:BR:88:ARG:HD2	2.07	0.54
51:BS:57:LYS:HD2	51:BS:57:LYS:C	2.33	0.54
52:BT:23:ARG:CB	52:BT:24:PRO:HD3	2.35	0.54
53:BU:34:LYS:HE2	53:BU:34:LYS:CA	2.30	0.54
53:BU:52:ARG:HB3	53:BU:52:ARG:HH11	1.71	0.54
54:BV:72:VAL:CG2	54:BV:85:LYS:HB3	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:235:C:C5'	17:AQ:70:ARG:HG2	2.37	0.54
1:AA:561:U:OP1	1:AA:561:U:H6	1.91	0.54
1:AA:687:A:C1'	1:AA:688:G:P	2.96	0.54
1:AA:1228:C:H4'	13:AM:116:THR:O	2.07	0.54
1:AA:1306:A:N6	1:AA:1331:G:C2'	2.70	0.54
1:AA:1314:C:C5	19:AS:6:LYS:NZ	2.75	0.54
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.43	0.54
1:AA:1384:C:N3	1:AA:1385:G:N7	2.56	0.54
1:AA:1400:C:N4	22:AV:34:G:C8	2.76	0.54
7:AG:70:LYS:HB3	7:AG:100:ALA:HB2	1.89	0.54
11:AK:26:ASN:O	11:AK:27:ASN:HB2	2.06	0.54
12:AL:17:LYS:NZ	12:AL:18:VAL:HG22	2.23	0.54
12:AL:28:LYS:HE3	12:AL:33:ARG:HH12	1.73	0.54
13:AM:13:LYS:O	13:AM:45:VAL:HG23	2.08	0.54
13:AM:108:ARG:HH11	13:AM:108:ARG:CG	2.19	0.54
15:AO:82:ILE:HD11	15:AO:87:ILE:C	2.33	0.54
24:AY:25:LYS:NZ	24:AY:86:GLY:HA3	2.22	0.54
24:AY:312:LEU:HD11	24:AY:401:SER:CB	2.36	0.54
24:AY:358:MET:HE1	24:AY:363:ARG:HE	1.73	0.54
24:AY:573:HIS:CG	24:AY:573:HIS:O	2.60	0.54
31:B6:12:GLU:HB3	31:B6:23:THR:HG22	1.89	0.54
35:BA:26:G:C6	35:BA:27:G:N1	2.75	0.54
35:BA:653:A:N3	35:BA:653:A:C3'	2.66	0.54
35:BA:706:A:H2'	35:BA:707:G:O4'	2.08	0.54
35:BA:1071:G:H1'	35:BA:1089:G:C8	2.43	0.54
35:BA:1595:G:C2'	35:BA:1596:A:H5'	2.37	0.54
35:BA:2062:A:H5'	35:BA:2062:A:C8	2.43	0.54
35:BA:2404:C:C4	35:BA:2414:G:N1	2.75	0.54
35:BA:2523:G:H2'	35:BA:2524:G:H5"	1.88	0.54
37:BC:72:GLN:HA	37:BC:72:GLN:NE2	2.23	0.54
39:BE:141:ILE:O	39:BE:154:LYS:HE2	2.07	0.54
40:BF:102:PRO:HB2	40:BF:105:VAL:HG23	1.89	0.54
42:BH:85:LYS:HD3	42:BH:85:LYS:O	2.07	0.54
46:BN:73:THR:HG23	46:BN:82:LEU:HD11	1.90	0.54
51:BS:68:GLN:C	51:BS:70:GLY:N	2.62	0.54
53:BU:8:VAL:HG23	53:BU:11:ARG:HH21	1.73	0.54
58:BZ:6:LYS:HD3	58:BZ:6:LYS:N	2.23	0.54
1:AA:477:A:O2'	1:AA:479:C:H5'	2.07	0.54
1:AA:563:A:H5'	1:AA:566:G:H21	1.70	0.54
1:AA:591:U:C2	1:AA:592:G:C8	2.95	0.54
1:AA:609:A:C2'	1:AA:610:G:H5'	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:848:C:O2'	1:AA:849:C:H5'	2.08	0.54
1:AA:1137:C:H4'	1:AA:1138:G:N2	2.22	0.54
1:AA:1228:C:OP1	13:AM:108:ARG:NH2	2.38	0.54
1:AA:1368:G:H2'	1:AA:1369:C:C5'	2.33	0.54
5:AE:64:ARG:HG3	5:AE:64:ARG:HH11	1.73	0.54
7:AG:79:ARG:HD3	7:AG:79:ARG:N	2.23	0.54
8:AH:123:GLU:O	8:AH:127:LEU:HB2	2.07	0.54
12:AL:58:VAL:O	12:AL:65:GLU:HA	2.08	0.54
18:AR:84:LYS:HD3	18:AR:84:LYS:N	2.22	0.54
22:AV:1:G:C2	22:AV:73:A:C8	2.95	0.54
24:AY:89:ASP:O	24:AY:90:PHE:CD1	2.61	0.54
24:AY:498:ILE:HG22	24:AY:507:TYR:CD2	2.42	0.54
24:AY:513:LYS:HB2	24:AY:566:THR:HB	1.89	0.54
35:BA:688:U:O2'	35:BA:689:A:H5'	2.08	0.54
35:BA:1652:A:H8	35:BA:1652:A:O5'	1.91	0.54
35:BA:2339:G:H2'	35:BA:2340:G:C8	2.43	0.54
37:BC:54:ARG:CZ	37:BC:56:ASP:HB3	2.37	0.54
37:BC:73:VAL:HG21	37:BC:157:ILE:HG22	1.88	0.54
37:BC:183:PRO:C	37:BC:185:LYS:H	2.16	0.54
39:BE:179:GLU:CB	39:BE:181:LEU:HD23	2.28	0.54
41:BG:144:ILE:O	41:BG:145:THR:C	2.51	0.54
48:BP:16:ARG:NH2	48:BP:18:ARG:HG2	2.22	0.54
48:BP:17:LYS:O	48:BP:17:LYS:HG2	2.08	0.54
48:BP:108:LYS:O	48:BP:110:TYR:N	2.41	0.54
49:BQ:60:ARG:HA	58:BZ:179:ASP:HA	1.90	0.54
52:BT:35:LYS:NZ	52:BT:41:ARG:HD2	2.23	0.54
58:BZ:19:ARG:C	58:BZ:21:ALA:N	2.65	0.54
1:AA:78:G:H1'	1:AA:79:G:O5'	2.08	0.54
1:AA:355:C:H2'	1:AA:356:A:O4'	2.08	0.54
1:AA:507:C:H3'	1:AA:508:C:H2'	1.88	0.54
1:AA:1077:G:C2	1:AA:1081:G:C6	2.96	0.54
3:AC:14:ILE:HG12	3:AC:15:THR:N	2.17	0.54
4:AD:129:ASN:HD21	4:AD:145:GLU:H	1.53	0.54
11:AK:93:GLN:HA	11:AK:93:GLN:OE1	2.06	0.54
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.38	0.54
22:AV:39:U:O2'	22:AV:40:C:H5'	2.07	0.54
24:AY:26:THR:HA	24:AY:83:ASP:OD2	2.07	0.54
25:B0:69:PHE:N	25:B0:69:PHE:CD1	2.75	0.54
27:B2:21:LEU:O	27:B2:24:LEU:N	2.41	0.54
35:BA:207:A:H2'	35:BA:208:C:O4'	2.08	0.54
35:BA:259:G:H1'	35:BA:621:A:O2'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1084:A:N7	35:BA:1085:A:C5	2.76	0.54
35:BA:1842:G:H2'	35:BA:1843:C:C6	2.43	0.54
35:BA:2556:C:H2'	35:BA:2557:G:O5'	2.08	0.54
40:BF:7:TYR:HB3	40:BF:16:GLY:H	1.73	0.54
40:BF:34:TRP:HB2	48:BP:10:PRO:HB2	1.89	0.54
41:BG:91:ARG:HG2	41:BG:92:VAL:N	2.23	0.54
47:BO:10:VAL:HG23	47:BO:10:VAL:O	2.08	0.54
52:BT:46:GLU:O	52:BT:65:LYS:HE3	2.07	0.54
1:AA:536:C:H2'	1:AA:537:G:H8	1.71	0.54
1:AA:625:G:H2'	1:AA:626:U:C6	2.42	0.54
1:AA:679:C:H2'	1:AA:680:C:H6	1.73	0.54
1:AA:699:C:C2'	1:AA:700:G:C5'	2.75	0.54
1:AA:1029:C:C4	1:AA:1030(A):G:O6	2.61	0.54
1:AA:1049:U:HO2'	14:AN:2:ALA:N	2.06	0.54
4:AD:83:SER:HA	4:AD:89:THR:HG21	1.89	0.54
7:AG:49:ILE:HG22	7:AG:53:LYS:HE3	1.89	0.54
19:AS:6:LYS:HG3	19:AS:7:LYS:N	2.20	0.54
22:AV:16:C:O2'	22:AV:17:C:O5'	2.23	0.54
22:AV:27:G:H1	22:AV:43:C:N4	2.03	0.54
29:B4:6:HIS:CE1	41:BG:66:GLN:HG3	2.44	0.54
30:B5:48:GLU:OE1	30:B5:48:GLU:N	2.39	0.54
35:BA:15:G:H2'	35:BA:16:G:C5'	2.32	0.54
35:BA:262:A:C2'	35:BA:263:C:C5'	2.83	0.54
35:BA:327:G:H2'	35:BA:328:U:O5'	2.08	0.54
35:BA:877:U:O2'	35:BA:878:A:H5"	2.07	0.54
35:BA:896:A:O4'	58:BZ:176:PRO:HG3	2.07	0.54
35:BA:1120:G:H2'	35:BA:1121:C:C6	2.43	0.54
35:BA:2126:A:N6	35:BA:2163:C:H4'	2.22	0.54
37:BC:121:MET:HE1	37:BC:139:PRO:HG2	1.89	0.54
39:BE:101:ARG:HB3	39:BE:169:ASN:HD22	1.72	0.54
39:BE:141:ILE:CB	39:BE:154:LYS:HE2	2.38	0.54
40:BF:126:VAL:HG21	40:BF:129:PHE:CZ	2.43	0.54
41:BG:37:VAL:O	41:BG:93:THR:O	2.25	0.54
48:BP:9:ASN:H	48:BP:10:PRO:HD2	1.71	0.54
51:BS:13:ARG:HG3	51:BS:14:VAL:N	2.15	0.54
54:BV:62:LEU:HD21	54:BV:95:LEU:CB	2.25	0.54
58:BZ:28:MET:HE1	58:BZ:67:LEU:HD11	1.89	0.54
58:BZ:180:VAL:O	58:BZ:181:GLU:HB2	2.08	0.54
1:AA:41:G:H2'	1:AA:42:G:C8	2.43	0.53
1:AA:92:C:C2'	1:AA:93:G:H5'	2.37	0.53
1:AA:588:G:O6	1:AA:753:A:H2'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:699:C:O5'	1:AA:699:C:H6	1.91	0.53
3:AC:35:GLU:HG2	3:AC:39:ILE:HD11	1.90	0.53
3:AC:60:ALA:HB3	3:AC:63:ASN:HD22	1.72	0.53
3:AC:187:ALA:O	3:AC:188:LEU:CB	2.55	0.53
16:AP:18:ARG:HG3	16:AP:35:LYS:HE3	1.89	0.53
16:AP:47:ASP:CG	16:AP:47:ASP:O	2.51	0.53
24:AY:9:LEU:CD2	24:AY:284:LEU:HD13	2.38	0.53
24:AY:25:LYS:NZ	24:AY:86:GLY:H	2.05	0.53
24:AY:356:LEU:C	24:AY:356:LEU:HD23	2.33	0.53
35:BA:18:C:O2	35:BA:19:C:C5	2.60	0.53
35:BA:250:G:C6	35:BA:251:A:C6	2.96	0.53
35:BA:1231:G:H2'	35:BA:1232:G:C8	2.43	0.53
35:BA:1301:A:N3	35:BA:1301:A:C5'	2.71	0.53
35:BA:1446:C:H41	35:BA:1465:G:H1	1.49	0.53
35:BA:2000:G:N3	35:BA:2001:A:C8	2.75	0.53
35:BA:2328:A:H2'	35:BA:2329:G:C8	2.42	0.53
39:BE:70:ALA:O	39:BE:71:GLY:C	2.51	0.53
39:BE:87:GLU:OE1	39:BE:89:ASP:HB3	2.08	0.53
39:BE:111:ARG:HB3	50:BR:2:ARG:CZ	2.39	0.53
40:BF:27:GLU:OE1	40:BF:27:GLU:N	2.41	0.53
41:BG:60:LEU:O	41:BG:60:LEU:HD12	2.08	0.53
41:BG:113:ARG:HG2	41:BG:141:PHE:CD2	2.43	0.53
41:BG:148:MET:C	41:BG:148:MET:HE3	2.32	0.53
48:BP:24:GLY:HA3	48:BP:29:LYS:O	2.08	0.53
48:BP:66:GLY:O	48:BP:67:MET:CB	2.56	0.53
51:BS:39:ILE:O	51:BS:39:ILE:HG22	2.08	0.53
52:BT:91:ARG:O	52:BT:117:ASP:HB2	2.07	0.53
53:BU:17:ILE:HG23	53:BU:39:LEU:HD12	1.89	0.53
1:AA:188:C:O2'	1:AA:189:G:H5'	2.08	0.53
1:AA:1047:G:H2'	1:AA:1048:G:C5'	2.24	0.53
1:AA:1372:U:H2'	1:AA:1373:G:O5'	2.07	0.53
2:AB:166:ASP:CG	2:AB:169:LYS:HB2	2.33	0.53
2:AB:169:LYS:O	2:AB:169:LYS:HD3	2.08	0.53
3:AC:35:GLU:OE1	3:AC:97:LYS:HE2	2.08	0.53
7:AG:16:LEU:CD1	9:AI:42:ARG:HA	2.39	0.53
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.08	0.53
7:AG:48:LYS:HG2	7:AG:49:ILE:N	2.22	0.53
7:AG:113:GLU:HB2	7:AG:119:ARG:HD2	1.90	0.53
9:AI:121:ARG:HG2	9:AI:121:ARG:NH1	2.22	0.53
24:AY:617:MET:CE	24:AY:641:GLN:HG2	2.38	0.53
25:B0:76:GLY:O	25:B0:78:TYR:CE1	2.60	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:49:VAL:HG13	26:B1:60:PHE:HB2	1.91	0.53
27:B2:70:GLN:HE21	27:B2:71:ASN:HB2	1.73	0.53
29:B4:65:ASP:O	29:B4:66:SER:C	2.51	0.53
31:B6:53:LYS:O	31:B6:54:ILE:OXT	2.25	0.53
35:BA:955:C:OP2	49:BQ:14:ARG:CD	2.55	0.53
35:BA:1063:G:H22	35:BA:1074:G:H1	1.56	0.53
35:BA:1475:G:H5'	35:BA:1475:G:C8	2.37	0.53
35:BA:1587:A:H3'	35:BA:1588:C:C6	2.43	0.53
35:BA:2753:A:C2'	35:BA:2754:U:C5'	2.85	0.53
36:BB:30:C:H1'	36:BB:57:A:H61	1.72	0.53
37:BC:121:MET:HE1	37:BC:139:PRO:O	2.09	0.53
53:BU:15:LYS:O	53:BU:19:LYS:HD3	2.08	0.53
57:BY:26:LYS:CG	57:BY:27:VAL:H	2.18	0.53
57:BY:41:GLY:O	57:BY:42:VAL:C	2.50	0.53
1:AA:36:C:O2'	1:AA:37:U:H5'	2.08	0.53
1:AA:64:G:C4'	1:AA:65:U:OP1	2.56	0.53
1:AA:152:A:H62	1:AA:169:C:H42	1.57	0.53
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.40	0.53
1:AA:1241:G:H2'	1:AA:1242:C:H6	1.69	0.53
1:AA:1305:G:H1'	1:AA:1332:A:H62	1.73	0.53
10:AJ:80:LYS:HB3	10:AJ:80:LYS:HZ2	1.73	0.53
11:AK:48:ILE:HD11	11:AK:64:ALA:HA	1.90	0.53
12:AL:75:HIS:CD2	12:AL:77:LEU:H	2.23	0.53
17:AQ:40:LYS:HD3	17:AQ:42:TYR:CZ	2.43	0.53
24:AY:58:GLU:HG2	24:AY:63:ILE:O	2.08	0.53
25:B0:10:THR:CG2	25:B0:11:ARG:H	2.02	0.53
25:B0:69:PHE:CD2	25:B0:79:VAL:HG22	2.43	0.53
27:B2:11:GLU:O	27:B2:15:LYS:HG2	2.09	0.53
29:B4:71:ARG:HG3	29:B4:71:ARG:O	2.08	0.53
34:B9:1:MET:SD	34:B9:31:LYS:C	2.92	0.53
35:BA:177:G:N3	35:BA:177:G:H2'	2.23	0.53
35:BA:265:A:H1'	35:BA:266:G:O4'	2.08	0.53
35:BA:686:G:N2	35:BA:788:A:H61	2.06	0.53
35:BA:1516:C:C2'	35:BA:1517:G:H5"	2.37	0.53
35:BA:2838:G:O2'	50:BR:45:ARG:HD3	2.08	0.53
37:BC:127:LYS:HD3	37:BC:127:LYS:H	1.73	0.53
40:BF:140:LEU:O	40:BF:143:ALA:HB3	2.07	0.53
41:BG:9:ARG:N	41:BG:9:ARG:HD2	2.23	0.53
41:BG:77:ILE:CG2	41:BG:80:PHE:HB2	2.32	0.53
41:BG:127:GLY:C	41:BG:129:GLY:N	2.65	0.53
42:BH:124:GLU:HB2	42:BH:132:ARG:HG2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:34:THR:HG22	47:BO:37:ASP:OD2	2.08	0.53
50:BR:13:HIS:CE1	50:BR:16:HIS:HB2	2.43	0.53
51:BS:11:LYS:C	51:BS:13:ARG:H	2.14	0.53
53:BU:24:TYR:HB2	53:BU:29:SER:HB3	1.89	0.53
1:AA:266:G:O2'	1:AA:267:C:H5"	2.08	0.53
1:AA:359:U:C2'	1:AA:360:A:C5'	2.87	0.53
1:AA:937:A:H2'	1:AA:938:A:H5'	1.90	0.53
2:AB:39:ILE:O	2:AB:41:ILE:CD1	2.57	0.53
24:AY:69:VAL:HG13	24:AY:69:VAL:O	2.08	0.53
24:AY:402:ILE:HG22	24:AY:403:GLU:N	2.23	0.53
31:B6:20:ASN:CG	31:B6:21:TYR:N	2.67	0.53
35:BA:419:C:H2'	35:BA:420:C:H6	1.72	0.53
35:BA:843:G:O2'	35:BA:844:C:H5'	2.09	0.53
35:BA:860:U:O2	35:BA:860:U:H5'	2.08	0.53
35:BA:1427:A:C4'	35:BA:1428:C:O5'	2.40	0.53
35:BA:1451:C:H2'	35:BA:1458:C:H41	1.73	0.53
35:BA:1528:A:N1	35:BA:1542:A:H2	2.07	0.53
35:BA:2310:A:N7	41:BG:75:LYS:HE2	2.24	0.53
35:BA:2712:U:H1'	35:BA:2712(A):A:N7	2.23	0.53
35:BA:2717:G:O2'	52:BT:96:ARG:HD3	2.09	0.53
37:BC:100:ILE:O	37:BC:102:GLN:N	2.42	0.53
41:BG:94:LEU:N	41:BG:94:LEU:HD22	2.22	0.53
41:BG:131:TYR:O	41:BG:132:ASN:CB	2.55	0.53
44:BK:56:UNK:C	44:BK:67:UNK:HA	2.38	0.53
55:BW:1:MET:HB3	55:BW:64:MET:CE	2.38	0.53
1:AA:199:G:C2'	1:AA:200:G:O5'	2.57	0.53
1:AA:701:C:OP1	1:AA:703:G:H5'	2.09	0.53
1:AA:1279:A:H2'	1:AA:1282:C:N4	2.24	0.53
1:AA:1347:G:N7	9:AI:10:ARG:NH2	2.56	0.53
1:AA:1504:G:H3'	1:AA:1504:G:P	2.48	0.53
2:AB:10:LEU:HD23	2:AB:10:LEU:O	2.07	0.53
2:AB:15:VAL:HG13	2:AB:209:ARG:HB3	1.91	0.53
4:AD:170:VAL:HG21	4:AD:176:LEU:HB2	1.90	0.53
7:AG:46:ALA:HB1	7:AG:121:ALA:HB2	1.89	0.53
9:AI:11:LYS:O	9:AI:11:LYS:HG3	2.09	0.53
10:AJ:89:ASP:O	10:AJ:90:LEU:HB2	2.09	0.53
13:AM:65:LYS:HG3	13:AM:65:LYS:O	2.08	0.53
24:AY:342:TYR:CZ	24:AY:347:GLY:HA2	2.44	0.53
24:AY:408:VAL:HG12	24:AY:656:ALA:HB2	1.89	0.53
29:B4:32:TYR:CD2	29:B4:33:VAL:O	2.62	0.53
34:B9:1:MET:HE3	35:BA:2478:A:OP2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:195:A:H5”	48:BP:46:LYS:HZ3	1.74	0.53
35:BA:244:A:C2	35:BA:255:A:C4	2.97	0.53
35:BA:492:A:C2’	35:BA:493:G:H5’	2.39	0.53
35:BA:755:C:H2’	35:BA:756:C:H6	1.74	0.53
35:BA:900:A:H3’	35:BA:901:A:C8	2.41	0.53
35:BA:1122:G:C2	35:BA:1123:C:C5	2.97	0.53
35:BA:1145:C:O2’	35:BA:1146:C:H5’	2.09	0.53
35:BA:1300:U:H1’	35:BA:1301:A:OP2	2.09	0.53
35:BA:1413:G:C2’	35:BA:1414:G:O5’	2.56	0.53
35:BA:1539:G:C6	35:BA:1540:U:H1’	2.43	0.53
35:BA:1798:U:H5	38:BD:274:ARG:NH2	2.06	0.53
35:BA:2022:U:O2’	35:BA:2617:C:H5’	2.07	0.53
35:BA:2312:U:H2’	35:BA:2313:C:C5’	2.10	0.53
35:BA:2373:G:H2’	35:BA:2374:C:C6	2.44	0.53
35:BA:2467:C:H4’	49:BQ:123:HIS:CD2	2.43	0.53
35:BA:2779:U:H1’	35:BA:2781:A:C6	2.44	0.53
37:BC:101:ILE:C	37:BC:103:LYS:N	2.67	0.53
37:BC:124:VAL:CG1	37:BC:125:GLY:N	2.71	0.53
38:BD:134:ARG:CZ	38:BD:135:PHE:HE1	2.20	0.53
40:BF:19:GLU:CD	40:BF:19:GLU:N	2.67	0.53
55:BW:20:VAL:HG23	55:BW:47:VAL:HG21	1.90	0.53
1:AA:105:G:C6	1:AA:106:C:N3	2.77	0.53
1:AA:436:C:H2’	1:AA:437:U:H6	1.72	0.53
1:AA:592:G:C2’	1:AA:593:G:H5’	2.38	0.53
1:AA:942:G:C2	1:AA:943:U:C2	2.97	0.53
2:AB:21:ARG:C	2:AB:23:ARG:H	2.16	0.53
9:AI:52:ALA:HB3	9:AI:95:LYS:HZ3	1.72	0.53
13:AM:23:TYR:HB3	13:AM:67:GLU:HA	1.91	0.53
20:AT:64:ASP:OD1	20:AT:81:LYS:HD2	2.07	0.53
24:AY:5:VAL:HG13	24:AY:6:GLU:H	1.74	0.53
24:AY:312:LEU:HD23	24:AY:387:ASP:O	2.08	0.53
24:AY:689:LYS:HG3	24:AY:690:GLY:N	2.23	0.53
25:B0:21:LEU:HD13	25:B0:41:ARG:HG2	1.90	0.53
25:B0:35:ASN:O	25:B0:37:LEU:HD22	2.08	0.53
29:B4:56:VAL:C	29:B4:58:ARG:H	2.16	0.53
31:B6:15:GLU:OE2	31:B6:41:PRO:CB	2.56	0.53
31:B6:17:LYS:HB2	31:B6:18:ARG:NH1	2.19	0.53
35:BA:11:G:O5’	35:BA:11:G:H8	1.90	0.53
35:BA:14:A:H8	35:BA:14:A:O5’	1.91	0.53
35:BA:632:A:O5’	35:BA:632:A:H8	1.90	0.53
35:BA:672:C:O3’	40:BF:81:PRO:HG2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:813:U:O2'	35:BA:1225:G:H1'	2.09	0.53
35:BA:1050:A:H2'	35:BA:1051:G:H8	1.74	0.53
35:BA:1227:G:C4	35:BA:1228:G:C8	2.96	0.53
35:BA:1291:C:HO2'	35:BA:1292:U:H5'	1.70	0.53
35:BA:1461:G:C6	35:BA:1462:C:N4	2.76	0.53
35:BA:1684:C:O2'	35:BA:1685:C:H5'	2.09	0.53
35:BA:1767:C:H2'	35:BA:1768:U:C5'	2.29	0.53
35:BA:2092:U:H5	35:BA:2226:C:OP2	1.91	0.53
35:BA:2363:C:O2'	35:BA:2364:C:C5'	2.39	0.53
35:BA:2363:C:H2'	35:BA:2364:C:H6	1.72	0.53
35:BA:2403:C:C6	35:BA:2403:C:P	3.01	0.53
35:BA:2491:U:H4'	35:BA:2570:G:OP1	2.09	0.53
35:BA:2758:A:C4	35:BA:2759:G:C8	2.97	0.53
37:BC:128:LEU:HD12	37:BC:128:LEU:O	2.09	0.53
38:BD:92:ILE:HA	38:BD:107:ALA:H	1.74	0.53
38:BD:97:TYR:C	38:BD:99:ASP:H	2.17	0.53
39:BE:101:ARG:HB3	39:BE:169:ASN:ND2	2.24	0.53
41:BG:39:ILE:HD11	41:BG:155:MET:SD	2.48	0.53
51:BS:19:LYS:O	51:BS:19:LYS:HG2	2.09	0.53
53:BU:42:ALA:O	53:BU:43:GLY:C	2.51	0.53
54:BV:47:VAL:O	54:BV:49:THR:N	2.41	0.53
55:BW:13:SER:HB3	55:BW:16:LYS:HD2	1.89	0.53
55:BW:26:GLY:N	55:BW:71:VAL:HG23	2.21	0.53
57:BY:3:VAL:C	57:BY:5:MET:H	2.15	0.53
1:AA:92:C:H2'	1:AA:93:G:C5'	2.38	0.53
1:AA:696:A:O5'	1:AA:696:A:H8	1.91	0.53
1:AA:1372:U:OP2	9:AI:11:LYS:HE3	2.07	0.53
4:AD:34:GLU:O	4:AD:35:ARG:HB2	2.08	0.53
4:AD:170:VAL:HG12	4:AD:174:LEU:HB2	1.91	0.53
10:AJ:8:LEU:H	10:AJ:8:LEU:HD12	1.73	0.53
12:AL:27:LEU:HD12	12:AL:28:LYS:CE	2.28	0.53
19:AS:7:LYS:O	19:AS:7:LYS:CG	2.56	0.53
24:AY:127:LYS:C	24:AY:128:TYR:HD1	2.16	0.53
26:B1:57:GLU:O	26:B1:58:ILE:CG1	2.54	0.53
29:B4:12:ALA:O	29:B4:13:ARG:HG2	2.09	0.53
29:B4:60:GLN:C	29:B4:62:ARG:HD2	2.33	0.53
35:BA:597:U:O2'	48:BP:15:ARG:HG2	2.08	0.53
35:BA:888:C:O2'	35:BA:889:C:H5"	2.08	0.53
35:BA:963:U:C2'	35:BA:964:C:O5'	2.56	0.53
35:BA:1021:A:O2'	35:BA:1023:U:H5"	2.08	0.53
35:BA:1839:G:H5'	35:BA:1839:G:C8	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2000:G:N2	35:BA:2001:A:C8	2.75	0.53
35:BA:2262:U:O2'	35:BA:2263:C:H5'	2.09	0.53
37:BC:65:LEU:HD22	37:BC:189:ASN:HB3	1.91	0.53
38:BD:28:GLU:N	38:BD:28:GLU:CD	2.66	0.53
47:BO:98:VAL:HG12	47:BO:117:LEU:HB3	1.89	0.53
51:BS:88:ASP:OD1	51:BS:89:ARG:N	2.42	0.53
54:BV:47:VAL:C	54:BV:49:THR:H	2.17	0.53
54:BV:47:VAL:HB	54:BV:49:THR:O	2.09	0.53
57:BY:57:GLN:OE1	57:BY:57:GLN:HA	2.08	0.53
1:AA:89:C:O2'	1:AA:90:U:H6	1.92	0.53
1:AA:198:G:O2'	1:AA:199:G:P	2.66	0.53
1:AA:543:C:O2'	1:AA:544:G:H5"	2.09	0.53
1:AA:609:A:H2'	1:AA:610:G:H5'	1.91	0.53
1:AA:790:A:H5'	22:AV:38:A:O3'	2.09	0.53
1:AA:1048:G:N3	1:AA:1050:G:C8	2.77	0.53
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.44	0.53
1:AA:1370:G:H2'	1:AA:1371:G:H5'	1.91	0.53
6:AF:45:LEU:O	6:AF:46:ARG:HG2	2.08	0.53
9:AI:10:ARG:O	9:AI:11:LYS:C	2.52	0.53
12:AL:46:LYS:O	12:AL:48:PRO:CD	2.57	0.53
16:AP:10:GLY:CA	16:AP:16:HIS:HB2	2.39	0.53
24:AY:44:GLU:C	24:AY:45:VAL:HG13	2.33	0.53
24:AY:421:GLN:HE21	24:AY:421:GLN:C	2.17	0.53
27:B2:21:LEU:HD13	27:B2:64:LEU:HB2	1.90	0.53
27:B2:31:GLU:HB3	27:B2:53:LEU:HD11	1.91	0.53
27:B2:41:ILE:HD12	27:B2:43:GLN:CG	2.34	0.53
35:BA:1252:G:OP2	53:BU:14:HIS:HE1	1.91	0.53
35:BA:1258:C:O4'	40:BF:84:VAL:HG11	2.08	0.53
35:BA:1771:C:C1'	35:BA:1786:A:H8	2.22	0.53
35:BA:2150:U:H2'	35:BA:2151:G:C8	2.43	0.53
35:BA:2404:C:H2'	35:BA:2405:G:O5'	2.09	0.53
35:BA:2801:A:O2'	35:BA:2895:U:H5'	2.08	0.53
37:BC:116:ALA:HB1	37:BC:118:PRO:HA	1.91	0.53
38:BD:206:LEU:HD23	38:BD:211:ARG:NH1	2.24	0.53
40:BF:46:ARG:HH11	40:BF:46:ARG:HG3	1.74	0.53
40:BF:133:ASN:O	40:BF:134:GLY:C	2.52	0.53
42:BH:166:GLY:O	42:BH:167:GLU:HB2	2.09	0.53
46:BN:46:VAL:HG13	46:BN:48:MET:HG2	1.90	0.53
50:BR:21:TYR:OH	50:BR:43:GLU:HG2	2.09	0.53
50:BR:70:LEU:HD13	50:BR:75:LEU:CD1	2.39	0.53
52:BT:93:ARG:CG	52:BT:117:ASP:HA	2.36	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:40:ASP:OD1	58:BZ:42:VAL:HG12	2.09	0.53
7:AG:47:CYS:HA	7:AG:50:ILE:CG2	2.39	0.53
10:AJ:4:ILE:HG21	10:AJ:74:ILE:HD11	1.91	0.53
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG22	1.91	0.53
12:AL:94:PRO:C	12:AL:96:VAL:H	2.17	0.53
16:AP:3:LYS:O	16:AP:21:VAL:HA	2.09	0.53
17:AQ:95:TYR:C	17:AQ:97:SER:H	2.17	0.53
19:AS:40:ILE:HG23	19:AS:67:VAL:HA	1.91	0.53
31:B6:16:CYS:SG	31:B6:48:VAL:HG23	2.48	0.53
35:BA:558:G:OP1	46:BN:111:PRO:HD2	2.09	0.53
35:BA:1821:A:H8	35:BA:1821:A:O5'	1.92	0.53
35:BA:1984:G:H2'	35:BA:1985:G:C5'	2.37	0.53
35:BA:2317:C:H2'	35:BA:2318:G:H5'	1.91	0.53
37:BC:116:ALA:CB	37:BC:118:PRO:HA	2.37	0.53
38:BD:33:LEU:HD23	38:BD:33:LEU:C	2.34	0.53
39:BE:93:VAL:HG12	39:BE:182:LEU:HD13	1.91	0.53
46:BN:22:THR:HG22	46:BN:61:ARG:HB3	1.91	0.53
46:BN:119:ARG:CG	46:BN:119:ARG:HH11	2.22	0.53
48:BP:51:PHE:CD2	48:BP:52:GLU:C	2.87	0.53
49:BQ:65:PHE:CD1	49:BQ:65:PHE:N	2.77	0.53
52:BT:34:VAL:HG13	52:BT:39:ARG:HA	1.90	0.53
57:BY:38:ILE:CG2	57:BY:39:VAL:N	2.72	0.53
58:BZ:112:ARG:HD3	58:BZ:112:ARG:O	2.09	0.53
1:AA:106:C:O2'	1:AA:107:G:C5'	2.30	0.53
1:AA:770:C:C2'	1:AA:771:G:C5'	2.86	0.53
1:AA:868:C:C2'	1:AA:869:G:H5'	2.39	0.53
1:AA:1125:U:O4	10:AJ:5:ARG:NE	2.41	0.53
5:AE:6:PHE:CB	5:AE:34:VAL:HG22	2.39	0.53
24:AY:17:ILE:HD12	24:AY:17:ILE:N	2.24	0.53
24:AY:229:LEU:C	24:AY:231:TYR:N	2.66	0.53
24:AY:459:LEU:HD12	24:AY:459:LEU:N	2.23	0.53
33:B8:39:LYS:HE3	35:BA:2365:G:O6	2.09	0.53
35:BA:402:A:O2'	35:BA:403:U:H5'	2.09	0.53
35:BA:1104:C:C2'	35:BA:1105:U:C5'	2.82	0.53
35:BA:1121:C:H2'	35:BA:1122:G:O5'	2.09	0.53
35:BA:1272:A:OP2	35:BA:1647:G:OP1	2.26	0.53
35:BA:1301:A:C4'	35:BA:1302:A:OP1	2.56	0.53
35:BA:1458:C:H4'	35:BA:1459:G:O5'	2.09	0.53
35:BA:1694:C:H4'	35:BA:1695:G:H5"	1.91	0.53
35:BA:1711:C:O2'	35:BA:1712:C:H5'	2.08	0.53
35:BA:2584:U:C2'	35:BA:2585:U:H5'	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2649:U:H2'	35:BA:2650:U:C6	2.44	0.53
36:BB:91:C:H5'	49:BQ:18:LYS:HG2	1.91	0.53
37:BC:52:PRO:HG2	37:BC:53:ARG:H	1.73	0.53
39:BE:68:ALA:C	39:BE:70:ALA:N	2.66	0.53
40:BF:50:SER:HB2	40:BF:94:PRO:HD3	1.90	0.53
48:BP:101:VAL:CG2	48:BP:102:ARG:N	2.71	0.53
53:BU:50:ARG:NH1	54:BV:72:VAL:HG12	2.19	0.53
53:BU:95:LEU:HD12	54:BV:11:GLN:HG3	1.91	0.53
54:BV:39:LEU:HA	54:BV:47:VAL:CG1	2.38	0.53
1:AA:406:G:H5"	4:AD:5:ILE:CG2	2.39	0.52
1:AA:447:G:H2'	1:AA:485:G:N2	2.23	0.52
1:AA:627:G:O2'	1:AA:628:G:H5'	2.07	0.52
1:AA:1029:C:C3'	1:AA:1030:C:C5'	2.80	0.52
1:AA:1400:C:H3'	1:AA:1401:G:H5'	1.91	0.52
1:AA:1487:G:H2'	1:AA:1488:G:H5'	1.90	0.52
2:AB:114:ARG:HG3	2:AB:114:ARG:NH1	2.15	0.52
8:AH:72:PRO:O	8:AH:73:ASP:HB3	2.08	0.52
13:AM:70:LEU:O	13:AM:73:GLU:HB2	2.09	0.52
24:AY:249:GLY:C	24:AY:255:ILE:HG23	2.34	0.52
24:AY:498:ILE:HA	24:AY:507:TYR:CB	2.39	0.52
29:B4:16:CYS:HA	29:B4:33:VAL:CG1	2.39	0.52
35:BA:174:C:O2	35:BA:174:C:H2'	2.08	0.52
35:BA:375:C:H2'	35:BA:376:C:C6	2.44	0.52
35:BA:1461:G:O2'	35:BA:1462:C:H5'	2.09	0.52
35:BA:1494:A:H2'	35:BA:1495:A:C5'	2.38	0.52
35:BA:1541:G:H1'	35:BA:1542:A:C4	2.44	0.52
35:BA:2011:U:H2'	35:BA:2012:G:O5'	2.09	0.52
35:BA:2401:U:H5"	35:BA:2402:C:C5	2.44	0.52
35:BA:2611:U:OP2	35:BA:2611:U:C6	2.61	0.52
37:BC:88:GLU:HB2	37:BC:91:GLY:O	2.09	0.52
37:BC:138:LEU:HD23	37:BC:139:PRO:HD2	1.90	0.52
38:BD:218:ARG:HH11	38:BD:218:ARG:HG3	1.74	0.52
39:BE:116:VAL:HG13	39:BE:122:PHE:HB2	1.90	0.52
40:BF:162:LEU:H	40:BF:162:LEU:HD12	1.74	0.52
41:BG:135:LEU:O	41:BG:137:GLU:N	2.31	0.52
41:BG:154:GLY:O	41:BG:155:MET:HB3	2.09	0.52
46:BN:15:LEU:HD12	46:BN:136:GLU:CG	2.39	0.52
51:BS:73:LEU:C	51:BS:73:LEU:HD23	2.34	0.52
52:BT:50:ILE:HA	52:BT:99:LEU:HD12	1.90	0.52
52:BT:89:VAL:HG12	52:BT:91:ARG:H	1.74	0.52
1:AA:108:G:N3	1:AA:108:G:H5"	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:275:G:H5'	17:AQ:14:LYS:HD3	1.91	0.52
1:AA:406:G:H1'	1:AA:495:A:N1	2.24	0.52
1:AA:1052:U:O5'	1:AA:1052:U:H6	1.92	0.52
1:AA:1156:G:H8	1:AA:1156:G:O5'	1.91	0.52
2:AB:54:THR:HG23	2:AB:185:ILE:CG2	2.40	0.52
7:AG:94:ARG:HG3	7:AG:94:ARG:HH11	1.73	0.52
8:AH:35:ILE:HG22	8:AH:39:LEU:CD2	2.38	0.52
15:AO:23:GLY:O	15:AO:24:SER:O	2.28	0.52
16:AP:20:VAL:CG2	16:AP:21:VAL:N	2.71	0.52
20:AT:74:LYS:HG3	20:AT:75:ASN:ND2	2.23	0.52
24:AY:99:ARG:NE	24:AY:128:TYR:CE2	2.69	0.52
24:AY:490:PRO:HB3	24:AY:515:GLU:HB3	1.91	0.52
26:B1:30:VAL:O	35:BA:2395:C:O2'	2.26	0.52
28:B3:22:ALA:HA	28:B3:46:ASN:ND2	2.23	0.52
29:B4:21:VAL:HG11	29:B4:35:VAL:HG22	1.91	0.52
29:B4:39:CYS:CB	29:B4:41:PRO:CD	2.86	0.52
29:B4:47:GLN:O	29:B4:48:ARG:C	2.51	0.52
35:BA:185:U:H4'	35:BA:218:A:H4'	1.90	0.52
35:BA:331:A:HO2'	35:BA:332:A:P	2.31	0.52
35:BA:1419:A:O2'	35:BA:1420:U:C5'	2.54	0.52
35:BA:1600:C:HO2'	35:BA:1601:G:H5'	1.70	0.52
35:BA:1601:G:C5	35:BA:1602:U:C4	2.98	0.52
35:BA:1695:G:N3	35:BA:1695:G:C3'	2.71	0.52
35:BA:1925:C:C5	35:BA:1926:U:H5	2.28	0.52
35:BA:2554:U:O2'	35:BA:2555:U:H5'	2.09	0.52
37:BC:51:ASP:OD2	37:BC:54:ARG:HB2	2.09	0.52
37:BC:118:PRO:CB	37:BC:121:MET:HG2	2.40	0.52
38:BD:16:MET:HB3	38:BD:207:GLY:HA3	1.91	0.52
41:BG:111:LEU:HB2	41:BG:112:PRO:HD3	1.92	0.52
41:BG:135:LEU:C	41:BG:137:GLU:N	2.68	0.52
42:BH:83:TYR:HB3	42:BH:134:SER:CA	2.36	0.52
46:BN:35:ARG:NH2	46:BN:42:TRP:HH2	2.08	0.52
49:BQ:137:TYR:HE1	58:BZ:81:ARG:CZ	2.22	0.52
51:BS:17:ARG:NH2	51:BS:90:GLY:H	2.07	0.52
1:AA:186:C:H2'	1:AA:187:C:C5	2.44	0.52
1:AA:346:G:H5"	52:BT:35:LYS:NZ	2.23	0.52
1:AA:397:A:H5'	1:AA:398:C:OP1	2.09	0.52
1:AA:699:C:H2'	1:AA:700:G:C5'	2.25	0.52
1:AA:950:U:O2'	1:AA:951:G:C5'	2.57	0.52
1:AA:1116:C:C2'	1:AA:1117:G:H5"	2.38	0.52
1:AA:1287:A:N6	1:AA:1288:A:N6	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1390:U:H6	1:AA:1390:U:O5'	1.92	0.52
2:AB:36:ARG:O	2:AB:37:ASN:HB2	2.08	0.52
8:AH:58:TYR:O	8:AH:59:LEU:HD23	2.09	0.52
9:AI:62:TYR:CE2	9:AI:64:THR:OG1	2.63	0.52
9:AI:114:TYR:CE1	10:AJ:59:SER:HA	2.45	0.52
10:AJ:35:SER:O	10:AJ:36:GLY:O	2.28	0.52
19:AS:47:HIS:O	19:AS:62:ILE:HG23	2.09	0.52
20:AT:89:ARG:NH2	20:AT:106:ALA:HB2	2.24	0.52
24:AY:24:GLY:O	24:AY:28:THR:N	2.25	0.52
26:B1:57:GLU:CG	26:B1:58:ILE:N	2.61	0.52
29:B4:68:ARG:CD	29:B4:71:ARG:HD3	2.36	0.52
35:BA:39:C:HO2'	35:BA:40:C:H5'	1.69	0.52
35:BA:41:C:N4	35:BA:437:G:H1	2.07	0.52
35:BA:693:C:HO2'	35:BA:694:U:H5'	1.74	0.52
35:BA:926:A:H8	35:BA:926:A:H5'	1.73	0.52
35:BA:2206:G:H5"	35:BA:2207:G:OP2	2.08	0.52
35:BA:2818:G:O2'	35:BA:2819:G:H5'	2.10	0.52
37:BC:129:GLY:C	37:BC:131:ILE:N	2.67	0.52
37:BC:171:ALA:HB1	37:BC:173:HIS:CE1	2.43	0.52
39:BE:103:ASP:OD2	39:BE:168:MET:HE2	2.09	0.52
41:BG:49:ASP:O	41:BG:50:ALA:C	2.52	0.52
42:BH:5:GLY:HA2	42:BH:69:ARG:HD3	1.91	0.52
44:BK:57:UNK:HA	44:BK:67:UNK:N	2.24	0.52
48:BP:31:ALA:C	48:BP:33:ARG:N	2.65	0.52
48:BP:88:LEU:HD11	48:BP:95:VAL:CG2	2.26	0.52
52:BT:38:ASN:HD22	52:BT:38:ASN:N	2.07	0.52
54:BV:4:ILE:HD12	54:BV:40:LEU:HG	1.90	0.52
54:BV:6:LYS:O	54:BV:37:VAL:HG21	2.09	0.52
55:BW:90:ARG:HG3	55:BW:90:ARG:NH1	2.24	0.52
58:BZ:3:TYR:N	58:BZ:3:TYR:CD1	2.78	0.52
1:AA:302:G:N3	1:AA:556:C:H4'	2.25	0.52
1:AA:355:C:O4'	1:AA:388:G:O2'	2.26	0.52
1:AA:493:G:H2'	1:AA:494:U:C5	2.45	0.52
1:AA:543:C:O5'	1:AA:543:C:H6	1.92	0.52
1:AA:625:G:H2'	1:AA:626:U:H6	1.74	0.52
1:AA:1075:C:O2'	1:AA:1076:C:H5'	2.10	0.52
3:AC:74:GLY:O	3:AC:78:GLY:HA2	2.09	0.52
24:AY:61:ARG:NH2	24:AY:460:GLU:OE1	2.41	0.52
24:AY:281:PRO:HB2	24:AY:286:ILE:HD13	1.92	0.52
30:B5:17:ASP:HB3	35:BA:16:G:OP1	2.09	0.52
35:BA:35:G:O6	35:BA:446:G:N2	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:142:A:H5'	35:BA:142(A):C:OP2	2.10	0.52
35:BA:212:G:O2'	35:BA:213:A:H5'	2.10	0.52
35:BA:1484:G:H2'	35:BA:1485:G:C5'	2.22	0.52
35:BA:1570:A:H2'	35:BA:1571:A:C8	2.44	0.52
35:BA:1848:A:H2'	35:BA:1849:G:O4'	2.10	0.52
36:BB:13:A:HO2'	36:BB:14:U:H3'	1.74	0.52
42:BH:13:LYS:O	42:BH:15:VAL:N	2.42	0.52
42:BH:83:TYR:CB	42:BH:134:SER:HA	2.35	0.52
42:BH:149:ARG:NH1	42:BH:167:GLU:OE1	2.43	0.52
51:BS:22:GLY:O	51:BS:23:ARG:HB2	2.09	0.52
51:BS:66:ALA:HB1	51:BS:99:LYS:CG	2.40	0.52
54:BV:99:ILE:HD13	54:BV:99:ILE:N	2.24	0.52
58:BZ:119:GLU:HG3	58:BZ:122:ARG:NH1	2.25	0.52
1:AA:697:U:C2'	1:AA:698:G:C5'	2.80	0.52
1:AA:1030:C:C4'	1:AA:1030(A):G:H5'	2.38	0.52
1:AA:1066:C:H5'	1:AA:1067:A:OP2	2.09	0.52
3:AC:47:LEU:HD11	3:AC:87:LEU:HD13	1.90	0.52
8:AH:30:ARG:NH1	8:AH:30:ARG:HB3	2.25	0.52
9:AI:20:ARG:O	9:AI:60:ASP:N	2.41	0.52
9:AI:88:TYR:O	9:AI:89:ASN:HB3	2.10	0.52
11:AK:23:ALA:HB2	11:AK:28:THR:HG23	1.92	0.52
13:AM:46:LYS:O	13:AM:46:LYS:HG2	2.09	0.52
13:AM:74:VAL:O	13:AM:78:ILE:HG12	2.09	0.52
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.17	0.52
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.10	0.52
16:AP:59:TRP:HA	16:AP:62:VAL:CG2	2.39	0.52
24:AY:437:THR:HG23	24:AY:454:MET:HG2	1.92	0.52
24:AY:526:VAL:HB	24:AY:566:THR:CA	2.34	0.52
24:AY:624:LEU:HD11	24:AY:655:TYR:OH	2.09	0.52
35:BA:195:A:H61	35:BA:198:C:H3'	1.75	0.52
35:BA:271(L):U:C5'	35:BA:271(M):G:H5'	2.29	0.52
35:BA:812:C:O5'	48:BP:25:SER:HB2	2.09	0.52
35:BA:1121:C:C2	35:BA:1122:G:C8	2.98	0.52
35:BA:1149:G:H2'	35:BA:1150:C:C6	2.44	0.52
35:BA:1424:G:C2'	35:BA:1425:G:O5'	2.58	0.52
35:BA:1568:G:C5'	38:BD:61:LEU:HD23	2.39	0.52
35:BA:2543:G:H2'	35:BA:2544:G:C8	2.43	0.52
35:BA:2580:U:H4'	39:BE:130:GLY:HA3	1.91	0.52
35:BA:2777:G:H5"	35:BA:2778:A:C5'	2.40	0.52
37:BC:109:MET:HA	37:BC:111:PHE:CE2	2.45	0.52
39:BE:38:THR:HG21	39:BE:40:GLU:OE1	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:65:TRP:HZ3	40:BF:73:ALA:O	1.93	0.52
41:BG:110:ALA:HB1	41:BG:142:PRO:CG	2.40	0.52
49:BQ:29:PHE:HB3	49:BQ:65:PHE:CE2	2.44	0.52
54:BV:2:PHE:CG	54:BV:13:ARG:NH1	2.77	0.52
58:BZ:6:LYS:N	58:BZ:6:LYS:CD	2.72	0.52
58:BZ:19:ARG:C	58:BZ:21:ALA:H	2.16	0.52
1:AA:359:U:O5'	1:AA:359:U:H6	1.91	0.52
1:AA:415:A:O2'	1:AA:416:G:H5'	2.09	0.52
1:AA:603:U:O2'	1:AA:604:G:H5'	2.10	0.52
1:AA:992:U:H1'	1:AA:993:G:C2	2.45	0.52
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.09	0.52
1:AA:1306:A:N6	1:AA:1331:G:HO2'	2.08	0.52
6:AF:69:GLU:CD	6:AF:69:GLU:N	2.68	0.52
7:AG:80:VAL:HG12	7:AG:81:GLY:N	2.24	0.52
10:AJ:61:GLU:OE2	14:AN:49:HIS:HE1	1.93	0.52
12:AL:45:PRO:HG3	12:AL:53:ARG:CD	2.39	0.52
24:AY:357:ARG:HH11	24:AY:357:ARG:HG3	1.74	0.52
24:AY:487:ILE:CD1	24:AY:563:ILE:HG22	2.39	0.52
26:B1:62:VAL:HG22	26:B1:63:ALA:N	2.25	0.52
30:B5:19:ARG:NH1	35:BA:1265:A:H3'	2.24	0.52
35:BA:654(U):A:H2'	35:BA:654(V):A:H8	1.75	0.52
35:BA:747:U:O4	35:BA:2613:U:N3	2.42	0.52
35:BA:1022:G:O6	46:BN:66:LYS:CE	2.57	0.52
35:BA:1137:G:H2'	35:BA:1138:G:C8	2.44	0.52
35:BA:1281:G:O2'	35:BA:1282:U:H5'	2.09	0.52
35:BA:1405:U:H2'	35:BA:1406:U:H6	1.73	0.52
35:BA:1455:G:O6	35:BA:2705:A:C2	2.62	0.52
35:BA:1820:U:O2'	38:BD:201:HIS:CD2	2.54	0.52
35:BA:1993:U:H2'	35:BA:1994:C:C6	2.45	0.52
35:BA:2176:A:C2'	35:BA:2177:C:C6	2.86	0.52
35:BA:2376:A:H2'	35:BA:2377:A:O4'	2.09	0.52
35:BA:2680:C:H2'	35:BA:2681:C:O2	2.09	0.52
37:BC:133:GLY:C	37:BC:135:ARG:N	2.65	0.52
38:BD:69:ARG:NH2	38:BD:128:GLY:O	2.43	0.52
40:BF:192:LEU:HD23	40:BF:193:VAL:N	2.25	0.52
41:BG:135:LEU:N	41:BG:135:LEU:HD12	2.25	0.52
41:BG:137:GLU:CD	41:BG:154:GLY:H	2.18	0.52
41:BG:170:ARG:CZ	41:BG:180:PHE:HE2	2.22	0.52
44:BK:99:UNK:O	44:BK:101:UNK:N	2.40	0.52
48:BP:101:VAL:HA	48:BP:105:LEU:O	2.10	0.52
50:BR:101:ALA:O	50:BR:102:GLU:HB2	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:17:SER:HB3	57:BY:71:LYS:HB3	1.90	0.52
1:AA:80:G:H2'	1:AA:80:G:N3	2.24	0.52
1:AA:198:G:C5	1:AA:220:G:C2	2.96	0.52
1:AA:346:G:N3	1:AA:346:G:C2'	2.73	0.52
1:AA:495:A:O4'	1:AA:496:A:H5'	2.10	0.52
1:AA:1306:A:H61	1:AA:1331:G:C1'	2.22	0.52
1:AA:1320:C:H5"	19:AS:70:LYS:HG3	1.92	0.52
1:AA:1331:G:OP2	13:AM:23:TYR:CD1	2.63	0.52
3:AC:84:ILE:C	3:AC:86:VAL:N	2.64	0.52
6:AF:71:ARG:HG3	6:AF:71:ARG:HH11	1.75	0.52
8:AH:1:MET:HE2	8:AH:1:MET:H1	1.74	0.52
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.92	0.52
9:AI:106:ALA:O	9:AI:108:VAL:HG23	2.10	0.52
17:AQ:26:GLN:O	17:AQ:27:PHE:HB3	2.09	0.52
18:AR:53:ARG:HA	18:AR:56:THR:OG1	2.10	0.52
25:B0:16:SER:HB2	35:BA:2262:U:H5	1.74	0.52
25:B0:52:GLY:C	25:B0:60:PHE:CE1	2.88	0.52
27:B2:69:ARG:C	27:B2:70:GLN:CD	2.78	0.52
31:B6:45:LYS:O	31:B6:46:HIS:CB	2.58	0.52
33:B8:28:GLY:O	33:B8:32:LEU:CD2	2.53	0.52
33:B8:60:LEU:C	33:B8:61:LEU:HD12	2.35	0.52
35:BA:263:C:H2'	35:BA:264:C:C6	2.44	0.52
35:BA:565:C:H4'	35:BA:1253:A:C6	2.45	0.52
35:BA:603:A:H1'	35:BA:604:G:P	2.48	0.52
35:BA:1420:U:H5'	35:BA:1421:G:OP2	2.09	0.52
35:BA:1739:U:O2'	35:BA:1740:G:H5'	2.10	0.52
35:BA:2747:G:O6	35:BA:2755:C:H5"	2.10	0.52
35:BA:2853:C:H2'	35:BA:2854:G:H8	1.75	0.52
36:BB:106:G:O2'	36:BB:107:G:H5'	2.09	0.52
39:BE:61:ARG:C	39:BE:63:LEU:H	2.16	0.52
39:BE:132:HIS:CG	39:BE:135:HIS:NE2	2.77	0.52
40:BF:77:ASP:O	40:BF:79:GLY:N	2.34	0.52
41:BG:83:ARG:N	41:BG:83:ARG:CD	2.69	0.52
41:BG:130:ASN:O	41:BG:159:VAL:HG13	2.09	0.52
48:BP:101:VAL:CG1	48:BP:106:LEU:HD23	2.39	0.52
49:BQ:58:PHE:HD1	49:BQ:58:PHE:O	1.91	0.52
51:BS:12:PHE:HD1	51:BS:13:ARG:N	2.07	0.52
51:BS:106:ARG:NE	51:BS:108:GLY:HA3	2.25	0.52
53:BU:85:LYS:NZ	53:BU:117:GLN:HE22	2.08	0.52
57:BY:97:ARG:O	57:BY:98:VAL:HB	2.09	0.52
58:BZ:28:MET:HE3	58:BZ:59:LEU:CD1	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:61:G:C6	1:AA:107:G:N1	2.78	0.52
1:AA:198:G:C6	1:AA:220:G:C4	2.98	0.52
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.25	0.52
1:AA:793:U:OP2	1:AA:794:A:C8	2.63	0.52
1:AA:973:G:OP1	10:AJ:57:LYS:NZ	2.35	0.52
1:AA:1120:G:H2'	1:AA:1121:U:H6	1.75	0.52
1:AA:1321:C:C5'	1:AA:1322:C:H5"	2.38	0.52
3:AC:188:LEU:HD12	3:AC:190:ARG:NH1	2.24	0.52
6:AF:37:VAL:HG12	6:AF:38:GLU:N	2.24	0.52
7:AG:33:ASP:C	7:AG:35:LYS:H	2.17	0.52
7:AG:36:LYS:O	7:AG:37:ASN:HB3	2.10	0.52
13:AM:113:PRO:O	13:AM:114:ARG:HB2	2.09	0.52
20:AT:27:LYS:HD3	20:AT:27:LYS:O	2.09	0.52
22:AV:39:U:O5'	22:AV:39:U:H6	1.92	0.52
24:AY:393:ASP:O	24:AY:394:ALA:O	2.28	0.52
24:AY:487:ILE:H	24:AY:487:ILE:CD1	2.23	0.52
25:B0:45:PHE:CZ	25:B0:77:ARG:NH2	2.77	0.52
29:B4:21:VAL:O	29:B4:22:ILE:C	2.52	0.52
30:B5:16:ARG:HD2	30:B5:20:ARG:HH12	1.74	0.52
31:B6:17:LYS:C	31:B6:18:ARG:HD2	2.35	0.52
35:BA:260:G:O4'	35:BA:621:A:H1'	2.10	0.52
35:BA:413:C:H42	35:BA:2410:G:H1	1.57	0.52
35:BA:661:C:H4'	48:BP:16:ARG:NH1	2.23	0.52
35:BA:1223:G:N1	35:BA:1227:G:O6	2.41	0.52
37:BC:44:VAL:HG21	37:BC:176:VAL:HG21	1.92	0.52
39:BE:36:ARG:NH2	39:BE:88:GLY:CA	2.63	0.52
41:BG:83:ARG:C	41:BG:85:GLY:N	2.68	0.52
41:BG:89:GLY:O	41:BG:90:LEU:HB3	2.10	0.52
41:BG:127:GLY:O	41:BG:129:GLY:N	2.43	0.52
42:BH:168:PRO:HB3	42:BH:170:ARG:NH2	2.25	0.52
48:BP:9:ASN:N	48:BP:10:PRO:CD	2.72	0.52
49:BQ:134:ARG:NH1	58:BZ:122:ARG:NH2	2.58	0.52
52:BT:30:VAL:CB	52:BT:31:SER:CB	2.69	0.52
56:BX:23:GLU:CD	56:BX:23:GLU:H	2.18	0.52
58:BZ:98:MET:O	58:BZ:125:LEU:HA	2.09	0.52
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.74	0.52
1:AA:1529:G:N3	1:AA:1529:G:H2'	2.25	0.52
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.91	0.52
4:AD:145:GLU:HG2	4:AD:184:LYS:HG2	1.92	0.52
4:AD:150:GLU:C	4:AD:152:SER:N	2.67	0.52
7:AG:15:ASP:HB3	7:AG:19:GLY:C	2.34	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:38:ILE:O	10:AJ:38:ILE:HG13	2.10	0.52
20:AT:65:LYS:O	20:AT:68:LYS:HG2	2.10	0.52
24:AY:327:PHE:CD1	24:AY:376:ALA:HB2	2.45	0.52
24:AY:583:LYS:C	24:AY:583:LYS:HD3	2.35	0.52
26:B1:49:VAL:HG13	26:B1:49:VAL:O	2.09	0.52
28:B3:4:LEU:HD11	28:B3:44:ARG:NE	2.25	0.52
29:B4:16:CYS:SG	29:B4:21:VAL:HG21	2.50	0.52
35:BA:272(C):G:H2'	35:BA:272(D):G:C8	2.45	0.52
35:BA:316:C:C2'	35:BA:317:G:O5'	2.58	0.52
35:BA:996:A:H4'	53:BU:92:ARG:HE	1.74	0.52
35:BA:1486:A:C1'	35:BA:1505:C:H42	2.23	0.52
35:BA:2105:C:OP1	35:BA:2105:C:O4'	2.27	0.52
35:BA:2203:U:H3'	35:BA:2205:C:OP2	2.10	0.52
37:BC:6:LYS:N	37:BC:9:ARG:NH1	2.58	0.52
41:BG:77:ILE:HD12	41:BG:80:PHE:CB	2.37	0.52
41:BG:77:ILE:HG21	41:BG:82:LEU:N	2.25	0.52
42:BH:1:MET:O	42:BH:2:SER:OG	2.28	0.52
42:BH:35:VAL:O	42:BH:37:VAL:HG23	2.10	0.52
48:BP:30:THR:HA	48:BP:33:ARG:HD2	1.91	0.52
51:BS:11:LYS:O	51:BS:11:LYS:HG2	2.10	0.52
58:BZ:185:GLU:O	58:BZ:186:GLU:C	2.50	0.52
1:AA:268:C:O2'	1:AA:269:C:H5'	2.10	0.52
1:AA:321:A:H62	1:AA:328:C:H1'	1.75	0.52
1:AA:787:A:C2'	1:AA:788:U:H5'	2.40	0.52
1:AA:797:C:O2'	1:AA:798:G:H5'	2.10	0.52
1:AA:942:G:C2	1:AA:943:U:C4	2.98	0.52
2:AB:212:GLN:NE2	2:AB:216:SER:OG	2.43	0.52
3:AC:74:GLY:O	3:AC:78:GLY:N	2.43	0.52
3:AC:90:GLU:HA	3:AC:93:LYS:HB2	1.91	0.52
7:AG:51:GLN:O	7:AG:52:GLU:HB2	2.10	0.52
7:AG:81:GLY:C	23:AX:12:A:O3'	2.53	0.52
10:AJ:90:LEU:HG	10:AJ:90:LEU:O	2.08	0.52
14:AN:21:TYR:OH	14:AN:23:ARG:NH1	2.43	0.52
24:AY:276:VAL:O	24:AY:280:LEU:HB2	2.10	0.52
24:AY:614:GLU:CA	24:AY:617:MET:HE3	2.38	0.52
27:B2:48:HIS:CD2	27:B2:49:LYS:N	2.78	0.52
27:B2:63:VAL:O	27:B2:66:GLU:CG	2.57	0.52
30:B5:54:GLY:O	30:B5:55:ARG:C	2.53	0.52
32:B7:12:ARG:HD3	32:B7:46:VAL:CG2	2.40	0.52
35:BA:639:U:H2'	35:BA:640:C:C6	2.44	0.52
35:BA:1013:C:O2'	35:BA:1014:U:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1151:G:H2'	35:BA:1152:C:C6	2.45	0.52
35:BA:1258:C:O4'	40:BF:84:VAL:CG1	2.58	0.52
35:BA:1445:A:H8	35:BA:1460:A:C4	2.28	0.52
35:BA:1488:G:H5'	35:BA:1489:U:OP2	2.10	0.52
35:BA:1579:A:H5'	35:BA:1579:A:H8	1.75	0.52
35:BA:1892:C:C2'	35:BA:1893:C:C5'	2.72	0.52
35:BA:1917:U:O2'	35:BA:1918:A:H5'	2.10	0.52
35:BA:1925:C:H3'	35:BA:1926:U:H5"	1.91	0.52
35:BA:1999:C:C2	35:BA:2000:G:C8	2.98	0.52
36:BB:52:A:O2'	36:BB:53:A:C8	2.62	0.52
42:BH:7:LEU:HD21	42:BH:69:ARG:HE	1.75	0.52
49:BQ:141:GLN:HG3	58:BZ:72:ARG:CZ	2.40	0.52
52:BT:34:VAL:HG22	52:BT:39:ARG:HA	1.91	0.52
57:BY:44:ILE:HD13	57:BY:65:ALA:HB2	1.91	0.52
58:BZ:181:GLU:C	58:BZ:182:LYS:HG3	2.35	0.52
1:AA:90:U:H4'	1:AA:91:C:OP1	2.09	0.51
1:AA:91:C:O2	1:AA:91:C:C2'	2.57	0.51
1:AA:437:U:C2'	1:AA:438:G:H5'	2.40	0.51
1:AA:506:G:H8	1:AA:506:G:O5'	1.92	0.51
1:AA:663:A:O2'	1:AA:664:G:H5'	2.10	0.51
1:AA:982:U:H1'	1:AA:983:A:C2	2.44	0.51
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.75	0.51
1:AA:1285:A:C1'	1:AA:1286:A:C8	2.93	0.51
1:AA:1305:G:C8	1:AA:1305:G:OP2	2.63	0.51
1:AA:1399:C:N3	1:AA:1502:A:N6	2.58	0.51
4:AD:182:LYS:HG2	4:AD:183:GLY:H	1.75	0.51
6:AF:60:PHE:HE2	18:AR:76:LEU:HD12	1.75	0.51
9:AI:2:GLU:HG2	9:AI:2:GLU:O	2.10	0.51
12:AL:83:VAL:HG12	12:AL:84:LEU:N	2.24	0.51
16:AP:28:ARG:HG2	16:AP:28:ARG:NH1	2.25	0.51
24:AY:96:ARG:HH11	24:AY:315:LYS:HG2	1.75	0.51
32:B7:45:ALA:O	32:B7:46:VAL:HG23	2.10	0.51
33:B8:18:ALA:HB2	35:BA:628:G:O3'	2.10	0.51
35:BA:935:C:H2'	35:BA:936:C:H6	1.75	0.51
35:BA:960:A:H8	35:BA:960:A:O5'	1.93	0.51
35:BA:1073:A:H2'	35:BA:1073:A:N3	2.24	0.51
35:BA:1173:G:H3'	35:BA:1174:A:H5'	1.92	0.51
35:BA:1212:G:HO2'	35:BA:1213:A:P	2.33	0.51
35:BA:1221:C:O2'	35:BA:1221(A):C:H5'	2.10	0.51
35:BA:1381:G:O2'	35:BA:1382:G:H5'	2.10	0.51
35:BA:1423:G:C2'	35:BA:1424:G:C5'	2.88	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1697:G:H3'	35:BA:1698:A:C5'	2.37	0.51
35:BA:1784:A:H4'	35:BA:1785:A:C5'	2.40	0.51
35:BA:2404:C:C2'	35:BA:2405:G:O5'	2.58	0.51
36:BB:16:G:O2'	36:BB:17:C:H6	1.92	0.51
37:BC:42:VAL:CG1	37:BC:43:GLU:N	2.73	0.51
37:BC:48:LEU:CB	37:BC:50:ILE:HD12	2.38	0.51
37:BC:67:HIS:CG	37:BC:185:LYS:HD2	2.45	0.51
41:BG:180:PHE:C	41:BG:180:PHE:CD1	2.88	0.51
44:BK:25:UNK:O	44:BK:26:UNK:C	2.58	0.51
48:BP:108:LYS:HD2	48:BP:108:LYS:N	2.24	0.51
51:BS:30:ARG:HH11	51:BS:97:ARG:CG	2.19	0.51
51:BS:78:LEU:HD11	51:BS:103:GLU:CG	2.40	0.51
51:BS:92:TYR:O	51:BS:93:LYS:CB	2.57	0.51
57:BY:7:VAL:HB	57:BY:8:LYS:CE	2.40	0.51
1:AA:119:A:H62	1:AA:287:U:H3	1.57	0.51
1:AA:197:A:O2'	1:AA:198:G:P	2.68	0.51
1:AA:266:G:C5'	1:AA:267:C:C6	2.90	0.51
1:AA:544:G:H2'	1:AA:545:C:O5'	2.09	0.51
1:AA:580:U:H2'	1:AA:581:G:O4'	2.10	0.51
1:AA:680:C:O2'	38:BD:166:GLN:HG2	2.10	0.51
1:AA:796:C:H2'	1:AA:797:C:C6	2.43	0.51
1:AA:1211:U:H5'	1:AA:1212:U:OP1	2.09	0.51
1:AA:1256:A:H2	1:AA:1277:C:C4	2.27	0.51
1:AA:1495:U:O5'	1:AA:1495:U:H6	1.93	0.51
1:AA:1499:A:C2	1:AA:1500:A:C8	2.99	0.51
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.45	0.51
3:AC:95:THR:C	3:AC:97:LYS:H	2.18	0.51
11:AK:21:ILE:HG13	11:AK:30:VAL:HG12	1.91	0.51
12:AL:26:ALA:O	12:AL:27:LEU:O	2.27	0.51
12:AL:78:GLN:HE22	24:AY:444:PRO:HA	1.74	0.51
24:AY:71:THR:HG22	24:AY:80:ASN:OD1	2.09	0.51
24:AY:386:GLY:HA2	24:AY:402:ILE:HG12	1.91	0.51
35:BA:654(E):G:O2'	35:BA:654(F):C:H5'	2.09	0.51
35:BA:1992:G:C4	35:BA:1997:G:O6	2.63	0.51
35:BA:2000:G:C2'	35:BA:2001:A:H5'	2.40	0.51
35:BA:2103:C:H2'	35:BA:2104:G:H5'	1.92	0.51
35:BA:2109:U:H1'	35:BA:2181:G:N2	2.24	0.51
35:BA:2199:A:H5'	35:BA:2200:C:OP2	2.09	0.51
35:BA:2320:A:C2	35:BA:2333:A:C8	2.98	0.51
35:BA:2853:C:H2'	35:BA:2854:G:C8	2.46	0.51
36:BB:70:C:H2'	36:BB:71:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:64:SER:HA	37:BC:161:ARG:H	1.74	0.51
40:BF:10:PRO:HA	40:BF:127:GLU:CG	2.40	0.51
40:BF:20:LEU:N	40:BF:24:LEU:HD21	2.25	0.51
40:BF:28:ILE:HD13	40:BF:28:ILE:N	2.24	0.51
40:BF:139:PHE:CZ	40:BF:156:LEU:HD22	2.45	0.51
42:BH:12:PRO:CD	42:BH:15:VAL:HG21	2.36	0.51
44:BK:135:UNK:O	44:BK:137:UNK:N	2.44	0.51
48:BP:101:VAL:HG23	48:BP:102:ARG:N	2.24	0.51
48:BP:111:ARG:HG3	48:BP:128:HIS:CG	2.45	0.51
49:BQ:134:ARG:HA	49:BQ:137:TYR:CD2	2.43	0.51
53:BU:74:LEU:HD12	53:BU:74:LEU:C	2.35	0.51
53:BU:83:LEU:HG	53:BU:88:ILE:HD11	1.92	0.51
58:BZ:54:HIS:HB3	58:BZ:101:PRO:HD3	1.92	0.51
1:AA:81:U:O2	1:AA:81:U:H3'	2.10	0.51
1:AA:509:A:H3'	1:AA:509:A:P	2.50	0.51
1:AA:662:G:H2'	1:AA:663:A:C8	2.45	0.51
1:AA:833:U:H2'	1:AA:834:C:H6	1.75	0.51
1:AA:1499:A:H2'	1:AA:1500:A:H8	1.75	0.51
3:AC:22:TRP:HZ3	3:AC:24:ALA:CB	2.22	0.51
4:AD:25:ARG:C	4:AD:27:TYR:H	2.18	0.51
26:B1:4:VAL:HG23	26:B1:11:ARG:HG3	1.91	0.51
27:B2:8:LYS:O	27:B2:9:GLN:C	2.53	0.51
27:B2:38:GLN:HA	27:B2:41:ILE:HD11	1.91	0.51
35:BA:107:C:C2'	35:BA:108:U:H5'	2.40	0.51
35:BA:1029:A:H8	35:BA:1029:A:O5'	1.93	0.51
35:BA:1213:A:H2'	35:BA:1214:A:C8	2.45	0.51
35:BA:1213:A:H2'	35:BA:1214:A:H8	1.76	0.51
35:BA:1588:C:O2	35:BA:1588:C:H2'	2.10	0.51
35:BA:1926:U:H2'	35:BA:1926:U:O2	2.10	0.51
35:BA:2404:C:N4	35:BA:2414:G:C6	2.78	0.51
37:BC:101:ILE:O	37:BC:103:LYS:N	2.42	0.51
38:BD:21:PHE:HB3	38:BD:24:ILE:HG21	1.93	0.51
38:BD:35:LYS:C	38:BD:35:LYS:CD	2.82	0.51
39:BE:26:ILE:HG22	39:BE:27:LEU:N	2.24	0.51
39:BE:47:VAL:HB	39:BE:49:LEU:CD2	2.40	0.51
40:BF:20:LEU:HB3	40:BF:23:ASP:CG	2.35	0.51
41:BG:35:GLU:O	41:BG:95:ARG:HB3	2.10	0.51
42:BH:136:ILE:HD12	42:BH:136:ILE:H	1.75	0.51
47:BO:13:ASN:H	47:BO:13:ASN:ND2	2.09	0.51
48:BP:52:GLU:CG	48:BP:57:THR:HB	2.38	0.51
55:BW:40:ASN:O	55:BW:41:LYS:HD3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:14:SER:O	56:BX:15:GLU:C	2.54	0.51
58:BZ:136:PHE:O	58:BZ:136:PHE:CD1	2.63	0.51
1:AA:490:G:N3	1:AA:491:G:C8	2.79	0.51
1:AA:1151:A:C5	1:AA:1152:A:N6	2.78	0.51
1:AA:1291:G:OP1	7:AG:37:ASN:ND2	2.42	0.51
4:AD:208:SER:O	4:AD:209:ARG:HB2	2.09	0.51
7:AG:15:ASP:CB	7:AG:19:GLY:O	2.52	0.51
10:AJ:51:ARG:HG3	10:AJ:60:ARG:CA	2.40	0.51
11:AK:21:ILE:HD12	11:AK:21:ILE:N	2.26	0.51
12:AL:47:LYS:O	12:AL:48:PRO:C	2.53	0.51
13:AM:80:ARG:HG3	19:AS:65:ASN:HD21	1.76	0.51
15:AO:39:LEU:HD13	15:AO:56:LEU:HD23	1.91	0.51
16:AP:34:GLU:OE1	16:AP:55:ARG:NH1	2.44	0.51
19:AS:35:SER:C	19:AS:37:ARG:N	2.67	0.51
22:AV:61:C:H2'	22:AV:62:C:H6	1.76	0.51
24:AY:10:LYS:HA	24:AY:282:SER:OG	2.10	0.51
24:AY:69:VAL:CA	24:AY:82:ILE:CG1	2.84	0.51
24:AY:507:TYR:HD1	24:AY:508:GLY:N	2.08	0.51
25:B0:4:LYS:HD2	49:BQ:82:ARG:CZ	2.40	0.51
26:B1:5:CYS:SG	26:B1:8:SER:HB3	2.51	0.51
28:B3:5:LYS:HE2	28:B3:34:GLU:CD	2.35	0.51
31:B6:22:ALA:C	31:B6:23:THR:HG23	2.35	0.51
31:B6:42:TRP:CE3	31:B6:42:TRP:HA	2.46	0.51
35:BA:494:G:OP1	55:BW:8:ARG:NH1	2.41	0.51
35:BA:662:G:OP1	48:BP:18:ARG:CZ	2.59	0.51
35:BA:1139:G:O2'	35:BA:1140:C:H5'	2.10	0.51
35:BA:1142:U:H2'	35:BA:1142(A):A:OP1	2.10	0.51
35:BA:1177:A:H4'	35:BA:1178:C:C5	2.45	0.51
35:BA:1215:G:H2'	35:BA:1216:G:H8	1.76	0.51
35:BA:1223:G:C6	35:BA:1227:G:C6	2.98	0.51
35:BA:1643:G:C2	35:BA:1644:C:C2	2.99	0.51
35:BA:2138:C:N4	35:BA:2153:G:O6	2.43	0.51
35:BA:2713:A:C3'	35:BA:2714:G:H5'	2.26	0.51
38:BD:30:GLU:CG	38:BD:63:ARG:HH21	2.23	0.51
40:BF:7:TYR:CD2	40:BF:16:GLY:HA3	2.45	0.51
40:BF:20:LEU:HD23	40:BF:21:ALA:N	2.23	0.51
40:BF:83:PHE:O	40:BF:86:GLY:N	2.35	0.51
41:BG:51:ARG:C	41:BG:52:ILE:HG13	2.33	0.51
41:BG:82:LEU:HD22	41:BG:88:ILE:HD11	1.91	0.51
41:BG:94:LEU:N	41:BG:94:LEU:CD2	2.74	0.51
42:BH:20:ALA:HB1	42:BH:21:PRO:CD	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:95:VAL:CG2	48:BP:125:VAL:HG23	2.39	0.51
50:BR:2:ARG:O	50:BR:3:HIS:ND1	2.44	0.51
57:BY:97:ARG:O	57:BY:98:VAL:HG23	2.10	0.51
1:AA:60:A:N6	1:AA:110:C:N3	2.58	0.51
1:AA:310:G:H2'	1:AA:311:C:C6	2.45	0.51
1:AA:771:G:C5	1:AA:772:U:C5	2.98	0.51
1:AA:868:C:H2'	1:AA:869:G:O5'	2.11	0.51
1:AA:1392:G:N2	1:AA:1502:A:C8	2.79	0.51
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.11	0.51
4:AD:152:SER:O	4:AD:155:LEU:HB2	2.11	0.51
6:AF:3:ARG:HB3	6:AF:93:SER:HB3	1.92	0.51
7:AG:57:GLU:HG3	7:AG:57:GLU:O	2.10	0.51
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.74	0.51
9:AI:82:ALA:O	9:AI:86:VAL:HB	2.11	0.51
9:AI:95:LYS:HZ2	9:AI:96:LEU:CD1	2.23	0.51
9:AI:95:LYS:HD2	9:AI:96:LEU:N	2.25	0.51
17:AQ:9:VAL:CG1	17:AQ:56:VAL:HG22	2.31	0.51
22:AV:23:A:H2'	22:AV:24:G:H5'	1.92	0.51
24:AY:165:GLN:HE21	24:AY:177:ILE:CG2	2.21	0.51
26:B1:51:VAL:N	26:B1:58:ILE:O	2.35	0.51
29:B4:10:VAL:CG2	29:B4:11:PRO:HD2	2.40	0.51
35:BA:15:G:C2	35:BA:16:G:C8	2.99	0.51
35:BA:52:A:H2'	35:BA:53:A:H5'	1.92	0.51
35:BA:127:A:H5"	35:BA:128:C:O4'	2.10	0.51
35:BA:960:A:H5"	35:BA:961:C:OP2	2.10	0.51
37:BC:42:VAL:HG13	37:BC:43:GLU:H	1.73	0.51
37:BC:68:GLY:H	37:BC:189:ASN:ND2	2.09	0.51
39:BE:67:PHE:CD1	39:BE:69:LYS:HE3	2.45	0.51
41:BG:145:THR:O	41:BG:145:THR:HG22	2.10	0.51
43:BJ:90:UNK:O	43:BJ:91:UNK:C	2.58	0.51
46:BN:39:ARG:HH21	46:BN:41:ASP:HB2	1.73	0.51
46:BN:58:ASP:HB3	46:BN:95:PRO:HB2	1.91	0.51
48:BP:147:LEU:O	48:BP:148:LEU:HB2	2.11	0.51
51:BS:27:SER:HA	51:BS:88:ASP:HB3	1.93	0.51
54:BV:64:HIS:ND1	54:BV:92:THR:CG2	2.71	0.51
58:BZ:183:LEU:C	58:BZ:183:LEU:HD12	2.36	0.51
1:AA:324:G:N2	1:AA:326:G:H3'	2.26	0.51
1:AA:347:G:N3	1:AA:348:G:C8	2.78	0.51
1:AA:688:G:C5	1:AA:700:G:C2	2.98	0.51
1:AA:1175:G:C2'	1:AA:1176:A:C5'	2.86	0.51
1:AA:1395:C:H2'	1:AA:1396:A:H5'	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:76:GLN:O	2:AB:77:ALA:CB	2.58	0.51
2:AB:115:LEU:HD23	2:AB:115:LEU:C	2.35	0.51
2:AB:227:GLY:O	2:AB:228:GLY:C	2.54	0.51
4:AD:36:ARG:C	4:AD:38:TYR:H	2.19	0.51
4:AD:199:ASN:OD1	4:AD:201:GLN:HB2	2.11	0.51
6:AF:90:VAL:HG13	6:AF:90:VAL:O	2.09	0.51
8:AH:2:LEU:HD21	8:AH:5:PRO:HA	1.92	0.51
8:AH:29:SER:HB3	8:AH:32:LYS:HG3	1.93	0.51
9:AI:9:ARG:CG	9:AI:14:VAL:HG13	2.40	0.51
13:AM:2:ALA:N	13:AM:9:ILE:CG2	2.74	0.51
24:AY:238:THR:C	24:AY:240:GLU:H	2.18	0.51
24:AY:401:SER:O	24:AY:402:ILE:CG1	2.59	0.51
24:AY:491:VAL:HG12	24:AY:492:ASP:N	2.25	0.51
24:AY:600:VAL:HG21	24:AY:678:GLU:CD	2.36	0.51
25:B0:53:MET:CE	25:B0:57:PHE:CD2	2.94	0.51
27:B2:39:ALA:O	27:B2:42:GLY:N	2.41	0.51
35:BA:35:G:H2'	35:BA:36:G:H8	1.76	0.51
35:BA:320:A:H4'	35:BA:322:A:N7	2.25	0.51
35:BA:330:A:H2	35:BA:1210:A:C2'	2.14	0.51
35:BA:444:C:O2'	35:BA:445:C:H5'	2.09	0.51
35:BA:601:C:H2'	35:BA:602:G:O4'	2.10	0.51
35:BA:833:U:H2'	35:BA:834:C:C6	2.46	0.51
35:BA:881:G:H2'	35:BA:882:G:O4'	2.10	0.51
35:BA:1121:C:O5'	35:BA:1121:C:H6	1.93	0.51
35:BA:1676:A:H2'	35:BA:1677:A:O4'	2.11	0.51
35:BA:1876:A:H2'	35:BA:1877:A:C8	2.45	0.51
35:BA:1941:C:O2'	35:BA:1942:C:H5'	2.10	0.51
35:BA:2632:A:O2'	39:BE:61:ARG:NH2	2.43	0.51
38:BD:70:TRP:CZ3	38:BD:150:LYS:HA	2.46	0.51
38:BD:97:TYR:C	38:BD:99:ASP:N	2.65	0.51
39:BE:71:GLY:O	39:BE:73:GLU:N	2.43	0.51
41:BG:36:LYS:HD3	41:BG:38:VAL:CG2	2.41	0.51
42:BH:168:PRO:HB3	42:BH:170:ARG:HH21	1.76	0.51
46:BN:133:GLN:C	46:BN:134:ARG:HG2	2.36	0.51
48:BP:83:VAL:O	48:BP:83:VAL:HG13	2.11	0.51
48:BP:111:ARG:HG2	48:BP:111:ARG:HH11	1.75	0.51
51:BS:51:ALA:CB	51:BS:73:LEU:HB2	2.41	0.51
51:BS:51:ALA:HB3	51:BS:73:LEU:HB2	1.91	0.51
51:BS:54:LEU:C	51:BS:56:LEU:N	2.68	0.51
52:BT:3:ARG:O	52:BT:4:GLY:C	2.53	0.51
55:BW:72:LYS:HD2	55:BW:106:ILE:HD11	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:2:ARG:CD	57:BY:3:VAL:HG23	2.40	0.51
57:BY:97:ARG:O	57:BY:98:VAL:CB	2.57	0.51
1:AA:161:A:O2'	1:AA:162:A:H5'	2.08	0.51
1:AA:687:A:H1'	1:AA:688:G:P	2.49	0.51
1:AA:1126:U:OP2	1:AA:1281:U:O2	2.29	0.51
24:AY:478:LYS:O	24:AY:478:LYS:HG3	2.10	0.51
24:AY:575:VAL:O	24:AY:575:VAL:HG12	2.10	0.51
31:B6:6:ARG:CB	31:B6:6:ARG:HH11	2.23	0.51
35:BA:1107:G:H4'	43:BJ:81:UNK:CA	2.39	0.51
35:BA:1233:C:O2'	35:BA:1234:U:H5'	2.11	0.51
35:BA:1248:G:P	40:BF:92:PRO:HG3	2.51	0.51
35:BA:1462:C:O2'	35:BA:1463:C:H5'	2.11	0.51
35:BA:1496:A:H8	35:BA:1577:C:O2'	1.93	0.51
35:BA:1799:G:OP1	35:BA:1799:G:C3'	2.43	0.51
35:BA:2012:G:O5'	35:BA:2012:G:H8	1.94	0.51
37:BC:126:SER:C	37:BC:128:LEU:H	2.19	0.51
38:BD:134:ARG:CZ	38:BD:135:PHE:CE1	2.94	0.51
40:BF:132:VAL:O	40:BF:138:GLU:OE1	2.29	0.51
41:BG:39:ILE:CD1	41:BG:157:ILE:HG12	2.35	0.51
41:BG:43:LEU:CD1	41:BG:48:GLU:H	2.24	0.51
47:BO:23:ARG:HG3	47:BO:24:VAL:N	2.25	0.51
48:BP:95:VAL:HG23	48:BP:125:VAL:HG23	1.92	0.51
57:BY:42:VAL:O	57:BY:65:ALA:HB3	2.11	0.51
1:AA:473:G:H2'	1:AA:474:G:H8	1.75	0.51
1:AA:1147:C:O2	9:AI:16:ARG:CZ	2.59	0.51
1:AA:1189:C:O3'	3:AC:5:ILE:HD12	2.10	0.51
1:AA:1228:C:O5'	13:AM:115:LYS:HB3	2.10	0.51
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.45	0.51
2:AB:24:TRP:CZ3	2:AB:32:ILE:HD12	2.46	0.51
3:AC:17:ASP:CG	3:AC:18:TRP:H	2.18	0.51
16:AP:54:GLU:HA	16:AP:54:GLU:OE1	2.11	0.51
24:AY:129:LYS:HA	24:AY:253:LEU:HD21	1.92	0.51
24:AY:137:ASN:CG	24:AY:138:LYS:H	2.18	0.51
24:AY:494:GLU:CB	24:AY:511:LYS:HG2	2.40	0.51
31:B6:41:PRO:CD	31:B6:45:LYS:HA	2.39	0.51
35:BA:315:G:H2'	35:BA:316:C:C6	2.45	0.51
35:BA:654(M):C:H2'	35:BA:654(N):G:C8	2.45	0.51
35:BA:747:U:C4	35:BA:2613:U:O4	2.53	0.51
35:BA:896:A:H1'	58:BZ:176:PRO:HB3	1.92	0.51
35:BA:1022:G:C6	35:BA:1141:U:C4	2.99	0.51
35:BA:1227:G:H2'	35:BA:1228:G:C8	2.37	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1601:G:C6	35:BA:1602:U:C4	2.99	0.51
35:BA:1827:C:H2'	35:BA:1828:G:H5'	1.92	0.51
35:BA:1859:A:C2	35:BA:1884:A:H1'	2.45	0.51
35:BA:1919:A:H2'	35:BA:1920:C:C5'	2.39	0.51
35:BA:2591:C:H2'	35:BA:2592:G:C8	2.46	0.51
36:BB:94:C:O2'	36:BB:95:C:H5'	2.11	0.51
37:BC:117:THR:CG2	37:BC:119:ASP:CG	2.81	0.51
39:BE:69:LYS:O	39:BE:71:GLY:N	2.43	0.51
39:BE:111:ARG:C	50:BR:2:ARG:HG2	2.36	0.51
39:BE:174:ASP:OD1	39:BE:175:VAL:N	2.39	0.51
48:BP:79:ARG:O	48:BP:110:TYR:HB3	2.10	0.51
48:BP:84:ASN:OD1	48:BP:116:GLY:CA	2.54	0.51
48:BP:84:ASN:HD22	48:BP:115:LEU:HD23	1.75	0.51
48:BP:101:VAL:HG12	48:BP:106:LEU:HD23	1.93	0.51
50:BR:85:PRO:O	50:BR:87:TYR:N	2.44	0.51
52:BT:95:ARG:HH11	52:BT:95:ARG:HA	1.76	0.51
53:BU:80:ILE:O	53:BU:84:LYS:HB2	2.11	0.51
53:BU:92:ARG:HB2	54:BV:11:GLN:NE2	2.24	0.51
54:BV:21:ARG:N	54:BV:21:ARG:HD3	2.26	0.51
55:BW:6:ILE:HA	55:BW:103:ILE:O	2.11	0.51
57:BY:17:SER:HA	57:BY:71:LYS:HE2	1.93	0.51
57:BY:99:CYS:O	57:BY:100:ALA:HB2	2.11	0.51
58:BZ:108:PRO:HA	58:BZ:142:SER:HA	1.92	0.51
58:BZ:114:GLY:C	58:BZ:177:PRO:HD3	2.36	0.51
58:BZ:183:LEU:HD11	58:BZ:186:GLU:CA	2.41	0.51
1:AA:311:C:C3'	1:AA:312:C:H5'	2.30	0.51
1:AA:322:C:H2'	1:AA:323:U:H5'	1.93	0.51
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.46	0.51
2:AB:16:HIS:CE1	2:AB:210:SER:C	2.89	0.51
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.25	0.51
17:AQ:68:ARG:N	17:AQ:70:ARG:HH11	2.08	0.51
22:AV:45:U:O2	22:AV:45:U:C3'	2.59	0.51
24:AY:264:LEU:HB2	61:AY:701:GCP:N7	2.26	0.51
26:B1:53:VAL:HG21	26:B1:58:ILE:CD1	2.38	0.51
35:BA:7:G:H2'	35:BA:8:A:C8	2.46	0.51
35:BA:264:C:O5'	35:BA:264:C:H6	1.92	0.51
35:BA:1027:A:O2'	35:BA:1028:A:H5'	2.11	0.51
35:BA:1188:U:O2'	35:BA:1189:A:H5'	2.10	0.51
35:BA:1649:G:H2'	35:BA:1650:G:H5'	1.92	0.51
35:BA:2181:G:O2'	35:BA:2182:G:H5'	2.11	0.51
35:BA:2207:G:N3	35:BA:2207:G:C5'	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2273:A:H2'	35:BA:2274:A:C8	2.46	0.51
35:BA:2653:U:O2'	42:BH:110:SER:HB2	2.11	0.51
35:BA:2808:U:H5'	35:BA:2891:G:O6	2.10	0.51
40:BF:101:LEU:HD12	40:BF:102:PRO:CD	2.40	0.51
41:BG:106:LEU:HA	41:BG:110:ALA:CB	2.41	0.51
41:BG:180:PHE:O	41:BG:181:ARG:O	2.29	0.51
42:BH:26:VAL:O	42:BH:32:GLU:HA	2.10	0.51
42:BH:149:ARG:HA	42:BH:162:ILE:CG1	2.41	0.51
42:BH:169:VAL:HG13	42:BH:170:ARG:H	1.75	0.51
48:BP:115:LEU:CD2	48:BP:116:GLY:N	2.74	0.51
50:BR:97:VAL:C	50:BR:98:LEU:HD23	2.35	0.51
53:BU:74:LEU:CD1	53:BU:79:PHE:HB2	2.41	0.51
53:BU:95:LEU:O	53:BU:98:LEU:HG	2.11	0.51
57:BY:84:ARG:HH21	57:BY:97:ARG:HB3	1.76	0.51
58:BZ:108:PRO:HG2	58:BZ:111:VAL:CG2	2.41	0.51
1:AA:63:C:C5'	1:AA:64:G:OP2	2.54	0.51
1:AA:110:C:H2'	1:AA:111:G:C5'	2.40	0.51
1:AA:157:G:H2'	1:AA:158:G:H8	1.75	0.51
1:AA:388:G:O2'	1:AA:389:A:P	2.69	0.51
1:AA:397:A:H3'	1:AA:397:A:N3	2.26	0.51
1:AA:549:C:C2	1:AA:550:G:C8	2.99	0.51
1:AA:555:C:H2'	1:AA:556:C:C5	2.46	0.51
1:AA:560:U:C5'	1:AA:561:U:H3'	2.39	0.51
1:AA:868:C:C2'	1:AA:869:G:C5'	2.89	0.51
1:AA:1128:C:O2'	1:AA:1129:C:H5"	2.11	0.51
1:AA:1316:G:H2'	1:AA:1317:C:H5"	1.93	0.51
4:AD:152:SER:HA	4:AD:155:LEU:HD12	1.93	0.51
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.10	0.51
5:AE:80:ILE:HG22	8:AH:104:ARG:NH2	2.26	0.51
11:AK:79:SER:OG	11:AK:106:LYS:HD2	2.11	0.51
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD2	2.46	0.51
19:AS:6:LYS:CG	19:AS:7:LYS:H	2.12	0.51
24:AY:70:THR:O	24:AY:80:ASN:HA	2.11	0.51
24:AY:512:ILE:H	24:AY:512:ILE:HD13	1.76	0.51
26:B1:29:GLY:O	26:B1:30:VAL:CB	2.58	0.51
27:B2:9:GLN:C	27:B2:11:GLU:N	2.69	0.51
31:B6:11:LEU:C	31:B6:11:LEU:CD2	2.83	0.51
35:BA:139(A):G:H3'	35:BA:140:G:H8	1.76	0.51
35:BA:213:A:O2'	35:BA:214:G:H5'	2.11	0.51
35:BA:627:A:H62	48:BP:84:ASN:HD21	1.59	0.51
35:BA:779:U:OP1	38:BD:49:ILE:HG13	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1180:C:C2'	35:BA:1181:C:H5'	2.41	0.51
35:BA:1348:G:C2'	35:BA:1349:A:H5"	2.40	0.51
35:BA:1854:A:H62	35:BA:1888:G:H8	1.59	0.51
35:BA:2648:C:H2'	35:BA:2649:U:C6	2.46	0.51
37:BC:65:LEU:HB3	37:BC:189:ASN:HD22	1.75	0.51
38:BD:26:LYS:HA	38:BD:26:LYS:NZ	2.25	0.51
41:BG:103:LEU:CD1	41:BG:107:LEU:HG	2.41	0.51
41:BG:137:GLU:HG3	41:BG:155:MET:N	2.25	0.51
42:BH:12:PRO:HD3	42:BH:76:VAL:HG13	1.92	0.51
44:BK:28:UNK:O	44:BK:31:UNK:N	2.44	0.51
45:BL:92:UNK:O	45:BL:94:UNK:N	2.43	0.51
46:BN:39:ARG:HH21	46:BN:41:ASP:CG	2.19	0.51
51:BS:20:ARG:NE	51:BS:20:ARG:HA	2.24	0.51
51:BS:35:ILE:HD13	51:BS:99:LYS:HD3	1.92	0.51
55:BW:58:ALA:O	55:BW:64:MET:HG3	2.10	0.51
56:BX:35:THR:CG2	56:BX:36:LYS:N	2.74	0.51
58:BZ:44:PHE:CE1	58:BZ:48:PHE:HD2	2.29	0.51
58:BZ:45:ASP:O	58:BZ:49:ARG:HG2	2.10	0.51
1:AA:77:G:N1	1:AA:92:C:N4	2.60	0.50
1:AA:511:C:O4'	4:AD:43:HIS:NE2	2.44	0.50
1:AA:1014:A:C2	1:AA:1219:U:H1'	2.46	0.50
1:AA:1116:C:C2'	1:AA:1117:G:C5'	2.89	0.50
1:AA:1177:G:OP2	9:AI:97:LYS:NZ	2.33	0.50
2:AB:39:ILE:O	2:AB:41:ILE:HD13	2.10	0.50
4:AD:83:SER:HA	4:AD:89:THR:CG2	2.41	0.50
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.73	0.50
6:AF:87:ARG:HG2	6:AF:87:ARG:HH11	1.77	0.50
11:AK:121:PRO:HG2	11:AK:126:ARG:HG3	1.92	0.50
24:AY:15:ILE:HD12	24:AY:81:ILE:HG23	1.94	0.50
24:AY:38:ARG:NH2	24:AY:270:GLN:NE2	2.58	0.50
25:B0:69:PHE:N	25:B0:69:PHE:HD1	2.08	0.50
26:B1:63:ALA:O	26:B1:67:ILE:HG13	2.11	0.50
26:B1:85:LEU:O	26:B1:86:SER:HB3	2.11	0.50
31:B6:18:ARG:HH22	31:B6:44:ARG:HB3	1.76	0.50
33:B8:15:LYS:HD2	48:BP:65:ARG:NH2	2.25	0.50
33:B8:50:LEU:C	33:B8:52:LYS:N	2.68	0.50
35:BA:17:G:H2'	35:BA:18:C:C5	2.45	0.50
35:BA:402:A:C2'	35:BA:403:U:H5'	2.42	0.50
35:BA:436:C:H2'	35:BA:437:G:C8	2.47	0.50
35:BA:833:U:C4'	48:BP:51:PHE:O	2.59	0.50
35:BA:953:A:N6	35:BA:965:C:C4	2.78	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:965:C:O2'	35:BA:966:G:H5'	2.11	0.50
35:BA:1762:A:H8	35:BA:1762:A:O5'	1.93	0.50
35:BA:1786:A:C4	35:BA:1938:A:C6	2.98	0.50
35:BA:2180:U:H5'	35:BA:2180:U:C6	2.32	0.50
35:BA:2339:G:H2'	35:BA:2340:G:H8	1.74	0.50
37:BC:50:ILE:HD13	37:BC:50:ILE:H	1.76	0.50
37:BC:138:LEU:HD23	37:BC:139:PRO:CD	2.41	0.50
37:BC:191:ARG:O	37:BC:195:ARG:HG2	2.11	0.50
38:BD:69:ARG:CD	38:BD:105:ILE:HD11	2.34	0.50
39:BE:6:GLY:O	39:BE:195:LEU:HD12	2.10	0.50
40:BF:135:LYS:H	40:BF:166:ALA:CB	2.24	0.50
42:BH:171:LEU:O	42:BH:173:PRO:CD	2.51	0.50
43:BJ:96:UNK:C	43:BJ:98:UNK:N	2.74	0.50
46:BN:85:ILE:N	46:BN:85:ILE:HD12	2.26	0.50
51:BS:24:LEU:CB	51:BS:85:VAL:HG12	2.41	0.50
56:BX:83:VAL:HG12	56:BX:84:ALA:N	2.26	0.50
58:BZ:97:GLU:HG3	58:BZ:127:LYS:CB	2.35	0.50
1:AA:323:U:H2'	1:AA:324:G:O4'	2.11	0.50
1:AA:514:C:H2'	1:AA:515:G:H8	1.75	0.50
1:AA:769:G:C2'	1:AA:770:C:C5'	2.78	0.50
1:AA:963:G:N2	10:AJ:55:LYS:CE	2.75	0.50
1:AA:1152:A:C2	1:AA:1153:C:N3	2.79	0.50
1:AA:1444:C:O2'	1:AA:1445:C:H5'	2.11	0.50
2:AB:16:HIS:NE2	2:AB:210:SER:OG	2.44	0.50
3:AC:64:VAL:HG12	3:AC:66:VAL:CG2	2.41	0.50
3:AC:95:THR:O	3:AC:97:LYS:N	2.38	0.50
8:AH:122:ARG:HB2	8:AH:122:ARG:CZ	2.41	0.50
9:AI:33:PHE:HD2	9:AI:34:ASN:ND2	2.09	0.50
10:AJ:6:ILE:HB	10:AJ:98:ILE:HD12	1.94	0.50
24:AY:11:ARG:HA	24:AY:77:HIS:CE1	2.46	0.50
24:AY:463:VAL:O	24:AY:466:LEU:HB2	2.11	0.50
27:B2:47:ASN:C	27:B2:49:LYS:N	2.67	0.50
33:B8:4:MET:HE2	33:B8:61:LEU:HB3	1.94	0.50
35:BA:71:A:C2	56:BX:31:HIS:CE1	2.97	0.50
35:BA:271(R):G:O2'	35:BA:271(S):G:H5'	2.11	0.50
35:BA:637:A:H4'	35:BA:638:G:O5'	2.11	0.50
35:BA:996:A:O2'	53:BU:92:ARG:HG3	2.11	0.50
35:BA:1301:A:H2'	35:BA:1302:A:C3'	2.41	0.50
35:BA:1453:U:H5'	50:BR:63:ARG:NE	2.26	0.50
35:BA:1788:C:O2'	35:BA:1789:A:H5'	2.10	0.50
35:BA:2261:C:O2'	35:BA:2262:U:H5'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2691:C:H6	35:BA:2691:C:H5'	1.76	0.50
36:BB:30:C:H2'	36:BB:31:C:O4'	2.11	0.50
40:BF:167:ALA:O	40:BF:169:ASN:N	2.44	0.50
41:BG:6:ALA:O	41:BG:7:LEU:C	2.52	0.50
41:BG:16:ARG:HB3	41:BG:17:PRO:HD3	1.92	0.50
41:BG:69:ALA:O	41:BG:90:LEU:HD12	2.11	0.50
42:BH:9:ILE:HA	42:BH:69:ARG:NH1	2.26	0.50
42:BH:11:VAL:HB	42:BH:48:GLY:O	2.12	0.50
46:BN:1:MET:C	46:BN:1:MET:SD	2.94	0.50
48:BP:57:THR:C	48:BP:59:LEU:N	2.46	0.50
49:BQ:51:ARG:O	49:BQ:55:VAL:HG12	2.11	0.50
52:BT:121:ILE:O	52:BT:124:ASP:HB2	2.11	0.50
57:BY:81:LYS:HD3	57:BY:97:ARG:O	2.11	0.50
1:AA:107:G:OP1	1:AA:325:A:N6	2.45	0.50
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.44	0.50
1:AA:775:G:H2'	1:AA:776:G:C5'	2.41	0.50
1:AA:1081:G:O6	5:AE:47:LYS:NZ	2.41	0.50
1:AA:1285:A:HO2'	1:AA:1286:A:P	2.32	0.50
1:AA:1388:C:HO2'	1:AA:1389:C:H5'	1.73	0.50
5:AE:80:ILE:HG13	5:AE:91:LEU:HB2	1.93	0.50
10:AJ:38:ILE:CG1	10:AJ:71:LEU:HB3	2.41	0.50
11:AK:58:PRO:O	11:AK:61:ALA:HB3	2.11	0.50
11:AK:115:PRO:C	11:AK:117:ASN:H	2.19	0.50
13:AM:40:ASN:HB3	13:AM:43:THR:HG23	1.93	0.50
22:AV:9:A:H62	22:AV:23:A:H2	1.60	0.50
24:AY:616:TYR:CE2	24:AY:664:GLN:HG3	2.45	0.50
27:B2:47:ASN:ND2	35:BA:95:G:H1'	2.25	0.50
35:BA:109:G:C2	35:BA:110:G:C4	2.99	0.50
35:BA:139(A):G:H3'	35:BA:140:G:C8	2.47	0.50
35:BA:527:C:O2	35:BA:527:C:H5'	2.12	0.50
35:BA:692:C:H2'	35:BA:693:C:H6	1.75	0.50
35:BA:699:A:C2'	35:BA:700:G:C5'	2.86	0.50
35:BA:1023:U:C3'	35:BA:1024:G:H5'	2.38	0.50
35:BA:1256:G:H21	40:BF:82:ILE:HG22	1.77	0.50
35:BA:1446:C:H5	35:BA:1466:G:C2	2.28	0.50
35:BA:1544:A:H2'	35:BA:1545:A:C8	2.46	0.50
35:BA:1773:A:N7	35:BA:1829:A:H1'	2.26	0.50
35:BA:2009:G:N1	35:BA:2010:G:N7	2.59	0.50
35:BA:2124:G:H2'	35:BA:2125:G:C5'	2.41	0.50
35:BA:2305:A:C2	35:BA:2306:C:C1'	2.94	0.50
35:BA:2606:C:C3'	35:BA:2607:G:H5'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2875:C:H4'	52:BT:5:ALA:HB2	1.93	0.50
36:BB:49:C:OP1	51:BS:97:ARG:HG3	2.11	0.50
39:BE:179:GLU:O	39:BE:180:ASN:HB2	2.11	0.50
42:BH:1:MET:HG3	42:BH:2:SER:N	2.26	0.50
48:BP:61:ARG:C	48:BP:62:LEU:CD2	2.84	0.50
49:BQ:12:GLN:OE1	49:BQ:72:LYS:HG3	2.11	0.50
49:BQ:135:ASP:N	49:BQ:137:TYR:CD2	2.79	0.50
54:BV:18:LEU:O	54:BV:19:LYS:HB2	2.10	0.50
58:BZ:32:HIS:O	58:BZ:33:LEU:HB3	2.11	0.50
1:AA:175:C:H2'	1:AA:176:C:H6	1.77	0.50
1:AA:1049:U:H2'	14:AN:2:ALA:N	2.25	0.50
1:AA:1392:G:H21	1:AA:1502:A:H8	1.57	0.50
3:AC:108:ASN:HB3	3:AC:111:LEU:HB2	1.93	0.50
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.45	0.50
10:AJ:66:ARG:HH11	10:AJ:66:ARG:CB	2.25	0.50
16:AP:52:ASP:OD1	16:AP:54:GLU:HB2	2.12	0.50
24:AY:141:LYS:HG2	24:AY:142:THR:N	2.27	0.50
24:AY:211:GLU:O	24:AY:215:LYS:HG3	2.11	0.50
25:B0:11:ARG:HD3	25:B0:12:ASN:N	2.17	0.50
25:B0:11:ARG:O	25:B0:14:ARG:NH1	2.44	0.50
26:B1:26:ARG:HG3	26:B1:27:GLU:N	2.21	0.50
26:B1:81:LYS:HE3	35:BA:271(H):G:H5"	1.92	0.50
31:B6:53:LYS:O	31:B6:54:ILE:C	2.54	0.50
35:BA:298:G:H5'	35:BA:299:A:OP1	2.11	0.50
35:BA:491:G:O2'	35:BA:492:A:H5'	2.11	0.50
35:BA:565:C:H4'	35:BA:1253:A:N6	2.26	0.50
35:BA:1025:G:C4	35:BA:1135:C:C1'	2.95	0.50
35:BA:1109:C:H2'	35:BA:1110:G:O4'	2.11	0.50
35:BA:1503:U:H2'	35:BA:1504:C:C5	2.46	0.50
35:BA:1784:A:H4'	35:BA:1785:A:H5"	1.93	0.50
35:BA:2040:C:H2'	35:BA:2041:U:C6	2.46	0.50
35:BA:2397:G:C2'	35:BA:2398:U:H5'	2.41	0.50
35:BA:2475:C:H5'	35:BA:2476:A:OP2	2.11	0.50
37:BC:218:THR:HG22	37:BC:219:MET:SD	2.50	0.50
41:BG:103:LEU:C	41:BG:103:LEU:HD13	2.36	0.50
41:BG:139:LEU:H	41:BG:139:LEU:CD2	2.25	0.50
48:BP:38:GLN:HG3	48:BP:39:LYS:N	2.24	0.50
48:BP:81:GLN:CD	48:BP:106:LEU:HA	2.36	0.50
49:BQ:65:PHE:N	49:BQ:65:PHE:HD1	2.08	0.50
51:BS:58:LEU:HD21	51:BS:68:GLN:CB	2.41	0.50
53:BU:57:PHE:O	53:BU:58:ARG:C	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:42:VAL:CG2	57:BY:67:LEU:HD13	2.33	0.50
1:AA:188:C:C4'	20:AT:89:ARG:NH1	2.75	0.50
1:AA:260:G:H2'	1:AA:261:U:C6	2.47	0.50
1:AA:346:G:O2'	1:AA:347:G:P	2.69	0.50
1:AA:360:A:OP1	24:AY:430:ARG:NH2	2.45	0.50
1:AA:563:A:OP2	1:AA:564:C:OP1	2.30	0.50
1:AA:695:A:H2'	1:AA:696:A:C8	2.46	0.50
1:AA:1041:A:H2'	1:AA:1042:G:C8	2.46	0.50
1:AA:1120:G:H2'	1:AA:1121:U:C6	2.47	0.50
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.12	0.50
1:AA:1306:A:N6	1:AA:1331:G:C1'	2.73	0.50
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.46	0.50
3:AC:6:HIS:ND1	3:AC:8:ILE:HB	2.26	0.50
4:AD:15:GLU:C	4:AD:17:VAL:H	2.18	0.50
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.56	0.50
13:AM:116:THR:O	13:AM:117:VAL:CB	2.60	0.50
22:AV:43:C:O2	22:AV:43:C:C5'	2.59	0.50
24:AY:100:VAL:HG23	24:AY:329:ARG:CB	2.40	0.50
24:AY:457:LEU:O	24:AY:457:LEU:HD23	2.12	0.50
24:AY:628:ARG:HG2	24:AY:628:ARG:NH1	2.24	0.50
32:B7:43:THR:O	32:B7:44:PRO:C	2.53	0.50
35:BA:252:G:P	48:BP:50:ARG:NH1	2.78	0.50
35:BA:272(B):G:H2'	35:BA:272(C):G:H8	1.76	0.50
35:BA:1103:A:C5'	35:BA:1104:C:OP2	2.46	0.50
35:BA:2206:G:N3	35:BA:2206:G:C3'	2.72	0.50
41:BG:104:GLU:HA	41:BG:107:LEU:HB3	1.92	0.50
41:BG:137:GLU:HA	41:BG:155:MET:H	1.76	0.50
42:BH:9:ILE:HG22	42:BH:10:PRO:N	2.25	0.50
42:BH:154:PRO:C	42:BH:156:ALA:H	2.19	0.50
50:BR:7:GLY:C	50:BR:8:ARG:NE	2.70	0.50
51:BS:106:ARG:C	51:BS:108:GLY:H	2.20	0.50
1:AA:507:C:C6	1:AA:508:C:C6	2.99	0.50
1:AA:559:A:O4'	1:AA:561:U:H2'	2.10	0.50
1:AA:614:A:H2'	1:AA:615:C:H6	1.76	0.50
1:AA:771:G:O6	1:AA:772:U:O4	2.30	0.50
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.47	0.50
1:AA:1372:U:H2'	1:AA:1373:G:H8	1.76	0.50
2:AB:71:VAL:HG11	2:AB:170:GLU:HG2	1.93	0.50
2:AB:148:TYR:O	2:AB:149:LEU:HD13	2.12	0.50
3:AC:34:LEU:HG	14:AN:25:VAL:HG11	1.94	0.50
3:AC:40:ARG:HG3	3:AC:40:ARG:NH1	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:12:CYS:SG	4:AD:19:LEU:HB2	2.52	0.50
12:AL:18:VAL:CG2	12:AL:19:ARG:N	2.70	0.50
13:AM:4:ILE:CG2	13:AM:5:ALA:H	2.08	0.50
13:AM:9:ILE:O	13:AM:10:PRO:O	2.30	0.50
14:AN:12:ARG:NH1	14:AN:14:PRO:HG2	2.26	0.50
24:AY:128:TYR:HD1	24:AY:128:TYR:N	2.10	0.50
24:AY:339:SER:O	24:AY:351:ARG:HD2	2.11	0.50
26:B1:57:GLU:CG	26:B1:58:ILE:H	2.18	0.50
27:B2:45:SER:O	27:B2:47:ASN:OD1	2.30	0.50
29:B4:5:ILE:O	29:B4:6:HIS:O	2.30	0.50
29:B4:16:CYS:CA	29:B4:33:VAL:HG11	2.41	0.50
35:BA:1036:G:C2	35:BA:1120:G:C5	3.00	0.50
35:BA:1054:A:C6	35:BA:1106:G:C6	3.00	0.50
35:BA:1087:G:N2	35:BA:1103:A:H61	2.03	0.50
35:BA:1411:C:H2'	35:BA:1412:A:C8	2.47	0.50
35:BA:1806:C:H2'	35:BA:1807:G:C5'	2.41	0.50
35:BA:1890:A:H3'	35:BA:1891:G:H5'	1.91	0.50
35:BA:1914:C:H5"	35:BA:1915:U:C5	2.46	0.50
35:BA:2182:G:H2'	35:BA:2183:C:C6	2.46	0.50
35:BA:2189:U:C3'	35:BA:2190:G:H5"	2.40	0.50
36:BB:22:U:H2'	36:BB:23:G:C8	2.47	0.50
36:BB:101:G:H2'	36:BB:102:A:O4'	2.12	0.50
37:BC:117:THR:CG2	37:BC:119:ASP:OD1	2.60	0.50
39:BE:77:ILE:HG22	39:BE:78:LEU:HD12	1.93	0.50
41:BG:5:VAL:HB	41:BG:8:LYS:CB	2.41	0.50
41:BG:24:GLY:O	41:BG:25:TYR:CB	2.58	0.50
42:BH:30:LYS:CE	42:BH:81:GLU:HG3	2.17	0.50
42:BH:124:GLU:HG3	42:BH:132:ARG:HG3	1.93	0.50
47:BO:53:LYS:O	47:BO:56:ASP:HB2	2.12	0.50
48:BP:71:VAL:HG13	48:BP:72:PRO:CD	2.41	0.50
48:BP:95:VAL:HA	48:BP:99:LEU:HD23	1.94	0.50
49:BQ:141:GLN:HE21	58:BZ:72:ARG:HA	1.77	0.50
51:BS:12:PHE:C	51:BS:12:PHE:HD1	2.20	0.50
54:BV:38:LEU:C	54:BV:38:LEU:HD23	2.36	0.50
58:BZ:62:PRO:C	58:BZ:64:GLY:H	2.20	0.50
1:AA:437:U:O2'	1:AA:438:G:H5'	2.11	0.50
1:AA:1499:A:OP1	1:AA:1499:A:H3'	2.12	0.50
2:AB:16:HIS:CD2	2:AB:210:SER:OG	2.65	0.50
2:AB:105:PHE:O	2:AB:109:SER:N	2.42	0.50
2:AB:115:LEU:HD22	2:AB:153:ARG:NH1	2.26	0.50
3:AC:130:VAL:O	3:AC:131:ARG:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:40:ARG:HG2	5:AE:40:ARG:HH11	1.76	0.50
9:AI:53:VAL:HG13	9:AI:95:LYS:CE	2.40	0.50
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.45	0.50
18:AR:32:ARG:CA	18:AR:69:THR:HG21	2.32	0.50
19:AS:58:VAL:HG23	19:AS:58:VAL:O	2.10	0.50
19:AS:67:VAL:CG1	29:B4:52:THR:HG23	2.42	0.50
24:AY:20:HIS:CD2	24:AY:21:ILE:N	2.80	0.50
24:AY:20:HIS:CG	24:AY:115:GLU:HB2	2.47	0.50
24:AY:548:GLU:C	24:AY:550:MET:H	2.18	0.50
25:B0:52:GLY:O	25:B0:60:PHE:CD1	2.64	0.50
27:B2:2:LYS:HA	27:B2:5:GLU:HG2	1.94	0.50
28:B3:35:ARG:HD2	28:B3:37:LEU:HD21	1.93	0.50
29:B4:14:ILE:O	29:B4:15:ILE:O	2.30	0.50
29:B4:62:ARG:C	29:B4:64:GLY:H	2.19	0.50
35:BA:654:A:C8	35:BA:654(V):A:H4'	2.47	0.50
35:BA:958:U:C2'	35:BA:959:A:OP2	2.60	0.50
35:BA:1274:A:C2	35:BA:1645:G:O4'	2.65	0.50
35:BA:1464:C:H1'	35:BA:1528:A:C8	2.47	0.50
35:BA:1669:A:O3'	35:BA:2549:G:H5'	2.12	0.50
35:BA:1902:C:O2'	38:BD:244:ARG:HB3	2.06	0.50
35:BA:2401:U:C5	35:BA:2402:C:N4	2.79	0.50
35:BA:2524:G:H2'	35:BA:2525:G:O4'	2.11	0.50
35:BA:2893:G:H5'	35:BA:2894:G:C5'	2.32	0.50
36:BB:66:A:O2'	36:BB:67:G:O5'	2.30	0.50
37:BC:108:TRP:O	37:BC:110:ASP:N	2.45	0.50
39:BE:33:VAL:HG12	39:BE:89:ASP:O	2.12	0.50
41:BG:34:LEU:HD12	41:BG:34:LEU:N	2.26	0.50
41:BG:38:VAL:HG13	41:BG:93:THR:CA	2.41	0.50
42:BH:37:VAL:HG12	42:BH:38:SER:N	2.27	0.50
52:BT:91:ARG:O	52:BT:92:GLY:C	2.54	0.50
54:BV:82:ARG:HD2	54:BV:82:ARG:N	2.26	0.50
57:BY:50:ARG:C	57:BY:52:SER:N	2.69	0.50
1:AA:149:A:O2'	1:AA:150:C:H5'	2.11	0.50
1:AA:272:C:O2'	1:AA:273:A:H5'	2.12	0.50
1:AA:563:A:O5'	1:AA:564:C:OP1	2.30	0.50
1:AA:688:G:N1	1:AA:700:G:C6	2.80	0.50
1:AA:962:C:C2'	1:AA:963:G:O5'	2.60	0.50
1:AA:1399:C:H1'	1:AA:1400:C:OP2	2.12	0.50
2:AB:157:ARG:O	2:AB:158:LEU:O	2.30	0.50
3:AC:129:ALA:CB	3:AC:133:ALA:HB2	2.42	0.50
5:AE:80:ILE:HD12	5:AE:138:ALA:CB	2.28	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:121:ASP:HB2	8:AH:125:ARG:NH2	2.26	0.50
29:B4:36:CYS:O	29:B4:38:LYS:HE2	2.11	0.50
30:B5:40:LYS:CE	30:B5:46:CYS:CB	2.80	0.50
35:BA:271(D):G:O2'	35:BA:271(E):U:H5'	2.12	0.50
35:BA:443:A:H1'	35:BA:1201:C:O4'	2.12	0.50
35:BA:860:U:C2'	35:BA:861:A:C5'	2.90	0.50
35:BA:1416:G:O2'	35:BA:1417:C:OP2	2.30	0.50
35:BA:1495:A:N3	35:BA:1496:A:C2	2.80	0.50
35:BA:1653:G:O4'	35:BA:1654:A:OP2	2.30	0.50
35:BA:2009:G:C6	35:BA:2010:G:N7	2.79	0.50
35:BA:2035:G:H4'	35:BA:2036:C:OP2	2.09	0.50
35:BA:2145:C:C5'	35:BA:2146:C:H5	2.25	0.50
35:BA:2320:A:H8	35:BA:2321:G:O6	1.95	0.50
35:BA:2401:U:O2'	35:BA:2402:C:OP1	2.30	0.50
35:BA:2461:C:H2'	35:BA:2462:U:H6	1.75	0.50
35:BA:2620:C:P	39:BE:153:GLY:H	2.34	0.50
36:BB:15:A:H1'	36:BB:110:G:C5	2.47	0.50
37:BC:104:ILE:O	37:BC:105:LEU:C	2.55	0.50
37:BC:191:ARG:O	37:BC:194:ILE:HG22	2.12	0.50
39:BE:103:ASP:OD2	39:BE:201:THR:HA	2.11	0.50
41:BG:133:LEU:HD13	41:BG:134:GLY:N	2.26	0.50
43:BJ:72:UNK:C	43:BJ:74:UNK:N	2.75	0.50
47:BO:115:VAL:HG13	47:BO:121:VAL:HG21	1.93	0.50
48:BP:105:LEU:N	48:BP:105:LEU:HD12	2.26	0.50
50:BR:53:HIS:HD2	50:BR:94:TYR:OH	1.95	0.50
51:BS:13:ARG:CG	51:BS:14:VAL:N	2.74	0.50
51:BS:88:ASP:O	51:BS:89:ARG:HB3	2.11	0.50
52:BT:11:GLU:N	52:BT:11:GLU:OE1	2.44	0.50
53:BU:59:ARG:HH11	53:BU:59:ARG:CG	2.25	0.50
53:BU:92:ARG:NH1	54:BV:11:GLN:O	2.44	0.50
57:BY:2:ARG:O	57:BY:3:VAL:HB	2.11	0.50
58:BZ:60:GLU:O	58:BZ:61:LEU:CG	2.60	0.50
1:AA:311:C:HO2'	1:AA:312:C:H5"	1.72	0.50
1:AA:774:G:H2'	1:AA:775:G:C8	2.40	0.50
1:AA:833:U:H2'	1:AA:834:C:C6	2.46	0.50
1:AA:1047:G:O2'	1:AA:1048:G:C5'	2.59	0.50
1:AA:1132:C:O2'	1:AA:1133:G:H5'	2.12	0.50
2:AB:76:GLN:O	2:AB:211:ILE:HD12	2.11	0.50
2:AB:76:GLN:NE2	2:AB:76:GLN:H	2.10	0.50
3:AC:12:LEU:O	3:AC:16:ARG:O	2.30	0.50
3:AC:35:GLU:OE1	3:AC:95:THR:HG23	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:194:LEU:HD22	4:AD:194:LEU:N	2.27	0.50
7:AG:86:GLN:O	7:AG:87:VAL:HG12	2.12	0.50
10:AJ:43:ARG:HG3	10:AJ:43:ARG:NH1	2.23	0.50
12:AL:27:LEU:CD1	12:AL:28:LYS:H	2.11	0.50
19:AS:19:VAL:CG1	19:AS:44:MET:HG2	2.41	0.50
24:AY:345:THR:HG22	24:AY:345:THR:O	2.11	0.50
29:B4:22:ILE:HG21	41:BG:105:LYS:HB3	1.93	0.50
33:B8:48:PHE:C	33:B8:49:VAL:CG2	2.84	0.50
35:BA:74:A:H5"	35:BA:75:G:O4'	2.12	0.50
35:BA:265:A:C1'	35:BA:266:G:O4'	2.59	0.50
35:BA:271(F):C:H2'	35:BA:271(G):C:C6	2.47	0.50
35:BA:331:A:O2'	35:BA:332:A:O5'	2.30	0.50
35:BA:740:U:H2'	35:BA:741:G:H8	1.75	0.50
35:BA:956:G:H2'	35:BA:957:A:H2'	1.93	0.50
35:BA:1301:A:N7	35:BA:1303:G:C8	2.80	0.50
35:BA:1424:G:H2'	35:BA:1425:G:C8	2.46	0.50
35:BA:1425:G:O5'	35:BA:1425:G:H8	1.95	0.50
35:BA:1890:A:O5'	35:BA:1890:A:H8	1.95	0.50
35:BA:2126:A:O2'	35:BA:2127:G:OP2	2.30	0.50
35:BA:2173:A:H5'	35:BA:2174:C:OP2	2.12	0.50
35:BA:2386:C:H2'	35:BA:2387:U:C6	2.47	0.50
36:BB:73:A:C4	36:BB:105:A:C2	3.00	0.50
37:BC:57:GLN:HB2	37:BC:202:PRO:HG2	1.93	0.50
37:BC:203:GLU:CD	37:BC:203:GLU:N	2.70	0.50
38:BD:133:LEU:HA	38:BD:136:ILE:HD13	1.93	0.50
41:BG:82:LEU:HD22	41:BG:88:ILE:CD1	2.41	0.50
41:BG:106:LEU:HD23	41:BG:106:LEU:C	2.37	0.50
48:BP:16:ARG:O	48:BP:18:ARG:N	2.45	0.50
48:BP:30:THR:CG2	48:BP:31:ALA:N	2.74	0.50
48:BP:39:LYS:HD2	48:BP:40:SER:N	2.27	0.50
48:BP:115:LEU:O	48:BP:116:GLY:O	2.30	0.50
2:AB:90:MET:O	2:AB:91:PRO:O	2.30	0.49
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.94	0.49
4:AD:13:ARG:HD2	4:AD:36:ARG:O	2.12	0.49
7:AG:50:ILE:HD13	7:AG:58:PRO:HA	1.93	0.49
7:AG:94:ARG:HG3	7:AG:94:ARG:NH1	2.26	0.49
7:AG:102:ARG:HH11	7:AG:102:ARG:HG3	1.76	0.49
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.11	0.49
22:AV:45:U:O2	22:AV:45:U:O5'	2.30	0.49
24:AY:190:ASN:C	24:AY:192:LEU:H	2.20	0.49
24:AY:490:PRO:HG3	24:AY:515:GLU:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:36:ILE:HD11	35:BA:2355:C:H4'	1.94	0.49
26:B1:52:ARG:C	26:B1:53:VAL:HG13	2.36	0.49
31:B6:11:LEU:N	31:B6:11:LEU:CD1	2.75	0.49
31:B6:32:ASN:O	31:B6:33:LYS:CG	2.58	0.49
35:BA:773:U:H5'	38:BD:47:GLY:HA3	1.94	0.49
35:BA:896:A:O2'	58:BZ:176:PRO:HG2	2.12	0.49
35:BA:1062:G:N2	35:BA:1076:C:H42	2.09	0.49
35:BA:1423:G:H2'	35:BA:1424:G:H8	1.76	0.49
35:BA:1799:G:C8	38:BD:181:GLU:OE2	2.56	0.49
35:BA:1914:C:H3'	35:BA:1915:U:H6	1.76	0.49
35:BA:1917:U:C2'	35:BA:1918:A:H5'	2.42	0.49
35:BA:2554:U:C4	35:BA:2555:U:O4	2.65	0.49
35:BA:2593:U:H2'	35:BA:2594:C:C6	2.46	0.49
37:BC:118:PRO:O	37:BC:120:VAL:N	2.45	0.49
37:BC:138:LEU:O	37:BC:139:PRO:C	2.53	0.49
40:BF:81:PRO:O	40:BF:82:ILE:O	2.30	0.49
41:BG:62:LEU:N	41:BG:62:LEU:HD12	2.26	0.49
41:BG:66:GLN:NE2	41:BG:94:LEU:CG	2.72	0.49
41:BG:106:LEU:HG	41:BG:110:ALA:HB3	1.94	0.49
41:BG:110:ALA:HB1	41:BG:142:PRO:HB3	1.92	0.49
42:BH:158:HIS:CA	42:BH:170:ARG:HD2	2.40	0.49
48:BP:47:ASP:OD2	48:BP:49:ARG:N	2.45	0.49
50:BR:50:HIS:CE1	50:BR:54:LEU:HD11	2.47	0.49
51:BS:99:LYS:NZ	51:BS:99:LYS:CB	2.75	0.49
55:BW:68:ARG:HB3	55:BW:110:LYS:H	1.77	0.49
56:BX:28:PHE:CZ	56:BX:92:LEU:HD11	2.47	0.49
58:BZ:128:VAL:CG1	58:BZ:133:ILE:HD13	2.42	0.49
1:AA:56:U:H2'	1:AA:57:G:H8	1.75	0.49
1:AA:197:A:O2'	1:AA:198:G:O5'	2.30	0.49
1:AA:491:G:O2'	1:AA:492:G:C5'	2.60	0.49
1:AA:512:U:H2'	1:AA:513:C:H6	1.75	0.49
1:AA:940:C:H2'	1:AA:941:G:H8	1.78	0.49
1:AA:961:U:OP1	1:AA:961:U:C3'	2.59	0.49
1:AA:962:C:H2'	1:AA:963:G:C8	2.46	0.49
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.48	0.49
2:AB:25:ASN:O	2:AB:28:PHE:N	2.46	0.49
4:AD:121:VAL:N	4:AD:126:ILE:HD13	2.26	0.49
5:AE:6:PHE:HB3	5:AE:34:VAL:HG22	1.94	0.49
9:AI:16:ARG:HB2	9:AI:64:THR:HB	1.94	0.49
11:AK:33:THR:HG22	11:AK:39:PRO:HA	1.94	0.49
12:AL:93:LEU:HB3	12:AL:96:VAL:CG2	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:106:ASN:O	13:AM:107:ALA:HB3	2.12	0.49
14:AN:44:LEU:HD12	14:AN:44:LEU:O	2.11	0.49
18:AR:68:LYS:O	18:AR:72:ARG:HG3	2.13	0.49
19:AS:29:ARG:CB	19:AS:48:THR:HB	2.32	0.49
21:AU:3:LYS:HD3	21:AU:14:TRP:CD1	2.47	0.49
24:AY:128:TYR:N	24:AY:128:TYR:CD1	2.80	0.49
24:AY:348:ARG:HG2	24:AY:382:GLU:HG3	1.95	0.49
24:AY:431:LEU:CD1	24:AY:465:ARG:HH12	2.24	0.49
25:B0:19:LYS:HZ3	25:B0:41:ARG:HH22	1.45	0.49
25:B0:26:TYR:O	25:B0:29:GLN:HG3	2.12	0.49
25:B0:50:ASN:CG	25:B0:63:VAL:HG21	2.37	0.49
26:B1:83:GLU:OE1	26:B1:84:GLY:N	2.44	0.49
29:B4:23:GLU:O	29:B4:24:THR:O	2.30	0.49
30:B5:28:PRO:HD2	55:BW:35:ILE:HD12	1.94	0.49
35:BA:331:A:C2'	35:BA:332:A:OP1	2.60	0.49
35:BA:1009:A:C4'	53:BU:59:ARG:HD3	2.42	0.49
35:BA:1021:A:H61	35:BA:1142(A):A:H61	1.61	0.49
35:BA:1228:G:N2	35:BA:1229:G:C1'	2.70	0.49
35:BA:1799:G:P	35:BA:1799:G:C3'	3.00	0.49
35:BA:2115:G:H2'	35:BA:2117:A:H62	1.77	0.49
35:BA:2524:G:H5'	35:BA:2524:G:C8	2.44	0.49
35:BA:2810:A:O2'	39:BE:61:ARG:NH1	2.45	0.49
35:BA:2842:G:O2'	35:BA:2843:G:H5'	2.12	0.49
37:BC:54:ARG:HD2	37:BC:55:SER:H	1.76	0.49
38:BD:70:TRP:CZ3	38:BD:146:GLU:OE2	2.65	0.49
39:BE:197:ILE:HD11	39:BE:199:ARG:CZ	2.42	0.49
40:BF:65:TRP:CZ3	40:BF:72:ARG:HB3	2.47	0.49
41:BG:87:PRO:HG2	41:BG:88:ILE:N	2.22	0.49
42:BH:89:ILE:C	42:BH:89:ILE:HD12	2.37	0.49
46:BN:15:LEU:HD12	46:BN:136:GLU:HG3	1.94	0.49
48:BP:146:VAL:O	48:BP:148:LEU:HG	2.13	0.49
49:BQ:21:THR:HG23	49:BQ:101:ARG:HB2	1.94	0.49
49:BQ:140:ALA:O	58:BZ:72:ARG:O	2.29	0.49
54:BV:18:LEU:C	54:BV:18:LEU:CD2	2.85	0.49
1:AA:60:A:O2'	1:AA:61:G:OP2	2.30	0.49
1:AA:199:G:O2'	1:AA:200:G:O5'	2.30	0.49
1:AA:200:G:H8	1:AA:200:G:O5'	1.95	0.49
1:AA:223:U:H2'	1:AA:224:C:C6	2.47	0.49
1:AA:314:C:O2'	1:AA:315:A:C5'	2.54	0.49
1:AA:648:A:H2'	1:AA:649:G:C8	2.47	0.49
1:AA:818:G:O2'	1:AA:819:A:H5'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:868:C:H2'	1:AA:869:G:C5'	2.42	0.49
1:AA:1267:C:O2'	1:AA:1268:A:O4'	2.29	0.49
1:AA:1318:A:H1'	19:AS:37:ARG:HH21	1.77	0.49
2:AB:18:GLY:HA2	2:AB:41:ILE:HD12	1.93	0.49
7:AG:18:TYR:HB3	7:AG:59:LEU:HD12	1.93	0.49
8:AH:29:SER:HB3	8:AH:32:LYS:CG	2.42	0.49
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.42	0.49
17:AQ:9:VAL:HG11	17:AQ:84:LEU:HD13	1.94	0.49
22:AV:46:G:H3'	22:AV:47:U:H5'	1.94	0.49
24:AY:72:CYS:SG	24:AY:79:ILE:HB	2.52	0.49
24:AY:192:LEU:O	24:AY:192:LEU:HD13	2.12	0.49
25:B0:77:ARG:NH2	35:BA:857:C:H5'	2.26	0.49
35:BA:34:C:O5'	35:BA:34:C:C6	2.63	0.49
35:BA:466:A:O4'	35:BA:683:C:H4'	2.12	0.49
35:BA:491:G:H2'	35:BA:492:A:C8	2.48	0.49
35:BA:720:C:H2'	35:BA:721:C:H6	1.77	0.49
35:BA:776:G:H4'	35:BA:777:A:O5'	2.12	0.49
35:BA:967:C:C3'	35:BA:968:G:H5'	2.33	0.49
35:BA:1049:C:H2'	35:BA:1050:A:H8	1.77	0.49
35:BA:1278:A:O2'	35:BA:1279:G:H5'	2.11	0.49
35:BA:1301:A:O2'	35:BA:1302:A:O5'	2.31	0.49
35:BA:2074:U:H2'	35:BA:2075:U:C6	2.47	0.49
35:BA:2095:C:O2'	35:BA:2096:U:H5'	2.12	0.49
35:BA:2321:G:N3	35:BA:2321:G:H2'	2.27	0.49
35:BA:2361:A:O2'	35:BA:2362:G:H5'	2.12	0.49
36:BB:75:G:H21	58:BZ:85:HIS:CE1	2.30	0.49
37:BC:15:VAL:O	37:BC:21:TYR:OH	2.29	0.49
37:BC:94:TYR:O	37:BC:95:VAL:O	2.30	0.49
38:BD:26:LYS:HA	38:BD:26:LYS:HE2	1.93	0.49
42:BH:53:GLU:HG3	42:BH:54:ARG:N	2.27	0.49
42:BH:83:TYR:O	42:BH:84:SER:HB3	2.12	0.49
48:BP:96:THR:HG22	48:BP:126:VAL:CB	2.41	0.49
55:BW:71:VAL:O	55:BW:71:VAL:CG2	2.60	0.49
57:BY:55:TYR:N	57:BY:56:PRO:CD	2.74	0.49
57:BY:68:HIS:ND1	57:BY:70:SER:HB3	2.27	0.49
1:AA:376:G:H5"	16:AP:5:ARG:HB2	1.94	0.49
1:AA:399:G:H2'	1:AA:400:C:C6	2.48	0.49
1:AA:549:C:C2'	1:AA:550:G:O5'	2.60	0.49
1:AA:983:A:O2'	1:AA:1050:G:OP2	2.31	0.49
1:AA:1217:C:H2'	1:AA:1218:C:H6	1.77	0.49
1:AA:1330:U:H5'	1:AA:1331:G:OP2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1395:C:C2'	1:AA:1396:A:H5'	2.43	0.49
2:AB:86:GLU:C	2:AB:88:ALA:H	2.20	0.49
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.90	0.49
2:AB:212:GLN:CG	2:AB:235:SER:HB2	2.42	0.49
16:AP:60:LEU:HD21	16:AP:66:PRO:HG3	1.95	0.49
24:AY:14:ASN:HD21	24:AY:80:ASN:ND2	2.06	0.49
24:AY:19:ALA:N	24:AY:25:LYS:HD3	2.26	0.49
29:B4:17:GLY:N	29:B4:33:VAL:HG11	2.26	0.49
31:B6:7:ILE:CG2	31:B6:27:LYS:HZ2	2.17	0.49
31:B6:40:CYS:SG	31:B6:45:LYS:HB2	2.53	0.49
33:B8:54:GLU:HG2	33:B8:57:ARG:HH21	1.77	0.49
35:BA:184:C:H2'	35:BA:185:U:H6	1.77	0.49
35:BA:259:G:C2'	35:BA:260:G:C5'	2.90	0.49
35:BA:1721:G:C6	35:BA:1739:U:H5'	2.47	0.49
35:BA:1925:C:C3'	35:BA:1926:U:C5'	2.90	0.49
35:BA:2203:U:O3'	35:BA:2205:C:OP2	2.30	0.49
35:BA:2464:C:O2'	35:BA:2465:C:P	2.70	0.49
35:BA:2580:U:C5'	39:BE:131:ALA:N	2.75	0.49
38:BD:3:VAL:CG1	38:BD:17:THR:HB	2.42	0.49
38:BD:241:PRO:O	38:BD:242:ARG:CB	2.58	0.49
39:BE:38:THR:CG2	39:BE:40:GLU:OE1	2.60	0.49
40:BF:22:ALA:O	40:BF:26:ALA:HB2	2.12	0.49
40:BF:156:LEU:HD12	40:BF:193:VAL:O	2.11	0.49
40:BF:192:LEU:CD1	40:BF:194:MET:HE2	2.42	0.49
42:BH:3:ARG:HH11	42:BH:3:ARG:HG3	1.75	0.49
44:BK:117:UNK:C	44:BK:119:UNK:N	2.73	0.49
46:BN:2:LYS:O	46:BN:4:TYR:CE1	2.65	0.49
46:BN:19:GLU:O	46:BN:59:LYS:O	2.30	0.49
46:BN:104:LYS:C	46:BN:106:MET:H	2.20	0.49
46:BN:119:ARG:NH1	46:BN:119:ARG:HG3	2.27	0.49
47:BO:1:MET:HE2	47:BO:32:TYR:CG	2.47	0.49
49:BQ:141:GLN:HG2	58:BZ:72:ARG:HD3	1.94	0.49
57:BY:44:ILE:CD1	57:BY:65:ALA:HB2	2.42	0.49
58:BZ:114:GLY:O	58:BZ:146:ILE:HG22	2.12	0.49
1:AA:493:G:H2'	1:AA:494:U:H5	1.76	0.49
1:AA:838:G:C2'	1:AA:839:U:H5"	2.40	0.49
1:AA:946:A:C6	1:AA:947:G:O6	2.65	0.49
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.47	0.49
1:AA:1163:C:H2'	1:AA:1164:G:C8	2.46	0.49
1:AA:1452:C:H5'	1:AA:1457:G:N7	2.27	0.49
1:AA:1504:G:O4'	1:AA:1505:G:OP2	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:1:MET:H3	8:AH:1:MET:CE	2.22	0.49
19:AS:16:LEU:O	19:AS:19:VAL:HB	2.13	0.49
24:AY:285:ASP:O	24:AY:286:ILE:HD12	2.13	0.49
24:AY:510:VAL:CG1	24:AY:511:LYS:N	2.76	0.49
27:B2:42:GLY:O	27:B2:43:GLN:O	2.31	0.49
31:B6:33:LYS:HA	31:B6:33:LYS:CE	2.38	0.49
35:BA:246:C:O5'	35:BA:246:C:H6	1.94	0.49
35:BA:363(F):A:O2'	35:BA:364:C:OP2	2.28	0.49
35:BA:643:A:O2'	35:BA:644:A:H5'	2.12	0.49
35:BA:1067:A:H3'	35:BA:1068:G:H5"	1.94	0.49
35:BA:1142:U:C2'	35:BA:1142(A):A:OP1	2.61	0.49
35:BA:1420:U:O4'	35:BA:1420:U:OP1	2.30	0.49
35:BA:1819:A:O4'	35:BA:1820:U:OP2	2.30	0.49
35:BA:2311:A:C2	41:BG:80:PHE:HD2	2.29	0.49
35:BA:2679:A:O2'	35:BA:2680:C:H5'	2.13	0.49
37:BC:3:LYS:O	37:BC:3:LYS:HG2	2.13	0.49
40:BF:10:PRO:CA	40:BF:127:GLU:HG2	2.41	0.49
41:BG:20:ILE:O	41:BG:21:ARG:CB	2.59	0.49
41:BG:66:GLN:NE2	41:BG:94:LEU:CD2	2.75	0.49
42:BH:124:GLU:HB2	42:BH:132:ARG:CG	2.42	0.49
47:BO:111:PHE:HB3	47:BO:114:ILE:HD13	1.95	0.49
52:BT:27:THR:CG2	52:BT:28:VAL:H	2.03	0.49
53:BU:49:HIS:C	53:BU:51:LYS:N	2.70	0.49
54:BV:37:VAL:O	54:BV:37:VAL:HG23	2.13	0.49
58:BZ:17:ALA:HA	58:BZ:20:ARG:HD3	1.95	0.49
1:AA:26:A:N6	1:AA:558:G:H1'	2.28	0.49
1:AA:60:A:O2'	1:AA:61:G:O4'	2.30	0.49
1:AA:78:G:H2'	1:AA:78:G:N3	2.27	0.49
1:AA:81:U:H2'	1:AA:82:U:H5"	1.94	0.49
1:AA:519:C:C2'	1:AA:520:A:H5'	2.43	0.49
1:AA:1019:C:O2'	1:AA:1020:U:H5'	2.13	0.49
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.47	0.49
1:AA:1279:A:C2'	1:AA:1282:C:N4	2.76	0.49
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.47	0.49
1:AA:1385:G:N2	1:AA:1386:G:C4	2.81	0.49
1:AA:1503:A:H3'	1:AA:1504:G:H5'	1.94	0.49
2:AB:16:HIS:ND1	2:AB:210:SER:OG	2.45	0.49
7:AG:22:LEU:C	7:AG:24:THR:H	2.18	0.49
10:AJ:8:LEU:HD12	10:AJ:8:LEU:N	2.27	0.49
11:AK:44:SER:H	11:AK:47:VAL:HB	1.78	0.49
18:AR:53:ARG:C	18:AR:55:ARG:N	2.69	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:19:G:C6	35:BA:2169:A:H1'	2.48	0.49
24:AY:391:GLY:C	24:AY:393:ASP:H	2.21	0.49
24:AY:688:ILE:N	24:AY:688:ILE:HD12	2.28	0.49
27:B2:2:LYS:CE	27:B2:52:ASP:OD1	2.61	0.49
28:B3:52:HIS:C	28:B3:53:LEU:HG	2.37	0.49
29:B4:12:ALA:C	29:B4:13:ARG:HG2	2.36	0.49
29:B4:28:LYS:HZ2	41:BG:144:ILE:N	2.11	0.49
30:B5:10:LYS:HG3	35:BA:1263:U:H1'	1.95	0.49
30:B5:46:CYS:SG	30:B5:48:GLU:HG2	2.53	0.49
33:B8:23:VAL:HG11	33:B8:46:ARG:HD3	1.94	0.49
35:BA:16:G:C2'	35:BA:17:G:C5'	2.89	0.49
35:BA:53:A:O2'	35:BA:54:G:H5'	2.11	0.49
35:BA:1408:C:H42	35:BA:1594:G:H1	1.59	0.49
35:BA:1462:C:H2'	35:BA:1463:C:H6	1.77	0.49
35:BA:1799:G:H8	38:BD:181:GLU:CD	2.20	0.49
35:BA:1819:A:H5"	38:BD:158:ALA:CB	2.37	0.49
35:BA:2023:G:H4'	35:BA:2617:C:O3'	2.13	0.49
35:BA:2248:C:C2'	35:BA:2249:U:H5'	2.42	0.49
35:BA:2298:A:N6	35:BA:2318:G:C8	2.76	0.49
35:BA:2403:C:O5'	35:BA:2403:C:H6	1.95	0.49
35:BA:2468:G:N2	35:BA:2481:G:O2'	2.46	0.49
35:BA:2728:U:H2'	35:BA:2729:G:C8	2.48	0.49
38:BD:145:VAL:HG12	38:BD:146:GLU:O	2.12	0.49
41:BG:164:GLU:OE1	41:BG:164:GLU:HA	2.11	0.49
45:BL:85:UNK:O	45:BL:86:UNK:O	2.31	0.49
46:BN:15:LEU:C	46:BN:15:LEU:HD13	2.38	0.49
46:BN:89:LYS:O	46:BN:93:THR:HG22	2.12	0.49
46:BN:116:LEU:O	46:BN:119:ARG:HB2	2.12	0.49
48:BP:50:ARG:O	48:BP:52:GLU:CB	2.52	0.49
51:BS:39:ILE:HD11	51:BS:73:LEU:HD21	1.94	0.49
52:BT:126:ALA:C	52:BT:128:GLU:N	2.69	0.49
57:BY:13:VAL:CG2	57:BY:72:VAL:HB	2.43	0.49
57:BY:46:LYS:H	57:BY:62:GLU:CG	2.26	0.49
57:BY:88:LYS:NZ	57:BY:93:GLY:CA	2.75	0.49
1:AA:404:U:H2'	1:AA:405:U:C6	2.47	0.49
1:AA:415:A:H2'	1:AA:416:G:C8	2.47	0.49
1:AA:771:G:N1	1:AA:772:U:C4	2.80	0.49
1:AA:942:G:N1	1:AA:943:U:C4	2.81	0.49
1:AA:1384:C:C4	1:AA:1385:G:N7	2.81	0.49
2:AB:145:LEU:HD23	2:AB:149:LEU:HD22	1.94	0.49
2:AB:155:LEU:CD2	2:AB:159:PRO:HG3	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:84:ILE:O	3:AC:87:LEU:N	2.46	0.49
12:AL:41:ARG:HG2	12:AL:42:THR:N	2.23	0.49
14:AN:24:CYS:HB2	14:AN:29:ARG:HB3	1.95	0.49
24:AY:128:TYR:O	24:AY:129:LYS:C	2.54	0.49
24:AY:488:THR:HG1	24:AY:598:ASP:HB3	1.78	0.49
25:B0:27:GLU:HB2	25:B0:68:GLU:HA	1.94	0.49
35:BA:189:G:H2'	35:BA:205:G:N2	2.28	0.49
35:BA:214:G:H1'	35:BA:216:A:O2'	2.13	0.49
35:BA:272(D):G:H1	35:BA:364:C:H42	1.60	0.49
35:BA:314:A:O2'	35:BA:315:G:H5'	2.13	0.49
35:BA:1295:C:H2'	35:BA:1296:G:C8	2.47	0.49
35:BA:1375:C:HO2'	35:BA:1376:C:H5'	1.72	0.49
35:BA:1496:A:C8	35:BA:1577:C:O2'	2.66	0.49
35:BA:1821:A:C2	35:BA:1822:G:C5	3.01	0.49
35:BA:2309:A:C2	35:BA:2310:A:H2	2.30	0.49
35:BA:2309:A:H2	35:BA:2310:A:H2	1.60	0.49
35:BA:2362:G:H2'	35:BA:2363:C:H5'	1.93	0.49
35:BA:2410:G:H21	35:BA:2411:A:H1'	1.77	0.49
35:BA:2478:A:H2'	35:BA:2479:G:O4'	2.13	0.49
35:BA:2656:U:N3	35:BA:2665:A:H2	1.97	0.49
38:BD:16:MET:HE3	38:BD:211:ARG:HE	1.77	0.49
38:BD:24:ILE:HD12	38:BD:25:THR:H	1.78	0.49
39:BE:44:TYR:O	39:BE:45:THR:CB	2.59	0.49
39:BE:65:GLY:C	39:BE:67:PHE:N	2.69	0.49
39:BE:154:LYS:O	39:BE:155:LYS:O	2.30	0.49
39:BE:176:ILE:HB	39:BE:181:LEU:HB2	1.93	0.49
39:BE:181:LEU:HD21	52:BT:7:ILE:HG22	1.93	0.49
41:BG:87:PRO:C	41:BG:88:ILE:HG13	2.37	0.49
41:BG:110:ALA:O	41:BG:111:LEU:C	2.56	0.49
42:BH:61:HIS:O	42:BH:62:LYS:C	2.55	0.49
44:BK:93:UNK:O	44:BK:94:UNK:C	2.60	0.49
48:BP:27:HIS:CE1	54:BV:82:ARG:O	2.66	0.49
50:BR:3:HIS:O	50:BR:5:LYS:HD3	2.13	0.49
52:BT:107:ASP:CG	52:BT:108:ARG:H	2.20	0.49
53:BU:85:LYS:HZ3	53:BU:117:GLN:HE22	1.61	0.49
57:BY:28:LYS:CA	57:BY:38:ILE:H	2.25	0.49
58:BZ:7:ALA:C	58:BZ:8:TYR:CD1	2.91	0.49
1:AA:255:G:H1'	17:AQ:16:GLN:HE21	1.76	0.49
1:AA:365:U:O2	1:AA:365:U:O5'	2.30	0.49
1:AA:1294:G:O2'	1:AA:1295:G:H5'	2.12	0.49
1:AA:1372:U:C2'	1:AA:1373:G:O5'	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1392:G:H8	1:AA:1392:G:O5'	1.96	0.49
3:AC:9:GLY:HA2	3:AC:12:LEU:HG	1.93	0.49
3:AC:53:ALA:HB2	3:AC:115:LEU:CD1	2.32	0.49
5:AE:82:VAL:HG11	5:AE:137:GLU:HB3	1.94	0.49
5:AE:98:THR:HB	5:AE:117:ASP:HB3	1.94	0.49
6:AF:86:ARG:O	6:AF:87:ARG:CB	2.61	0.49
7:AG:7:ALA:O	7:AG:8:GLU:CB	2.60	0.49
12:AL:115:LYS:O	12:AL:117:ARG:N	2.42	0.49
14:AN:29:ARG:HG2	14:AN:40:CYS:HB2	1.93	0.49
16:AP:9:PHE:HB2	16:AP:16:HIS:O	2.12	0.49
24:AY:403:GLU:OE1	24:AY:403:GLU:HA	2.13	0.49
24:AY:517:LEU:HD11	24:AY:564:LYS:HB3	1.94	0.49
61:AY:701:GCP:H3B1	62:AY:2001:HOH:O	2.13	0.49
27:B2:35:LEU:C	27:B2:37:PHE:H	2.21	0.49
29:B4:11:PRO:HA	29:B4:24:THR:HB	1.93	0.49
30:B5:57:VAL:HG12	30:B5:58:LEU:HD12	1.95	0.49
35:BA:105:C:H2'	35:BA:106:C:H6	1.76	0.49
35:BA:247:G:O2'	35:BA:248:G:O5'	2.30	0.49
35:BA:248:G:C2	35:BA:2431:U:H4'	2.47	0.49
35:BA:287:C:H2'	35:BA:288:C:H6	1.78	0.49
35:BA:995:C:O2	46:BN:4:TYR:OH	2.23	0.49
35:BA:996:A:O2'	35:BA:997:G:H5'	2.13	0.49
35:BA:1067:A:N3	35:BA:1067:A:H2'	2.28	0.49
35:BA:1231:G:H2'	35:BA:1232:G:H8	1.76	0.49
35:BA:2104:G:C1'	35:BA:2105:C:P	2.99	0.49
35:BA:2128:C:O2'	35:BA:2129:C:OP2	2.31	0.49
35:BA:2695:C:H2'	35:BA:2696:U:C6	2.48	0.49
35:BA:2756:U:C4'	35:BA:2757:A:O5'	2.61	0.49
35:BA:2756:U:O4	35:BA:2759:G:O6	2.30	0.49
35:BA:2756:U:O4'	35:BA:2757:A:O5'	2.30	0.49
37:BC:115:VAL:HG23	37:BC:145:THR:O	2.13	0.49
38:BD:209:ALA:C	38:BD:210:GLY:O	2.52	0.49
40:BF:25:PRO:HB3	40:BF:119:ARG:CB	2.36	0.49
41:BG:41:GLN:NE2	41:BG:60:LEU:HD22	2.27	0.49
48:BP:120:ALA:HB1	48:BP:138:LEU:HD12	1.95	0.49
49:BQ:66:ILE:HD12	49:BQ:66:ILE:O	2.12	0.49
58:BZ:6:LYS:H	58:BZ:6:LYS:CE	2.22	0.49
1:AA:190:U:O2	20:AT:105:SER:HB2	2.13	0.49
1:AA:964:A:C6	1:AA:965:A:N6	2.79	0.49
3:AC:16:ARG:HH11	3:AC:16:ARG:CB	2.24	0.49
5:AE:64:ARG:HG3	5:AE:64:ARG:NH1	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:128:ARG:H	9:AI:128:ARG:HD3	1.77	0.49
13:AM:79:LYS:HA	13:AM:82:MET:HE3	1.95	0.49
24:AY:402:ILE:O	24:AY:403:GLU:HB3	2.11	0.49
24:AY:617:MET:HG3	24:AY:643:ILE:HD11	1.94	0.49
27:B2:9:GLN:O	27:B2:10:LEU:C	2.56	0.49
35:BA:332:A:O4'	35:BA:333:G:OP1	2.30	0.49
35:BA:856:C:O2'	35:BA:857:C:O5'	2.30	0.49
35:BA:1227:G:C4	35:BA:1228:G:N7	2.81	0.49
35:BA:1269:A:H61	35:BA:2011:U:H3	1.60	0.49
35:BA:2415:G:H4'	48:BP:67:MET:N	2.28	0.49
35:BA:2836:U:C4	35:BA:2883:A:N6	2.81	0.49
38:BD:25:THR:O	38:BD:26:LYS:HB3	2.13	0.49
40:BF:4:VAL:HG11	40:BF:17:ARG:HE	1.77	0.49
40:BF:54:ARG:NH2	40:BF:80:ALA:HB2	2.28	0.49
42:BH:6:ARG:HH11	42:BH:6:ARG:HG3	1.78	0.49
54:BV:21:ARG:HG2	54:BV:21:ARG:HH11	1.78	0.49
58:BZ:46:LYS:HD2	58:BZ:46:LYS:C	2.38	0.49
1:AA:184:G:H2'	1:AA:185:A:H8	1.78	0.49
1:AA:197:A:O2'	1:AA:198:G:C8	2.65	0.49
1:AA:594:G:H2'	1:AA:595:G:C5'	2.42	0.49
1:AA:861:G:O5'	1:AA:861:G:H8	1.95	0.49
1:AA:1049:U:C4'	1:AA:1050:G:O5'	2.49	0.49
1:AA:1053:G:O2'	1:AA:1054:C:OP2	2.29	0.49
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.13	0.49
1:AA:1366:C:C4	1:AA:1367:C:N4	2.81	0.49
1:AA:1523:G:O2'	1:AA:1524:C:H5'	2.12	0.49
6:AF:72:VAL:HG13	6:AF:73:ASN:N	2.26	0.49
9:AI:26:VAL:HG22	9:AI:27:THR:H	1.78	0.49
9:AI:95:LYS:NZ	9:AI:96:LEU:HD13	2.26	0.49
13:AM:10:PRO:CG	13:AM:18:ALA:HB1	2.40	0.49
19:AS:41:VAL:HG21	19:AS:44:MET:HG3	1.94	0.49
19:AS:75:ALA:O	19:AS:76:PRO:C	2.56	0.49
20:AT:26:ASN:HD22	20:AT:26:ASN:N	2.11	0.49
21:AU:2:GLY:O	21:AU:4:GLY:N	2.46	0.49
24:AY:47:GLU:HB3	24:AY:52:MET:CB	2.42	0.49
24:AY:55:MET:SD	24:AY:65:ILE:HD11	2.53	0.49
24:AY:120:THR:HG23	24:AY:123:ARG:HH22	1.77	0.49
24:AY:308:PRO:HB2	24:AY:394:ALA:CB	2.41	0.49
24:AY:422:GLU:O	24:AY:426:GLN:HB2	2.13	0.49
30:B5:41:PRO:HG2	30:B5:44:THR:CG2	2.39	0.49
34:B9:10:ILE:HD12	34:B9:10:ILE:N	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:18:C:C2	35:BA:19:C:C6	3.00	0.49
35:BA:18:C:N3	35:BA:19:C:C4	2.81	0.49
35:BA:953:A:C6	35:BA:965:C:N3	2.81	0.49
35:BA:1062:G:H8	35:BA:1062:G:OP2	1.96	0.49
35:BA:1121:C:C2'	35:BA:1122:G:O5'	2.61	0.49
35:BA:1181:C:C2'	35:BA:1182:A:H5'	2.43	0.49
35:BA:1297:C:C2'	35:BA:1298:C:H5'	2.41	0.49
35:BA:1427:A:C1'	35:BA:1428:C:OP2	2.61	0.49
35:BA:1453:U:OP1	50:BR:77:ARG:NH1	2.45	0.49
35:BA:1887:C:C3'	35:BA:1888:G:H5"	2.43	0.49
35:BA:2068:U:N3	35:BA:2430:A:C2	2.56	0.49
35:BA:2404:C:N4	35:BA:2414:G:N1	2.61	0.49
39:BE:129:HIS:O	39:BE:130:GLY:O	2.31	0.49
42:BH:6:ARG:HG3	42:BH:6:ARG:NH1	2.27	0.49
45:BL:86:UNK:C	45:BL:88:UNK:N	2.71	0.49
46:BN:25:ARG:HH11	46:BN:25:ARG:CG	2.24	0.49
47:BO:104:ARG:NH1	47:BO:104:ARG:HB2	2.27	0.49
52:BT:106:SER:CA	52:BT:110:ILE:HG12	2.38	0.49
54:BV:19:LYS:HE2	54:BV:20:LEU:H	1.78	0.49
1:AA:105:G:H2'	1:AA:106:C:C5	2.47	0.48
1:AA:362:G:H8	1:AA:362:G:O5'	1.94	0.48
1:AA:495:A:C4'	1:AA:496:A:OP1	2.61	0.48
1:AA:1177:G:H8	1:AA:1177:G:O5'	1.96	0.48
1:AA:1367:C:C2'	1:AA:1368:G:O5'	2.61	0.48
1:AA:1447:A:H3'	1:AA:1447:A:N3	2.27	0.48
2:AB:122:PHE:HE2	2:AB:139:LYS:HA	1.75	0.48
3:AC:38:ARG:HH11	3:AC:38:ARG:HB2	1.78	0.48
3:AC:155:GLY:HA3	3:AC:196:LEU:HD13	1.94	0.48
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.71	0.48
6:AF:89:MET:HG2	6:AF:91:VAL:HG23	1.95	0.48
15:AO:56:LEU:HD13	15:AO:56:LEU:C	2.38	0.48
24:AY:32:ILE:HG23	24:AY:273:LEU:HD21	1.95	0.48
24:AY:99:ARG:CD	24:AY:402:ILE:H	2.26	0.48
25:B0:50:ASN:CB	25:B0:63:VAL:HG21	2.43	0.48
29:B4:6:HIS:O	29:B4:7:PRO:O	2.30	0.48
29:B4:10:VAL:HG23	29:B4:11:PRO:HD2	1.94	0.48
29:B4:21:VAL:CG2	29:B4:35:VAL:HG21	2.43	0.48
35:BA:18:C:O2'	35:BA:554:U:OP1	2.31	0.48
35:BA:436:C:H2'	35:BA:437:G:H8	1.78	0.48
35:BA:464:U:O5'	35:BA:464:U:H6	1.96	0.48
35:BA:652:C:O2'	35:BA:653:A:O5'	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:680:G:H2'	35:BA:681:G:C8	2.48	0.48
35:BA:690:G:H2'	35:BA:691:C:C6	2.48	0.48
35:BA:782:A:H5'	35:BA:783:A:C2	2.48	0.48
35:BA:858:U:O2'	35:BA:859:G:C8	2.56	0.48
35:BA:958:U:H3'	35:BA:958:U:H6	1.78	0.48
35:BA:1426:G:OP2	35:BA:1427:A:O2'	2.30	0.48
35:BA:1504:C:O2'	35:BA:1505:C:C5'	2.60	0.48
35:BA:1899:G:O2'	35:BA:1900:A:H5"	2.12	0.48
35:BA:1985:G:C2'	35:BA:1986:A:O5'	2.60	0.48
35:BA:2123:G:H2'	35:BA:2124:G:H5'	1.92	0.48
35:BA:2199:A:N3	35:BA:2199:A:H2'	2.27	0.48
35:BA:2757:A:O2'	35:BA:2758:A:C5'	2.57	0.48
37:BC:55:SER:C	37:BC:57:GLN:N	2.71	0.48
37:BC:184:GLU:O	37:BC:188:ASP:OD2	2.31	0.48
39:BE:1:MET:O	39:BE:2:LYS:C	2.55	0.48
40:BF:26:ALA:C	40:BF:27:GLU:OE1	2.57	0.48
40:BF:84:VAL:C	40:BF:86:GLY:H	2.19	0.48
41:BG:80:PHE:O	41:BG:81:LYS:CG	2.61	0.48
41:BG:133:LEU:CD1	41:BG:134:GLY:H	2.24	0.48
41:BG:162:THR:HG22	41:BG:163:ALA:N	2.28	0.48
42:BH:41:MET:HE1	42:BH:65:HIS:N	2.28	0.48
54:BV:14:VAL:HB	54:BV:96:ILE:HG13	1.94	0.48
56:BX:36:LYS:HD3	56:BX:54:VAL:O	2.13	0.48
57:BY:50:ARG:HD2	57:BY:54:LYS:O	2.13	0.48
58:BZ:115:GLY:HA2	58:BZ:177:PRO:CD	2.41	0.48
1:AA:34:C:O2'	1:AA:35:G:H5'	2.13	0.48
1:AA:335:C:H2'	1:AA:336:C:H6	1.78	0.48
1:AA:442:C:H42	1:AA:492:G:H1	1.62	0.48
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.27	0.48
1:AA:788:U:HO2'	23:AX:13:A:H2	1.59	0.48
1:AA:980:C:H2'	1:AA:981:U:H5'	1.94	0.48
1:AA:1030(D):A:O2'	1:AA:1031:G:P	2.70	0.48
1:AA:1153:C:O2'	1:AA:1154:G:O5'	2.30	0.48
2:AB:82:ARG:HG2	2:AB:83:MET:N	2.26	0.48
3:AC:40:ARG:HG3	3:AC:40:ARG:HH11	1.78	0.48
3:AC:84:ILE:HG23	3:AC:85:ARG:H	1.77	0.48
4:AD:36:ARG:HB3	4:AD:36:ARG:HH11	1.78	0.48
12:AL:28:LYS:O	12:AL:29:GLY:C	2.55	0.48
13:AM:70:LEU:O	13:AM:71:ARG:C	2.56	0.48
19:AS:17:GLU:O	19:AS:19:VAL:N	2.46	0.48
24:AY:238:THR:C	24:AY:240:GLU:N	2.70	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:7:LEU:HD12	49:BQ:85:LYS:HE2	1.93	0.48
29:B4:52:THR:O	29:B4:53:GLU:C	2.56	0.48
33:B8:24:ALA:O	33:B8:46:ARG:HA	2.12	0.48
35:BA:17:G:C4	35:BA:18:C:C5	3.00	0.48
35:BA:29:U:H2'	35:BA:30:G:H5'	1.88	0.48
35:BA:143:G:H4'	56:BX:35:THR:HG21	1.95	0.48
35:BA:869:G:O2'	35:BA:870:A:H5'	2.13	0.48
35:BA:1144:G:C6	35:BA:1145:C:N4	2.81	0.48
35:BA:1296:G:C2'	35:BA:1297:C:H5'	2.43	0.48
35:BA:1415:U:H3	35:BA:1587:A:H61	1.62	0.48
35:BA:1416:G:N2	35:BA:1417:C:C2	2.82	0.48
35:BA:1579:A:H2'	35:BA:1580:A:O4'	2.14	0.48
35:BA:1595:G:H2'	35:BA:1596:A:H5'	1.95	0.48
35:BA:1645:G:O5'	35:BA:1645:G:H8	1.96	0.48
35:BA:1848:A:OP1	35:BA:1848:A:H3'	2.13	0.48
35:BA:1925:C:O2	35:BA:1925:C:H2'	2.12	0.48
35:BA:1992:G:O4'	35:BA:1993:U:OP2	2.30	0.48
35:BA:2009:G:O2'	35:BA:2010:G:H5"	2.13	0.48
35:BA:2103:C:O2'	35:BA:2104:G:C5'	2.59	0.48
35:BA:2103:C:N4	35:BA:2186:G:H1	2.08	0.48
35:BA:2169:A:O2'	35:BA:2170:A:H5'	2.13	0.48
35:BA:2197:U:O2'	35:BA:2198:A:H2'	2.13	0.48
35:BA:2606:C:O5'	35:BA:2606:C:H6	1.96	0.48
35:BA:2651:C:O2'	35:BA:2652:C:H5'	2.12	0.48
35:BA:2770:G:H5'	35:BA:2771:C:OP2	2.13	0.48
35:BA:2807:G:C2'	35:BA:2808:U:H5"	2.42	0.48
38:BD:21:PHE:O	38:BD:24:ILE:HG22	2.13	0.48
38:BD:45:ASN:CG	38:BD:46:GLN:N	2.71	0.48
38:BD:89:SER:HB2	38:BD:159:ALA:H	1.78	0.48
40:BF:46:ARG:HG3	40:BF:46:ARG:NH1	2.29	0.48
41:BG:40:ASN:HD21	41:BG:91:ARG:HG3	1.77	0.48
41:BG:118:ARG:HD3	41:BG:118:ARG:H	1.78	0.48
46:BN:45:ASN:HD22	46:BN:45:ASN:H	1.58	0.48
48:BP:65:ARG:HB3	48:BP:68:GLN:NE2	2.08	0.48
54:BV:2:PHE:HD1	54:BV:3:ALA:N	2.11	0.48
1:AA:265:G:H2'	1:AA:267:C:C5	2.48	0.48
1:AA:486:U:H2'	1:AA:487:A:C8	2.48	0.48
1:AA:723:U:O2	1:AA:723:U:C2'	2.61	0.48
1:AA:773:G:N1	1:AA:774:G:C6	2.81	0.48
1:AA:863:U:H5'	1:AA:863:U:O2	2.13	0.48
1:AA:959:A:O2'	1:AA:984:C:O2'	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1385:G:C2'	1:AA:1386:G:O5'	2.61	0.48
2:AB:130:ARG:HE	2:AB:131:PRO:HD2	1.79	0.48
3:AC:11:ARG:O	3:AC:14:ILE:N	2.38	0.48
3:AC:167:TRP:CD1	3:AC:168:ALA:C	2.91	0.48
4:AD:159:ARG:HB3	4:AD:159:ARG:HH11	1.78	0.48
11:AK:15:ALA:HA	11:AK:76:GLY:O	2.13	0.48
13:AM:18:ALA:O	13:AM:19:LEU:C	2.55	0.48
13:AM:49:THR:O	13:AM:50:GLU:C	2.57	0.48
20:AT:26:ASN:N	20:AT:26:ASN:ND2	2.60	0.48
22:AV:63:G:H2'	22:AV:64:A:O4'	2.14	0.48
24:AY:47:GLU:HB3	24:AY:52:MET:HA	1.94	0.48
24:AY:530:VAL:C	24:AY:532:GLY:H	2.20	0.48
24:AY:623:ASP:O	24:AY:626:ALA:HB3	2.13	0.48
24:AY:628:ARG:HH11	24:AY:628:ARG:CG	2.16	0.48
24:AY:680:PRO:HD2	24:AY:683:VAL:CG2	2.40	0.48
25:B0:53:MET:SD	25:B0:57:PHE:CA	3.00	0.48
27:B2:69:ARG:O	27:B2:70:GLN:OE1	2.31	0.48
28:B3:36:VAL:HG23	28:B3:36:VAL:O	2.12	0.48
30:B5:3:LYS:HG3	30:B5:4:HIS:H	1.77	0.48
30:B5:53:ALA:O	30:B5:55:ARG:N	2.46	0.48
31:B6:42:TRP:HA	31:B6:42:TRP:HE3	1.77	0.48
31:B6:53:LYS:HD3	31:B6:54:ILE:N	2.22	0.48
35:BA:39:C:H2'	35:BA:40:C:C6	2.48	0.48
35:BA:271(P):C:C2'	35:BA:271(Q):G:H5'	2.43	0.48
35:BA:621:A:H2'	35:BA:622:G:C5'	2.42	0.48
35:BA:738:G:O6	35:BA:739:G:N1	2.46	0.48
35:BA:848:G:N9	35:BA:933:A:H8	2.12	0.48
35:BA:890:A:H2'	35:BA:892:G:H5"	1.94	0.48
35:BA:1684:C:H2'	35:BA:1685:C:H6	1.77	0.48
35:BA:1967:C:N4	35:BA:1968:G:C6	2.81	0.48
35:BA:1968:G:O2'	35:BA:1969:A:O4'	2.30	0.48
35:BA:2033:A:O2'	35:BA:2034:U:O5'	2.30	0.48
35:BA:2142:C:O2'	35:BA:2143:C:H5'	2.13	0.48
35:BA:2485:G:H5"	49:BQ:46:GLN:HE21	1.78	0.48
35:BA:2559:C:H2'	35:BA:2560:C:H5'	1.94	0.48
36:BB:77:U:P	58:BZ:19:ARG:NH2	2.86	0.48
38:BD:117:VAL:HG22	38:BD:118:VAL:N	2.28	0.48
39:BE:71:GLY:C	39:BE:73:GLU:N	2.71	0.48
48:BP:9:ASN:N	48:BP:10:PRO:HD2	2.27	0.48
52:BT:38:ASN:H	52:BT:38:ASN:HD22	1.61	0.48
53:BU:21:ALA:O	53:BU:22:LYS:C	2.56	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:39:VAL:O	57:BY:40:GLU:CG	2.60	0.48
1:AA:490:G:H2'	1:AA:491:G:C5'	2.43	0.48
1:AA:1239:A:H62	1:AA:1299:A:H61	1.60	0.48
4:AD:149:ALA:O	4:AD:153:ARG:HG3	2.13	0.48
7:AG:44:TYR:C	7:AG:46:ALA:N	2.68	0.48
7:AG:49:ILE:HD11	7:AG:118:VAL:HA	1.94	0.48
9:AI:42:ARG:HH22	9:AI:75:ASP:CG	2.21	0.48
9:AI:50:LEU:HD23	9:AI:85:LEU:CD2	2.44	0.48
9:AI:92:TYR:O	9:AI:95:LYS:HG3	2.14	0.48
13:AM:96:LEU:HB3	13:AM:97:PRO:CD	2.41	0.48
24:AY:315:LYS:HB3	24:AY:327:PHE:HD2	1.78	0.48
29:B4:29:PRO:HG2	29:B4:30:GLU:H	1.78	0.48
30:B5:53:ALA:HA	30:B5:56:LYS:HZ2	1.72	0.48
35:BA:34:C:H42	35:BA:447:A:H61	1.61	0.48
35:BA:36:G:C6	35:BA:37:C:C4	3.02	0.48
35:BA:528:A:C2	35:BA:2043:C:C5'	2.96	0.48
35:BA:2151:G:OP1	37:BC:3:LYS:HE2	2.12	0.48
35:BA:2481:G:O2'	35:BA:2482:G:OP2	2.30	0.48
37:BC:129:GLY:O	37:BC:133:GLY:N	2.29	0.48
39:BE:82:ARG:O	39:BE:83:ASP:HB2	2.12	0.48
40:BF:133:ASN:N	40:BF:133:ASN:HD22	2.10	0.48
48:BP:85:LEU:HD22	48:BP:115:LEU:O	2.13	0.48
51:BS:62:LYS:C	51:BS:64:GLU:H	2.22	0.48
54:BV:15:GLU:CG	54:BV:16:PRO:CD	2.86	0.48
54:BV:72:VAL:HG23	54:BV:72:VAL:O	2.13	0.48
57:BY:28:LYS:HB2	57:BY:37:VAL:CB	2.22	0.48
57:BY:81:LYS:CD	57:BY:97:ARG:HG3	2.38	0.48
57:BY:95:LYS:CE	57:BY:99:CYS:O	2.61	0.48
1:AA:454:C:H5'	1:AA:455:C:OP2	2.13	0.48
1:AA:484:G:H4'	1:AA:485:G:O5'	2.14	0.48
1:AA:519:C:H2'	1:AA:520:A:H5'	1.95	0.48
1:AA:697:U:O2'	1:AA:698:G:H5'	2.13	0.48
2:AB:132:LYS:HG3	2:AB:135:GLN:OE1	2.13	0.48
4:AD:104:VAL:O	4:AD:108:LEU:HB2	2.13	0.48
7:AG:131:LYS:HD2	7:AG:131:LYS:N	2.29	0.48
12:AL:18:VAL:O	12:AL:19:ARG:HB3	2.13	0.48
13:AM:112:GLY:HA3	13:AM:115:LYS:HE2	1.93	0.48
20:AT:23:ARG:HG2	20:AT:23:ARG:HH11	1.79	0.48
24:AY:99:ARG:HD2	24:AY:402:ILE:H	1.78	0.48
24:AY:138:LYS:HG2	61:AY:701:GCP:C4	2.43	0.48
24:AY:138:LYS:C	24:AY:140:ASP:H	2.21	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:401:SER:O	24:AY:402:ILE:CB	2.61	0.48
24:AY:538:TYR:CD1	24:AY:579:GLU:HG2	2.48	0.48
25:B0:19:LYS:HG3	25:B0:41:ARG:HH21	1.79	0.48
25:B0:49:LYS:O	25:B0:50:ASN:HB2	2.14	0.48
28:B3:5:LYS:CE	28:B3:34:GLU:OE2	2.61	0.48
29:B4:2:LYS:O	29:B4:2:LYS:HD3	2.13	0.48
29:B4:9:LEU:HD12	29:B4:9:LEU:N	2.28	0.48
33:B8:4:MET:HG2	33:B8:61:LEU:CD2	2.43	0.48
33:B8:15:LYS:HE3	35:BA:630:G:OP2	2.14	0.48
35:BA:331:A:O4'	35:BA:332:A:OP1	2.32	0.48
35:BA:332:A:C6	35:BA:335:C:C4	3.01	0.48
35:BA:570:G:H2'	35:BA:2030:A:C5	2.49	0.48
35:BA:872:A:H4'	49:BQ:66:ILE:HD11	1.94	0.48
35:BA:1188:U:H4'	54:BV:79:VAL:HG13	1.95	0.48
35:BA:2287:A:N6	35:BA:2344:U:N3	2.57	0.48
35:BA:2410:G:C2	35:BA:2411:A:C4	3.01	0.48
35:BA:2457:U:O2'	35:BA:2458:G:H5'	2.13	0.48
37:BC:88:GLU:O	37:BC:89:GLU:HB3	2.14	0.48
38:BD:133:LEU:HB3	38:BD:173:VAL:HG11	1.94	0.48
38:BD:260:ARG:HH22	38:BD:266:SER:HB3	1.79	0.48
42:BH:85:LYS:HZ3	42:BH:87:LEU:CG	2.25	0.48
43:BJ:70:UNK:O	43:BJ:71:UNK:CB	2.61	0.48
46:BN:22:THR:CG2	46:BN:61:ARG:HD3	2.40	0.48
46:BN:30:ILE:HG22	46:BN:34:LEU:HD22	1.95	0.48
46:BN:67:LEU:O	46:BN:68:GLU:CB	2.61	0.48
49:BQ:52:VAL:HA	49:BQ:55:VAL:CG1	2.44	0.48
50:BR:44:LEU:C	50:BR:44:LEU:HD13	2.39	0.48
51:BS:89:ARG:HG3	51:BS:92:TYR:CA	2.43	0.48
52:BT:29:ARG:H	52:BT:45:PHE:C	2.21	0.48
53:BU:110:VAL:O	53:BU:114:LYS:HG2	2.13	0.48
55:BW:59:VAL:O	55:BW:63:ASP:HA	2.13	0.48
58:BZ:121:HIS:HB2	58:BZ:171:ILE:HA	1.95	0.48
1:AA:60:A:O2'	1:AA:61:G:O5'	2.32	0.48
1:AA:123:C:H2'	1:AA:124:G:H8	1.79	0.48
1:AA:853:G:O2'	1:AA:854:G:H5'	2.13	0.48
1:AA:995:C:H4'	14:AN:8:GLU:OE2	2.14	0.48
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	2.14	0.48
1:AA:1152:A:C2	1:AA:1153:C:C4	3.01	0.48
2:AB:87:ARG:HD2	2:AB:219:VAL:CG1	2.27	0.48
2:AB:141:GLU:O	2:AB:144:ARG:HG2	2.13	0.48
3:AC:28:GLN:O	3:AC:31:HIS:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:44:GLY:HA2	6:AF:59:TYR:CE1	2.49	0.48
7:AG:47:CYS:CA	7:AG:50:ILE:HG22	2.42	0.48
10:AJ:23:ILE:HG23	10:AJ:85:LEU:HD22	1.95	0.48
12:AL:53:ARG:HH12	12:AL:92:ASP:HB2	1.79	0.48
19:AS:32:LYS:HA	19:AS:50:ALA:HB3	1.95	0.48
19:AS:41:VAL:CB	19:AS:44:MET:HB3	2.37	0.48
20:AT:26:ASN:ND2	20:AT:26:ASN:H	2.11	0.48
24:AY:34:TYR:O	24:AY:38:ARG:HB2	2.12	0.48
24:AY:614:GLU:HG3	24:AY:617:MET:HE3	1.94	0.48
25:B0:19:LYS:HE2	25:B0:19:LYS:HA	1.95	0.48
27:B2:4:SER:C	27:B2:6:VAL:N	2.72	0.48
27:B2:5:GLU:O	27:B2:8:LYS:HG3	2.14	0.48
29:B4:28:LYS:CD	41:BG:143:GLU:HA	2.38	0.48
31:B6:26:ASN:HD21	31:B6:32:ASN:HD22	1.60	0.48
35:BA:256:A:C2'	35:BA:257:A:C5'	2.80	0.48
35:BA:607:U:N3	35:BA:620:G:C8	2.82	0.48
35:BA:635:C:O2'	35:BA:639:U:OP1	2.31	0.48
35:BA:780:G:H21	35:BA:783:A:H62	1.60	0.48
35:BA:1090:U:H2'	35:BA:1091:G:C8	2.49	0.48
35:BA:1140:C:H6	35:BA:1140:C:O5'	1.97	0.48
35:BA:1319:G:O2'	35:BA:1320:C:H5'	2.13	0.48
35:BA:1458:C:H4'	35:BA:1459:G:C4	2.49	0.48
35:BA:1771:C:H1'	35:BA:1786:A:C8	2.48	0.48
35:BA:2011:U:C2'	35:BA:2012:G:O5'	2.61	0.48
35:BA:2171:A:O2'	35:BA:2172:U:O4'	2.26	0.48
35:BA:2175:C:C2	35:BA:2176:A:N7	2.82	0.48
35:BA:2305:A:H5"	41:BG:134:GLY:HA3	1.95	0.48
35:BA:2383:G:O2'	35:BA:2384:G:H5'	2.13	0.48
35:BA:2692:C:H1'	35:BA:2847:U:O2'	2.13	0.48
35:BA:2713:A:O2'	35:BA:2714:G:H5"	2.14	0.48
35:BA:2820:A:H1'	50:BR:5:LYS:HE3	1.95	0.48
36:BB:17:C:H2'	36:BB:18:G:O4'	2.14	0.48
36:BB:55:U:H2'	36:BB:56:G:C8	2.48	0.48
38:BD:117:VAL:HG23	38:BD:128:GLY:C	2.38	0.48
38:BD:147:LEU:HD22	38:BD:155:LEU:HD11	1.94	0.48
39:BE:132:HIS:O	39:BE:132:HIS:CG	2.64	0.48
41:BG:106:LEU:HA	41:BG:110:ALA:HB2	1.96	0.48
46:BN:120:LEU:HD13	46:BN:120:LEU:C	2.38	0.48
48:BP:30:THR:HG22	48:BP:31:ALA:H	1.75	0.48
50:BR:79:LEU:C	50:BR:79:LEU:HD13	2.38	0.48
51:BS:30:ARG:NH1	51:BS:97:ARG:HB3	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:102:ALA:O	51:BS:103:GLU:HG2	2.13	0.48
52:BT:23:ARG:CB	52:BT:24:PRO:HD2	2.23	0.48
52:BT:117:ASP:O	52:BT:119:LYS:N	2.46	0.48
53:BU:92:ARG:NH1	53:BU:94:ASN:ND2	2.57	0.48
1:AA:390:C:H2'	1:AA:391:G:C8	2.49	0.48
1:AA:405:U:O2	1:AA:498:U:H2'	2.14	0.48
1:AA:567:G:H2'	1:AA:568:G:O4'	2.14	0.48
1:AA:590:C:C2'	1:AA:591:U:C5'	2.90	0.48
1:AA:961:U:HO2'	1:AA:962:C:H6	1.62	0.48
2:AB:111:ARG:HG3	2:AB:145:LEU:HD21	1.94	0.48
2:AB:204:ASN:ND2	2:AB:204:ASN:C	2.72	0.48
3:AC:22:TRP:HB2	3:AC:59:ARG:HB2	1.96	0.48
24:AY:99:ARG:NH2	24:AY:128:TYR:OH	2.46	0.48
25:B0:42:GLY:O	25:B0:57:PHE:CB	2.62	0.48
32:B7:23:ARG:HG3	32:B7:23:ARG:NH1	2.28	0.48
35:BA:35:G:H2'	35:BA:36:G:C8	2.48	0.48
35:BA:48:G:C6	35:BA:178:G:O6	2.66	0.48
35:BA:140:G:N3	35:BA:142:A:N1	2.61	0.48
35:BA:146:G:H2'	35:BA:147:U:O4'	2.14	0.48
35:BA:246:C:C3'	35:BA:247:G:C5'	2.91	0.48
35:BA:248:G:C8	35:BA:250:G:C4	3.02	0.48
35:BA:271(M):G:N7	35:BA:271(O):C:C4	2.82	0.48
35:BA:333:G:C6	35:BA:334:C:N4	2.82	0.48
35:BA:387:U:O5'	35:BA:387:U:H6	1.96	0.48
35:BA:435:C:H2'	35:BA:436:C:H5'	1.95	0.48
35:BA:534:U:H5'	53:BU:42:ALA:HB1	1.96	0.48
35:BA:558:G:P	46:BN:111:PRO:HD2	2.53	0.48
35:BA:644:A:H2'	35:BA:646:A:C2	2.49	0.48
35:BA:743:G:O2'	35:BA:744:G:O5'	2.30	0.48
35:BA:856:C:C4'	35:BA:857:C:OP1	2.57	0.48
35:BA:896:A:C8	58:BZ:146:ILE:HD12	2.49	0.48
35:BA:968:G:C2'	35:BA:969:U:C5'	2.92	0.48
35:BA:1062:G:H22	35:BA:1076:C:H42	1.61	0.48
35:BA:1249:U:O4'	53:BU:4:ALA:HB3	2.14	0.48
35:BA:1820:U:C4	38:BD:160:GLY:O	2.65	0.48
35:BA:1982:C:N3	35:BA:1983:C:N4	2.60	0.48
37:BC:42:VAL:HA	37:BC:216:THR:O	2.13	0.48
38:BD:72:LYS:HE2	38:BD:101:GLU:CD	2.38	0.48
39:BE:56:PRO:O	39:BE:57:LYS:NZ	2.47	0.48
39:BE:141:ILE:HB	39:BE:154:LYS:HE2	1.95	0.48
41:BG:55:LYS:HD3	41:BG:148:MET:CE	2.39	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:116:ASP:CG	41:BG:117:PHE:H	2.21	0.48
42:BH:16:SER:HB2	42:BH:27:LYS:HB2	1.94	0.48
47:BO:17:ARG:HE	47:BO:47:ILE:HD12	1.78	0.48
48:BP:24:GLY:N	48:BP:33:ARG:CZ	2.76	0.48
49:BQ:50:ALA:O	49:BQ:53:ALA:HB3	2.14	0.48
50:BR:103:ARG:NH1	50:BR:110:PRO:HB3	2.28	0.48
51:BS:53:SER:C	51:BS:55:ALA:H	2.22	0.48
53:BU:64:ARG:O	53:BU:65:ILE:C	2.56	0.48
54:BV:21:ARG:HG3	54:BV:93:GLU:HB2	1.96	0.48
54:BV:61:VAL:HG12	54:BV:94:LEU:CD2	2.43	0.48
57:BY:38:ILE:HG22	57:BY:39:VAL:N	2.27	0.48
57:BY:59:GLY:C	57:BY:60:PHE:HD1	2.21	0.48
58:BZ:72:ARG:HG2	58:BZ:89:PHE:HB2	1.96	0.48
1:AA:193:C:H2'	1:AA:194:C:C6	2.48	0.48
1:AA:339:C:OP2	47:BO:97:ARG:NH1	2.46	0.48
1:AA:339:C:H2'	1:AA:340:U:C6	2.48	0.48
1:AA:453:A:O2'	1:AA:454:C:O4'	2.32	0.48
1:AA:591:U:H2'	1:AA:592:G:H8	1.79	0.48
1:AA:1151:A:H1'	1:AA:1152:A:C8	2.48	0.48
1:AA:1305:G:O2'	1:AA:1306:A:O5'	2.30	0.48
1:AA:1401:G:H2'	1:AA:1402:C:O4'	2.13	0.48
3:AC:167:TRP:CD1	3:AC:168:ALA:N	2.82	0.48
5:AE:100:VAL:HG23	5:AE:100:VAL:O	2.13	0.48
7:AG:22:LEU:O	7:AG:24:THR:N	2.38	0.48
10:AJ:32:ALA:HB2	10:AJ:81:THR:HG21	1.95	0.48
19:AS:42:PRO:HB3	19:AS:67:VAL:HG13	1.95	0.48
20:AT:36:LEU:HD13	20:AT:55:ILE:HG23	1.95	0.48
24:AY:164:MET:C	24:AY:180:VAL:HG22	2.39	0.48
24:AY:272:LEU:O	24:AY:276:VAL:HG23	2.13	0.48
24:AY:497:PHE:CE2	24:AY:581:ALA:HA	2.49	0.48
26:B1:39:LYS:NZ	35:BA:189:G:OP2	2.47	0.48
30:B5:51:TYR:OH	35:BA:2884:U:C2	2.55	0.48
31:B6:15:GLU:OE1	31:B6:18:ARG:CG	2.61	0.48
31:B6:26:ASN:ND2	31:B6:32:ASN:ND2	2.61	0.48
31:B6:53:LYS:CD	31:B6:54:ILE:N	2.76	0.48
33:B8:4:MET:O	33:B8:62:LEU:HD11	2.14	0.48
33:B8:61:LEU:HD13	33:B8:62:LEU:H	1.78	0.48
35:BA:19:C:O2'	35:BA:20:C:H5'	2.13	0.48
35:BA:971:C:OP1	35:BA:974:G:C8	2.67	0.48
35:BA:1215:G:O6	35:BA:1235:G:N3	2.47	0.48
35:BA:1430:C:H2'	35:BA:1431:U:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1786:A:H2'	35:BA:1786:A:N3	2.29	0.48
36:BB:65:C:O2'	36:BB:66:A:H5'	2.13	0.48
36:BB:80:U:H2'	36:BB:81:G:N2	2.22	0.48
37:BC:81:GLY:O	37:BC:82:GLU:HB3	2.12	0.48
37:BC:125:GLY:O	37:BC:127:LYS:HG2	2.13	0.48
38:BD:36:PRO:O	38:BD:37:LEU:HG	2.14	0.48
38:BD:142:VAL:CG2	38:BD:191:ALA:HB1	2.43	0.48
39:BE:60:ASN:OD1	39:BE:62:PRO:CD	2.53	0.48
39:BE:120:TRP:CE3	39:BE:155:LYS:HE2	2.48	0.48
39:BE:188:VAL:HG13	39:BE:188:VAL:O	2.14	0.48
41:BG:6:ALA:CB	41:BG:105:LYS:HZ2	2.22	0.48
55:BW:73:ALA:HB3	55:BW:106:ILE:HG12	1.95	0.48
56:BX:35:THR:HG22	56:BX:36:LYS:N	2.27	0.48
57:BY:43:ASN:CG	57:BY:43:ASN:O	2.57	0.48
58:BZ:155:LEU:CD2	58:BZ:155:LEU:H	2.27	0.48
1:AA:89:C:C2	1:AA:90:U:C5	3.02	0.48
1:AA:484:G:H8	1:AA:484:G:OP1	1.96	0.48
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.48	0.48
1:AA:1154:G:N3	1:AA:1155:G:C8	2.82	0.48
1:AA:1370:G:C2	1:AA:1371:G:N7	2.82	0.48
1:AA:1387:G:C2'	1:AA:1388:C:H5'	2.42	0.48
2:AB:73:THR:O	2:AB:74:LYS:C	2.57	0.48
2:AB:238:LEU:O	2:AB:239:VAL:C	2.55	0.48
3:AC:118:GLN:O	3:AC:119:ARG:C	2.57	0.48
4:AD:36:ARG:HH11	4:AD:36:ARG:CB	2.26	0.48
4:AD:150:GLU:C	4:AD:152:SER:H	2.21	0.48
7:AG:15:ASP:OD2	7:AG:23:VAL:HG11	2.13	0.48
7:AG:41:ARG:O	7:AG:42:ILE:C	2.57	0.48
11:AK:69:ALA:O	11:AK:72:ALA:N	2.47	0.48
13:AM:65:LYS:HB2	13:AM:69:GLU:CG	2.43	0.48
22:AV:55:U:OP2	37:BC:142:LYS:HD2	2.14	0.48
24:AY:25:LYS:HZ3	24:AY:86:GLY:HA3	1.79	0.48
24:AY:148:LEU:O	24:AY:152:THR:HG22	2.14	0.48
24:AY:196:ILE:HG13	24:AY:197:ARG:N	2.21	0.48
24:AY:384:ILE:HG12	24:AY:387:ASP:OD2	2.13	0.48
24:AY:438:PHE:CE1	24:AY:451:ILE:HG13	2.48	0.48
25:B0:12:ASN:HB2	35:BA:2278:A:C8	2.49	0.48
28:B3:31:LEU:C	28:B3:33:GLN:H	2.18	0.48
28:B3:59:VAL:CG1	28:B3:60:GLU:N	2.75	0.48
31:B6:35:GLU:HB3	31:B6:51:GLU:HG3	1.96	0.48
31:B6:35:GLU:HB3	31:B6:51:GLU:CG	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:250:G:H2'	35:BA:251:A:C8	2.49	0.48
35:BA:271(D):G:H2'	35:BA:271(E):U:H6	1.78	0.48
35:BA:848:G:C4	35:BA:933:A:H8	2.31	0.48
35:BA:1099:G:O2'	35:BA:1100:C:H5'	2.14	0.48
35:BA:1169:G:H2'	35:BA:1170:G:O4'	2.14	0.48
35:BA:1295:C:H2'	35:BA:1296:G:H8	1.78	0.48
35:BA:1683:C:H2'	35:BA:1684:C:C6	2.49	0.48
35:BA:1893:C:H2'	35:BA:1894:C:C5'	2.43	0.48
35:BA:2126:A:C6	35:BA:2163:C:H4'	2.48	0.48
36:BB:50:G:OP2	51:BS:62:LYS:HB2	2.14	0.48
38:BD:263:ARG:CZ	38:BD:263:ARG:HB2	2.44	0.48
40:BF:20:LEU:HB3	40:BF:23:ASP:OD1	2.14	0.48
40:BF:83:PHE:O	40:BF:84:VAL:C	2.57	0.48
40:BF:185:ASP:HA	40:BF:188:ARG:HD3	1.95	0.48
41:BG:137:GLU:O	41:BG:138:GLN:C	2.57	0.48
52:BT:35:LYS:NZ	52:BT:41:ARG:HE	2.12	0.48
53:BU:92:ARG:CB	54:BV:11:GLN:NE2	2.76	0.48
1:AA:161:A:H2'	1:AA:162:A:C8	2.49	0.48
1:AA:346:G:H5'	52:BT:35:LYS:HZ1	1.78	0.48
1:AA:452:A:O2'	1:AA:453:A:H5'	2.14	0.48
1:AA:509:A:OP2	1:AA:510:A:OP2	2.32	0.48
1:AA:521:G:O2'	1:AA:522:C:C5'	2.59	0.48
1:AA:1152:A:N1	1:AA:1153:C:N4	2.62	0.48
2:AB:16:HIS:CG	2:AB:210:SER:OG	2.66	0.48
2:AB:17:PHE:CD1	2:AB:18:GLY:N	2.81	0.48
2:AB:114:ARG:NH1	2:AB:118:LEU:CD1	2.72	0.48
2:AB:142:LEU:O	2:AB:146:GLN:HB2	2.14	0.48
7:AG:26:PHE:HD1	7:AG:101:LEU:HD22	1.79	0.48
16:AP:70:ALA:O	16:AP:74:LEU:HG	2.13	0.48
19:AS:19:VAL:HG13	19:AS:44:MET:HG2	1.96	0.48
24:AY:199:ILE:HD12	24:AY:199:ILE:C	2.39	0.48
28:B3:32:GLN:O	28:B3:33:GLN:C	2.56	0.48
29:B4:1:MET:O	29:B4:2:LYS:CB	2.58	0.48
34:B9:18:ARG:HG2	34:B9:18:ARG:HH11	1.79	0.48
35:BA:99:U:C4'	35:BA:102:G:H1'	2.44	0.48
35:BA:177:G:OP2	35:BA:177:G:N2	2.41	0.48
35:BA:425:G:O2'	35:BA:426:C:H5'	2.14	0.48
35:BA:654(A):G:N1	35:BA:654(S):G:N2	2.61	0.48
35:BA:743:G:C6	35:BA:755:C:N3	2.81	0.48
35:BA:1465:G:C4	35:BA:1466:G:C8	3.02	0.48
35:BA:2257:U:O2'	35:BA:2258:C:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:88:GLU:CA	37:BC:92:ALA:HB3	2.43	0.48
37:BC:158:LYS:O	37:BC:159:ALA:CB	2.62	0.48
38:BD:23:GLU:O	38:BD:24:ILE:O	2.32	0.48
38:BD:30:GLU:CG	38:BD:63:ARG:HE	2.26	0.48
38:BD:95:LEU:HD13	38:BD:97:TYR:CE1	2.49	0.48
38:BD:210:GLY:C	38:BD:212:SER:H	2.22	0.48
40:BF:9:ILE:O	40:BF:11:VAL:N	2.47	0.48
40:BF:54:ARG:HB2	40:BF:79:GLY:O	2.13	0.48
47:BO:66:LYS:HA	47:BO:79:PHE:O	2.13	0.48
52:BT:6:LEU:C	52:BT:8:LYS:N	2.72	0.48
53:BU:16:LYS:O	53:BU:20:LEU:HD22	2.14	0.48
53:BU:88:ILE:O	53:BU:88:ILE:HG13	2.14	0.48
54:BV:47:VAL:HG12	54:BV:52:VAL:N	2.29	0.48
57:BY:13:VAL:HG22	57:BY:14:LEU:N	2.29	0.48
57:BY:29:GLU:N	57:BY:29:GLU:CD	2.71	0.48
1:AA:187:C:O5'	1:AA:187:C:H6	1.97	0.47
1:AA:247:G:OP2	17:AQ:99:SER:HB2	2.13	0.47
1:AA:560:U:O2'	1:AA:561:U:OP2	2.30	0.47
1:AA:624:C:H4'	16:AP:10:GLY:O	2.14	0.47
1:AA:952:U:H2'	1:AA:953:G:H5'	1.96	0.47
1:AA:1015:A:H1'	1:AA:1218:C:O2'	2.14	0.47
1:AA:1153:C:O2'	1:AA:1154:G:OP2	2.30	0.47
1:AA:1504:G:H3'	1:AA:1504:G:OP2	2.14	0.47
2:AB:23:ARG:CG	2:AB:23:ARG:NH1	2.37	0.47
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.82	0.47
4:AD:36:ARG:O	4:AD:38:TYR:N	2.46	0.47
16:AP:27:LYS:HG2	16:AP:30:GLY:H	1.79	0.47
16:AP:53:VAL:HG12	16:AP:79:VAL:HG22	1.96	0.47
19:AS:18:LYS:O	19:AS:22:LEU:HB2	2.14	0.47
35:BA:18:C:N3	35:BA:19:C:C5	2.81	0.47
35:BA:47:C:N4	35:BA:179:G:H1	2.12	0.47
35:BA:326:G:H2'	35:BA:327:G:H8	1.78	0.47
35:BA:583:G:OP2	53:BU:10:ARG:HD2	2.14	0.47
35:BA:627:A:O2'	35:BA:636:G:N2	2.47	0.47
35:BA:859:G:N2	35:BA:917:A:OP2	2.36	0.47
35:BA:963:U:H2'	35:BA:964:C:O5'	2.14	0.47
35:BA:1239:G:H2'	35:BA:1240:U:O4'	2.14	0.47
35:BA:1786:A:N3	35:BA:1786:A:C2'	2.77	0.47
35:BA:2104:G:H2'	35:BA:2104:G:N3	2.29	0.47
35:BA:2206:G:N3	35:BA:2206:G:C2'	2.76	0.47
35:BA:2746:U:C2'	35:BA:2747:G:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2807:G:H2'	35:BA:2808:U:H5"	1.96	0.47
41:BG:42:GLY:C	41:BG:47:LYS:HZ2	2.22	0.47
41:BG:80:PHE:O	41:BG:81:LYS:HG2	2.14	0.47
42:BH:86:GLU:OE1	42:BH:86:GLU:N	2.47	0.47
44:BK:15:UNK:HA	44:BK:45:UNK:O	2.13	0.47
46:BN:128:HIS:HD2	46:BN:130:HIS:N	2.08	0.47
53:BU:85:LYS:C	53:BU:87:GLY:H	2.22	0.47
54:BV:71:LEU:HD12	54:BV:86:GLY:HA2	1.95	0.47
55:BW:32:ALA:O	55:BW:36:LEU:HD22	2.14	0.47
57:BY:47:LYS:HG3	57:BY:60:PHE:CZ	2.49	0.47
1:AA:521:G:H2'	1:AA:522:C:C5'	2.25	0.47
1:AA:778:G:O2'	1:AA:779:C:H5'	2.14	0.47
1:AA:1239:A:O2'	1:AA:1240:U:OP2	2.28	0.47
1:AA:1305:G:OP2	1:AA:1305:G:H8	1.97	0.47
1:AA:1396:A:C4'	1:AA:1398:A:H1'	2.44	0.47
9:AI:48:GLU:CD	9:AI:51:ARG:HD3	2.39	0.47
13:AM:54:VAL:HA	13:AM:57:ARG:HB3	1.96	0.47
15:AO:72:ARG:HG2	15:AO:73:GLU:OE2	2.14	0.47
22:AV:45:U:O2	22:AV:45:U:C4'	2.62	0.47
24:AY:550:MET:HG2	24:AY:560:VAL:HB	1.97	0.47
26:B1:3:LYS:NZ	35:BA:1364:G:N7	2.46	0.47
28:B3:46:ASN:ND2	35:BA:850:C:O2'	2.47	0.47
29:B4:31:ILE:HG12	29:B4:33:VAL:N	2.29	0.47
35:BA:286:C:H2'	35:BA:287:C:C6	2.49	0.47
35:BA:1215:G:O6	35:BA:1235:G:C2	2.67	0.47
35:BA:1448:G:H1'	35:BA:1528:A:N6	2.26	0.47
35:BA:1698:A:N3	35:BA:1700:A:O4'	2.47	0.47
35:BA:2389:G:C5'	35:BA:2390:U:H5'	2.43	0.47
36:BB:44:G:H1'	36:BB:47:C:N4	2.28	0.47
37:BC:17:PRO:HG2	37:BC:18:ASN:H	1.79	0.47
37:BC:24:ASP:C	37:BC:24:ASP:OD1	2.55	0.47
37:BC:103:LYS:O	37:BC:104:ILE:C	2.57	0.47
37:BC:180:SER:O	37:BC:181:PHE:O	2.33	0.47
38:BD:26:LYS:O	38:BD:27:THR:HB	2.14	0.47
38:BD:76:PRO:HG2	38:BD:98:VAL:CG2	2.43	0.47
41:BG:66:GLN:HE21	41:BG:92:VAL:CG2	2.26	0.47
41:BG:152:LEU:HD23	41:BG:152:LEU:N	2.25	0.47
42:BH:13:LYS:O	42:BH:15:VAL:HG22	2.15	0.47
43:BJ:69:UNK:O	43:BJ:70:UNK:C	2.62	0.47
45:BL:59:UNK:C	45:BL:61:UNK:N	2.75	0.47
46:BN:1:MET:SD	46:BN:2:LYS:C	2.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:33:GLY:HA2	49:BQ:105:GLU:HA	1.96	0.47
52:BT:123:GLN:O	52:BT:127:ALA:HB3	2.13	0.47
53:BU:32:PHE:O	53:BU:36:ARG:HB2	2.14	0.47
55:BW:24:ILE:HG21	55:BW:36:LEU:CD1	2.44	0.47
56:BX:8:ILE:HD11	56:BX:42:ALA:CB	2.34	0.47
1:AA:197:A:C5	1:AA:221:C:C4'	2.95	0.47
1:AA:342:C:C2'	1:AA:343:U:H5'	2.43	0.47
1:AA:563:A:C2	1:AA:567:G:C5	3.03	0.47
1:AA:867:G:C6	1:AA:868:C:C4	3.02	0.47
1:AA:1073:U:O2'	1:AA:1074:G:C5'	2.58	0.47
1:AA:1368:G:C2'	1:AA:1369:C:C5'	2.83	0.47
4:AD:70:ILE:HG23	4:AD:74:GLN:HB2	1.96	0.47
8:AH:30:ARG:HB3	8:AH:30:ARG:CZ	2.44	0.47
10:AJ:3:LYS:HB3	10:AJ:4:ILE:CD1	2.45	0.47
15:AO:39:LEU:HD13	15:AO:56:LEU:CB	2.43	0.47
24:AY:82:ILE:O	24:AY:83:ASP:C	2.57	0.47
24:AY:550:MET:CE	24:AY:563:ILE:HD11	2.44	0.47
25:B0:4:LYS:O	25:B0:5:LYS:O	2.31	0.47
25:B0:50:ASN:C	25:B0:62:LEU:HD21	2.39	0.47
25:B0:61:ALA:HB2	25:B0:81:VAL:HG21	1.96	0.47
26:B1:20:ARG:HG2	26:B1:20:ARG:HH11	1.79	0.47
29:B4:50:VAL:O	29:B4:51:ASP:C	2.57	0.47
29:B4:59:PHE:CD1	29:B4:59:PHE:O	2.66	0.47
29:B4:66:SER:O	29:B4:69:LYS:HG2	2.14	0.47
35:BA:7:G:O2'	35:BA:8:A:H5'	2.15	0.47
35:BA:527:C:O2	35:BA:527:C:O4'	2.30	0.47
35:BA:602:G:O6	35:BA:654(T):C:C2	2.67	0.47
35:BA:717:G:H2'	35:BA:718:A:O4'	2.15	0.47
35:BA:882:G:N2	35:BA:895:U:C2	2.82	0.47
35:BA:1036:G:N1	35:BA:1120:G:C6	2.82	0.47
35:BA:1151:G:H2'	35:BA:1152:C:H6	1.79	0.47
35:BA:1652:A:H62	50:BR:11:ASN:ND2	2.12	0.47
35:BA:2052:G:O4'	39:BE:142:GLY:HA3	2.14	0.47
35:BA:2110:G:H8	35:BA:2110:G:OP2	1.96	0.47
35:BA:2401:U:HO2'	35:BA:2402:C:P	2.37	0.47
37:BC:20:VAL:O	37:BC:21:TYR:CB	2.58	0.47
38:BD:25:THR:C	38:BD:27:THR:H	2.19	0.47
40:BF:20:LEU:HD13	40:BF:203:GLN:OE1	2.15	0.47
44:BK:4:UNK:O	44:BK:5:UNK:C	2.62	0.47
46:BN:119:ARG:HH11	46:BN:119:ARG:HG3	1.77	0.47
51:BS:24:LEU:O	51:BS:85:VAL:HB	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:5:ALA:HB2	55:BW:54:ALA:HB2	1.96	0.47
55:BW:24:ILE:HG21	55:BW:36:LEU:HD13	1.96	0.47
58:BZ:151:HIS:CB	58:BZ:171:ILE:H	2.27	0.47
1:AA:177:C:H2'	1:AA:178:C:H6	1.78	0.47
1:AA:605:U:O2'	1:AA:606:G:H5'	2.14	0.47
1:AA:863:U:O2	1:AA:863:U:C4'	2.62	0.47
1:AA:1298:C:H2'	7:AG:114:ARG:HH12	1.78	0.47
1:AA:1381:U:H5	1:AA:1382:C:C4	2.31	0.47
1:AA:1392:G:N2	1:AA:1502:A:H8	2.12	0.47
1:AA:1400:C:C4'	1:AA:1401:G:OP2	2.56	0.47
2:AB:46:LYS:HA	2:AB:49:GLU:OE1	2.15	0.47
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.22	0.47
6:AF:21:LEU:HD13	6:AF:21:LEU:C	2.40	0.47
7:AG:22:LEU:CD2	7:AG:101:LEU:HD11	2.45	0.47
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.32	0.47
24:AY:24:GLY:O	24:AY:25:LYS:C	2.56	0.47
24:AY:164:MET:O	24:AY:180:VAL:HG22	2.14	0.47
27:B2:4:SER:OG	27:B2:5:GLU:N	2.48	0.47
29:B4:16:CYS:CB	29:B4:19:GLY:O	2.62	0.47
33:B8:41:ILE:O	33:B8:41:ILE:HG12	2.14	0.47
35:BA:27:G:C2	35:BA:512:G:H2'	2.48	0.47
35:BA:201:C:C2'	35:BA:202:U:H5'	2.45	0.47
35:BA:325:G:H2'	35:BA:326:G:C8	2.46	0.47
35:BA:738:G:C6	35:BA:739:G:C2	3.02	0.47
35:BA:806:C:P	48:BP:39:LYS:HG3	2.53	0.47
35:BA:993:G:OP1	53:BU:50:ARG:NH1	2.48	0.47
35:BA:1133:U:O2	35:BA:1137:G:H5"	2.15	0.47
37:BC:42:VAL:CG1	37:BC:43:GLU:H	2.27	0.47
37:BC:75:VAL:HG12	37:BC:113:ALA:HB3	1.97	0.47
37:BC:80:LYS:O	37:BC:83:LYS:HB3	2.14	0.47
40:BF:53:THR:HG22	40:BF:56:GLU:OE1	2.14	0.47
40:BF:181:LEU:HD23	40:BF:202:PHE:HD1	1.79	0.47
42:BH:153:LYS:CG	42:BH:154:PRO:HD2	2.44	0.47
49:BQ:3:MET:HB2	49:BQ:4:PRO:HD2	1.95	0.47
50:BR:4:LEU:C	50:BR:6:SER:N	2.70	0.47
52:BT:1:MET:HE2	52:BT:1:MET:HA	1.96	0.47
56:BX:32:PRO:HA	56:BX:77:LYS:HB2	1.97	0.47
57:BY:2:ARG:C	57:BY:4:LYS:H	2.23	0.47
58:BZ:183:LEU:HD11	58:BZ:186:GLU:HA	1.96	0.47
1:AA:431:A:O2'	1:AA:432:A:H5'	2.14	0.47
1:AA:490:G:H2'	1:AA:491:G:C8	2.38	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:563:A:N3	1:AA:563:A:C2'	2.77	0.47
1:AA:646:U:H2'	1:AA:647:C:C6	2.49	0.47
1:AA:839:U:O2	1:AA:839:U:C2'	2.61	0.47
1:AA:868:C:C2'	1:AA:869:G:O5'	2.62	0.47
1:AA:1133:G:C4	1:AA:1142:G:N2	2.81	0.47
2:AB:204:ASN:HD22	2:AB:204:ASN:C	2.16	0.47
7:AG:49:ILE:O	7:AG:50:ILE:CB	2.61	0.47
7:AG:116:ALA:HA	7:AG:119:ARG:NH1	2.30	0.47
13:AM:70:LEU:HD23	13:AM:70:LEU:C	2.40	0.47
22:AV:76:A:H8	35:BA:2394:C:H42	1.60	0.47
24:AY:512:ILE:HD13	24:AY:512:ILE:N	2.29	0.47
24:AY:535:PRO:C	24:AY:537:GLU:N	2.69	0.47
33:B8:4:MET:HB2	35:BA:592:G:O2'	2.14	0.47
34:B9:17:ILE:CG2	34:B9:18:ARG:H	2.25	0.47
34:B9:29:ASN:ND2	34:B9:32:HIS:CE1	2.83	0.47
35:BA:39:C:C2'	35:BA:40:C:C5'	2.91	0.47
35:BA:108:U:H2'	35:BA:109:G:C8	2.46	0.47
35:BA:271(Q):G:O2'	35:BA:271(R):G:P	2.72	0.47
35:BA:363:G:H2'	35:BA:363(A):A:H8	1.79	0.47
35:BA:620:G:H4'	35:BA:621:A:H5"	1.97	0.47
35:BA:709:U:H2'	35:BA:710:G:C8	2.49	0.47
35:BA:1023:U:C2'	35:BA:1024:G:C5'	2.72	0.47
35:BA:1097:U:C2'	35:BA:1098:A:H5'	2.43	0.47
35:BA:1132:A:O2'	35:BA:1133:U:H5'	2.15	0.47
35:BA:1800:C:H5'	38:BD:147:LEU:HD21	1.96	0.47
35:BA:1885:A:H8	35:BA:1885:A:H5'	1.79	0.47
35:BA:1992:G:C2'	35:BA:1993:U:OP2	2.62	0.47
35:BA:2134:A:C8	35:BA:2158:A:C2	3.00	0.47
35:BA:2557:G:C2'	35:BA:2558:C:H5'	2.44	0.47
35:BA:2610:C:O2'	35:BA:2611:U:OP1	2.32	0.47
38:BD:131:LEU:HD12	38:BD:131:LEU:N	2.28	0.47
39:BE:2:LYS:HD3	39:BE:95:ILE:CG2	2.45	0.47
40:BF:81:PRO:HB3	40:BF:89:VAL:HG23	1.96	0.47
41:BG:7:LEU:HB2	41:BG:104:GLU:CG	2.43	0.47
41:BG:77:ILE:CG2	41:BG:80:PHE:H	2.28	0.47
48:BP:108:LYS:C	48:BP:110:TYR:N	2.72	0.47
52:BT:30:VAL:C	52:BT:43:GLN:O	2.57	0.47
52:BT:90:GLN:CB	52:BT:121:ILE:HG12	2.44	0.47
53:BU:54:LYS:O	53:BU:58:ARG:HG3	2.15	0.47
1:AA:188:C:H6	1:AA:188:C:O5'	1.97	0.47
1:AA:425:G:O2'	1:AA:426:G:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:963:G:N2	10:AJ:55:LYS:HD3	2.29	0.47
1:AA:1151:A:C4	1:AA:1152:A:C5	3.02	0.47
1:AA:1487:G:C2'	1:AA:1488:G:H5'	2.45	0.47
3:AC:190:ARG:HG3	3:AC:190:ARG:NH1	2.30	0.47
6:AF:15:ASP:C	6:AF:17:SER:H	2.22	0.47
13:AM:32:GLU:O	13:AM:35:GLU:HG2	2.14	0.47
19:AS:51:VAL:HG21	19:AS:71:LEU:HB3	1.95	0.47
24:AY:137:ASN:CG	24:AY:138:LYS:N	2.73	0.47
24:AY:186:TYR:CD1	24:AY:186:TYR:N	2.82	0.47
24:AY:488:THR:O	24:AY:516:PRO:HG3	2.14	0.47
24:AY:550:MET:SD	24:AY:563:ILE:HD11	2.54	0.47
25:B0:12:ASN:HA	25:B0:14:ARG:NH1	2.30	0.47
27:B2:53:LEU:O	27:B2:53:LEU:HD23	2.14	0.47
28:B3:22:ALA:CA	28:B3:46:ASN:HD22	2.26	0.47
29:B4:38:LYS:HG2	29:B4:47:GLN:OE1	2.15	0.47
32:B7:40:TRP:CD2	35:BA:459:U:H5"	2.49	0.47
35:BA:90:U:HO2'	35:BA:92:A:P	2.37	0.47
35:BA:527:C:H1'	35:BA:528:A:C8	2.49	0.47
35:BA:747:U:H1'	55:BW:92:ARG:NH2	2.29	0.47
35:BA:1198:U:H2'	35:BA:1199:U:C6	2.50	0.47
35:BA:1223:G:C2	35:BA:1227:G:C5	3.03	0.47
35:BA:1678:G:H8	35:BA:1678:G:O5'	1.98	0.47
35:BA:1805:U:O2'	35:BA:1806:C:C5'	2.47	0.47
35:BA:2147:G:H2'	35:BA:2148:G:C4'	2.44	0.47
35:BA:2175:C:H2'	35:BA:2176:A:H8	1.78	0.47
35:BA:2193:G:C4	35:BA:2194:G:C8	3.02	0.47
35:BA:2364:C:C2'	35:BA:2365:G:H5'	2.45	0.47
35:BA:2615:U:H2'	35:BA:2616:C:H6	1.79	0.47
36:BB:13:A:N1	36:BB:69:G:O2'	2.40	0.47
39:BE:61:ARG:O	39:BE:63:LEU:N	2.41	0.47
40:BF:198:ALA:O	40:BF:201:VAL:HG12	2.15	0.47
43:BJ:51:UNK:O	43:BJ:87:UNK:HA	2.14	0.47
46:BN:15:LEU:O	46:BN:136:GLU:HA	2.15	0.47
47:BO:11:ALA:O	47:BO:98:VAL:HG23	2.14	0.47
48:BP:52:GLU:CG	48:BP:57:THR:HG22	2.35	0.47
49:BQ:39:PRO:O	49:BQ:40:ALA:HB2	2.13	0.47
49:BQ:141:GLN:CG	58:BZ:72:ARG:CZ	2.93	0.47
51:BS:53:SER:C	51:BS:55:ALA:N	2.73	0.47
52:BT:13:ARG:NE	52:BT:13:ARG:HA	2.27	0.47
53:BU:61:TRP:O	53:BU:65:ILE:HD13	2.15	0.47
58:BZ:20:ARG:HB3	58:BZ:20:ARG:HH11	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:102:LEU:HD12	58:BZ:121:HIS:O	2.14	0.47
1:AA:123:C:H2'	1:AA:124:G:C8	2.50	0.47
1:AA:160:A:H1'	1:AA:344:A:C2	2.49	0.47
1:AA:187:C:C2'	1:AA:188:C:H5'	2.44	0.47
1:AA:339:C:H2'	1:AA:340:U:H6	1.80	0.47
1:AA:353:A:H2'	1:AA:354:G:OP2	2.15	0.47
1:AA:360:A:H2'	1:AA:361:G:C8	2.50	0.47
1:AA:360:A:H2'	1:AA:361:G:C5'	2.45	0.47
1:AA:491:G:C2'	1:AA:492:G:O5'	2.62	0.47
1:AA:544:G:C2'	1:AA:545:C:O5'	2.63	0.47
1:AA:564:C:C4	1:AA:565:U:C4	3.02	0.47
1:AA:590:C:OP1	8:AH:30:ARG:N	2.43	0.47
1:AA:713:G:H2'	1:AA:714:G:C8	2.49	0.47
1:AA:933:G:OP2	7:AG:3:ARG:HB2	2.14	0.47
1:AA:954:G:H2'	1:AA:955:U:H6	1.78	0.47
1:AA:961:U:OP1	1:AA:961:U:C2'	2.63	0.47
1:AA:1073:U:H2'	1:AA:1074:G:C5'	2.32	0.47
1:AA:1142:G:C8	1:AA:1143:G:C8	3.03	0.47
1:AA:1476:G:H2'	1:AA:1477:C:C6	2.50	0.47
2:AB:21:ARG:O	2:AB:23:ARG:N	2.40	0.47
2:AB:212:GLN:C	2:AB:212:GLN:CD	2.83	0.47
3:AC:84:ILE:O	3:AC:85:ARG:C	2.57	0.47
3:AC:91:LEU:CB	3:AC:99:VAL:HG21	2.44	0.47
3:AC:207:VAL:O	3:AC:207:VAL:HG12	2.14	0.47
4:AD:106:TYR:C	4:AD:108:LEU:H	2.22	0.47
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.97	0.47
6:AF:71:ARG:HG3	6:AF:71:ARG:NH1	2.29	0.47
7:AG:33:ASP:C	7:AG:35:LYS:N	2.72	0.47
7:AG:69:VAL:HG11	7:AG:104:LEU:HD13	1.96	0.47
9:AI:6:GLY:O	9:AI:17:VAL:HG12	2.14	0.47
9:AI:50:LEU:HD23	9:AI:85:LEU:HD23	1.97	0.47
11:AK:57:THR:OG1	11:AK:58:PRO:HD2	2.14	0.47
13:AM:28:ALA:O	13:AM:29:ARG:C	2.56	0.47
18:AR:56:THR:HB	18:AR:58:LEU:HD12	1.94	0.47
19:AS:20:LEU:CD1	29:B4:61:ARG:HH21	2.28	0.47
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.47	0.47
24:AY:35:TYR:OH	24:AY:266:ASN:HB3	2.14	0.47
24:AY:126:GLU:O	24:AY:129:LYS:N	2.37	0.47
24:AY:203:GLU:O	24:AY:204:GLU:C	2.57	0.47
24:AY:238:THR:HG22	24:AY:241:GLU:CD	2.40	0.47
24:AY:238:THR:HG23	24:AY:241:GLU:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:588:MET:HA	24:AY:591:LYS:HB3	1.96	0.47
24:AY:652:MET:HE3	24:AY:655:TYR:CG	2.50	0.47
26:B1:5:CYS:C	26:B1:7:ILE:H	2.22	0.47
26:B1:24:ALA:HB3	26:B1:27:GLU:HG3	1.97	0.47
27:B2:2:LYS:HE3	27:B2:52:ASP:CG	2.39	0.47
28:B3:10:LYS:HB3	28:B3:53:LEU:HD23	1.95	0.47
29:B4:36:CYS:C	29:B4:38:LYS:H	2.22	0.47
31:B6:15:GLU:CD	31:B6:18:ARG:NE	2.72	0.47
33:B8:29:LYS:HD3	33:B8:44:LYS:HB3	1.95	0.47
35:BA:15:G:C4	35:BA:16:G:C8	3.03	0.47
35:BA:528:A:C2	35:BA:2043:C:H5'	2.47	0.47
35:BA:576:U:H2'	35:BA:577:G:C8	2.50	0.47
35:BA:582:G:H2'	35:BA:583:G:H8	1.78	0.47
35:BA:603:A:C8	35:BA:655:A:C6	3.03	0.47
35:BA:612:C:C2'	35:BA:613:G:C5'	2.71	0.47
35:BA:628:G:H2'	35:BA:629:G:C5'	2.42	0.47
35:BA:753:C:H2'	35:BA:754:C:H6	1.78	0.47
35:BA:796:C:H2'	35:BA:797:C:H6	1.77	0.47
35:BA:902:C:H2'	35:BA:903:C:H6	1.76	0.47
35:BA:1197:G:O2'	35:BA:1198:U:H5'	2.14	0.47
35:BA:1288:U:C2	35:BA:1327:C:O2	2.67	0.47
35:BA:1779:U:H3'	35:BA:1779:U:H6	1.79	0.47
35:BA:1893:C:C2'	35:BA:1894:C:H5'	2.44	0.47
35:BA:2009:G:C2'	35:BA:2010:G:H5"	2.43	0.47
35:BA:2148:G:O2'	35:BA:2149:G:H5'	2.14	0.47
35:BA:2352:A:H2'	35:BA:2353:G:O4'	2.14	0.47
35:BA:2505:G:O6	35:BA:2576:G:H2'	2.15	0.47
35:BA:2783:G:H2'	35:BA:2784:C:H6	1.79	0.47
36:BB:37:C:H2'	36:BB:38:C:H5'	1.97	0.47
37:BC:105:LEU:HD22	37:BC:105:LEU:H	1.80	0.47
38:BD:65:ILE:HD13	38:BD:65:ILE:C	2.39	0.47
38:BD:186:HIS:CD2	38:BD:188:GLU:HB2	2.50	0.47
40:BF:3:GLU:HA	40:BF:24:LEU:CG	2.44	0.47
40:BF:18:ARG:C	40:BF:19:GLU:CD	2.82	0.47
40:BF:82:ILE:H	40:BF:82:ILE:HG12	1.32	0.47
41:BG:5:VAL:HG11	41:BG:8:LYS:HB2	1.96	0.47
41:BG:28:VAL:O	41:BG:28:VAL:HG12	2.13	0.47
41:BG:96:ARG:O	41:BG:97:ASP:C	2.58	0.47
41:BG:138:GLN:C	41:BG:140:ILE:H	2.23	0.47
41:BG:164:GLU:O	41:BG:165:THR:C	2.58	0.47
47:BO:77:ILE:CD1	52:BT:74:ARG:HD3	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:46:LYS:HG2	48:BP:51:PHE:CG	2.49	0.47
51:BS:56:LEU:HD23	51:BS:57:LYS:O	2.14	0.47
51:BS:93:LYS:O	51:BS:93:LYS:HG3	2.14	0.47
52:BT:25:GLY:CA	52:BT:92:GLY:HA2	2.45	0.47
52:BT:48:ILE:H	52:BT:48:ILE:HD12	1.79	0.47
52:BT:133:GLU:OE1	52:BT:136:GLN:HB3	2.15	0.47
53:BU:95:LEU:C	53:BU:97:ASP:N	2.69	0.47
54:BV:68:LYS:HD2	54:BV:69:LYS:H	1.80	0.47
57:BY:81:LYS:HD3	57:BY:97:ARG:CG	2.39	0.47
1:AA:412:A:H5'	1:AA:413:G:OP1	2.15	0.47
1:AA:444:C:H2'	1:AA:445:G:C8	2.50	0.47
1:AA:751:U:C2'	1:AA:752:G:H5'	2.45	0.47
1:AA:774:G:H2'	1:AA:775:G:O5'	2.15	0.47
1:AA:820:U:H4'	1:AA:821:G:OP2	2.15	0.47
1:AA:961:U:O2'	1:AA:962:C:P	2.73	0.47
1:AA:1157:A:H4'	1:AA:1158:C:C5'	2.43	0.47
1:AA:1384:C:C2	1:AA:1385:G:C8	3.03	0.47
2:AB:19:HIS:O	2:AB:20:GLU:HB2	2.14	0.47
2:AB:20:GLU:CB	2:AB:190:THR:OG1	2.62	0.47
3:AC:84:ILE:C	3:AC:86:VAL:H	2.23	0.47
3:AC:113:ALA:HA	3:AC:116:VAL:HG12	1.96	0.47
9:AI:9:ARG:HG2	9:AI:14:VAL:HG13	1.96	0.47
12:AL:24:VAL:O	12:AL:24:VAL:HG12	2.15	0.47
12:AL:94:PRO:O	12:AL:96:VAL:N	2.48	0.47
16:AP:52:ASP:O	16:AP:53:VAL:C	2.57	0.47
19:AS:25:LYS:HG3	19:AS:26:GLY:N	2.30	0.47
24:AY:319:ASP:OD2	24:AY:322:VAL:HG22	2.15	0.47
25:B0:5:LYS:O	25:B0:6:GLY:C	2.58	0.47
29:B4:35:VAL:HG13	41:BG:108:ASN:O	2.15	0.47
30:B5:40:LYS:HD3	30:B5:46:CYS:CB	2.44	0.47
31:B6:45:LYS:C	31:B6:46:HIS:ND1	2.73	0.47
35:BA:150:C:H2'	35:BA:151:C:C6	2.50	0.47
35:BA:285:C:O2'	35:BA:286:C:H5'	2.15	0.47
35:BA:1106:G:H2'	35:BA:1107:G:H8	1.80	0.47
35:BA:1133:U:O3'	35:BA:1135:C:OP2	2.33	0.47
35:BA:1501:C:H1'	38:BD:100:GLY:HA2	1.95	0.47
35:BA:1540:U:O2'	35:BA:1541:G:OP1	2.33	0.47
35:BA:1995:U:H2'	35:BA:1996:C:C6	2.50	0.47
35:BA:2126:A:O2'	35:BA:2127:G:O4'	2.30	0.47
35:BA:2291:U:OP1	35:BA:2381:C:H5'	2.15	0.47
35:BA:2337:G:H2'	35:BA:2338:G:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2360:A:HO2'	35:BA:2361:A:P	2.37	0.47
35:BA:2401:U:H5"	35:BA:2402:C:H5	1.79	0.47
35:BA:2580:U:H5'	39:BE:131:ALA:H	1.79	0.47
36:BB:3:C:N4	36:BB:118:G:H1	2.05	0.47
37:BC:118:PRO:HB3	37:BC:121:MET:HG2	1.97	0.47
37:BC:228:HIS:O	37:BC:229:SER:HB3	2.15	0.47
38:BD:243:GLY:O	38:BD:244:ARG:O	2.32	0.47
38:BD:266:SER:O	38:BD:267:SER:O	2.33	0.47
39:BE:61:ARG:HH11	39:BE:61:ARG:HG3	1.79	0.47
41:BG:50:ALA:C	41:BG:52:ILE:H	2.23	0.47
44:BK:88:UNK:HA	44:BK:96:UNK:H2	1.79	0.47
46:BN:10:GLU:CD	46:BN:11:PRO:HD2	2.40	0.47
46:BN:45:ASN:H	46:BN:45:ASN:ND2	2.13	0.47
49:BQ:116:GLU:O	49:BQ:120:ILE:HG12	2.14	0.47
1:AA:17:U:H4'	1:AA:1080:A:O4'	2.15	0.47
1:AA:539:A:OP2	12:AL:115:LYS:HE3	2.15	0.47
1:AA:701:C:P	1:AA:703:G:H5'	2.55	0.47
1:AA:1129:C:O3'	1:AA:1131:G:OP2	2.33	0.47
1:AA:1283:G:O2'	1:AA:1284:C:P	2.73	0.47
1:AA:1346:A:O3'	1:AA:1347:G:H4'	2.15	0.47
2:AB:127:ILE:HD13	2:AB:135:GLN:NE2	2.29	0.47
3:AC:42:LEU:O	3:AC:42:LEU:HD12	2.14	0.47
3:AC:72:LYS:HE3	3:AC:74:GLY:H	1.80	0.47
3:AC:121:ALA:O	3:AC:124:ILE:HG22	2.14	0.47
7:AG:138:LYS:HD3	7:AG:138:LYS:C	2.40	0.47
8:AH:104:ARG:O	8:AH:105:ARG:C	2.58	0.47
9:AI:114:TYR:HE1	10:AJ:59:SER:HA	1.80	0.47
11:AK:108:ILE:HG21	18:AR:88:LYS:HB3	1.97	0.47
13:AM:2:ALA:N	13:AM:9:ILE:HG22	2.29	0.47
24:AY:108:PHE:CE2	24:AY:114:VAL:HG22	2.50	0.47
24:AY:428:LEU:HB3	24:AY:440:VAL:HG21	1.96	0.47
24:AY:547:GLU:O	24:AY:550:MET:HB3	2.15	0.47
24:AY:600:VAL:HG21	24:AY:678:GLU:CG	2.45	0.47
25:B0:72:ARG:HB3	25:B0:75:LEU:HB2	1.96	0.47
26:B1:84:GLY:O	26:B1:90:ILE:HD11	2.15	0.47
29:B4:2:LYS:HD2	29:B4:6:HIS:CD2	2.50	0.47
29:B4:16:CYS:HB3	29:B4:19:GLY:O	2.15	0.47
31:B6:45:LYS:NZ	31:B6:45:LYS:CB	2.78	0.47
32:B7:34:ARG:HD3	35:BA:467:G:OP2	2.14	0.47
33:B8:61:LEU:N	33:B8:61:LEU:CD1	2.76	0.47
35:BA:31:C:C3'	35:BA:32:C:C5'	2.93	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:860:U:O2	35:BA:860:U:O4’	2.31	0.47
35:BA:1067:A:C3’	35:BA:1068:G:H5”	2.45	0.47
35:BA:1286:A:C4	35:BA:1329:U:C4	3.03	0.47
35:BA:1541:G:O2’	35:BA:1542:A:C5’	2.63	0.47
35:BA:1542:A:C8	35:BA:1544:A:H5’	2.50	0.47
35:BA:1999:C:H5”	35:BA:2723:C:O2’	2.15	0.47
35:BA:2134:A:N6	35:BA:2157:G:H1’	2.30	0.47
35:BA:2757:A:C2’	35:BA:2758:A:O5’	2.61	0.47
35:BA:2848:G:H3’	52:BT:95:ARG:O	2.14	0.47
35:BA:2875:C:HO2’	52:BT:5:ALA:HB3	1.79	0.47
36:BB:53:A:H2’	36:BB:53:A:N3	2.29	0.47
37:BC:6:LYS:HA	37:BC:9:ARG:NH1	2.30	0.47
37:BC:88:GLU:HA	37:BC:92:ALA:CB	2.45	0.47
38:BD:21:PHE:HB3	38:BD:24:ILE:CG2	2.44	0.47
38:BD:210:GLY:O	38:BD:212:SER:N	2.46	0.47
40:BF:29:ASN:H	40:BF:112:MET:CE	2.28	0.47
41:BG:9:ARG:HB3	41:BG:13:GLU:OE1	2.15	0.47
41:BG:39:ILE:HG23	41:BG:39:ILE:O	2.14	0.47
42:BH:89:ILE:O	42:BH:89:ILE:CG1	2.62	0.47
48:BP:18:ARG:O	48:BP:20:GLY:N	2.48	0.47
48:BP:34:GLY:O	48:BP:35:HIS:CB	2.62	0.47
50:BR:28:LEU:HD23	50:BR:28:LEU:O	2.15	0.47
52:BT:106:SER:O	52:BT:107:ASP:HB3	2.15	0.47
57:BY:95:LYS:HE3	57:BY:96:ILE:O	2.14	0.47
1:AA:41:G:O2’	1:AA:42:G:H5’	2.15	0.47
1:AA:255:G:O6	1:AA:266:G:O6	2.33	0.47
1:AA:941:G:H2’	1:AA:942:G:O5’	2.15	0.47
1:AA:942:G:C2	1:AA:943:U:C5	3.03	0.47
1:AA:1036:G:H3’	1:AA:1037:C:C6	2.49	0.47
1:AA:1305:G:O2’	1:AA:1306:A:C8	2.54	0.47
2:AB:74:LYS:O	2:AB:74:LYS:HG3	2.14	0.47
2:AB:96:ARG:HG3	2:AB:98:LEU:HD23	1.97	0.47
4:AD:120:LEU:C	4:AD:126:ILE:HD13	2.40	0.47
8:AH:121:ASP:HB2	8:AH:125:ARG:HH22	1.80	0.47
13:AM:7:VAL:HG22	41:BG:147:ASP:OD1	2.10	0.47
17:AQ:95:TYR:C	17:AQ:97:SER:N	2.72	0.47
24:AY:5:VAL:C	24:AY:7:TYR:N	2.72	0.47
25:B0:38:VAL:HG12	25:B0:39:ARG:N	2.29	0.47
33:B8:27:THR:CG2	35:BA:2361:A:OP1	2.59	0.47
35:BA:9:U:O2’	35:BA:10:G:P	2.73	0.47
35:BA:614:U:O2	35:BA:614:U:O4’	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:693:C:C2'	35:BA:694:U:O5'	2.63	0.47
35:BA:880:G:H2'	35:BA:881:G:C5'	2.42	0.47
35:BA:958:U:O4	49:BQ:17:LEU:HG	2.15	0.47
35:BA:1461:G:P	35:BA:1461:G:H8	2.38	0.47
35:BA:1818:U:O4	38:BD:154:LYS:HD3	2.16	0.47
35:BA:2236:C:H2'	35:BA:2237:G:O4'	2.15	0.47
36:BB:14:U:OP2	36:BB:71:C:H5'	2.15	0.47
37:BC:97:GLY:O	37:BC:98:GLU:C	2.58	0.47
38:BD:95:LEU:HD11	38:BD:103:ARG:HB2	1.97	0.47
41:BG:100:TRP:O	41:BG:104:GLU:HB2	2.15	0.47
42:BH:67:LEU:O	42:BH:71:LEU:HD12	2.15	0.47
50:BR:54:LEU:HB3	50:BR:62:ALA:HB1	1.97	0.47
50:BR:107:ASP:C	50:BR:107:ASP:OD1	2.56	0.47
51:BS:49:VAL:HG12	51:BS:50:SER:N	2.28	0.47
51:BS:90:GLY:C	51:BS:92:TYR:H	2.22	0.47
56:BX:57:LEU:HD22	56:BX:78:LYS:HB3	1.97	0.47
57:BY:49:VAL:O	57:BY:50:ARG:HB2	2.14	0.47
58:BZ:119:GLU:H	58:BZ:119:GLU:CD	2.23	0.47
1:AA:198:G:C6	1:AA:220:G:C5	3.00	0.46
1:AA:423:G:C2'	1:AA:424:G:H5'	2.45	0.46
1:AA:679:C:H2'	1:AA:680:C:C6	2.50	0.46
1:AA:688:G:N1	1:AA:700:G:C4	2.83	0.46
1:AA:774:G:C2'	1:AA:775:G:O5'	2.63	0.46
1:AA:949:A:C3'	1:AA:950:U:C5'	2.91	0.46
1:AA:1307:U:C2	1:AA:1308:U:C5	3.02	0.46
1:AA:1312:G:O2'	1:AA:1313:U:H5'	2.15	0.46
1:AA:1498:U:H4'	1:AA:1499:A:C5'	2.44	0.46
2:AB:93:VAL:O	2:AB:93:VAL:HG22	2.14	0.46
2:AB:115:LEU:CD1	2:AB:149:LEU:HB3	2.45	0.46
2:AB:127:ILE:C	2:AB:129:GLU:H	2.23	0.46
3:AC:72:LYS:HE3	3:AC:74:GLY:CA	2.45	0.46
4:AD:13:ARG:HG2	4:AD:33:MET:CE	2.45	0.46
7:AG:69:VAL:HG22	7:AG:69:VAL:O	2.14	0.46
10:AJ:33:GLN:CG	10:AJ:75:ILE:HD11	2.45	0.46
24:AY:36:THR:OG1	24:AY:37:GLY:N	2.49	0.46
24:AY:86:GLY:O	24:AY:117:GLN:HG3	2.15	0.46
24:AY:108:PHE:HE2	24:AY:114:VAL:HG22	1.80	0.46
24:AY:148:LEU:O	24:AY:152:THR:HB	2.14	0.46
24:AY:343:ASN:O	24:AY:347:GLY:N	2.48	0.46
28:B3:9:VAL:CG2	28:B3:55:ARG:HD2	2.44	0.46
29:B4:65:ASP:O	29:B4:67:TYR:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B5:51:TYR:HB3	30:B5:54:GLY:HA3	1.97	0.46
32:B7:34:ARG:HH11	32:B7:34:ARG:CG	2.20	0.46
35:BA:33:U:O4	35:BA:446:G:O2'	2.17	0.46
35:BA:221:A:N7	35:BA:266:G:C6	2.83	0.46
35:BA:860:U:H2'	35:BA:861:A:H5'	1.97	0.46
35:BA:1113:U:H2'	35:BA:1114:G:H8	1.79	0.46
35:BA:1422:G:H2'	35:BA:1423:G:C8	2.49	0.46
35:BA:2580:U:H5'	39:BE:131:ALA:N	2.30	0.46
35:BA:2713:A:C3'	35:BA:2714:G:H5"	2.43	0.46
36:BB:8:U:H5'	36:BB:8:U:C6	2.35	0.46
36:BB:54:G:O2'	36:BB:55:U:H5'	2.15	0.46
37:BC:42:VAL:O	37:BC:216:THR:C	2.59	0.46
37:BC:176:VAL:O	37:BC:176:VAL:HG12	2.15	0.46
40:BF:178:PRO:HG2	40:BF:179:GLU:OE1	2.15	0.46
40:BF:192:LEU:HD22	40:BF:194:MET:HG3	1.97	0.46
41:BG:5:VAL:HG21	41:BG:8:LYS:NZ	2.29	0.46
41:BG:52:ILE:HD12	41:BG:53:LEU:N	2.30	0.46
41:BG:56:ALA:HB2	41:BG:153:ARG:CZ	2.45	0.46
44:BK:112:UNK:O	44:BK:113:UNK:C	2.62	0.46
46:BN:37:LYS:HG3	46:BN:42:TRP:CE3	2.50	0.46
46:BN:58:ASP:O	46:BN:60:ILE:N	2.48	0.46
48:BP:146:VAL:CG2	48:BP:147:LEU:H	2.07	0.46
52:BT:16:ARG:HH12	52:BT:19:LEU:HG	1.80	0.46
52:BT:27:THR:O	52:BT:28:VAL:CB	2.63	0.46
52:BT:90:GLN:HB3	52:BT:121:ILE:HG12	1.96	0.46
54:BV:19:LYS:NZ	54:BV:20:LEU:N	2.62	0.46
58:BZ:20:ARG:HH11	58:BZ:20:ARG:CB	2.27	0.46
1:AA:29:G:O2'	1:AA:30:U:H5'	2.15	0.46
1:AA:389:A:H2'	1:AA:389:A:N3	2.30	0.46
1:AA:736:C:H2'	1:AA:737:A:C8	2.50	0.46
1:AA:789:U:H6	1:AA:789:U:O5'	1.98	0.46
1:AA:859:A:C2'	1:AA:860:A:C5'	2.87	0.46
1:AA:865:A:C5	1:AA:866:C:C4	3.03	0.46
1:AA:1046:A:H2'	1:AA:1047:G:H5'	1.97	0.46
1:AA:1151:A:N1	1:AA:1152:A:C6	2.83	0.46
1:AA:1180:A:H8	1:AA:1180:A:O5'	1.99	0.46
1:AA:1296:C:C5'	1:AA:1302:U:O4	2.63	0.46
2:AB:95:GLN:HE21	2:AB:147:LYS:HE2	1.80	0.46
2:AB:111:ARG:HD2	2:AB:111:ARG:HA	1.64	0.46
3:AC:31:HIS:O	3:AC:34:LEU:N	2.49	0.46
3:AC:84:ILE:HG23	3:AC:85:ARG:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:99:VAL:HG23	3:AC:99:VAL:O	2.14	0.46
4:AD:158:ILE:HG22	4:AD:181:MET:CE	2.45	0.46
13:AM:66:LEU:N	13:AM:66:LEU:CD1	2.77	0.46
15:AO:17:ARG:O	15:AO:18:PHE:HB3	2.16	0.46
18:AR:26:LEU:HG	18:AR:42:ARG:NH1	2.30	0.46
22:AV:47:U:H3'	22:AV:48:C:H5"	1.98	0.46
24:AY:122:TRP:CG	24:AY:157:LEU:HD12	2.50	0.46
24:AY:421:GLN:HE21	24:AY:421:GLN:CA	2.28	0.46
29:B4:6:HIS:ND1	29:B4:7:PRO:HD2	2.30	0.46
35:BA:155:U:C3'	35:BA:156:U:H5"	2.46	0.46
35:BA:361:G:C2'	35:BA:362:U:H5"	2.38	0.46
35:BA:570:G:H2'	35:BA:2030:A:N7	2.30	0.46
35:BA:843:G:C2'	35:BA:844:C:H5'	2.45	0.46
35:BA:1104:C:O5'	35:BA:1104:C:H6	1.97	0.46
35:BA:1290:C:H2'	35:BA:1291:C:C6	2.49	0.46
35:BA:1416:G:N2	35:BA:1417:C:N3	2.63	0.46
35:BA:1434:A:H2'	35:BA:1435:G:C8	2.50	0.46
35:BA:1463:C:H2'	35:BA:1464:C:C6	2.50	0.46
35:BA:1625:C:H2'	35:BA:1626:G:H5'	1.97	0.46
35:BA:1769:G:O6	35:BA:1984:G:O6	2.34	0.46
35:BA:2572:A:N7	39:BE:144:ARG:HD2	2.30	0.46
35:BA:2581:G:C6	35:BA:2610:C:C2	3.02	0.46
35:BA:2741:A:H2'	35:BA:2742:C:O4'	2.15	0.46
36:BB:5:C:O2'	36:BB:6:C:H5'	2.14	0.46
36:BB:22:U:H2'	36:BB:23:G:H8	1.79	0.46
36:BB:50:G:OP2	51:BS:62:LYS:HD3	2.15	0.46
36:BB:67:G:O2'	36:BB:68:C:H6	1.97	0.46
37:BC:54:ARG:HH22	37:BC:56:ASP:HB3	1.76	0.46
37:BC:68:GLY:N	37:BC:189:ASN:ND2	2.62	0.46
37:BC:108:TRP:CD1	37:BC:108:TRP:N	2.82	0.46
37:BC:115:VAL:HG22	37:BC:150:ILE:HD13	1.97	0.46
40:BF:122:LYS:HG3	40:BF:191:ARG:HA	1.97	0.46
43:BJ:109:UNK:C	43:BJ:111:UNK:N	2.78	0.46
50:BR:9:LYS:HG3	50:BR:43:GLU:OE1	2.15	0.46
51:BS:95:HIS:CG	51:BS:96:GLY:N	2.84	0.46
52:BT:16:ARG:NH1	52:BT:18:ASP:OD1	2.49	0.46
53:BU:66:ASN:CG	53:BU:76:TYR:HB2	2.40	0.46
1:AA:135:C:H2'	1:AA:136:C:H5'	1.97	0.46
1:AA:545:C:O2'	1:AA:546:G:C5'	2.63	0.46
1:AA:559:A:H1'	1:AA:561:U:O2'	2.16	0.46
1:AA:589:C:C2'	1:AA:590:C:H5'	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:688:G:C2'	1:AA:689:C:C5'	2.93	0.46
1:AA:1407:C:H2'	1:AA:1408:A:H5'	1.97	0.46
3:AC:50:ALA:HB2	3:AC:75:VAL:HG11	1.93	0.46
3:AC:74:GLY:O	3:AC:78:GLY:CA	2.64	0.46
3:AC:115:LEU:O	3:AC:118:GLN:HB3	2.15	0.46
4:AD:5:ILE:HG22	4:AD:5:ILE:O	2.15	0.46
13:AM:67:GLU:CD	13:AM:71:ARG:HH21	2.23	0.46
16:AP:8:ARG:NH2	16:AP:15:PRO:HG3	2.30	0.46
19:AS:42:PRO:HG2	19:AS:43:GLU:H	1.80	0.46
24:AY:241:GLU:O	24:AY:245:ALA:HB2	2.16	0.46
24:AY:455:GLY:O	24:AY:458:HIS:HB3	2.15	0.46
24:AY:687:LEU:C	24:AY:688:ILE:HD12	2.40	0.46
27:B2:5:GLU:O	27:B2:9:GLN:OE1	2.33	0.46
32:B7:33:ARG:NH1	35:BA:467:G:OP1	2.47	0.46
33:B8:60:LEU:O	33:B8:63:PRO:HG2	2.15	0.46
35:BA:18:C:H6	35:BA:18:C:O5'	1.99	0.46
35:BA:271(E):U:H2'	35:BA:271(F):C:C6	2.51	0.46
35:BA:833:U:H5'	48:BP:51:PHE:O	2.11	0.46
35:BA:1353:A:C8	35:BA:1378:A:N6	2.83	0.46
35:BA:1431:U:H2'	35:BA:1432:C:C6	2.50	0.46
35:BA:1599:C:H2'	35:BA:1600:C:H6	1.81	0.46
35:BA:1773:A:C8	35:BA:1829:A:C8	3.03	0.46
35:BA:1797:C:C2'	35:BA:1798:U:H5'	2.45	0.46
35:BA:1988:C:H2'	35:BA:1989:G:H8	1.80	0.46
35:BA:2200:C:H42	35:BA:2223:G:H1	1.62	0.46
35:BA:2714:G:C6	35:BA:2715:C:C4	3.03	0.46
36:BB:43:C:C4'	41:BG:94:LEU:HD11	2.44	0.46
39:BE:98:PRO:HG3	39:BE:175:VAL:HG12	1.97	0.46
41:BG:7:LEU:HB2	41:BG:104:GLU:CD	2.40	0.46
46:BN:39:ARG:HE	46:BN:41:ASP:HB2	1.80	0.46
52:BT:109:GLU:HG2	52:BT:112:ARG:CZ	2.45	0.46
53:BU:90:VAL:CG1	54:BV:39:LEU:HG	2.29	0.46
1:AA:61:G:C2'	1:AA:62:U:H5'	2.46	0.46
1:AA:84:U:O2	1:AA:84:U:O4'	2.32	0.46
1:AA:266:G:C4'	1:AA:267:C:C6	2.99	0.46
1:AA:309:G:H2'	1:AA:310:G:H8	1.80	0.46
1:AA:859:A:H2'	1:AA:860:A:H8	1.81	0.46
1:AA:869:G:O5'	1:AA:869:G:H8	1.97	0.46
1:AA:942:G:C2	1:AA:943:U:C6	3.03	0.46
1:AA:972:C:O3'	10:AJ:57:LYS:HG2	2.16	0.46
1:AA:1452:C:OP2	1:AA:1457:G:C6	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:16:HIS:ND1	2:AB:210:SER:HA	2.30	0.46
17:AQ:74:LEU:HD13	17:AQ:74:LEU:C	2.41	0.46
24:AY:49:ALA:N	24:AY:52:MET:HB3	2.31	0.46
25:B0:43:THR:O	25:B0:44:ARG:C	2.58	0.46
35:BA:157:U:O2'	35:BA:158:U:H5'	2.15	0.46
35:BA:1336:A:H2'	35:BA:1337:G:C8	2.49	0.46
35:BA:1828:G:O6	38:BD:222:ARG:HD2	2.16	0.46
35:BA:2650:U:H2'	35:BA:2651:C:C6	2.50	0.46
35:BA:2716:U:O2'	35:BA:2717:G:C5'	2.48	0.46
38:BD:108:PRO:HB3	38:BD:143:HIS:HE1	1.79	0.46
38:BD:164:GLN:O	38:BD:166:GLN:NE2	2.48	0.46
39:BE:55:ASN:O	39:BE:56:PRO:O	2.34	0.46
39:BE:76:ARG:CG	39:BE:195:LEU:HD22	2.42	0.46
41:BG:29:TRP:O	41:BG:31:VAL:N	2.46	0.46
46:BN:134:ARG:H	46:BN:135:PRO:HD3	1.80	0.46
47:BO:102:VAL:HB	47:BO:106:LEU:HD12	1.98	0.46
49:BQ:134:ARG:CZ	58:BZ:122:ARG:NH2	2.79	0.46
56:BX:27:THR:HA	56:BX:80:ILE:HA	1.97	0.46
57:BY:89:PHE:O	57:BY:90:LEU:HD23	2.16	0.46
58:BZ:5:LEU:HD23	58:BZ:47:VAL:CG2	2.30	0.46
58:BZ:77:ASP:O	58:BZ:78:LYS:HB2	2.16	0.46
58:BZ:129:SER:O	58:BZ:130:PRO:C	2.58	0.46
1:AA:38:G:O2'	1:AA:39:G:O5'	2.30	0.46
1:AA:77:G:H1	1:AA:92:C:H42	1.63	0.46
1:AA:346:G:O2'	1:AA:347:G:OP2	2.33	0.46
1:AA:1157:A:C4	1:AA:1181:G:C2	3.04	0.46
3:AC:10:PHE:CZ	3:AC:178:LEU:HD11	2.51	0.46
7:AG:22:LEU:O	7:AG:23:VAL:HB	2.15	0.46
7:AG:120:ILE:O	7:AG:121:ALA:CB	2.59	0.46
9:AI:17:VAL:HG13	9:AI:17:VAL:O	2.15	0.46
12:AL:17:LYS:CD	12:AL:18:VAL:N	2.76	0.46
17:AQ:59:ILE:HG23	17:AQ:71:PHE:HB3	1.98	0.46
24:AY:150:ILE:O	24:AY:151:ARG:C	2.59	0.46
24:AY:296:GLY:O	24:AY:297:GLU:HB3	2.14	0.46
24:AY:614:GLU:HA	24:AY:617:MET:CE	2.37	0.46
25:B0:51:VAL:CA	25:B0:62:LEU:HD21	2.45	0.46
26:B1:11:ARG:NH2	35:BA:1365:A:O2'	2.49	0.46
33:B8:4:MET:HE2	33:B8:61:LEU:HD23	1.98	0.46
35:BA:832:G:P	48:BP:40:SER:HB3	2.55	0.46
35:BA:1063:G:H1	35:BA:1074:G:H1	1.63	0.46
35:BA:1133:U:HO3'	35:BA:1135:C:P	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1265:A:H8	35:BA:1265:A:OP1	1.99	0.46
35:BA:1285:G:H8	35:BA:1285:G:O5'	1.99	0.46
35:BA:1591:G:H5'	35:BA:1591:G:H8	1.80	0.46
35:BA:1639:U:H2'	35:BA:1640:C:C5'	2.46	0.46
35:BA:1993:U:H2'	35:BA:1994:C:H6	1.80	0.46
35:BA:2723:C:O3'	50:BR:2:ARG:NH2	2.49	0.46
35:BA:2748:A:C4	35:BA:2757:A:N6	2.83	0.46
36:BB:37:C:C2'	36:BB:38:C:H5'	2.45	0.46
37:BC:88:GLU:CG	37:BC:89:GLU:H	2.18	0.46
37:BC:123:ALA:O	37:BC:127:LYS:CG	2.63	0.46
37:BC:223:VAL:HG23	37:BC:223:VAL:O	2.15	0.46
38:BD:102:LYS:C	38:BD:103:ARG:HG2	2.40	0.46
38:BD:124:PRO:O	38:BD:126:GLN:HG2	2.16	0.46
39:BE:19:ARG:HA	47:BO:73:ASP:HA	1.96	0.46
40:BF:4:VAL:N	40:BF:24:LEU:HD12	2.30	0.46
41:BG:16:ARG:O	41:BG:20:ILE:HG13	2.16	0.46
41:BG:32:PRO:HB3	41:BG:163:ALA:HB2	1.96	0.46
41:BG:57:ALA:O	41:BG:61:ALA:CB	2.63	0.46
41:BG:61:ALA:CB	41:BG:67:LYS:HA	2.42	0.46
41:BG:118:ARG:HH12	41:BG:182:LYS:HD3	1.79	0.46
42:BH:30:LYS:HZ3	42:BH:80:SER:HA	1.80	0.46
42:BH:168:PRO:CB	42:BH:170:ARG:NH2	2.78	0.46
44:BK:76:UNK:C	44:BK:78:UNK:N	2.75	0.46
46:BN:40:PRO:HB3	53:BU:68:ALA:HB2	1.97	0.46
47:BO:36:GLY:HA3	47:BO:109:LYS:HD2	1.96	0.46
50:BR:57:ARG:HB3	50:BR:59:ASP:OD1	2.15	0.46
51:BS:28:VAL:CG1	51:BS:29:PHE:N	2.76	0.46
55:BW:2:GLU:N	55:BW:64:MET:HE1	2.30	0.46
1:AA:366:C:O5'	1:AA:366:C:H6	1.98	0.46
1:AA:827:U:H3	1:AA:872:A:H61	1.62	0.46
1:AA:930:C:O2'	1:AA:931:C:H5'	2.15	0.46
1:AA:946:A:N1	1:AA:947:G:C6	2.83	0.46
1:AA:958:A:H8	1:AA:958:A:O5'	1.99	0.46
1:AA:1279:A:H5"	1:AA:1280:A:P	2.55	0.46
2:AB:19:HIS:HE2	2:AB:206:ASP:CG	2.23	0.46
2:AB:90:MET:HB3	2:AB:91:PRO:HD2	1.97	0.46
3:AC:191:THR:CG2	3:AC:192:THR:N	2.79	0.46
5:AE:50:GLU:CD	5:AE:51:VAL:H	2.24	0.46
7:AG:28:ASN:HA	7:AG:31:MET:HE2	1.97	0.46
9:AI:85:LEU:C	9:AI:85:LEU:HD12	2.41	0.46
10:AJ:28:ARG:NH1	10:AJ:34:VAL:HB	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:118:ALA:HB1	19:AS:88:LYS:HZ1	1.80	0.46
16:AP:60:LEU:HD21	16:AP:66:PRO:CG	2.44	0.46
24:AY:266:ASN:C	24:AY:267:LYS:HG3	2.41	0.46
24:AY:324:ARG:HD3	24:AY:380:LEU:O	2.15	0.46
24:AY:357:ARG:NH1	24:AY:357:ARG:HG3	2.31	0.46
26:B1:59:THR:O	26:B1:60:PHE:CG	2.67	0.46
28:B3:54:VAL:O	28:B3:54:VAL:CG2	2.63	0.46
31:B6:53:LYS:CG	31:B6:54:ILE:N	2.78	0.46
35:BA:34:C:N4	35:BA:447:A:N6	2.63	0.46
35:BA:574:C:N3	39:BE:145:LYS:HE2	2.31	0.46
35:BA:602:G:N1	35:BA:654(U):A:N7	2.64	0.46
35:BA:904:C:O2'	35:BA:905:U:H5'	2.15	0.46
35:BA:1240:U:O2'	35:BA:1241:A:H5'	2.16	0.46
35:BA:1689:A:H62	35:BA:1698:A:H2	1.63	0.46
35:BA:2125:G:H8	35:BA:2125:G:O5'	1.99	0.46
35:BA:2287:A:H2	35:BA:2346:A:N1	2.14	0.46
35:BA:2317:C:O2'	35:BA:2318:G:H5'	2.15	0.46
35:BA:2533:A:OP1	35:BA:2665:A:H1'	2.15	0.46
35:BA:2572:A:C8	39:BE:144:ARG:HD2	2.50	0.46
35:BA:2770:G:C5'	35:BA:2771:C:OP2	2.64	0.46
37:BC:46:ALA:O	37:BC:47:LYS:HB2	2.15	0.46
39:BE:57:LYS:HA	39:BE:57:LYS:CE	2.27	0.46
39:BE:132:HIS:CA	39:BE:135:HIS:NE2	2.79	0.46
40:BF:22:ALA:HB1	40:BF:26:ALA:HB2	1.97	0.46
40:BF:125:LEU:HD23	40:BF:125:LEU:N	2.29	0.46
41:BG:42:GLY:O	41:BG:47:LYS:HD2	2.15	0.46
44:BK:10:UNK:O	44:BK:11:UNK:CB	2.63	0.46
45:BL:65:UNK:O	45:BL:67:UNK:N	2.49	0.46
45:BL:115:UNK:O	45:BL:116:UNK:C	2.63	0.46
50:BR:2:ARG:NH1	50:BR:2:ARG:CG	2.71	0.46
51:BS:30:ARG:HD3	51:BS:97:ARG:CG	2.34	0.46
52:BT:10:VAL:O	52:BT:13:ARG:HG2	2.14	0.46
58:BZ:149:SER:HB2	58:BZ:173:ALA:CA	2.39	0.46
1:AA:555:C:N4	1:AA:556:C:H42	2.12	0.46
1:AA:557:G:O2'	1:AA:558:G:H5'	2.16	0.46
1:AA:602:A:H2'	1:AA:603:U:C6	2.51	0.46
1:AA:614:A:O2'	1:AA:615:C:H5'	2.16	0.46
1:AA:701:C:H3'	1:AA:701:C:H6	1.80	0.46
1:AA:841:U:H3'	1:AA:848:C:O4'	2.15	0.46
1:AA:1037:C:C2	1:AA:1038:C:N3	2.84	0.46
1:AA:1151:A:O4'	10:AJ:39:PRO:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1250:A:H2	1:AA:1370:G:H1'	1.81	0.46
1:AA:1286:A:HO2'	1:AA:1287:A:H5"	1.80	0.46
2:AB:76:GLN:H	2:AB:76:GLN:HE21	1.63	0.46
2:AB:130:ARG:O	2:AB:131:PRO:C	2.59	0.46
3:AC:11:ARG:O	3:AC:14:ILE:O	2.34	0.46
3:AC:29:TYR:O	3:AC:30:ARG:C	2.59	0.46
3:AC:60:ALA:O	3:AC:62:ASP:N	2.45	0.46
6:AF:67:MET:HE2	6:AF:72:VAL:HA	1.97	0.46
7:AG:47:CYS:C	7:AG:49:ILE:N	2.71	0.46
7:AG:88:PRO:O	7:AG:89:MET:HB3	2.15	0.46
24:AY:628:ARG:NH1	24:AY:628:ARG:CG	2.76	0.46
25:B0:25:ARG:CB	25:B0:37:LEU:HD12	2.43	0.46
32:B7:34:ARG:HB2	32:B7:42:LEU:HD22	1.96	0.46
35:BA:535:C:C2'	35:BA:536:A:H5'	2.46	0.46
35:BA:742:G:C2'	35:BA:743:G:H5"	2.22	0.46
35:BA:812:C:H5'	48:BP:25:SER:CB	2.45	0.46
35:BA:999:U:O2'	35:BA:1000:A:H5'	2.16	0.46
35:BA:1639:U:H6	35:BA:1639:U:O5'	1.99	0.46
35:BA:1983:C:O2'	35:BA:1984:G:H5'	1.99	0.46
35:BA:2126:A:HO2'	35:BA:2127:G:H8	1.63	0.46
35:BA:2203:U:C3'	35:BA:2205:C:OP2	2.64	0.46
35:BA:2849:U:OP2	52:BT:95:ARG:NH1	2.49	0.46
37:BC:30:VAL:CG2	37:BC:31:LYS:H	2.27	0.46
38:BD:27:THR:CG2	38:BD:83:GLU:CG	2.90	0.46
39:BE:38:THR:HG22	39:BE:40:GLU:H	1.81	0.46
41:BG:144:ILE:HD11	41:BG:146:TYR:CE1	2.50	0.46
41:BG:162:THR:O	41:BG:163:ALA:O	2.34	0.46
42:BH:149:ARG:HA	42:BH:162:ILE:HD11	1.94	0.46
48:BP:48:PRO:HB2	48:BP:51:PHE:O	2.15	0.46
48:BP:105:LEU:O	48:BP:106:LEU:HB3	2.16	0.46
50:BR:44:LEU:HD13	50:BR:44:LEU:O	2.16	0.46
51:BS:101:LEU:HD12	51:BS:101:LEU:C	2.41	0.46
52:BT:78:LEU:HB3	52:BT:79:HIS:CD2	2.51	0.46
52:BT:134:GLU:O	52:BT:135:ALA:HB3	2.16	0.46
54:BV:19:LYS:HZ3	54:BV:20:LEU:N	2.14	0.46
57:BY:10:GLY:CA	57:BY:27:VAL:HG12	2.46	0.46
57:BY:50:ARG:NE	57:BY:55:TYR:O	2.48	0.46
58:BZ:151:HIS:CG	58:BZ:170:THR:HA	2.51	0.46
1:AA:185:A:C4	1:AA:186:C:C5	3.03	0.46
1:AA:364:A:H8	1:AA:364:A:O5'	1.99	0.46
1:AA:599:C:O2'	1:AA:600:C:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:648:A:H2'	1:AA:649:G:H8	1.81	0.46
1:AA:892:A:O2'	1:AA:1415:G:H4'	2.15	0.46
1:AA:982:U:O2'	1:AA:983:A:OP2	2.30	0.46
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.16	0.46
1:AA:1408:A:H5'	1:AA:1408:A:C8	2.43	0.46
2:AB:9:GLU:N	2:AB:9:GLU:CD	2.74	0.46
2:AB:10:LEU:C	2:AB:10:LEU:CD2	2.88	0.46
2:AB:42:ILE:CD1	2:AB:202:PRO:C	2.89	0.46
3:AC:21:ARG:O	3:AC:22:TRP:HB3	2.15	0.46
6:AF:86:ARG:O	6:AF:87:ARG:HB2	2.16	0.46
18:AR:53:ARG:O	18:AR:55:ARG:N	2.49	0.46
24:AY:246:ILE:HG23	24:AY:255:ILE:CD1	2.46	0.46
24:AY:445:GLU:OE1	24:AY:482:ALA:HB1	2.16	0.46
24:AY:448:GLN:OE1	24:AY:480:GLN:HG3	2.16	0.46
26:B1:5:CYS:SG	26:B1:8:SER:CB	3.04	0.46
26:B1:26:ARG:O	26:B1:27:GLU:C	2.59	0.46
29:B4:21:VAL:HG12	29:B4:22:ILE:HD13	1.97	0.46
29:B4:55:ARG:O	29:B4:56:VAL:C	2.57	0.46
30:B5:40:LYS:HE2	30:B5:46:CYS:CB	2.43	0.46
30:B5:57:VAL:HG12	30:B5:58:LEU:CD1	2.46	0.46
35:BA:604:G:C2'	35:BA:605:C:C5'	2.77	0.46
35:BA:1142(A):A:N3	35:BA:1144:G:C8	2.84	0.46
35:BA:1820:U:O2'	35:BA:1821:A:OP1	2.30	0.46
35:BA:2751:G:C6	42:BH:1:MET:CG	2.99	0.46
36:BB:42:C:O2'	36:BB:43:C:P	2.74	0.46
38:BD:181:GLU:HB2	38:BD:273:ARG:O	2.16	0.46
39:BE:103:ASP:CG	39:BE:201:THR:HA	2.41	0.46
40:BF:125:LEU:HD12	40:BF:196:LEU:HD23	1.98	0.46
42:BH:92:ILE:C	42:BH:94:TYR:H	2.23	0.46
45:BL:83:UNK:O	45:BL:86:UNK:CB	2.64	0.46
46:BN:132:ALA:O	46:BN:133:GLN:HB3	2.15	0.46
48:BP:91:PHE:CD1	48:BP:91:PHE:N	2.84	0.46
52:BT:7:ILE:O	52:BT:11:GLU:OE1	2.34	0.46
54:BV:35:LEU:C	54:BV:37:VAL:N	2.71	0.46
54:BV:55:ALA:HA	54:BV:100:ARG:O	2.15	0.46
55:BW:75:TYR:O	55:BW:104:THR:HG23	2.15	0.46
1:AA:66:G:H4'	1:AA:173:U:C5	2.51	0.46
1:AA:185:A:H2'	1:AA:186:C:C6	2.50	0.46
1:AA:307:C:C5	1:AA:308:C:N4	2.84	0.46
1:AA:492:G:H2'	1:AA:493:G:O5'	2.14	0.46
1:AA:547:A:C1'	1:AA:548:G:P	3.03	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'	1.98	0.46
1:AA:863:U:O2	1:AA:863:U:H3'	2.16	0.46
1:AA:925:G:N3	1:AA:1502:A:H1'	2.31	0.46
3:AC:11:ARG:HH11	3:AC:11:ARG:CG	2.28	0.46
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.16	0.46
4:AD:109:GLY:O	4:AD:111:ALA:N	2.49	0.46
6:AF:79:LEU:O	6:AF:85:VAL:HG11	2.15	0.46
7:AG:24:THR:O	7:AG:25:ALA:C	2.59	0.46
8:AH:84:ARG:NH2	8:AH:136:GLU:OE2	2.49	0.46
9:AI:4:TYR:CG	9:AI:88:TYR:HB2	2.50	0.46
11:AK:40:ILE:HG23	11:AK:75:TYR:CE2	2.51	0.46
13:AM:29:ARG:O	13:AM:30:ALA:C	2.59	0.46
16:AP:1:MET:HE2	16:AP:65:GLN:HG3	1.98	0.46
24:AY:487:ILE:HD13	24:AY:487:ILE:N	2.28	0.46
24:AY:616:TYR:CD2	24:AY:663:THR:HA	2.51	0.46
25:B0:39:ARG:HG3	25:B0:39:ARG:O	2.15	0.46
28:B3:3:ARG:HA	28:B3:37:LEU:O	2.16	0.46
34:B9:7:VAL:HG13	34:B9:25:VAL:HG23	1.98	0.46
35:BA:267:C:C2	35:BA:268:C:C5	3.04	0.46
35:BA:332:A:C5	35:BA:335:C:N4	2.83	0.46
35:BA:590:A:OP1	40:BF:95:ARG:NH1	2.49	0.46
35:BA:863:A:O2'	35:BA:864:G:H5'	2.16	0.46
35:BA:1027:A:H61	35:BA:1126:A:C1'	2.29	0.46
35:BA:1187:G:H5"	54:BV:81:TYR:HE2	1.73	0.46
35:BA:1297:C:OP1	35:BA:2710:C:H4'	2.16	0.46
35:BA:1434:A:O2'	35:BA:1435:G:H5'	2.16	0.46
35:BA:1528:A:C2	35:BA:1542:A:H2	2.34	0.46
35:BA:1982:C:C2	35:BA:1983:C:C5	3.04	0.46
35:BA:2403:C:C2	35:BA:2404:C:C5	3.03	0.46
35:BA:2715:C:C2'	35:BA:2716:U:C5'	2.90	0.46
35:BA:2791:C:H4'	35:BA:2792:G:O5'	2.14	0.46
36:BB:50:G:OP1	51:BS:63:THR:HG23	2.15	0.46
37:BC:20:VAL:O	37:BC:224:ARG:O	2.34	0.46
38:BD:266:SER:C	38:BD:267:SER:O	2.59	0.46
39:BE:46:ALA:HB2	39:BE:82:ARG:HA	1.97	0.46
41:BG:7:LEU:HD11	41:BG:176:LEU:CD2	2.46	0.46
42:BH:154:PRO:HB2	42:BH:163:TYR:CZ	2.50	0.46
47:BO:86:ILE:HG22	47:BO:94:ARG:HG3	1.98	0.46
48:BP:98:GLU:HA	48:BP:101:VAL:HG22	1.98	0.46
49:BQ:109:VAL:HG12	49:BQ:113:GLN:OE1	2.15	0.46
52:BT:34:VAL:HG13	52:BT:39:ARG:CA	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:88:ILE:HG22	52:BT:89:VAL:N	2.30	0.46
1:AA:90:U:C4'	1:AA:91:C:OP1	2.64	0.46
1:AA:192:U:H1'	20:AT:103:GLY:HA2	1.97	0.46
1:AA:551:U:H2'	1:AA:552:U:C6	2.51	0.46
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.30	0.46
1:AA:1250:A:C2	1:AA:1370:G:H1'	2.50	0.46
1:AA:1494:G:O3'	24:AY:499:ARG:NH2	2.49	0.46
4:AD:31:CYS:C	4:AD:33:MET:N	2.74	0.46
4:AD:60:GLU:HG2	4:AD:202:LEU:HD12	1.98	0.46
8:AH:132:GLU:HG2	8:AH:134:ILE:HD13	1.96	0.46
11:AK:65:ALA:O	11:AK:68:ALA:HB3	2.15	0.46
25:B0:16:SER:HB2	35:BA:2262:U:C5	2.51	0.46
25:B0:66:VAL:CG1	25:B0:67:VAL:H	2.28	0.46
29:B4:2:LYS:HD3	29:B4:2:LYS:C	2.41	0.46
33:B8:4:MET:HB3	33:B8:61:LEU:CD2	2.45	0.46
35:BA:34:C:H42	35:BA:447:A:N6	2.13	0.46
35:BA:185:U:H2'	35:BA:186:G:C8	2.51	0.46
35:BA:363(A):A:H2'	35:BA:363(A):A:N3	2.31	0.46
35:BA:426:C:O2'	35:BA:427:U:H5'	2.16	0.46
35:BA:686:G:H21	35:BA:788:A:H61	1.64	0.46
35:BA:831:G:O3'	48:BP:40:SER:HB3	2.16	0.46
35:BA:2208:A:H1'	35:BA:2219:G:C6	2.51	0.46
36:BB:64:C:H2'	36:BB:65:C:C6	2.51	0.46
40:BF:30:PRO:O	40:BF:31:HIS:C	2.59	0.46
40:BF:65:TRP:CZ3	40:BF:73:ALA:O	2.69	0.46
40:BF:179:GLU:H	40:BF:179:GLU:CD	2.15	0.46
41:BG:43:LEU:HD13	41:BG:53:LEU:HD12	1.97	0.46
41:BG:53:LEU:C	41:BG:55:LYS:N	2.74	0.46
41:BG:87:PRO:O	41:BG:88:ILE:HB	2.16	0.46
42:BH:19:VAL:HG12	42:BH:20:ALA:N	2.31	0.46
42:BH:126:PRO:HG2	42:BH:127:GLU:H	1.81	0.46
47:BO:114:ILE:H	47:BO:114:ILE:HD12	1.81	0.46
48:BP:84:ASN:ND2	48:BP:115:LEU:HD23	2.30	0.46
49:BQ:104:PHE:O	49:BQ:105:GLU:HB3	2.15	0.46
55:BW:43:GLY:O	55:BW:44:ALA:C	2.58	0.46
1:AA:644:G:H5'	8:AH:92:ARG:NH2	2.31	0.45
1:AA:769:G:O2'	1:AA:770:C:C5'	2.62	0.45
1:AA:791:G:H8	1:AA:791:G:O5'	1.98	0.45
1:AA:1145:C:O2'	1:AA:1146:A:O5'	2.32	0.45
1:AA:1286:A:O2'	1:AA:1287:A:OP2	2.30	0.45
1:AA:1305:G:C6	1:AA:1331:G:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:16:ARG:CG	3:AC:17:ASP:N	2.79	0.45
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.98	0.45
8:AH:8:ASP:O	8:AH:12:ARG:HG3	2.15	0.45
8:AH:86:ILE:HB	8:AH:133:LEU:O	2.16	0.45
9:AI:8:GLY:HA2	9:AI:79:LEU:HD12	1.97	0.45
9:AI:40:LEU:O	9:AI:42:ARG:N	2.49	0.45
9:AI:99:LEU:HD22	9:AI:99:LEU:N	2.30	0.45
12:AL:123:LYS:CE	12:AL:123:LYS:N	2.78	0.45
19:AS:17:GLU:C	19:AS:19:VAL:N	2.73	0.45
19:AS:61:TYR:O	19:AS:62:ILE:C	2.59	0.45
24:AY:526:VAL:HG11	24:AY:566:THR:HG23	1.96	0.45
26:B1:67:ILE:N	26:B1:68:PRO:HD2	2.31	0.45
27:B2:10:LEU:HB3	27:B2:14:ARG:NH1	2.31	0.45
27:B2:50:ILE:HG21	35:BA:61:G:H5'	1.98	0.45
29:B4:40:HIS:NE2	41:BG:118:ARG:CA	2.74	0.45
31:B6:26:ASN:O	31:B6:27:LYS:HB2	2.15	0.45
35:BA:438:G:O2'	35:BA:440:G:H5'	2.16	0.45
35:BA:1022:G:C5	35:BA:1141:U:C4	3.03	0.45
35:BA:1155:A:OP2	53:BU:58:ARG:NH1	2.50	0.45
35:BA:1529:G:N1	35:BA:1541:G:N2	2.64	0.45
35:BA:1771:C:O4'	35:BA:1786:A:H8	1.99	0.45
35:BA:2137:C:O2'	35:BA:2138:C:OP1	2.34	0.45
35:BA:2205:C:H6	35:BA:2205:C:O5'	1.99	0.45
41:BG:40:ASN:ND2	41:BG:91:ARG:HG3	2.31	0.45
41:BG:43:LEU:O	41:BG:44:GLY:O	2.34	0.45
42:BH:41:MET:HE1	42:BH:65:HIS:CA	2.46	0.45
58:BZ:124:ILE:O	58:BZ:126:VAL:HG13	2.16	0.45
1:AA:73:G:H5'	1:AA:76:C:OP2	2.16	0.45
1:AA:495:A:HO2'	1:AA:496:A:P	2.40	0.45
1:AA:684:A:H2'	1:AA:685:G:C8	2.50	0.45
1:AA:797:C:H2'	1:AA:798:G:H8	1.81	0.45
1:AA:937:A:H2'	1:AA:938:A:C5'	2.46	0.45
1:AA:951:G:C6	1:AA:1230:C:N3	2.85	0.45
1:AA:959:A:C3'	1:AA:960:U:H4'	2.46	0.45
1:AA:1151:A:O2'	1:AA:1152:A:P	2.74	0.45
1:AA:1285:A:O5'	1:AA:1285:A:H8	1.98	0.45
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.81	0.45
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.30	0.45
1:AA:1402:C:OP2	23:AX:19:A:O3'	2.19	0.45
1:AA:1407:C:H2'	1:AA:1408:A:C5'	2.46	0.45
3:AC:5:ILE:HD13	3:AC:5:ILE:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:86:VAL:HG23	3:AC:87:LEU:N	2.30	0.45
3:AC:117:ALA:O	3:AC:187:ALA:HB2	2.16	0.45
3:AC:165:THR:O	3:AC:165:THR:HG22	2.15	0.45
4:AD:122:ARG:NH1	4:AD:134:ASP:OD2	2.49	0.45
6:AF:40:VAL:O	6:AF:40:VAL:HG13	2.16	0.45
7:AG:140:ASP:C	7:AG:142:GLU:N	2.71	0.45
13:AM:82:MET:SD	13:AM:93:ARG:HG3	2.57	0.45
15:AO:82:ILE:HD13	15:AO:82:ILE:C	2.41	0.45
18:AR:29:PHE:CD2	18:AR:39:VAL:HG11	2.50	0.45
24:AY:74:TRP:NE1	24:AY:273:LEU:HB3	2.31	0.45
24:AY:138:LYS:HG2	61:AY:701:GCP:N1	2.31	0.45
24:AY:461:ILE:C	24:AY:461:ILE:HD12	2.41	0.45
24:AY:510:VAL:CG1	24:AY:567:LEU:HD11	2.46	0.45
28:B3:2:PRO:O	28:B3:39:ASP:HB2	2.15	0.45
31:B6:17:LYS:HE2	31:B6:17:LYS:CA	2.39	0.45
31:B6:27:LYS:O	31:B6:28:ARG:C	2.59	0.45
33:B8:4:MET:CG	33:B8:61:LEU:HD23	2.44	0.45
35:BA:99:U:H4'	35:BA:102:G:H1'	1.98	0.45
35:BA:654(P):C:O2'	35:BA:654(Q):C:H5'	2.15	0.45
35:BA:1412:A:C2'	35:BA:1413:G:C5'	2.89	0.45
35:BA:1937:A:O2'	35:BA:1938:A:O5'	2.33	0.45
35:BA:2115:G:C5'	35:BA:2116:G:OP2	2.64	0.45
35:BA:2174:C:O2	37:BC:219:MET:HE1	2.16	0.45
35:BA:2531:A:H4'	42:BH:157:TYR:CD2	2.51	0.45
35:BA:2606:C:N3	35:BA:2607:G:N7	2.64	0.45
36:BB:42:C:H5"	41:BG:67:LYS:HE3	1.97	0.45
37:BC:37:LYS:O	37:BC:38:PHE:HB3	2.17	0.45
39:BE:34:VAL:HG22	39:BE:48:GLN:NE2	2.30	0.45
39:BE:34:VAL:HG11	39:BE:78:LEU:HD23	1.98	0.45
39:BE:119:ARG:HG3	39:BE:160:TYR:HB2	1.99	0.45
40:BF:155:LEU:HD22	40:BF:186:ILE:HA	1.98	0.45
42:BH:19:VAL:O	42:BH:23:ARG:O	2.34	0.45
42:BH:166:GLY:O	42:BH:167:GLU:HG3	2.16	0.45
43:BJ:98:UNK:C	43:BJ:100:UNK:N	2.77	0.45
45:BL:70:UNK:O	45:BL:71:UNK:C	2.65	0.45
51:BS:35:ILE:CD1	51:BS:99:LYS:HD3	2.45	0.45
54:BV:45:THR:O	54:BV:46:VAL:C	2.59	0.45
57:BY:44:ILE:CG2	57:BY:45:VAL:H	2.28	0.45
58:BZ:31:ARG:HD2	58:BZ:94:GLU:OE1	2.17	0.45
1:AA:343:U:O5'	1:AA:343:U:H6	1.99	0.45
1:AA:356:A:C2'	1:AA:368:U:O2'	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:444:C:H2'	1:AA:445:G:H8	1.80	0.45
1:AA:718:G:H5'	11:AK:117:ASN:CG	2.40	0.45
1:AA:938:A:O2'	1:AA:939:G:C5'	2.55	0.45
1:AA:1178:G:H8	1:AA:1178:G:O5'	1.99	0.45
1:AA:1178:G:C4	1:AA:1180:A:OP2	2.69	0.45
1:AA:1202:G:H1'	14:AN:29:ARG:HD3	1.98	0.45
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.15	0.45
1:AA:1307:U:O2'	1:AA:1308:U:H5'	2.16	0.45
1:AA:1324:A:C4'	1:AA:1362:C:H4'	2.46	0.45
2:AB:76:GLN:O	2:AB:211:ILE:CD1	2.65	0.45
2:AB:178:ARG:NH1	8:AH:71:GLY:O	2.49	0.45
4:AD:17:VAL:CG1	4:AD:18:LYS:N	2.54	0.45
4:AD:170:VAL:CG1	4:AD:174:LEU:HB2	2.46	0.45
6:AF:97:PHE:CD2	18:AR:31:LEU:HD21	2.46	0.45
7:AG:5:ARG:HE	7:AG:5:ARG:HB2	1.43	0.45
7:AG:89:MET:HE2	7:AG:90:GLU:OE2	2.16	0.45
7:AG:113:GLU:OE1	7:AG:113:GLU:N	2.43	0.45
8:AH:112:LEU:CD2	8:AH:133:LEU:HD13	2.46	0.45
9:AI:23:ASN:N	9:AI:23:ASN:ND2	2.38	0.45
10:AJ:89:ASP:HB3	10:AJ:91:PRO:HD3	1.99	0.45
12:AL:27:LEU:CB	12:AL:62:SER:HB2	2.46	0.45
19:AS:53:ASN:N	19:AS:56:GLN:O	2.48	0.45
19:AS:66:MET:HE3	19:AS:74:PHE:CE2	2.51	0.45
25:B0:20:ARG:HH11	25:B0:20:ARG:CG	2.29	0.45
26:B1:11:ARG:CB	26:B1:12:PRO:HD2	2.40	0.45
26:B1:49:VAL:HG12	26:B1:62:VAL:HG12	1.98	0.45
29:B4:21:VAL:O	29:B4:22:ILE:O	2.34	0.45
29:B4:48:ARG:HH11	29:B4:48:ARG:CG	2.29	0.45
32:B7:11:LYS:CE	35:BA:686:G:H5"	2.46	0.45
35:BA:247:G:H3'	35:BA:249:C:H5	1.78	0.45
35:BA:651:G:H2'	35:BA:652:C:C5'	2.46	0.45
35:BA:659:C:H2'	35:BA:660:G:H8	1.82	0.45
35:BA:997:G:O2'	35:BA:998:C:H5'	2.16	0.45
35:BA:1058:G:N2	35:BA:1059:G:H1'	2.32	0.45
35:BA:1936:A:OP1	35:BA:1937:A:H5'	2.16	0.45
35:BA:2287:A:C2	35:BA:2346:A:N1	2.85	0.45
35:BA:2680:C:O2'	35:BA:2681:C:H5'	2.17	0.45
37:BC:23:ILE:HG12	37:BC:229:SER:OXT	2.16	0.45
38:BD:34:VAL:O	38:BD:64:ILE:HG23	2.16	0.45
38:BD:65:ILE:HD11	38:BD:67:PHE:CZ	2.51	0.45
40:BF:82:ILE:O	40:BF:83:PHE:O	2.33	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:154:PRO:CB	42:BH:163:TYR:CZ	2.99	0.45
48:BP:48:PRO:O	48:BP:50:ARG:N	2.50	0.45
50:BR:45:ARG:CG	50:BR:46:GLY:N	2.72	0.45
51:BS:89:ARG:CG	51:BS:92:TYR:CA	2.94	0.45
54:BV:19:LYS:HE2	54:BV:19:LYS:HA	1.98	0.45
1:AA:113:G:H2'	1:AA:114:U:H6	1.78	0.45
1:AA:159:G:H22	1:AA:163:C:H42	1.64	0.45
1:AA:189(I):G:O2'	1:AA:189(J):G:H5'	2.16	0.45
1:AA:368:U:P	24:AY:351:ARG:HH21	2.39	0.45
1:AA:495:A:O4'	1:AA:496:A:H8	1.93	0.45
1:AA:507:C:H3'	1:AA:507:C:H6	1.82	0.45
1:AA:1314:C:OP2	19:AS:6:LYS:CD	2.65	0.45
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.96	0.45
2:AB:114:ARG:NH1	2:AB:114:ARG:CG	2.77	0.45
4:AD:106:TYR:C	4:AD:108:LEU:N	2.73	0.45
4:AD:157:LEU:HG	4:AD:161:ASN:ND2	2.32	0.45
7:AG:22:LEU:C	7:AG:24:THR:N	2.74	0.45
10:AJ:32:ALA:CB	10:AJ:81:THR:HG21	2.47	0.45
12:AL:48:PRO:HG2	12:AL:49:ASN:H	1.81	0.45
12:AL:109:GLY:HA3	12:AL:121:GLY:O	2.17	0.45
13:AM:10:PRO:O	13:AM:11:ARG:CB	2.63	0.45
22:AV:47:U:H3'	22:AV:48:C:C5'	2.46	0.45
24:AY:491:VAL:HG21	24:AY:597:GLY:HA2	1.97	0.45
24:AY:500:GLN:O	24:AY:500:GLN:NE2	2.38	0.45
28:B3:35:ARG:HD3	28:B3:37:LEU:CD2	2.41	0.45
35:BA:43:A:H8	35:BA:43:A:O5'	2.00	0.45
35:BA:70:G:H5"	35:BA:112:U:O2	2.17	0.45
35:BA:491:G:H2'	35:BA:492:A:H8	1.81	0.45
35:BA:885:C:O2	35:BA:886:C:N4	2.50	0.45
35:BA:1291:C:O2'	35:BA:1292:U:C5'	2.52	0.45
35:BA:1646:C:O5'	35:BA:1646:C:H6	2.00	0.45
35:BA:1786:A:C4	35:BA:1938:A:N6	2.84	0.45
35:BA:1981:A:H5"	35:BA:1982:C:OP2	2.16	0.45
35:BA:2009:G:C2	35:BA:2010:G:N7	2.84	0.45
35:BA:2887:U:H2'	35:BA:2888:C:H6	1.81	0.45
36:BB:13:A:H5'	36:BB:13:A:H8	1.82	0.45
36:BB:34:U:H5	41:BG:96:ARG:HH12	1.63	0.45
37:BC:48:LEU:HD23	37:BC:59:VAL:HG21	1.98	0.45
38:BD:206:LEU:HD23	38:BD:206:LEU:HA	1.78	0.45
38:BD:211:ARG:O	38:BD:215:LEU:HG	2.17	0.45
39:BE:120:TRP:O	39:BE:122:PHE:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:66:GLY:O	42:BH:67:LEU:C	2.59	0.45
44:BK:30:UNK:O	44:BK:31:UNK:C	2.64	0.45
47:BO:107:ARG:HD3	52:BT:36:GLU:CD	2.42	0.45
49:BQ:135:ASP:H	49:BQ:137:TYR:HD2	1.59	0.45
52:BT:34:VAL:HG11	52:BT:39:ARG:HG3	1.97	0.45
52:BT:95:ARG:HB3	52:BT:95:ARG:CZ	2.47	0.45
52:BT:95:ARG:HH11	52:BT:95:ARG:CB	2.30	0.45
53:BU:68:ALA:O	53:BU:71:GLN:HG3	2.17	0.45
54:BV:52:VAL:HG13	54:BV:55:ALA:HB3	1.98	0.45
56:BX:57:LEU:HD22	56:BX:57:LEU:O	2.15	0.45
57:BY:60:PHE:O	57:BY:61:ILE:HG13	2.15	0.45
58:BZ:28:MET:HE1	58:BZ:67:LEU:CD1	2.46	0.45
58:BZ:48:PHE:CD1	58:BZ:52:SER:HA	2.51	0.45
1:AA:744:C:H2'	1:AA:745:C:C6	2.52	0.45
1:AA:941:G:O2'	1:AA:942:G:O5'	2.34	0.45
1:AA:1447:A:H4'	1:AA:1447:A:OP2	2.16	0.45
2:AB:11:LEU:HD13	2:AB:217:ARG:NH2	2.32	0.45
3:AC:65:ALA:O	3:AC:66:VAL:HB	2.17	0.45
4:AD:107:ARG:HG2	4:AD:107:ARG:HH11	1.82	0.45
6:AF:41:GLU:HG3	6:AF:62:TRP:CE3	2.52	0.45
16:AP:57:ARG:HG3	16:AP:79:VAL:HG13	1.99	0.45
24:AY:600:VAL:HG21	24:AY:678:GLU:OE1	2.16	0.45
35:BA:79:G:O2'	35:BA:80:G:H5'	2.17	0.45
35:BA:477:A:H2'	35:BA:478:A:C8	2.52	0.45
35:BA:654(N):G:H2'	35:BA:654(O):G:C4'	2.46	0.45
35:BA:956:G:P	49:BQ:14:ARG:HH21	2.38	0.45
35:BA:1243:G:H2'	35:BA:1244:G:O4'	2.16	0.45
35:BA:1336:A:O2'	35:BA:1337:G:H5'	2.16	0.45
35:BA:1422:G:C4	35:BA:1423:G:N7	2.85	0.45
35:BA:1688:U:H5'	35:BA:1689:A:OP1	2.15	0.45
35:BA:2007:C:C2'	35:BA:2008:C:H5'	2.40	0.45
35:BA:2009:G:C3'	35:BA:2010:G:C5'	2.95	0.45
35:BA:2688:U:H5	35:BA:2720:U:OP2	2.00	0.45
37:BC:98:GLU:O	37:BC:99:GLU:C	2.59	0.45
37:BC:139:PRO:HB2	37:BC:146:VAL:HG22	1.97	0.45
40:BF:185:ASP:OD1	40:BF:188:ARG:HD3	2.17	0.45
41:BG:130:ASN:O	41:BG:159:VAL:O	2.34	0.45
48:BP:51:PHE:CG	48:BP:52:GLU:O	2.69	0.45
51:BS:83:LYS:HG2	51:BS:105:ALA:CB	2.47	0.45
51:BS:89:ARG:NH1	51:BS:92:TYR:HA	2.31	0.45
54:BV:39:LEU:HD22	54:BV:39:LEU:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:26:GLY:H	55:BW:71:VAL:CG2	2.22	0.45
1:AA:161:A:H2'	1:AA:162:A:H8	1.81	0.45
1:AA:275:G:H5'	17:AQ:14:LYS:CD	2.47	0.45
1:AA:773:G:C2	1:AA:774:G:C4	3.05	0.45
1:AA:863:U:O2	1:AA:863:U:C3'	2.65	0.45
1:AA:943:U:H6	1:AA:943:U:O5'	1.98	0.45
1:AA:1279:A:H2'	1:AA:1282:C:H42	1.80	0.45
1:AA:1285:A:O2'	1:AA:1286:A:OP2	2.35	0.45
1:AA:1288:A:H1'	1:AA:1352:C:O2'	2.17	0.45
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.16	0.45
1:AA:1442:G:H22	1:AA:1461:G:H21	1.65	0.45
2:AB:61:LEU:HD11	2:AB:160:ASP:HB2	1.97	0.45
3:AC:31:HIS:O	3:AC:32:LEU:C	2.60	0.45
4:AD:101:LEU:O	4:AD:102:ASP:C	2.60	0.45
7:AG:7:ALA:O	7:AG:8:GLU:HB3	2.17	0.45
7:AG:70:LYS:CB	7:AG:100:ALA:HB2	2.46	0.45
9:AI:78:LYS:HE2	9:AI:101:PHE:HA	1.99	0.45
9:AI:117:HIS:C	9:AI:118:LYS:CG	2.89	0.45
13:AM:22:ILE:HB	13:AM:25:ILE:HB	1.98	0.45
13:AM:81:LEU:O	13:AM:89:GLY:HA3	2.16	0.45
17:AQ:86:GLU:O	17:AQ:90:ILE:HG12	2.17	0.45
19:AS:31:ILE:O	19:AS:31:ILE:HG23	2.16	0.45
24:AY:181:LEU:HD23	24:AY:182:ARG:CZ	2.47	0.45
24:AY:507:TYR:CD1	24:AY:507:TYR:C	2.94	0.45
26:B1:53:VAL:O	26:B1:54:ALA:C	2.59	0.45
28:B3:35:ARG:HG2	28:B3:36:VAL:N	2.31	0.45
29:B4:2:LYS:CE	29:B4:4:GLY:O	2.60	0.45
29:B4:24:THR:O	29:B4:25:TYR:CB	2.65	0.45
30:B5:8:LYS:O	35:BA:2017:U:H4'	2.16	0.45
33:B8:45:GLY:O	33:B8:46:ARG:HB2	2.17	0.45
34:B9:10:ILE:O	34:B9:11:CYS:CB	2.61	0.45
35:BA:49:A:C6	35:BA:177:G:C2	3.04	0.45
35:BA:111:A:O2'	35:BA:112:U:H5"	2.15	0.45
35:BA:271(M):G:H8	35:BA:271(M):G:H3'	1.80	0.45
35:BA:607:U:O2	35:BA:621:A:N1	2.50	0.45
35:BA:884:C:N4	35:BA:892:G:N1	2.61	0.45
35:BA:1298:C:O2'	35:BA:1301:A:H1'	2.16	0.45
35:BA:1336:A:H2'	35:BA:1337:G:H8	1.82	0.45
35:BA:1407:C:H5'	35:BA:1408:C:OP2	2.14	0.45
35:BA:1504:C:HO2'	35:BA:1505:C:P	2.40	0.45
35:BA:1670:C:O2	39:BE:129:HIS:HE1	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1770:G:O2'	35:BA:1771:C:C5'	2.43	0.45
35:BA:1820:U:N3	38:BD:160:GLY:HA3	2.31	0.45
35:BA:1967:C:C4	35:BA:1968:G:C5	3.04	0.45
35:BA:2012:G:O3'	55:BW:96:ILE:HG13	2.16	0.45
35:BA:2389:G:H5"	35:BA:2390:U:O4'	2.17	0.45
35:BA:2555:U:C3'	35:BA:2556:C:C5'	2.90	0.45
35:BA:2864:G:H2'	35:BA:2865:U:C6	2.51	0.45
38:BD:28:GLU:O	38:BD:29:PRO:C	2.57	0.45
38:BD:108:PRO:HG2	38:BD:111:LEU:CB	2.40	0.45
39:BE:203:LYS:C	39:BE:203:LYS:CD	2.88	0.45
41:BG:77:ILE:HG21	41:BG:81:LYS:N	2.31	0.45
41:BG:110:ALA:HB1	41:BG:142:PRO:HG3	1.98	0.45
41:BG:113:ARG:NE	41:BG:113:ARG:CA	2.80	0.45
41:BG:180:PHE:CD1	41:BG:181:ARG:HG2	2.51	0.45
44:BK:109:UNK:C	44:BK:111:UNK:N	2.80	0.45
47:BO:48:PRO:O	47:BO:49:ARG:C	2.59	0.45
48:BP:82:GLY:HA2	48:BP:113:LYS:O	2.16	0.45
51:BS:20:ARG:NE	51:BS:20:ARG:CA	2.80	0.45
53:BU:95:LEU:HD13	54:BV:4:ILE:CG2	2.46	0.45
53:BU:114:LYS:HG2	53:BU:114:LYS:H	1.57	0.45
54:BV:52:VAL:HG13	54:BV:52:VAL:O	2.16	0.45
57:BY:13:VAL:HG22	57:BY:14:LEU:H	1.80	0.45
57:BY:17:SER:CB	57:BY:71:LYS:HB3	2.46	0.45
58:BZ:104:PHE:HB3	58:BZ:141:VAL:CG2	2.43	0.45
1:AA:81:U:H2'	1:AA:88:A:H61	1.81	0.45
1:AA:189(B):C:O2'	1:AA:189(C):C:H5'	2.16	0.45
1:AA:1077:G:C6	1:AA:1081:G:C6	3.03	0.45
1:AA:1314:C:H5	19:AS:6:LYS:CE	2.30	0.45
1:AA:1457:G:OP1	20:AT:39:LYS:NZ	2.50	0.45
1:AA:1498:U:C1'	1:AA:1499:A:P	3.05	0.45
2:AB:15:VAL:CG1	2:AB:209:ARG:HB3	2.46	0.45
2:AB:21:ARG:HB3	2:AB:38:GLY:O	2.17	0.45
2:AB:67:THR:HA	2:AB:90:MET:SD	2.57	0.45
2:AB:113:HIS:HA	2:AB:116:GLU:HG3	1.98	0.45
2:AB:124:SER:HB2	2:AB:125:PRO:CD	2.46	0.45
4:AD:32:ALA:C	4:AD:34:GLU:H	2.23	0.45
4:AD:61:LYS:NZ	4:AD:62:GLN:NE2	2.65	0.45
4:AD:63:LYS:HD3	4:AD:197:PRO:O	2.17	0.45
8:AH:36:LEU:O	8:AH:37:ARG:C	2.59	0.45
8:AH:105:ARG:HA	8:AH:105:ARG:HD3	1.63	0.45
9:AI:17:VAL:HG11	9:AI:80:GLY:C	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:75:ASN:HA	20:AT:78:ALA:HB3	1.99	0.45
24:AY:232:LEU:HD13	24:AY:232:LEU:H	1.81	0.45
25:B0:23:VAL:HG22	25:B0:38:VAL:HG22	1.98	0.45
27:B2:33:MET:HG3	27:B2:36:ARG:NH2	2.31	0.45
29:B4:32:TYR:CD2	41:BG:113:ARG:HD2	2.51	0.45
30:B5:2:ALA:HA	35:BA:2015:A:O4'	2.17	0.45
30:B5:40:LYS:HZ3	30:B5:46:CYS:HB3	1.78	0.45
35:BA:610:G:H2'	35:BA:611:C:C6	2.52	0.45
35:BA:743:G:C2'	35:BA:744:G:C8	2.68	0.45
35:BA:773:U:C5'	38:BD:47:GLY:HA3	2.46	0.45
35:BA:995:C:C2	53:BU:57:PHE:HE2	2.35	0.45
35:BA:1105:U:O2'	35:BA:1106:G:OP2	2.30	0.45
35:BA:1132:A:C2'	35:BA:1133:U:H5'	2.46	0.45
35:BA:1140:C:H2'	35:BA:1141:U:H5'	1.98	0.45
35:BA:1422:G:C4	35:BA:1423:G:C8	3.04	0.45
35:BA:1517:G:H2'	35:BA:1518:U:O4'	2.16	0.45
35:BA:1658:C:OP1	39:BE:132:HIS:ND1	2.49	0.45
35:BA:1786:A:C1'	35:BA:1938:A:H61	2.26	0.45
35:BA:2030:A:H4'	35:BA:2031:A:C8	2.52	0.45
35:BA:2078:C:H2'	35:BA:2079:U:C6	2.51	0.45
35:BA:2134:A:C8	35:BA:2134:A:H5'	2.49	0.45
35:BA:2305:A:H2	35:BA:2306:C:H1'	1.80	0.45
35:BA:2410:G:H2'	35:BA:2411:A:O4'	2.17	0.45
35:BA:2602:A:OP2	35:BA:2602:A:H4'	2.16	0.45
35:BA:2612:C:H2'	35:BA:2613:U:H5'	1.98	0.45
37:BC:22:THR:HG23	37:BC:25:GLU:OE1	2.17	0.45
37:BC:211:ARG:HH11	37:BC:211:ARG:HG2	1.81	0.45
38:BD:142:VAL:HG21	38:BD:191:ALA:CB	2.47	0.45
40:BF:9:ILE:HA	40:BF:14:PRO:HA	1.98	0.45
40:BF:32:LEU:C	40:BF:32:LEU:HD23	2.42	0.45
40:BF:160:ASN:HD21	40:BF:162:LEU:CD1	2.18	0.45
41:BG:19:LEU:O	41:BG:21:ARG:N	2.50	0.45
41:BG:40:ASN:CG	41:BG:91:ARG:HB2	2.42	0.45
42:BH:44:VAL:HG12	42:BH:45:VAL:N	2.32	0.45
44:BK:117:UNK:O	44:BK:119:UNK:N	2.49	0.45
49:BQ:17:LEU:CD2	49:BQ:96:VAL:HG13	2.44	0.45
50:BR:33:ARG:HG3	50:BR:115:GLU:HG3	1.97	0.45
50:BR:103:ARG:HH12	50:BR:110:PRO:CD	2.27	0.45
52:BT:39:ARG:HD2	52:BT:39:ARG:N	2.29	0.45
53:BU:57:PHE:C	53:BU:59:ARG:N	2.71	0.45
57:BY:3:VAL:C	57:BY:5:MET:N	2.74	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:53:ILE:HG13	58:BZ:54:HIS:CD2	2.52	0.45
1:AA:159:G:H22	1:AA:163:C:N4	2.14	0.45
1:AA:180:U:C2'	1:AA:181:G:H5'	2.47	0.45
1:AA:188:C:O4'	20:AT:89:ARG:NH1	2.49	0.45
1:AA:335:C:H2'	1:AA:336:C:C6	2.52	0.45
1:AA:1029:C:C2'	1:AA:1030:C:H5"	2.46	0.45
1:AA:1119:C:O2'	1:AA:1120:G:H5'	2.17	0.45
2:AB:107:THR:O	2:AB:110:GLN:HG2	2.17	0.45
3:AC:43:LEU:O	3:AC:47:LEU:HB2	2.17	0.45
3:AC:122:GLU:C	3:AC:124:ILE:N	2.74	0.45
3:AC:129:ALA:HB1	3:AC:133:ALA:H	1.82	0.45
7:AG:113:GLU:HB3	7:AG:118:VAL:CG1	2.47	0.45
9:AI:10:ARG:CD	9:AI:105:ASP:HB3	2.47	0.45
14:AN:33:VAL:O	14:AN:33:VAL:CG2	2.64	0.45
20:AT:26:ASN:CB	20:AT:71:THR:OG1	2.62	0.45
24:AY:96:ARG:O	24:AY:100:VAL:HG12	2.17	0.45
24:AY:105:ILE:HD12	24:AY:105:ILE:N	2.31	0.45
24:AY:252:ASP:HB3	24:AY:254:LYS:HZ2	1.77	0.45
24:AY:517:LEU:HD11	24:AY:564:LYS:N	2.31	0.45
25:B0:15:ASP:OD1	25:B0:16:SER:N	2.41	0.45
25:B0:26:TYR:N	25:B0:26:TYR:CD1	2.84	0.45
25:B0:67:VAL:O	25:B0:68:GLU:HB3	2.16	0.45
26:B1:64:ALA:HA	26:B1:67:ILE:CD1	2.47	0.45
27:B2:51:ARG:HE	27:B2:51:ARG:HB2	1.52	0.45
29:B4:27:THR:O	29:B4:27:THR:OG1	2.31	0.45
29:B4:36:CYS:C	29:B4:38:LYS:N	2.72	0.45
29:B4:38:LYS:O	29:B4:39:CYS:C	2.59	0.45
30:B5:2:ALA:N	35:BA:747:U:C5	2.85	0.45
35:BA:201:C:O2'	35:BA:202:U:H5'	2.17	0.45
35:BA:318:C:H2'	35:BA:319:C:H6	1.82	0.45
35:BA:324:A:H2'	35:BA:325:G:O4'	2.17	0.45
35:BA:673:C:H4'	40:BF:82:ILE:CG1	2.47	0.45
35:BA:698:C:O2'	35:BA:734:A:N6	2.48	0.45
35:BA:996:A:C4'	53:BU:92:ARG:NE	2.76	0.45
35:BA:1041:G:H1	35:BA:1114:G:N2	2.15	0.45
35:BA:1120:G:H2'	35:BA:1121:C:H6	1.82	0.45
35:BA:1138:G:O2'	46:BN:102:ALA:O	2.34	0.45
35:BA:1922:G:O2'	35:BA:1923:U:H5'	2.16	0.45
35:BA:1992:G:H5'	35:BA:1994:C:N4	2.32	0.45
35:BA:2695:C:H2'	35:BA:2696:U:H6	1.82	0.45
36:BB:16:G:O2'	36:BB:17:C:O5'	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:44:ASN:HB2	38:BD:48:ARG:C	2.37	0.45
44:BK:8:UNK:O	44:BK:9:UNK:CB	2.64	0.45
48:BP:77:ARG:CD	48:BP:78:PRO:HD2	2.37	0.45
48:BP:113:LYS:HG2	48:BP:115:LEU:HD13	1.99	0.45
49:BQ:42:ILE:HG12	49:BQ:103:MET:CE	2.47	0.45
49:BQ:133:ARG:HG3	49:BQ:133:ARG:NH1	2.32	0.45
53:BU:32:PHE:CB	53:BU:36:ARG:NH2	2.80	0.45
54:BV:8:GLY:O	54:BV:10:LYS:HE3	2.17	0.45
57:BY:28:LYS:N	57:BY:28:LYS:CE	2.79	0.45
57:BY:81:LYS:HG3	57:BY:82:PRO:HD2	1.98	0.45
58:BZ:166:SER:N	58:BZ:167:PRO:HA	2.32	0.45
1:AA:89:C:O2'	1:AA:90:U:C6	2.69	0.45
1:AA:449:C:O2	16:AP:42:ARG:HD2	2.16	0.45
1:AA:564:C:N4	1:AA:565:U:O4	2.50	0.45
1:AA:591:U:H2'	1:AA:592:G:O5'	2.17	0.45
1:AA:680:C:O2'	38:BD:166:GLN:CG	2.64	0.45
1:AA:973:G:N3	10:AJ:55:LYS:HE3	2.31	0.45
1:AA:1476:G:H2'	1:AA:1477:C:H6	1.81	0.45
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.17	0.45
2:AB:136:VAL:O	2:AB:140:HIS:HB2	2.17	0.45
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.17	0.45
2:AB:229:VAL:HB	2:AB:230:VAL:H	1.46	0.45
4:AD:33:MET:C	4:AD:37:PRO:HG3	2.42	0.45
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.17	0.45
7:AG:30:ILE:HD13	7:AG:105:VAL:HG22	1.99	0.45
11:AK:15:ALA:O	11:AK:78:GLN:N	2.41	0.45
22:AV:27:G:O2'	22:AV:28:G:H5'	2.17	0.45
24:AY:17:ILE:HD13	24:AY:81:ILE:HG22	1.99	0.45
24:AY:29:THR:O	24:AY:33:LEU:HD13	2.17	0.45
24:AY:114:VAL:CG2	24:AY:152:THR:HG23	2.46	0.45
27:B2:12:GLU:HG2	27:B2:12:GLU:O	2.16	0.45
31:B6:39:TYR:O	31:B6:41:PRO:HD3	2.16	0.45
32:B7:10:ARG:NH1	35:BA:771:G:OP1	2.49	0.45
35:BA:13:A:H61	35:BA:525:U:H3'	1.82	0.45
35:BA:61:G:H1	35:BA:94:C:N4	2.14	0.45
35:BA:271(J):C:O2	35:BA:271(M):G:O6	2.35	0.45
35:BA:271(M):G:C8	35:BA:271(M):G:H3'	2.52	0.45
35:BA:603:A:O4'	35:BA:604:G:O5'	2.35	0.45
35:BA:654(A):G:H2'	35:BA:654(B):C:C5'	2.47	0.45
35:BA:654(U):A:H2'	35:BA:654(V):A:C8	2.52	0.45
35:BA:693:C:H2'	35:BA:694:U:O5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:869:G:C2'	35:BA:870:A:H5'	2.47	0.45
35:BA:885:C:H2'	35:BA:886:C:C5	2.52	0.45
35:BA:1028:A:O2'	35:BA:1029:A:H5'	2.16	0.45
35:BA:1055:G:H2'	35:BA:1056:G:O4'	2.16	0.45
35:BA:1445:A:H8	35:BA:1460:A:C6	2.35	0.45
35:BA:1494:A:O2'	35:BA:1495:A:H5"	2.17	0.45
35:BA:1754:C:N3	35:BA:2716:U:O2'	2.43	0.45
35:BA:1810:A:H2'	35:BA:1811:G:O4'	2.17	0.45
35:BA:1999:C:H2'	35:BA:2000:G:C5'	2.40	0.45
35:BA:2106:G:H5'	35:BA:2106:G:C8	2.51	0.45
35:BA:2131:G:H5'	35:BA:2133:A:O4'	2.17	0.45
35:BA:2332:U:H5'	35:BA:2336:A:N6	2.32	0.45
35:BA:2748:A:C8	35:BA:2757:A:N6	2.85	0.45
35:BA:2879:C:H4'	35:BA:2880:C:OP1	2.17	0.45
37:BC:174:ALA:HA	37:BC:175:PRO:HD3	1.81	0.45
40:BF:39:TRP:O	40:BF:43:LYS:HG2	2.17	0.45
41:BG:104:GLU:HB3	41:BG:105:LYS:NZ	2.31	0.45
50:BR:45:ARG:HA	50:BR:95:THR:HG21	1.97	0.45
51:BS:11:LYS:C	51:BS:13:ARG:N	2.74	0.45
52:BT:30:VAL:CG1	52:BT:31:SER:CB	2.57	0.45
53:BU:27:LEU:C	53:BU:29:SER:H	2.25	0.45
54:BV:61:VAL:O	54:BV:61:VAL:CG2	2.64	0.45
55:BW:66:GLU:O	55:BW:66:GLU:HG2	2.17	0.45
1:AA:141:A:H1'	1:AA:182:U:O2	2.17	0.45
1:AA:450:G:C5'	16:AP:41:PRO:O	2.65	0.45
1:AA:486:U:H2'	1:AA:487:A:H8	1.81	0.45
1:AA:627:G:H2'	1:AA:628:G:H8	1.82	0.45
1:AA:773:G:C2'	1:AA:774:G:C5'	2.88	0.45
1:AA:776:G:N2	1:AA:802:A:OP2	2.46	0.45
1:AA:1526:G:C2'	1:AA:1527:C:C5'	2.95	0.45
1:AA:1529:G:H4'	1:AA:1530:G:OP2	2.17	0.45
2:AB:36:ARG:O	2:AB:37:ASN:HB3	2.16	0.45
2:AB:80:ILE:HD11	2:AB:208:ILE:HG23	1.98	0.45
2:AB:87:ARG:NH2	2:AB:233:SER:N	2.64	0.45
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.98	0.45
5:AE:101:ILE:O	5:AE:120:THR:HB	2.18	0.45
6:AF:98:LEU:HD12	6:AF:98:LEU:N	2.32	0.45
10:AJ:4:ILE:CD1	10:AJ:4:ILE:N	2.80	0.45
10:AJ:53:PRO:HA	14:AN:42:ILE:HD12	1.98	0.45
20:AT:89:ARG:HH22	20:AT:106:ALA:HB2	1.82	0.45
24:AY:67:ALA:HB3	24:AY:83:ASP:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:81:ILE:O	24:AY:82:ILE:CG1	2.64	0.45
24:AY:149:VAL:C	24:AY:152:THR:HG22	2.42	0.45
24:AY:554:PRO:HG2	24:AY:555:LEU:N	2.32	0.45
30:B5:51:TYR:C	30:B5:53:ALA:N	2.63	0.45
35:BA:94:C:O2	35:BA:94:C:H2'	2.17	0.45
35:BA:289:A:H2'	35:BA:290:G:O4'	2.17	0.45
35:BA:536:A:H2'	35:BA:537:C:H6	1.81	0.45
35:BA:886:C:N4	35:BA:892:G:C2	2.85	0.45
35:BA:1047:G:N2	35:BA:1110:G:H2'	2.32	0.45
35:BA:1146:C:O2'	35:BA:1147:C:H5'	2.17	0.45
35:BA:1204:A:C2	35:BA:1241:A:N1	2.85	0.45
35:BA:1317:A:H2'	35:BA:1318:C:C6	2.51	0.45
35:BA:1806:C:H2'	35:BA:1807:G:C8	2.52	0.45
35:BA:1806:C:H2'	35:BA:1807:G:H8	1.82	0.45
35:BA:1827:C:O2'	35:BA:1828:G:H5'	2.16	0.45
35:BA:2117:A:H4'	35:BA:2118:U:OP1	2.17	0.45
35:BA:2124:G:H1	35:BA:2174:C:N4	2.06	0.45
37:BC:16:ASP:OD2	37:BC:19:LYS:HB2	2.17	0.45
37:BC:179:ALA:O	37:BC:180:SER:O	2.35	0.45
38:BD:97:TYR:HB3	38:BD:99:ASP:HB2	1.99	0.45
39:BE:9:VAL:HG11	39:BE:25:VAL:HG12	1.99	0.45
40:BF:2:LYS:O	40:BF:3:GLU:HB3	2.17	0.45
40:BF:125:LEU:HD12	40:BF:196:LEU:CD2	2.47	0.45
40:BF:135:LYS:O	40:BF:138:GLU:N	2.50	0.45
40:BF:203:GLN:C	40:BF:205:ARG:N	2.72	0.45
42:BH:83:TYR:HB2	42:BH:84:SER:H	1.49	0.45
45:BL:68:UNK:HA	45:BL:71:UNK:CB	2.47	0.45
46:BN:57:ALA:O	46:BN:58:ASP:CG	2.60	0.45
49:BQ:16:ARG:HH11	49:BQ:16:ARG:CG	2.30	0.45
51:BS:52:SER:O	51:BS:69:VAL:HG23	2.16	0.45
52:BT:113:LYS:HA	52:BT:113:LYS:HD3	1.77	0.45
53:BU:57:PHE:HB3	53:BU:61:TRP:CZ2	2.52	0.45
53:BU:111:GLU:OE1	53:BU:111:GLU:HA	2.16	0.45
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.17	0.44
1:AA:492:G:C2'	1:AA:493:G:O5'	2.64	0.44
1:AA:814:A:H2'	1:AA:816:A:H5"	1.98	0.44
1:AA:875:C:O2'	8:AH:14:ARG:HD2	2.17	0.44
1:AA:976:G:H5'	1:AA:1358:U:O2'	2.18	0.44
1:AA:1001:A:H2'	1:AA:1001(A):G:H5'	1.99	0.44
1:AA:1033:G:H2'	1:AA:1034:G:C8	2.50	0.44
1:AA:1175:G:O2'	1:AA:1176:A:C5'	2.39	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:93:VAL:HG11	2:AB:97:TRP:CD1	2.52	0.44
3:AC:72:LYS:O	3:AC:72:LYS:HG3	2.16	0.44
4:AD:102:ASP:OD1	4:AD:103:ASN:N	2.44	0.44
4:AD:204:ILE:HD13	5:AE:97:GLY:O	2.17	0.44
7:AG:156:TRP:CD1	7:AG:156:TRP:H	2.35	0.44
10:AJ:28:ARG:C	10:AJ:30:SER:N	2.74	0.44
12:AL:25:PRO:C	12:AL:27:LEU:N	2.61	0.44
24:AY:556:ILE:HG13	24:AY:558:PHE:HD1	1.83	0.44
27:B2:46:GLN:HE21	27:B2:48:HIS:CE1	2.36	0.44
33:B8:21:LYS:HD3	33:B8:48:PHE:CE1	2.52	0.44
35:BA:109:G:H2'	35:BA:110:G:O5'	2.18	0.44
35:BA:466:A:C2'	35:BA:467:G:H5'	2.47	0.44
35:BA:566:U:H2'	35:BA:567:A:O4'	2.17	0.44
35:BA:614(A):U:H4'	35:BA:614(B):G:H5"	1.97	0.44
35:BA:1268:A:C2	35:BA:2013:A:C4	3.05	0.44
35:BA:1278:A:H4'	50:BR:34:ILE:HD12	1.98	0.44
35:BA:1475:G:H2'	35:BA:1476:C:H6	1.82	0.44
35:BA:1591:G:H8	35:BA:1591:G:C5'	2.30	0.44
35:BA:1782:C:O2	35:BA:2608:G:O2'	2.29	0.44
35:BA:1967:C:H2'	35:BA:1968:G:H5'	1.99	0.44
35:BA:2126:A:O2'	35:BA:2127:G:H5"	2.17	0.44
35:BA:2300:G:N2	35:BA:2317:C:H1'	2.32	0.44
35:BA:2307:G:H21	35:BA:2308:G:H5'	1.82	0.44
35:BA:2334:G:H4'	35:BA:2335:A:OP2	2.16	0.44
37:BC:30:VAL:CG2	37:BC:31:LYS:N	2.78	0.44
38:BD:46:GLN:N	38:BD:46:GLN:OE1	2.50	0.44
38:BD:70:TRP:HZ3	38:BD:146:GLU:CD	2.24	0.44
39:BE:3:GLY:HA3	39:BE:81:ILE:HD12	1.99	0.44
39:BE:55:ASN:HD22	39:BE:55:ASN:HA	1.51	0.44
39:BE:181:LEU:HD21	52:BT:7:ILE:CG2	2.46	0.44
40:BF:4:VAL:HA	40:BF:19:GLU:HB3	1.98	0.44
40:BF:117:ARG:HD3	40:BF:117:ARG:HA	1.69	0.44
41:BG:5:VAL:HB	41:BG:8:LYS:HB2	1.99	0.44
41:BG:78:SER:OG	41:BG:79:ASN:N	2.50	0.44
41:BG:137:GLU:O	41:BG:138:GLN:HG2	2.17	0.44
42:BH:7:LEU:HD23	42:BH:7:LEU:H	1.82	0.44
47:BO:47:ILE:HG12	47:BO:48:PRO:HD2	1.99	0.44
48:BP:17:LYS:O	48:BP:18:ARG:C	2.61	0.44
48:BP:31:ALA:C	48:BP:33:ARG:H	2.26	0.44
48:BP:79:ARG:N	48:BP:110:TYR:HD2	2.15	0.44
49:BQ:20:ALA:HB1	58:BZ:78:LYS:HB3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:37:LEU:HD11	49:BQ:130:LYS:HB2	1.97	0.44
49:BQ:135:ASP:C	49:BQ:137:TYR:H	2.23	0.44
50:BR:85:PRO:C	50:BR:87:TYR:H	2.25	0.44
51:BS:97:ARG:HG3	51:BS:97:ARG:H	1.52	0.44
52:BT:106:SER:O	52:BT:107:ASP:CG	2.60	0.44
54:BV:1:MET:O	54:BV:2:PHE:CB	2.52	0.44
54:BV:39:LEU:HD12	54:BV:47:VAL:HG21	1.99	0.44
57:BY:7:VAL:CB	57:BY:8:LYS:NZ	2.70	0.44
1:AA:647:C:O2'	1:AA:648:A:H5'	2.16	0.44
1:AA:690:G:C5	1:AA:691:G:C5	3.05	0.44
1:AA:692:U:H2'	1:AA:694:A:OP2	2.17	0.44
1:AA:694:A:OP1	11:AK:53:SER:HB3	2.17	0.44
1:AA:1080:A:H8	1:AA:1080:A:O5'	1.99	0.44
1:AA:1202:G:H2'	1:AA:1203:C:H5'	1.99	0.44
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.53	0.44
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.52	0.44
1:AA:1501:C:C4	1:AA:1504:G:C5	3.04	0.44
3:AC:129:ALA:O	3:AC:131:ARG:N	2.50	0.44
4:AD:34:GLU:O	4:AD:35:ARG:HG3	2.16	0.44
4:AD:126:ILE:CD1	4:AD:126:ILE:N	2.81	0.44
6:AF:44:GLY:O	6:AF:46:ARG:HG3	2.16	0.44
9:AI:53:VAL:HG11	9:AI:95:LYS:HE2	1.95	0.44
9:AI:117:HIS:O	9:AI:118:LYS:CB	2.65	0.44
10:AJ:16:LEU:HD12	10:AJ:70:ARG:HG3	1.99	0.44
12:AL:117:ARG:CZ	12:AL:124:LYS:HA	2.47	0.44
14:AN:59:ALA:O	14:AN:60:SER:CB	2.65	0.44
19:AS:41:VAL:HA	19:AS:42:PRO:HD2	1.86	0.44
24:AY:229:LEU:O	24:AY:231:TYR:N	2.50	0.44
24:AY:424:LEU:HB2	24:AY:472:VAL:HG11	2.00	0.44
24:AY:555:LEU:HD13	24:AY:601:ILE:HG13	1.99	0.44
25:B0:11:ARG:N	25:B0:11:ARG:CD	2.81	0.44
25:B0:66:VAL:HG13	25:B0:67:VAL:H	1.82	0.44
25:B0:77:ARG:C	25:B0:78:TYR:CD1	2.95	0.44
26:B1:58:ILE:HD11	26:B1:90:ILE:CG2	2.48	0.44
27:B2:35:LEU:O	27:B2:36:ARG:C	2.60	0.44
27:B2:38:GLN:HB3	27:B2:44:LEU:HB3	1.99	0.44
29:B4:57:GLU:HB2	29:B4:58:ARG:HD2	1.99	0.44
29:B4:68:ARG:O	29:B4:71:ARG:HG2	2.17	0.44
30:B5:39:MET:HB2	55:BW:34:ASN:ND2	2.32	0.44
31:B6:17:LYS:C	31:B6:18:ARG:CD	2.90	0.44
33:B8:38:GLY:O	33:B8:42:ARG:N	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:49:A:C5	35:BA:177:G:C6	3.05	0.44
35:BA:104:U:C5	35:BA:105:C:C5	3.05	0.44
35:BA:304:G:O2'	35:BA:305:U:H5'	2.16	0.44
35:BA:310:A:OP1	57:BY:18:GLY:HA2	2.16	0.44
35:BA:623:G:H2'	35:BA:624:C:C6	2.52	0.44
35:BA:1006:C:O2	46:BN:106:MET:HG2	2.17	0.44
35:BA:1106:G:H2'	35:BA:1107:G:C8	2.52	0.44
35:BA:1642:G:O2'	35:BA:1643:G:C5'	2.65	0.44
35:BA:1801:G:H3'	35:BA:1802:A:H5'	1.98	0.44
35:BA:2134:A:O2'	35:BA:2135:A:H5'	2.16	0.44
35:BA:2308:G:N7	35:BA:2310:A:H5'	2.32	0.44
35:BA:2593:U:H2'	35:BA:2594:C:H6	1.83	0.44
35:BA:2606:C:C3'	35:BA:2607:G:C5'	2.94	0.44
35:BA:2630:G:H1'	35:BA:2894:G:N9	2.32	0.44
36:BB:67:G:O2'	36:BB:68:C:C6	2.67	0.44
37:BC:134:PRO:C	37:BC:135:ARG:HG3	2.42	0.44
37:BC:160:GLY:O	37:BC:161:ARG:C	2.61	0.44
39:BE:33:VAL:O	39:BE:33:VAL:HG13	2.17	0.44
40:BF:192:LEU:HD13	40:BF:194:MET:HE2	1.99	0.44
41:BG:16:ARG:N	41:BG:17:PRO:HD2	2.32	0.44
41:BG:25:TYR:CE2	41:BG:26:GLN:OE1	2.70	0.44
41:BG:80:PHE:O	41:BG:81:LYS:CB	2.65	0.44
42:BH:158:HIS:HB2	42:BH:159:GLU:H	1.63	0.44
45:BL:113:UNK:O	45:BL:115:UNK:N	2.50	0.44
48:BP:85:LEU:HD23	48:BP:86:LYS:H	1.78	0.44
48:BP:114:ILE:O	48:BP:115:LEU:HB3	2.18	0.44
52:BT:41:ARG:HD3	52:BT:41:ARG:O	2.17	0.44
58:BZ:5:LEU:HD13	58:BZ:6:LYS:N	2.32	0.44
58:BZ:79:ARG:C	58:BZ:81:ARG:N	2.65	0.44
58:BZ:128:VAL:HG11	58:BZ:133:ILE:HD13	1.98	0.44
1:AA:226:G:C2'	1:AA:227:G:H5'	2.47	0.44
1:AA:324:G:H8	1:AA:324:G:O5'	2.00	0.44
1:AA:413:G:O6	4:AD:35:ARG:HD2	2.17	0.44
1:AA:488:C:N4	1:AA:489:C:N4	2.66	0.44
1:AA:698:G:H2'	1:AA:699:C:H6	1.79	0.44
1:AA:861:G:C2'	1:AA:862:C:H5'	2.46	0.44
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.52	0.44
1:AA:1367:C:H2'	1:AA:1368:G:O5'	2.16	0.44
1:AA:1384:C:H2'	1:AA:1385:G:H8	1.83	0.44
2:AB:82:ARG:NH1	2:AB:82:ARG:CG	2.80	0.44
3:AC:129:ALA:HB1	3:AC:133:ALA:N	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:42:ARG:NH2	9:AI:75:ASP:OD1	2.51	0.44
13:AM:40:ASN:HB3	13:AM:43:THR:CG2	2.47	0.44
19:AS:32:LYS:CA	19:AS:50:ALA:HB3	2.47	0.44
24:AY:510:VAL:HG13	24:AY:567:LEU:HD11	1.98	0.44
25:B0:50:ASN:O	25:B0:62:LEU:HD23	2.15	0.44
32:B7:11:LYS:HE2	35:BA:686:G:H5"	1.99	0.44
35:BA:524:U:H2'	35:BA:525:U:C6	2.52	0.44
35:BA:654(M):C:H2'	35:BA:654(N):G:N7	2.33	0.44
35:BA:1287:A:C5	35:BA:1288:U:C4	3.05	0.44
35:BA:1345:C:H42	35:BA:1601:G:H1	1.64	0.44
35:BA:1902:C:H4'	38:BD:244:ARG:HB2	2.00	0.44
35:BA:2008:C:O2'	35:BA:2009:G:H5'	2.17	0.44
35:BA:2065:C:H2'	35:BA:2066:C:C6	2.52	0.44
35:BA:2128:C:O2'	35:BA:2129:C:P	2.76	0.44
35:BA:2410:G:C2	35:BA:2411:A:H1'	2.52	0.44
35:BA:2581:G:C6	35:BA:2610:C:C4	3.05	0.44
37:BC:129:GLY:C	37:BC:131:ILE:H	2.24	0.44
38:BD:248:SER:CB	38:BD:249:PRO:CD	2.89	0.44
40:BF:9:ILE:CB	40:BF:14:PRO:HA	2.47	0.44
40:BF:80:ALA:HB1	40:BF:81:PRO:CD	2.44	0.44
40:BF:162:LEU:HD12	40:BF:162:LEU:N	2.31	0.44
41:BG:136:ARG:O	41:BG:138:GLN:N	2.50	0.44
41:BG:144:ILE:CG2	41:BG:145:THR:N	2.80	0.44
42:BH:158:HIS:N	42:BH:158:HIS:CD2	2.85	0.44
44:BK:122:UNK:O	44:BK:124:UNK:N	2.50	0.44
46:BN:55:VAL:HG22	46:BN:56:ASN:N	2.33	0.44
46:BN:65:LYS:O	46:BN:69:GLN:HB2	2.17	0.44
48:BP:138:LEU:HD23	48:BP:143:GLY:O	2.17	0.44
50:BR:3:HIS:C	50:BR:5:LYS:N	2.67	0.44
54:BV:19:LYS:NZ	54:BV:20:LEU:HB2	2.28	0.44
54:BV:34:GLU:O	54:BV:36:PRO:CD	2.65	0.44
1:AA:173:U:H5'	1:AA:197:A:H5'	1.95	0.44
1:AA:590:C:OP1	8:AH:30:ARG:HB2	2.18	0.44
1:AA:884:U:H4'	1:AA:885:G:H5"	2.00	0.44
1:AA:995:C:O4'	14:AN:8:GLU:OE1	2.35	0.44
1:AA:1001:A:O2'	1:AA:1001(A):G:H5"	2.17	0.44
1:AA:1027:C:C3'	1:AA:1028:C:H5"	2.41	0.44
2:AB:145:LEU:CD2	2:AB:149:LEU:HD21	2.45	0.44
2:AB:155:LEU:HD23	2:AB:155:LEU:HA	1.78	0.44
2:AB:195:ASP:O	8:AH:68:ARG:NH2	2.50	0.44
3:AC:206:GLU:O	3:AC:207:VAL:C	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.17	0.44
7:AG:73:MET:HA	7:AG:91:VAL:HG23	1.99	0.44
24:AY:348:ARG:CG	24:AY:348:ARG:NH1	2.80	0.44
27:B2:45:SER:O	27:B2:47:ASN:N	2.45	0.44
27:B2:55:ARG:HG3	27:B2:55:ARG:NH1	2.26	0.44
29:B4:38:LYS:O	29:B4:40:HIS:N	2.50	0.44
29:B4:45:GLY:O	29:B4:46:GLN:C	2.60	0.44
29:B4:62:ARG:O	29:B4:63:TYR:HB2	2.18	0.44
31:B6:36:LEU:CD1	31:B6:50:ARG:NH1	2.81	0.44
32:B7:34:ARG:HB2	32:B7:42:LEU:CD2	2.47	0.44
35:BA:449:A:H4'	53:BU:3:ARG:NH2	2.32	0.44
35:BA:461:C:C3'	35:BA:462:C:H5'	2.47	0.44
35:BA:651:G:C6	35:BA:652:C:C4	3.05	0.44
35:BA:833:U:H5"	48:BP:48:PRO:HB2	1.99	0.44
35:BA:839:U:H2'	35:BA:840:C:C6	2.53	0.44
35:BA:1165:U:O2'	35:BA:1166:C:H5'	2.18	0.44
35:BA:1224:C:N4	35:BA:1225:G:C6	2.85	0.44
35:BA:1379:A:N3	35:BA:1379:A:O5'	2.51	0.44
35:BA:1413:G:H2'	35:BA:1414:G:O5'	2.17	0.44
35:BA:1503:U:O2'	35:BA:1504:C:H5'	2.18	0.44
35:BA:1925:C:C4	35:BA:1926:U:H5	2.36	0.44
35:BA:1994:C:O5'	35:BA:1994:C:C6	2.62	0.44
35:BA:2025:C:H2'	35:BA:2026:C:C6	2.52	0.44
35:BA:2128:C:H1'	35:BA:2129:C:C5'	2.47	0.44
35:BA:2283:C:H2'	35:BA:2284:C:O4'	2.17	0.44
35:BA:2537:U:H2'	35:BA:2538:C:C6	2.52	0.44
35:BA:2585:U:O2'	35:BA:2586:C:OP2	2.33	0.44
35:BA:2875:C:O2'	52:BT:3:ARG:HD3	2.17	0.44
36:BB:81:G:H5'	36:BB:81:G:N3	2.32	0.44
36:BB:105:A:H4'	58:BZ:89:PHE:CE1	2.53	0.44
37:BC:88:GLU:HA	37:BC:92:ALA:HB3	1.98	0.44
39:BE:14:ILE:HD11	39:BE:173:VAL:CG1	2.47	0.44
39:BE:76:ARG:O	39:BE:77:ILE:C	2.60	0.44
39:BE:87:GLU:H	39:BE:87:GLU:HG3	1.65	0.44
42:BH:121:ILE:HD11	42:BH:140:LYS:HB3	2.00	0.44
47:BO:114:ILE:HD12	47:BO:114:ILE:N	2.32	0.44
49:BQ:58:PHE:HB3	49:BQ:113:GLN:NE2	2.32	0.44
50:BR:34:ILE:HA	50:BR:34:ILE:HD13	1.77	0.44
51:BS:15:ARG:HH12	51:BS:18:ILE:HD11	1.81	0.44
51:BS:106:ARG:CD	51:BS:108:GLY:HA3	2.48	0.44
52:BT:95:ARG:NH1	52:BT:95:ARG:CB	2.79	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:51:VAL:HG12	57:BY:51:VAL:O	2.18	0.44
58:BZ:29:TYR:HB3	58:BZ:34:ASN:HD22	1.81	0.44
1:AA:49:U:N3	1:AA:361:G:N2	2.66	0.44
1:AA:198:G:C6	1:AA:220:G:N3	2.86	0.44
1:AA:345:C:OP2	1:AA:345:C:H6	2.00	0.44
1:AA:507:C:H2'	1:AA:508:C:OP1	2.18	0.44
1:AA:555:C:C2	1:AA:556:C:C4	3.06	0.44
1:AA:590:C:H2'	1:AA:591:U:C6	2.53	0.44
1:AA:773:G:C2	1:AA:774:G:N7	2.86	0.44
1:AA:1050:G:O2'	1:AA:1051:C:H5'	2.18	0.44
1:AA:1063:C:H3'	1:AA:1064:G:H2'	2.00	0.44
1:AA:1079:G:C6	1:AA:1080:A:N6	2.85	0.44
1:AA:1181:G:O2'	1:AA:1184:G:H5'	2.17	0.44
1:AA:1270:C:O2'	1:AA:1271:G:H5'	2.17	0.44
1:AA:1270:C:C2'	1:AA:1271:G:H5'	2.47	0.44
1:AA:1328:C:O2'	1:AA:1329:A:H5'	2.18	0.44
1:AA:1438:G:H2'	1:AA:1439:C:H6	1.82	0.44
3:AC:122:GLU:C	3:AC:124:ILE:H	2.25	0.44
4:AD:3:ARG:HE	4:AD:5:ILE:HG13	1.82	0.44
9:AI:40:LEU:C	9:AI:42:ARG:H	2.26	0.44
13:AM:67:GLU:OE2	13:AM:71:ARG:NH2	2.43	0.44
19:AS:60:VAL:HG22	19:AS:62:ILE:H	1.82	0.44
20:AT:96:GLY:O	20:AT:97:ALA:CB	2.65	0.44
22:AV:73:A:C3'	22:AV:74:C:H5'	2.48	0.44
27:B2:16:LEU:HB3	27:B2:20:GLU:HB3	1.98	0.44
27:B2:39:ALA:C	27:B2:41:ILE:N	2.74	0.44
31:B6:9:LEU:HD11	31:B6:11:LEU:HD12	2.00	0.44
35:BA:381:G:O2'	35:BA:382:G:H5'	2.18	0.44
35:BA:445:C:O2'	35:BA:446:G:H5'	2.18	0.44
35:BA:548:A:H2'	35:BA:549:G:C5'	2.47	0.44
35:BA:747:U:O2	35:BA:747:U:O4'	2.35	0.44
35:BA:826:U:H4'	48:BP:55:ARG:HB2	1.99	0.44
35:BA:1063:G:N2	35:BA:1074:G:H1	2.16	0.44
35:BA:1299:G:H4'	35:BA:1301:A:C4	2.52	0.44
35:BA:1301:A:C8	35:BA:1303:G:C8	3.05	0.44
35:BA:1595:G:C2	35:BA:1596:A:C8	3.06	0.44
35:BA:1794:U:H1'	35:BA:1900:A:N3	2.32	0.44
35:BA:1794:U:H1'	35:BA:1900:A:C2	2.53	0.44
35:BA:1854:A:H2'	35:BA:1855:G:O4'	2.17	0.44
35:BA:2169:A:C4'	37:BC:130:ARG:HH21	2.30	0.44
35:BA:2556:C:H2'	35:BA:2557:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:77:ALA:O	37:BC:78:ILE:HD13	2.17	0.44
37:BC:118:PRO:HB2	37:BC:121:MET:H	1.82	0.44
39:BE:8:LYS:NZ	39:BE:188:VAL:HG13	2.31	0.44
39:BE:53:PRO:O	39:BE:75:VAL:HG23	2.18	0.44
42:BH:5:GLY:HA2	42:BH:69:ARG:HB2	2.00	0.44
42:BH:109:PHE:CZ	42:BH:152:ARG:HD2	2.51	0.44
42:BH:167:GLU:N	42:BH:168:PRO:CD	2.81	0.44
44:BK:111:UNK:O	44:BK:112:UNK:C	2.65	0.44
50:BR:70:LEU:HD13	50:BR:75:LEU:HD12	1.98	0.44
54:BV:69:LYS:HA	54:BV:87:HIS:O	2.17	0.44
1:AA:19:C:H4'	1:AA:864:A:O4'	2.18	0.44
1:AA:109:A:H3'	1:AA:110:C:C5'	2.47	0.44
1:AA:312:C:C2'	1:AA:313:A:O5'	2.66	0.44
1:AA:434:U:H2'	1:AA:435:C:O4'	2.18	0.44
1:AA:514:C:O2'	1:AA:515:G:H5'	2.17	0.44
1:AA:960:U:O2	1:AA:960:U:H2'	2.17	0.44
2:AB:124:SER:HB2	2:AB:125:PRO:HD2	1.99	0.44
3:AC:36:ASP:OD1	3:AC:57:ILE:HG21	2.17	0.44
3:AC:64:VAL:CB	3:AC:99:VAL:HG12	2.47	0.44
7:AG:36:LYS:O	7:AG:37:ASN:CB	2.64	0.44
7:AG:81:GLY:HA3	23:AX:12:A:O3'	2.17	0.44
8:AH:100:ILE:HA	8:AH:101:PRO:HD3	1.82	0.44
9:AI:23:ASN:HB2	9:AI:24:GLY:H	1.52	0.44
10:AJ:50:ILE:CD1	10:AJ:57:LYS:HD3	2.46	0.44
14:AN:55:GLY:O	14:AN:56:VAL:HB	2.18	0.44
15:AO:56:LEU:HD13	15:AO:60:VAL:HG23	1.99	0.44
18:AR:44:LEU:HD22	18:AR:79:LEU:HD22	1.99	0.44
19:AS:40:ILE:CG2	19:AS:69:HIS:H	2.29	0.44
19:AS:86:GLU:O	19:AS:87:ALA:CB	2.65	0.44
22:AV:39:U:C2	22:AV:40:C:C5	3.06	0.44
24:AY:20:HIS:CG	24:AY:21:ILE:N	2.86	0.44
26:B1:11:ARG:HH11	26:B1:11:ARG:CG	2.25	0.44
29:B4:56:VAL:HG23	29:B4:60:GLN:CG	2.44	0.44
30:B5:44:THR:HG21	50:BR:101:ALA:CB	2.46	0.44
31:B6:19:ARG:O	31:B6:20:ASN:O	2.35	0.44
33:B8:62:LEU:C	33:B8:64:TYR:N	2.74	0.44
34:B9:1:MET:HE3	35:BA:2478:A:P	2.57	0.44
35:BA:47:C:N3	35:BA:179:G:C2	2.86	0.44
35:BA:265:A:N3	35:BA:265:A:H5'	2.33	0.44
35:BA:414:C:H2'	35:BA:415:A:C8	2.53	0.44
35:BA:880:G:C3'	35:BA:881:G:H5"	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:967:C:O5'	35:BA:967:C:C6	2.66	0.44
35:BA:1032:A:H2	35:BA:1122:G:H22	1.66	0.44
35:BA:1301:A:C2'	35:BA:1302:A:C2'	2.93	0.44
35:BA:1590:U:C3'	35:BA:1591:G:H5"	2.44	0.44
35:BA:2358:G:H2'	35:BA:2359:C:C5'	2.39	0.44
35:BA:2515:C:O2'	35:BA:2516:G:H5'	2.16	0.44
35:BA:2656:U:C2'	35:BA:2657:A:H5"	2.45	0.44
37:BC:135:ARG:O	37:BC:136:GLY:C	2.59	0.44
39:BE:144:ARG:HB3	39:BE:145:LYS:H	1.46	0.44
40:BF:6:VAL:CG1	40:BF:7:TYR:N	2.66	0.44
41:BG:57:ALA:N	41:BG:90:LEU:HD21	2.33	0.44
41:BG:172:LEU:HD23	41:BG:172:LEU:C	2.42	0.44
42:BH:97:ARG:O	42:BH:98:LEU:C	2.60	0.44
45:BL:97:UNK:O	45:BL:98:UNK:CB	2.65	0.44
48:BP:62:LEU:HG	48:BP:62:LEU:O	2.18	0.44
50:BR:50:HIS:CD2	50:BR:54:LEU:HD11	2.53	0.44
52:BT:117:ASP:OD1	52:BT:119:LYS:HB3	2.17	0.44
53:BU:66:ASN:ND2	53:BU:70:ARG:HE	2.15	0.44
54:BV:28:GLU:O	54:BV:29:PRO:C	2.58	0.44
55:BW:5:ALA:C	55:BW:6:ILE:HG13	2.42	0.44
57:BY:44:ILE:CG2	57:BY:45:VAL:N	2.78	0.44
1:AA:105:G:C4	1:AA:106:C:C4	3.06	0.44
1:AA:173:U:H5'	1:AA:197:A:C4'	2.48	0.44
1:AA:262:A:H2'	1:AA:263:A:C8	2.53	0.44
1:AA:620:C:H2'	1:AA:621:A:O4'	2.18	0.44
1:AA:973:G:C1'	10:AJ:55:LYS:HG2	2.46	0.44
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.53	0.44
1:AA:1268:A:C8	1:AA:1326:C:O2'	2.70	0.44
1:AA:1279:A:O2'	1:AA:1281:U:H5"	2.18	0.44
1:AA:1283:G:O2'	1:AA:1284:C:OP2	2.30	0.44
1:AA:1452:C:O2'	1:AA:1456:G:P	2.75	0.44
3:AC:14:ILE:CG1	3:AC:15:THR:N	2.79	0.44
12:AL:43:VAL:CG1	12:AL:44:THR:N	2.81	0.44
14:AN:9:LYS:HA	14:AN:12:ARG:NH2	2.33	0.44
19:AS:20:LEU:HD22	29:B4:61:ARG:HH21	1.82	0.44
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.99	0.44
24:AY:40:HIS:HB3	24:AY:41:LYS:H	1.60	0.44
24:AY:149:VAL:O	24:AY:152:THR:HG22	2.18	0.44
24:AY:156:ARG:HH22	24:AY:666:ARG:CZ	2.29	0.44
24:AY:512:ILE:CD1	24:AY:589:ALA:HB1	2.47	0.44
24:AY:530:VAL:HG13	24:AY:531:GLY:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:10:LYS:C	26:B1:11:ARG:HG3	2.42	0.44
27:B2:44:LEU:CD1	27:B2:44:LEU:O	2.64	0.44
29:B4:7:PRO:HG2	29:B4:9:LEU:HD12	1.97	0.44
34:B9:8:LYS:O	34:B9:25:VAL:HG21	2.17	0.44
35:BA:121:G:H4'	35:BA:149:A:H5'	2.00	0.44
35:BA:181:A:C2	35:BA:435:C:C5	3.06	0.44
35:BA:528:A:C2	35:BA:2043:C:H4'	2.53	0.44
35:BA:533:G:H5'	53:BU:24:TYR:CE1	2.52	0.44
35:BA:1094:U:H5'	35:BA:1095:A:OP2	2.17	0.44
35:BA:1204:A:H2	35:BA:1241:A:N1	2.15	0.44
35:BA:1217:C:OP2	53:BU:15:LYS:HE3	2.18	0.44
35:BA:1767:C:C2'	35:BA:1768:U:C5'	2.78	0.44
35:BA:1778:U:O5'	35:BA:1778:U:H6	1.99	0.44
35:BA:2019:A:H2'	35:BA:2020:A:O5'	2.18	0.44
35:BA:2402:C:H1'	35:BA:2403:C:OP2	2.18	0.44
35:BA:2403:C:O5'	35:BA:2403:C:C6	2.71	0.44
35:BA:2517:C:C6	35:BA:2542:A:C2	3.06	0.44
37:BC:7:ARG:HH22	37:BC:219:MET:HB2	1.82	0.44
38:BD:35:LYS:O	38:BD:36:PRO:C	2.59	0.44
38:BD:244:ARG:HA	38:BD:245:PRO:HA	1.51	0.44
39:BE:164:ARG:NH2	39:BE:199:ARG:NH2	2.65	0.44
40:BF:10:PRO:O	40:BF:11:VAL:HG23	2.17	0.44
40:BF:37:VAL:HG11	48:BP:7:ARG:HH12	1.81	0.44
41:BG:9:ARG:H	41:BG:9:ARG:CD	2.25	0.44
41:BG:16:ARG:HB3	41:BG:17:PRO:CD	2.48	0.44
46:BN:3:THR:CG2	46:BN:4:TYR:H	2.23	0.44
46:BN:51:PHE:CZ	46:BN:119:ARG:HD2	2.52	0.44
46:BN:73:THR:HG23	46:BN:82:LEU:CD1	2.48	0.44
54:BV:55:ALA:O	54:BV:56:SER:HB3	2.18	0.44
55:BW:2:GLU:OE2	55:BW:106:ILE:HD12	2.17	0.44
55:BW:110:LYS:HD2	55:BW:110:LYS:HA	1.77	0.44
57:BY:6:HIS:CD2	57:BY:6:HIS:N	2.85	0.44
58:BZ:44:PHE:CZ	58:BZ:48:PHE:CD2	2.98	0.44
58:BZ:122:ARG:HH11	58:BZ:122:ARG:CB	2.30	0.44
1:AA:363:A:H8	1:AA:363:A:O5'	2.01	0.44
1:AA:498:U:O2'	1:AA:499:A:P	2.76	0.44
1:AA:961:U:C6	1:AA:962:C:C5	3.06	0.44
1:AA:979:C:C3'	1:AA:980:C:C5'	2.94	0.44
1:AA:1073:U:C2'	1:AA:1074:G:C5'	2.76	0.44
1:AA:1371:G:OP1	9:AI:12:GLU:HB2	2.17	0.44
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:35:ARG:C	4:AD:37:PRO:HD3	2.42	0.44
12:AL:5:PRO:HB2	12:AL:9:GLN:HB2	1.98	0.44
12:AL:10:LEU:HB3	17:AQ:32:TYR:CE2	2.53	0.44
13:AM:39:ILE:CD1	13:AM:56:LEU:HB2	2.48	0.44
13:AM:45:VAL:HA	13:AM:48:LEU:HG	1.99	0.44
14:AN:12:ARG:HB3	14:AN:14:PRO:CD	2.48	0.44
14:AN:28:GLY:O	14:AN:29:ARG:C	2.60	0.44
15:AO:56:LEU:C	15:AO:56:LEU:CD1	2.91	0.44
19:AS:88:LYS:C	19:AS:90:THR:N	2.75	0.44
22:AV:15:G:H5'	22:AV:16:C:O2	2.18	0.44
24:AY:7:TYR:CD2	24:AY:370:LYS:HD2	2.52	0.44
24:AY:165:GLN:OE1	24:AY:259:PHE:HD2	2.01	0.44
24:AY:229:LEU:HA	24:AY:232:LEU:CD2	2.48	0.44
24:AY:587:SER:O	24:AY:591:LYS:HB2	2.17	0.44
27:B2:21:LEU:O	27:B2:22:GLU:C	2.59	0.44
29:B4:22:ILE:HG13	41:BG:105:LYS:HD3	2.00	0.44
33:B8:23:VAL:HG12	33:B8:46:ARG:NH1	2.24	0.44
35:BA:181:A:C6	35:BA:182:A:C6	3.06	0.44
35:BA:221:A:O2'	35:BA:222:A:OP2	2.32	0.44
35:BA:264:C:H4'	35:BA:428:A:C2	2.53	0.44
35:BA:327:G:O2'	35:BA:328:U:O5'	2.36	0.44
35:BA:876:C:H2'	35:BA:877:U:O4'	2.18	0.44
35:BA:1047:G:H2'	35:BA:1110:G:N2	2.33	0.44
35:BA:1180:C:H2'	35:BA:1181:C:H5'	2.00	0.44
35:BA:1215:G:C2'	35:BA:1216:G:C5'	2.90	0.44
35:BA:1249:U:C4'	53:BU:4:ALA:HB3	2.47	0.44
35:BA:1446:C:O2	35:BA:1446:C:H3'	2.18	0.44
35:BA:1493:C:O2	35:BA:1493:C:C2'	2.66	0.44
35:BA:1982:C:C4	35:BA:1983:C:C4	3.04	0.44
35:BA:1992:G:C2	35:BA:1997:G:C5	3.06	0.44
35:BA:2207:G:H5"	35:BA:2207:G:C2	2.48	0.44
35:BA:2259:G:C8	35:BA:2427:C:C4	3.06	0.44
35:BA:2364:C:H2'	35:BA:2365:G:O4'	2.18	0.44
35:BA:2468:G:OP1	49:BQ:119:ARG:NH2	2.47	0.44
35:BA:2884:U:H2'	35:BA:2885:C:H5'	2.00	0.44
36:BB:37:C:H2'	36:BB:38:C:C5'	2.48	0.44
37:BC:75:VAL:CG2	37:BC:92:ALA:HA	2.47	0.44
37:BC:130:ARG:O	37:BC:130:ARG:HG3	2.17	0.44
38:BD:43:ARG:HB3	38:BD:54:ARG:CB	2.43	0.44
41:BG:97:ASP:CG	41:BG:98:ARG:N	2.75	0.44
42:BH:11:VAL:HG12	42:BH:12:PRO:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:85:LYS:NZ	42:BH:145:ALA:HA	2.32	0.44
42:BH:85:LYS:HZ2	42:BH:145:ALA:HA	1.83	0.44
44:BK:6:UNK:O	44:BK:7:UNK:CB	2.64	0.44
49:BQ:16:ARG:HG3	49:BQ:17:LEU:H	1.82	0.44
54:BV:1:MET:HB3	54:BV:2:PHE:H	1.55	0.44
54:BV:57:VAL:HG23	54:BV:99:ILE:HG23	2.00	0.44
55:BW:37:ARG:HG3	55:BW:37:ARG:NH1	2.30	0.44
58:BZ:118:GLN:HG2	58:BZ:120:ILE:HD13	2.00	0.44
1:AA:415:A:H2'	1:AA:416:G:H8	1.83	0.44
1:AA:975:A:C4'	1:AA:976:G:H5"	2.25	0.44
1:AA:1157:A:C1'	1:AA:1158:C:P	3.05	0.44
1:AA:1280:A:O4'	10:AJ:41:PRO:CG	2.63	0.44
2:AB:86:GLU:C	2:AB:88:ALA:N	2.75	0.44
2:AB:105:PHE:O	2:AB:106:LYS:C	2.61	0.44
4:AD:209:ARG:C	4:AD:209:ARG:NE	2.76	0.44
7:AG:127:ALA:C	7:AG:129:GLU:N	2.76	0.44
9:AI:5:TYR:CD1	9:AI:5:TYR:C	2.95	0.44
9:AI:19:LEU:HD12	9:AI:19:LEU:O	2.18	0.44
10:AJ:37:PRO:HA	10:AJ:71:LEU:O	2.18	0.44
12:AL:27:LEU:C	12:AL:29:GLY:N	2.74	0.44
12:AL:45:PRO:HG2	12:AL:50:SER:C	2.42	0.44
13:AM:68:GLY:O	13:AM:69:GLU:C	2.61	0.44
17:AQ:9:VAL:HG11	17:AQ:84:LEU:HD12	1.99	0.44
19:AS:40:ILE:CG2	19:AS:67:VAL:C	2.91	0.44
19:AS:67:VAL:HG12	29:B4:52:THR:HG23	2.00	0.44
24:AY:88:VAL:C	24:AY:90:PHE:H	2.25	0.44
24:AY:92:ILE:HD12	24:AY:96:ARG:HE	1.83	0.44
24:AY:99:ARG:NE	24:AY:128:TYR:CZ	2.84	0.44
24:AY:498:ILE:HA	24:AY:507:TYR:HB3	2.00	0.44
25:B0:37:LEU:HD22	25:B0:37:LEU:N	2.27	0.44
25:B0:62:LEU:N	25:B0:62:LEU:CD2	2.66	0.44
29:B4:7:PRO:HB2	29:B4:8:LYS:H	1.70	0.44
30:B5:45:VAL:HG13	30:B5:51:TYR:HB2	1.99	0.44
35:BA:49:A:N3	35:BA:49:A:H5'	2.33	0.44
35:BA:256:A:O2'	35:BA:257:A:C5'	2.66	0.44
35:BA:478:A:N1	35:BA:500:G:H4'	2.32	0.44
35:BA:551:G:O2'	35:BA:1220:A:N3	2.47	0.44
35:BA:807:U:OP2	48:BP:39:LYS:HG2	2.18	0.44
35:BA:860:U:H2'	35:BA:861:A:C5'	2.48	0.44
35:BA:940:G:H2'	35:BA:941:A:O4'	2.18	0.44
35:BA:1136:G:C2	35:BA:1137:G:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1169:G:N2	35:BA:1181:C:C2	2.86	0.44
35:BA:1464:C:O2'	35:BA:1528:A:H1'	2.18	0.44
35:BA:1654:A:H1'	35:BA:2823:A:H5'	1.99	0.44
35:BA:1688:U:H1'	35:BA:1701:A:N6	2.33	0.44
35:BA:2037:G:H2'	35:BA:2038:G:C8	2.53	0.44
35:BA:2202:C:H2'	35:BA:2203:U:C6	2.51	0.44
35:BA:2233:U:H2'	35:BA:2234:G:C8	2.52	0.44
35:BA:2287:A:C2	35:BA:2346:A:C2	3.06	0.44
35:BA:2394:C:OP1	48:BP:63:PRO:CD	2.66	0.44
35:BA:2756:U:C1'	35:BA:2757:A:O5'	2.66	0.44
37:BC:86:GLU:O	37:BC:87:ALA:HB3	2.18	0.44
38:BD:3:VAL:HG13	38:BD:17:THR:HB	1.99	0.44
38:BD:134:ARG:NH1	38:BD:188:GLU:OE2	2.51	0.44
39:BE:33:VAL:HG23	39:BE:47:VAL:HG12	2.00	0.44
39:BE:154:LYS:O	39:BE:154:LYS:CG	2.66	0.44
40:BF:22:ALA:C	40:BF:24:LEU:N	2.74	0.44
40:BF:26:ALA:HB1	40:BF:27:GLU:OE1	2.17	0.44
40:BF:114:VAL:HG21	40:BF:202:PHE:CZ	2.52	0.44
41:BG:29:TRP:C	41:BG:31:VAL:N	2.76	0.44
41:BG:38:VAL:HG12	41:BG:39:ILE:N	2.33	0.44
41:BG:117:PHE:CD2	41:BG:118:ARG:CD	2.99	0.44
41:BG:148:MET:HE3	41:BG:148:MET:O	2.18	0.44
45:BL:61:UNK:HA	45:BL:93:UNK:O	2.18	0.44
47:BO:1:MET:HE2	47:BO:32:TYR:CD2	2.53	0.44
48:BP:51:PHE:HD2	48:BP:52:GLU:O	1.91	0.44
49:BQ:21:THR:C	49:BQ:23:GLY:H	2.26	0.44
50:BR:85:PRO:C	50:BR:87:TYR:N	2.74	0.44
51:BS:18:ILE:C	51:BS:20:ARG:H	2.25	0.44
51:BS:54:LEU:CD1	51:BS:57:LYS:HA	2.34	0.44
52:BT:26:ASP:HB3	52:BT:89:VAL:O	2.18	0.44
58:BZ:39:VAL:HG21	58:BZ:44:PHE:HB2	1.99	0.44
1:AA:37:U:O2'	1:AA:38:G:H5"	2.17	0.43
1:AA:38:G:HO2'	1:AA:39:G:P	2.41	0.43
1:AA:279:A:OP2	17:AQ:95:TYR:OH	2.34	0.43
1:AA:545:C:O2'	1:AA:549:C:OP1	2.36	0.43
1:AA:936:C:H2'	1:AA:937:A:O5'	2.18	0.43
1:AA:1458:G:H5"	20:AT:31:SER:HB2	2.00	0.43
3:AC:16:ARG:CD	3:AC:17:ASP:N	2.80	0.43
3:AC:131:ARG:HH11	3:AC:131:ARG:CB	2.28	0.43
5:AE:105:VAL:HB	5:AE:106:PRO:CD	2.48	0.43
6:AF:100:ASN:O	18:AR:28:GLU:HG2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:48:LYS:HG2	7:AG:49:ILE:H	1.83	0.43
24:AY:27:THR:O	24:AY:30:GLU:HB3	2.18	0.43
26:B1:19:GLN:HB2	26:B1:35:THR:HG22	1.99	0.43
26:B1:50:ARG:H	26:B1:50:ARG:HG2	1.50	0.43
27:B2:8:LYS:C	27:B2:11:GLU:HG2	2.36	0.43
27:B2:10:LEU:O	27:B2:14:ARG:CG	2.66	0.43
28:B3:58:VAL:HG12	28:B3:59:VAL:N	2.33	0.43
29:B4:32:TYR:HB3	41:BG:141:PHE:CZ	2.52	0.43
29:B4:48:ARG:O	29:B4:50:VAL:N	2.48	0.43
29:B4:51:ASP:O	29:B4:53:GLU:N	2.50	0.43
32:B7:34:ARG:CD	35:BA:467:G:OP2	2.66	0.43
34:B9:7:VAL:O	34:B9:7:VAL:HG12	2.17	0.43
35:BA:47:C:N4	35:BA:179:G:N1	2.66	0.43
35:BA:221:A:C4	35:BA:266:G:N7	2.85	0.43
35:BA:547:A:C6	35:BA:548:A:C6	3.06	0.43
35:BA:701:G:C2’	35:BA:702:G:H5’	2.47	0.43
35:BA:1086:A:H3’	35:BA:1086:A:N3	2.33	0.43
35:BA:1221(A):C:C2’	35:BA:1222:C:H5’	2.47	0.43
35:BA:1316:U:H2’	35:BA:1317:A:H8	1.83	0.43
35:BA:1449:A:H5”	35:BA:1449:A:H8	1.82	0.43
35:BA:1578:U:H2’	35:BA:1579:A:H5’	1.98	0.43
35:BA:1595:G:N3	35:BA:1596:A:C8	2.86	0.43
35:BA:1982:C:N4	35:BA:1983:C:H42	2.13	0.43
35:BA:2033:A:O2’	35:BA:2034:U:OP1	2.30	0.43
35:BA:2199:A:OP2	35:BA:2200:C:H5	2.00	0.43
35:BA:2203:U:O2	35:BA:2203:U:H2’	2.17	0.43
35:BA:2543:G:H2’	35:BA:2544:G:H8	1.83	0.43
35:BA:2712:U:H5’	35:BA:2712:U:O2	2.17	0.43
37:BC:39:ASP:O	37:BC:178:LYS:HE3	2.17	0.43
38:BD:221:VAL:HG22	38:BD:226:MET:CE	2.48	0.43
40:BF:3:GLU:CA	40:BF:24:LEU:CG	2.95	0.43
40:BF:136:THR:HG23	40:BF:170:LEU:CD2	2.45	0.43
41:BG:6:ALA:HB3	41:BG:105:LYS:HE3	1.99	0.43
41:BG:37:VAL:CG2	41:BG:99:MET:HG3	2.46	0.43
47:BO:76:ALA:HB3	52:BT:75:ILE:HD12	1.99	0.43
48:BP:35:HIS:C	48:BP:36:LYS:HG3	2.43	0.43
48:BP:96:THR:HG22	48:BP:126:VAL:CG2	2.48	0.43
52:BT:30:VAL:O	52:BT:44:ASP:HA	2.18	0.43
52:BT:59:THR:O	52:BT:77:PRO:O	2.36	0.43
53:BU:76:TYR:CZ	53:BU:80:ILE:HG13	2.53	0.43
54:BV:76:LYS:HB2	54:BV:81:TYR:HB3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:549:C:H2'	1:AA:550:G:O4'	2.17	0.43
1:AA:684:A:H1'	11:AK:39:PRO:HD2	1.99	0.43
1:AA:979:C:H3'	1:AA:980:C:C5'	2.48	0.43
1:AA:1032:G:H2'	1:AA:1033:G:C8	2.54	0.43
2:AB:19:HIS:HB3	2:AB:189:ASP:OD2	2.18	0.43
2:AB:23:ARG:CG	2:AB:23:ARG:O	2.66	0.43
3:AC:25:GLY:O	3:AC:28:GLN:N	2.38	0.43
4:AD:108:LEU:HD12	4:AD:108:LEU:HA	1.71	0.43
7:AG:87:VAL:HG23	7:AG:151:TYR:O	2.18	0.43
10:AJ:49:VAL:HG22	10:AJ:50:ILE:O	2.18	0.43
14:AN:12:ARG:CB	14:AN:14:PRO:HD2	2.48	0.43
16:AP:52:ASP:O	16:AP:54:GLU:N	2.51	0.43
24:AY:47:GLU:HB3	24:AY:52:MET:CA	2.47	0.43
24:AY:140:ASP:OD2	24:AY:265:LYS:HD3	2.18	0.43
24:AY:168:ILE:HB	24:AY:176:GLY:H	1.83	0.43
24:AY:471:LYS:O	24:AY:471:LYS:CG	2.61	0.43
24:AY:535:PRO:O	24:AY:537:GLU:N	2.51	0.43
24:AY:573:HIS:O	24:AY:574:GLU:HB2	2.18	0.43
24:AY:589:ALA:O	24:AY:592:GLU:HG2	2.17	0.43
24:AY:617:MET:HE2	24:AY:641:GLN:HG2	2.00	0.43
27:B2:9:GLN:H	27:B2:9:GLN:NE2	2.08	0.43
28:B3:31:LEU:C	28:B3:33:GLN:N	2.76	0.43
29:B4:39:CYS:HB3	29:B4:40:HIS:H	1.68	0.43
29:B4:56:VAL:HG13	29:B4:57:GLU:N	2.33	0.43
30:B5:35:GLU:HB2	30:B5:49:CYS:HB3	2.00	0.43
33:B8:27:THR:HG22	48:BP:62:LEU:CD2	2.48	0.43
35:BA:16:G:N3	35:BA:17:G:C8	2.86	0.43
35:BA:239:U:H2'	35:BA:240:G:O4'	2.17	0.43
35:BA:333:G:H2'	35:BA:333:G:N3	2.33	0.43
35:BA:590:A:H2'	35:BA:591:C:C6	2.52	0.43
35:BA:601:C:O2'	35:BA:605:C:OP1	2.36	0.43
35:BA:900:A:H2'	35:BA:900:A:N3	2.32	0.43
35:BA:962:G:HO2'	35:BA:963:U:H5'	1.81	0.43
35:BA:2354:G:N1	35:BA:2364:C:C4	2.86	0.43
35:BA:2534:A:H2'	35:BA:2535:G:O5'	2.18	0.43
35:BA:2688:U:C5	35:BA:2720:U:OP2	2.71	0.43
35:BA:2808:U:N3	35:BA:2892:A:N7	2.65	0.43
36:BB:8:U:H6	36:BB:8:U:C5'	2.21	0.43
36:BB:67:G:HO2'	36:BB:68:C:H6	1.56	0.43
41:BG:20:ILE:O	41:BG:21:ARG:HB2	2.17	0.43
45:BL:68:UNK:C	45:BL:70:UNK:N	2.79	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:14:VAL:CG1	51:BS:15:ARG:H	2.29	0.43
52:BT:125:ARG:HG2	52:BT:125:ARG:NH1	2.32	0.43
56:BX:21:PHE:O	56:BX:22:ALA:C	2.60	0.43
57:BY:86:ARG:HG2	57:BY:87:LYS:N	2.33	0.43
1:AA:152:A:H62	1:AA:169:C:N4	2.16	0.43
1:AA:360:A:C6	1:AA:361:G:C6	3.06	0.43
1:AA:491:G:C2	1:AA:492:G:C5	3.05	0.43
1:AA:940:C:H2'	1:AA:941:G:C8	2.52	0.43
1:AA:983:A:H1'	1:AA:1049:U:O2	2.18	0.43
1:AA:1048:G:O2'	1:AA:1049:U:H3'	2.18	0.43
1:AA:1309:G:N7	13:AM:99:ARG:NH2	2.65	0.43
1:AA:1508:G:O2'	1:AA:1509:C:H5'	2.18	0.43
3:AC:164:ARG:HH11	3:AC:164:ARG:CG	2.30	0.43
8:AH:42:GLU:HG3	8:AH:109:ILE:CD1	2.43	0.43
11:AK:57:THR:CG2	11:AK:60:ALA:H	2.31	0.43
11:AK:105:VAL:O	11:AK:105:VAL:HG23	2.17	0.43
14:AN:25:VAL:HG12	14:AN:25:VAL:O	2.18	0.43
15:AO:12:ILE:O	15:AO:16:ALA:HB2	2.18	0.43
19:AS:6:LYS:CG	19:AS:7:LYS:N	2.81	0.43
20:AT:57:ARG:HD2	20:AT:102:GLY:CA	2.48	0.43
22:AV:11:C:H42	22:AV:24:G:H1	1.66	0.43
24:AY:116:PRO:C	24:AY:118:SER:H	2.25	0.43
26:B1:33:LYS:HB2	35:BA:2432:A:C2	2.53	0.43
31:B6:12:GLU:CD	31:B6:12:GLU:N	2.76	0.43
31:B6:18:ARG:NH2	31:B6:44:ARG:CB	2.82	0.43
35:BA:185:U:H2'	35:BA:186:G:H8	1.84	0.43
35:BA:261:G:O2'	35:BA:262:A:H5'	2.18	0.43
35:BA:326:G:HO2'	35:BA:327:G:H5'	1.77	0.43
35:BA:630:G:H4'	35:BA:640:C:H4'	1.99	0.43
35:BA:743:G:N9	35:BA:744:G:C8	2.85	0.43
35:BA:910:A:H2'	35:BA:911:A:C8	2.53	0.43
35:BA:1068:G:H1'	35:BA:1069:A:OP1	2.18	0.43
35:BA:1076:C:O5'	35:BA:1076:C:H6	2.00	0.43
35:BA:1211:U:O5'	35:BA:1211:U:O2	2.35	0.43
35:BA:1264:G:C2	35:BA:2014:A:N7	2.87	0.43
35:BA:1378:A:C4	35:BA:1380:G:N7	2.86	0.43
35:BA:1412:A:H2'	35:BA:1413:G:C5'	2.46	0.43
35:BA:1458:C:O4'	35:BA:1459:G:C5	2.71	0.43
35:BA:1681:G:O2'	35:BA:1762:A:C2'	2.66	0.43
35:BA:1784:A:H4'	35:BA:1785:A:O5'	2.18	0.43
35:BA:1784:A:C4'	35:BA:1785:A:H5"	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2034:U:H2'	35:BA:2035:G:O5'	2.18	0.43
35:BA:2362:G:C2'	35:BA:2363:C:C5'	2.94	0.43
35:BA:2403:C:O2'	35:BA:2404:C:C5'	2.62	0.43
35:BA:2620:C:OP1	39:BE:153:GLY:CA	2.66	0.43
36:BB:111:G:H2'	36:BB:112:U:O4'	2.18	0.43
39:BE:56:PRO:O	39:BE:57:LYS:HE3	2.18	0.43
39:BE:132:HIS:CD2	39:BE:135:HIS:NE2	2.86	0.43
40:BF:81:PRO:HA	40:BF:87:GLY:O	2.17	0.43
40:BF:200:GLU:O	40:BF:201:VAL:C	2.62	0.43
42:BH:137:ASP:OD2	42:BH:140:LYS:HE3	2.18	0.43
43:BJ:53:UNK:C	43:BJ:85:LEU:HD12	2.46	0.43
48:BP:39:LYS:O	48:BP:40:SER:CB	2.67	0.43
48:BP:144:GLU:N	48:BP:145:PRO:CD	2.78	0.43
52:BT:29:ARG:HH11	52:BT:88:ILE:CD1	2.24	0.43
52:BT:34:VAL:HG22	52:BT:39:ARG:CA	2.48	0.43
52:BT:40:THR:O	52:BT:41:ARG:HB3	2.17	0.43
57:BY:28:LYS:HA	57:BY:38:ILE:CG2	2.34	0.43
57:BY:28:LYS:N	57:BY:28:LYS:HE2	2.34	0.43
58:BZ:74:VAL:CG2	58:BZ:86:VAL:HG13	2.42	0.43
1:AA:185:A:C5	1:AA:186:C:C4	3.06	0.43
1:AA:321:A:H2'	1:AA:322:C:H5'	1.99	0.43
1:AA:937:A:H2'	1:AA:938:A:H8	1.84	0.43
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.17	0.43
3:AC:132:ARG:O	3:AC:136:GLN:HB2	2.18	0.43
3:AC:180:ALA:O	3:AC:181:ASN:CB	2.66	0.43
7:AG:51:GLN:O	7:AG:52:GLU:CB	2.65	0.43
7:AG:58:PRO:O	7:AG:59:LEU:C	2.61	0.43
9:AI:53:VAL:C	9:AI:55:ALA:N	2.76	0.43
19:AS:19:VAL:O	19:AS:22:LEU:HB3	2.18	0.43
24:AY:12:LEU:O	24:AY:13:ARG:HD2	2.19	0.43
24:AY:15:ILE:HA	24:AY:103:GLY:O	2.18	0.43
24:AY:153:MET:HA	24:AY:157:LEU:CD2	2.46	0.43
24:AY:229:LEU:HA	24:AY:232:LEU:HD22	2.00	0.43
24:AY:348:ARG:NH1	24:AY:382:GLU:HG3	2.33	0.43
24:AY:606:MET:CE	24:AY:671:MET:HG3	2.48	0.43
24:AY:684:GLN:O	24:AY:687:LEU:HB2	2.17	0.43
25:B0:56:ASP:C	25:B0:57:PHE:HD1	2.26	0.43
33:B8:29:LYS:HD3	33:B8:44:LYS:HB2	1.97	0.43
35:BA:15:G:HO2'	35:BA:16:G:H5'	1.73	0.43
35:BA:19:C:H5'	35:BA:554:U:OP1	2.18	0.43
35:BA:769:G:H4'	35:BA:1379:A:N6	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1122:G:C2	35:BA:1123:C:C6	3.07	0.43
35:BA:1137:G:H2'	35:BA:1138:G:H8	1.81	0.43
35:BA:1300:U:C1'	35:BA:1301:A:OP2	2.67	0.43
35:BA:1424:G:H2'	35:BA:1425:G:H8	1.82	0.43
35:BA:1496:A:O3'	35:BA:1497:U:O2	2.36	0.43
35:BA:1642:G:H8	35:BA:1642:G:O5'	2.02	0.43
35:BA:1710:C:H4'	35:BA:2858:C:O2	2.18	0.43
35:BA:1748:G:H5'	35:BA:1748:G:C8	2.43	0.43
35:BA:1770:G:H2'	35:BA:1771:C:C6	2.53	0.43
35:BA:2032:G:N2	39:BE:146:THR:CG2	2.58	0.43
35:BA:2137:C:N3	35:BA:2154:G:O6	2.52	0.43
35:BA:2298:A:N6	35:BA:2318:G:H8	2.14	0.43
35:BA:2607:G:C2'	35:BA:2608:G:O5'	2.66	0.43
36:BB:87:G:C2'	36:BB:88:C:H5"	2.45	0.43
37:BC:194:ILE:HD11	37:BC:227:PRO:HB2	1.99	0.43
41:BG:49:ASP:O	41:BG:52:ILE:N	2.50	0.43
42:BH:173:PRO:O	42:BH:174:GLY:C	2.62	0.43
46:BN:78:TYR:N	46:BN:78:TYR:CD1	2.87	0.43
48:BP:38:GLN:CG	48:BP:39:LYS:H	2.18	0.43
57:BY:77:PRO:O	57:BY:78:ALA:HB2	2.17	0.43
57:BY:81:LYS:HA	57:BY:82:PRO:HD3	1.78	0.43
58:BZ:180:VAL:HG13	58:BZ:181:GLU:H	1.73	0.43
1:AA:41:G:H2'	1:AA:42:G:H8	1.84	0.43
1:AA:51:A:H4'	1:AA:52:G:C5'	2.49	0.43
1:AA:412:A:H4'	1:AA:413:G:H8	1.82	0.43
1:AA:488:C:C2'	1:AA:489:C:H5'	2.48	0.43
1:AA:774:G:H2'	1:AA:775:G:C5'	2.48	0.43
1:AA:779:C:H2'	1:AA:780:A:O4'	2.18	0.43
1:AA:951:G:C6	1:AA:1231:G:C6	3.06	0.43
1:AA:1314:C:OP2	19:AS:6:LYS:HD2	2.18	0.43
1:AA:1456:G:H2'	1:AA:1456:G:N3	2.34	0.43
3:AC:116:VAL:C	3:AC:118:GLN:N	2.76	0.43
4:AD:170:VAL:O	4:AD:171:GLY:C	2.62	0.43
6:AF:15:ASP:C	6:AF:17:SER:N	2.76	0.43
9:AI:110:GLU:OE2	9:AI:113:LYS:NZ	2.52	0.43
13:AM:70:LEU:O	13:AM:73:GLU:N	2.51	0.43
15:AO:39:LEU:HD12	15:AO:59:MET:HE3	1.99	0.43
19:AS:7:LYS:HZ3	19:AS:7:LYS:C	2.23	0.43
22:AV:19:G:O6	35:BA:2169:A:H1'	2.18	0.43
24:AY:33:LEU:HD23	24:AY:360:ALA:CB	2.48	0.43
24:AY:170:ARG:N	24:AY:170:ARG:HD2	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:225:GLU:O	24:AY:228:MET:HB3	2.18	0.43
24:AY:572:TYR:CD1	24:AY:572:TYR:N	2.77	0.43
29:B4:6:HIS:HE1	41:BG:66:GLN:HB2	1.82	0.43
33:B8:33:ASN:N	33:B8:36:LYS:HE3	2.34	0.43
34:B9:1:MET:HG3	34:B9:1:MET:O	2.18	0.43
35:BA:448:U:C4	35:BA:583:G:H1'	2.54	0.43
35:BA:628:G:H8	35:BA:628:G:O5'	2.02	0.43
35:BA:792:G:C3'	35:BA:793:A:H5'	2.47	0.43
35:BA:833:U:O4'	48:BP:52:GLU:N	2.44	0.43
35:BA:971:C:O2'	35:BA:972:G:H5'	2.18	0.43
35:BA:1142(A):A:C4	35:BA:1144:G:C8	3.07	0.43
35:BA:1259:G:O2'	35:BA:1260:G:H5'	2.18	0.43
35:BA:1568:G:H5"	38:BD:61:LEU:CD2	2.49	0.43
35:BA:1669:A:H5"	35:BA:2550:G:OP1	2.19	0.43
35:BA:1827:C:H2'	35:BA:1828:G:C5'	2.49	0.43
35:BA:1970:A:O4'	35:BA:1972:A:C8	2.72	0.43
35:BA:1983:C:H4'	35:BA:2606:C:O3'	2.19	0.43
35:BA:2036:C:H2'	35:BA:2037:G:H5'	1.99	0.43
35:BA:2175:C:H1'	37:BC:218:THR:O	2.19	0.43
35:BA:2716:U:C2'	35:BA:2717:G:C5'	2.84	0.43
37:BC:5:GLY:O	37:BC:6:LYS:C	2.61	0.43
37:BC:129:GLY:O	37:BC:130:ARG:C	2.62	0.43
37:BC:206:LYS:HB3	37:BC:206:LYS:HZ2	1.81	0.43
38:BD:161:THR:O	38:BD:162:SER:HB3	2.18	0.43
38:BD:274:ARG:HB3	38:BD:275:LYS:H	1.73	0.43
39:BE:27:LEU:HD23	52:BT:1:MET:HB2	2.00	0.43
40:BF:201:VAL:HG13	40:BF:202:PHE:N	2.33	0.43
41:BG:60:LEU:HA	41:BG:63:ILE:CG2	2.49	0.43
48:BP:48:PRO:C	48:BP:50:ARG:N	2.74	0.43
48:BP:98:GLU:O	48:BP:101:VAL:HG22	2.17	0.43
51:BS:42:ASP:C	51:BS:44:LYS:N	2.71	0.43
55:BW:10:VAL:O	55:BW:11:ARG:HB2	2.19	0.43
58:BZ:152:ALA:HB1	58:BZ:167:PRO:C	2.43	0.43
1:AA:223:U:H2'	1:AA:224:C:H6	1.83	0.43
1:AA:441:A:H3'	1:AA:442:C:H6	1.84	0.43
1:AA:508:C:C4'	1:AA:509:A:O5'	2.49	0.43
1:AA:560:U:C5'	1:AA:561:U:O5'	2.66	0.43
1:AA:594:G:H2'	1:AA:595:G:O5'	2.18	0.43
1:AA:691:G:H2'	1:AA:692:U:C6	2.53	0.43
1:AA:911:U:H2'	1:AA:912:C:C6	2.54	0.43
1:AA:982:U:HO2'	1:AA:983:A:P	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:992:U:H4'	1:AA:993:G:O5'	2.18	0.43
1:AA:1152:A:HO2'	1:AA:1153:C:H5'	1.76	0.43
4:AD:13:ARG:CA	4:AD:33:MET:HE1	2.47	0.43
7:AG:36:LYS:O	7:AG:38:LEU:N	2.51	0.43
7:AG:127:ALA:O	7:AG:128:ALA:C	2.61	0.43
9:AI:118:LYS:O	9:AI:119:ALA:CB	2.66	0.43
12:AL:41:ARG:NH1	12:AL:43:VAL:HG22	2.26	0.43
12:AL:117:ARG:HD2	12:AL:122:THR:OG1	2.19	0.43
14:AN:12:ARG:HB3	14:AN:14:PRO:HD2	2.00	0.43
16:AP:53:VAL:HG23	16:AP:54:GLU:N	2.32	0.43
17:AQ:26:GLN:HA	17:AQ:36:ILE:O	2.18	0.43
24:AY:58:GLU:C	24:AY:60:GLU:N	2.75	0.43
24:AY:102:ASP:O	24:AY:130:VAL:HG13	2.17	0.43
24:AY:148:LEU:O	24:AY:152:THR:CG2	2.66	0.43
24:AY:484:ARG:HA	24:AY:484:ARG:HD3	1.83	0.43
24:AY:530:VAL:CG2	24:AY:531:GLY:N	2.74	0.43
24:AY:610:VAL:CG2	24:AY:643:ILE:HB	2.48	0.43
24:AY:615:GLU:H	24:AY:615:GLU:HG3	1.55	0.43
25:B0:18:ALA:HB1	35:BA:2271:G:OP1	2.19	0.43
35:BA:56:A:H2'	35:BA:57:C:O4'	2.19	0.43
35:BA:500:G:H22	35:BA:502:A:H3'	1.80	0.43
35:BA:653:A:C4'	35:BA:654:A:OP2	2.64	0.43
35:BA:1036:G:O2'	35:BA:1037:G:H5'	2.18	0.43
35:BA:1208:C:C4	35:BA:1209:G:N7	2.86	0.43
35:BA:1348:G:C2	35:BA:1599:C:N3	2.87	0.43
35:BA:1490:A:C2	38:BD:75:ILE:HD13	2.54	0.43
35:BA:1649:G:C2'	35:BA:1650:G:C5'	2.95	0.43
35:BA:1652:A:C6	35:BA:1653:G:N1	2.86	0.43
35:BA:2310:A:N7	41:BG:75:LYS:CE	2.82	0.43
35:BA:2350:C:H2'	35:BA:2351:G:O4'	2.18	0.43
35:BA:2753:A:H2'	35:BA:2754:U:C6	2.53	0.43
37:BC:11:LEU:HD11	37:BC:35:THR:HG23	2.01	0.43
37:BC:78:ILE:O	37:BC:78:ILE:HG22	2.19	0.43
37:BC:104:ILE:O	37:BC:104:ILE:HD12	2.18	0.43
37:BC:149:ASN:ND2	37:BC:152:GLU:HB3	2.23	0.43
39:BE:105:THR:OG1	39:BE:199:ARG:NH2	2.45	0.43
39:BE:116:VAL:HG13	39:BE:122:PHE:CB	2.49	0.43
39:BE:146:THR:HA	39:BE:147:PRO:C	2.43	0.43
41:BG:139:LEU:N	41:BG:139:LEU:HD23	2.34	0.43
46:BN:109:LYS:HE3	46:BN:109:LYS:HB2	1.83	0.43
48:BP:137:LYS:C	48:BP:139:LYS:H	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:38:ASN:ND2	52:BT:38:ASN:N	2.63	0.43
54:BV:38:LEU:HD23	54:BV:39:LEU:N	2.34	0.43
54:BV:46:VAL:O	54:BV:48:GLY:N	2.51	0.43
57:BY:79:CYS:O	57:BY:80:GLY:O	2.35	0.43
57:BY:81:LYS:HG3	57:BY:97:ARG:HD3	2.00	0.43
1:AA:115:G:O4'	1:AA:116:A:OP2	2.36	0.43
1:AA:124:G:C6	1:AA:125:U:C4	3.06	0.43
1:AA:299:G:H2'	1:AA:300:A:C8	2.53	0.43
1:AA:964:A:H8	1:AA:964:A:O5'	2.01	0.43
1:AA:1327:C:OP2	21:AU:12:LYS:NZ	2.52	0.43
1:AA:1502:A:H4'	1:AA:1503:A:OP2	2.18	0.43
3:AC:6:HIS:CB	14:AN:49:HIS:HB3	2.48	0.43
4:AD:89:THR:O	4:AD:90:GLY:C	2.61	0.43
4:AD:190:ASP:OD1	4:AD:190:ASP:C	2.61	0.43
14:AN:4:LYS:HA	14:AN:7:ILE:HG12	1.99	0.43
15:AO:18:PHE:O	15:AO:19:PRO:C	2.62	0.43
18:AR:26:LEU:HD13	18:AR:39:VAL:HG13	2.00	0.43
19:AS:88:LYS:C	19:AS:90:THR:H	2.26	0.43
22:AV:41:C:H2'	22:AV:42:C:C5'	2.47	0.43
24:AY:165:GLN:HB2	24:AY:260:LEU:HD13	1.99	0.43
24:AY:550:MET:HE2	24:AY:563:ILE:HD11	2.01	0.43
27:B2:2:LYS:HD2	27:B2:5:GLU:CG	2.45	0.43
27:B2:43:GLN:O	27:B2:44:LEU:C	2.62	0.43
28:B3:54:VAL:O	28:B3:54:VAL:HG22	2.17	0.43
35:BA:18:C:C4	35:BA:19:C:N4	2.87	0.43
35:BA:270:A:H2'	35:BA:271:A:O4'	2.19	0.43
35:BA:1092:C:O2'	35:BA:1093:G:H5'	2.17	0.43
35:BA:1145:C:O5'	35:BA:1145:C:H6	2.01	0.43
35:BA:1171:G:H2'	35:BA:1171:G:N3	2.34	0.43
35:BA:1445:A:H8	35:BA:1460:A:C5	2.36	0.43
35:BA:1654:A:C1'	35:BA:2823:A:H5'	2.48	0.43
35:BA:1782:C:H1'	35:BA:2609:U:C5'	2.46	0.43
35:BA:1786:A:H1'	35:BA:1938:A:H61	1.77	0.43
35:BA:1820:U:H3	38:BD:160:GLY:HA3	1.84	0.43
35:BA:2086:U:H2'	35:BA:2087:G:C8	2.52	0.43
35:BA:2192:G:HO2'	35:BA:2193:G:H5"	1.83	0.43
35:BA:2230:G:C6	35:BA:2231:C:C4	3.06	0.43
35:BA:2306:C:H4'	41:BG:136:ARG:NH1	2.34	0.43
35:BA:2554:U:C2'	35:BA:2555:U:H5'	2.49	0.43
35:BA:2833:G:H3'	35:BA:2834:G:C5'	2.49	0.43
37:BC:73:VAL:CG1	37:BC:74:ARG:N	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:262:ARG:C	38:BD:264:LYS:H	2.27	0.43
39:BE:45:THR:O	39:BE:46:ALA:HB2	2.18	0.43
39:BE:154:LYS:O	39:BE:154:LYS:HG2	2.18	0.43
41:BG:172:LEU:CD2	41:BG:176:LEU:HD12	2.48	0.43
42:BH:125:VAL:O	42:BH:125:VAL:HG12	2.17	0.43
46:BN:90:MET:HA	46:BN:90:MET:CE	2.41	0.43
47:BO:87:ILE:HG23	47:BO:91:LEU:C	2.44	0.43
48:BP:58:THR:C	48:BP:61:ARG:HE	2.27	0.43
48:BP:125:VAL:HG11	48:BP:138:LEU:HD21	2.01	0.43
49:BQ:50:ALA:HB1	49:BQ:121:ALA:HB1	2.00	0.43
49:BQ:58:PHE:O	49:BQ:58:PHE:CD1	2.70	0.43
51:BS:89:ARG:CB	51:BS:92:TYR:HB3	2.48	0.43
51:BS:106:ARG:HD2	51:BS:106:ARG:C	2.44	0.43
52:BT:27:THR:O	52:BT:28:VAL:CG1	2.66	0.43
52:BT:62:THR:CG2	52:BT:75:ILE:HG12	2.46	0.43
53:BU:92:ARG:O	53:BU:93:LYS:C	2.61	0.43
54:BV:21:ARG:HG2	54:BV:21:ARG:NH1	2.34	0.43
56:BX:21:PHE:N	56:BX:21:PHE:CD1	2.87	0.43
57:BY:59:GLY:C	57:BY:60:PHE:CD1	2.97	0.43
58:BZ:151:HIS:HB2	58:BZ:171:ILE:H	1.83	0.43
58:BZ:185:GLU:HG2	58:BZ:187:ALA:N	2.33	0.43
1:AA:406:G:C4	1:AA:495:A:C6	3.06	0.43
1:AA:453:A:O2'	1:AA:454:C:H6	1.99	0.43
1:AA:524:G:H8	1:AA:524:G:O5'	2.02	0.43
1:AA:650:G:O2'	1:AA:651:C:H5'	2.19	0.43
1:AA:1145:C:O2'	1:AA:1146:A:H8	2.01	0.43
1:AA:1267:C:N4	1:AA:1327:C:O2'	2.51	0.43
1:AA:1366:C:N4	1:AA:1367:C:N4	2.66	0.43
1:AA:1403:C:H2'	1:AA:1404:C:C6	2.54	0.43
2:AB:58:ILE:HG22	2:AB:222:ILE:HD13	2.01	0.43
5:AE:20:GLN:HE21	5:AE:20:GLN:HB3	1.54	0.43
7:AG:122:HIS:HD2	7:AG:125:MET:CE	2.31	0.43
9:AI:43:ALA:C	9:AI:45:ALA:H	2.27	0.43
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	2.01	0.43
14:AN:4:LYS:O	14:AN:7:ILE:HG12	2.19	0.43
15:AO:23:GLY:O	15:AO:27:VAL:HB	2.19	0.43
20:AT:71:THR:HG22	20:AT:72:LEU:H	1.84	0.43
24:AY:58:GLU:O	24:AY:60:GLU:N	2.51	0.43
24:AY:343:ASN:C	24:AY:343:ASN:ND2	2.74	0.43
24:AY:403:GLU:O	24:AY:404:VAL:HB	2.19	0.43
24:AY:464:ASP:O	24:AY:468:ARG:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:45:PHE:O	25:B0:59:LEU:HD11	2.19	0.43
25:B0:49:LYS:N	25:B0:80:HIS:HB3	2.33	0.43
28:B3:47:VAL:CG1	28:B3:56:VAL:HG21	2.48	0.43
31:B6:9:LEU:HD22	31:B6:10:LEU:N	2.33	0.43
34:B9:9:ARG:O	34:B9:10:ILE:O	2.36	0.43
35:BA:171:G:C2'	35:BA:172:C:H5'	2.48	0.43
35:BA:329:G:P	57:BY:71:LYS:HD3	2.59	0.43
35:BA:890:A:H2'	35:BA:892:G:C5'	2.48	0.43
35:BA:956:G:O4'	49:BQ:83:MET:HE1	2.19	0.43
35:BA:1079:C:O2	35:BA:1079:C:C2'	2.58	0.43
35:BA:1115:G:H2'	35:BA:1116:C:O4'	2.19	0.43
35:BA:1227:G:C2	35:BA:1228:G:C8	3.07	0.43
35:BA:1890:A:H2	35:BA:2235:G:O4'	2.02	0.43
35:BA:2029:G:N1	35:BA:2033:A:OP2	2.32	0.43
35:BA:2033:A:O5'	35:BA:2033:A:H8	2.01	0.43
35:BA:2103:C:H4'	35:BA:2104:G:OP1	2.19	0.43
35:BA:2318:G:H2'	35:BA:2319:G:OP1	2.19	0.43
35:BA:2600:A:O2'	35:BA:2601:C:H5'	2.19	0.43
35:BA:2839:G:H5'	50:BR:46:GLY:HA2	2.01	0.43
37:BC:89:GLU:OE2	37:BC:90:ALA:HB2	2.19	0.43
37:BC:195:ARG:HH11	37:BC:195:ARG:HG3	1.83	0.43
39:BE:70:ALA:O	39:BE:72:VAL:N	2.52	0.43
39:BE:128:SER:O	39:BE:129:HIS:HB2	2.19	0.43
39:BE:202:LYS:HD2	39:BE:202:LYS:N	2.33	0.43
40:BF:149:ASP:OD1	40:BF:149:ASP:N	2.50	0.43
41:BG:87:PRO:O	41:BG:88:ILE:CB	2.67	0.43
42:BH:87:LEU:N	42:BH:131:VAL:O	2.40	0.43
44:BK:105:UNK:O	44:BK:106:UNK:C	2.65	0.43
44:BK:128:UNK:C	44:BK:130:UNK:N	2.81	0.43
50:BR:59:ASP:O	50:BR:60:LEU:CB	2.65	0.43
50:BR:100:LEU:HD22	50:BR:112:ALA:HA	2.00	0.43
52:BT:89:VAL:CB	52:BT:91:ARG:HG3	2.43	0.43
53:BU:76:TYR:CE1	53:BU:80:ILE:HG13	2.54	0.43
53:BU:83:LEU:CG	53:BU:88:ILE:HD11	2.48	0.43
54:BV:5:VAL:HG23	54:BV:37:VAL:HG23	2.01	0.43
54:BV:15:GLU:O	54:BV:16:PRO:C	2.62	0.43
56:BX:11:PRO:HB3	56:BX:92:LEU:CD2	2.48	0.43
1:AA:116:A:O5'	1:AA:116:A:H8	2.02	0.43
1:AA:160:A:H1'	1:AA:344:A:C6	2.54	0.43
1:AA:198:G:N3	1:AA:199:G:C5	2.87	0.43
1:AA:266:G:HO2'	1:AA:267:C:P	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:376:G:H5”	16:AP:5:ARG:HD2	2.01	0.43
1:AA:474:G:O2’	1:AA:475:G:H5’	2.18	0.43
1:AA:523:A:C2	12:AL:91:LYS:HB3	2.53	0.43
1:AA:1305:G:C5’	21:AU:4:GLY:C	2.90	0.43
7:AG:49:ILE:HD11	7:AG:117:ALA:O	2.19	0.43
7:AG:127:ALA:O	7:AG:129:GLU:N	2.52	0.43
15:AO:68:ARG:HH11	15:AO:68:ARG:CG	2.31	0.43
19:AS:41:VAL:CG2	19:AS:44:MET:HG3	2.49	0.43
20:AT:72:LEU:HD21	20:AT:80:ARG:HE	1.83	0.43
22:AV:27:G:N2	22:AV:43:C:H5	2.07	0.43
24:AY:213:HIS:O	24:AY:217:VAL:HG23	2.19	0.43
24:AY:435:ASP:C	24:AY:437:THR:H	2.26	0.43
26:B1:58:ILE:HD11	26:B1:90:ILE:HG21	2.00	0.43
30:B5:41:PRO:HA	30:B5:42:PRO:HD3	1.80	0.43
35:BA:341:G:O2’	35:BA:342:G:H5’	2.18	0.43
35:BA:385:C:O2	48:BP:71:VAL:HG21	2.19	0.43
35:BA:634:C:H2’	35:BA:635:C:C6	2.53	0.43
35:BA:814:C:H2’	35:BA:815:C:H6	1.82	0.43
35:BA:847:U:H2’	35:BA:848:G:H5”	1.99	0.43
35:BA:848:G:H5’	35:BA:848:G:C8	2.49	0.43
35:BA:1054:A:C2	35:BA:1106:G:C6	3.07	0.43
35:BA:1858:G:H8	35:BA:1858:G:OP2	2.02	0.43
35:BA:1902:C:H4’	38:BD:244:ARG:CB	2.49	0.43
35:BA:2012:G:H4’	55:BW:96:ILE:CD1	2.49	0.43
35:BA:2313:C:H2’	35:BA:2314:C:C6	2.54	0.43
35:BA:2423:U:H5’	35:BA:2423:U:C6	2.49	0.43
35:BA:2482:G:C2	35:BA:2483:C:H1’	2.53	0.43
35:BA:2579:C:H2’	35:BA:2580:U:O4’	2.19	0.43
35:BA:2580:U:O3’	39:BE:130:GLY:HA2	2.19	0.43
35:BA:2758:A:C2	35:BA:2759:G:H1’	2.53	0.43
37:BC:90:ALA:HB1	37:BC:155:ARG:HG2	2.01	0.43
37:BC:138:LEU:HA	37:BC:139:PRO:HD2	1.91	0.43
37:BC:225:ILE:O	37:BC:227:PRO:HD3	2.19	0.43
38:BD:31:LYS:NZ	38:BD:102:LYS:NZ	2.67	0.43
38:BD:198:ASN:C	38:BD:200:ASP:H	2.26	0.43
40:BF:157:VAL:O	40:BF:194:MET:HA	2.18	0.43
40:BF:167:ALA:HA	40:BF:170:LEU:HD23	2.01	0.43
41:BG:104:GLU:H	41:BG:107:LEU:H	1.67	0.43
41:BG:182:LYS:OXT	41:BG:182:LYS:CD	2.66	0.43
47:BO:8:LEU:HD13	47:BO:82:ASN:HB3	2.00	0.43
48:BP:146:VAL:HG13	48:BP:147:LEU:H	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:54:MET:HB3	49:BQ:64:ILE:HD11	1.99	0.43
52:BT:58:ASN:ND2	52:BT:58:ASN:N	2.58	0.43
54:BV:19:LYS:HZ3	54:BV:20:LEU:CB	2.25	0.43
56:BX:12:VAL:HG12	56:BX:29:TRP:CE2	2.53	0.43
57:BY:28:LYS:O	57:BY:29:GLU:C	2.62	0.43
57:BY:31:LEU:HB2	57:BY:32:PRO:HA	2.01	0.43
1:AA:192:U:H1'	20:AT:103:GLY:CA	2.49	0.43
1:AA:382:A:H2'	1:AA:383:A:C8	2.54	0.43
1:AA:563:A:N3	1:AA:563:A:H2'	2.34	0.43
1:AA:865:A:H2'	1:AA:866:C:C6	2.54	0.43
1:AA:1184:G:H2'	1:AA:1185:G:H5'	1.98	0.43
1:AA:1217:C:O2'	1:AA:1218:C:H5'	2.19	0.43
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.54	0.43
2:AB:231:GLU:CB	2:AB:232:PRO:HD3	2.33	0.43
4:AD:38:TYR:N	4:AD:38:TYR:CD1	2.87	0.43
4:AD:104:VAL:HG11	4:AD:146:ILE:HG13	2.01	0.43
7:AG:19:GLY:O	7:AG:20:ASP:CB	2.66	0.43
19:AS:22:LEU:HD11	19:AS:27:GLU:H	1.84	0.43
24:AY:9:LEU:HD22	24:AY:284:LEU:HD22	2.00	0.43
24:AY:153:MET:O	24:AY:157:LEU:HD23	2.18	0.43
24:AY:251:ILE:HD13	24:AY:285:ASP:HB3	2.00	0.43
24:AY:517:LEU:N	24:AY:517:LEU:CD1	2.80	0.43
24:AY:614:GLU:HG3	24:AY:617:MET:CE	2.48	0.43
24:AY:658:ASP:O	24:AY:662:LYS:HG2	2.19	0.43
24:AY:681:LYS:O	24:AY:684:GLN:HB3	2.19	0.43
25:B0:73:GLY:C	25:B0:75:LEU:H	2.27	0.43
27:B2:70:GLN:O	27:B2:71:ASN:O	2.36	0.43
28:B3:2:PRO:HG2	28:B3:39:ASP:HB3	2.01	0.43
31:B6:12:GLU:OE1	31:B6:52:VAL:HG13	2.19	0.43
32:B7:32:LYS:HE2	35:BA:180:G:OP2	2.19	0.43
33:B8:32:LEU:O	33:B8:33:ASN:O	2.36	0.43
35:BA:71:A:H5'	35:BA:71:A:C8	2.54	0.43
35:BA:71:A:OP2	35:BA:71:A:H3'	2.18	0.43
35:BA:92:A:H2'	35:BA:93:G:O4'	2.19	0.43
35:BA:108:U:H2'	35:BA:109:G:H5'	1.98	0.43
35:BA:154:G:O2'	35:BA:154(A):C:H5'	2.18	0.43
35:BA:301:G:OP2	57:BY:97:ARG:NH1	2.52	0.43
35:BA:422:A:H2'	35:BA:423:A:C8	2.54	0.43
35:BA:462:C:O2'	35:BA:463:G:C5'	2.49	0.43
35:BA:522:G:C6	35:BA:523:C:N4	2.86	0.43
35:BA:859:G:O3'	35:BA:860:U:O2	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1283:G:H2'	35:BA:1285:G:OP2	2.19	0.43
35:BA:1332:G:H4'	35:BA:1333:C:OP2	2.18	0.43
35:BA:1478:G:O2'	35:BA:1558:A:C2	2.72	0.43
35:BA:1794:U:H2'	35:BA:1795:C:C6	2.54	0.43
35:BA:1801:G:C6	35:BA:2202:C:O4'	2.71	0.43
35:BA:2104:G:N7	35:BA:2186:G:N2	2.67	0.43
35:BA:2305:A:O2'	41:BG:136:ARG:HD2	2.19	0.43
35:BA:2870:C:H5"	50:BR:65:LEU:HD21	2.01	0.43
36:BB:28:C:H2'	36:BB:29:A:H8	1.82	0.43
37:BC:60:ARG:HG3	37:BC:165:ARG:HB2	2.01	0.43
37:BC:89:GLU:C	37:BC:91:GLY:N	2.72	0.43
37:BC:195:ARG:HG3	37:BC:195:ARG:NH1	2.34	0.43
39:BE:4:ILE:HG12	39:BE:5:LEU:N	2.34	0.43
39:BE:8:LYS:HE2	39:BE:192:ASN:HD22	1.84	0.43
39:BE:24:THR:HB	39:BE:184:VAL:HG23	2.01	0.43
40:BF:178:PRO:HB3	40:BF:198:ALA:CB	2.49	0.43
41:BG:39:ILE:HD12	41:BG:157:ILE:CG1	2.39	0.43
41:BG:107:LEU:HD23	41:BG:111:LEU:CD1	2.49	0.43
42:BH:86:GLU:CB	42:BH:132:ARG:HB3	2.48	0.43
45:BL:85:UNK:O	45:BL:86:UNK:C	2.67	0.43
46:BN:36:GLY:HA2	46:BN:38:HIS:CE1	2.54	0.43
46:BN:55:VAL:HG22	46:BN:56:ASN:H	1.83	0.43
49:BQ:141:GLN:CD	58:BZ:72:ARG:CZ	2.92	0.43
51:BS:16:ASN:OD1	51:BS:16:ASN:C	2.62	0.43
52:BT:95:ARG:H	52:BT:95:ARG:HG2	1.67	0.43
57:BY:28:LYS:O	57:BY:38:ILE:N	2.52	0.43
58:BZ:144:LEU:HD11	58:BZ:150:LEU:H	1.84	0.43
1:AA:57:G:O2'	1:AA:58:C:C5'	2.61	0.42
1:AA:262:A:C6	1:AA:263:A:C6	3.06	0.42
1:AA:264:U:O2'	17:AQ:64:PRO:O	2.37	0.42
1:AA:276:G:O2'	1:AA:277:C:H5'	2.18	0.42
1:AA:309:G:C2	1:AA:310:G:N7	2.87	0.42
1:AA:519:C:C4	1:AA:520:A:C5	3.07	0.42
1:AA:902:G:H2'	1:AA:903:G:H8	1.84	0.42
1:AA:960:U:C4	1:AA:1225:A:C8	3.07	0.42
1:AA:1255:G:OP1	3:AC:26:LYS:HE2	2.18	0.42
2:AB:54:THR:O	2:AB:58:ILE:HG13	2.19	0.42
2:AB:166:ASP:HB3	2:AB:169:LYS:CB	2.49	0.42
3:AC:103:VAL:HG12	3:AC:104:GLN:H	1.82	0.42
3:AC:124:ILE:HG23	3:AC:125:GLU:N	2.33	0.42
9:AI:10:ARG:HG2	9:AI:75:ASP:HB2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:55:VAL:HG22	12:AL:56:ALA:H	1.83	0.42
12:AL:83:VAL:CG1	12:AL:84:LEU:N	2.81	0.42
13:AM:8:GLU:OE1	13:AM:22:ILE:HG12	2.19	0.42
16:AP:11:SER:OG	16:AP:12:LYS:N	2.51	0.42
17:AQ:69:LYS:C	17:AQ:70:ARG:HD2	2.43	0.42
24:AY:67:ALA:CB	24:AY:83:ASP:O	2.67	0.42
24:AY:166:LEU:HD13	24:AY:180:VAL:HG11	2.01	0.42
24:AY:394:ALA:O	24:AY:395:PRO:C	2.60	0.42
24:AY:491:VAL:CG1	24:AY:492:ASP:N	2.81	0.42
25:B0:54:GLY:O	25:B0:55:ARG:C	2.62	0.42
29:B4:61:ARG:HB2	29:B4:61:ARG:NH1	2.32	0.42
35:BA:405:U:H3'	35:BA:406:G:H5'	2.01	0.42
35:BA:833:U:H5'	48:BP:51:PHE:C	2.44	0.42
35:BA:852:G:H2'	35:BA:853:G:H8	1.84	0.42
35:BA:1326:U:O2'	35:BA:1327:C:H5'	2.19	0.42
35:BA:1446:C:O2	35:BA:1446:C:H5"	2.19	0.42
35:BA:1543:C:C3'	35:BA:1544:A:C5'	2.97	0.42
35:BA:1568:G:H5"	38:BD:61:LEU:HD23	2.00	0.42
35:BA:1643:G:C2'	35:BA:1644:C:O5'	2.67	0.42
35:BA:1658:C:H2'	35:BA:1659:U:C6	2.54	0.42
35:BA:2007:C:O5'	35:BA:2007:C:H6	2.02	0.42
35:BA:2334:G:N3	51:BS:18:ILE:CD1	2.82	0.42
35:BA:2341:G:H2'	35:BA:2342:C:C6	2.54	0.42
35:BA:2703:C:H2'	35:BA:2704:C:H6	1.84	0.42
37:BC:87:ALA:O	37:BC:88:GLU:C	2.61	0.42
40:BF:20:LEU:N	40:BF:24:LEU:HD23	2.30	0.42
40:BF:187:VAL:HG12	48:BP:7:ARG:HA	2.01	0.42
41:BG:51:ARG:O	41:BG:52:ILE:HG13	2.18	0.42
42:BH:12:PRO:CD	42:BH:76:VAL:HG13	2.48	0.42
42:BH:97:ARG:O	42:BH:97:ARG:HG2	2.18	0.42
46:BN:25:ARG:CG	46:BN:25:ARG:NH1	2.82	0.42
48:BP:25:SER:O	48:BP:30:THR:OG1	2.33	0.42
49:BQ:59:ARG:O	49:BQ:59:ARG:HD2	2.19	0.42
49:BQ:81:VAL:CG1	49:BQ:82:ARG:N	2.81	0.42
51:BS:30:ARG:HH11	51:BS:97:ARG:CB	2.32	0.42
51:BS:39:ILE:CD1	51:BS:73:LEU:HD21	2.48	0.42
51:BS:56:LEU:HD23	51:BS:56:LEU:O	2.19	0.42
52:BT:106:SER:HB2	52:BT:110:ILE:HG13	2.01	0.42
52:BT:133:GLU:O	52:BT:134:GLU:C	2.62	0.42
56:BX:23:GLU:CD	56:BX:23:GLU:N	2.77	0.42
57:BY:2:ARG:N	57:BY:4:LYS:HG2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:48:PHE:HA	58:BZ:51:ALA:HB3	2.00	0.42
1:AA:185:A:N6	1:AA:186:C:N4	2.67	0.42
1:AA:520:A:OP2	12:AL:51:ALA:HB1	2.17	0.42
1:AA:751:U:H2'	1:AA:752:G:O4'	2.19	0.42
1:AA:825:G:N2	8:AH:11:THR:HG21	2.34	0.42
1:AA:942:G:C6	1:AA:943:U:O4	2.72	0.42
1:AA:1425:U:H2'	1:AA:1426:C:C6	2.54	0.42
1:AA:1452:C:H4'	1:AA:1456:G:O5'	2.19	0.42
2:AB:190:THR:O	2:AB:190:THR:OG1	2.37	0.42
3:AC:138:VAL:HG21	3:AC:168:ALA:HB2	1.93	0.42
5:AE:79:GLU:CD	5:AE:79:GLU:H	2.27	0.42
5:AE:131:ILE:HD13	5:AE:131:ILE:HA	1.93	0.42
7:AG:44:TYR:O	7:AG:45:ASP:C	2.62	0.42
8:AH:67:PRO:O	8:AH:68:ARG:C	2.62	0.42
10:AJ:28:ARG:O	10:AJ:30:SER:N	2.43	0.42
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.29	0.42
11:AK:14:VAL:HG23	11:AK:14:VAL:O	2.19	0.42
11:AK:48:ILE:HG22	11:AK:49:GLY:N	2.34	0.42
12:AL:17:LYS:HD3	12:AL:18:VAL:N	2.26	0.42
12:AL:54:LYS:N	12:AL:54:LYS:HD2	2.34	0.42
13:AM:9:ILE:HA	13:AM:10:PRO:HD2	1.87	0.42
13:AM:91:ARG:CD	13:AM:97:PRO:O	2.67	0.42
14:AN:3:ARG:O	14:AN:4:LYS:C	2.62	0.42
19:AS:15:LEU:HD13	19:AS:15:LEU:C	2.44	0.42
20:AT:10:LEU:CD1	20:AT:11:SER:H	2.26	0.42
24:AY:96:ARG:NH1	24:AY:315:LYS:HG2	2.34	0.42
24:AY:546:ILE:HG22	24:AY:547:GLU:N	2.34	0.42
28:B3:6:VAL:HG12	28:B3:56:VAL:CG2	2.30	0.42
35:BA:49:A:H5"	35:BA:51:G:C5'	2.49	0.42
35:BA:309:G:O3'	57:BY:18:GLY:HA2	2.19	0.42
35:BA:548:A:H2'	35:BA:549:G:H5'	2.01	0.42
35:BA:792:G:H3'	35:BA:793:A:H5'	2.01	0.42
35:BA:1690:A:H2'	35:BA:1691:C:O4'	2.19	0.42
35:BA:1848:A:O2'	35:BA:1849:G:H5'	2.18	0.42
35:BA:1970:A:O4'	35:BA:1972:A:C1'	2.67	0.42
35:BA:2010:G:H2'	35:BA:2011:U:H6	1.84	0.42
35:BA:2031:A:C6	35:BA:2498:C:H1'	2.54	0.42
35:BA:2069:G:C2'	35:BA:2070:G:H5'	2.49	0.42
35:BA:2635:C:OP1	39:BE:77:ILE:HG21	2.19	0.42
35:BA:2777:G:C5'	35:BA:2778:A:H5'	2.47	0.42
37:BC:54:ARG:HE	37:BC:57:GLN:HG2	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:117:THR:O	37:BC:147:GLY:C	2.62	0.42
40:BF:68:LYS:HB3	40:BF:68:LYS:HE3	1.69	0.42
43:BJ:73:UNK:C	43:BJ:75:UNK:N	2.79	0.42
44:BK:115:UNK:O	44:BK:116:UNK:C	2.67	0.42
46:BN:72:TYR:CD2	46:BN:90:MET:HG3	2.54	0.42
47:BO:50:GLY:H	47:BO:53:LYS:NZ	2.16	0.42
47:BO:88:ASN:OD1	47:BO:88:ASN:C	2.63	0.42
49:BQ:84:GLY:O	49:BQ:85:LYS:HB2	2.19	0.42
51:BS:89:ARG:HG3	51:BS:92:TYR:HA	2.00	0.42
53:BU:97:ASP:OD2	53:BU:101:ARG:NH1	2.52	0.42
57:BY:23:ARG:CG	57:BY:23:ARG:HH11	2.31	0.42
57:BY:39:VAL:C	57:BY:40:GLU:HG2	2.44	0.42
58:BZ:53:ILE:HG13	58:BZ:54:HIS:HD2	1.84	0.42
1:AA:559:A:H2'	1:AA:559:A:N3	2.35	0.42
1:AA:686:U:O4'	11:AK:42:TRP:NE1	2.39	0.42
1:AA:803:G:H2'	1:AA:804:U:C6	2.54	0.42
2:AB:24:TRP:CD1	2:AB:24:TRP:H	2.37	0.42
2:AB:58:ILE:CG2	2:AB:222:ILE:HD11	2.49	0.42
2:AB:145:LEU:O	2:AB:149:LEU:N	2.52	0.42
3:AC:38:ARG:CB	3:AC:38:ARG:NH1	2.82	0.42
6:AF:15:ASP:O	6:AF:17:SER:N	2.52	0.42
9:AI:108:VAL:HG12	9:AI:109:VAL:N	2.34	0.42
9:AI:111:ARG:HG2	9:AI:112:LYS:N	2.33	0.42
10:AJ:6:ILE:CD1	10:AJ:23:ILE:HG21	2.48	0.42
10:AJ:27:ALA:HB2	10:AJ:85:LEU:HD11	2.01	0.42
11:AK:67:ASP:OD2	11:AK:71:LYS:HE3	2.19	0.42
13:AM:46:LYS:C	13:AM:47:ASP:OD1	2.61	0.42
14:AN:31:ARG:O	14:AN:32:SER:HB2	2.18	0.42
24:AY:15:ILE:HD13	24:AY:105:ILE:HD13	2.01	0.42
24:AY:99:ARG:NH2	24:AY:128:TYR:CZ	2.83	0.42
24:AY:166:LEU:HD21	24:AY:208:GLN:HG2	2.00	0.42
27:B2:69:ARG:NH2	35:BA:111:A:H4'	2.35	0.42
28:B3:9:VAL:HG13	28:B3:55:ARG:CD	2.45	0.42
31:B6:30:THR:O	31:B6:32:ASN:HB2	2.19	0.42
33:B8:12:LYS:HE2	48:BP:68:GLN:HG2	2.02	0.42
35:BA:49:A:N7	35:BA:177:G:C6	2.86	0.42
35:BA:479:A:N3	35:BA:481:G:H5"	2.34	0.42
35:BA:598:G:C5'	48:BP:15:ARG:HB3	2.47	0.42
35:BA:654(O):G:HO2'	35:BA:654(P):C:C1'	2.32	0.42
35:BA:814:C:H2'	35:BA:815:C:C6	2.54	0.42
35:BA:994:C:OP1	53:BU:53:ARG:NH2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1035:U:H3	35:BA:1120:G:H1	1.67	0.42
35:BA:1098:A:C2'	35:BA:1099:G:H5'	2.49	0.42
35:BA:1464:C:O2'	35:BA:1528:A:H8	2.02	0.42
35:BA:1591:G:H5'	35:BA:1591:G:C8	2.54	0.42
35:BA:2199:A:H3'	35:BA:2200:C:H6	1.84	0.42
35:BA:2751:G:O6	42:BH:1:MET:HG2	2.18	0.42
37:BC:97:GLY:O	37:BC:100:ILE:HG13	2.19	0.42
37:BC:153:ILE:O	37:BC:157:ILE:HG13	2.19	0.42
38:BD:33:LEU:HD22	38:BD:34:VAL:HG13	2.01	0.42
38:BD:130:ALA:HA	38:BD:192:THR:HA	2.00	0.42
40:BF:101:LEU:CD1	40:BF:102:PRO:HD2	2.47	0.42
40:BF:206:ILE:HG22	40:BF:207:GLY:N	2.34	0.42
41:BG:139:LEU:CD2	41:BG:139:LEU:N	2.81	0.42
42:BH:9:ILE:HD12	42:BH:69:ARG:HH11	1.85	0.42
42:BH:39:PRO:C	42:BH:41:MET:N	2.76	0.42
44:BK:95:UNK:CB	44:BK:135:UNK:HA	2.49	0.42
46:BN:39:ARG:C	46:BN:41:ASP:H	2.28	0.42
47:BO:63:VAL:HG12	47:BO:106:LEU:HD11	2.00	0.42
47:BO:119:PRO:O	47:BO:120:GLU:HB2	2.19	0.42
48:BP:35:HIS:O	48:BP:36:LYS:HB2	2.19	0.42
48:BP:97:PRO:O	48:BP:98:GLU:CB	2.65	0.42
1:AA:112:G:H2'	1:AA:113:G:C5'	2.25	0.42
1:AA:203:U:OP2	1:AA:203:U:C6	2.72	0.42
1:AA:370:C:C2	1:AA:392:G:N2	2.87	0.42
1:AA:417:C:O2'	1:AA:418:C:H5'	2.19	0.42
1:AA:560:U:O5'	1:AA:560:U:H6	2.03	0.42
1:AA:924:C:H2'	1:AA:925:G:C8	2.54	0.42
1:AA:1158:C:O2	1:AA:1158:C:O2'	2.36	0.42
1:AA:1193:G:H2'	1:AA:1194:U:H5'	2.00	0.42
1:AA:1286:A:C2	21:AU:22:ARG:NH2	2.88	0.42
1:AA:1385:G:N2	1:AA:1386:G:N3	2.67	0.42
1:AA:1498:U:O2'	23:AX:16:U:O3'	2.37	0.42
3:AC:20:SER:HB3	3:AC:40:ARG:HH22	1.84	0.42
4:AD:3:ARG:NH2	4:AD:5:ILE:HG12	2.25	0.42
6:AF:3:ARG:HD3	6:AF:64:GLN:NE2	2.35	0.42
6:AF:45:LEU:HD21	6:AF:57:GLN:HE22	1.85	0.42
6:AF:69:GLU:HG2	6:AF:70:ASP:N	2.34	0.42
7:AG:122:HIS:HD2	7:AG:125:MET:HE2	1.84	0.42
12:AL:34:ARG:O	12:AL:61:THR:HG23	2.19	0.42
13:AM:97:PRO:CA	13:AM:110:ARG:HD3	2.49	0.42
18:AR:31:LEU:HD23	18:AR:31:LEU:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:47:U:O5'	22:AV:47:U:C6	2.59	0.42
25:B0:10:THR:CG2	25:B0:11:ARG:N	2.70	0.42
27:B2:43:GLN:HB2	27:B2:44:LEU:H	1.58	0.42
29:B4:21:VAL:HG22	29:B4:35:VAL:HG21	2.02	0.42
30:B5:20:ARG:C	30:B5:22:HIS:N	2.77	0.42
35:BA:45:C:N4	35:BA:47:C:H41	2.17	0.42
35:BA:248:G:H5"	35:BA:386:G:N2	2.34	0.42
35:BA:376:C:H2'	35:BA:377:C:C6	2.54	0.42
35:BA:531:C:OP1	35:BA:561:G:N1	2.48	0.42
35:BA:580:C:H2'	35:BA:581:C:C6	2.54	0.42
35:BA:868:U:C4	35:BA:869:G:N7	2.87	0.42
35:BA:882:G:H2'	35:BA:883:G:C8	2.43	0.42
35:BA:896:A:C2	58:BZ:177:PRO:HD2	2.54	0.42
35:BA:921:G:H4'	35:BA:2269:A:C5	2.54	0.42
35:BA:992:C:OP1	54:BV:74:LYS:NZ	2.51	0.42
35:BA:1084:A:N7	35:BA:1085:A:C4	2.88	0.42
35:BA:1104:C:O2'	35:BA:1105:U:C5'	2.66	0.42
35:BA:1510:G:H2'	35:BA:1511:C:C6	2.54	0.42
35:BA:1770:G:C5	35:BA:1771:C:C4	3.07	0.42
35:BA:1800:C:H5'	38:BD:147:LEU:CD2	2.49	0.42
35:BA:2153:G:N2	35:BA:2154:G:H1'	2.34	0.42
35:BA:2335:A:O2'	35:BA:2336:A:H5"	2.19	0.42
35:BA:2693:A:H2'	35:BA:2694:G:H8	1.84	0.42
35:BA:2774:C:H2'	35:BA:2775:A:O4'	2.19	0.42
36:BB:38:C:O2	36:BB:48:A:H1'	2.19	0.42
36:BB:68:C:O2'	36:BB:69:G:H5'	2.19	0.42
41:BG:104:GLU:HA	41:BG:107:LEU:CB	2.50	0.42
41:BG:137:GLU:CG	41:BG:155:MET:N	2.82	0.42
41:BG:170:ARG:NE	41:BG:180:PHE:HE2	2.17	0.42
45:BL:106:UNK:O	45:BL:107:UNK:C	2.68	0.42
46:BN:41:ASP:O	46:BN:42:TRP:C	2.61	0.42
48:BP:115:LEU:C	48:BP:115:LEU:CD2	2.92	0.42
48:BP:124:LYS:HE3	48:BP:142:GLY:O	2.20	0.42
49:BQ:141:GLN:NE2	58:BZ:72:ARG:NE	2.67	0.42
50:BR:116:LEU:HA	50:BR:116:LEU:HD23	1.67	0.42
54:BV:29:PRO:CA	54:BV:61:VAL:HG23	2.43	0.42
54:BV:47:VAL:HG12	54:BV:52:VAL:CB	2.49	0.42
56:BX:22:ALA:HB3	56:BX:23:GLU:OE2	2.19	0.42
56:BX:23:GLU:O	56:BX:25:LYS:N	2.45	0.42
56:BX:52:VAL:O	56:BX:52:VAL:HG12	2.20	0.42
58:BZ:102:LEU:HD21	58:BZ:124:ILE:CD1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:45:U:H2'	1:AA:46:G:C8	2.54	0.42
1:AA:862:C:C3'	1:AA:863:U:H5'	2.45	0.42
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.20	0.42
1:AA:1279:A:O2'	1:AA:1281:U:OP2	2.31	0.42
1:AA:1389:C:H6	1:AA:1389:C:O5'	2.03	0.42
1:AA:1403:C:H6	1:AA:1403:C:O5'	2.03	0.42
1:AA:1440:C:O2'	1:AA:1441:G:H5'	2.19	0.42
2:AB:232:PRO:O	2:AB:233:SER:C	2.62	0.42
4:AD:18:LYS:HG3	4:AD:33:MET:HG3	2.00	0.42
4:AD:191:ARG:HD3	4:AD:200:GLU:OE1	2.19	0.42
5:AE:145:LYS:HA	8:AH:107:LEU:HD22	2.02	0.42
7:AG:31:MET:SD	7:AG:36:LYS:HB2	2.59	0.42
9:AI:47:LEU:N	9:AI:47:LEU:CD1	2.82	0.42
10:AJ:9:ARG:HH22	10:AJ:97:GLU:HG3	1.84	0.42
12:AL:111:LYS:O	12:AL:112:ASP:HB2	2.19	0.42
13:AM:16:ASP:OD1	13:AM:16:ASP:N	2.53	0.42
13:AM:23:TYR:CD2	13:AM:70:LEU:HD13	2.55	0.42
14:AN:41:ARG:NH1	14:AN:42:ILE:HD13	2.34	0.42
15:AO:74:ASP:HB3	15:AO:77:ARG:HG2	2.00	0.42
17:AQ:68:ARG:N	17:AQ:70:ARG:NH1	2.64	0.42
24:AY:57:GLN:NE2	24:AY:464:ASP:OD1	2.52	0.42
24:AY:87:HIS:HE2	35:BA:2662:A:P	2.42	0.42
24:AY:109:ASP:O	24:AY:111:SER:N	2.53	0.42
24:AY:517:LEU:HD13	24:AY:563:ILE:CA	2.50	0.42
24:AY:532:GLY:C	24:AY:534:ILE:N	2.76	0.42
24:AY:621:ILE:CG1	24:AY:643:ILE:HD13	2.49	0.42
25:B0:53:MET:SD	25:B0:57:PHE:HB3	2.59	0.42
26:B1:58:ILE:HD11	26:B1:90:ILE:HB	2.01	0.42
31:B6:17:LYS:O	31:B6:18:ARG:HD2	2.20	0.42
34:B9:35:ARG:HD3	35:BA:2742:C:OP1	2.20	0.42
35:BA:299:A:C5	35:BA:322:A:C2	3.07	0.42
35:BA:310:A:P	57:BY:18:GLY:HA2	2.59	0.42
35:BA:603:A:N7	35:BA:655:A:C5	2.87	0.42
35:BA:811:U:P	48:BP:33:ARG:NH1	2.92	0.42
35:BA:833:U:C4'	48:BP:51:PHE:C	2.92	0.42
35:BA:1027:A:N6	35:BA:1126:A:N9	2.68	0.42
35:BA:1564:C:O2'	35:BA:1565:C:H5'	2.19	0.42
35:BA:1787:A:C2	35:BA:1788:C:C5	3.08	0.42
35:BA:2000:G:H21	35:BA:2001:A:C1'	2.32	0.42
35:BA:2009:G:N3	35:BA:2010:G:C8	2.88	0.42
35:BA:2310:A:C5	41:BG:75:LYS:HE2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2464:C:O2'	35:BA:2465:C:O5'	2.37	0.42
35:BA:2823:A:OP1	39:BE:113:PHE:HB2	2.19	0.42
37:BC:89:GLU:O	37:BC:91:GLY:N	2.51	0.42
38:BD:31:LYS:NZ	38:BD:102:LYS:HZ2	2.17	0.42
39:BE:53:PRO:C	39:BE:54:GLN:CG	2.92	0.42
40:BF:28:ILE:CD1	40:BF:28:ILE:H	2.32	0.42
40:BF:110:LEU:HD21	40:BF:181:LEU:HG	2.01	0.42
41:BG:38:VAL:CA	41:BG:93:THR:HA	2.41	0.42
41:BG:144:ILE:CG2	41:BG:145:THR:H	2.30	0.42
45:BL:106:UNK:C	45:BL:108:UNK:N	2.81	0.42
46:BN:18:ALA:O	46:BN:19:GLU:C	2.63	0.42
48:BP:115:LEU:CB	48:BP:131:SER:OG	2.67	0.42
49:BQ:6:ARG:O	49:BQ:7:MET:HG3	2.19	0.42
49:BQ:56:ARG:CG	49:BQ:56:ARG:NH1	2.76	0.42
53:BU:91:ASP:O	53:BU:95:LEU:HB2	2.19	0.42
56:BX:28:PHE:CE2	56:BX:92:LEU:HD11	2.54	0.42
1:AA:563:A:N3	1:AA:563:A:C3'	2.83	0.42
1:AA:867:G:O2'	1:AA:868:C:H5'	2.19	0.42
1:AA:954:G:O2'	1:AA:955:U:H5'	2.19	0.42
1:AA:980:C:H6	1:AA:980:C:C5'	2.20	0.42
1:AA:1010:G:O2'	1:AA:1011:G:H5'	2.19	0.42
1:AA:1287:A:C6	1:AA:1288:A:N6	2.88	0.42
1:AA:1368:G:OP1	10:AJ:62:HIS:NE2	2.44	0.42
2:AB:7:VAL:O	2:AB:11:LEU:HD12	2.19	0.42
2:AB:72:GLY:O	2:AB:94:ASN:HA	2.19	0.42
3:AC:31:HIS:O	3:AC:33:LEU:N	2.52	0.42
3:AC:123:GLN:CA	3:AC:123:GLN:HE21	2.33	0.42
5:AE:120:THR:HG22	5:AE:121:LYS:N	2.35	0.42
7:AG:71:PRO:HD3	7:AG:103:TRP:HZ3	1.82	0.42
7:AG:74:GLU:HG2	7:AG:91:VAL:CG2	2.47	0.42
11:AK:56:GLY:O	11:AK:89:ALA:CB	2.67	0.42
12:AL:20:LYS:N	12:AL:20:LYS:CD	2.83	0.42
19:AS:20:LEU:HD13	29:B4:61:ARG:NH2	2.33	0.42
19:AS:29:ARG:O	19:AS:31:ILE:HG22	2.18	0.42
24:AY:113:GLY:HA3	24:AY:152:THR:HG21	2.02	0.42
24:AY:126:GLU:HG2	24:AY:132:ARG:NH2	2.29	0.42
26:B1:3:LYS:O	26:B1:12:PRO:HD3	2.20	0.42
26:B1:25:LYS:HB2	26:B1:25:LYS:HE3	1.56	0.42
26:B1:52:ARG:O	26:B1:53:VAL:O	2.37	0.42
28:B3:9:VAL:HG21	28:B3:55:ARG:HD2	2.01	0.42
31:B6:19:ARG:CG	31:B6:20:ASN:N	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:192:C:C5	35:BA:193:U:C6	3.07	0.42
35:BA:328:U:H2'	35:BA:329:G:OP1	2.19	0.42
35:BA:646:A:H2'	35:BA:647:G:O4'	2.19	0.42
35:BA:697:C:H2'	35:BA:698:C:C5'	2.45	0.42
35:BA:999:U:H5"	35:BA:1154:G:O6	2.19	0.42
35:BA:1022:G:C5	35:BA:1141:U:O4	2.73	0.42
35:BA:1144:G:C6	35:BA:1145:C:C4	3.08	0.42
35:BA:1348:G:H2'	35:BA:1349:A:C5'	2.47	0.42
35:BA:1530:C:H2'	35:BA:1531:C:C6	2.55	0.42
35:BA:1817:G:H2'	35:BA:1818:U:C5'	2.31	0.42
35:BA:1936:A:OP2	35:BA:1961:C:N4	2.51	0.42
35:BA:2174:C:C3'	35:BA:2175:C:H5'	2.49	0.42
35:BA:2563:U:H4'	47:BO:28:SER:HA	2.00	0.42
36:BB:66:A:O2'	36:BB:67:G:P	2.76	0.42
36:BB:106:G:H2'	36:BB:107:G:H8	1.84	0.42
38:BD:70:TRP:O	38:BD:73:VAL:HG23	2.19	0.42
38:BD:105:ILE:HD12	38:BD:105:ILE:HA	1.80	0.42
40:BF:4:VAL:H	40:BF:24:LEU:HD12	1.84	0.42
41:BG:93:THR:CG2	41:BG:94:LEU:H	2.29	0.42
41:BG:140:ILE:O	41:BG:141:PHE:O	2.37	0.42
47:BO:3:GLN:O	47:BO:4:PRO:C	2.62	0.42
47:BO:35:VAL:CG2	47:BO:69:ILE:HD11	2.48	0.42
47:BO:104:ARG:NH1	47:BO:107:ARG:NH1	2.60	0.42
51:BS:92:TYR:CD1	51:BS:93:LYS:N	2.87	0.42
52:BT:58:ASN:HD22	52:BT:58:ASN:N	2.10	0.42
55:BW:12:ILE:HD13	55:BW:17:VAL:HG22	2.02	0.42
57:BY:97:ARG:O	57:BY:98:VAL:CG2	2.67	0.42
58:BZ:5:LEU:HD11	58:BZ:39:VAL:HB	2.02	0.42
1:AA:22:G:H4'	1:AA:885:G:C8	2.55	0.42
1:AA:38:G:O2'	1:AA:39:G:C5'	2.68	0.42
1:AA:507:C:C2'	1:AA:508:C:OP1	2.68	0.42
1:AA:1116:C:O2'	1:AA:1117:G:H5"	2.19	0.42
1:AA:1304:G:H1'	1:AA:1333:A:N6	2.32	0.42
2:AB:51:LEU:CD2	2:AB:201:ILE:HD12	2.49	0.42
4:AD:91:SER:O	4:AD:92:VAL:C	2.61	0.42
7:AG:125:MET:O	7:AG:128:ALA:CB	2.65	0.42
14:AN:24:CYS:HB2	14:AN:40:CYS:HB3	2.01	0.42
14:AN:26:ARG:HB3	14:AN:43:CYS:SG	2.59	0.42
15:AO:66:LEU:HD12	15:AO:66:LEU:HA	1.88	0.42
24:AY:7:TYR:CZ	24:AY:370:LYS:HB2	2.55	0.42
24:AY:150:ILE:HD11	24:AY:163:VAL:HG22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:237:PRO:HB2	24:AY:242:LEU:HG	2.02	0.42
28:B3:1:MET:CG	28:B3:2:PRO:HD2	2.49	0.42
29:B4:33:VAL:CG1	29:B4:34:GLU:H	2.22	0.42
35:BA:54:G:C2'	35:BA:55:G:O5'	2.67	0.42
35:BA:221:A:H4'	35:BA:222:A:O5'	2.20	0.42
35:BA:359:A:H2'	35:BA:360:G:O4'	2.20	0.42
35:BA:554:U:C2'	35:BA:555:U:H5'	2.50	0.42
35:BA:607:U:H3'	35:BA:607:U:H6	1.85	0.42
35:BA:752:A:HO2'	35:BA:753:C:P	2.39	0.42
35:BA:922:U:H2'	35:BA:923:C:C6	2.55	0.42
35:BA:1138:G:N3	46:BN:106:MET:HE2	2.34	0.42
35:BA:1203:G:H3'	35:BA:1204:A:H5"	2.01	0.42
35:BA:1820:U:HO2'	35:BA:1821:A:P	2.42	0.42
35:BA:2203:U:O3'	35:BA:2205:C:OP1	2.38	0.42
35:BA:2241:A:H2'	35:BA:2242:G:C8	2.54	0.42
35:BA:2722:G:H2'	35:BA:2723:C:C6	2.55	0.42
35:BA:2789:C:H5'	35:BA:2790:A:OP1	2.20	0.42
35:BA:2808:U:H5	35:BA:2891:G:C5	2.37	0.42
37:BC:73:VAL:CG1	37:BC:74:ARG:H	2.33	0.42
38:BD:7:LYS:O	38:BD:9:TYR:N	2.50	0.42
38:BD:30:GLU:CG	38:BD:63:ARG:CZ	2.87	0.42
38:BD:43:ARG:HB2	38:BD:54:ARG:HB2	2.01	0.42
38:BD:210:GLY:C	38:BD:212:SER:N	2.76	0.42
41:BG:67:LYS:HA	41:BG:68:PRO:HD3	1.78	0.42
42:BH:149:ARG:HH12	42:BH:167:GLU:CD	2.28	0.42
42:BH:156:ALA:C	42:BH:158:HIS:N	2.75	0.42
44:BK:70:UNK:O	44:BK:71:UNK:CB	2.68	0.42
48:BP:114:ILE:C	48:BP:114:ILE:CD1	2.80	0.42
52:BT:93:ARG:HD2	52:BT:93:ARG:HA	1.79	0.42
52:BT:105:LEU:HD22	52:BT:109:GLU:OE1	2.20	0.42
55:BW:24:ILE:O	55:BW:71:VAL:CG2	2.67	0.42
1:AA:38:G:O2'	1:AA:39:G:H5"	2.20	0.42
1:AA:39:G:N9	1:AA:498:U:C4	2.59	0.42
1:AA:190:U:O2'	1:AA:191:G:H5'	2.19	0.42
1:AA:490:G:C2	1:AA:491:G:C5	3.07	0.42
1:AA:796:C:HO2'	1:AA:797:C:H5'	1.77	0.42
1:AA:936:C:C2'	1:AA:937:A:O5'	2.68	0.42
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.20	0.42
2:AB:15:VAL:CG2	2:AB:209:ARG:HH21	2.14	0.42
2:AB:51:LEU:HD23	2:AB:201:ILE:HD12	2.01	0.42
2:AB:73:THR:O	2:AB:78:GLN:HG3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:95:THR:C	3:AC:97:LYS:N	2.77	0.42
3:AC:129:ALA:CB	3:AC:132:ARG:HG3	2.47	0.42
4:AD:32:ALA:C	4:AD:34:GLU:N	2.77	0.42
4:AD:33:MET:HA	4:AD:33:MET:HE2	2.02	0.42
4:AD:39:PRO:HB2	4:AD:44:GLY:HA2	2.02	0.42
4:AD:57:ARG:HB3	4:AD:206:PHE:HB2	2.01	0.42
5:AE:36:ASP:O	5:AE:37:ARG:HB2	2.20	0.42
9:AI:41:VAL:O	9:AI:41:VAL:HG12	2.19	0.42
20:AT:41:ILE:HG12	20:AT:41:ILE:H	1.58	0.42
24:AY:42:ILE:C	24:AY:44:GLU:H	2.28	0.42
24:AY:58:GLU:O	24:AY:59:ARG:C	2.63	0.42
24:AY:179:ASP:OD1	24:AY:181:LEU:HB3	2.20	0.42
24:AY:210:ARG:HH11	24:AY:210:ARG:CG	2.31	0.42
24:AY:218:GLU:OE2	45:BL:83:UNK:CB	2.68	0.42
24:AY:494:GLU:O	24:AY:494:GLU:HG3	2.20	0.42
24:AY:556:ILE:HG13	24:AY:558:PHE:CD1	2.55	0.42
24:AY:605:ILE:HD13	24:AY:677:GLN:HG2	2.02	0.42
25:B0:3:HIS:HB2	35:BA:2494:G:H5'	2.01	0.42
25:B0:7:LEU:O	25:B0:8:GLY:O	2.37	0.42
29:B4:12:ALA:CA	29:B4:24:THR:HG22	2.25	0.42
33:B8:5:LYS:HG2	35:BA:242:G:C8	2.54	0.42
33:B8:10:ALA:C	33:B8:12:LYS:N	2.78	0.42
33:B8:63:PRO:O	33:B8:64:TYR:C	2.63	0.42
34:B9:19:ARG:C	34:B9:21:GLY:N	2.77	0.42
35:BA:36:G:N2	35:BA:444:C:O2	2.45	0.42
35:BA:526:A:O2'	35:BA:2043:C:H2'	2.14	0.42
35:BA:861:A:H2'	35:BA:862:G:O4'	2.20	0.42
35:BA:1027:A:N6	35:BA:1126:A:C1'	2.83	0.42
35:BA:1060:U:C4	35:BA:1062:G:H4'	2.55	0.42
35:BA:1213:A:C2'	35:BA:1214:A:H5'	2.50	0.42
35:BA:1221:C:C2	35:BA:1221(A):C:C5	3.06	0.42
35:BA:1541:G:O2'	35:BA:1542:A:P	2.77	0.42
35:BA:1678:G:H21	35:BA:1989:G:N2	2.06	0.42
35:BA:1856:G:C2	35:BA:1887:C:C2	3.08	0.42
35:BA:2039:C:H2'	35:BA:2040:C:H6	1.85	0.42
35:BA:2810:A:H2'	39:BE:61:ARG:NH2	2.35	0.42
36:BB:13:A:O2'	36:BB:15:A:H5"	2.19	0.42
38:BD:112:GLN:HB2	38:BD:115:GLN:NE2	2.35	0.42
39:BE:67:PHE:CE1	39:BE:69:LYS:HE3	2.55	0.42
41:BG:22:ARG:O	41:BG:23:PHE:CG	2.72	0.42
41:BG:40:ASN:HA	41:BG:91:ARG:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:64:THR:HA	41:BG:102:PHE:CD1	2.54	0.42
41:BG:66:GLN:OE1	41:BG:94:LEU:CG	2.61	0.42
42:BH:98:LEU:HB2	42:BH:125:VAL:CG2	2.50	0.42
47:BO:98:VAL:CG1	47:BO:117:LEU:C	2.93	0.42
48:BP:78:PRO:CA	48:BP:110:TYR:HE2	2.31	0.42
49:BQ:12:GLN:CD	49:BQ:73:PRO:HD2	2.45	0.42
51:BS:57:LYS:HD2	51:BS:58:LEU:N	2.35	0.42
51:BS:61:ASN:O	51:BS:65:VAL:HG23	2.20	0.42
53:BU:78:THR:O	53:BU:79:PHE:C	2.63	0.42
54:BV:39:LEU:CD1	54:BV:51:VAL:HA	2.50	0.42
54:BV:66:ARG:O	54:BV:67:GLY:O	2.38	0.42
57:BY:88:LYS:CB	57:BY:91:GLU:HB2	2.49	0.42
1:AA:347:G:H21	1:AA:348:G:H1'	1.85	0.42
1:AA:683:G:C5	1:AA:684:A:C5	3.07	0.42
1:AA:1134:G:N2	1:AA:1141:C:C2	2.88	0.42
1:AA:1279:A:H2	10:AJ:43:ARG:HH12	1.68	0.42
1:AA:1316:G:O2'	14:AN:18:VAL:HG11	2.19	0.42
3:AC:22:TRP:CE2	14:AN:54:PRO:CG	2.94	0.42
3:AC:71:ALA:HB2	3:AC:115:LEU:CD2	2.47	0.42
5:AE:92:LYS:HA	5:AE:93:PRO:HD3	1.95	0.42
7:AG:86:GLN:O	7:AG:87:VAL:CG1	2.68	0.42
10:AJ:54:PHE:CZ	10:AJ:55:LYS:CE	3.03	0.42
10:AJ:82:ILE:C	10:AJ:84:GLN:N	2.78	0.42
11:AK:81:ASP:OD1	11:AK:107:SER:OG	2.34	0.42
15:AO:56:LEU:O	15:AO:56:LEU:HD13	2.20	0.42
15:AO:75:PRO:O	15:AO:78:TYR:HB3	2.20	0.42
19:AS:88:LYS:O	19:AS:90:THR:N	2.53	0.42
24:AY:315:LYS:O	24:AY:316:ILE:HD13	2.19	0.42
24:AY:390:VAL:O	24:AY:391:GLY:C	2.63	0.42
24:AY:515:GLU:OE1	24:AY:515:GLU:N	2.53	0.42
26:B1:78:LYS:HB3	26:B1:78:LYS:HE2	1.68	0.42
29:B4:30:GLU:CG	29:B4:31:ILE:N	2.81	0.42
30:B5:10:LYS:HG3	35:BA:1263:U:C1'	2.50	0.42
35:BA:17:G:O2'	35:BA:18:C:H5'	2.20	0.42
35:BA:92:A:C2	35:BA:93:G:H1'	2.55	0.42
35:BA:548:A:C2'	35:BA:549:G:H5'	2.49	0.42
35:BA:753:C:H2'	35:BA:754:C:C6	2.55	0.42
35:BA:1036:G:N1	35:BA:1120:G:C5	2.88	0.42
35:BA:1558:A:H4'	35:BA:1559:G:H2'	2.02	0.42
35:BA:1625:C:C2'	35:BA:1626:G:H5'	2.50	0.42
35:BA:1823:G:O2'	35:BA:1824:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2307:G:H3'	35:BA:2307:G:N3	2.35	0.42
35:BA:2567:G:H2'	35:BA:2568:C:H6	1.84	0.42
37:BC:48:LEU:CD2	37:BC:59:VAL:HG21	2.50	0.42
39:BE:92:THR:O	39:BE:95:ILE:HG12	2.20	0.42
39:BE:170:LEU:N	39:BE:170:LEU:HD12	2.34	0.42
39:BE:201:THR:OG1	39:BE:202:LYS:N	2.52	0.42
40:BF:7:TYR:CE1	40:BF:196:LEU:HD11	2.55	0.42
40:BF:10:PRO:HD2	40:BF:13:SER:O	2.19	0.42
41:BG:7:LEU:HD12	41:BG:104:GLU:HG3	2.01	0.42
41:BG:7:LEU:HD11	41:BG:176:LEU:HD21	2.02	0.42
48:BP:88:LEU:HD21	48:BP:125:VAL:HG21	2.02	0.42
50:BR:104:ARG:HD2	50:BR:109:ALA:HB3	2.02	0.42
50:BR:116:LEU:O	50:BR:117:VAL:HG12	2.20	0.42
52:BT:90:GLN:HB3	52:BT:121:ILE:CG1	2.50	0.42
53:BU:59:ARG:CG	53:BU:59:ARG:NH1	2.81	0.42
53:BU:84:LYS:HD2	53:BU:89:GLU:HG3	2.02	0.42
56:BX:35:THR:HB	56:BX:38:GLU:HB2	2.02	0.42
1:AA:240:C:H2'	1:AA:241:C:H6	1.85	0.42
1:AA:368:U:C3'	1:AA:368:U:C6	3.03	0.42
1:AA:495:A:O2'	1:AA:496:A:O5'	2.30	0.42
1:AA:560:U:C4'	1:AA:561:U:C5'	2.76	0.42
1:AA:663:A:C2'	1:AA:664:G:H5'	2.49	0.42
1:AA:748:C:H1'	1:AA:749:C:C5	2.48	0.42
1:AA:859:A:HO2'	1:AA:860:A:H5'	1.81	0.42
1:AA:1296:C:H4'	1:AA:1302:U:O4	2.20	0.42
1:AA:1495:U:H2'	1:AA:1496:C:C6	2.55	0.42
4:AD:81:GLU:OE2	4:AD:139:ARG:NH2	2.52	0.42
5:AE:38:GLN:HE21	5:AE:38:GLN:HB3	1.69	0.42
5:AE:145:LYS:HD2	8:AH:107:LEU:CD2	2.50	0.42
13:AM:20:THR:C	13:AM:22:ILE:H	2.26	0.42
14:AN:42:ILE:O	14:AN:46:GLU:HG3	2.20	0.42
17:AQ:65:ILE:O	17:AQ:65:ILE:HG22	2.20	0.42
17:AQ:67:LYS:CA	17:AQ:70:ARG:NH1	2.81	0.42
24:AY:403:GLU:HG3	24:AY:404:VAL:N	2.35	0.42
24:AY:486:THR:HG21	24:AY:519:ARG:NH2	2.35	0.42
25:B0:2:ALA:HB3	35:BA:2602:A:H61	1.85	0.42
25:B0:36:ILE:CD1	35:BA:2355:C:O4'	2.68	0.42
25:B0:78:TYR:O	25:B0:79:VAL:CG2	2.63	0.42
29:B4:22:ILE:CG1	41:BG:105:LYS:HD3	2.50	0.42
35:BA:66:C:O2'	35:BA:67:U:H5'	2.20	0.42
35:BA:575:A:OP2	35:BA:2499:C:O2'	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:586:A:H2	35:BA:809:G:N3	2.18	0.42
35:BA:908:C:O2'	35:BA:909:A:H5'	2.20	0.42
35:BA:958:U:O2'	35:BA:959:A:OP2	2.30	0.42
35:BA:1076:C:C5	35:BA:1077:A:N7	2.88	0.42
35:BA:1415:U:HO2'	35:BA:1417:C:P	2.42	0.42
35:BA:1902:C:H2'	35:BA:1903:G:O5'	2.19	0.42
35:BA:2033:A:C4'	35:BA:2034:U:OP1	2.57	0.42
35:BA:2177:C:N4	35:BA:2178:C:C4	2.87	0.42
35:BA:2292:C:O2'	35:BA:2293:C:H5'	2.20	0.42
35:BA:2615:U:H2'	35:BA:2616:C:C6	2.55	0.42
36:BB:42:C:H41	41:BG:91:ARG:NH2	2.18	0.42
37:BC:6:LYS:N	37:BC:9:ARG:HH12	2.17	0.42
38:BD:4:LYS:O	38:BD:17:THR:HA	2.19	0.42
39:BE:51:PHE:CG	39:BE:52:LEU:N	2.88	0.42
39:BE:111:ARG:HB3	50:BR:2:ARG:NH1	2.35	0.42
39:BE:167:VAL:CG2	39:BE:170:LEU:HD11	2.50	0.42
40:BF:28:ILE:HD13	40:BF:28:ILE:H	1.85	0.42
40:BF:84:VAL:C	40:BF:86:GLY:N	2.77	0.42
40:BF:135:LYS:O	40:BF:136:THR:C	2.62	0.42
41:BG:110:ALA:HB1	41:BG:142:PRO:CB	2.50	0.42
42:BH:86:GLU:HB2	42:BH:132:ARG:HB3	2.02	0.42
42:BH:98:LEU:HB2	42:BH:125:VAL:HG21	2.02	0.42
44:BK:63:UNK:O	44:BK:64:UNK:CB	2.67	0.42
48:BP:47:ASP:CB	48:BP:49:ARG:N	2.74	0.42
50:BR:4:LEU:O	50:BR:4:LEU:CD2	2.68	0.42
50:BR:79:LEU:HA	50:BR:83:ILE:HG12	2.02	0.42
51:BS:54:LEU:C	51:BS:57:LYS:H	2.28	0.42
51:BS:87:PHE:O	51:BS:88:ASP:HB2	2.19	0.42
52:BT:29:ARG:C	52:BT:30:VAL:HG22	2.41	0.42
53:BU:20:LEU:HD22	53:BU:20:LEU:N	2.32	0.42
54:BV:19:LYS:HG2	54:BV:94:LEU:CB	2.42	0.42
54:BV:47:VAL:HG12	54:BV:52:VAL:CA	2.49	0.42
55:BW:36:LEU:N	55:BW:36:LEU:CD2	2.83	0.42
58:BZ:155:LEU:H	58:BZ:155:LEU:HD23	1.85	0.42
1:AA:131:C:H2'	1:AA:132:C:H6	1.85	0.41
1:AA:222:U:H2'	1:AA:223:U:C6	2.55	0.41
1:AA:748:C:O2'	1:AA:749:C:P	2.78	0.41
1:AA:917:G:H2'	1:AA:918:A:C8	2.54	0.41
1:AA:962:C:H2'	1:AA:963:G:O5'	2.20	0.41
1:AA:979:C:O2	14:AN:19:ARG:HG2	2.20	0.41
1:AA:1053:G:O2'	1:AA:1054:C:P	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1151:A:O2'	1:AA:1152:A:OP2	2.30	0.41
1:AA:1158:C:O2	1:AA:1158:C:H2'	2.17	0.41
1:AA:1238:A:P	1:AA:1335:C:HO2'	2.33	0.41
2:AB:39:ILE:O	2:AB:40:HIS:O	2.38	0.41
2:AB:75:LYS:HB3	2:AB:76:GLN:HE21	1.85	0.41
3:AC:120:VAL:O	3:AC:123:GLN:N	2.50	0.41
5:AE:7:GLU:O	5:AE:8:GLU:HB3	2.19	0.41
6:AF:29:ALA:O	6:AF:30:LEU:C	2.62	0.41
7:AG:86:GLN:C	7:AG:87:VAL:HG12	2.45	0.41
9:AI:17:VAL:HG23	9:AI:63:ILE:HG12	2.01	0.41
10:AJ:49:VAL:HG23	14:AN:41:ARG:HD3	2.01	0.41
11:AK:50:TYR:CD1	11:AK:54:ARG:HB3	2.54	0.41
13:AM:52:GLU:HA	13:AM:55:ARG:HB3	2.02	0.41
19:AS:42:PRO:C	19:AS:44:MET:N	2.74	0.41
24:AY:328:ILE:HD11	24:AY:335:LEU:HD23	2.01	0.41
24:AY:402:ILE:O	24:AY:403:GLU:CB	2.68	0.41
24:AY:546:ILE:O	24:AY:550:MET:HB2	2.20	0.41
24:AY:548:GLU:C	24:AY:550:MET:N	2.76	0.41
25:B0:39:ARG:NH2	35:BA:2355:C:O2	2.53	0.41
25:B0:67:VAL:HG12	25:B0:68:GLU:N	2.35	0.41
26:B1:43:TYR:N	26:B1:43:TYR:CD1	2.87	0.41
26:B1:73:LEU:O	26:B1:74:VAL:C	2.63	0.41
27:B2:2:LYS:HA	27:B2:5:GLU:OE2	2.20	0.41
27:B2:22:GLU:O	27:B2:26:ARG:HD2	2.20	0.41
29:B4:37:SER:O	29:B4:38:LYS:HB3	2.20	0.41
29:B4:46:GLN:HG3	29:B4:48:ARG:HD3	2.02	0.41
29:B4:56:VAL:O	29:B4:58:ARG:N	2.53	0.41
31:B6:25:LYS:HE2	33:B8:34:TRP:NE1	2.20	0.41
35:BA:28:A:N6	35:BA:512:G:O2'	2.53	0.41
35:BA:654(F):C:N4	35:BA:654(M):C:H42	2.18	0.41
35:BA:849:A:C8	35:BA:850:C:C5	3.07	0.41
35:BA:1038:C:C3'	35:BA:1039:G:C5'	2.90	0.41
35:BA:1412:A:HO2'	35:BA:1413:G:H5'	1.82	0.41
35:BA:1799:G:C2	35:BA:1800:C:C5	3.08	0.41
35:BA:1822:G:C2'	35:BA:1823:G:C5'	2.96	0.41
35:BA:1914:C:H3'	35:BA:1915:U:C6	2.55	0.41
35:BA:2011:U:H2'	35:BA:2012:G:C5'	2.50	0.41
35:BA:2191:G:N3	35:BA:2191:G:H2'	2.35	0.41
35:BA:2363:C:C2'	35:BA:2364:C:H5'	2.42	0.41
35:BA:2653:U:H3'	35:BA:2654:A:C8	2.55	0.41
35:BA:2712(A):A:H8	35:BA:2712(A):A:O5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2785:C:H2'	35:BA:2786:U:C6	2.55	0.41
35:BA:2788:C:H2'	35:BA:2789:C:O4'	2.20	0.41
37:BC:189:ASN:O	37:BC:190:ILE:C	2.63	0.41
41:BG:42:GLY:O	41:BG:43:LEU:CB	2.67	0.41
41:BG:137:GLU:O	41:BG:138:GLN:O	2.37	0.41
46:BN:3:THR:C	46:BN:4:TYR:CG	2.98	0.41
48:BP:85:LEU:HA	48:BP:88:LEU:CB	2.50	0.41
48:BP:104:GLY:H	48:BP:105:LEU:HD12	1.85	0.41
50:BR:103:ARG:NH1	50:BR:110:PRO:HD3	2.30	0.41
51:BS:67:ARG:HH21	51:BS:100:ALA:HB3	1.85	0.41
51:BS:68:GLN:O	51:BS:70:GLY:N	2.52	0.41
52:BT:96:ARG:HG2	52:BT:98:LYS:O	2.19	0.41
53:BU:87:GLY:C	53:BU:89:GLU:N	2.75	0.41
53:BU:112:ARG:NH1	54:BV:46:VAL:HG11	2.35	0.41
54:BV:15:GLU:HG2	54:BV:16:PRO:CD	2.50	0.41
54:BV:16:PRO:HD3	54:BV:99:ILE:HD11	2.01	0.41
54:BV:34:GLU:O	54:BV:36:PRO:HD3	2.20	0.41
54:BV:35:LEU:HB3	54:BV:37:VAL:HG23	2.02	0.41
57:BY:10:GLY:C	57:BY:27:VAL:HG12	2.45	0.41
57:BY:27:VAL:C	57:BY:29:GLU:OE1	2.63	0.41
57:BY:28:LYS:CG	57:BY:37:VAL:HB	2.49	0.41
57:BY:53:PRO:O	57:BY:54:LYS:C	2.62	0.41
1:AA:116:A:OP2	1:AA:116:A:N7	2.53	0.41
1:AA:264:U:H6	1:AA:264:U:O5'	2.03	0.41
1:AA:304:U:O2'	1:AA:305:G:H5'	2.19	0.41
1:AA:411:A:O2'	1:AA:413:G:H5'	2.20	0.41
1:AA:432:A:C8	1:AA:433:C:C5	3.08	0.41
1:AA:771:G:C4	1:AA:772:U:C5	3.07	0.41
1:AA:773:G:C4	1:AA:774:G:N7	2.88	0.41
1:AA:872:A:O3'	1:AA:873:A:H2'	2.20	0.41
1:AA:895:G:H2'	1:AA:896:C:C6	2.54	0.41
1:AA:973:G:N3	10:AJ:55:LYS:CE	2.83	0.41
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.20	0.41
4:AD:6:GLY:O	4:AD:7:PRO:C	2.63	0.41
6:AF:67:MET:HE1	6:AF:75:LEU:HD22	1.99	0.41
9:AI:40:LEU:C	9:AI:42:ARG:N	2.77	0.41
11:AK:126:ARG:HB3	11:AK:126:ARG:CZ	2.49	0.41
16:AP:59:TRP:HA	16:AP:62:VAL:HG23	2.02	0.41
16:AP:60:LEU:HD23	16:AP:60:LEU:HA	1.86	0.41
22:AV:58:A:O2'	22:AV:60:U:OP2	2.31	0.41
24:AY:58:GLU:HG3	24:AY:65:ILE:HG12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:343:ASN:ND2	24:AY:346:LYS:N	2.68	0.41
24:AY:356:LEU:HD21	24:AY:358:MET:SD	2.60	0.41
25:B0:37:LEU:H	25:B0:37:LEU:CD2	2.26	0.41
30:B5:49:CYS:HB2	30:B5:50:GLY:H	1.63	0.41
32:B7:4:THR:HG22	35:BA:687:C:O4'	2.20	0.41
33:B8:12:LYS:HG2	48:BP:68:GLN:CD	2.44	0.41
33:B8:12:LYS:HG2	48:BP:68:GLN:CG	2.50	0.41
35:BA:196:A:H5"	48:BP:46:LYS:HE2	2.01	0.41
35:BA:231:C:O2'	35:BA:232:G:H5'	2.20	0.41
35:BA:330:A:HO2'	35:BA:331:A:H8	1.67	0.41
35:BA:435:C:C2'	35:BA:436:C:H5'	2.51	0.41
35:BA:944:G:H5'	35:BA:945:A:C5'	2.50	0.41
35:BA:996:A:H4'	53:BU:92:ARG:CD	2.51	0.41
35:BA:1475:G:H2'	35:BA:1476:C:C6	2.55	0.41
35:BA:1789:A:OP1	38:BD:222:ARG:HD3	2.20	0.41
35:BA:1853:A:H2'	35:BA:1854:A:C8	2.54	0.41
35:BA:2040:C:H2'	35:BA:2041:U:H6	1.85	0.41
35:BA:2648:C:H2'	35:BA:2649:U:H6	1.83	0.41
38:BD:48:ARG:HG3	38:BD:48:ARG:NH1	2.35	0.41
41:BG:167:GLU:H	41:BG:167:GLU:CD	2.28	0.41
42:BH:6:ARG:HH11	42:BH:6:ARG:CG	2.33	0.41
46:BN:55:VAL:HG22	46:BN:126:PRO:HA	2.02	0.41
46:BN:56:ASN:O	46:BN:57:ALA:O	2.37	0.41
47:BO:64:ARG:HG2	47:BO:79:PHE:CG	2.56	0.41
48:BP:30:THR:CG2	48:BP:31:ALA:H	2.33	0.41
48:BP:97:PRO:HG3	48:BP:112:LEU:CD1	2.50	0.41
56:BX:27:THR:HB	56:BX:80:ILE:HB	2.03	0.41
57:BY:6:HIS:CD2	57:BY:6:HIS:H	2.38	0.41
57:BY:20:TYR:O	57:BY:21:LYS:C	2.62	0.41
1:AA:204:U:H4'	1:AA:216:G:C5'	2.48	0.41
1:AA:668:G:O2'	15:AO:46:HIS:CD2	2.74	0.41
1:AA:1049:U:O2'	14:AN:2:ALA:N	2.53	0.41
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.19	0.41
2:AB:160:ASP:O	2:AB:161:ALA:HB2	2.20	0.41
4:AD:28:SER:OG	4:AD:30:LYS:HG2	2.21	0.41
6:AF:42:GLU:HG3	6:AF:61:LEU:CD2	2.51	0.41
6:AF:42:GLU:HG3	6:AF:61:LEU:HD23	2.01	0.41
9:AI:56:LEU:HB3	9:AI:57:GLY:H	1.71	0.41
16:AP:21:VAL:HG12	16:AP:34:GLU:O	2.20	0.41
16:AP:28:ARG:NH1	16:AP:29:ASP:OD2	2.54	0.41
18:AR:40:LEU:HB3	18:AR:79:LEU:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:47:HIS:O	19:AS:62:ILE:CG2	2.68	0.41
20:AT:14:LYS:HE3	20:AT:18:GLN:HE22	1.85	0.41
22:AV:12:U:H3	22:AV:23:A:H62	1.67	0.41
24:AY:15:ILE:HG22	24:AY:103:GLY:CA	2.50	0.41
24:AY:95:GLU:OE1	24:AY:128:TYR:OH	2.37	0.41
24:AY:401:SER:C	24:AY:402:ILE:HG13	2.43	0.41
24:AY:507:TYR:CD1	24:AY:508:GLY:N	2.88	0.41
25:B0:67:VAL:HG12	25:B0:68:GLU:H	1.84	0.41
26:B1:40:ARG:HG2	26:B1:40:ARG:NH1	2.35	0.41
28:B3:13:ILE:HD11	35:BA:989:G:C8	2.55	0.41
31:B6:8:LYS:HA	31:B6:27:LYS:HA	2.02	0.41
33:B8:26:LYS:HB3	33:B8:44:LYS:HG3	2.01	0.41
33:B8:62:LEU:O	33:B8:64:TYR:N	2.53	0.41
35:BA:29:U:H2'	35:BA:30:G:C8	2.55	0.41
35:BA:630:G:C4'	35:BA:640:C:H4'	2.50	0.41
35:BA:643:A:C2'	35:BA:644:A:H5'	2.51	0.41
35:BA:664:C:H4'	35:BA:941:A:OP1	2.20	0.41
35:BA:673:C:H5"	40:BF:80:ALA:HB1	2.02	0.41
35:BA:943:U:OP2	48:BP:38:GLN:NE2	2.52	0.41
35:BA:1039:G:O6	35:BA:1116:C:N3	2.53	0.41
35:BA:1144:G:C4	35:BA:1145:C:C5	3.08	0.41
35:BA:1289:C:H2'	35:BA:1290:C:C6	2.55	0.41
35:BA:1301:A:H2'	35:BA:1302:A:C2'	2.51	0.41
35:BA:1344:G:H4'	35:BA:1384:A:C5	2.56	0.41
35:BA:1374:G:O2'	35:BA:1375:C:H5'	2.19	0.41
35:BA:1486:A:O4'	35:BA:1505:C:N4	2.53	0.41
35:BA:2117:A:O2'	35:BA:2118:U:O5'	2.35	0.41
35:BA:2362:G:H2'	35:BA:2363:C:C5'	2.49	0.41
35:BA:2611:U:O2	35:BA:2611:U:H2'	2.20	0.41
35:BA:2637:U:O2'	35:BA:2638:G:H5'	2.20	0.41
36:BB:77:U:P	58:BZ:19:ARG:HH22	2.43	0.41
36:BB:91:C:OP1	49:BQ:16:ARG:HG3	2.20	0.41
38:BD:65:ILE:HD13	38:BD:65:ILE:O	2.21	0.41
38:BD:129:ASN:O	38:BD:193:VAL:HG12	2.20	0.41
39:BE:47:VAL:HG22	39:BE:84:PHE:O	2.20	0.41
40:BF:195:ASP:OD1	40:BF:195:ASP:C	2.63	0.41
41:BG:60:LEU:HA	41:BG:63:ILE:HG23	2.02	0.41
46:BN:45:ASN:N	46:BN:45:ASN:ND2	2.67	0.41
52:BT:85:LYS:NZ	52:BT:85:LYS:CB	2.54	0.41
53:BU:66:ASN:HD21	53:BU:70:ARG:HE	1.67	0.41
55:BW:62:HIS:O	55:BW:63:ASP:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:49:VAL:O	57:BY:50:ARG:CB	2.67	0.41
57:BY:95:LYS:HD2	57:BY:99:CYS:O	2.20	0.41
58:BZ:60:GLU:O	58:BZ:61:LEU:HB2	2.20	0.41
58:BZ:155:LEU:CD2	58:BZ:155:LEU:N	2.83	0.41
1:AA:89:C:HO2'	1:AA:90:U:P	2.43	0.41
1:AA:149:A:H2'	1:AA:150:C:C6	2.55	0.41
1:AA:263:A:HO2'	1:AA:264:U:H5'	1.83	0.41
1:AA:266:G:O2'	1:AA:267:C:OP2	2.35	0.41
1:AA:431:A:H2'	1:AA:432:A:O4'	2.20	0.41
1:AA:701:C:H1'	1:AA:703:G:C2	2.55	0.41
1:AA:917:G:C2'	1:AA:918:A:H5'	2.50	0.41
1:AA:1070:U:O2'	1:AA:1071:C:H5'	2.21	0.41
1:AA:1118:C:O2	1:AA:1179:A:C6	2.74	0.41
1:AA:1152:A:C2'	1:AA:1153:C:O5'	2.69	0.41
2:AB:114:ARG:NH1	2:AB:141:GLU:OE2	2.54	0.41
2:AB:181:PHE:HD1	8:AH:70:GLN:HB3	1.86	0.41
3:AC:151:VAL:O	3:AC:167:TRP:HA	2.20	0.41
4:AD:31:CYS:O	4:AD:32:ALA:HB3	2.20	0.41
4:AD:158:ILE:CG2	4:AD:181:MET:HE1	2.50	0.41
7:AG:152:ALA:HB1	7:AG:155:ARG:NH2	2.36	0.41
16:AP:28:ARG:NH1	16:AP:29:ASP:CG	2.79	0.41
20:AT:14:LYS:HA	20:AT:17:ARG:NE	2.36	0.41
24:AY:146:LEU:HD23	24:AY:146:LEU:O	2.19	0.41
24:AY:435:ASP:OD1	24:AY:437:THR:HB	2.20	0.41
24:AY:517:LEU:HD13	24:AY:563:ILE:HA	2.01	0.41
25:B0:19:LYS:NZ	25:B0:19:LYS:HB3	2.23	0.41
33:B8:48:PHE:HB3	33:B8:49:VAL:H	1.75	0.41
35:BA:20:C:O2'	35:BA:21:A:H5'	2.20	0.41
35:BA:156:U:C2'	35:BA:157:U:H5'	2.50	0.41
35:BA:157:U:C2'	35:BA:158:U:H5'	2.50	0.41
35:BA:385:C:O2'	35:BA:388:G:N2	2.53	0.41
35:BA:773:U:H4'	38:BD:47:GLY:HA3	2.01	0.41
35:BA:942:G:C2'	35:BA:943:U:H5'	2.50	0.41
35:BA:955:C:O2'	35:BA:956:G:C5'	2.57	0.41
35:BA:1290:C:H6	35:BA:1290:C:O5'	2.04	0.41
35:BA:1381:G:O2'	35:BA:1382:G:C5'	2.68	0.41
35:BA:1495:A:N3	35:BA:1495:A:H2'	2.35	0.41
35:BA:1528:A:N1	35:BA:1542:A:C2	2.88	0.41
35:BA:1692:U:O2'	35:BA:1693:U:H2'	2.20	0.41
35:BA:1805:U:C2'	35:BA:1806:C:C5'	2.88	0.41
35:BA:1996:C:H6	35:BA:1996:C:OP1	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2680:C:OP2	39:BE:111:ARG:NH2	2.51	0.41
36:BB:43:C:H1'	41:BG:94:LEU:HD22	2.02	0.41
39:BE:77:ILE:CG2	39:BE:78:LEU:HD12	2.51	0.41
40:BF:136:THR:O	40:BF:137:LYS:C	2.63	0.41
43:BJ:44:UNK:O	43:BJ:48:UNK:CB	2.68	0.41
43:BJ:94:UNK:C	43:BJ:96:UNK:N	2.82	0.41
44:BK:89:UNK:C	44:BK:91:UNK:N	2.82	0.41
49:BQ:66:ILE:H	49:BQ:66:ILE:HG13	1.66	0.41
51:BS:29:PHE:C	51:BS:29:PHE:CD1	2.98	0.41
51:BS:83:LYS:O	51:BS:83:LYS:HG2	2.20	0.41
53:BU:39:LEU:O	53:BU:40:PHE:C	2.63	0.41
54:BV:5:VAL:CG2	54:BV:35:LEU:HB3	2.50	0.41
57:BY:31:LEU:HD13	57:BY:31:LEU:HA	1.92	0.41
58:BZ:12:GLY:HA2	58:BZ:36:LYS:NZ	2.35	0.41
58:BZ:119:GLU:O	58:BZ:119:GLU:HG2	2.20	0.41
1:AA:494:U:O5'	1:AA:494:U:C6	2.59	0.41
1:AA:671:G:H2'	1:AA:672:U:O4'	2.20	0.41
1:AA:683:G:H3'	1:AA:684:A:C8	2.56	0.41
1:AA:696:A:H1'	1:AA:786:G:O2'	2.21	0.41
1:AA:711:G:O2'	1:AA:712:A:H5'	2.20	0.41
1:AA:936:C:HO2'	1:AA:937:A:H5'	1.71	0.41
1:AA:939:G:H1	1:AA:1344:C:N4	2.13	0.41
1:AA:946:A:N6	1:AA:947:G:O6	2.54	0.41
1:AA:957:U:H4'	19:AS:79:THR:O	2.21	0.41
1:AA:1048:G:C6	1:AA:1210:C:N4	2.89	0.41
1:AA:1442(A):G:H2'	52:BT:122:ASP:OD2	2.21	0.41
2:AB:21:ARG:C	2:AB:23:ARG:N	2.77	0.41
2:AB:32:ILE:HD13	2:AB:40:HIS:CD2	2.55	0.41
2:AB:87:ARG:HD3	2:AB:219:VAL:CG1	2.49	0.41
3:AC:123:GLN:HE21	3:AC:123:GLN:HA	1.86	0.41
4:AD:3:ARG:H	4:AD:3:ARG:CD	2.25	0.41
4:AD:93:PHE:O	4:AD:94:LEU:C	2.63	0.41
5:AE:139:LEU:HD23	5:AE:142:LEU:HD11	2.02	0.41
7:AG:143:ARG:O	7:AG:144:MET:C	2.63	0.41
8:AH:1:MET:O	8:AH:2:LEU:CB	2.69	0.41
9:AI:49:PRO:HG2	9:AI:81:ILE:CG2	2.43	0.41
9:AI:59:PHE:CZ	9:AI:88:TYR:CE2	3.07	0.41
12:AL:7:ILE:O	12:AL:11:VAL:HG23	2.20	0.41
13:AM:70:LEU:C	13:AM:70:LEU:CD2	2.93	0.41
13:AM:89:GLY:C	13:AM:91:ARG:N	2.77	0.41
14:AN:13:THR:O	14:AN:14:PRO:C	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:21:VAL:CG1	16:AP:34:GLU:HB3	2.50	0.41
18:AR:71:LYS:O	18:AR:72:ARG:C	2.63	0.41
24:AY:635:GLU:OE2	24:AY:644:ARG:NH1	2.54	0.41
26:B1:82:LEU:HD12	26:B1:82:LEU:HA	1.82	0.41
28:B3:7:LYS:CB	28:B3:34:GLU:HB3	2.49	0.41
29:B4:28:LYS:NZ	41:BG:144:ILE:HG22	2.36	0.41
29:B4:53:GLU:OE1	29:B4:54:GLY:N	2.54	0.41
31:B6:6:ARG:NH1	31:B6:6:ARG:CB	2.78	0.41
35:BA:245:G:C6	35:BA:254:G:N2	2.88	0.41
35:BA:361:G:H2'	35:BA:362:U:C5'	2.42	0.41
35:BA:483:A:H2'	35:BA:484:C:O4'	2.20	0.41
35:BA:569:U:C4	35:BA:570:G:C6	3.08	0.41
35:BA:747:U:O4	35:BA:2613:U:C2	2.72	0.41
35:BA:749:C:O2	35:BA:1618:A:H2'	2.20	0.41
35:BA:962:G:H2'	35:BA:963:U:C5'	2.47	0.41
35:BA:1318:C:C3'	35:BA:1319:G:H5"	2.47	0.41
35:BA:1505:C:O2	35:BA:1505:C:O4'	2.39	0.41
35:BA:1509(B):A:H2'	35:BA:1510:G:C8	2.55	0.41
35:BA:1636:C:H2'	35:BA:1637:A:C8	2.55	0.41
35:BA:1748:G:H2'	35:BA:1749:A:O4'	2.20	0.41
35:BA:1855:G:N2	35:BA:1888:G:H1'	2.36	0.41
35:BA:1887:C:H2'	35:BA:1888:G:C4'	2.51	0.41
35:BA:1893:C:H2'	35:BA:1894:C:O4'	2.20	0.41
35:BA:2006:C:N4	35:BA:2007:C:N4	2.68	0.41
35:BA:2176:A:O2'	35:BA:2177:C:P	2.79	0.41
35:BA:2523:G:H2'	35:BA:2524:G:H5'	2.01	0.41
35:BA:2528:U:H2'	35:BA:2530:A:O5'	2.20	0.41
35:BA:2666:C:H5'	35:BA:2667:C:OP2	2.20	0.41
36:BB:7:G:C3'	36:BB:8:U:C5'	2.99	0.41
37:BC:11:LEU:H	37:BC:11:LEU:HD22	1.86	0.41
37:BC:149:ASN:O	37:BC:151:GLY:N	2.54	0.41
38:BD:68:LYS:HD3	38:BD:70:TRP:CZ2	2.55	0.41
38:BD:165:ILE:HA	38:BD:175:LEU:HD23	2.03	0.41
40:BF:102:PRO:HB2	40:BF:105:VAL:CG2	2.49	0.41
41:BG:135:LEU:HD12	41:BG:135:LEU:H	1.84	0.41
42:BH:11:VAL:HG13	42:BH:12:PRO:HD2	2.03	0.41
46:BN:37:LYS:HG3	46:BN:42:TRP:CZ3	2.55	0.41
47:BO:87:ILE:HD13	47:BO:93:PRO:HA	2.02	0.41
48:BP:47:ASP:OD2	48:BP:49:ARG:CA	2.69	0.41
49:BQ:32:TYR:O	49:BQ:105:GLU:CB	2.66	0.41
49:BQ:48:GLU:O	49:BQ:52:VAL:HG23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:35:LYS:NZ	52:BT:41:ARG:CD	2.83	0.41
53:BU:112:ARG:NH2	54:BV:46:VAL:HG13	2.35	0.41
54:BV:2:PHE:CD1	54:BV:3:ALA:N	2.87	0.41
1:AA:66:G:C6	1:AA:104:G:C2	3.09	0.41
1:AA:409:G:OP1	4:AD:22:LYS:O	2.38	0.41
1:AA:490:G:H2'	1:AA:491:G:O5'	2.20	0.41
1:AA:538:G:H2'	1:AA:539:A:C8	2.56	0.41
1:AA:862:C:C3'	1:AA:863:U:C5'	2.98	0.41
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.51	0.41
1:AA:958:A:C6	1:AA:959:A:N1	2.89	0.41
1:AA:999:C:O2'	1:AA:1000:U:H5'	2.20	0.41
1:AA:1030(A):G:C6	1:AA:1030(B):C:N4	2.89	0.41
1:AA:1505:G:OP2	1:AA:1505:G:C8	2.73	0.41
1:AA:1508:G:H2'	1:AA:1509:C:C6	2.56	0.41
1:AA:1527:C:H6	1:AA:1527:C:O5'	2.03	0.41
3:AC:69:HIS:HA	3:AC:104:GLN:HB2	2.02	0.41
3:AC:191:THR:HG21	3:AC:193:TYR:CE1	2.55	0.41
8:AH:72:PRO:O	8:AH:73:ASP:CB	2.69	0.41
9:AI:47:LEU:C	9:AI:49:PRO:CD	2.90	0.41
10:AJ:47:PHE:CE2	14:AN:37:PHE:HE2	2.38	0.41
10:AJ:78:ASN:ND2	10:AJ:80:LYS:H	2.06	0.41
12:AL:18:VAL:O	12:AL:19:ARG:CB	2.68	0.41
15:AO:24:SER:O	15:AO:25:THR:C	2.64	0.41
24:AY:31:ARG:HD2	24:AY:263:ALA:O	2.20	0.41
24:AY:126:GLU:C	24:AY:128:TYR:N	2.77	0.41
24:AY:137:ASN:HD22	24:AY:138:LYS:H	1.59	0.41
24:AY:150:ILE:CD1	24:AY:163:VAL:HG22	2.51	0.41
25:B0:56:ASP:O	25:B0:57:PHE:C	2.64	0.41
27:B2:7:ARG:NH2	35:BA:102:G:OP2	2.53	0.41
28:B3:51:ALA:C	28:B3:53:LEU:H	2.27	0.41
29:B4:61:ARG:NH1	29:B4:61:ARG:N	2.69	0.41
30:B5:2:ALA:N	35:BA:747:U:C4	2.89	0.41
31:B6:44:ARG:HD2	31:B6:44:ARG:HA	1.85	0.41
35:BA:257:A:H2'	35:BA:258:G:H8	1.86	0.41
35:BA:600:G:H2'	35:BA:601:C:C6	2.54	0.41
35:BA:1111:A:O4'	42:BH:1:MET:SD	2.79	0.41
35:BA:1386:C:H2'	35:BA:1387:C:C6	2.56	0.41
35:BA:1750:G:O2'	35:BA:1751:C:H5'	2.20	0.41
35:BA:1770:G:C6	35:BA:1771:C:C4	3.08	0.41
35:BA:1790:C:H5"	35:BA:1791:A:OP1	2.20	0.41
35:BA:2011:U:OP2	55:BW:16:LYS:HD3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2153:G:N3	35:BA:2153:G:H2'	2.34	0.41
35:BA:2320:A:N3	35:BA:2320:A:H2'	2.36	0.41
35:BA:2402:C:C1'	35:BA:2403:C:OP2	2.69	0.41
35:BA:2553:G:O5'	35:BA:2553:G:H8	2.04	0.41
35:BA:2577:A:H5"	35:BA:2578:G:H5'	2.02	0.41
35:BA:2606:C:C2	35:BA:2607:G:C8	3.08	0.41
35:BA:2836:U:O5'	35:BA:2836:U:H6	2.02	0.41
36:BB:22:U:H3	36:BB:61:G:H1	1.68	0.41
36:BB:35:U:O2'	36:BB:36:C:H5'	2.21	0.41
39:BE:30:PRO:HD3	39:BE:180:ASN:CG	2.45	0.41
40:BF:19:GLU:HA	40:BF:24:LEU:HD21	2.02	0.41
41:BG:167:GLU:O	41:BG:168:GLU:C	2.63	0.41
42:BH:5:GLY:HA2	42:BH:69:ARG:CB	2.50	0.41
42:BH:70:THR:O	42:BH:74:ASN:ND2	2.52	0.41
42:BH:105:LEU:H	42:BH:105:LEU:HD23	1.84	0.41
44:BK:107:UNK:O	44:BK:108:UNK:C	2.68	0.41
45:BL:81:UNK:C	45:BL:83:UNK:N	2.84	0.41
49:BQ:75:THR:HG23	49:BQ:76:LYS:N	2.34	0.41
50:BR:10:LEU:HB2	50:BR:11:ASN:H	1.52	0.41
52:BT:16:ARG:HH11	52:BT:16:ARG:CG	2.34	0.41
52:BT:34:VAL:HA	52:BT:39:ARG:HA	2.03	0.41
53:BU:112:ARG:NH1	54:BV:46:VAL:CG1	2.83	0.41
55:BW:17:VAL:C	55:BW:19:LEU:N	2.74	0.41
57:BY:45:VAL:HG11	57:BY:60:PHE:HB3	2.02	0.41
58:BZ:20:ARG:CB	58:BZ:20:ARG:NH1	2.84	0.41
58:BZ:96:VAL:O	58:BZ:127:LYS:HA	2.20	0.41
1:AA:198:G:O2'	1:AA:199:G:OP2	2.38	0.41
1:AA:269:C:H2'	1:AA:270:A:H8	1.86	0.41
1:AA:323:U:O5'	1:AA:323:U:H6	2.03	0.41
1:AA:530:G:H3'	1:AA:531:U:H5'	2.01	0.41
1:AA:592:G:N3	1:AA:593:G:C8	2.89	0.41
1:AA:892:A:C2	1:AA:907:A:C4	3.09	0.41
1:AA:960:U:O2'	1:AA:1223:C:C5'	2.68	0.41
1:AA:1385:G:H2'	1:AA:1386:G:O5'	2.21	0.41
4:AD:200:GLU:O	4:AD:201:GLN:C	2.61	0.41
9:AI:126:SER:OG	9:AI:127:LYS:N	2.41	0.41
10:AJ:76:ASN:HA	10:AJ:77:PRO:HD2	1.96	0.41
11:AK:21:ILE:N	11:AK:21:ILE:CD1	2.83	0.41
11:AK:90:GLY:O	11:AK:91:ARG:C	2.63	0.41
19:AS:60:VAL:O	19:AS:60:VAL:HG13	2.20	0.41
24:AY:438:PHE:CE1	24:AY:451:ILE:CG1	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:459:LEU:H	24:AY:459:LEU:CD1	2.32	0.41
24:AY:546:ILE:HG12	24:AY:590:ILE:HG12	2.02	0.41
25:B0:7:LEU:HB3	49:BQ:85:LYS:CG	2.46	0.41
25:B0:24:LYS:HA	25:B0:24:LYS:HD3	1.89	0.41
35:BA:27:G:O2'	35:BA:28:A:OP2	2.30	0.41
35:BA:247:G:H1'	35:BA:251:A:H62	1.86	0.41
35:BA:380:U:O2'	35:BA:381:G:H5'	2.20	0.41
35:BA:586:A:N1	35:BA:809:G:O2'	2.45	0.41
35:BA:600:G:C2'	35:BA:601:C:C5'	2.98	0.41
35:BA:732:C:H2'	35:BA:733:G:O4'	2.21	0.41
35:BA:1144:G:H2'	35:BA:1145:C:H6	1.84	0.41
35:BA:1817:G:OP1	38:BD:88:ARG:NH2	2.50	0.41
35:BA:2131:G:C5'	35:BA:2133:A:O4'	2.69	0.41
35:BA:2355:C:C4	35:BA:2356:C:C4	3.08	0.41
35:BA:2612:C:C2'	35:BA:2613:U:H5'	2.51	0.41
38:BD:142:VAL:HG22	38:BD:143:HIS:N	2.36	0.41
39:BE:68:ALA:O	39:BE:70:ALA:N	2.54	0.41
40:BF:8:GLN:O	40:BF:10:PRO:N	2.53	0.41
40:BF:8:GLN:CB	40:BF:126:VAL:HA	2.44	0.41
40:BF:19:GLU:CA	40:BF:24:LEU:HD21	2.51	0.41
40:BF:114:VAL:O	40:BF:115:ALA:C	2.62	0.41
40:BF:126:VAL:HG22	40:BF:195:ASP:HA	2.02	0.41
40:BF:185:ASP:HA	40:BF:188:ARG:CD	2.50	0.41
41:BG:56:ALA:HB2	41:BG:153:ARG:NH1	2.36	0.41
41:BG:67:LYS:HG2	41:BG:68:PRO:O	2.20	0.41
42:BH:107:VAL:O	42:BH:152:ARG:NE	2.51	0.41
46:BN:73:THR:CG2	46:BN:82:LEU:HD11	2.50	0.41
47:BO:104:ARG:NH2	52:BT:33:LYS:HE3	2.31	0.41
48:BP:59:LEU:C	48:BP:61:ARG:H	2.26	0.41
48:BP:70:GLN:HB3	48:BP:72:PRO:HD2	2.02	0.41
48:BP:111:ARG:HA	48:BP:128:HIS:CD2	2.56	0.41
49:BQ:29:PHE:HB3	49:BQ:65:PHE:CD2	2.55	0.41
49:BQ:133:ARG:O	49:BQ:137:TYR:HE2	2.04	0.41
50:BR:4:LEU:C	50:BR:4:LEU:HD23	2.46	0.41
51:BS:66:ALA:O	51:BS:69:VAL:HG12	2.20	0.41
53:BU:82:GLY:O	53:BU:86:ALA:N	2.41	0.41
58:BZ:182:LYS:O	58:BZ:183:LEU:HB3	2.21	0.41
1:AA:175:C:H2'	1:AA:176:C:C6	2.54	0.41
1:AA:269:C:H2'	1:AA:270:A:C8	2.56	0.41
1:AA:307:C:C5	1:AA:308:C:C5	3.08	0.41
1:AA:356:A:C1'	1:AA:368:U:O2'	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:490:G:C2'	1:AA:491:G:O5'	2.69	0.41
1:AA:593:G:H1	1:AA:646:U:H3	1.68	0.41
1:AA:872:A:N3	1:AA:872:A:H2'	2.35	0.41
1:AA:955:U:H4'	19:AS:85:LYS:O	2.20	0.41
1:AA:1003:G:O2'	1:AA:1004:A:O5'	2.29	0.41
1:AA:1059:C:O3'	14:AN:45:ARG:NH2	2.53	0.41
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.86	0.41
1:AA:1149:C:P	9:AI:9:ARG:NH1	2.94	0.41
1:AA:1226:C:H4'	19:AS:80:TYR:CZ	2.55	0.41
2:AB:58:ILE:CG2	2:AB:222:ILE:CD1	2.99	0.41
9:AI:95:LYS:NZ	9:AI:96:LEU:CD1	2.82	0.41
11:AK:79:SER:HB2	11:AK:106:LYS:HG3	2.03	0.41
12:AL:86:ARG:HB2	12:AL:101:VAL:HG23	2.03	0.41
15:AO:39:LEU:HD13	15:AO:56:LEU:CD2	2.51	0.41
16:AP:81:ARG:HD3	16:AP:83:GLU:OE2	2.21	0.41
24:AY:367:GLU:O	24:AY:367:GLU:HG2	2.21	0.41
27:B2:45:SER:C	27:B2:47:ASN:H	2.25	0.41
31:B6:8:LYS:HE3	31:B6:25:LYS:CD	2.51	0.41
35:BA:30:G:H2'	35:BA:31:C:H6	1.75	0.41
35:BA:115:C:H2'	35:BA:116:C:H6	1.84	0.41
35:BA:917:A:H2'	35:BA:918:A:O4'	2.20	0.41
35:BA:1047:G:C2'	35:BA:1110:G:H21	2.31	0.41
35:BA:1092:C:H2'	35:BA:1093:G:H5'	2.02	0.41
35:BA:1360:A:C8	35:BA:1361:G:C8	3.09	0.41
35:BA:1472:A:C2'	35:BA:1473:G:H5'	2.51	0.41
35:BA:1569:A:O5'	38:BD:59:LYS:NZ	2.53	0.41
35:BA:1589:C:H2'	35:BA:1590:U:C6	2.56	0.41
35:BA:1994:C:H2'	35:BA:1995:U:H5'	2.03	0.41
35:BA:2097:C:H2'	35:BA:2098:U:O4'	2.21	0.41
35:BA:2584:U:H2'	35:BA:2585:U:H5'	2.03	0.41
40:BF:59:TYR:HE2	40:BF:85:GLY:O	2.04	0.41
40:BF:110:LEU:O	40:BF:114:VAL:HG23	2.21	0.41
41:BG:77:ILE:HD11	41:BG:82:LEU:HD12	2.03	0.41
41:BG:103:LEU:HD13	41:BG:107:LEU:HB2	2.03	0.41
42:BH:56:SER:HB2	42:BH:61:HIS:CE1	2.55	0.41
44:BK:48:UNK:O	44:BK:50:UNK:N	2.54	0.41
48:BP:13:ASN:HB3	48:BP:14:LYS:H	1.49	0.41
49:BQ:25:ASP:OD2	58:BZ:78:LYS:HD3	2.20	0.41
49:BQ:28:ALA:O	49:BQ:29:PHE:HD1	2.03	0.41
51:BS:96:GLY:O	51:BS:98:VAL:N	2.52	0.41
57:BY:20:TYR:CD1	57:BY:20:TYR:N	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:89:C:N3	1:AA:90:U:H5	2.18	0.41
1:AA:105:G:C6	1:AA:106:C:C4	3.09	0.41
1:AA:106:C:O5'	1:AA:106:C:H6	2.03	0.41
1:AA:109:A:N3	1:AA:109:A:H5"	2.36	0.41
1:AA:114:U:O5'	1:AA:114:U:C6	2.65	0.41
1:AA:185:A:C5	1:AA:186:C:N4	2.89	0.41
1:AA:203:U:OP2	1:AA:203:U:H6	2.03	0.41
1:AA:302:G:O2'	1:AA:556:C:H5"	2.20	0.41
1:AA:563:A:H2	12:AL:15:ARG:NH2	2.19	0.41
1:AA:673:G:H2'	1:AA:674:G:H8	1.73	0.41
1:AA:683:G:H2'	1:AA:684:A:C8	2.56	0.41
1:AA:702:A:N6	35:BA:1846:G:OP1	2.54	0.41
1:AA:1036:G:H2'	1:AA:1036:G:N3	2.36	0.41
1:AA:1055:A:H2'	3:AC:156:ARG:HD2	2.03	0.41
1:AA:1132:C:C4	1:AA:1133:G:C6	3.08	0.41
1:AA:1267:C:O2'	1:AA:1268:A:O5'	2.38	0.41
1:AA:1314:C:H5	19:AS:6:LYS:NZ	2.16	0.41
1:AA:1372:U:H2'	1:AA:1373:G:C8	2.54	0.41
1:AA:1384:C:H2'	1:AA:1385:G:C5'	2.44	0.41
1:AA:1452:C:H5'	1:AA:1457:G:C8	2.56	0.41
1:AA:1507:A:C2	1:AA:1508:G:C4	3.09	0.41
2:AB:82:ARG:NH1	2:AB:86:GLU:OE2	2.53	0.41
4:AD:4:TYR:HE2	4:AD:7:PRO:O	2.03	0.41
5:AE:36:ASP:O	5:AE:38:GLN:HG2	2.21	0.41
6:AF:37:VAL:CG1	6:AF:38:GLU:N	2.84	0.41
8:AH:4:ASP:C	8:AH:4:ASP:OD1	2.64	0.41
9:AI:53:VAL:O	9:AI:55:ALA:N	2.53	0.41
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	2.03	0.41
11:AK:15:ALA:HB1	11:AK:78:GLN:CG	2.51	0.41
11:AK:18:ARG:O	11:AK:32:ILE:HA	2.21	0.41
12:AL:27:LEU:HB2	12:AL:62:SER:HB2	2.03	0.41
13:AM:19:LEU:O	13:AM:20:THR:C	2.63	0.41
13:AM:116:THR:HG22	13:AM:117:VAL:N	2.31	0.41
15:AO:87:ILE:CG2	15:AO:88:ARG:N	2.65	0.41
16:AP:43:LYS:HG3	16:AP:48:TRP:CD2	2.56	0.41
17:AQ:65:ILE:N	17:AQ:65:ILE:CD1	2.83	0.41
19:AS:42:PRO:HB3	19:AS:67:VAL:HG11	2.01	0.41
19:AS:60:VAL:O	19:AS:62:ILE:HG22	2.21	0.41
20:AT:36:LEU:HD12	20:AT:55:ILE:HG23	2.02	0.41
22:AV:9:A:C2	22:AV:46:G:C6	3.09	0.41
24:AY:74:TRP:CE2	24:AY:273:LEU:HB3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:100:VAL:HG13	24:AY:101:LEU:N	2.35	0.41
24:AY:107:VAL:HG12	24:AY:108:PHE:N	2.35	0.41
24:AY:181:LEU:HD21	24:AY:243:VAL:CG2	2.51	0.41
24:AY:356:LEU:HD23	24:AY:356:LEU:O	2.21	0.41
24:AY:438:PHE:C	24:AY:439:ARG:HG3	2.46	0.41
24:AY:529:ILE:HD11	24:AY:534:ILE:HD12	2.03	0.41
24:AY:530:VAL:O	24:AY:532:GLY:N	2.53	0.41
24:AY:689:LYS:CG	24:AY:690:GLY:N	2.83	0.41
25:B0:46:LYS:HA	25:B0:47:PRO:HD3	1.93	0.41
26:B1:6:GLU:C	26:B1:7:ILE:CG1	2.93	0.41
28:B3:18:ASP:OD1	28:B3:18:ASP:N	2.53	0.41
33:B8:10:ALA:C	33:B8:12:LYS:H	2.28	0.41
33:B8:38:GLY:O	33:B8:42:ARG:CB	2.69	0.41
35:BA:28:A:C5	35:BA:29:U:C5	3.09	0.41
35:BA:49:A:C4’	35:BA:50:U:OP2	2.57	0.41
35:BA:266:G:H2’	35:BA:267:C:O5’	2.21	0.41
35:BA:328:U:H4’	57:BY:68:HIS:CE1	2.56	0.41
35:BA:332:A:N1	35:BA:335:C:C5	2.88	0.41
35:BA:337:C:H2’	35:BA:338:G:O4’	2.21	0.41
35:BA:405:U:O2	35:BA:405:U:O4’	2.39	0.41
35:BA:469:G:C2’	35:BA:470:A:H5”	2.51	0.41
35:BA:522:G:C6	35:BA:523:C:C4	3.09	0.41
35:BA:637:A:C2	35:BA:652:C:H5’	2.56	0.41
35:BA:958:U:C3’	35:BA:958:U:C6	3.04	0.41
35:BA:964:C:O5’	35:BA:964:C:H6	2.04	0.41
35:BA:1057:A:H2’	35:BA:1058:G:H8	1.86	0.41
35:BA:1188:U:C5’	54:BV:79:VAL:HG13	2.51	0.41
35:BA:1215:G:H2’	35:BA:1216:G:H5’	2.00	0.41
35:BA:1224:C:C4	35:BA:1225:G:C6	3.08	0.41
35:BA:1288:U:C2	35:BA:1327:C:C2	3.09	0.41
35:BA:1297:C:O2’	35:BA:1298:C:C5’	2.44	0.41
35:BA:1362:C:O2’	35:BA:1363:C:H5’	2.21	0.41
35:BA:1375:C:O5’	35:BA:1375:C:H6	2.04	0.41
35:BA:1445:A:C8	35:BA:1460:A:N3	2.87	0.41
35:BA:1510:G:O2’	35:BA:1511:C:H5’	2.21	0.41
35:BA:1595:G:O2’	35:BA:1596:A:H5’	2.21	0.41
35:BA:1720:U:H2’	35:BA:1721:G:C5’	2.19	0.41
35:BA:1777:U:C2’	35:BA:1778:U:H5’	2.50	0.41
35:BA:1819:A:OP1	38:BD:158:ALA:HB3	2.20	0.41
35:BA:2070:G:H2’	35:BA:2071:A:C8	2.55	0.41
35:BA:2133:A:H1’	35:BA:2157:G:N2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:50:G:OP2	51:BS:62:LYS:CB	2.69	0.41
37:BC:11:LEU:CD1	37:BC:33:LEU:HA	2.50	0.41
37:BC:117:THR:HG23	37:BC:119:ASP:N	2.32	0.41
37:BC:129:GLY:HA3	37:BC:138:LEU:HD12	2.02	0.41
37:BC:194:ILE:CD1	37:BC:227:PRO:CB	2.99	0.41
38:BD:70:TRP:CD1	38:BD:70:TRP:C	2.99	0.41
38:BD:130:ALA:HB2	38:BD:192:THR:HB	2.03	0.41
38:BD:231:HIS:CD2	38:BD:249:PRO:HB3	2.56	0.41
38:BD:238:GLY:O	38:BD:239:ARG:O	2.39	0.41
39:BE:9:VAL:HG23	52:BT:4:GLY:CA	2.42	0.41
39:BE:137:HIS:HB3	39:BE:138:PRO:HD2	2.03	0.41
40:BF:4:VAL:HG11	40:BF:17:ARG:NE	2.36	0.41
40:BF:8:GLN:HB3	40:BF:126:VAL:CA	2.47	0.41
41:BG:45:GLU:N	41:BG:45:GLU:OE1	2.54	0.41
41:BG:166:ASP:O	41:BG:170:ARG:HB3	2.21	0.41
42:BH:37:VAL:CG1	42:BH:38:SER:N	2.83	0.41
42:BH:103:LEU:HD23	42:BH:148:ILE:HD12	2.03	0.41
42:BH:155:SER:O	42:BH:157:TYR:N	2.54	0.41
48:BP:29:LYS:N	48:BP:29:LYS:CD	2.82	0.41
48:BP:48:PRO:O	48:BP:49:ARG:C	2.62	0.41
49:BQ:16:ARG:CG	49:BQ:16:ARG:NH1	2.82	0.41
49:BQ:21:THR:CG2	49:BQ:23:GLY:O	2.67	0.41
49:BQ:62:GLY:HA3	49:BQ:109:VAL:HG22	2.03	0.41
49:BQ:64:ILE:C	49:BQ:65:PHE:HD1	2.29	0.41
52:BT:4:GLY:O	52:BT:8:LYS:HB2	2.20	0.41
54:BV:3:ALA:HB2	54:BV:99:ILE:HG21	2.02	0.41
54:BV:46:VAL:O	54:BV:46:VAL:HG13	2.21	0.41
54:BV:89:GLN:OE1	54:BV:89:GLN:HA	2.21	0.41
57:BY:46:LYS:HB3	57:BY:62:GLU:HG3	2.03	0.41
58:BZ:24:LEU:HA	58:BZ:25:PRO:HD2	1.96	0.41
58:BZ:153:SER:HB2	58:BZ:167:PRO:HG2	2.02	0.41
1:AA:312:C:H2'	1:AA:313:A:O5'	2.21	0.41
1:AA:471:G:C6	1:AA:472:A:C5	3.09	0.41
1:AA:731:G:H5'	1:AA:766:A:H4'	2.03	0.41
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.21	0.41
1:AA:961:U:O2'	1:AA:962:C:O5'	2.38	0.41
1:AA:1003:G:N2	1:AA:1004:A:H1'	2.35	0.41
1:AA:1258:G:H2'	1:AA:1259:C:H6	1.85	0.41
1:AA:1314:C:H5	19:AS:6:LYS:HE2	1.85	0.41
1:AA:1526:G:O2'	1:AA:1527:C:C5'	2.42	0.41
2:AB:9:GLU:CD	2:AB:9:GLU:H	2.23	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:125:PRO:O	2:AB:126:GLU:C	2.62	0.41
2:AB:127:ILE:CD1	2:AB:135:GLN:NE2	2.84	0.41
8:AH:92:ARG:HA	8:AH:92:ARG:HD2	1.78	0.41
11:AK:116:HIS:O	11:AK:117:ASN:HB2	2.21	0.41
16:AP:80:PHE:CD1	16:AP:80:PHE:N	2.89	0.41
19:AS:44:MET:SD	19:AS:44:MET:C	3.04	0.41
22:AV:43:C:O2	22:AV:43:C:O5'	2.38	0.41
24:AY:393:ASP:O	24:AY:394:ALA:C	2.63	0.41
25:B0:17:GLN:NE2	25:B0:17:GLN:HA	2.34	0.41
25:B0:49:LYS:O	25:B0:80:HIS:HB3	2.20	0.41
25:B0:82:ARG:HE	25:B0:82:ARG:HB3	1.69	0.41
28:B3:56:VAL:HG12	28:B3:57:GLU:N	2.36	0.41
29:B4:1:MET:HB2	36:BB:39:A:C6	2.56	0.41
30:B5:7:PRO:HA	35:BA:2615:U:C2	2.56	0.41
30:B5:19:ARG:HH12	35:BA:1265:A:H3'	1.86	0.41
35:BA:156:U:H2'	35:BA:157:U:C5'	2.51	0.41
35:BA:271(N):U:H6	35:BA:271(N):U:P	2.44	0.41
35:BA:733:G:C8	35:BA:761:A:N6	2.88	0.41
35:BA:803:U:O2'	35:BA:804:A:H5'	2.21	0.41
35:BA:850:C:O2'	35:BA:851:U:H5'	2.21	0.41
35:BA:1111:A:C8	42:BH:1:MET:HE1	2.56	0.41
35:BA:1766:U:H2'	35:BA:1767:C:H6	1.86	0.41
35:BA:1892:C:O2'	35:BA:1893:C:C5'	2.58	0.41
35:BA:1992:G:C2	35:BA:1997:G:C6	3.08	0.41
35:BA:2318:G:C2'	35:BA:2319:G:OP1	2.69	0.41
35:BA:2712:U:O2'	35:BA:2712(A):A:O5'	2.39	0.41
37:BC:44:VAL:HG23	37:BC:176:VAL:CG2	2.51	0.41
37:BC:156:GLU:O	37:BC:157:ILE:C	2.64	0.41
41:BG:36:LYS:HG2	41:BG:37:VAL:N	2.36	0.41
41:BG:42:GLY:C	41:BG:43:LEU:HG	2.46	0.41
42:BH:53:GLU:CG	42:BH:54:ARG:N	2.84	0.41
52:BT:19:LEU:HA	52:BT:20:PRO:HD3	1.74	0.41
52:BT:42:ILE:HD13	52:BT:83:ILE:HD13	2.03	0.41
52:BT:55:ASN:H	52:BT:59:THR:HG22	1.86	0.41
54:BV:24:LYS:HA	54:BV:92:THR:CG2	2.36	0.41
54:BV:51:VAL:CG1	54:BV:52:VAL:N	2.80	0.41
57:BY:28:LYS:CA	57:BY:39:VAL:H	2.32	0.41
58:BZ:98:MET:HE2	58:BZ:100:VAL:CG2	2.47	0.41
1:AA:59:A:H2'	1:AA:59:A:N3	2.37	0.40
1:AA:174:C:H2'	1:AA:175:C:C6	2.56	0.40
1:AA:434:U:H2'	1:AA:435:C:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:495:A:C4'	1:AA:496:A:C5'	2.67	0.40
1:AA:594:G:C2'	1:AA:595:G:H5'	2.50	0.40
1:AA:604:G:O2'	1:AA:605:U:H5'	2.22	0.40
1:AA:652:U:C2	1:AA:752:G:N2	2.89	0.40
1:AA:658:G:O2'	1:AA:659:U:H5'	2.21	0.40
1:AA:1125:U:H5	10:AJ:73:ASP:OD2	2.04	0.40
1:AA:1193:G:OP1	3:AC:167:TRP:HZ3	2.04	0.40
1:AA:1256:A:H5'	1:AA:1257:U:OP1	2.21	0.40
1:AA:1363:C:H5'	1:AA:1363(A):A:O5'	2.20	0.40
2:AB:79:ASP:O	2:AB:80:ILE:C	2.64	0.40
4:AD:60:GLU:O	4:AD:63:LYS:HB3	2.20	0.40
8:AH:101:PRO:HG2	8:AH:133:LEU:HD21	2.02	0.40
13:AM:13:LYS:O	13:AM:14:ARG:C	2.63	0.40
14:AN:12:ARG:NH1	14:AN:12:ARG:HB2	2.36	0.40
14:AN:59:ALA:O	14:AN:60:SER:HB2	2.20	0.40
17:AQ:60:ILE:HG21	17:AQ:74:LEU:HD23	2.02	0.40
20:AT:63:ILE:HG22	20:AT:77:ALA:HB1	2.04	0.40
20:AT:69:GLY:O	20:AT:73:HIS:HD2	2.02	0.40
24:AY:8:ASP:O	24:AY:9:LEU:CB	2.69	0.40
24:AY:25:LYS:HZ2	24:AY:86:GLY:CA	2.34	0.40
24:AY:238:THR:O	24:AY:240:GLU:N	2.54	0.40
26:B1:3:LYS:CB	26:B1:61:ARG:HH21	2.33	0.40
27:B2:6:VAL:C	27:B2:9:GLN:OE1	2.65	0.40
27:B2:10:LEU:HD13	35:BA:78:A:P	2.60	0.40
29:B4:40:HIS:HA	29:B4:45:GLY:HA3	2.03	0.40
29:B4:54:GLY:C	29:B4:55:ARG:O	2.64	0.40
31:B6:51:GLU:O	31:B6:52:VAL:CB	2.68	0.40
35:BA:7:G:H2'	35:BA:8:A:H8	1.85	0.40
35:BA:9:U:O2'	35:BA:10:G:O5'	2.35	0.40
35:BA:37:C:C2'	35:BA:38:A:C5'	2.97	0.40
35:BA:146:G:H8	35:BA:146:G:C5'	2.29	0.40
35:BA:154:G:H1	35:BA:172:C:H42	1.69	0.40
35:BA:258:G:H2'	35:BA:259:G:H5'	2.02	0.40
35:BA:271(N):U:P	35:BA:271(N):U:C6	3.14	0.40
35:BA:608:A:H2'	35:BA:609:A:C8	2.57	0.40
35:BA:1022:G:C6	35:BA:1141:U:C5	3.09	0.40
35:BA:1060:U:O2'	35:BA:1061:U:P	2.78	0.40
35:BA:1137:G:C2'	35:BA:1138:G:C5'	2.96	0.40
35:BA:1344:G:H5'	35:BA:1384:A:C6	2.56	0.40
35:BA:1506:C:O2	35:BA:1506:C:H2'	2.20	0.40
35:BA:1661:G:C6	35:BA:2000:G:C6	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1779:U:C3'	35:BA:1779:U:C6	3.04	0.40
35:BA:1804:C:H2'	35:BA:1805:U:H5'	2.04	0.40
35:BA:1805:U:H5"	38:BD:250:TRP:CD2	2.56	0.40
35:BA:2415:G:H4'	48:BP:66:GLY:C	2.47	0.40
35:BA:2523:G:C2'	35:BA:2524:G:C5'	2.97	0.40
35:BA:2629:A:H5'	35:BA:2629:A:N3	2.36	0.40
35:BA:2807:G:H3'	35:BA:2808:U:C5'	2.41	0.40
35:BA:2881:C:O2'	35:BA:2882:A:H5'	2.20	0.40
36:BB:111:G:C2'	36:BB:112:U:H5'	2.50	0.40
37:BC:54:ARG:CZ	37:BC:55:SER:O	2.69	0.40
37:BC:129:GLY:CA	37:BC:138:LEU:HD12	2.51	0.40
37:BC:135:ARG:O	37:BC:137:LEU:HG	2.20	0.40
37:BC:141:PRO:O	37:BC:143:ALA:N	2.46	0.40
38:BD:35:LYS:HZ3	38:BD:35:LYS:CB	2.34	0.40
39:BE:72:VAL:HG12	39:BE:72:VAL:O	2.20	0.40
40:BF:129:PHE:CD2	40:BF:163:VAL:HG21	2.57	0.40
42:BH:30:LYS:HG3	42:BH:81:GLU:H	1.86	0.40
42:BH:171:LEU:HD23	42:BH:171:LEU:C	2.45	0.40
44:BK:126:UNK:C	44:BK:128:UNK:N	2.82	0.40
46:BN:3:THR:O	46:BN:4:TYR:CG	2.74	0.40
48:BP:125:VAL:O	48:BP:125:VAL:HG13	2.21	0.40
52:BT:35:LYS:NZ	52:BT:41:ARG:NE	2.69	0.40
52:BT:92:GLY:O	52:BT:93:ARG:C	2.63	0.40
53:BU:39:LEU:HD23	53:BU:39:LEU:HA	1.94	0.40
54:BV:47:VAL:HG21	54:BV:50:PRO:O	2.21	0.40
54:BV:91:TYR:CD1	54:BV:91:TYR:C	2.99	0.40
54:BV:97:LYS:HD3	54:BV:97:LYS:HA	1.89	0.40
55:BW:26:GLY:N	55:BW:71:VAL:CG2	2.84	0.40
1:AA:46:G:H2'	1:AA:366:C:C4	2.55	0.40
1:AA:131:C:H2'	1:AA:132:C:C6	2.56	0.40
1:AA:443:C:H2'	1:AA:444:C:C6	2.56	0.40
1:AA:600:C:H2'	1:AA:601:C:C6	2.56	0.40
1:AA:890:G:O2'	1:AA:906:G:O6	2.31	0.40
1:AA:951:G:C6	1:AA:1231:G:C5	3.09	0.40
1:AA:951:G:C5	1:AA:1231:G:C6	3.10	0.40
1:AA:995:C:O2'	1:AA:996:A:P	2.80	0.40
1:AA:1048:G:C2	1:AA:1050:G:C5	3.10	0.40
1:AA:1149:C:OP2	9:AI:9:ARG:NH1	2.53	0.40
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.21	0.40
1:AA:1496:C:H6	1:AA:1496:C:O5'	2.04	0.40
2:AB:185:ILE:HG23	2:AB:199:TYR:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:12:LEU:C	3:AC:14:ILE:N	2.79	0.40
3:AC:31:HIS:C	3:AC:33:LEU:N	2.77	0.40
3:AC:40:ARG:HG2	3:AC:55:VAL:HG11	2.03	0.40
4:AD:169:LYS:HE2	4:AD:169:LYS:HB2	1.98	0.40
5:AE:91:LEU:HD12	5:AE:91:LEU:HA	1.87	0.40
7:AG:15:ASP:OD1	7:AG:16:LEU:N	2.54	0.40
8:AH:23:SER:HB2	8:AH:61:VAL:O	2.22	0.40
9:AI:79:LEU:HD13	9:AI:83:ARG:HD2	2.02	0.40
11:AK:33:THR:HB	11:AK:37:GLY:C	2.46	0.40
11:AK:82:VAL:CG1	11:AK:108:ILE:HA	2.48	0.40
12:AL:52:LEU:O	12:AL:54:LYS:HD2	2.21	0.40
15:AO:61:GLY:O	15:AO:65:ARG:HG2	2.22	0.40
16:AP:53:VAL:O	16:AP:57:ARG:HG3	2.21	0.40
24:AY:17:ILE:O	24:AY:84:THR:HB	2.21	0.40
24:AY:138:LYS:C	24:AY:140:ASP:N	2.78	0.40
24:AY:532:GLY:C	24:AY:534:ILE:H	2.28	0.40
25:B0:21:LEU:HD11	25:B0:41:ARG:HG2	2.02	0.40
25:B0:69:PHE:CE2	25:B0:79:VAL:CG2	3.03	0.40
26:B1:11:ARG:NH1	26:B1:11:ARG:CG	2.81	0.40
26:B1:73:LEU:C	26:B1:75:GLU:N	2.78	0.40
28:B3:31:LEU:HD23	28:B3:31:LEU:HA	1.85	0.40
30:B5:47:PRO:HG2	30:B5:48:GLU:H	1.85	0.40
31:B6:15:GLU:OE1	31:B6:18:ARG:HG2	2.21	0.40
33:B8:62:LEU:H	33:B8:62:LEU:HG	1.69	0.40
35:BA:16:G:H2'	35:BA:17:G:C5'	2.50	0.40
35:BA:118:A:OP2	35:BA:119:A:H5"	2.21	0.40
35:BA:145:G:C2'	35:BA:146:G:C5'	2.82	0.40
35:BA:327:G:HO2'	35:BA:328:U:H5'	1.78	0.40
35:BA:389:G:C6	48:BP:70:GLN:HG3	2.55	0.40
35:BA:860:U:C5	35:BA:917:A:N7	2.82	0.40
35:BA:923:C:H2'	35:BA:924:C:C6	2.56	0.40
35:BA:1009:A:H5'	53:BU:59:ARG:HD3	2.03	0.40
35:BA:1131:G:N2	46:BN:73:THR:CG2	2.84	0.40
35:BA:1503:U:C2	35:BA:1504:C:C5	3.10	0.40
35:BA:1697:G:C2'	35:BA:1698:A:OP1	2.69	0.40
35:BA:1765:C:H2'	35:BA:1766:U:H6	1.86	0.40
35:BA:2038:G:H2'	35:BA:2039:C:O4'	2.21	0.40
35:BA:2297:C:O2'	35:BA:2298:A:H5'	2.21	0.40
35:BA:2403:C:H2'	35:BA:2404:C:H5'	2.03	0.40
35:BA:2672:G:H3'	35:BA:2673:G:H5"	2.03	0.40
35:BA:2752:C:H2'	35:BA:2753:A:H5'	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2771:C:H2'	35:BA:2772:C:C6	2.55	0.40
39:BE:1:MET:O	39:BE:2:LYS:O	2.40	0.40
39:BE:61:ARG:C	39:BE:63:LEU:N	2.79	0.40
41:BG:83:ARG:HB2	41:BG:84:LYS:H	1.51	0.40
42:BH:90:LYS:HD2	42:BH:163:TYR:CE1	2.55	0.40
44:BK:95:UNK:O	44:BK:96:UNK:O	2.38	0.40
47:BO:12:ASP:C	47:BO:99:PHE:HE2	2.29	0.40
50:BR:38:VAL:O	50:BR:39:PRO:C	2.63	0.40
50:BR:76:VAL:O	50:BR:79:LEU:HB3	2.22	0.40
51:BS:33:LYS:HB3	51:BS:34:HIS:HD2	1.86	0.40
52:BT:33:LYS:NZ	52:BT:43:GLN:NE2	2.68	0.40
56:BX:13:LEU:O	56:BX:14:SER:HB3	2.21	0.40
1:AA:443:C:H2'	1:AA:444:C:H6	1.86	0.40
1:AA:546:G:O2'	1:AA:547:A:O5'	2.30	0.40
1:AA:589:C:H2'	1:AA:590:C:H5'	2.02	0.40
1:AA:744:C:H2'	1:AA:745:C:H6	1.87	0.40
1:AA:992:U:O2'	1:AA:993:G:P	2.80	0.40
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.21	0.40
1:AA:1307:U:O4'	13:AM:109:THR:HG21	2.21	0.40
1:AA:1452:C:C6	1:AA:1452:C:OP1	2.74	0.40
2:AB:24:TRP:CE3	2:AB:32:ILE:HD12	2.54	0.40
2:AB:26:PRO:O	2:AB:29:ALA:HB2	2.21	0.40
3:AC:103:VAL:CG1	3:AC:104:GLN:N	2.84	0.40
3:AC:134:ILE:HD11	3:AC:153:VAL:HG23	2.03	0.40
8:AH:100:ILE:HG22	8:AH:125:ARG:HH12	1.87	0.40
10:AJ:44:VAL:HG22	10:AJ:66:ARG:CG	2.42	0.40
11:AK:50:TYR:O	11:AK:51:LYS:HG3	2.21	0.40
12:AL:45:PRO:HD2	12:AL:51:ALA:O	2.19	0.40
17:AQ:53:LEU:C	17:AQ:53:LEU:HD23	2.47	0.40
24:AY:242:LEU:O	24:AY:245:ALA:HB3	2.22	0.40
24:AY:401:SER:O	24:AY:402:ILE:HB	2.21	0.40
24:AY:568:TYR:HD1	24:AY:568:TYR:H	1.70	0.40
35:BA:265:A:O4'	35:BA:266:G:O4'	2.39	0.40
35:BA:303:U:O2'	35:BA:304:G:H5'	2.21	0.40
35:BA:373:U:H2'	35:BA:374:A:H8	1.87	0.40
35:BA:813:U:H2'	35:BA:814:C:C6	2.56	0.40
35:BA:815:C:H2'	35:BA:816:C:H6	1.85	0.40
35:BA:1351:C:O2'	35:BA:1571:A:H1'	2.21	0.40
35:BA:1530:C:H2'	35:BA:1531:C:H6	1.86	0.40
35:BA:1902:C:C3'	38:BD:244:ARG:HB2	2.51	0.40
35:BA:1956:U:H1'	35:BA:2552:U:OP1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1973:G:O2'	35:BA:1974:C:H5'	2.22	0.40
35:BA:2011:U:C2'	35:BA:2012:G:C5'	3.00	0.40
35:BA:2100:G:H2'	35:BA:2100:G:N3	2.36	0.40
35:BA:2117:A:HO2'	35:BA:2118:U:H3'	1.83	0.40
35:BA:2552:U:C2	35:BA:2554:U:H5'	2.56	0.40
35:BA:2588:G:O6	35:BA:2607:G:C6	2.75	0.40
36:BB:56:G:H5"	41:BG:27:ASN:HD21	1.83	0.40
37:BC:167:ASP:OD1	37:BC:169:THR:OG1	2.38	0.40
37:BC:228:HIS:O	37:BC:229:SER:CB	2.68	0.40
38:BD:25:THR:C	38:BD:27:THR:N	2.78	0.40
40:BF:46:ARG:HG3	40:BF:48:THR:HG23	2.04	0.40
40:BF:63:LYS:NZ	40:BF:75:HIS:O	2.48	0.40
41:BG:45:GLU:OE2	41:BG:152:LEU:HD11	2.21	0.40
42:BH:30:LYS:HG2	42:BH:30:LYS:HZ2	1.74	0.40
46:BN:119:ARG:CG	46:BN:119:ARG:NH1	2.83	0.40
47:BO:1:MET:HB3	47:BO:32:TYR:CD2	2.56	0.40
48:BP:6:LEU:CD1	48:BP:9:ASN:OD1	2.67	0.40
48:BP:51:PHE:CG	48:BP:52:GLU:C	2.99	0.40
51:BS:62:LYS:C	51:BS:64:GLU:N	2.78	0.40
55:BW:79:GLY:C	55:BW:100:THR:CG2	2.95	0.40
58:BZ:29:TYR:O	58:BZ:30:ASN:HB3	2.21	0.40
58:BZ:30:ASN:HB3	58:BZ:89:PHE:CE1	2.56	0.40
1:AA:89:C:C1'	1:AA:90:U:OP1	2.66	0.40
1:AA:165:C:O2'	1:AA:166:G:H5'	2.20	0.40
1:AA:935:A:H2'	1:AA:936:C:C6	2.56	0.40
1:AA:937:A:C5	1:AA:938:A:N7	2.90	0.40
1:AA:1118:C:H1'	1:AA:1179:A:C8	2.56	0.40
1:AA:1154:G:C2	1:AA:1155:G:C8	3.10	0.40
1:AA:1316:G:O3'	14:AN:18:VAL:CG1	2.70	0.40
1:AA:1437:C:O2'	1:AA:1438:G:H5'	2.21	0.40
2:AB:127:ILE:HD13	2:AB:135:GLN:HE21	1.86	0.40
3:AC:121:ALA:HB1	3:AC:198:VAL:HG21	2.02	0.40
6:AF:91:VAL:HG13	18:AR:72:ARG:NH2	2.36	0.40
8:AH:34:GLU:OE1	8:AH:37:ARG:NH1	2.55	0.40
8:AH:114:THR:C	8:AH:116:LYS:H	2.29	0.40
20:AT:39:LYS:HB2	20:AT:39:LYS:HE3	1.93	0.40
20:AT:71:THR:C	20:AT:72:LEU:O	2.58	0.40
24:AY:87:HIS:NE2	35:BA:2662:A:OP1	2.48	0.40
24:AY:247:ARG:O	24:AY:251:ILE:HG13	2.21	0.40
26:B1:30:VAL:H	35:BA:2396:G:H4'	1.87	0.40
27:B2:36:ARG:NH2	56:BX:5:TYR:O	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B3:4:LEU:HG	28:B3:39:ASP:HB2	2.02	0.40
30:B5:51:TYR:O	30:B5:53:ALA:C	2.65	0.40
33:B8:15:LYS:CD	48:BP:65:ARG:NH2	2.79	0.40
35:BA:57:C:H2'	35:BA:58:G:O4'	2.20	0.40
35:BA:265:A:H4'	35:BA:266:G:O5'	2.22	0.40
35:BA:911:A:O5'	35:BA:911:A:H8	2.04	0.40
35:BA:967:C:H2'	35:BA:968:G:H8	1.86	0.40
35:BA:1093:G:H1'	35:BA:1099:G:N2	2.33	0.40
35:BA:1103:A:H5'	35:BA:1104:C:H5	1.85	0.40
35:BA:1161:C:O2'	54:BV:23:GLU:HG3	2.21	0.40
35:BA:1199:U:H2'	35:BA:1200:C:O4'	2.21	0.40
35:BA:1216:G:C2'	35:BA:1217:C:C5'	2.95	0.40
35:BA:1273:U:C5'	35:BA:1646:C:H41	2.31	0.40
35:BA:1683:C:H2'	35:BA:1684:C:H6	1.85	0.40
35:BA:1798:U:H5'	38:BD:259:THR:CG2	2.46	0.40
35:BA:2104:G:C1'	35:BA:2105:C:OP1	2.64	0.40
35:BA:2199:A:H5"	35:BA:2200:C:OP2	2.20	0.40
35:BA:2252:G:H2'	35:BA:2253:G:C8	2.57	0.40
35:BA:2252:G:O2'	35:BA:2253:G:H5'	2.22	0.40
39:BE:182:LEU:C	39:BE:183:LEU:HD12	2.46	0.40
41:BG:73:ALA:HB3	41:BG:85:GLY:CA	2.50	0.40
44:BK:95:UNK:O	44:BK:96:UNK:C	2.70	0.40
46:BN:7:LYS:O	46:BN:8:GLN:C	2.64	0.40
46:BN:74:ARG:HH21	46:BN:83:LYS:HD3	1.85	0.40
47:BO:24:VAL:O	47:BO:24:VAL:CG2	2.70	0.40
48:BP:95:VAL:HB	48:BP:100:LEU:HD21	2.03	0.40
51:BS:52:SER:HB3	51:BS:55:ALA:HB3	2.02	0.40
53:BU:18:LEU:HD13	53:BU:18:LEU:HA	1.96	0.40
55:BW:5:ALA:CB	55:BW:50:VAL:HG23	2.52	0.40
57:BY:2:ARG:O	57:BY:3:VAL:CB	2.69	0.40
58:BZ:151:HIS:HB2	58:BZ:170:THR:CA	2.38	0.40
1:AA:8:A:H5'	5:AE:120:THR:O	2.21	0.40
1:AA:34:C:H2'	1:AA:35:G:H8	1.86	0.40
1:AA:60:A:H62	1:AA:110:C:N4	2.19	0.40
1:AA:89:C:C4	1:AA:90:U:H5	2.40	0.40
1:AA:414:A:C2	1:AA:415:A:C4	3.09	0.40
1:AA:678:U:H2'	1:AA:679:C:C6	2.57	0.40
1:AA:689:C:O2'	1:AA:690:G:H5'	2.21	0.40
1:AA:737:A:H2'	1:AA:738:C:C6	2.57	0.40
1:AA:1007:C:O2'	1:AA:1008:C:H5'	2.20	0.40
1:AA:1030(D):A:H1'	1:AA:1031:G:OP2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1151:A:N3	1:AA:1152:A:C8	2.89	0.40
2:AB:95:GLN:OE1	2:AB:95:GLN:HA	2.21	0.40
2:AB:111:ARG:NH2	2:AB:114:ARG:HG2	2.36	0.40
2:AB:137:ARG:HD3	2:AB:137:ARG:O	2.21	0.40
2:AB:167:PRO:HG3	2:AB:188:ALA:CB	2.50	0.40
2:AB:213:LEU:HD23	2:AB:217:ARG:HG2	2.03	0.40
5:AE:28:PHE:CD1	5:AE:28:PHE:N	2.90	0.40
5:AE:145:LYS:HA	8:AH:107:LEU:CD2	2.52	0.40
7:AG:64:GLN:HG3	7:AG:128:ALA:O	2.21	0.40
8:AH:100:ILE:HB	8:AH:125:ARG:NH1	2.37	0.40
13:AM:52:GLU:HA	13:AM:55:ARG:HD3	2.03	0.40
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HD2	1.84	0.40
17:AQ:66:SER:OG	17:AQ:69:LYS:HB2	2.21	0.40
19:AS:51:VAL:CG2	19:AS:71:LEU:HB3	2.51	0.40
20:AT:92:LEU:C	20:AT:94:ALA:H	2.26	0.40
22:AV:46:G:H3'	22:AV:47:U:C5'	2.51	0.40
24:AY:100:VAL:HG21	24:AY:314:PHE:CD1	2.55	0.40
24:AY:192:LEU:HD12	24:AY:194:THR:CG2	2.49	0.40
24:AY:199:ILE:H	24:AY:199:ILE:HG13	1.72	0.40
24:AY:205:TYR:O	24:AY:206:LEU:C	2.64	0.40
24:AY:506:GLN:HB3	24:AY:507:TYR:H	1.70	0.40
25:B0:25:ARG:HD2	25:B0:29:GLN:NE2	2.37	0.40
27:B2:10:LEU:HB3	27:B2:14:ARG:CZ	2.51	0.40
31:B6:15:GLU:C	31:B6:17:LYS:N	2.75	0.40
33:B8:26:LYS:CB	33:B8:44:LYS:HG3	2.51	0.40
35:BA:156:U:H2'	35:BA:157:U:H5'	2.04	0.40
35:BA:246:C:C2'	35:BA:247:G:H5"	2.45	0.40
35:BA:492:A:H2'	35:BA:493:G:H5'	2.03	0.40
35:BA:545:C:OP1	35:BA:545:C:H6	2.04	0.40
35:BA:652:C:O2'	35:BA:653:A:C4	2.71	0.40
35:BA:848:G:C4	35:BA:933:A:C8	3.09	0.40
35:BA:896:A:C8	58:BZ:146:ILE:CD1	3.05	0.40
35:BA:953:A:C2	35:BA:954:G:C8	3.10	0.40
35:BA:1228:G:C2	35:BA:1229:G:N9	2.89	0.40
35:BA:1418:G:O5'	35:BA:1418:G:H8	2.04	0.40
35:BA:1833:U:O2'	35:BA:1969:A:N1	2.54	0.40
35:BA:2026:C:H2'	35:BA:2027:G:O4'	2.22	0.40
35:BA:2061:G:H5"	35:BA:2503:A:C2	2.55	0.40
35:BA:2105:C:P	35:BA:2105:C:O4'	2.80	0.40
35:BA:2117:A:O2'	35:BA:2118:U:P	2.80	0.40
35:BA:2564:A:C2	35:BA:2647:U:H4'	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2712:U:C1'	35:BA:2712(A):A:N7	2.84	0.40
35:BA:2801:A:O2'	35:BA:2894:G:H5"	2.21	0.40
36:BB:22:U:O2'	36:BB:23:G:H5'	2.21	0.40
36:BB:93:G:H2'	36:BB:94:C:C6	2.56	0.40
37:BC:89:GLU:O	37:BC:90:ALA:HB3	2.20	0.40
38:BD:165:ILE:HG23	38:BD:173:VAL:CG2	2.52	0.40
39:BE:137:HIS:CB	39:BE:138:PRO:HD2	2.51	0.40
40:BF:192:LEU:HD23	40:BF:192:LEU:C	2.46	0.40
41:BG:43:LEU:HD13	41:BG:48:GLU:H	1.87	0.40
41:BG:52:ILE:HD12	41:BG:53:LEU:C	2.47	0.40
41:BG:106:LEU:CA	41:BG:110:ALA:HB3	2.52	0.40
42:BH:84:SER:O	42:BH:85:LYS:HB3	2.22	0.40
43:BJ:17:UNK:C	43:BJ:19:UNK:N	2.85	0.40
48:BP:107:LYS:C	48:BP:109:GLY:N	2.80	0.40
48:BP:121:LYS:O	48:BP:123:LEU:CD2	2.61	0.40
54:BV:52:VAL:O	54:BV:53:GLU:C	2.64	0.40
56:BX:40:LYS:O	56:BX:44:GLU:HG3	2.20	0.40
58:BZ:111:VAL:O	58:BZ:112:ARG:C	2.63	0.40

All (40) 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)
20:AT:100:ILE:CG1	27:B2:43:GLN:CD[2_554]	0.34	1.86
20:AT:100:ILE:CD1	27:B2:43:GLN:NE2[2_554]	0.69	1.51
3:AC:79:ARG:CD	35:BA:2139:C:C4[2_555]	0.83	1.37
3:AC:79:ARG:CD	35:BA:2139:C:C5[2_555]	0.87	1.33
3:AC:79:ARG:CG	35:BA:2139:C:C6[2_555]	0.96	1.24
3:AC:79:ARG:CZ	35:BA:2139:C:N4[2_555]	1.08	1.12
20:AT:100:ILE:CB	27:B2:43:GLN:OE1[2_554]	1.11	1.09
3:AC:79:ARG:NE	35:BA:2139:C:C4[2_555]	1.16	1.04
3:AC:79:ARG:NH1	35:BA:2139:C:N4[2_555]	1.19	1.01
20:AT:100:ILE:CG2	27:B2:43:GLN:OE1[2_554]	1.21	0.99
3:AC:79:ARG:CG	35:BA:2139:C:N1[2_555]	1.24	0.96
3:AC:79:ARG:NE	35:BA:2139:C:N4[2_555]	1.32	0.88
20:AT:100:ILE:CG1	27:B2:43:GLN:OE1[2_554]	1.33	0.87
3:AC:79:ARG:CG	35:BA:2139:C:C5[2_555]	1.42	0.78
20:AT:100:ILE:CG1	27:B2:43:GLN:CG[2_554]	1.43	0.77
20:AT:100:ILE:CG1	27:B2:43:GLN:NE2[2_554]	1.43	0.77
20:AT:100:ILE:CD1	27:B2:43:GLN:CD[2_554]	1.48	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:81:GLY:N	35:BA:2140:C:OP2[2_555]	1.54	0.66
20:AT:100:ILE:CB	27:B2:43:GLN:CD[2_554]	1.60	0.60
3:AC:79:ARG:NE	35:BA:2139:C:N3[2_555]	1.61	0.59
3:AC:77:ILE:O	35:BA:2140:C:OP1[2_555]	1.71	0.49
3:AC:78:GLY:O	35:BA:2140:C:O4'[2_555]	1.71	0.49
3:AC:79:ARG:N	35:BA:2139:C:C3'[2_555]	1.71	0.49
3:AC:79:ARG:CD	35:BA:2139:C:N4[2_555]	1.76	0.44
3:AC:79:ARG:N	35:BA:2139:C:C2'[2_555]	1.77	0.43
3:AC:79:ARG:CG	35:BA:2139:C:C2[2_555]	1.86	0.34
3:AC:79:ARG:CD	35:BA:2139:C:C6[2_555]	1.92	0.28
3:AC:78:GLY:C	35:BA:2140:C:O5'[2_555]	1.93	0.27
3:AC:79:ARG:CG	35:BA:2139:C:C4[2_555]	1.93	0.27
3:AC:79:ARG:CD	35:BA:2139:C:N3[2_555]	1.93	0.27
3:AC:80:GLY:N	35:BA:2139:C:O3'[2_555]	2.01	0.19
3:AC:78:GLY:O	35:BA:2140:C:O5'[2_555]	2.02	0.18
3:AC:79:ARG:CZ	35:BA:2139:C:C4[2_555]	2.06	0.14
3:AC:78:GLY:CA	35:BA:2140:C:OP1[2_555]	2.08	0.12
20:AT:100:ILE:CD1	27:B2:43:GLN:CG[2_554]	2.09	0.11
3:AC:79:ARG:NH1	35:BA:2152:G:N1[2_555]	2.11	0.09
3:AC:79:ARG:CB	35:BA:2139:C:C6[2_555]	2.12	0.08
3:AC:79:ARG:CG	35:BA:2139:C:N3[2_555]	2.12	0.08
20:AT:100:ILE:CB	27:B2:43:GLN:NE2[2_554]	2.12	0.08
2:AB:105:PHE:CE2	37:BC:28:ARG:NH2[2_555]	2.16	0.04

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%)	163 (70%)	44 (19%)	26 (11%)	0 0
3	AC	205/239 (86%)	145 (71%)	32 (16%)	28 (14%)	0 0
4	AD	206/209 (99%)	160 (78%)	35 (17%)	11 (5%)	1 3
5	AE	149/162 (92%)	134 (90%)	12 (8%)	3 (2%)	6 16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
6	AF	99/101 (98%)	80 (81%)	13 (13%)	6 (6%)	1 2
7	AG	153/156 (98%)	113 (74%)	26 (17%)	14 (9%)	0 1
8	AH	136/138 (99%)	122 (90%)	13 (10%)	1 (1%)	18 40
9	AI	125/128 (98%)	93 (74%)	21 (17%)	11 (9%)	0 1
10	AJ	97/105 (92%)	73 (75%)	15 (16%)	9 (9%)	0 1
11	AK	117/129 (91%)	95 (81%)	19 (16%)	3 (3%)	4 12
12	AL	123/132 (93%)	101 (82%)	11 (9%)	11 (9%)	0 1
13	AM	117/126 (93%)	74 (63%)	32 (27%)	11 (9%)	0 1
14	AN	58/61 (95%)	44 (76%)	7 (12%)	7 (12%)	0 0
15	AO	86/89 (97%)	78 (91%)	7 (8%)	1 (1%)	10 28
16	AP	82/88 (93%)	73 (89%)	7 (8%)	2 (2%)	4 13
17	AQ	98/105 (93%)	86 (88%)	10 (10%)	2 (2%)	6 16
18	AR	68/88 (77%)	58 (85%)	8 (12%)	2 (3%)	3 10
19	AS	86/93 (92%)	53 (62%)	21 (24%)	12 (14%)	0 0
20	AT	97/106 (92%)	79 (81%)	10 (10%)	8 (8%)	0 1
21	AU	23/27 (85%)	17 (74%)	4 (17%)	2 (9%)	0 1
24	AY	685/691 (99%)	537 (78%)	99 (14%)	49 (7%)	1 1
25	B0	82/84 (98%)	56 (68%)	19 (23%)	7 (8%)	0 1
26	B1	92/97 (95%)	73 (79%)	14 (15%)	5 (5%)	1 3
27	B2	69/71 (97%)	45 (65%)	11 (16%)	13 (19%)	0 0
28	B3	58/60 (97%)	50 (86%)	7 (12%)	1 (2%)	7 20
29	B4	69/71 (97%)	16 (23%)	17 (25%)	36 (52%)	0 0
30	B5	57/59 (97%)	45 (79%)	3 (5%)	9 (16%)	0 0
31	B6	48/53 (91%)	22 (46%)	11 (23%)	15 (31%)	0 0
32	B7	46/48 (96%)	43 (94%)	3 (6%)	0	100 100
33	B8	62/64 (97%)	42 (68%)	8 (13%)	12 (19%)	0 0
34	B9	35/37 (95%)	23 (66%)	9 (26%)	3 (9%)	0 1
37	BC	225/228 (99%)	121 (54%)	56 (25%)	48 (21%)	0 0
38	BD	273/275 (99%)	222 (81%)	33 (12%)	18 (7%)	1 1
39	BE	203/206 (98%)	145 (71%)	34 (17%)	24 (12%)	0 0
40	BF	206/210 (98%)	165 (80%)	19 (9%)	22 (11%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
41	BG	177/181 (98%)	78 (44%)	49 (28%)	50 (28%)	0 0
42	BH	174/180 (97%)	112 (64%)	31 (18%)	31 (18%)	0 0
43	BJ	1/130 (1%)	0	1 (100%)	0	100 100
46	BN	137/140 (98%)	110 (80%)	15 (11%)	12 (9%)	0 1
47	BO	120/122 (98%)	109 (91%)	8 (7%)	3 (2%)	4 13
48	BP	144/149 (97%)	84 (58%)	23 (16%)	37 (26%)	0 0
49	BQ	139/141 (99%)	115 (83%)	18 (13%)	6 (4%)	2 4
50	BR	115/117 (98%)	90 (78%)	17 (15%)	8 (7%)	1 1
51	BS	97/111 (87%)	52 (54%)	25 (26%)	20 (21%)	0 0
52	BT	136/146 (93%)	90 (66%)	25 (18%)	21 (15%)	0 0
53	BU	115/117 (98%)	87 (76%)	22 (19%)	6 (5%)	1 3
54	BV	99/101 (98%)	73 (74%)	11 (11%)	15 (15%)	0 0
55	BW	111/113 (98%)	93 (84%)	14 (13%)	4 (4%)	2 6
56	BX	91/95 (96%)	79 (87%)	11 (12%)	1 (1%)	11 29
57	BY	99/109 (91%)	54 (54%)	17 (17%)	28 (28%)	0 0
58	BZ	183/205 (89%)	131 (72%)	30 (16%)	22 (12%)	0 0
All	All	6506/6949 (94%)	4803 (74%)	1007 (16%)	696 (11%)	0 0

All (696) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	26	PRO
2	AB	37	ASN
2	AB	76	GLN
2	AB	77	ALA
2	AB	150	SER
2	AB	191	ASP
2	AB	229	VAL
2	AB	231	GLU
3	AC	12	LEU
3	AC	82	GLU
3	AC	84	ILE
3	AC	119	ARG
3	AC	131	ARG
3	AC	160	ALA

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Mol	Chain	Res	Type
3	AC	169	ALA
3	AC	188	LEU
4	AD	35	ARG
6	AF	87	ARG
7	AG	7	ALA
7	AG	8	GLU
7	AG	50	ILE
7	AG	77	SER
7	AG	87	VAL
7	AG	88	PRO
9	AI	23	ASN
9	AI	25	LYS
9	AI	26	VAL
9	AI	56	LEU
9	AI	118	LYS
10	AJ	36	GLY
10	AJ	90	LEU
11	AK	48	ILE
12	AL	27	LEU
12	AL	28	LYS
12	AL	47	LYS
12	AL	94	PRO
13	AM	10	PRO
13	AM	63	THR
13	AM	67	GLU
13	AM	117	VAL
14	AN	14	PRO
14	AN	16	PHE
14	AN	29	ARG
14	AN	59	ALA
15	AO	24	SER
18	AR	87	ARG
19	AS	63	THR
24	AY	40	HIS
24	AY	57	GLN
24	AY	82	ILE
24	AY	206	LEU
24	AY	394	ALA
24	AY	402	ILE
24	AY	403	GLU
24	AY	530	VAL
24	AY	555	LEU

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Mol	Chain	Res	Type
25	B0	37	LEU
25	B0	57	PHE
26	B1	83	GLU
27	B2	17	SER
27	B2	43	GLN
27	B2	48	HIS
27	B2	70	GLN
27	B2	71	ASN
29	B4	7	PRO
29	B4	15	ILE
29	B4	16	CYS
29	B4	22	ILE
29	B4	24	THR
29	B4	25	TYR
29	B4	29	PRO
29	B4	33	VAL
29	B4	34	GLU
29	B4	35	VAL
29	B4	38	LYS
29	B4	40	HIS
29	B4	55	ARG
29	B4	60	GLN
29	B4	66	SER
30	B5	4	HIS
30	B5	48	GLU
30	B5	49	CYS
30	B5	52	TYR
30	B5	53	ALA
30	B5	54	GLY
30	B5	57	VAL
31	B6	18	ARG
31	B6	20	ASN
31	B6	27	LYS
31	B6	31	PRO
31	B6	33	LYS
31	B6	46	HIS
31	B6	52	VAL
33	B8	29	LYS
33	B8	33	ASN
33	B8	34	TRP
33	B8	35	GLN
33	B8	61	LEU

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Mol	Chain	Res	Type
33	B8	64	TYR
37	BC	42	VAL
37	BC	47	LYS
37	BC	68	GLY
37	BC	95	VAL
37	BC	101	ILE
37	BC	104	ILE
37	BC	117	THR
37	BC	145	THR
37	BC	148	PHE
37	BC	180	SER
37	BC	181	PHE
38	BD	24	ILE
38	BD	45	ASN
38	BD	125	ILE
38	BD	127	VAL
38	BD	267	SER
39	BE	2	LYS
39	BE	55	ASN
39	BE	56	PRO
39	BE	72	VAL
39	BE	76	ARG
39	BE	77	ILE
39	BE	88	GLY
39	BE	130	GLY
39	BE	155	LYS
40	BF	3	GLU
40	BF	11	VAL
40	BF	14	PRO
40	BF	21	ALA
40	BF	26	ALA
40	BF	82	ILE
40	BF	83	PHE
40	BF	89	VAL
40	BF	168	ARG
41	BG	8	LYS
41	BG	21	ARG
41	BG	22	ARG
41	BG	23	PHE
41	BG	25	TYR
41	BG	44	GLY
41	BG	48	GLU

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Mol	Chain	Res	Type
41	BG	49	ASP
41	BG	54	GLU
41	BG	66	GLN
41	BG	73	ALA
41	BG	86	MET
41	BG	87	PRO
41	BG	88	ILE
41	BG	104	GLU
41	BG	109	VAL
41	BG	117	PHE
41	BG	118	ARG
41	BG	122	PRO
41	BG	123	ASN
41	BG	143	GLU
41	BG	146	TYR
41	BG	181	ARG
42	BH	21	PRO
42	BH	55	PRO
42	BH	83	TYR
42	BH	126	PRO
42	BH	137	ASP
42	BH	138	LYS
42	BH	157	TYR
42	BH	167	GLU
46	BN	58	ASP
46	BN	127	ASP
46	BN	134	ARG
48	BP	10	PRO
48	BP	13	ASN
48	BP	15	ARG
48	BP	17	LYS
48	BP	19	VAL
48	BP	34	GLY
48	BP	39	LYS
48	BP	40	SER
48	BP	47	ASP
48	BP	58	THR
48	BP	61	ARG
48	BP	65	ARG
48	BP	103	ALA
48	BP	107	LYS
48	BP	108	LYS

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Mol	Chain	Res	Type
48	BP	115	LEU
48	BP	140	ALA
48	BP	146	VAL
49	BQ	62	GLY
50	BR	4	LEU
50	BR	117	VAL
51	BS	53	SER
51	BS	88	ASP
51	BS	92	TYR
51	BS	93	LYS
51	BS	105	ALA
52	BT	23	ARG
52	BT	28	VAL
52	BT	30	VAL
52	BT	32	TYR
52	BT	33	LYS
52	BT	80	SER
52	BT	88	ILE
52	BT	91	ARG
52	BT	107	ASP
52	BT	119	LYS
52	BT	127	ALA
53	BU	89	GLU
53	BU	91	ASP
54	BV	2	PHE
54	BV	16	PRO
54	BV	53	GLU
55	BW	63	ASP
57	BY	17	SER
57	BY	27	VAL
57	BY	30	VAL
57	BY	50	ARG
57	BY	51	VAL
57	BY	56	PRO
57	BY	57	GLN
57	BY	62	GLU
57	BY	77	PRO
57	BY	78	ALA
57	BY	80	GLY
57	BY	90	LEU
57	BY	98	VAL
57	BY	99	CYS

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Mol	Chain	Res	Type
58	BZ	31	ARG
58	BZ	61	LEU
58	BZ	113	ALA
58	BZ	124	ILE
58	BZ	152	ALA
58	BZ	186	GLU
2	AB	17	PHE
2	AB	28	PHE
2	AB	40	HIS
2	AB	91	PRO
2	AB	95	GLN
2	AB	228	GLY
3	AC	13	GLY
3	AC	22	TRP
3	AC	26	LYS
3	AC	85	ARG
3	AC	168	ALA
3	AC	181	ASN
3	AC	207	VAL
4	AD	3	ARG
4	AD	26	CYS
4	AD	30	LYS
4	AD	88	VAL
4	AD	110	PHE
6	AF	39	LYS
6	AF	40	VAL
9	AI	11	LYS
9	AI	41	VAL
9	AI	127	LYS
10	AJ	32	ALA
10	AJ	86	MET
12	AL	79	GLU
13	AM	4	ILE
13	AM	12	ASN
13	AM	28	ALA
13	AM	46	LYS
14	AN	24	CYS
16	AP	83	GLU
17	AQ	33	GLY
19	AS	27	GLU
19	AS	62	ILE
19	AS	64	GLU

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Mol	Chain	Res	Type
20	AT	101	GLY
21	AU	3	LYS
21	AU	25	LYS
24	AY	6	GLU
24	AY	25	LYS
24	AY	45	VAL
24	AY	58	GLU
24	AY	110	SER
24	AY	114	VAL
24	AY	197	ARG
24	AY	224	ASP
24	AY	400	GLU
24	AY	401	SER
24	AY	447	GLY
24	AY	536	LYS
25	B0	5	LYS
25	B0	8	GLY
25	B0	11	ARG
25	B0	12	ASN
25	B0	79	VAL
26	B1	7	ILE
26	B1	53	VAL
27	B2	10	LEU
27	B2	36	ARG
27	B2	47	ASN
29	B4	20	ASN
29	B4	31	ILE
29	B4	39	CYS
29	B4	44	THR
29	B4	48	ARG
29	B4	49	PHE
29	B4	52	THR
29	B4	56	VAL
29	B4	61	ARG
29	B4	65	ASP
30	B5	55	ARG
31	B6	28	ARG
31	B6	29	ASN
31	B6	44	ARG
31	B6	51	GLU
34	B9	36	GLN
37	BC	53	ARG

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Mol	Chain	Res	Type
37	BC	81	GLY
37	BC	85	LYS
37	BC	92	ALA
37	BC	99	GLU
37	BC	102	GLN
37	BC	105	LEU
37	BC	106	ASP
37	BC	109	MET
37	BC	130	ARG
37	BC	143	ALA
37	BC	150	ILE
37	BC	159	ALA
37	BC	161	ARG
37	BC	179	ALA
38	BD	28	GLU
38	BD	239	ARG
38	BD	242	ARG
38	BD	244	ARG
38	BD	268	ARG
39	BE	71	GLY
39	BE	75	VAL
39	BE	121	ASN
39	BE	186	GLY
40	BF	5	ALA
40	BF	25	PRO
40	BF	78	ILE
40	BF	134	GLY
40	BF	167	ALA
41	BG	6	ALA
41	BG	24	GLY
41	BG	43	LEU
41	BG	52	ILE
41	BG	78	SER
41	BG	97	ASP
41	BG	98	ARG
41	BG	115	ARG
41	BG	128	ARG
41	BG	129	GLY
41	BG	132	ASN
41	BG	138	GLN
41	BG	162	THR
41	BG	163	ALA

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Mol	Chain	Res	Type
42	BH	2	SER
42	BH	14	GLY
42	BH	66	GLY
42	BH	156	ALA
42	BH	158	HIS
46	BN	19	GLU
46	BN	57	ALA
47	BO	5	GLN
47	BO	49	ARG
47	BO	111	PHE
48	BP	12	ALA
48	BP	26	GLY
48	BP	76	LYS
48	BP	109	GLY
48	BP	116	GLY
48	BP	117	GLU
48	BP	147	LEU
49	BQ	60	ARG
50	BR	10	LEU
50	BR	86	ARG
51	BS	58	LEU
51	BS	62	LYS
51	BS	90	GLY
51	BS	94	TYR
51	BS	97	ARG
51	BS	103	GLU
52	BT	29	ARG
52	BT	78	LEU
53	BU	88	ILE
54	BV	23	GLU
54	BV	40	LEU
54	BV	46	VAL
54	BV	47	VAL
54	BV	50	PRO
54	BV	67	GLY
55	BW	11	ARG
55	BW	68	ARG
57	BY	42	VAL
58	BZ	30	ASN
58	BZ	81	ARG
58	BZ	147	GLY
58	BZ	148	ASP

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Mol	Chain	Res	Type
58	BZ	150	LEU
2	AB	75	LYS
2	AB	92	TYR
2	AB	125	PRO
2	AB	157	ARG
3	AC	54	ARG
4	AD	37	PRO
4	AD	189	PRO
5	AE	70	PRO
6	AF	13	ASN
7	AG	57	GLU
7	AG	89	MET
8	AH	2	LEU
10	AJ	29	ARG
10	AJ	30	SER
10	AJ	59	SER
13	AM	51	ALA
17	AQ	68	ARG
18	AR	54	ARG
19	AS	8	GLY
19	AS	9	VAL
19	AS	85	LYS
20	AT	73	HIS
20	AT	95	ALA
24	AY	22	ASP
24	AY	55	MET
24	AY	127	LYS
24	AY	171	GLU
24	AY	204	GLU
24	AY	297	GLU
29	B4	36	CYS
29	B4	51	ASP
31	B6	9	LEU
31	B6	16	CYS
31	B6	45	LYS
33	B8	31	HIS
33	B8	49	VAL
34	B9	10	ILE
37	BC	30	VAL
37	BC	43	GLU
37	BC	52	PRO
37	BC	69	LEU

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Mol	Chain	Res	Type
37	BC	107	GLY
37	BC	119	ASP
37	BC	128	LEU
37	BC	134	PRO
37	BC	184	GLU
37	BC	202	PRO
37	BC	209	PHE
38	BD	35	LYS
38	BD	262	ARG
38	BD	263	ARG
39	BE	53	PRO
39	BE	54	GLN
39	BE	70	ALA
39	BE	82	ARG
39	BE	187	ALA
40	BF	10	PRO
40	BF	84	VAL
40	BF	135	LYS
41	BG	133	LEU
41	BG	137	GLU
41	BG	155	MET
42	BH	12	PRO
42	BH	24	VAL
42	BH	81	GLU
42	BH	154	PRO
42	BH	170	ARG
48	BP	49	ARG
48	BP	106	LEU
48	BP	111	ARG
48	BP	149	GLU
49	BQ	13	GLN
49	BQ	115	MET
50	BR	88	ARG
50	BR	106	GLY
51	BS	13	ARG
51	BS	24	LEU
51	BS	51	ALA
51	BS	57	LYS
52	BT	118	ARG
52	BT	134	GLU
52	BT	136	GLN
53	BU	93	LYS

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Mol	Chain	Res	Type
54	BV	19	LYS
55	BW	6	ILE
57	BY	39	VAL
57	BY	40	GLU
57	BY	53	PRO
57	BY	100	ALA
58	BZ	12	GLY
58	BZ	22	GLY
58	BZ	80	ARG
58	BZ	128	VAL
2	AB	190	THR
3	AC	4	LYS
3	AC	29	TYR
3	AC	61	ALA
3	AC	80	GLY
3	AC	170	GLN
5	AE	8	GLU
6	AF	16	GLN
12	AL	115	LYS
13	AM	85	GLY
14	AN	56	VAL
14	AN	60	SER
16	AP	53	VAL
19	AS	18	LYS
19	AS	89	ALA
19	AS	90	THR
20	AT	71	THR
20	AT	74	LYS
20	AT	97	ALA
24	AY	49	ALA
24	AY	551	GLN
27	B2	35	LEU
27	B2	46	GLN
27	B2	50	ILE
29	B4	21	VAL
29	B4	42	PHE
29	B4	47	GLN
29	B4	59	PHE
29	B4	67	TYR
30	B5	51	TYR
31	B6	23	THR
33	B8	3	LYS

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Mol	Chain	Res	Type
37	BC	16	ASP
37	BC	88	GLU
37	BC	141	PRO
37	BC	142	LYS
38	BD	3	VAL
38	BD	241	PRO
39	BE	69	LYS
40	BF	81	PRO
41	BG	26	GLN
41	BG	46	ALA
41	BG	57	ALA
42	BH	160	LYS
46	BN	8	GLN
46	BN	59	LYS
46	BN	68	GLU
48	BP	9	ASN
48	BP	25	SER
48	BP	33	ARG
49	BQ	20	ALA
49	BQ	140	ALA
51	BS	14	VAL
51	BS	102	ALA
52	BT	3	ARG
52	BT	12	SER
53	BU	50	ARG
56	BX	13	LEU
57	BY	97	ARG
58	BZ	14	LYS
58	BZ	78	LYS
2	AB	8	LYS
2	AB	16	HIS
3	AC	32	LEU
3	AC	66	VAL
3	AC	118	GLN
3	AC	121	ALA
3	AC	187	ALA
4	AD	191	ARG
6	AF	70	ASP
7	AG	4	ARG
7	AG	47	CYS
7	AG	58	PRO
7	AG	128	ALA

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Mol	Chain	Res	Type
9	AI	54	ASP
10	AJ	18	ALA
12	AL	29	GLY
12	AL	45	PRO
12	AL	95	GLY
19	AS	41	VAL
19	AS	87	ALA
20	AT	100	ILE
24	AY	47	GLU
24	AY	59	ARG
24	AY	183	MET
24	AY	205	TYR
24	AY	210	ARG
24	AY	253	LEU
24	AY	380	LEU
24	AY	506	GLN
24	AY	574	GLU
27	B2	5	GLU
27	B2	16	LEU
28	B3	16	PRO
29	B4	2	LYS
29	B4	6	HIS
29	B4	9	LEU
33	B8	32	LEU
33	B8	43	GLN
34	B9	11	CYS
37	BC	21	TYR
37	BC	89	GLU
37	BC	116	ALA
37	BC	126	SER
39	BE	52	LEU
40	BF	9	ILE
41	BG	93	THR
42	BH	13	LYS
42	BH	19	VAL
42	BH	40	GLU
42	BH	85	LYS
42	BH	98	LEU
42	BH	159	GLU
42	BH	168	PRO
46	BN	5	VAL
48	BP	67	MET

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Mol	Chain	Res	Type
48	BP	141	ALA
50	BR	8	ARG
50	BR	11	ASN
52	BT	7	ILE
52	BT	17	THR
54	BV	44	LYS
54	BV	48	GLY
57	BY	3	VAL
57	BY	10	GLY
57	BY	31	LEU
57	BY	61	ILE
58	BZ	63	ASP
58	BZ	158	PRO
58	BZ	162	GLU
58	BZ	183	LEU
2	AB	130	ARG
2	AB	158	LEU
3	AC	65	ALA
4	AD	150	GLU
4	AD	171	GLY
5	AE	22	GLY
7	AG	20	ASP
9	AI	89	ASN
11	AK	117	ASN
24	AY	23	ALA
24	AY	60	GLU
24	AY	81	ILE
24	AY	230	LYS
24	AY	239	GLU
24	AY	531	GLY
24	AY	554	PRO
24	AY	577	SER
24	AY	680	PRO
37	BC	221	PRO
38	BD	36	PRO
39	BE	45	THR
39	BE	73	GLU
40	BF	204	ASN
41	BG	30	GLU
41	BG	50	ALA
41	BG	94	LEU
41	BG	165	THR

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Mol	Chain	Res	Type
42	BH	9	ILE
46	BN	125	GLY
46	BN	129	PRO
48	BP	43	GLY
52	BT	31	SER
57	BY	4	LYS
57	BY	81	LYS
57	BY	88	LYS
2	AB	234	PRO
2	AB	239	VAL
3	AC	130	VAL
10	AJ	4	ILE
20	AT	102	GLY
24	AY	37	GLY
24	AY	404	VAL
26	B1	30	VAL
38	BD	238	GLY
40	BF	30	PRO
46	BN	40	PRO
48	BP	144	GLU
51	BS	82	ILE
54	BV	35	LEU
57	BY	52	SER
26	B1	86	SER
29	B4	41	PRO
37	BC	75	VAL
37	BC	84	ILE
39	BE	175	VAL
40	BF	6	VAL
41	BG	141	PHE
41	BG	142	PRO
42	BH	111	HIS
53	BU	90	VAL
7	AG	17	VAL
9	AI	81	ILE
12	AL	48	PRO
33	B8	63	PRO
48	BP	11	GLY
51	BS	60	GLY
54	BV	79	VAL
39	BE	62	PRO
42	BH	92	ILE

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Mol	Chain	Res	Type
51	BS	98	VAL
54	BV	52	VAL
58	BZ	176	PRO
11	AK	49	GLY
12	AL	18	VAL
13	AM	24	GLY
42	BH	20	ALA
42	BH	10	PRO
38	BD	245	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%)	160 (79%)	42 (21%)	1 3
3	AC	160/188 (85%)	127 (79%)	33 (21%)	1 3
4	AD	180/181 (99%)	155 (86%)	25 (14%)	3 10
5	AE	115/123 (94%)	109 (95%)	6 (5%)	21 46
6	AF	90/90 (100%)	82 (91%)	8 (9%)	9 24
7	AG	126/127 (99%)	113 (90%)	13 (10%)	7 19
8	AH	119/119 (100%)	105 (88%)	14 (12%)	5 15
9	AI	98/99 (99%)	83 (85%)	15 (15%)	3 8
10	AJ	88/92 (96%)	81 (92%)	7 (8%)	11 28
11	AK	90/99 (91%)	85 (94%)	5 (6%)	19 43
12	AL	104/109 (95%)	88 (85%)	16 (15%)	2 8
13	AM	94/101 (93%)	83 (88%)	11 (12%)	5 16
14	AN	49/50 (98%)	42 (86%)	7 (14%)	3 9
15	AO	79/80 (99%)	71 (90%)	8 (10%)	7 20
16	AP	72/74 (97%)	68 (94%)	4 (6%)	19 43
17	AQ	94/97 (97%)	91 (97%)	3 (3%)	34 59
18	AR	61/77 (79%)	55 (90%)	6 (10%)	7 21

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
19	AS	74/80 (92%)	65 (88%)	9 (12%)	5 14
20	AT	76/82 (93%)	67 (88%)	9 (12%)	5 15
21	AU	19/22 (86%)	19 (100%)	0	100 100
24	AY	579/582 (100%)	508 (88%)	71 (12%)	4 14
25	B0	66/66 (100%)	46 (70%)	20 (30%)	0 0
26	B1	78/82 (95%)	61 (78%)	17 (22%)	1 2
27	B2	66/66 (100%)	41 (62%)	25 (38%)	0 0
28	B3	51/52 (98%)	41 (80%)	10 (20%)	1 3
29	B4	63/63 (100%)	46 (73%)	17 (27%)	0 0
30	B5	51/51 (100%)	40 (78%)	11 (22%)	1 2
31	B6	49/51 (96%)	36 (74%)	13 (26%)	0 1
32	B7	41/41 (100%)	38 (93%)	3 (7%)	13 33
33	B8	53/54 (98%)	40 (76%)	13 (24%)	1 1
34	B9	34/34 (100%)	30 (88%)	4 (12%)	5 15
37	BC	179/180 (99%)	155 (87%)	24 (13%)	4 11
38	BD	217/217 (100%)	183 (84%)	34 (16%)	2 8
39	BE	165/166 (99%)	132 (80%)	33 (20%)	1 3
40	BF	165/166 (99%)	147 (89%)	18 (11%)	6 18
41	BG	153/155 (99%)	127 (83%)	26 (17%)	2 5
42	BH	146/148 (99%)	132 (90%)	14 (10%)	8 22
43	BJ	1/1 (100%)	1 (100%)	0	100 100
46	BN	117/119 (98%)	101 (86%)	16 (14%)	3 11
47	BO	100/100 (100%)	93 (93%)	7 (7%)	14 34
48	BP	112/115 (97%)	87 (78%)	25 (22%)	1 2
49	BQ	111/111 (100%)	93 (84%)	18 (16%)	2 7
50	BR	100/100 (100%)	83 (83%)	17 (17%)	2 5
51	BS	77/87 (88%)	62 (80%)	15 (20%)	1 3
52	BT	120/127 (94%)	95 (79%)	25 (21%)	1 3
53	BU	92/93 (99%)	84 (91%)	8 (9%)	9 25
54	BV	82/82 (100%)	65 (79%)	17 (21%)	1 3
55	BW	91/92 (99%)	76 (84%)	15 (16%)	2 7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
56	BX	74/77 (96%)	68 (92%)	6 (8%)	11 28
57	BY	84/90 (93%)	68 (81%)	16 (19%)	1 3
58	BZ	162/178 (91%)	140 (86%)	22 (14%)	3 11
All	All	5469/5656 (97%)	4668 (85%)	801 (15%)	3 9

All (801) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	8	LYS
2	AB	16	HIS
2	AB	17	PHE
2	AB	22	LYS
2	AB	23	ARG
2	AB	36	ARG
2	AB	39	ILE
2	AB	41	ILE
2	AB	42	ILE
2	AB	48	MET
2	AB	52	GLU
2	AB	60	ASP
2	AB	74	LYS
2	AB	76	GLN
2	AB	82	ARG
2	AB	83	MET
2	AB	87	ARG
2	AB	90	MET
2	AB	93	VAL
2	AB	96	ARG
2	AB	101	MET
2	AB	102	LEU
2	AB	110	GLN
2	AB	114	ARG
2	AB	116	GLU
2	AB	122	PHE
2	AB	127	ILE
2	AB	142	LEU
2	AB	149	LEU
2	AB	153	ARG
2	AB	157	ARG
2	AB	170	GLU
2	AB	172	ILE

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Mol	Chain	Res	Type
2	AB	178	ARG
2	AB	185	ILE
2	AB	187	LEU
2	AB	200	ILE
2	AB	221	LEU
2	AB	224	GLN
2	AB	229	VAL
2	AB	231	GLU
2	AB	233	SER
3	AC	3	ASN
3	AC	5	ILE
3	AC	14	ILE
3	AC	16	ARG
3	AC	20	SER
3	AC	26	LYS
3	AC	30	ARG
3	AC	34	LEU
3	AC	45	LYS
3	AC	46	GLU
3	AC	52	LEU
3	AC	54	ARG
3	AC	63	ASN
3	AC	72	LYS
3	AC	76	VAL
3	AC	82	GLU
3	AC	86	VAL
3	AC	94	LEU
3	AC	101	LEU
3	AC	105	GLU
3	AC	110	ASN
3	AC	111	LEU
3	AC	115	LEU
3	AC	119	ARG
3	AC	123	GLN
3	AC	131	ARG
3	AC	132	ARG
3	AC	143	GLU
3	AC	164	ARG
3	AC	165	THR
3	AC	166	GLU
3	AC	167	TRP
3	AC	178	LEU

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Mol	Chain	Res	Type
4	AD	3	ARG
4	AD	8	VAL
4	AD	13	ARG
4	AD	15	GLU
4	AD	21	LEU
4	AD	34	GLU
4	AD	36	ARG
4	AD	50	ARG
4	AD	58	LEU
4	AD	76	ARG
4	AD	88	VAL
4	AD	101	LEU
4	AD	110	PHE
4	AD	112	VAL
4	AD	127	THR
4	AD	132	ARG
4	AD	135	LEU
4	AD	139	ARG
4	AD	150	GLU
4	AD	168	ARG
4	AD	190	ASP
4	AD	194	LEU
4	AD	196	LEU
4	AD	200	GLU
4	AD	209	ARG
5	AE	10	MET
5	AE	20	GLN
5	AE	31	LEU
5	AE	68	GLU
5	AE	80	ILE
5	AE	91	LEU
6	AF	19	LEU
6	AF	25	ILE
6	AF	32	ASN
6	AF	43	LEU
6	AF	67	MET
6	AF	69	GLU
6	AF	73	ASN
6	AF	95	GLU
7	AG	22	LEU
7	AG	38	LEU
7	AG	57	GLU

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Mol	Chain	Res	Type
7	AG	73	MET
7	AG	79	ARG
7	AG	90	GLU
7	AG	104	LEU
7	AG	106	GLN
7	AG	114	ARG
7	AG	119	ARG
7	AG	131	LYS
7	AG	140	ASP
7	AG	154	TYR
8	AH	1	MET
8	AH	6	ILE
8	AH	26	VAL
8	AH	27	PRO
8	AH	30	ARG
8	AH	39	LEU
8	AH	52	ASP
8	AH	54	ASP
8	AH	63	LEU
8	AH	91	ARG
8	AH	92	ARG
8	AH	105	ARG
8	AH	112	LEU
8	AH	127	LEU
9	AI	2	GLU
9	AI	14	VAL
9	AI	20	ARG
9	AI	23	ASN
9	AI	26	VAL
9	AI	47	LEU
9	AI	53	VAL
9	AI	56	LEU
9	AI	60	ASP
9	AI	78	LYS
9	AI	81	ILE
9	AI	85	LEU
9	AI	104	ARG
9	AI	118	LYS
9	AI	121	ARG
10	AJ	4	ILE
10	AJ	6	ILE
10	AJ	8	LEU

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Mol	Chain	Res	Type
10	AJ	49	VAL
10	AJ	57	LYS
10	AJ	95	GLU
10	AJ	96	ILE
11	AK	53	SER
11	AK	104	GLN
11	AK	109	VAL
11	AK	124	LYS
11	AK	126	ARG
12	AL	7	ILE
12	AL	20	LYS
12	AL	27	LEU
12	AL	33	ARG
12	AL	41	ARG
12	AL	42	THR
12	AL	44	THR
12	AL	47	LYS
12	AL	79	GLU
12	AL	84	LEU
12	AL	85	ILE
12	AL	89	ARG
12	AL	94	PRO
12	AL	118	SER
12	AL	123	LYS
12	AL	127	GLU
13	AM	7	VAL
13	AM	8	GLU
13	AM	9	ILE
13	AM	11	ARG
13	AM	64	TRP
13	AM	65	LYS
13	AM	70	LEU
13	AM	79	LYS
13	AM	91	ARG
13	AM	101	GLN
13	AM	108	ARG
14	AN	14	PRO
14	AN	16	PHE
14	AN	23	ARG
14	AN	31	ARG
14	AN	33	VAL
14	AN	44	LEU

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Mol	Chain	Res	Type
14	AN	58	LYS
15	AO	25	THR
15	AO	31	LEU
15	AO	39	LEU
15	AO	56	LEU
15	AO	68	ARG
15	AO	74	ASP
15	AO	81	LEU
15	AO	82	ILE
16	AP	2	VAL
16	AP	27	LYS
16	AP	55	ARG
16	AP	62	VAL
17	AQ	37	LYS
17	AQ	38	ARG
17	AQ	65	ILE
18	AR	37	VAL
18	AR	47	THR
18	AR	49	LYS
18	AR	50	ILE
18	AR	76	LEU
18	AR	86	VAL
19	AS	7	LYS
19	AS	12	ASP
19	AS	15	LEU
19	AS	21	GLU
19	AS	30	LEU
19	AS	37	ARG
19	AS	62	ILE
19	AS	85	LYS
19	AS	86	GLU
20	AT	18	GLN
20	AT	24	LEU
20	AT	26	ASN
20	AT	27	LYS
20	AT	30	LYS
20	AT	41	ILE
20	AT	51	GLU
20	AT	75	ASN
20	AT	82	SER
24	AY	21	ILE
24	AY	31	ARG

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Mol	Chain	Res	Type
24	AY	40	HIS
24	AY	45	VAL
24	AY	52	MET
24	AY	54	PHE
24	AY	59	ARG
24	AY	60	GLU
24	AY	64	THR
24	AY	81	ILE
24	AY	82	ILE
24	AY	84	THR
24	AY	91	THR
24	AY	92	ILE
24	AY	98	MET
24	AY	101	LEU
24	AY	120	THR
24	AY	121	VAL
24	AY	128	TYR
24	AY	157	LEU
24	AY	166	LEU
24	AY	191	ASP
24	AY	192	LEU
24	AY	224	ASP
24	AY	232	LEU
24	AY	236	GLU
24	AY	252	ASP
24	AY	255	ILE
24	AY	260	LEU
24	AY	264	LEU
24	AY	277	VAL
24	AY	284	LEU
24	AY	289	ILE
24	AY	312	LEU
24	AY	343	ASN
24	AY	348	ARG
24	AY	352	VAL
24	AY	355	LEU
24	AY	356	LEU
24	AY	369	LEU
24	AY	377	VAL
24	AY	396	ARG
24	AY	408	VAL
24	AY	411	VAL

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Mol	Chain	Res	Type
24	AY	417	THR
24	AY	421	GLN
24	AY	422	GLU
24	AY	426	GLN
24	AY	431	LEU
24	AY	437	THR
24	AY	445	GLU
24	AY	457	LEU
24	AY	466	LEU
24	AY	478	LYS
24	AY	481	VAL
24	AY	487	ILE
24	AY	500	GLN
24	AY	509	HIS
24	AY	510	VAL
24	AY	512	ILE
24	AY	572	TYR
24	AY	580	MET
24	AY	607	ARG
24	AY	616	TYR
24	AY	623	ASP
24	AY	628	ARG
24	AY	635	GLU
24	AY	637	ARG
24	AY	647	VAL
24	AY	649	LEU
24	AY	671	MET
25	B0	5	LYS
25	B0	11	ARG
25	B0	14	ARG
25	B0	20	ARG
25	B0	27	GLU
25	B0	30	VAL
25	B0	39	ARG
25	B0	40	GLN
25	B0	43	THR
25	B0	44	ARG
25	B0	53	MET
25	B0	55	ARG
25	B0	56	ASP
25	B0	57	PHE
25	B0	62	LEU

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Mol	Chain	Res	Type
25	B0	69	PHE
25	B0	70	GLN
25	B0	75	LEU
25	B0	80	HIS
25	B0	84	LEU
26	B1	5	CYS
26	B1	8	SER
26	B1	11	ARG
26	B1	25	LYS
26	B1	27	GLU
26	B1	30	VAL
26	B1	33	LYS
26	B1	37	ILE
26	B1	39	LYS
26	B1	40	ARG
26	B1	50	ARG
26	B1	53	VAL
26	B1	73	LEU
26	B1	78	LYS
26	B1	80	LEU
26	B1	82	LEU
26	B1	83	GLU
27	B2	2	LYS
27	B2	4	SER
27	B2	7	ARG
27	B2	8	LYS
27	B2	9	GLN
27	B2	20	GLU
27	B2	24	LEU
27	B2	26	ARG
27	B2	27	GLU
27	B2	32	LEU
27	B2	37	PHE
27	B2	40	SER
27	B2	41	ILE
27	B2	43	GLN
27	B2	44	LEU
27	B2	45	SER
27	B2	47	ASN
27	B2	48	HIS
27	B2	49	LYS
27	B2	51	ARG

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Mol	Chain	Res	Type
27	B2	53	LEU
27	B2	64	LEU
27	B2	65	ASN
27	B2	68	ARG
27	B2	70	GLN
28	B3	1	MET
28	B3	8	LEU
28	B3	10	LYS
28	B3	29	ARG
28	B3	30	ARG
28	B3	33	GLN
28	B3	40	THR
28	B3	54	VAL
28	B3	55	ARG
28	B3	57	GLU
29	B4	1	MET
29	B4	15	ILE
29	B4	24	THR
29	B4	27	THR
29	B4	31	ILE
29	B4	34	GLU
29	B4	38	LYS
29	B4	39	CYS
29	B4	42	PHE
29	B4	49	PHE
29	B4	51	ASP
29	B4	52	THR
29	B4	53	GLU
29	B4	58	ARG
29	B4	59	PHE
29	B4	61	ARG
29	B4	62	ARG
30	B5	3	LYS
30	B5	4	HIS
30	B5	16	ARG
30	B5	26	THR
30	B5	29	THR
30	B5	44	THR
30	B5	45	VAL
30	B5	48	GLU
30	B5	51	TYR
30	B5	52	TYR

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Mol	Chain	Res	Type
30	B5	55	ARG
31	B6	7	ILE
31	B6	9	LEU
31	B6	10	LEU
31	B6	11	LEU
31	B6	18	ARG
31	B6	29	ASN
31	B6	31	PRO
31	B6	32	ASN
31	B6	35	GLU
31	B6	36	LEU
31	B6	42	TRP
31	B6	45	LYS
31	B6	53	LYS
32	B7	8	ASN
32	B7	43	THR
32	B7	44	PRO
33	B8	11	LYS
33	B8	13	ARG
33	B8	19	SER
33	B8	30	ARG
33	B8	31	HIS
33	B8	32	LEU
33	B8	34	TRP
33	B8	35	GLN
33	B8	41	ILE
33	B8	47	LYS
33	B8	49	VAL
33	B8	59	LYS
33	B8	61	LEU
34	B9	2	LYS
34	B9	7	VAL
34	B9	11	CYS
34	B9	29	ASN
37	BC	28	ARG
37	BC	29	LEU
37	BC	32	GLU
37	BC	48	LEU
37	BC	50	ILE
37	BC	54	ARG
37	BC	63	VAL
37	BC	98	GLU

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Mol	Chain	Res	Type
37	BC	99	GLU
37	BC	100	ILE
37	BC	103	LYS
37	BC	104	ILE
37	BC	106	ASP
37	BC	108	TRP
37	BC	119	ASP
37	BC	121	MET
37	BC	127	LYS
37	BC	130	ARG
37	BC	138	LEU
37	BC	158	LYS
37	BC	184	GLU
37	BC	203	GLU
37	BC	206	LYS
37	BC	208	THR
38	BD	3	VAL
38	BD	4	LYS
38	BD	18	VAL
38	BD	24	ILE
38	BD	25	THR
38	BD	26	LYS
38	BD	35	LYS
38	BD	46	GLN
38	BD	64	ILE
38	BD	65	ILE
38	BD	75	ILE
38	BD	89	SER
38	BD	95	LEU
38	BD	98	VAL
38	BD	103	ARG
38	BD	105	ILE
38	BD	106	ILE
38	BD	122	ASP
38	BD	131	LEU
38	BD	138	VAL
38	BD	141	VAL
38	BD	155	LEU
38	BD	166	GLN
38	BD	173	VAL
38	BD	192	THR
38	BD	193	VAL

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Mol	Chain	Res	Type
38	BD	212	SER
38	BD	218	ARG
38	BD	221	VAL
38	BD	229	VAL
38	BD	242	ARG
38	BD	257	LEU
38	BD	259	THR
38	BD	270	ILE
39	BE	9	VAL
39	BE	34	VAL
39	BE	47	VAL
39	BE	49	LEU
39	BE	52	LEU
39	BE	54	GLN
39	BE	55	ASN
39	BE	56	PRO
39	BE	57	LYS
39	BE	63	LEU
39	BE	67	PHE
39	BE	69	LYS
39	BE	79	ARG
39	BE	82	ARG
39	BE	87	GLU
39	BE	90	THR
39	BE	93	VAL
39	BE	94	GLU
39	BE	111	ARG
39	BE	116	VAL
39	BE	134	ILE
39	BE	144	ARG
39	BE	145	LYS
39	BE	146	THR
39	BE	154	LYS
39	BE	167	VAL
39	BE	169	ASN
39	BE	175	VAL
39	BE	178	GLU
39	BE	185	LYS
39	BE	197	ILE
39	BE	198	VAL
39	BE	203	LYS
40	BF	17	ARG

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Mol	Chain	Res	Type
40	BF	19	GLU
40	BF	20	LEU
40	BF	28	ILE
40	BF	33	LEU
40	BF	35	GLU
40	BF	50	SER
40	BF	68	LYS
40	BF	82	ILE
40	BF	84	VAL
40	BF	110	LEU
40	BF	125	LEU
40	BF	157	VAL
40	BF	158	THR
40	BF	164	ARG
40	BF	169	ASN
40	BF	179	GLU
40	BF	192	LEU
41	BG	9	ARG
41	BG	13	GLU
41	BG	21	ARG
41	BG	22	ARG
41	BG	26	GLN
41	BG	27	ASN
41	BG	48	GLU
41	BG	60	LEU
41	BG	66	GLN
41	BG	79	ASN
41	BG	82	LEU
41	BG	83	ARG
41	BG	91	ARG
41	BG	95	ARG
41	BG	106	LEU
41	BG	107	LEU
41	BG	108	ASN
41	BG	113	ARG
41	BG	121	ASN
41	BG	133	LEU
41	BG	135	LEU
41	BG	139	LEU
41	BG	146	TYR
41	BG	176	LEU
41	BG	180	PHE

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Mol	Chain	Res	Type
41	BG	182	LYS
42	BH	3	ARG
42	BH	6	ARG
42	BH	9	ILE
42	BH	47	GLU
42	BH	83	TYR
42	BH	89	ILE
42	BH	104	GLU
42	BH	105	LEU
42	BH	111	HIS
42	BH	124	GLU
42	BH	143	GLN
42	BH	158	HIS
42	BH	159	GLU
42	BH	168	PRO
46	BN	2	LYS
46	BN	25	ARG
46	BN	33	LEU
46	BN	34	LEU
46	BN	35	ARG
46	BN	37	LYS
46	BN	45	ASN
46	BN	48	MET
46	BN	68	GLU
46	BN	73	THR
46	BN	96	GLU
46	BN	119	ARG
46	BN	120	LEU
46	BN	129	PRO
46	BN	131	GLN
46	BN	136	GLU
47	BO	13	ASN
47	BO	20	MET
47	BO	22	ILE
47	BO	23	ARG
47	BO	24	VAL
47	BO	47	ILE
47	BO	52	VAL
48	BP	6	LEU
48	BP	9	ASN
48	BP	16	ARG
48	BP	33	ARG

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Mol	Chain	Res	Type
48	BP	39	LYS
48	BP	47	ASP
48	BP	49	ARG
48	BP	52	GLU
48	BP	55	ARG
48	BP	57	THR
48	BP	58	THR
48	BP	59	LEU
48	BP	61	ARG
48	BP	62	LEU
48	BP	68	GLN
48	BP	70	GLN
48	BP	85	LEU
48	BP	91	PHE
48	BP	105	LEU
48	BP	110	TYR
48	BP	112	LEU
48	BP	114	ILE
48	BP	115	LEU
48	BP	119	GLU
48	BP	135	LEU
49	BQ	1	MET
49	BQ	14	ARG
49	BQ	16	ARG
49	BQ	45	GLN
49	BQ	51	ARG
49	BQ	54	MET
49	BQ	56	ARG
49	BQ	59	ARG
49	BQ	65	PHE
49	BQ	66	ILE
49	BQ	75	THR
49	BQ	79	LEU
49	BQ	81	VAL
49	BQ	97	VAL
49	BQ	109	VAL
49	BQ	110	THR
49	BQ	133	ARG
49	BQ	141	GLN
50	BR	2	ARG
50	BR	6	SER
50	BR	10	LEU

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Mol	Chain	Res	Type
50	BR	18	LEU
50	BR	28	LEU
50	BR	29	LEU
50	BR	34	ILE
50	BR	65	LEU
50	BR	71	GLN
50	BR	75	LEU
50	BR	83	ILE
50	BR	99	LYS
50	BR	100	LEU
50	BR	113	LEU
50	BR	116	LEU
50	BR	117	VAL
50	BR	118	GLU
51	BS	11	LYS
51	BS	12	PHE
51	BS	15	ARG
51	BS	20	ARG
51	BS	36	TYR
51	BS	40	ILE
51	BS	49	VAL
51	BS	54	LEU
51	BS	56	LEU
51	BS	59	LYS
51	BS	64	GLU
51	BS	92	TYR
51	BS	97	ARG
51	BS	99	LYS
51	BS	106	ARG
52	BT	2	ASN
52	BT	7	ILE
52	BT	16	ARG
52	BT	23	ARG
52	BT	28	VAL
52	BT	29	ARG
52	BT	30	VAL
52	BT	33	LYS
52	BT	38	ASN
52	BT	49	VAL
52	BT	51	ARG
52	BT	58	ASN
52	BT	59	THR

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Mol	Chain	Res	Type
52	BT	78	LEU
52	BT	79	HIS
52	BT	80	SER
52	BT	83	ILE
52	BT	85	LYS
52	BT	95	ARG
52	BT	96	ARG
52	BT	99	LEU
52	BT	111	ARG
52	BT	118	ARG
52	BT	124	ASP
52	BT	133	GLU
53	BU	8	VAL
53	BU	18	LEU
53	BU	59	ARG
53	BU	60	LEU
53	BU	74	LEU
53	BU	83	LEU
53	BU	108	GLU
53	BU	117	GLN
54	BV	1	MET
54	BV	2	PHE
54	BV	7	THR
54	BV	10	LYS
54	BV	12	TYR
54	BV	16	PRO
54	BV	18	LEU
54	BV	19	LYS
54	BV	35	LEU
54	BV	39	LEU
54	BV	40	LEU
54	BV	45	THR
54	BV	50	PRO
54	BV	71	LEU
54	BV	89	GLN
54	BV	95	LEU
54	BV	99	ILE
55	BW	11	ARG
55	BW	17	VAL
55	BW	19	LEU
55	BW	20	VAL
55	BW	21	VAL

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Mol	Chain	Res	Type
55	BW	23	LEU
55	BW	36	LEU
55	BW	50	VAL
55	BW	76	VAL
55	BW	78	GLU
55	BW	90	ARG
55	BW	95	ILE
55	BW	96	ILE
55	BW	104	THR
55	BW	106	ILE
56	BX	27	THR
56	BX	57	LEU
56	BX	68	ARG
56	BX	70	LEU
56	BX	80	ILE
56	BX	90	GLU
57	BY	6	HIS
57	BY	23	ARG
57	BY	28	LYS
57	BY	29	GLU
57	BY	32	PRO
57	BY	38	ILE
57	BY	44	ILE
57	BY	53	PRO
57	BY	55	TYR
57	BY	56	PRO
57	BY	77	PRO
57	BY	83	THR
57	BY	85	VAL
57	BY	90	LEU
57	BY	95	LYS
57	BY	99	CYS
58	BZ	6	LYS
58	BZ	32	HIS
58	BZ	41	LEU
58	BZ	44	PHE
58	BZ	46	LYS
58	BZ	67	LEU
58	BZ	70	LEU
58	BZ	81	ARG
58	BZ	97	GLU
58	BZ	103	ARG

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Mol	Chain	Res	Type
58	BZ	112	ARG
58	BZ	121	HIS
58	BZ	122	ARG
58	BZ	140	ASP
58	BZ	148	ASP
58	BZ	155	LEU
58	BZ	163	LEU
58	BZ	168	GLU
58	BZ	182	LYS
58	BZ	183	LEU
58	BZ	185	GLU
58	BZ	186	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (182) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	37	ASN
2	AB	45	GLN
2	AB	78	GLN
2	AB	95	GLN
2	AB	146	GLN
2	AB	204	ASN
2	AB	212	GLN
3	AC	37	GLN
3	AC	63	ASN
3	AC	110	ASN
3	AC	118	GLN
3	AC	123	GLN
3	AC	170	GLN
3	AC	176	HIS
3	AC	181	ASN
4	AD	62	GLN
4	AD	77	ASN
4	AD	129	ASN
4	AD	161	ASN
5	AE	20	GLN
5	AE	38	GLN
5	AE	65	ASN
5	AE	73	ASN
6	AF	16	GLN
6	AF	27	GLN
6	AF	32	ASN

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Mol	Chain	Res	Type
6	AF	57	GLN
6	AF	64	GLN
6	AF	73	ASN
6	AF	84	ASN
6	AF	94	GLN
6	AF	100	ASN
7	AG	37	ASN
7	AG	64	GLN
7	AG	68	ASN
7	AG	84	ASN
7	AG	96	GLN
7	AG	122	HIS
7	AG	148	ASN
7	AG	153	HIS
8	AH	82	HIS
9	AI	23	ASN
9	AI	34	ASN
9	AI	73	GLN
10	AJ	56	HIS
10	AJ	78	ASN
11	AK	117	ASN
12	AL	8	ASN
12	AL	9	GLN
12	AL	49	ASN
12	AL	75	HIS
12	AL	78	GLN
13	AM	40	ASN
13	AM	62	ASN
13	AM	77	ASN
13	AM	101	GLN
15	AO	37	ASN
15	AO	46	HIS
15	AO	50	HIS
15	AO	53	HIS
15	AO	71	GLN
16	AP	16	HIS
16	AP	76	GLN
17	AQ	16	GLN
18	AR	36	ASN
19	AS	47	HIS
19	AS	53	ASN
19	AS	65	ASN

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Mol	Chain	Res	Type
20	AT	18	GLN
20	AT	26	ASN
20	AT	73	HIS
20	AT	75	ASN
24	AY	14	ASN
24	AY	57	GLN
24	AY	137	ASN
24	AY	165	GLN
24	AY	208	GLN
24	AY	270	GLN
24	AY	343	ASN
24	AY	421	GLN
24	AY	458	HIS
24	AY	543	GLN
24	AY	625	ASN
24	AY	641	GLN
24	AY	664	GLN
24	AY	684	GLN
25	B0	3	HIS
25	B0	50	ASN
25	B0	70	GLN
26	B1	16	ASN
26	B1	45	ASN
27	B2	46	GLN
27	B2	47	ASN
27	B2	70	GLN
28	B3	19	GLN
28	B3	46	ASN
28	B3	52	HIS
30	B5	4	HIS
30	B5	23	HIS
31	B6	32	ASN
32	B7	8	ASN
34	B9	34	GLN
37	BC	18	ASN
37	BC	67	HIS
37	BC	72	GLN
37	BC	149	ASN
37	BC	189	ASN
37	BC	200	HIS
38	BD	96	HIS
38	BD	115	GLN

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Mol	Chain	Res	Type
38	BD	116	GLN
38	BD	126	GLN
38	BD	166	GLN
38	BD	186	HIS
38	BD	198	ASN
38	BD	201	HIS
39	BE	48	GLN
39	BE	54	GLN
39	BE	55	ASN
39	BE	129	HIS
39	BE	132	HIS
39	BE	143	ASN
39	BE	169	ASN
39	BE	192	ASN
40	BF	69	HIS
40	BF	75	HIS
40	BF	133	ASN
40	BF	160	ASN
40	BF	204	ASN
41	BG	27	ASN
41	BG	40	ASN
41	BG	108	ASN
42	BH	61	HIS
42	BH	65	HIS
42	BH	74	ASN
42	BH	139	GLN
42	BH	147	ASN
42	BH	158	HIS
46	BN	45	ASN
46	BN	56	ASN
46	BN	94	HIS
46	BN	128	HIS
46	BN	131	GLN
47	BO	13	ASN
47	BO	82	ASN
48	BP	27	HIS
48	BP	38	GLN
48	BP	68	GLN
48	BP	81	GLN
48	BP	84	ASN
48	BP	128	HIS
49	BQ	13	GLN

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Mol	Chain	Res	Type
49	BQ	45	GLN
49	BQ	57	HIS
49	BQ	141	GLN
50	BR	3	HIS
50	BR	11	ASN
50	BR	13	HIS
50	BR	23	ASN
50	BR	53	HIS
51	BS	34	HIS
52	BT	38	ASN
52	BT	43	GLN
52	BT	58	ASN
52	BT	79	HIS
52	BT	90	GLN
53	BU	14	HIS
53	BU	49	HIS
53	BU	66	ASN
53	BU	81	HIS
53	BU	94	ASN
53	BU	117	GLN
55	BW	34	ASN
55	BW	57	ASN
55	BW	102	HIS
56	BX	31	HIS
56	BX	41	ASN
56	BX	87	GLN
58	BZ	34	ASN
58	BZ	65	GLN
58	BZ	73	GLN
58	BZ	132	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1506/1519 (99%)	323 (21%)	51 (3%)
22	AV	75/76 (98%)	24 (32%)	2 (2%)
23	AX	8/9 (88%)	3 (37%)	0
35	BA	2900/2915 (99%)	669 (23%)	60 (2%)
36	BB	118/122 (96%)	26 (22%)	2 (1%)
All	All	4607/4641 (99%)	1045 (22%)	115 (2%)

All (1045) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	38	G
1	AA	39	G
1	AA	40	C
1	AA	48	C
1	AA	51	A
1	AA	57	G
1	AA	60	A
1	AA	61	G
1	AA	64	G
1	AA	65	U
1	AA	76	C
1	AA	77	G
1	AA	78	G
1	AA	79	G
1	AA	80	G
1	AA	81	U
1	AA	82	U
1	AA	83	U
1	AA	84	U
1	AA	88	A
1	AA	89	C
1	AA	90	U
1	AA	91	C
1	AA	92	C
1	AA	101	A
1	AA	107	G
1	AA	108	G
1	AA	113	G
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	131	C
1	AA	144	G
1	AA	189(H)	G
1	AA	189(I)	G
1	AA	195	A
1	AA	197	A
1	AA	198	G
1	AA	199	G
1	AA	203	U

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Mol	Chain	Res	Type
1	AA	204	U
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	265	G
1	AA	266	G
1	AA	267	C
1	AA	268	C
1	AA	275	G
1	AA	289	G
1	AA	312	C
1	AA	321	A
1	AA	324	G
1	AA	328	C
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	348	G
1	AA	349	A
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	365	U
1	AA	366	C
1	AA	367	U
1	AA	372	C
1	AA	384	G
1	AA	389	A
1	AA	397	A
1	AA	398	C
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	429	U
1	AA	430	A
1	AA	442	C
1	AA	452	A
1	AA	453	A

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Mol	Chain	Res	Type
1	AA	454	C
1	AA	484	G
1	AA	485	G
1	AA	491	G
1	AA	496	A
1	AA	498	U
1	AA	499	A
1	AA	505	G
1	AA	507	C
1	AA	508	C
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	518	C
1	AA	522	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	544	G
1	AA	546	G
1	AA	547	A
1	AA	548	G
1	AA	557	G
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	563	A
1	AA	564	C
1	AA	572	A
1	AA	573	A
1	AA	574	A
1	AA	576	G
1	AA	577	G
1	AA	588	G
1	AA	589	C
1	AA	590	C
1	AA	593	G
1	AA	595	G
1	AA	632	A
1	AA	633	G

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Mol	Chain	Res	Type
1	AA	653	A
1	AA	665	A
1	AA	686	U
1	AA	687	A
1	AA	688	G
1	AA	700	G
1	AA	702	A
1	AA	703	G
1	AA	705	U
1	AA	722	A
1	AA	723	U
1	AA	731	G
1	AA	749	C
1	AA	755	G
1	AA	770	C
1	AA	771	G
1	AA	774	G
1	AA	777	A
1	AA	788	U
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	796	C
1	AA	816	A
1	AA	817	C
1	AA	828	A
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	861	G
1	AA	863	U
1	AA	868	C
1	AA	872	A
1	AA	874	G
1	AA	902	G
1	AA	917	G
1	AA	922	G
1	AA	926	G
1	AA	927	G
1	AA	934	C

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Mol	Chain	Res	Type
1	AA	935	A
1	AA	939	G
1	AA	940	C
1	AA	941	G
1	AA	948	C
1	AA	950	U
1	AA	951	G
1	AA	952	U
1	AA	953	G
1	AA	957	U
1	AA	960	U
1	AA	961	U
1	AA	962	C
1	AA	963	G
1	AA	966	G
1	AA	968	A
1	AA	969	A
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	980	C
1	AA	981	U
1	AA	982	U
1	AA	983	A
1	AA	992	U
1	AA	993	G
1	AA	996	A
1	AA	1001(A)	G
1	AA	1004	A
1	AA	1025	U
1	AA	1028	C
1	AA	1029	C
1	AA	1030	C
1	AA	1030(C)	G
1	AA	1031	G
1	AA	1048	G
1	AA	1050	G
1	AA	1054	C
1	AA	1066	C
1	AA	1072	G
1	AA	1074	G

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Mol	Chain	Res	Type
1	AA	1076	C
1	AA	1078	U
1	AA	1081	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1117	G
1	AA	1125	U
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1145	C
1	AA	1151	A
1	AA	1152	A
1	AA	1154	G
1	AA	1158	C
1	AA	1159	U
1	AA	1176	A
1	AA	1182	G
1	AA	1183	A
1	AA	1184	G
1	AA	1185	G
1	AA	1187	G
1	AA	1190	G
1	AA	1195	C
1	AA	1196	U
1	AA	1197	G
1	AA	1200	C
1	AA	1201	A
1	AA	1212	U
1	AA	1213	A
1	AA	1227	A
1	AA	1229	A
1	AA	1230	C
1	AA	1238	A
1	AA	1240	U

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Mol	Chain	Res	Type
1	AA	1241	G
1	AA	1256	A
1	AA	1257	U
1	AA	1267	C
1	AA	1268	A
1	AA	1280	A
1	AA	1281	U
1	AA	1283	G
1	AA	1284	C
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1299	A
1	AA	1300	G
1	AA	1302	U
1	AA	1305	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1335	C
1	AA	1338	G
1	AA	1346	A
1	AA	1347	G
1	AA	1353	G
1	AA	1364	U
1	AA	1369	C
1	AA	1370	G
1	AA	1371	G
1	AA	1372	U
1	AA	1373	G
1	AA	1385	G
1	AA	1386	G
1	AA	1387	G
1	AA	1390	U
1	AA	1391	U
1	AA	1398	A
1	AA	1399	C
1	AA	1400	C
1	AA	1401	G
1	AA	1402	C

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Mol	Chain	Res	Type
1	AA	1408	A
1	AA	1419	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1446	U
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1457	G
1	AA	1487	G
1	AA	1490	C
1	AA	1491	G
1	AA	1492	A
1	AA	1493	A
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	1520	G
1	AA	1524	C
1	AA	1525	G
1	AA	1526	G
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C
22	AV	10	G
22	AV	13	C
22	AV	15	G
22	AV	16	C
22	AV	17	C
22	AV	18	G
22	AV	19	G
22	AV	20	U
22	AV	21	A
22	AV	22	G
22	AV	23	A
22	AV	30	G
22	AV	34	G
22	AV	44	G

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Mol	Chain	Res	Type
22	AV	45	U
22	AV	46	G
22	AV	48	C
22	AV	52	G
22	AV	53	G
22	AV	61	C
22	AV	73	A
22	AV	74	C
22	AV	75	C
22	AV	76	A
23	AX	12	A
23	AX	13	A
23	AX	19	A
35	BA	9	U
35	BA	10	G
35	BA	16	G
35	BA	28	A
35	BA	29	U
35	BA	30	G
35	BA	32	C
35	BA	34	C
35	BA	36	G
35	BA	37	C
35	BA	44	G
35	BA	45	C
35	BA	49	A
35	BA	50	U
35	BA	53	A
35	BA	58	G
35	BA	71	A
35	BA	72	U
35	BA	74	A
35	BA	75	G
35	BA	83	G
35	BA	84	A
35	BA	88	G
35	BA	90	U
35	BA	94	C
35	BA	102	G
35	BA	109	G
35	BA	110	G
35	BA	111	A

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Mol	Chain	Res	Type
35	BA	112	U
35	BA	115	C
35	BA	118	A
35	BA	119	A
35	BA	120	U
35	BA	139(A)	G
35	BA	140	G
35	BA	141	A
35	BA	146	G
35	BA	174	C
35	BA	175	G
35	BA	177	G
35	BA	178	G
35	BA	179	G
35	BA	180	G
35	BA	181	A
35	BA	182	A
35	BA	196	A
35	BA	197	A
35	BA	198	C
35	BA	199	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	247	G
35	BA	248	G
35	BA	249	C
35	BA	252	G
35	BA	257	A
35	BA	262	A
35	BA	264	C
35	BA	265	A
35	BA	266	G
35	BA	271(I)	G
35	BA	271(J)	C
35	BA	271(K)	U

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Mol	Chain	Res	Type
35	BA	271(M)	G
35	BA	271(N)	U
35	BA	271(O)	C
35	BA	271(P)	C
35	BA	271(R)	G
35	BA	271(Y)	U
35	BA	272(A)	U
35	BA	272(B)	G
35	BA	272(I)	U
35	BA	274	G
35	BA	275	G
35	BA	276	A
35	BA	277	C
35	BA	311	A
35	BA	329	G
35	BA	330	A
35	BA	331	A
35	BA	332	A
35	BA	333	G
35	BA	334	C
35	BA	352	G
35	BA	353	G
35	BA	356	G
35	BA	362	U
35	BA	363(E)	U
35	BA	364	C
35	BA	386	G
35	BA	387	U
35	BA	388	G
35	BA	396	G
35	BA	405	U
35	BA	411	G
35	BA	412	A
35	BA	418	G
35	BA	428	A
35	BA	444	C
35	BA	448	U
35	BA	454	A
35	BA	456	C
35	BA	457	A
35	BA	460	A
35	BA	462	C

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Mol	Chain	Res	Type
35	BA	463	G
35	BA	464	U
35	BA	467	G
35	BA	470	A
35	BA	473	G
35	BA	481	G
35	BA	505	A
35	BA	508	G
35	BA	509	C
35	BA	525	U
35	BA	526	A
35	BA	527	C
35	BA	528	A
35	BA	530	G
35	BA	531	C
35	BA	532	A
35	BA	533	G
35	BA	563	G
35	BA	573	G
35	BA	575	A
35	BA	586	A
35	BA	588	U
35	BA	600	G
35	BA	603	A
35	BA	604	G
35	BA	605	C
35	BA	607	U
35	BA	613	G
35	BA	614(B)	G
35	BA	627	A
35	BA	628	G
35	BA	629	G
35	BA	630	G
35	BA	637	A
35	BA	645	C
35	BA	646	A
35	BA	651	G
35	BA	653	A
35	BA	654	A
35	BA	654(I)	C
35	BA	654(J)	A
35	BA	654(K)	C

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Mol	Chain	Res	Type
35	BA	654(T)	C
35	BA	655	A
35	BA	656	G
35	BA	686	G
35	BA	689	A
35	BA	690	G
35	BA	691	C
35	BA	692	C
35	BA	693	C
35	BA	697	C
35	BA	698	C
35	BA	699	A
35	BA	708	C
35	BA	722	A
35	BA	730	C
35	BA	740	U
35	BA	742	G
35	BA	743	G
35	BA	744	G
35	BA	753	C
35	BA	764	A
35	BA	776	G
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	857	C
35	BA	858	U
35	BA	859	G
35	BA	860	U
35	BA	866	A
35	BA	878	A

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Mol	Chain	Res	Type
35	BA	881	G
35	BA	885	C
35	BA	886	C
35	BA	887	A
35	BA	888	C
35	BA	889	C
35	BA	890	A
35	BA	892	G
35	BA	893	C
35	BA	896	A
35	BA	897	C
35	BA	901	A
35	BA	910	A
35	BA	917	A
35	BA	926	A
35	BA	932	G
35	BA	934	G
35	BA	941	A
35	BA	945	A
35	BA	946	G
35	BA	954	G
35	BA	955	C
35	BA	956	G
35	BA	958	U
35	BA	959	A
35	BA	961	C
35	BA	966	G
35	BA	968	G
35	BA	970	C
35	BA	974	G
35	BA	975	C
35	BA	983	A
35	BA	996	A
35	BA	1011	G
35	BA	1012	U
35	BA	1013	C
35	BA	1016	G
35	BA	1023	U
35	BA	1026	U
35	BA	1027	A
35	BA	1033	U
35	BA	1039	G

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Mol	Chain	Res	Type
35	BA	1045	A
35	BA	1046	A
35	BA	1047	G
35	BA	1048	A
35	BA	1059	G
35	BA	1061	U
35	BA	1065	U
35	BA	1066	U
35	BA	1067	A
35	BA	1068	G
35	BA	1069	A
35	BA	1070	A
35	BA	1073	A
35	BA	1074	G
35	BA	1087	G
35	BA	1088	A
35	BA	1091	G
35	BA	1101	U
35	BA	1105	U
35	BA	1106	G
35	BA	1110	G
35	BA	1111	A
35	BA	1112	G
35	BA	1114	G
35	BA	1116	C
35	BA	1119	C
35	BA	1120	G
35	BA	1130	U
35	BA	1133	U
35	BA	1135	C
35	BA	1136	G
35	BA	1137	G
35	BA	1142	U
35	BA	1142(A)	A
35	BA	1155	A
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	1205	U

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Mol	Chain	Res	Type
35	BA	1210	A
35	BA	1211	U
35	BA	1213	A
35	BA	1220	A
35	BA	1221	C
35	BA	1223	G
35	BA	1224	C
35	BA	1253	A
35	BA	1256	G
35	BA	1265	A
35	BA	1271	G
35	BA	1272	A
35	BA	1273	U
35	BA	1284	A
35	BA	1285	G
35	BA	1287	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	1365	A
35	BA	1368	G
35	BA	1377	G
35	BA	1378	A
35	BA	1380	G
35	BA	1382	G
35	BA	1384	A
35	BA	1385	G
35	BA	1386	C
35	BA	1396	U
35	BA	1407	C
35	BA	1416	G
35	BA	1417	C
35	BA	1420	U
35	BA	1425	G
35	BA	1426	G

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Mol	Chain	Res	Type
35	BA	1427	A
35	BA	1428	C
35	BA	1437	C
35	BA	1445	A
35	BA	1449	A
35	BA	1450	G
35	BA	1456	G
35	BA	1459	G
35	BA	1460	A
35	BA	1461	G
35	BA	1462	C
35	BA	1467	C
35	BA	1471	A
35	BA	1475	G
35	BA	1478	G
35	BA	1482	G
35	BA	1485	G
35	BA	1490	A
35	BA	1493	C
35	BA	1494	A
35	BA	1495	A
35	BA	1497	U
35	BA	1501	C
35	BA	1502	C
35	BA	1505	C
35	BA	1509	C
35	BA	1509(A)	A
35	BA	1517	G
35	BA	1534	U
35	BA	1541	G
35	BA	1542	A
35	BA	1543	C
35	BA	1544	A
35	BA	1547	C
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	1581	G
35	BA	1584	C

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Mol	Chain	Res	Type
35	BA	1586	A
35	BA	1588	C
35	BA	1591	G
35	BA	1597	A
35	BA	1598	C
35	BA	1599	C
35	BA	1608	A
35	BA	1616	A
35	BA	1617	C
35	BA	1618	A
35	BA	1639	U
35	BA	1640	C
35	BA	1642	G
35	BA	1643	G
35	BA	1646	C
35	BA	1647	G
35	BA	1648	C
35	BA	1653	G
35	BA	1654	A
35	BA	1674	G
35	BA	1696	G
35	BA	1698	A
35	BA	1699	G
35	BA	1702	G
35	BA	1718	G
35	BA	1721	G
35	BA	1722	A
35	BA	1739	U
35	BA	1740	G
35	BA	1741	A
35	BA	1745(A)	C
35	BA	1746	G
35	BA	1748	G
35	BA	1750	G
35	BA	1763	G
35	BA	1764	G
35	BA	1768	U
35	BA	1770	G
35	BA	1772	G
35	BA	1773	A
35	BA	1776	G
35	BA	1779	U

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Mol	Chain	Res	Type
35	BA	1780	A
35	BA	1781	C
35	BA	1782	C
35	BA	1786	A
35	BA	1787	A
35	BA	1788	C
35	BA	1791	A
35	BA	1799	G
35	BA	1800	C
35	BA	1801	G
35	BA	1805	U
35	BA	1806	C
35	BA	1808	U
35	BA	1816	G
35	BA	1820	U
35	BA	1821	A
35	BA	1822	G
35	BA	1829	A
35	BA	1835	G
35	BA	1839	G
35	BA	1840	G
35	BA	1847	A
35	BA	1848	A
35	BA	1858	G
35	BA	1865	G
35	BA	1877	A
35	BA	1878	G
35	BA	1881	C
35	BA	1885	A
35	BA	1888	G
35	BA	1889	A
35	BA	1890	A
35	BA	1891	G
35	BA	1893	C
35	BA	1906	G
35	BA	1907	G
35	BA	1912	A
35	BA	1913	A
35	BA	1914	C
35	BA	1920	C
35	BA	1925	C
35	BA	1926	U

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Mol	Chain	Res	Type
35	BA	1930	G
35	BA	1936	A
35	BA	1937	A
35	BA	1938	A
35	BA	1941	C
35	BA	1955	U
35	BA	1962	C
35	BA	1963	U
35	BA	1965	C
35	BA	1967	C
35	BA	1969	A
35	BA	1970	A
35	BA	1971	A
35	BA	1972	A
35	BA	1982	C
35	BA	1984	G
35	BA	1985	G
35	BA	1987	G
35	BA	1988	C
35	BA	1989	G
35	BA	1992	G
35	BA	1993	U
35	BA	1995	U
35	BA	1996	C
35	BA	1997	G
35	BA	1998	G
35	BA	2000	G
35	BA	2010	G
35	BA	2011	U
35	BA	2020	A
35	BA	2023	G
35	BA	2027	G
35	BA	2031	A
35	BA	2032	G
35	BA	2033	A
35	BA	2034	U
35	BA	2036	C
35	BA	2043	C
35	BA	2051	A
35	BA	2055	C
35	BA	2056	G
35	BA	2060	A

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Mol	Chain	Res	Type
35	BA	2061	G
35	BA	2062	A
35	BA	2069	G
35	BA	2099	U
35	BA	2100	G
35	BA	2103	C
35	BA	2104	G
35	BA	2105	C
35	BA	2106	G
35	BA	2110	G
35	BA	2111	C
35	BA	2112	G
35	BA	2116	G
35	BA	2117	A
35	BA	2118	U
35	BA	2127	G
35	BA	2128	C
35	BA	2129	C
35	BA	2132	U
35	BA	2133	A
35	BA	2134	A
35	BA	2137	C
35	BA	2138	C
35	BA	2140	C
35	BA	2145	C
35	BA	2146	C
35	BA	2147	G
35	BA	2152	G
35	BA	2153	G
35	BA	2154	G
35	BA	2158	A
35	BA	2159	G
35	BA	2172	U
35	BA	2173	A
35	BA	2174	C
35	BA	2175	C
35	BA	2177	C
35	BA	2178	C
35	BA	2180	U
35	BA	2181	G
35	BA	2186	G
35	BA	2187	G

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Mol	Chain	Res	Type
35	BA	2190	G
35	BA	2193	G
35	BA	2198	A
35	BA	2199	A
35	BA	2200	C
35	BA	2201	C
35	BA	2202	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	2238	G
35	BA	2239	G
35	BA	2275	C
35	BA	2283	C
35	BA	2287	A
35	BA	2288	A
35	BA	2305	A
35	BA	2307	G
35	BA	2308	G
35	BA	2309	A
35	BA	2313	C
35	BA	2316	C
35	BA	2319	G
35	BA	2320	A
35	BA	2334	G
35	BA	2336	A
35	BA	2347	C
35	BA	2350	C
35	BA	2356	C
35	BA	2357	U
35	BA	2361	A
35	BA	2364	C
35	BA	2383	G
35	BA	2385	C
35	BA	2392	A
35	BA	2400	G
35	BA	2401	U
35	BA	2402	C
35	BA	2403	C

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Mol	Chain	Res	Type
35	BA	2404	C
35	BA	2405	G
35	BA	2406	U
35	BA	2409	G
35	BA	2423	U
35	BA	2425	A
35	BA	2429	G
35	BA	2430	A
35	BA	2431	U
35	BA	2439	A
35	BA	2441	C
35	BA	2447	G
35	BA	2448	A
35	BA	2465	C
35	BA	2469	A
35	BA	2470	G
35	BA	2476	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	2552	U
35	BA	2554	U
35	BA	2555	U
35	BA	2556	C
35	BA	2557	G
35	BA	2558	C
35	BA	2560	C
35	BA	2566	A
35	BA	2567	G
35	BA	2573	C
35	BA	2578	G
35	BA	2586	C
35	BA	2602	A
35	BA	2603	G
35	BA	2607	G

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Mol	Chain	Res	Type
35	BA	2608	G
35	BA	2609	U
35	BA	2610	C
35	BA	2611	U
35	BA	2612	C
35	BA	2613	U
35	BA	2615	U
35	BA	2630	G
35	BA	2654	A
35	BA	2657	A
35	BA	2658	C
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	2714	G
35	BA	2717	G
35	BA	2726	U
35	BA	2733	A
35	BA	2750	A
35	BA	2751	G
35	BA	2752	C
35	BA	2753	A
35	BA	2756	U
35	BA	2757	A
35	BA	2758	A
35	BA	2759	G
35	BA	2764	A
35	BA	2765	A
35	BA	2766	G
35	BA	2778	A
35	BA	2779	U
35	BA	2780	G
35	BA	2789	C
35	BA	2790	A
35	BA	2791	C
35	BA	2794	C
35	BA	2799	C
35	BA	2802	G
35	BA	2803	C

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Mol	Chain	Res	Type
35	BA	2808	U
35	BA	2820	A
35	BA	2821	A
35	BA	2833	G
35	BA	2834	G
35	BA	2835	A
35	BA	2849	U
35	BA	2872	G
35	BA	2893	G
35	BA	2894	G
36	BB	8	U
36	BB	13	A
36	BB	15	A
36	BB	17	C
36	BB	21	G
36	BB	25	A
36	BB	26	A
36	BB	27	C
36	BB	32	C
36	BB	35	U
36	BB	39	A
36	BB	40	U
36	BB	41	U
36	BB	42	C
36	BB	43	C
36	BB	45	A
36	BB	53	A
36	BB	57	A
36	BB	66	A
36	BB	67	G
36	BB	68	C
36	BB	73	A
36	BB	81	G
36	BB	88	C
36	BB	110	G
36	BB	113	G

All (115) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	60	A
1	AA	64	G

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Mol	Chain	Res	Type
1	AA	78	G
1	AA	84	U
1	AA	89	C
1	AA	90	U
1	AA	115	G
1	AA	119	A
1	AA	197	A
1	AA	243	A
1	AA	250	A
1	AA	266	G
1	AA	274	A
1	AA	344	A
1	AA	353	A
1	AA	388	G
1	AA	412	A
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	495	A
1	AA	547	A
1	AA	560	U
1	AA	573	A
1	AA	575	G
1	AA	687	A
1	AA	748	C
1	AA	792	A
1	AA	968	A
1	AA	980	C
1	AA	982	U
1	AA	992	U
1	AA	1003	G
1	AA	1030(D)	A
1	AA	1049	U
1	AA	1053	G
1	AA	1101	A
1	AA	1139	G
1	AA	1157	A
1	AA	1200	C
1	AA	1229	A
1	AA	1239	A
1	AA	1279	A
1	AA	1285	A

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Mol	Chain	Res	Type
1	AA	1399	C
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1492	A
1	AA	1498	U
1	AA	1504	G
22	AV	15	G
22	AV	16	C
35	BA	49	A
35	BA	71	A
35	BA	74	A
35	BA	197	A
35	BA	221	A
35	BA	331	A
35	BA	332	A
35	BA	363(F)	A
35	BA	387	U
35	BA	587	C
35	BA	603	A
35	BA	627	A
35	BA	752	A
35	BA	764	A
35	BA	790	C
35	BA	856	C
35	BA	887	A
35	BA	974	G
35	BA	1060	U
35	BA	1068	G
35	BA	1210	A
35	BA	1300	U
35	BA	1301	A
35	BA	1379	A
35	BA	1427	A
35	BA	1540	U
35	BA	1541	G
35	BA	1558	A
35	BA	1591	G
35	BA	1608	A
35	BA	1653	G
35	BA	1799	G
35	BA	1819	A

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Mol	Chain	Res	Type
35	BA	1820	U
35	BA	1839	G
35	BA	1992	G
35	BA	2033	A
35	BA	2103	C
35	BA	2104	G
35	BA	2111	C
35	BA	2116	G
35	BA	2117	A
35	BA	2126	A
35	BA	2136	C
35	BA	2137	C
35	BA	2145	C
35	BA	2157	G
35	BA	2176	A
35	BA	2180	U
35	BA	2282	G
35	BA	2401	U
35	BA	2402	C
35	BA	2422	A
35	BA	2439	A
35	BA	2481	G
35	BA	2542	A
35	BA	2610	C
35	BA	2689	U
35	BA	2750	A
35	BA	2756	U
36	BB	56	G
36	BB	66	A

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 527 ligands modelled in this entry, 526 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
61	GCP	AY	701	59	32,34,34	1.56	6 (18%)	49,54,54	1.89	15 (30%)

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
61	GCP	AY	701	59	-	7/19/38/38	0/3/3/3

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	AY	701	GCP	PG-O3G	-3.45	1.47	1.55
61	AY	701	GCP	PB-O2B	-3.32	1.48	1.56
61	AY	701	GCP	C5-C6	-3.00	1.33	1.44
61	AY	701	GCP	PG-O2G	-2.94	1.48	1.55
61	AY	701	GCP	C5-N7	-2.74	1.33	1.39
61	AY	701	GCP	PB-O3A	2.49	1.61	1.58

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
61	AY	701	GCP	C2-N3-C4	4.86	120.68	112.30
61	AY	701	GCP	C5-C4-N3	-4.57	121.11	128.39
61	AY	701	GCP	PB-O3A-PA	-3.80	119.98	132.37
61	AY	701	GCP	C2-N1-C6	-3.78	118.26	125.11
61	AY	701	GCP	O1G-PG-C3B	-3.37	104.02	111.37
61	AY	701	GCP	N9-C8-N7	-3.03	107.78	113.40
61	AY	701	GCP	O2B-PB-O1B	2.97	119.61	109.95
61	AY	701	GCP	N9-C4-N3	2.58	131.12	125.95
61	AY	701	GCP	C5-C6-N1	2.50	119.61	113.25
61	AY	701	GCP	C4'-O4'-C1'	-2.49	103.96	109.47
61	AY	701	GCP	O3G-PG-O2G	2.27	114.44	107.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
61	AY	701	GCP	O2G-PG-C3B	-2.23	101.00	106.40
61	AY	701	GCP	C8-N7-C5	2.22	108.22	104.26
61	AY	701	GCP	O6-C6-C5	-2.18	120.78	126.53
61	AY	701	GCP	N1-C2-N3	-2.17	119.36	123.32

There are no chirality outliers.

All (7) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
61	AY	701	GCP	PG-C3B-PB-O2B
61	AY	701	GCP	PG-C3B-PB-O3A
61	AY	701	GCP	O4'-C4'-C5'-O5'
61	AY	701	GCP	PB-O3A-PA-O2A
61	AY	701	GCP	PG-C3B-PB-O1B
61	AY	701	GCP	C3'-C4'-C5'-O5'
61	AY	701	GCP	PB-C3B-PG-O1G

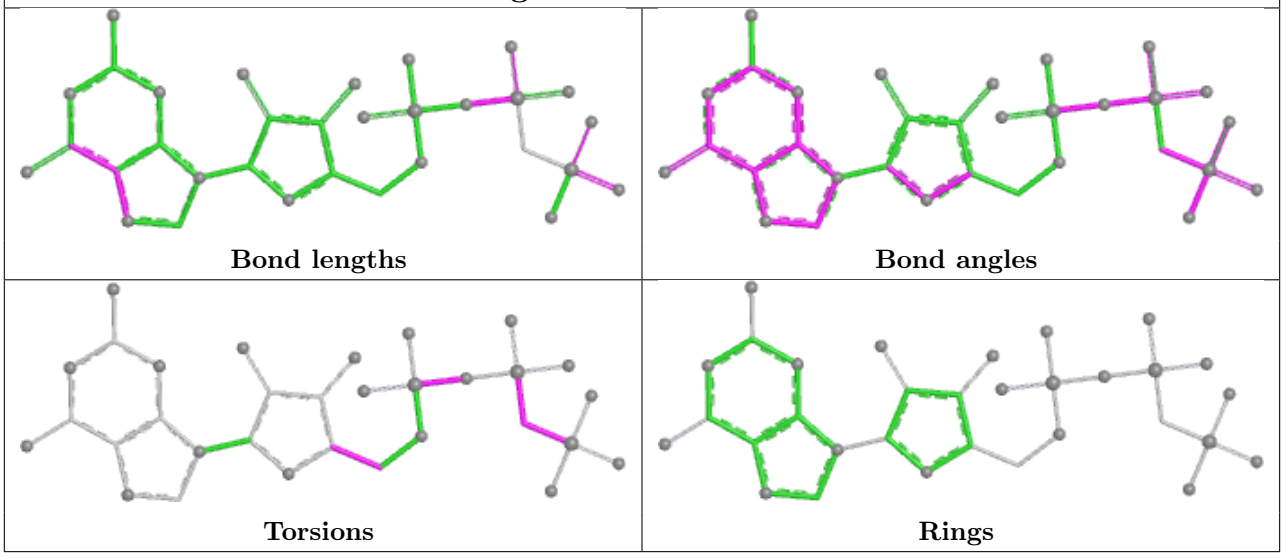
There are no ring outliers.

1 monomer is involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
61	AY	701	GCP	11	0

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

Ligand GCP AY 701



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
35	BA	3
1	AA	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	496:A	O3'	498:U	P	3.07
1	BA	45:C	O3'	47:C	P	2.97
1	BA	1133:U	O3'	1135:C	P	2.48
1	BA	2203:U	O3'	2205:C	P	2.42

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1507/1519 (99%)	0.44	149 (9%) 13 11	24, 47, 125, 239	0
2	AB	235/256 (91%)	1.47	74 (31%) 1 1	34, 61, 112, 122	0
3	AC	207/239 (86%)	1.20	39 (18%) 3 3	30, 54, 84, 102	0
4	AD	208/209 (99%)	0.94	29 (13%) 6 6	36, 57, 80, 89	0
5	AE	151/162 (93%)	0.15	5 (3%) 49 42	29, 40, 59, 81	0
6	AF	101/101 (100%)	0.76	7 (6%) 23 19	41, 68, 86, 99	0
7	AG	155/156 (99%)	1.22	31 (20%) 3 3	44, 66, 112, 126	0
8	AH	138/138 (100%)	0.21	5 (3%) 46 38	32, 45, 63, 74	0
9	AI	127/128 (99%)	1.23	26 (20%) 2 2	33, 61, 81, 90	0
10	AJ	99/105 (94%)	1.21	17 (17%) 4 3	38, 58, 100, 104	0
11	AK	119/129 (92%)	0.74	10 (8%) 17 15	26, 53, 76, 94	0
12	AL	125/132 (94%)	0.81	18 (14%) 6 5	27, 45, 64, 96	0
13	AM	119/126 (94%)	1.86	36 (30%) 1 1	46, 83, 107, 117	0
14	AN	60/61 (98%)	1.34	17 (28%) 1 1	35, 48, 83, 91	0
15	AO	88/89 (98%)	0.61	4 (4%) 38 31	33, 51, 75, 85	0
16	AP	84/88 (95%)	0.60	0 100 100	37, 47, 70, 95	0
17	AQ	100/105 (95%)	0.34	3 (3%) 52 45	27, 44, 62, 65	0
18	AR	70/88 (79%)	0.78	8 (11%) 10 9	36, 57, 94, 95	0
19	AS	88/93 (94%)	1.78	32 (36%) 1 1	59, 82, 103, 109	0
20	AT	99/106 (93%)	0.87	17 (17%) 4 3	33, 45, 68, 73	0
21	AU	25/27 (92%)	1.45	7 (28%) 1 1	43, 59, 79, 81	0
22	AV	76/76 (100%)	0.79	9 (11%) 9 8	33, 74, 111, 145	0
23	AX	9/9 (100%)	1.26	3 (33%) 1 1	28, 51, 122, 134	0
24	AY	687/691 (99%)	1.11	108 (15%) 5 5	39, 67, 119, 141	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å^2)	Q<0.9
25	B0	84/84 (100%)	2.26	37 (44%)	0	0	43, 56, 121, 140	0
26	B1	94/97 (96%)	1.31	24 (25%)	1	1	26, 47, 76, 88	0
27	B2	71/71 (100%)	1.33	16 (22%)	2	2	41, 57, 88, 112	0
28	B3	60/60 (100%)	1.14	11 (18%)	3	3	35, 56, 75, 100	0
29	B4	71/71 (100%)	2.54	46 (64%)	0	0	129, 151, 159, 159	0
30	B5	59/59 (100%)	1.30	18 (30%)	1	1	20, 42, 109, 122	0
31	B6	50/53 (94%)	3.00	36 (72%)	0	0	41, 72, 91, 98	0
32	B7	48/48 (100%)	0.30	6 (12%)	8	7	18, 30, 60, 86	0
33	B8	64/64 (100%)	1.85	24 (37%)	1	1	32, 49, 70, 87	0
34	B9	37/37 (100%)	1.19	7 (18%)	3	3	40, 52, 62, 76	0
35	BA	2901/2915 (99%)	0.26	226 (7%)	19	17	18, 42, 116, 244	0
36	BB	119/122 (97%)	1.02	14 (11%)	9	8	42, 88, 115, 130	0
37	BC	227/228 (99%)	1.63	68 (29%)	1	1	25, 78, 124, 135	0
38	BD	275/275 (100%)	0.42	22 (8%)	18	16	18, 32, 58, 93	0
39	BE	205/206 (99%)	0.85	36 (17%)	4	3	23, 42, 78, 86	0
40	BF	208/210 (99%)	1.11	40 (19%)	3	3	17, 52, 104, 121	0
41	BG	179/181 (98%)	2.63	125 (69%)	0	0	94, 122, 138, 144	0
42	BH	176/180 (97%)	1.78	59 (33%)	1	1	52, 75, 96, 108	0
43	BJ	1/130 (0%)	3.51	1 (100%)	0	0	121, 121, 121, 121	0
44	BK	0/140	-	-		-	-
45	BL	0/71	-	-		-	-
46	BN	139/140 (99%)	0.88	21 (15%)	5	5	31, 45, 72, 93	0
47	BO	122/122 (100%)	0.12	1 (0%)	82	78	25, 39, 54, 63	0
48	BP	146/149 (97%)	2.30	81 (55%)	0	0	34, 67, 96, 118	0
49	BQ	141/141 (100%)	0.84	11 (7%)	19	17	32, 49, 75, 115	0
50	BR	117/117 (100%)	0.59	9 (7%)	19	17	23, 40, 59, 67	0
51	BS	99/111 (89%)	2.39	57 (57%)	0	0	68, 91, 113, 122	0
52	BT	138/146 (94%)	1.69	47 (34%)	1	1	32, 53, 122, 144	0
53	BU	117/117 (100%)	0.60	12 (10%)	12	11	28, 42, 69, 85	0
54	BV	101/101 (100%)	1.05	15 (14%)	5	5	25, 62, 83, 87	0
55	BW	113/113 (100%)	0.32	3 (2%)	56	48	26, 38, 69, 104	0
56	BX	93/95 (97%)	0.43	4 (4%)	40	32	30, 41, 58, 63	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
57	BY	101/109 (92%)	2.20	51 (50%) 0 0	37, 61, 118, 127	0
58	BZ	185/205 (90%)	1.87	73 (39%) 1 0	25, 81, 96, 109	0
All	All	11218/11801 (95%)	0.84	1855 (16%) 4 4	17, 52, 116, 244	0

All (1855) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
25	B0	2	ALA	11.0
24	AY	50	ALA	10.6
24	AY	48	GLY	10.5
49	BQ	141	GLN	10.4
57	BY	51	VAL	10.2
49	BQ	140	ALA	9.9
25	B0	7	LEU	9.7
14	AN	2	ALA	9.7
37	BC	105	LEU	9.6
25	B0	4	LYS	9.1
30	B5	2	ALA	9.0
7	AG	49	ILE	8.9
35	BA	1534	U	8.7
11	AK	128	ALA	8.7
38	BD	36	PRO	8.4
52	BT	32	TYR	8.4
58	BZ	179	ASP	8.3
3	AC	120	VAL	8.3
19	AS	91	LYS	8.1
52	BT	30	VAL	8.0
35	BA	654(V)	A	7.9
57	BY	2	ARG	7.8
10	AJ	55	LYS	7.7
40	BF	12	LEU	7.7
40	BF	7	TYR	7.6
38	BD	276	LYS	7.5
53	BU	91	ASP	7.4
3	AC	78	GLY	7.4
52	BT	28	VAL	7.4
54	BV	36	PRO	7.3
52	BT	27	THR	7.1
11	AK	129	SER	7.1
42	BH	2	SER	7.0
24	AY	49	ALA	7.0

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Mol	Chain	Res	Type	RSRZ
33	B8	48	PHE	7.0
35	BA	654(E)	G	7.0
2	AB	16	HIS	6.9
42	BH	176	ALA	6.9
57	BY	3	VAL	6.9
35	BA	1541	G	6.7
40	BF	11	VAL	6.7
39	BE	76	ARG	6.7
25	B0	3	HIS	6.6
34	B9	1	MET	6.6
9	AI	62	TYR	6.6
33	B8	34	TRP	6.5
51	BS	30	ARG	6.5
35	BA	2602	A	6.4
3	AC	168	ALA	6.4
24	AY	573	HIS	6.3
24	AY	52	MET	6.3
31	B6	54	ILE	6.3
13	AM	10	PRO	6.3
51	BS	54	LEU	6.1
48	BP	27	HIS	6.1
58	BZ	114	GLY	6.1
52	BT	1	MET	6.1
29	B4	26	SER	6.0
24	AY	503	GLY	6.0
48	BP	53	GLY	6.0
42	BH	169	VAL	6.0
14	AN	16	PHE	6.0
25	B0	5	LYS	6.0
22	AV	17	C	6.0
30	B5	51	TYR	5.9
3	AC	169	ALA	5.9
48	BP	51	PHE	5.9
3	AC	121	ALA	5.9
31	B6	31	PRO	5.9
26	B1	85	LEU	5.9
9	AI	126	SER	5.9
42	BH	85	LYS	5.9
24	AY	46	HIS	5.9
13	AM	84	ILE	5.8
40	BF	24	LEU	5.8
52	BT	33	LYS	5.8

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Mol	Chain	Res	Type	RSRZ
35	BA	654(T)	C	5.8
35	BA	508	G	5.8
33	B8	64	TYR	5.8
42	BH	155	SER	5.8
24	AY	51	THR	5.7
31	B6	42	TRP	5.7
46	BN	4	TYR	5.7
41	BG	102	PHE	5.7
39	BE	204	ALA	5.7
4	AD	31	CYS	5.7
48	BP	52	GLU	5.7
41	BG	130	ASN	5.7
24	AY	530	VAL	5.7
25	B0	79	VAL	5.7
38	BD	275	LYS	5.6
20	AT	100	ILE	5.6
35	BA	2402	C	5.6
52	BT	31	SER	5.6
42	BH	171	LEU	5.6
48	BP	50	ARG	5.6
24	AY	42	ILE	5.6
42	BH	168	PRO	5.6
38	BD	244	ARG	5.5
58	BZ	115	GLY	5.5
35	BA	1847	A	5.5
58	BZ	166	SER	5.5
40	BF	5	ALA	5.5
2	AB	237	ALA	5.5
13	AM	113	PRO	5.5
35	BA	654(U)	A	5.4
39	BE	61	ARG	5.4
35	BA	1077	A	5.4
48	BP	23	PRO	5.4
25	B0	74	ARG	5.4
46	BN	3	THR	5.4
13	AM	7	VAL	5.4
27	B2	45	SER	5.4
48	BP	47	ASP	5.3
37	BC	24	ASP	5.3
39	BE	132	HIS	5.3
41	BG	41	GLN	5.3
13	AM	119	GLY	5.3

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Mol	Chain	Res	Type	RSRZ
3	AC	130	VAL	5.3
48	BP	65	ARG	5.3
35	BA	1073	A	5.2
37	BC	126	SER	5.2
24	AY	45	VAL	5.2
39	BE	77	ILE	5.2
24	AY	501	THR	5.2
50	BR	8	ARG	5.2
1	AA	1493	A	5.2
37	BC	168	LYS	5.2
52	BT	29	ARG	5.1
1	AA	1129	C	5.1
51	BS	14	VAL	5.1
24	AY	572	TYR	5.1
35	BA	2140	C	5.1
58	BZ	180	VAL	5.1
33	B8	51	ALA	5.1
41	BG	50	ALA	5.1
24	AY	507	TYR	5.1
24	AY	575	VAL	5.1
4	AD	19	LEU	5.1
51	BS	100	ALA	5.1
52	BT	106	SER	5.1
51	BS	11	LYS	5.0
12	AL	26	ALA	5.0
41	BG	76	SER	5.0
39	BE	72	VAL	5.0
24	AY	508	GLY	5.0
24	AY	537	GLU	5.0
57	BY	53	PRO	5.0
30	B5	46	CYS	5.0
33	B8	35	GLN	5.0
48	BP	7	ARG	5.0
51	BS	15	ARG	5.0
29	B4	25	TYR	5.0
22	AV	16	C	4.9
48	BP	15	ARG	4.9
33	B8	50	LEU	4.9
2	AB	18	GLY	4.9
58	BZ	177	PRO	4.9
31	B6	37	ARG	4.9
6	AF	101	ALA	4.9

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Mol	Chain	Res	Type	RSRZ
49	BQ	136	ALA	4.9
1	AA	1399	C	4.9
57	BY	52	SER	4.8
50	BR	4	LEU	4.8
30	B5	54	GLY	4.8
1	AA	1504	G	4.8
24	AY	500	GLN	4.8
24	AY	43	GLY	4.8
4	AD	209	ARG	4.8
1	AA	198	G	4.8
31	B6	39	TYR	4.8
46	BN	68	GLU	4.8
33	B8	32	LEU	4.8
41	BG	128	ARG	4.8
37	BC	96	GLY	4.7
48	BP	48	PRO	4.7
42	BH	83	TYR	4.7
42	BH	170	ARG	4.7
46	BN	2	LYS	4.7
26	B1	28	GLY	4.7
31	B6	9	LEU	4.7
57	BY	61	ILE	4.7
29	B4	9	LEU	4.7
29	B4	11	PRO	4.7
14	AN	19	ARG	4.7
14	AN	15	LYS	4.6
54	BV	48	GLY	4.6
35	BA	34	C	4.6
37	BC	122	GLY	4.6
39	BE	62	PRO	4.6
37	BC	101	ILE	4.6
33	B8	33	ASN	4.6
1	AA	1447	A	4.6
35	BA	2610	C	4.6
46	BN	1	MET	4.6
24	AY	502	GLY	4.6
57	BY	77	PRO	4.6
35	BA	2310	A	4.6
28	B3	55	ARG	4.6
1	AA	1335	C	4.6
24	AY	570	GLY	4.6
41	BG	157	ILE	4.6

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Mol	Chain	Res	Type	RSRZ
3	AC	123	GLN	4.6
50	BR	105	ARG	4.5
1	AA	1286	A	4.5
9	AI	61	ALA	4.5
26	B1	84	GLY	4.5
39	BE	131	ALA	4.5
37	BC	128	LEU	4.5
20	AT	9	ASN	4.5
32	B7	48	LYS	4.5
2	AB	7	VAL	4.5
35	BA	1026	U	4.5
41	BG	90	LEU	4.5
35	BA	2894	G	4.5
57	BY	58	GLY	4.5
37	BC	106	ASP	4.5
1	AA	1257	U	4.5
41	BG	140	ILE	4.4
35	BA	654(D)	G	4.4
3	AC	128	PHE	4.4
33	B8	63	PRO	4.4
25	B0	6	GLY	4.4
41	BG	127	GLY	4.4
13	AM	8	GLU	4.4
27	B2	10	LEU	4.4
51	BS	12	PHE	4.4
31	B6	46	HIS	4.4
58	BZ	176	PRO	4.4
3	AC	107	GLN	4.4
42	BH	172	LYS	4.4
41	BG	39	ILE	4.4
39	BE	205	ALA	4.4
13	AM	112	GLY	4.4
48	BP	26	GLY	4.4
41	BG	116	ASP	4.4
35	BA	1646	C	4.4
39	BE	75	VAL	4.3
40	BF	134	GLY	4.3
30	B5	58	LEU	4.3
35	BA	1068	G	4.3
24	AY	534	ILE	4.3
30	B5	57	VAL	4.3
35	BA	654(I)	C	4.3

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Mol	Chain	Res	Type	RSRZ
7	AG	84	ASN	4.3
29	B4	52	THR	4.3
13	AM	120	LYS	4.3
2	AB	122	PHE	4.3
1	AA	563	A	4.3
35	BA	2802	G	4.3
14	AN	14	PRO	4.3
48	BP	149	GLU	4.3
37	BC	114	VAL	4.3
25	B0	12	ASN	4.3
35	BA	654(G)	C	4.3
37	BC	100	ILE	4.3
25	B0	41	ARG	4.3
57	BY	81	LYS	4.3
26	B1	95	LEU	4.3
40	BF	208	GLY	4.3
51	BS	101	LEU	4.3
35	BA	654(H)	G	4.2
35	BA	1536	C	4.2
4	AD	151	LYS	4.2
13	AM	117	VAL	4.2
52	BT	25	GLY	4.2
37	BC	104	ILE	4.2
48	BP	110	TYR	4.2
39	BE	154	LYS	4.2
54	BV	19	LYS	4.2
35	BA	1533	G	4.2
40	BF	25	PRO	4.2
41	BG	154	GLY	4.2
13	AM	116	THR	4.2
29	B4	49	PHE	4.2
35	BA	1301	A	4.2
50	BR	3	HIS	4.2
3	AC	119	ARG	4.2
41	BG	113	ARG	4.2
2	AB	149	LEU	4.2
24	AY	533	VAL	4.2
51	BS	102	ALA	4.2
7	AG	82	GLY	4.2
31	B6	53	LYS	4.2
23	AX	11	A	4.2
40	BF	6	VAL	4.2

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Mol	Chain	Res	Type	RSRZ
41	BG	103	LEU	4.2
26	B1	57	GLU	4.2
24	AY	497	PHE	4.2
35	BA	275	G	4.1
24	AY	577	SER	4.1
9	AI	55	ALA	4.1
31	B6	23	THR	4.1
26	B1	26	ARG	4.1
31	B6	5	VAL	4.1
37	BC	118	PRO	4.1
41	BG	97	ASP	4.1
58	BZ	183	LEU	4.1
29	B4	10	VAL	4.1
40	BF	10	PRO	4.1
35	BA	2803	C	4.1
3	AC	80	GLY	4.1
19	AS	8	GLY	4.1
57	BY	99	CYS	4.1
57	BY	102	CYS	4.1
24	AY	44	GLU	4.1
41	BG	84	LYS	4.1
29	B4	59	PHE	4.1
27	B2	43	GLN	4.1
52	BT	112	ARG	4.1
41	BG	149	VAL	4.1
51	BS	99	LYS	4.1
35	BA	2795	G	4.1
10	AJ	85	LEU	4.0
40	BF	23	ASP	4.0
37	BC	95	VAL	4.0
54	BV	37	VAL	4.0
31	B6	22	ALA	4.0
51	BS	55	ALA	4.0
38	BD	38	LYS	4.0
48	BP	18	ARG	4.0
52	BT	91	ARG	4.0
57	BY	60	PHE	4.0
13	AM	5	ALA	4.0
20	AT	74	LYS	4.0
1	AA	1499	A	4.0
13	AM	9	ILE	4.0
35	BA	1420	U	4.0

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Mol	Chain	Res	Type	RSRZ
2	AB	230	VAL	4.0
12	AL	28	LYS	4.0
24	AY	47	GLU	4.0
24	AY	504	ARG	4.0
48	BP	71	VAL	4.0
35	BA	2796	U	4.0
48	BP	107	LYS	4.0
42	BH	156	ALA	4.0
52	BT	107	ASP	4.0
1	AA	702	A	4.0
35	BA	1542	A	4.0
35	BA	1087	G	4.0
1	AA	1125	U	3.9
24	AY	39	ILE	3.9
7	AG	156	TRP	3.9
24	AY	538	TYR	3.9
58	BZ	33	LEU	3.9
31	B6	52	VAL	3.9
48	BP	30	THR	3.9
1	AA	1281	U	3.9
57	BY	50	ARG	3.9
13	AM	85	GLY	3.9
9	AI	59	PHE	3.9
29	B4	42	PHE	3.9
57	BY	4	LYS	3.9
1	AA	701	C	3.9
58	BZ	3	TYR	3.9
20	AT	11	SER	3.9
52	BT	81	PRO	3.9
58	BZ	68	PRO	3.9
1	AA	496	A	3.9
25	B0	8	GLY	3.9
35	BA	1074	G	3.9
41	BG	175	LEU	3.9
1	AA	311	C	3.9
35	BA	1075	C	3.9
35	BA	1076	C	3.9
24	AY	498	ILE	3.9
23	AX	19	A	3.9
35	BA	2801(A)	A	3.9
41	BG	85	GLY	3.9
2	AB	238	LEU	3.9

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Mol	Chain	Res	Type	RSRZ
7	AG	48	LYS	3.9
36	BB	1	U	3.9
41	BG	126	ASP	3.9
42	BH	167	GLU	3.9
52	BT	105	LEU	3.9
37	BC	124	VAL	3.9
1	AA	1023	G	3.9
35	BA	1822	G	3.9
13	AM	114	ARG	3.9
41	BG	118	ARG	3.9
51	BS	82	ILE	3.9
40	BF	26	ALA	3.9
24	AY	571	SER	3.9
35	BA	654(F)	C	3.9
9	AI	24	GLY	3.8
4	AD	26	CYS	3.8
14	AN	8	GLU	3.8
41	BG	40	ASN	3.8
31	B6	21	TYR	3.8
37	BC	28	ARG	3.8
1	AA	951	G	3.8
35	BA	654(S)	G	3.8
41	BG	135	LEU	3.8
1	AA	1533	C	3.8
28	B3	51	ALA	3.8
29	B4	12	ALA	3.8
48	BP	118	GLY	3.8
37	BC	53	ARG	3.8
35	BA	1535	A	3.8
38	BD	35	LYS	3.8
57	BY	31	LEU	3.8
13	AM	6	GLY	3.8
24	AY	574	GLU	3.8
1	AA	92	C	3.8
11	AK	127	LYS	3.8
40	BF	22	ALA	3.8
8	AH	1	MET	3.8
24	AY	578	SER	3.7
3	AC	207	VAL	3.7
13	AM	4	ILE	3.7
12	AL	47	LYS	3.7
21	AU	25	LYS	3.7

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Mol	Chain	Res	Type	RSRZ
26	B1	96	LYS	3.7
58	BZ	182	LYS	3.7
31	B6	34	LEU	3.7
48	BP	143	GLY	3.7
1	AA	197	A	3.7
35	BA	2892	A	3.7
26	B1	27	GLU	3.7
31	B6	7	ILE	3.7
38	BD	26	LYS	3.7
39	BE	64	LYS	3.7
24	AY	53	ASP	3.7
3	AC	81	GLY	3.7
1	AA	1400	C	3.7
1	AA	1026	G	3.7
49	BQ	59	ARG	3.7
40	BF	82	ILE	3.7
24	AY	23	ALA	3.7
41	BG	111	LEU	3.7
52	BT	26	ASP	3.7
30	B5	52	TYR	3.7
33	B8	28	GLY	3.7
3	AC	124	ILE	3.7
1	AA	1283	G	3.7
35	BA	274	G	3.7
10	AJ	90	LEU	3.7
40	BF	8	GLN	3.7
41	BG	94	LEU	3.7
37	BC	206	LYS	3.7
41	BG	144	ILE	3.7
1	AA	1030	C	3.6
37	BC	121	MET	3.6
35	BA	1819	A	3.6
22	AV	19	G	3.6
3	AC	167	TRP	3.6
25	B0	42	GLY	3.6
27	B2	68	ARG	3.6
51	BS	16	ASN	3.6
28	B3	54	VAL	3.6
14	AN	13	THR	3.6
10	AJ	88	LEU	3.6
24	AY	506	GLN	3.6
31	B6	8	LYS	3.6

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Mol	Chain	Res	Type	RSRZ
24	AY	505	GLY	3.6
48	BP	28	GLY	3.6
42	BH	9	ILE	3.6
57	BY	96	ILE	3.6
1	AA	1181	G	3.6
4	AD	9	CYS	3.6
19	AS	5	LEU	3.6
33	B8	62	LEU	3.6
30	B5	55	ARG	3.6
46	BN	134	ARG	3.6
41	BG	125	PHE	3.6
33	B8	45	GLY	3.6
2	AB	12	GLU	3.6
35	BA	1286	A	3.6
41	BG	5	VAL	3.6
29	B4	63	TYR	3.6
48	BP	147	LEU	3.6
38	BD	245	PRO	3.6
1	AA	1127	G	3.6
35	BA	614(B)	G	3.6
35	BA	2611	U	3.6
36	BB	119	G	3.6
3	AC	129	ALA	3.6
32	B7	45	ALA	3.6
40	BF	21	ALA	3.6
39	BE	88	GLY	3.6
48	BP	54	GLY	3.6
7	AG	8	GLU	3.6
12	AL	127	GLU	3.6
26	B1	83	GLU	3.6
41	BG	4	ASP	3.6
41	BG	86	MET	3.6
41	BG	120	LEU	3.6
24	AY	113	GLY	3.5
38	BD	24	ILE	3.5
42	BH	82	GLY	3.5
48	BP	116	GLY	3.5
19	AS	41	VAL	3.5
24	AY	5	VAL	3.5
39	BE	59	VAL	3.5
58	BZ	181	GLU	3.5
37	BC	108	TRP	3.5

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Mol	Chain	Res	Type	RSRZ
49	BQ	138	ASP	3.5
57	BY	28	LYS	3.5
1	AA	1534	A	3.5
35	BA	2033	A	3.5
2	AB	23	ARG	3.5
14	AN	12	ARG	3.5
2	AB	17	PHE	3.5
19	AS	68	GLY	3.5
40	BF	16	GLY	3.5
48	BP	44	GLY	3.5
29	B4	1	MET	3.5
43	BJ	85	LEU	3.5
24	AY	576	ASP	3.5
42	BH	77	LYS	3.5
41	BG	179	PRO	3.5
40	BF	80	ALA	3.5
51	BS	105	ALA	3.5
35	BA	1067	A	3.5
57	BY	89	PHE	3.5
22	AV	20	U	3.5
37	BC	170	GLY	3.5
42	BH	19	VAL	3.5
57	BY	49	VAL	3.5
27	B2	16	LEU	3.5
41	BG	133	LEU	3.5
29	B4	29	PRO	3.5
49	BQ	135	ASP	3.5
40	BF	17	ARG	3.5
51	BS	89	ARG	3.5
1	AA	548	G	3.5
35	BA	1537	G	3.5
35	BA	2410	G	3.5
35	BA	2792	G	3.5
41	BG	121	ASN	3.5
51	BS	34	HIS	3.5
57	BY	79	CYS	3.5
1	AA	89	C	3.5
26	B1	53	VAL	3.5
29	B4	35	VAL	3.5
29	B4	50	VAL	3.5
35	BA	2139	C	3.5
31	B6	12	GLU	3.5

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Mol	Chain	Res	Type	RSRZ
35	BA	1540	U	3.5
39	BE	63	LEU	3.5
57	BY	90	LEU	3.5
24	AY	499	ARG	3.5
48	BP	58	THR	3.5
49	BQ	74	TYR	3.5
13	AM	12	ASN	3.5
29	B4	14	ILE	3.4
1	AA	108	G	3.4
35	BA	2032	G	3.4
35	BA	2893	G	3.4
2	AB	8	LYS	3.4
3	AC	106	VAL	3.4
51	BS	46	VAL	3.4
1	AA	1492	A	3.4
7	AG	121	ALA	3.4
9	AI	25	LYS	3.4
13	AM	31	LYS	3.4
41	BG	139	LEU	3.4
31	B6	43	CYS	3.4
58	BZ	185	GLU	3.4
35	BA	1799	G	3.4
35	BA	1103	A	3.4
35	BA	1495	A	3.4
35	BA	1848	A	3.4
35	BA	654(Q)	C	3.4
14	AN	59	ALA	3.4
52	BT	135	ALA	3.4
29	B4	27	THR	3.4
57	BY	44	ILE	3.4
24	AY	536	LYS	3.4
25	B0	38	VAL	3.4
37	BC	73	VAL	3.4
40	BF	76	GLY	3.4
51	BS	109	GLY	3.4
52	BT	3	ARG	3.4
1	AA	1256	A	3.4
35	BA	528	A	3.4
52	BT	138	ALA	3.4
14	AN	17	LYS	3.4
35	BA	2896	C	3.4
41	BG	156	ASP	3.4

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Mol	Chain	Res	Type	RSRZ
58	BZ	148	ASP	3.4
24	AY	55	MET	3.4
2	AB	93	VAL	3.4
25	B0	37	LEU	3.4
54	BV	20	LEU	3.4
40	BF	79	GLY	3.4
4	AD	49	ARG	3.4
42	BH	42	ARG	3.4
2	AB	159	PRO	3.4
52	BT	131	ALA	3.4
57	BY	78	ALA	3.4
1	AA	561	U	3.4
57	BY	47	LYS	3.4
29	B4	46	GLN	3.4
39	BE	54	GLN	3.4
51	BS	68	GLN	3.4
41	BG	11	TYR	3.4
2	AB	239	VAL	3.3
41	BG	160	VAL	3.3
58	BZ	165	VAL	3.3
25	B0	76	GLY	3.3
24	AY	402	ILE	3.3
24	AY	539	ILE	3.3
27	B2	72	ALA	3.3
37	BC	131	ILE	3.3
52	BT	127	ALA	3.3
58	BZ	184	ALA	3.3
1	AA	83	U	3.3
41	BG	146	TYR	3.3
25	B0	11	ARG	3.3
50	BR	2	ARG	3.3
51	BS	13	ARG	3.3
35	BA	6	A	3.3
35	BA	1046	A	3.3
35	BA	1088	A	3.3
35	BA	1177	A	3.3
35	BA	2360	A	3.3
35	BA	2799	C	3.3
35	BA	2000	G	3.3
19	AS	85	LYS	3.3
41	BG	182	LYS	3.3
37	BC	143	ALA	3.3

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Mol	Chain	Res	Type	RSRZ
14	AN	60	SER	3.3
2	AB	148	TYR	3.3
51	BS	60	GLY	3.3
41	BG	104	GLU	3.3
1	AA	1130	A	3.3
11	AK	11	LYS	3.3
24	AY	580	MET	3.3
1	AA	1024	G	3.3
40	BF	83	PHE	3.3
41	BG	180	PHE	3.3
35	BA	1066	U	3.3
41	BG	131	TYR	3.3
46	BN	135	PRO	3.3
48	BP	8	PRO	3.3
35	BA	2801	A	3.3
2	AB	19	HIS	3.3
24	AY	528	ALA	3.3
34	B9	20	HIS	3.3
1	AA	36	C	3.3
1	AA	1452	C	3.3
24	AY	54	PHE	3.3
53	BU	58	ARG	3.3
56	BX	3	THR	3.3
30	B5	50	GLY	3.3
35	BA	2207	G	3.3
35	BA	2793	G	3.3
41	BG	119	GLY	3.3
51	BS	92	TYR	3.2
38	BD	30	GLU	3.2
58	BZ	168	GLU	3.2
41	BG	155	MET	3.2
29	B4	5	ILE	3.2
28	B3	52	HIS	3.2
41	BG	158	ALA	3.2
51	BS	56	LEU	3.2
4	AD	3	ARG	3.2
13	AM	11	ARG	3.2
35	BA	896	A	3.2
35	BA	1045	A	3.2
14	AN	18	VAL	3.2
52	BT	34	VAL	3.2
4	AD	2	GLY	3.2

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Mol	Chain	Res	Type	RSRZ
2	AB	97	TRP	3.2
24	AY	60	GLU	3.2
1	AA	93	G	3.2
35	BA	1065	U	3.2
13	AM	118	ALA	3.2
37	BC	159	ALA	3.2
48	BP	6	LEU	3.2
48	BP	16	ARG	3.2
1	AA	547	A	3.2
35	BA	1084	A	3.2
20	AT	103	GLY	3.2
25	B0	13	GLY	3.2
3	AC	46	GLU	3.2
31	B6	40	CYS	3.2
58	BZ	178	GLU	3.2
2	AB	91	PRO	3.2
12	AL	41	ARG	3.2
30	B5	3	LYS	3.2
37	BC	3	LYS	3.2
41	BG	8	LYS	3.2
51	BS	59	LYS	3.2
29	B4	70	GLY	3.2
40	BF	131	GLY	3.2
19	AS	90	THR	3.2
57	BY	91	GLU	3.2
41	BG	52	ILE	3.2
42	BH	173	PRO	3.2
3	AC	131	ARG	3.2
19	AS	65	ASN	3.2
31	B6	20	ASN	3.2
41	BG	95	ARG	3.2
48	BP	59	LEU	3.2
19	AS	89	ALA	3.2
25	B0	57	PHE	3.2
31	B6	45	LYS	3.2
46	BN	59	LYS	3.2
1	AA	64	G	3.2
15	AO	23	GLY	3.2
54	BV	45	THR	3.2
29	B4	53	GLU	3.2
7	AG	50	ILE	3.2
22	AV	76	A	3.1

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Mol	Chain	Res	Type	RSRZ
2	AB	137	ARG	3.1
29	B4	66	SER	3.1
51	BS	58	LEU	3.1
52	BT	82	LEU	3.1
41	BG	46	ALA	3.1
41	BG	73	ALA	3.1
20	AT	73	HIS	3.1
2	AB	133	LYS	3.1
35	BA	2403	C	3.1
40	BF	4	VAL	3.1
40	BF	84	VAL	3.1
25	B0	10	THR	3.1
40	BF	14	PRO	3.1
39	BE	151	TYR	3.1
9	AI	60	ASP	3.1
19	AS	14	HIS	3.1
46	BN	5	VAL	3.1
51	BS	98	VAL	3.1
1	AA	1446	U	3.1
35	BA	271(L)	U	3.1
1	AA	1137	C	3.1
29	B4	4	GLY	3.1
57	BY	80	GLY	3.1
10	AJ	83	GLU	3.1
29	B4	22	ILE	3.1
37	BC	78	ILE	3.1
41	BG	54	GLU	3.1
2	AB	131	PRO	3.1
40	BF	65	TRP	3.1
41	BG	36	LYS	3.1
48	BP	46	LYS	3.1
7	AG	154	TYR	3.1
57	BY	48	ALA	3.1
58	BZ	32	HIS	3.1
19	AS	53	ASN	3.1
35	BA	11	G	3.1
35	BA	1698	A	3.1
9	AI	57	GLY	3.1
35	BA	1779	U	3.1
40	BF	207	GLY	3.1
1	AA	940	C	3.1
32	B7	47	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
41	BG	106	LEU	3.1
2	AB	236	TYR	3.1
24	AY	231	TYR	3.1
29	B4	6	HIS	3.1
41	BG	12	TYR	3.1
41	BG	117	PHE	3.1
1	AA	1001(A)	G	3.1
2	AB	185	ILE	3.1
35	BA	1175	U	3.1
35	BA	2808	U	3.1
41	BG	88	ILE	3.1
2	AB	125	PRO	3.1
33	B8	61	LEU	3.1
41	BG	82	LEU	3.1
42	BH	81	GLU	3.1
51	BS	62	LYS	3.1
27	B2	39	ALA	3.0
35	BA	654(K)	C	3.1
39	BE	66	HIS	3.0
57	BY	98	VAL	3.0
24	AY	690	GLY	3.0
37	BC	177	GLY	3.0
48	BP	34	GLY	3.0
24	AY	82	ILE	3.0
41	BG	72	ARG	3.0
3	AC	143	GLU	3.0
48	BP	74	GLU	3.0
37	BC	15	VAL	3.0
31	B6	26	ASN	3.0
42	BH	80	SER	3.0
2	AB	14	GLY	3.0
24	AY	531	GLY	3.0
52	BT	90	GLN	3.0
57	BY	8	LYS	3.0
12	AL	27	LEU	3.0
30	B5	59	GLU	3.0
42	BH	159	GLU	3.0
46	BN	139	GLU	3.0
35	BA	2062	A	3.0
2	AB	140	HIS	3.0
13	AM	64	TRP	3.0
35	BA	743	G	3.0

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Mol	Chain	Res	Type	RSRZ
35	BA	1653	G	3.0
41	BG	100	TRP	3.0
35	BA	246	C	3.0
35	BA	967	C	3.0
40	BF	9	ILE	3.0
48	BP	61	ARG	3.0
51	BS	57	LYS	3.0
41	BG	43	LEU	3.0
3	AC	122	GLU	3.0
41	BG	87	PRO	3.0
42	BH	36	PRO	3.0
51	BS	91	PRO	3.0
57	BY	56	PRO	3.0
39	BE	1	MET	3.0
41	BG	6	ALA	3.0
48	BP	140	ALA	3.0
12	AL	43	VAL	3.0
19	AS	45	VAL	3.0
25	B0	81	VAL	3.0
33	B8	49	VAL	3.0
41	BG	178	PHE	3.0
48	BP	19	VAL	3.0
48	BP	35	HIS	3.0
1	AA	161	A	3.0
37	BC	142	LYS	3.0
10	AJ	4	ILE	3.0
10	AJ	75	ILE	3.0
41	BG	96	ARG	3.0
37	BC	102	GLN	3.0
37	BC	107	GLY	3.0
39	BE	153	GLY	3.0
54	BV	42	GLY	3.0
35	BA	352	G	3.0
51	BS	50	SER	3.0
58	BZ	93	ASP	3.0
1	AA	91	C	3.0
37	BC	43	GLU	3.0
41	BG	164	GLU	3.0
7	AG	89	MET	3.0
41	BG	145	THR	3.0
46	BN	132	ALA	3.0
2	AB	15	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
1	AA	961	U	3.0
12	AL	21	LYS	2.9
13	AM	102	ARG	2.9
35	BA	276	A	2.9
41	BG	114	ILE	2.9
21	AU	2	GLY	2.9
2	AB	235	SER	2.9
52	BT	80	SER	2.9
52	BT	133	GLU	2.9
1	AA	38	G	2.9
1	AA	1491	G	2.9
20	AT	97	ALA	2.9
12	AL	44	THR	2.9
38	BD	40	THR	2.9
41	BG	23	PHE	2.9
41	BG	37	VAL	2.9
27	B2	48	HIS	2.9
19	AS	7	LYS	2.9
52	BT	129	ARG	2.9
58	BZ	146	ILE	2.9
56	BX	95	LEU	2.9
37	BC	94	TYR	2.9
52	BT	4	GLY	2.9
11	AK	78	GLN	2.9
1	AA	60	A	2.9
29	B4	7	PRO	2.9
35	BA	1773	A	2.9
31	B6	51	GLU	2.9
33	B8	65	GLU	2.9
41	BG	108	ASN	2.9
19	AS	9	VAL	2.9
24	AY	100	VAL	2.9
13	AM	115	LYS	2.9
33	B8	30	ARG	2.9
35	BA	2805	G	2.9
1	AA	950	U	2.9
35	BA	2132	U	2.9
2	AB	227	GLY	2.9
46	BN	42	TRP	2.9
9	AI	4	TYR	2.9
29	B4	43	TYR	2.9
57	BY	55	TYR	2.9

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Mol	Chain	Res	Type	RSRZ
39	BE	56	PRO	2.9
42	BH	21	PRO	2.9
42	BH	116	GLU	2.9
57	BY	5	MET	2.9
35	BA	653	A	2.9
7	AG	46	ALA	2.9
53	BU	90	VAL	2.9
48	BP	79	ARG	2.9
52	BT	108	ARG	2.9
57	BY	76	CYS	2.9
3	AC	77	ILE	2.9
35	BA	654(R)	C	2.9
48	BP	24	GLY	2.9
31	B6	41	PRO	2.9
35	BA	654(C)	G	2.9
35	BA	2206	G	2.9
37	BC	72	GLN	2.9
49	BQ	137	TYR	2.9
51	BS	36	TYR	2.9
52	BT	24	PRO	2.9
9	AI	12	GLU	2.9
18	AR	46	GLU	2.9
48	BP	98	GLU	2.9
52	BT	137	LYS	2.9
2	AB	188	ALA	2.9
4	AD	32	ALA	2.9
30	B5	45	VAL	2.9
41	BG	70	VAL	2.9
1	AA	495	A	2.9
2	AB	111	ARG	2.9
3	AC	30	ARG	2.9
12	AL	19	ARG	2.9
24	AY	40	HIS	2.9
31	B6	18	ARG	2.9
35	BA	2176	A	2.9
40	BF	18	ARG	2.9
58	BZ	150	LEU	2.9
2	AB	26	PRO	2.8
48	BP	72	PRO	2.8
1	AA	1397	C	2.8
35	BA	1060	U	2.8
2	AB	92	TYR	2.8

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Mol	Chain	Res	Type	RSRZ
14	AN	4	LYS	2.8
31	B6	24	GLU	2.8
35	BA	1079	C	2.8
53	BU	89	GLU	2.8
58	BZ	11	GLU	2.8
1	AA	1305	G	2.8
24	AY	541	ALA	2.8
35	BA	744	G	2.8
35	BA	2319	G	2.8
35	BA	2807	G	2.8
41	BG	91	ARG	2.8
58	BZ	131	ARG	2.8
31	B6	36	LEU	2.8
48	BP	88	LEU	2.8
51	BS	40	ILE	2.8
1	AA	1279	A	2.8
39	BE	65	GLY	2.8
19	AS	42	PRO	2.8
48	BP	70	GLN	2.8
57	BY	82	PRO	2.8
41	BG	75	LYS	2.8
41	BG	137	GLU	2.8
58	BZ	9	TYR	2.8
1	AA	470	C	2.8
9	AI	26	VAL	2.8
24	AY	525	PHE	2.8
2	AB	187	LEU	2.8
37	BC	93	ASP	2.8
52	BT	6	LEU	2.8
35	BA	741	G	2.8
35	BA	2131	G	2.8
1	AA	532	A	2.8
35	BA	2208	A	2.8
41	BG	129	GLY	2.8
4	AD	12	CYS	2.8
41	BG	105	LYS	2.8
20	AT	93	GLU	2.8
41	BG	29	TRP	2.8
41	BG	45	GLU	2.8
58	BZ	162	GLU	2.8
58	BZ	186	GLU	2.8
1	AA	1086	U	2.8

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Mol	Chain	Res	Type	RSRZ
35	BA	2613	U	2.8
41	BG	141	PHE	2.8
24	AY	529	ILE	2.8
41	BG	62	LEU	2.8
58	BZ	70	LEU	2.8
35	BA	2128	C	2.8
35	BA	2794	C	2.8
57	BY	17	SER	2.8
41	BG	148	MET	2.8
1	AA	412	A	2.8
7	AG	52	GLU	2.8
35	BA	1970	A	2.8
35	BA	2542	A	2.8
2	AB	136	VAL	2.8
24	AY	582	PHE	2.8
39	BE	68	ALA	2.8
1	AA	365	U	2.8
19	AS	30	LEU	2.8
3	AC	31	HIS	2.8
9	AI	58	HIS	2.8
35	BA	1820	U	2.8
31	B6	32	ASN	2.8
13	AM	82	MET	2.8
42	BH	153	LYS	2.8
35	BA	1543	C	2.8
48	BP	42	SER	2.8
5	AE	154	GLY	2.8
9	AI	100	GLY	2.8
26	B1	29	GLY	2.8
39	BE	130	GLY	2.8
56	BX	94	GLY	2.8
3	AC	105	GLU	2.7
13	AM	44	ARG	2.7
38	BD	274	ARG	2.7
42	BH	18	GLU	2.7
41	BG	159	VAL	2.7
1	AA	78	G	2.7
1	AA	79	G	2.7
7	AG	85	TYR	2.7
35	BA	1801	G	2.7
41	BG	101	ILE	2.7
46	BN	21	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
41	BG	93	THR	2.7
20	AT	101	GLY	2.7
37	BC	125	GLY	2.7
48	BP	109	GLY	2.7
58	BZ	64	GLY	2.7
2	AB	157	ARG	2.7
24	AY	99	ARG	2.7
58	BZ	4	ARG	2.7
4	AD	150	GLU	2.7
58	BZ	97	GLU	2.7
57	BY	85	VAL	2.7
9	AI	56	LEU	2.7
48	BP	150	ALA	2.7
35	BA	92	A	2.7
35	BA	1379	A	2.7
35	BA	2790	A	2.7
35	BA	1078	U	2.7
35	BA	2897	U	2.7
26	B1	59	THR	2.7
34	B9	12	ASP	2.7
41	BG	42	GLY	2.7
48	BP	41	ARG	2.7
3	AC	118	GLN	2.7
46	BN	10	GLU	2.7
58	BZ	13	GLU	2.7
3	AC	76	VAL	2.7
1	AA	1388	C	2.7
2	AB	11	LEU	2.7
31	B6	11	LEU	2.7
35	BA	1072	C	2.7
26	B1	25	LYS	2.7
28	B3	17	LYS	2.7
4	AD	4	TYR	2.7
42	BH	1	MET	2.7
52	BT	79	HIS	2.7
27	B2	69	ARG	2.7
48	BP	57	THR	2.7
51	BS	20	ARG	2.7
57	BY	59	GLY	2.7
1	AA	1124	G	2.7
1	AA	1386	G	2.7
35	BA	654(A)	G	2.7

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Mol	Chain	Res	Type	RSRZ
35	BA	2307	G	2.7
2	AB	241	GLU	2.7
7	AG	87	VAL	2.7
24	AY	548	GLU	2.7
51	BS	107	GLU	2.7
58	BZ	92	SER	2.7
54	BV	18	LEU	2.7
19	AS	87	ALA	2.7
55	BW	5	ALA	2.7
37	BC	103	LYS	2.7
39	BE	57	LYS	2.7
39	BE	133	LYS	2.7
48	BP	29	LYS	2.7
35	BA	1428	C	2.7
35	BA	2185	C	2.7
21	AU	9	ARG	2.7
48	BP	49	ARG	2.7
3	AC	109	PRO	2.7
41	BG	132	ASN	2.7
54	BV	30	GLY	2.7
35	BA	654	A	2.7
26	B1	51	VAL	2.7
26	B1	86	SER	2.7
58	BZ	149	SER	2.7
9	AI	18	PHE	2.6
13	AM	27	LYS	2.6
1	AA	773	G	2.6
1	AA	939	G	2.6
22	AV	18	G	2.6
3	AC	127	ARG	2.6
4	AD	47	ARG	2.6
7	AG	72	ARG	2.6
1	AA	1267	C	2.6
35	BA	1914	C	2.6
35	BA	2612	C	2.6
41	BG	161	THR	2.6
1	AA	793	U	2.6
1	AA	1126	U	2.6
10	AJ	89	ASP	2.6
25	B0	40	GLN	2.6
35	BA	12	U	2.6
48	BP	5	ASP	2.6

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Mol	Chain	Res	Type	RSRZ
48	BP	105	LEU	2.6
53	BU	97	ASP	2.6
58	BZ	111	VAL	2.6
2	AB	42	ILE	2.6
2	AB	123	ALA	2.6
39	BE	67	PHE	2.6
42	BH	165	ALA	2.6
51	BS	31	SER	2.6
1	AA	80	G	2.6
1	AA	310	G	2.6
1	AA	703	G	2.6
1	AA	1131	G	2.6
28	B3	29	ARG	2.6
36	BB	67	G	2.6
42	BH	59	ARG	2.6
42	BH	157	TYR	2.6
2	AB	234	PRO	2.6
25	B0	65	GLY	2.6
42	BH	91	GLY	2.6
2	AB	139	LYS	2.6
26	B1	30	VAL	2.6
27	B2	71	ASN	2.6
2	AB	127	ILE	2.6
29	B4	31	ILE	2.6
1	AA	37	U	2.6
2	AB	48	MET	2.6
3	AC	187	ALA	2.6
35	BA	362	U	2.6
1	AA	1502	A	2.6
30	B5	4	HIS	2.6
20	AT	98	PRO	2.6
13	AM	13	LYS	2.6
24	AY	583	LYS	2.6
48	BP	14	LYS	2.6
57	BY	54	LYS	2.6
57	BY	88	LYS	2.6
9	AI	64	THR	2.6
20	AT	10	LEU	2.6
31	B6	10	LEU	2.6
19	AS	40	ILE	2.6
24	AY	510	VAL	2.6
37	BC	69	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
24	AY	584	ILE	2.6
37	BC	84	ILE	2.6
7	AG	51	GLN	2.6
24	AY	527	ASN	2.6
57	BY	57	GLN	2.6
1	AA	1158	C	2.6
35	BA	645	C	2.6
35	BA	1080	C	2.6
35	BA	2804	C	2.6
35	BA	614(A)	U	2.6
4	AD	152	SER	2.6
25	B0	39	ARG	2.6
57	BY	97	ARG	2.6
58	BZ	80	ARG	2.6
1	AA	116	A	2.6
2	AB	232	PRO	2.6
24	AY	535	PRO	2.6
4	AD	70	ILE	2.6
32	B7	1	MET	2.6
24	AY	112	GLN	2.6
24	AY	579	GLU	2.6
41	BG	138	GLN	2.6
41	BG	143	GLU	2.6
58	BZ	94	GLU	2.6
6	AF	99	ALA	2.6
37	BC	87	ALA	2.6
52	BT	104	ASN	2.6
13	AM	83	ASP	2.6
35	BA	1059	G	2.5
35	BA	1110	G	2.5
35	BA	2153	G	2.5
7	AG	4	ARG	2.5
35	BA	156	U	2.5
35	BA	271(N)	U	2.5
35	BA	2401	U	2.5
49	BQ	60	ARG	2.5
52	BT	39	ARG	2.5
35	BA	249	C	2.5
4	AD	30	LYS	2.5
12	AL	17	LYS	2.5
37	BC	14	LYS	2.5
1	AA	162	A	2.5

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Mol	Chain	Res	Type	RSRZ
7	AG	88	PRO	2.5
35	BA	2757	A	2.5
13	AM	95	GLY	2.5
37	BC	136	GLY	2.5
41	BG	142	PRO	2.5
48	BP	10	PRO	2.5
48	BP	99	LEU	2.5
51	BS	24	LEU	2.5
51	BS	90	GLY	2.5
51	BS	104	GLY	2.5
58	BZ	62	PRO	2.5
41	BG	19	LEU	2.5
2	AB	112	VAL	2.5
24	AY	688	ILE	2.5
8	AH	99	GLU	2.5
39	BE	73	GLU	2.5
41	BG	48	GLU	2.5
49	BQ	139	GLU	2.5
29	B4	39	CYS	2.5
7	AG	83	ALA	2.5
12	AL	128	ALA	2.5
14	AN	20	ALA	2.5
20	AT	8	ARG	2.5
37	BC	130	ARG	2.5
42	BH	23	ARG	2.5
34	B9	2	LYS	2.5
48	BP	25	SER	2.5
1	AA	199	G	2.5
1	AA	1385	G	2.5
35	BA	2304	G	2.5
36	BB	16	G	2.5
1	AA	962	C	2.5
35	BA	856	C	2.5
6	AF	98	LEU	2.5
13	AM	66	LEU	2.5
38	BD	37	LEU	2.5
41	BG	65	GLY	2.5
54	BV	41	GLY	2.5
37	BC	42	VAL	2.5
42	BH	50	VAL	2.5
58	BZ	174	VAL	2.5
35	BA	229	A	2.5

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Mol	Chain	Res	Type	RSRZ
19	AS	64	GLU	2.5
26	B1	6	GLU	2.5
37	BC	163	GLU	2.5
10	AJ	54	PHE	2.5
10	AJ	84	GLN	2.5
29	B4	47	GLN	2.5
53	BU	116	ALA	2.5
30	B5	49	CYS	2.5
52	BT	2	ASN	2.5
9	AI	95	LYS	2.5
33	B8	29	LYS	2.5
42	BH	27	LYS	2.5
1	AA	723	U	2.5
1	AA	1498	U	2.5
40	BF	13	SER	2.5
12	AL	48	PRO	2.5
38	BD	33	LEU	2.5
46	BN	138	LEU	2.5
48	BP	63	PRO	2.5
58	BZ	61	LEU	2.5
37	BC	23	ILE	2.5
38	BD	42	GLY	2.5
41	BG	31	VAL	2.5
42	BH	49	VAL	2.5
4	AD	20	TYR	2.5
39	BE	200	GLU	2.5
2	AB	190	THR	2.5
7	AG	2	ALA	2.5
13	AM	2	ALA	2.5
26	B1	54	ALA	2.5
26	B1	56	GLN	2.5
37	BC	205	ALA	2.5
48	BP	120	ALA	2.5
58	BZ	164	ALA	2.5
24	AY	544	LYS	2.5
25	B0	19	LYS	2.5
39	BE	121	ASN	2.5
48	BP	39	LYS	2.5
2	AB	43	ASP	2.5
48	BP	45	LEU	2.5
58	BZ	163	LEU	2.5
2	AB	233	SER	2.5

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Mol	Chain	Res	Type	RSRZ
30	B5	47	PRO	2.5
7	AG	55	GLY	2.5
14	AN	7	ILE	2.5
35	BA	2585	U	2.5
51	BS	35	ILE	2.5
10	AJ	101	VAL	2.5
24	AY	69	VAL	2.5
41	BG	15	VAL	2.5
4	AD	156	GLU	2.5
33	B8	54	GLU	2.5
9	AI	15	ALA	2.5
17	AQ	101	ARG	2.5
41	BG	83	ARG	2.5
42	BH	60	ARG	2.5
51	BS	72	ALA	2.5
58	BZ	82	ARG	2.5
35	BA	1532	C	2.5
46	BN	137	LYS	2.5
57	BY	19	LYS	2.5
1	AA	347	G	2.5
1	AA	1003	G	2.5
1	AA	1030(D)	A	2.5
35	BA	1913	A	2.5
37	BC	228	HIS	2.5
37	BC	109	MET	2.4
24	AY	201	ILE	2.4
58	BZ	124	ILE	2.4
27	B2	42	GLY	2.4
29	B4	64	GLY	2.4
42	BH	14	GLY	2.4
46	BN	24	GLY	2.4
57	BY	45	VAL	2.4
58	BZ	60	GLU	2.4
27	B2	46	GLN	2.4
33	B8	15	LYS	2.4
53	BU	96	ALA	2.4
13	AM	20	THR	2.4
1	AA	163	C	2.4
35	BA	2789	C	2.4
37	BC	76	LEU	2.4
40	BF	20	LEU	2.4
41	BG	152	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
54	BV	35	LEU	2.4
1	AA	77	G	2.4
1	AA	1134	G	2.4
1	AA	1456	G	2.4
24	AY	21	ILE	2.4
24	AY	196	ILE	2.4
25	B0	36	ILE	2.4
35	BA	2607	G	2.4
42	BH	45	VAL	2.4
2	AB	150	SER	2.4
27	B2	17	SER	2.4
29	B4	37	SER	2.4
1	AA	498	U	2.4
29	B4	28	LYS	2.4
31	B6	38	LYS	2.4
33	B8	56	GLU	2.4
51	BS	33	LYS	2.4
37	BC	123	ALA	2.4
52	BT	130	ALA	2.4
9	AI	88	TYR	2.4
10	AJ	100	THR	2.4
51	BS	21	THR	2.4
28	B3	1	MET	2.4
58	BZ	125	LEU	2.4
35	BA	2008	C	2.4
24	AY	83	ASP	2.4
57	BY	27	VAL	2.4
57	BY	42	VAL	2.4
58	BZ	86	VAL	2.4
58	BZ	143	GLY	2.4
1	AA	1285	A	2.4
35	BA	1460	A	2.4
33	B8	11	LYS	2.4
42	BH	13	LYS	2.4
57	BY	33	LYS	2.4
25	B0	9	SER	2.4
35	BA	326	G	2.4
35	BA	2308	G	2.4
38	BD	272	ALA	2.4
41	BG	163	ALA	2.4
35	BA	9	U	2.4
4	AD	155	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
7	AG	120	ILE	2.4
4	AD	154	ASN	2.4
29	B4	41	PRO	2.4
41	BG	32	PRO	2.4
21	AU	16	GLY	2.4
24	AY	193	GLY	2.4
34	B9	37	GLY	2.4
3	AC	85	ARG	2.4
6	AF	83	ASP	2.4
9	AI	128	ARG	2.4
11	AK	126	ARG	2.4
15	AO	88	ARG	2.4
48	BP	76	LYS	2.4
53	BU	36	ARG	2.4
58	BZ	127	LYS	2.4
1	AA	748	C	2.4
1	AA	1403	C	2.4
35	BA	1509	C	2.4
48	BP	144	GLU	2.4
4	AD	149	ALA	2.4
25	B0	16	SER	2.4
1	AA	39	G	2.4
1	AA	1036	G	2.4
5	AE	10	MET	2.4
9	AI	27	THR	2.4
9	AI	125	TYR	2.4
35	BA	881	G	2.4
35	BA	1459	G	2.4
35	BA	2891	G	2.4
36	BB	81	G	2.4
41	BG	64	THR	2.4
2	AB	121	LEU	2.4
8	AH	2	LEU	2.4
50	BR	10	LEU	2.4
10	AJ	98	ILE	2.4
48	BP	145	PRO	2.4
9	AI	23	ASN	2.3
24	AY	496	LYS	2.3
38	BD	262	ARG	2.3
51	BS	106	ARG	2.3
58	BZ	10	ARG	2.3
58	BZ	58	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
7	AG	132	GLY	2.3
37	BC	25	GLU	2.3
11	AK	13	GLN	2.3
34	B9	36	GLN	2.3
35	BA	277	C	2.3
58	BZ	65	GLN	2.3
35	BA	603	A	2.3
35	BA	1494	A	2.3
41	BG	78	SER	2.3
41	BG	99	MET	2.3
42	BH	41	MET	2.3
13	AM	90	LEU	2.3
20	AT	99	LEU	2.3
41	BG	162	THR	2.3
1	AA	204	U	2.3
51	BS	18	ILE	2.3
2	AB	22	LYS	2.3
37	BC	202	PRO	2.3
57	BY	87	LYS	2.3
1	AA	631	G	2.3
14	AN	3	ARG	2.3
35	BA	271(M)	G	2.3
35	BA	2405	G	2.3
36	BB	118	G	2.3
41	BG	109	VAL	2.3
58	BZ	72	ARG	2.3
3	AC	96	GLY	2.3
11	AK	117	ASN	2.3
24	AY	296	GLY	2.3
38	BD	243	GLY	2.3
41	BG	44	GLY	2.3
41	BG	89	GLY	2.3
29	B4	51	ASP	2.3
29	B4	65	ASP	2.3
42	BH	47	GLU	2.3
48	BP	117	GLU	2.3
2	AB	90	MET	2.3
25	B0	62	LEU	2.3
41	BG	176	LEU	2.3
42	BH	56	SER	2.3
48	BP	62	LEU	2.3
48	BP	148	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
58	BZ	144	LEU	2.3
1	AA	549	C	2.3
1	AA	564	C	2.3
1	AA	88	A	2.3
23	AX	12	A	2.3
25	B0	78	TYR	2.3
35	BA	1493	C	2.3
36	BB	25	A	2.3
58	BZ	29	TYR	2.3
18	AR	88	LYS	2.3
24	AY	4	LYS	2.3
53	BU	16	LYS	2.3
7	AG	79	ARG	2.3
35	BA	2218	U	2.3
37	BC	141	PRO	2.3
42	BH	55	PRO	2.3
52	BT	13	ARG	2.3
58	BZ	95	PRO	2.3
24	AY	86	GLY	2.3
42	BH	174	GLY	2.3
48	BP	20	GLY	2.3
1	AA	200	G	2.3
1	AA	688	G	2.3
1	AA	1387	G	2.3
2	AB	29	ALA	2.3
2	AB	186	ALA	2.3
35	BA	654(O)	G	2.3
35	BA	1047	G	2.3
35	BA	1888	G	2.3
37	BC	92	ALA	2.3
40	BF	27	GLU	2.3
40	BF	1	MET	2.3
24	AY	567	LEU	2.3
27	B2	9	GLN	2.3
50	BR	71	GLN	2.3
52	BT	136	GLN	2.3
2	AB	24	TRP	2.3
42	BH	138	LYS	2.3
48	BP	114	ILE	2.3
2	AB	153	ARG	2.3
21	AU	24	ARG	2.3
29	B4	67	TYR	2.3

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Mol	Chain	Res	Type	RSRZ
52	BT	118	ARG	2.3
1	AA	1490	C	2.3
35	BA	884	C	2.3
35	BA	1786	A	2.3
35	BA	2158	A	2.3
36	BB	88	C	2.3
54	BV	47	VAL	2.3
53	BU	118	GLY	2.3
19	AS	10	PHE	2.3
37	BC	148	PHE	2.3
41	BG	123	ASN	2.3
2	AB	231	GLU	2.3
31	B6	35	GLU	2.3
51	BS	66	ALA	2.3
58	BZ	187	ALA	2.3
24	AY	410	ASP	2.3
28	B3	33	GLN	2.3
52	BT	78	LEU	2.3
13	AM	46	LYS	2.3
52	BT	8	LYS	2.3
1	AA	1030(C)	G	2.3
1	AA	1034	G	2.3
24	AY	302	HIS	2.3
35	BA	530	G	2.3
35	BA	2759	G	2.3
52	BT	86	ILE	2.3
2	AB	96	ARG	2.3
4	AD	208	SER	2.3
19	AS	4	SER	2.3
41	BG	16	ARG	2.3
55	BW	92	ARG	2.3
58	BZ	20	ARG	2.3
2	AB	31	TYR	2.3
32	B7	46	VAL	2.3
7	AG	130	GLY	2.3
18	AR	27	GLY	2.3
41	BG	24	GLY	2.3
1	AA	312	C	2.2
1	AA	949	A	2.2
1	AA	1030(B)	C	2.2
1	AA	1268	A	2.2
35	BA	627	A	2.2

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Mol	Chain	Res	Type	RSRZ
36	BB	15	A	2.2
9	AI	29	ASN	2.2
17	AQ	24	GLU	2.2
24	AY	80	ASN	2.2
24	AY	406	GLU	2.2
37	BC	113	ALA	2.2
58	BZ	119	GLU	2.2
24	AY	9	LEU	2.2
41	BG	34	LEU	2.2
58	BZ	91	LEU	2.2
2	AB	95	GLN	2.2
15	AO	13	GLN	2.2
19	AS	88	LYS	2.2
29	B4	8	LYS	2.2
42	BH	25	LYS	2.2
24	AY	22	ASP	2.2
25	B0	56	ASP	2.2
50	BR	69	ASP	2.2
29	B4	15	ILE	2.2
33	B8	41	ILE	2.2
53	BU	88	ILE	2.2
3	AC	164	ARG	2.2
6	AF	46	ARG	2.2
19	AS	69	HIS	2.2
21	AU	15	ARG	2.2
25	B0	55	ARG	2.2
31	B6	6	ARG	2.2
31	B6	44	ARG	2.2
19	AS	63	THR	2.2
24	AY	683	VAL	2.2
29	B4	56	VAL	2.2
7	AG	151	TYR	2.2
19	AS	61	TYR	2.2
42	BH	110	SER	2.2
58	BZ	142	SER	2.2
1	AA	1133	G	2.2
1	AA	1505	G	2.2
35	BA	10	G	2.2
35	BA	1170	G	2.2
35	BA	2009	G	2.2
3	AC	2	GLY	2.2
48	BP	91	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
49	BQ	58	PHE	2.2
35	BA	50	U	2.2
35	BA	2895	U	2.2
24	AY	68	ALA	2.2
29	B4	23	GLU	2.2
1	AA	160	A	2.2
19	AS	6	LYS	2.2
24	AY	471	LYS	2.2
25	B0	84	LEU	2.2
41	BG	35	GLU	2.2
1	AA	840	C	2.2
30	B5	56	LYS	2.2
35	BA	654(B)	C	2.2
35	BA	1654	A	2.2
35	BA	1821	A	2.2
35	BA	1983	C	2.2
35	BA	2791	C	2.2
24	AY	684	GLN	2.2
52	BT	83	ILE	2.2
6	AF	47	ARG	2.2
10	AJ	46	ARG	2.2
52	BT	115	ARG	2.2
2	AB	109	SER	2.2
38	BD	12	SER	2.2
15	AO	89	GLY	2.2
24	AY	532	GLY	2.2
46	BN	125	GLY	2.2
57	BY	10	GLY	2.2
12	AL	46	LYS	2.2
1	AA	97	G	2.2
5	AE	68	GLU	2.2
18	AR	24	ALA	2.2
20	AT	72	LEU	2.2
41	BG	47	LYS	2.2
48	BP	139	LYS	2.2
35	BA	35	G	2.2
42	BH	34	GLU	2.2
1	AA	1212	U	2.2
1	AA	1390	U	2.2
7	AG	115	ARG	2.2
8	AH	102	ARG	2.2
24	AY	59	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
26	B1	11	ARG	2.2
26	B1	50	ARG	2.2
27	B2	55	ARG	2.2
41	BG	63	ILE	2.2
41	BG	77	ILE	2.2
46	BN	12	ARG	2.2
47	BO	47	ILE	2.2
1	AA	267	C	2.2
24	AY	509	HIS	2.2
35	BA	890	A	2.2
35	BA	2715	C	2.2
24	AY	569	ASP	2.2
12	AL	18	VAL	2.2
26	B1	49	VAL	2.2
33	B8	53	PRO	2.2
42	BH	79	VAL	2.2
51	BS	49	VAL	2.2
11	AK	73	MET	2.2
26	B1	79	GLY	2.2
37	BC	21	TYR	2.2
48	BP	43	GLY	2.2
9	AI	78	LYS	2.2
24	AY	686	LYS	2.2
37	BC	85	LYS	2.2
51	BS	29	PHE	2.2
18	AR	31	LEU	2.2
3	AC	82	GLU	2.2
5	AE	155	GLU	2.2
10	AJ	28	ARG	2.2
38	BD	273	ARG	2.2
50	BR	45	ARG	2.2
39	BE	55	ASN	2.2
35	BA	2409	G	2.2
12	AL	112	ASP	2.2
19	AS	13	ASP	2.2
24	AY	680	PRO	2.2
35	BA	8	A	2.2
37	BC	115	VAL	2.2
40	BF	77	ASP	2.2
48	BP	87	ASP	2.2
35	BA	1116	C	2.2
35	BA	1505	C	2.2

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Mol	Chain	Res	Type	RSRZ
35	BA	1999	C	2.2
19	AS	33	THR	2.2
25	B0	58	THR	2.2
57	BY	95	LYS	2.2
37	BC	111	PHE	2.2
39	BE	70	ALA	2.2
40	BF	3	GLU	2.2
58	BZ	113	ALA	2.2
28	B3	30	ARG	2.1
38	BD	268	ARG	2.1
51	BS	23	ARG	2.1
51	BS	38	GLN	2.1
1	AA	839	U	2.1
35	BA	958	U	2.1
48	BP	84	ASN	2.1
55	BW	111	HIS	2.1
10	AJ	91	PRO	2.1
58	BZ	71	VAL	2.1
58	BZ	83	PRO	2.1
58	BZ	63	ASP	2.1
1	AA	1002	G	2.1
1	AA	1032	G	2.1
1	AA	1182	G	2.1
14	AN	22	THR	2.1
31	B6	25	LYS	2.1
35	BA	7	G	2.1
35	BA	178	G	2.1
35	BA	1173	G	2.1
35	BA	1987	G	2.1
37	BC	41	THR	2.1
46	BN	93	THR	2.1
51	BS	19	LYS	2.1
51	BS	22	GLY	2.1
11	AK	25	TYR	2.1
35	BA	652	C	2.1
41	BG	60	LEU	2.1
40	BF	130	ALA	2.1
41	BG	124	SER	2.1
3	AC	83	ARG	2.1
29	B4	48	ARG	2.1
40	BF	127	GLU	2.1
2	AB	162	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
58	BZ	57	ILE	2.1
21	AU	23	PRO	2.1
30	B5	60	VAL	2.1
35	BA	90	U	2.1
41	BG	122	PRO	2.1
24	AY	41	LYS	2.1
24	AY	473	ASP	2.1
20	AT	96	GLY	2.1
48	BP	37	GLY	2.1
2	AB	152	PHE	2.1
3	AC	42	LEU	2.1
29	B4	55	ARG	2.1
35	BA	654(J)	A	2.1
35	BA	1419	A	2.1
35	BA	2629	A	2.1
37	BC	171	ALA	2.1
51	BS	94	TYR	2.1
1	AA	61	G	2.1
2	AB	119	GLU	2.1
4	AD	158	ILE	2.1
5	AE	81	GLU	2.1
24	AY	6	GLU	2.1
27	B2	41	ILE	2.1
28	B3	38	GLU	2.1
35	BA	629	G	2.1
35	BA	2104	G	2.1
36	BB	110	G	2.1
1	AA	1006	C	2.1
1	AA	1037	C	2.1
1	AA	1039	C	2.1
2	AB	240	GLN	2.1
2	AB	132	LYS	2.1
2	AB	156	LYS	2.1
2	AB	229	VAL	2.1
31	B6	29	ASN	2.1
42	BH	29	PRO	2.1
48	BP	17	LYS	2.1
54	BV	16	PRO	2.1
1	AA	202	U	2.1
1	AA	991	U	2.1
2	AB	205	ASP	2.1
4	AD	23	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
6	AF	19	LEU	2.1
24	AY	24	GLY	2.1
24	AY	206	LEU	2.1
26	B1	31	GLY	2.1
41	BG	53	LEU	2.1
42	BH	28	GLY	2.1
48	BP	115	LEU	2.1
51	BS	63	THR	2.1
8	AH	30	ARG	2.1
29	B4	61	ARG	2.1
41	BG	98	ARG	2.1
48	BP	77	ARG	2.1
3	AC	84	ILE	2.1
18	AR	83	GLU	2.1
24	AY	56	GLU	2.1
29	B4	32	TYR	2.1
37	BC	157	ILE	2.1
37	BC	198	GLU	2.1
42	BH	53	GLU	2.1
51	BS	103	GLU	2.1
56	BX	23	GLU	2.1
58	BZ	99	TYR	2.1
35	BA	49	A	2.1
1	AA	1050	G	2.1
1	AA	1076	C	2.1
18	AR	23	LYS	2.1
19	AS	32	LYS	2.1
25	B0	80	HIS	2.1
3	AC	75	VAL	2.1
7	AG	80	VAL	2.1
7	AG	141	VAL	2.1
35	BA	248	G	2.1
35	BA	327	G	2.1
35	BA	2606	C	2.1
42	BH	160	LYS	2.1
52	BT	132	LYS	2.1
58	BZ	158	PRO	2.1
13	AM	81	LEU	2.1
19	AS	71	LEU	2.1
17	AQ	80	GLY	2.1
18	AR	29	PHE	2.1
29	B4	17	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
35	BA	2779	U	2.1
36	BB	41	U	2.1
52	BT	37	GLY	2.1
4	AD	115	ARG	2.1
25	B0	44	ARG	2.1
25	B0	71	ASP	2.1
32	B7	23	ARG	2.1
40	BF	175	THR	2.1
54	BV	21	ARG	2.1
24	AY	209	ALA	2.1
38	BD	2	ALA	2.1
42	BH	162	ILE	2.1
7	AG	129	GLU	2.1
10	AJ	22	LYS	2.0
37	BC	55	SER	2.0
39	BE	41	LYS	2.0
51	BS	53	SER	2.0
48	BP	38	GLN	2.0
54	BV	44	LYS	2.0
4	AD	112	VAL	2.0
28	B3	50	VAL	2.0
35	BA	278	A	2.0
42	BH	52	VAL	2.0
58	BZ	90	VAL	2.0
12	AL	45	PRO	2.0
39	BE	53	PRO	2.0
42	BH	10	PRO	2.0
1	AA	106	C	2.0
1	AA	165	C	2.0
1	AA	1145	C	2.0
1	AA	1336	C	2.0
22	AV	74	C	2.0
35	BA	1464	C	2.0
36	BB	42	C	2.0
36	BB	47	C	2.0
39	BE	60	ASN	2.0
1	AA	41	G	2.0
1	AA	98	G	2.0
1	AA	1030(A)	G	2.0
1	AA	1031	G	2.0
1	AA	1142	G	2.0
2	AB	130	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
4	AD	44	GLY	2.0
4	AD	159	ARG	2.0
33	B8	46	ARG	2.0
35	BA	171	G	2.0
35	BA	258	G	2.0
35	BA	363	G	2.0
35	BA	1772	G	2.0
1	AA	90	U	2.0
1	AA	1025	U	2.0
22	AV	45	U	2.0
35	BA	2716	U	2.0
46	BN	127	ASP	2.0
48	BP	75	ILE	2.0
20	AT	94	ALA	2.0
48	BP	31	ALA	2.0
2	AB	134	GLU	2.0
12	AL	91	LYS	2.0
7	AG	56	GLN	2.0
24	AY	401	SER	2.0
40	BF	15	SER	2.0
41	BG	26	GLN	2.0
41	BG	28	VAL	2.0
2	AB	155	LEU	2.0
19	AS	15	LEU	2.0
35	BA	2126	A	2.0
36	BB	29	A	2.0
41	BG	173	LEU	2.0
58	BZ	76	LEU	2.0
24	AY	197	ARG	2.0
42	BH	3	ARG	2.0
25	B0	69	PHE	2.0
48	BP	22	GLY	2.0
58	BZ	160	GLY	2.0
1	AA	948	C	2.0
1	AA	1038	C	2.0
13	AM	78	ILE	2.0
35	BA	1135	C	2.0
35	BA	1383	C	2.0
57	BY	38	ILE	2.0
58	BZ	137	ILE	2.0
20	AT	12	ALA	2.0
51	BS	77	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
19	AS	27	GLU	2.0
24	AY	393	ASP	2.0
35	BA	1061	U	2.0
1	AA	107	G	2.0
22	AV	15	G	2.0
30	B5	40	LYS	2.0
34	B9	15	LYS	2.0
35	BA	1740	G	2.0
37	BC	13	GLU	2.0
51	BS	88	ASP	2.0
39	BE	152	LYS	2.0
53	BU	15	LYS	2.0
57	BY	101	LYS	2.0
42	BH	17	VAL	2.0
42	BH	43	VAL	2.0

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

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

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3280	1/1	0.38	0.41	87,87,87,87	0
59	MG	AA	1712	1/1	0.39	0.21	66,66,66,66	0
59	MG	BA	3247	1/1	0.45	0.28	49,49,49,49	0
59	MG	BA	3179	1/1	0.48	0.32	87,87,87,87	0
59	MG	AA	1601	1/1	0.50	0.39	97,97,97,97	0
59	MG	BA	3215	1/1	0.51	0.27	81,81,81,81	0
59	MG	AA	1780	1/1	0.52	0.16	54,54,54,54	0
59	MG	AA	1666	1/1	0.53	0.48	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BC	301	1/1	0.56	0.17	115,115,115,115	0
59	MG	AA	1677	1/1	0.57	0.37	77,77,77,77	0
59	MG	BA	3204	1/1	0.57	0.29	60,60,60,60	0
59	MG	AA	1703	1/1	0.57	0.46	81,81,81,81	0
59	MG	BA	3252	1/1	0.58	0.18	50,50,50,50	0
59	MG	AA	1756	1/1	0.59	0.27	54,54,54,54	0
59	MG	AA	1716	1/1	0.63	0.38	71,71,71,71	0
59	MG	AA	1607	1/1	0.63	0.44	97,97,97,97	0
59	MG	AA	1758	1/1	0.64	0.35	75,75,75,75	0
59	MG	AA	1754	1/1	0.65	0.36	75,75,75,75	0
59	MG	BA	3275	1/1	0.65	0.29	52,52,52,52	0
59	MG	BA	3142	1/1	0.65	0.17	48,48,48,48	0
59	MG	AA	1767	1/1	0.65	0.33	60,60,60,60	0
59	MG	BA	3182	1/1	0.66	0.29	73,73,73,73	0
59	MG	BA	3194	1/1	0.66	0.14	74,74,74,74	0
59	MG	BA	3175	1/1	0.66	0.21	62,62,62,62	0
59	MG	BA	3226	1/1	0.67	0.24	56,56,56,56	0
59	MG	BA	3026	1/1	0.67	0.29	67,67,67,67	0
59	MG	BA	3282	1/1	0.67	0.24	67,67,67,67	0
59	MG	AA	1781	1/1	0.67	0.14	54,54,54,54	0
59	MG	AA	1744	1/1	0.68	0.24	90,90,90,90	0
59	MG	AA	1740	1/1	0.68	0.48	79,79,79,79	0
59	MG	AA	1635	1/1	0.69	0.12	65,65,65,65	0
59	MG	AA	1639	1/1	0.69	0.17	55,55,55,55	0
59	MG	BA	3236	1/1	0.69	0.18	52,52,52,52	0
59	MG	AA	1689	1/1	0.70	0.40	79,79,79,79	0
59	MG	AA	1620	1/1	0.70	0.41	75,75,75,75	0
59	MG	BA	3239	1/1	0.70	0.42	87,87,87,87	0
59	MG	BA	3163	1/1	0.71	0.16	55,55,55,55	0
59	MG	BA	3023	1/1	0.71	0.33	87,87,87,87	0
59	MG	BA	3261	1/1	0.71	0.22	67,67,67,67	0
59	MG	AA	1753	1/1	0.71	0.30	89,89,89,89	0
59	MG	BA	3090	1/1	0.71	0.25	56,56,56,56	0
59	MG	BA	3237	1/1	0.71	0.36	94,94,94,94	0
59	MG	AA	1773	1/1	0.71	0.40	60,60,60,60	0
59	MG	AA	1775	1/1	0.72	0.09	45,45,45,45	0
59	MG	AA	1707	1/1	0.73	0.23	60,60,60,60	0
59	MG	AA	1627	1/1	0.73	0.20	74,74,74,74	0
59	MG	B0	101	1/1	0.73	0.45	72,72,72,72	0
59	MG	BA	3266	1/1	0.73	0.24	71,71,71,71	0
59	MG	BA	3032	1/1	0.74	0.31	73,73,73,73	0
59	MG	BA	3301	1/1	0.74	0.30	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3315	1/1	0.74	0.22	52,52,52,52	0
59	MG	AA	1772	1/1	0.74	0.46	79,79,79,79	0
59	MG	BA	3240	1/1	0.75	0.32	60,60,60,60	0
59	MG	BA	3260	1/1	0.75	0.39	72,72,72,72	0
59	MG	BA	3279	1/1	0.75	0.38	63,63,63,63	0
59	MG	BA	3041	1/1	0.75	0.25	75,75,75,75	0
59	MG	BA	3055	1/1	0.76	0.20	33,33,33,33	0
59	MG	AA	1652	1/1	0.76	0.29	41,41,41,41	0
59	MG	BA	3281	1/1	0.76	0.40	79,79,79,79	0
59	MG	AA	1613	1/1	0.76	0.26	65,65,65,65	0
59	MG	AA	1632	1/1	0.76	0.27	56,56,56,56	0
59	MG	BA	3012	1/1	0.76	0.38	79,79,79,79	0
59	MG	BA	3241	1/1	0.76	0.25	65,65,65,65	0
59	MG	AA	1733	1/1	0.77	0.12	67,67,67,67	0
59	MG	BA	3134	1/1	0.77	0.22	65,65,65,65	0
59	MG	AA	1738	1/1	0.77	0.17	53,53,53,53	0
59	MG	AA	1674	1/1	0.77	0.39	74,74,74,74	0
59	MG	BA	3253	1/1	0.77	0.53	98,98,98,98	0
59	MG	AA	1697	1/1	0.77	0.17	61,61,61,61	0
59	MG	AA	1790	1/1	0.77	0.27	57,57,57,57	0
59	MG	AA	1640	1/1	0.77	0.26	74,74,74,74	0
59	MG	BA	3130	1/1	0.78	0.42	56,56,56,56	0
59	MG	BA	3183	1/1	0.78	0.11	58,58,58,58	0
59	MG	BA	3166	1/1	0.78	0.28	68,68,68,68	0
59	MG	BA	3304	1/1	0.78	0.21	32,32,32,32	0
59	MG	BA	3060	1/1	0.78	0.27	31,31,31,31	0
59	MG	BA	3040	1/1	0.78	0.30	71,71,71,71	0
59	MG	AA	1684	1/1	0.79	0.59	61,61,61,61	0
59	MG	BA	3265	1/1	0.79	0.31	65,65,65,65	0
59	MG	AA	1724	1/1	0.79	0.14	48,48,48,48	0
59	MG	BA	3268	1/1	0.79	0.41	85,85,85,85	0
59	MG	AA	1793	1/1	0.79	0.15	50,50,50,50	0
59	MG	BA	3278	1/1	0.79	0.24	91,91,91,91	0
59	MG	BA	3136	1/1	0.79	0.31	90,90,90,90	0
59	MG	AA	1743	1/1	0.79	0.23	38,38,38,38	0
59	MG	BA	3242	1/1	0.79	0.36	78,78,78,78	0
59	MG	AA	1626	1/1	0.79	0.34	59,59,59,59	0
59	MG	BA	3164	1/1	0.79	0.26	49,49,49,49	0
59	MG	BA	3216	1/1	0.79	0.18	54,54,54,54	0
59	MG	BA	3258	1/1	0.79	0.22	51,51,51,51	0
59	MG	AA	1762	1/1	0.79	0.28	100,100,100,100	0
59	MG	AA	1797	1/1	0.80	0.23	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3075	1/1	0.80	0.23	31,31,31,31	0
59	MG	AA	1760	1/1	0.80	0.28	70,70,70,70	0
59	MG	BA	3197	1/1	0.80	0.24	58,58,58,58	0
59	MG	BA	3106	1/1	0.80	0.20	47,47,47,47	0
59	MG	BA	3206	1/1	0.80	0.25	65,65,65,65	0
59	MG	BA	3212	1/1	0.80	0.26	46,46,46,46	0
59	MG	BA	3009	1/1	0.80	0.46	77,77,77,77	0
59	MG	BA	3132	1/1	0.80	0.32	59,59,59,59	0
59	MG	AA	1779	1/1	0.80	0.35	81,81,81,81	0
59	MG	BA	3230	1/1	0.80	0.22	40,40,40,40	0
59	MG	BA	3020	1/1	0.80	0.30	63,63,63,63	0
59	MG	AA	1704	1/1	0.80	0.24	25,25,25,25	0
59	MG	AA	1715	1/1	0.80	0.12	42,42,42,42	0
59	MG	AA	1788	1/1	0.80	0.31	73,73,73,73	0
59	MG	AA	1789	1/1	0.80	0.23	61,61,61,61	0
59	MG	AA	1611	1/1	0.80	0.33	75,75,75,75	0
59	MG	AA	1752	1/1	0.80	0.31	59,59,59,59	0
59	MG	AA	1676	1/1	0.81	0.23	62,62,62,62	0
59	MG	BA	3027	1/1	0.81	0.33	71,71,71,71	0
59	MG	AA	1644	1/1	0.81	0.23	60,60,60,60	0
59	MG	AA	1682	1/1	0.81	0.28	53,53,53,53	0
59	MG	BA	3269	1/1	0.81	0.18	48,48,48,48	0
59	MG	BA	3270	1/1	0.81	0.37	70,70,70,70	0
59	MG	AA	1730	1/1	0.81	0.17	62,62,62,62	0
59	MG	AA	1669	1/1	0.81	0.20	40,40,40,40	0
59	MG	BA	3147	1/1	0.81	0.31	119,119,119,119	0
59	MG	AA	1786	1/1	0.81	0.10	35,35,35,35	0
59	MG	BA	3251	1/1	0.81	0.29	44,44,44,44	0
59	MG	BA	3064	1/1	0.81	0.27	62,62,62,62	0
59	MG	BA	3300	1/1	0.81	0.32	65,65,65,65	0
59	MG	AA	1771	1/1	0.81	0.20	40,40,40,40	0
59	MG	BA	3255	1/1	0.81	0.26	35,35,35,35	0
59	MG	BA	3218	1/1	0.81	0.14	58,58,58,58	0
59	MG	AA	1638	1/1	0.81	0.11	38,38,38,38	0
59	MG	AA	1636	1/1	0.82	0.44	60,60,60,60	0
59	MG	BA	3213	1/1	0.82	0.29	31,31,31,31	0
59	MG	AA	1755	1/1	0.82	0.17	60,60,60,60	0
59	MG	BA	3190	1/1	0.82	0.27	81,81,81,81	0
59	MG	AA	1717	1/1	0.82	0.33	41,41,41,41	0
59	MG	BA	3283	1/1	0.82	0.20	73,73,73,73	0
59	MG	AA	1656	1/1	0.82	0.13	46,46,46,46	0
59	MG	BA	3200	1/1	0.82	0.31	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1728	1/1	0.82	0.17	47,47,47,47	0
59	MG	BA	3095	1/1	0.82	0.32	47,47,47,47	0
59	MG	BA	3276	1/1	0.82	0.30	46,46,46,46	0
61	GCP	AY	701	32/32	0.82	0.15	41,53,61,63	0
59	MG	BA	3259	1/1	0.83	0.11	39,39,39,39	0
59	MG	BA	3019	1/1	0.83	0.36	77,77,77,77	0
59	MG	BA	3187	1/1	0.83	0.32	68,68,68,68	0
59	MG	BA	3105	1/1	0.83	0.21	69,69,69,69	0
59	MG	BA	3244	1/1	0.83	0.17	41,41,41,41	0
59	MG	BA	3299	1/1	0.83	0.26	53,53,53,53	0
59	MG	BA	3030	1/1	0.83	0.45	86,86,86,86	0
59	MG	BA	3107	1/1	0.83	0.25	44,44,44,44	0
59	MG	AA	1651	1/1	0.83	0.27	68,68,68,68	0
59	MG	BA	3073	1/1	0.83	0.29	83,83,83,83	0
59	MG	AA	1650	1/1	0.83	0.20	36,36,36,36	0
59	MG	AA	1685	1/1	0.83	0.31	40,40,40,40	0
59	MG	BA	3198	1/1	0.84	0.23	63,63,63,63	0
59	MG	AA	1727	1/1	0.84	0.20	55,55,55,55	0
59	MG	BA	3202	1/1	0.84	0.24	43,43,43,43	0
59	MG	AA	1634	1/1	0.84	0.21	43,43,43,43	0
59	MG	BA	3016	1/1	0.84	0.35	77,77,77,77	0
59	MG	AA	1628	1/1	0.84	0.40	64,64,64,64	0
59	MG	AA	1696	1/1	0.84	0.27	35,35,35,35	0
59	MG	AA	1622	1/1	0.84	0.26	49,49,49,49	0
59	MG	AA	1726	1/1	0.84	0.17	45,45,45,45	0
59	MG	AA	1784	1/1	0.84	0.11	37,37,37,37	0
59	MG	BA	3184	1/1	0.84	0.22	40,40,40,40	0
59	MG	BA	3029	1/1	0.84	0.40	73,73,73,73	0
59	MG	BA	3138	1/1	0.84	0.37	57,57,57,57	0
59	MG	BA	3087	1/1	0.84	0.30	41,41,41,41	0
59	MG	BA	3238	1/1	0.84	0.16	42,42,42,42	0
59	MG	BA	3267	1/1	0.84	0.29	62,62,62,62	0
59	MG	BA	3144	1/1	0.84	0.17	28,28,28,28	0
59	MG	AA	1745	1/1	0.85	0.42	66,66,66,66	0
59	MG	AA	1637	1/1	0.85	0.30	65,65,65,65	0
59	MG	BA	3233	1/1	0.85	0.20	42,42,42,42	0
59	MG	BA	3234	1/1	0.85	0.18	63,63,63,63	0
59	MG	BA	3116	1/1	0.85	0.38	78,78,78,78	0
59	MG	BA	3121	1/1	0.85	0.30	33,33,33,33	0
59	MG	BA	3271	1/1	0.85	0.14	28,28,28,28	0
59	MG	BA	3025	1/1	0.85	0.28	42,42,42,42	0
59	MG	AA	1673	1/1	0.85	0.13	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3193	1/1	0.85	0.43	64,64,64,64	0
59	MG	BA	3072	1/1	0.85	0.50	70,70,70,70	0
59	MG	B5	101	1/1	0.85	0.22	47,47,47,47	0
59	MG	AA	1624	1/1	0.85	0.52	61,61,61,61	0
59	MG	BA	3079	1/1	0.85	0.21	34,34,34,34	0
59	MG	BA	3085	1/1	0.85	0.20	25,25,25,25	0
59	MG	BA	3284	1/1	0.85	0.33	61,61,61,61	0
59	MG	AA	1764	1/1	0.85	0.30	61,61,61,61	0
59	MG	BA	3148	1/1	0.85	0.17	53,53,53,53	0
59	MG	AA	1668	1/1	0.85	0.18	34,34,34,34	0
59	MG	BA	3093	1/1	0.85	0.41	69,69,69,69	0
59	MG	BA	3036	1/1	0.85	0.26	47,47,47,47	0
59	MG	BA	3174	1/1	0.85	0.34	97,97,97,97	0
59	MG	AA	1792	1/1	0.85	0.09	37,37,37,37	0
59	MG	AA	1658	1/1	0.86	0.15	25,25,25,25	0
59	MG	BA	3146	1/1	0.86	0.21	29,29,29,29	0
59	MG	BA	3028	1/1	0.86	0.30	60,60,60,60	0
59	MG	AA	1672	1/1	0.86	0.10	42,42,42,42	0
59	MG	BA	3152	1/1	0.86	0.32	64,64,64,64	0
59	MG	BA	3274	1/1	0.86	0.13	79,79,79,79	0
59	MG	BA	3160	1/1	0.86	0.17	55,55,55,55	0
59	MG	AA	1621	1/1	0.86	0.39	68,68,68,68	0
59	MG	AA	1709	1/1	0.86	0.10	41,41,41,41	0
59	MG	BA	3126	1/1	0.86	0.40	55,55,55,55	0
59	MG	BA	3167	1/1	0.86	0.25	61,61,61,61	0
59	MG	AA	1647	1/1	0.86	0.29	79,79,79,79	0
59	MG	BA	3039	1/1	0.86	0.26	38,38,38,38	0
59	MG	AA	1699	1/1	0.86	0.15	33,33,33,33	0
59	MG	AA	1731	1/1	0.86	0.11	48,48,48,48	0
59	MG	BA	3295	1/1	0.86	0.11	32,32,32,32	0
59	MG	BA	3297	1/1	0.86	0.10	39,39,39,39	0
59	MG	BA	3219	1/1	0.86	0.13	44,44,44,44	0
59	MG	BA	3225	1/1	0.86	0.17	44,44,44,44	0
59	MG	BA	3137	1/1	0.86	0.15	49,49,49,49	0
59	MG	BA	3302	1/1	0.86	0.30	52,52,52,52	0
59	MG	BA	3227	1/1	0.86	0.21	27,27,27,27	0
59	MG	BA	3263	1/1	0.86	0.24	63,63,63,63	0
59	MG	AA	1702	1/1	0.86	0.32	44,44,44,44	0
59	MG	BA	3059	1/1	0.86	0.38	45,45,45,45	0
59	MG	BA	3139	1/1	0.87	0.22	35,35,35,35	0
59	MG	BA	3140	1/1	0.87	0.14	45,45,45,45	0
59	MG	BA	3046	1/1	0.87	0.25	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1695	1/1	0.87	0.35	50,50,50,50	0
59	MG	AA	1671	1/1	0.87	0.38	43,43,43,43	0
59	MG	AA	1741	1/1	0.87	0.17	58,58,58,58	0
59	MG	AA	1708	1/1	0.87	0.28	57,57,57,57	0
59	MG	BA	3071	1/1	0.87	0.22	22,22,22,22	0
59	MG	BA	3201	1/1	0.87	0.32	64,64,64,64	0
59	MG	AA	1661	1/1	0.87	0.20	40,40,40,40	0
59	MG	BA	3161	1/1	0.87	0.29	30,30,30,30	0
59	MG	BA	3205	1/1	0.87	0.14	35,35,35,35	0
59	MG	AA	1643	1/1	0.87	0.13	38,38,38,38	0
59	MG	BA	3128	1/1	0.87	0.13	38,38,38,38	0
59	MG	BA	3292	1/1	0.87	0.21	64,64,64,64	0
59	MG	BA	3294	1/1	0.87	0.19	42,42,42,42	0
59	MG	BA	3129	1/1	0.87	0.20	51,51,51,51	0
59	MG	BA	3296	1/1	0.87	0.20	38,38,38,38	0
59	MG	BA	3257	1/1	0.87	0.24	43,43,43,43	0
59	MG	AA	1766	1/1	0.87	0.36	58,58,58,58	0
59	MG	BA	3168	1/1	0.87	0.14	58,58,58,58	0
59	MG	AA	1713	1/1	0.87	0.07	40,40,40,40	0
59	MG	BA	3082	1/1	0.87	0.30	23,23,23,23	0
59	MG	BA	3177	1/1	0.87	0.28	31,31,31,31	0
59	MG	BA	3308	1/1	0.87	0.17	58,58,58,58	0
59	MG	BA	3312	1/1	0.87	0.17	44,44,44,44	0
59	MG	AA	1606	1/1	0.87	0.31	60,60,60,60	0
59	MG	AA	1646	1/1	0.87	0.17	34,34,34,34	0
59	MG	AA	1791	1/1	0.87	0.09	57,57,57,57	0
59	MG	BA	3018	1/1	0.88	0.31	43,43,43,43	0
59	MG	AA	1729	1/1	0.88	0.26	45,45,45,45	0
59	MG	AA	1711	1/1	0.88	0.15	34,34,34,34	0
59	MG	AA	1604	1/1	0.88	0.31	59,59,59,59	0
59	MG	BA	3246	1/1	0.88	0.25	34,34,34,34	0
59	MG	BA	3264	1/1	0.88	0.35	77,77,77,77	0
59	MG	AA	1782	1/1	0.88	0.09	39,39,39,39	0
59	MG	BA	3133	1/1	0.88	0.17	39,39,39,39	0
59	MG	BA	3084	1/1	0.88	0.36	38,38,38,38	0
59	MG	BA	3112	1/1	0.88	0.44	51,51,51,51	0
59	MG	AA	1615	1/1	0.88	0.43	51,51,51,51	0
59	MG	BA	3290	1/1	0.88	0.25	43,43,43,43	0
59	MG	AA	1722	1/1	0.88	0.19	32,32,32,32	0
59	MG	BA	3293	1/1	0.88	0.39	76,76,76,76	0
59	MG	BA	3022	1/1	0.89	0.41	65,65,65,65	0
59	MG	AA	1735	1/1	0.89	0.40	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3047	1/1	0.89	0.24	42,42,42,42	0
59	MG	AA	1737	1/1	0.89	0.11	61,61,61,61	0
59	MG	BA	3248	1/1	0.89	0.20	58,58,58,58	0
59	MG	BA	3207	1/1	0.89	0.21	30,30,30,30	0
59	MG	BA	3056	1/1	0.89	0.25	38,38,38,38	0
59	MG	AA	1678	1/1	0.89	0.18	29,29,29,29	0
59	MG	BA	3176	1/1	0.89	0.30	23,23,23,23	0
59	MG	BA	3097	1/1	0.89	0.27	37,37,37,37	0
59	MG	AA	1679	1/1	0.89	0.24	32,32,32,32	0
59	MG	BA	3061	1/1	0.89	0.07	37,37,37,37	0
59	MG	BA	3220	1/1	0.89	0.30	56,56,56,56	0
59	MG	AA	1609	1/1	0.89	0.32	40,40,40,40	0
59	MG	BA	3111	1/1	0.89	0.19	30,30,30,30	0
59	MG	AA	1659	1/1	0.89	0.22	34,34,34,34	0
59	MG	BA	3188	1/1	0.89	0.26	34,34,34,34	0
59	MG	BA	3113	1/1	0.89	0.35	32,32,32,32	0
59	MG	BA	3191	1/1	0.89	0.37	72,72,72,72	0
59	MG	BA	3303	1/1	0.89	0.10	42,42,42,42	0
59	MG	AA	1655	1/1	0.89	0.26	30,30,30,30	0
59	MG	AA	1642	1/1	0.89	0.32	61,61,61,61	0
59	MG	BA	3158	1/1	0.89	0.20	27,27,27,27	0
59	MG	AA	1690	1/1	0.89	0.24	35,35,35,35	0
59	MG	AA	1691	1/1	0.89	0.21	65,65,65,65	0
59	MG	AA	1718	1/1	0.89	0.33	35,35,35,35	0
59	MG	AA	1759	1/1	0.90	0.21	37,37,37,37	0
59	MG	BA	3102	1/1	0.90	0.15	30,30,30,30	0
59	MG	BA	3068	1/1	0.90	0.15	33,33,33,33	0
59	MG	AA	1774	1/1	0.90	0.28	51,51,51,51	0
59	MG	AA	1663	1/1	0.90	0.28	37,37,37,37	0
59	MG	AA	1776	1/1	0.90	0.21	25,25,25,25	0
59	MG	BA	3217	1/1	0.90	0.12	35,35,35,35	0
59	MG	BA	3289	1/1	0.90	0.22	51,51,51,51	0
59	MG	AA	1777	1/1	0.90	0.13	40,40,40,40	0
59	MG	BA	3291	1/1	0.90	0.21	27,27,27,27	0
59	MG	BA	3077	1/1	0.90	0.21	31,31,31,31	0
59	MG	BA	3186	1/1	0.90	0.10	50,50,50,50	0
59	MG	BA	3222	1/1	0.90	0.24	44,44,44,44	0
59	MG	AA	1683	1/1	0.90	0.17	25,25,25,25	0
59	MG	BA	3118	1/1	0.90	0.26	29,29,29,29	0
59	MG	BA	3151	1/1	0.90	0.08	33,33,33,33	0
59	MG	BA	3228	1/1	0.90	0.21	23,23,23,23	0
59	MG	AA	1710	1/1	0.90	0.08	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3122	1/1	0.90	0.09	26,26,26,26	0
59	MG	AA	1798	1/1	0.90	0.07	39,39,39,39	0
59	MG	AA	1608	1/1	0.90	0.23	48,48,48,48	0
59	MG	BA	3058	1/1	0.90	0.22	31,31,31,31	0
59	MG	BA	3305	1/1	0.90	0.20	52,52,52,52	0
59	MG	BA	3088	1/1	0.90	0.17	27,27,27,27	0
59	MG	AA	1623	1/1	0.90	0.32	33,33,33,33	0
59	MG	AA	1630	1/1	0.90	0.35	56,56,56,56	0
59	MG	AA	1725	1/1	0.90	0.16	35,35,35,35	0
59	MG	BA	3172	1/1	0.90	0.29	31,31,31,31	0
59	MG	BA	3051	1/1	0.91	0.27	31,31,31,31	0
59	MG	AA	1763	1/1	0.91	0.22	51,51,51,51	0
59	MG	BA	3098	1/1	0.91	0.17	25,25,25,25	0
59	MG	AA	1719	1/1	0.91	0.11	32,32,32,32	0
59	MG	BA	3277	1/1	0.91	0.35	57,57,57,57	0
59	MG	AA	1765	1/1	0.91	0.46	63,63,63,63	0
59	MG	AA	1748	1/1	0.91	0.33	56,56,56,56	0
59	MG	AA	1750	1/1	0.91	0.19	42,42,42,42	0
59	MG	BA	3108	1/1	0.91	0.15	34,34,34,34	0
59	MG	AA	1770	1/1	0.91	0.27	41,41,41,41	0
59	MG	AA	1732	1/1	0.91	0.12	20,20,20,20	0
59	MG	AA	1618	1/1	0.91	0.25	47,47,47,47	0
59	MG	AA	1692	1/1	0.91	0.28	48,48,48,48	0
59	MG	BA	3203	1/1	0.91	0.18	30,30,30,30	0
59	MG	AA	1796	1/1	0.91	0.19	44,44,44,44	0
59	MG	AA	1693	1/1	0.91	0.19	30,30,30,30	0
59	MG	AA	1714	1/1	0.91	0.29	44,44,44,44	0
59	MG	BA	3034	1/1	0.91	0.16	36,36,36,36	0
59	MG	BA	3211	1/1	0.91	0.40	58,58,58,58	0
59	MG	AA	1757	1/1	0.91	0.24	57,57,57,57	0
59	MG	BA	3169	1/1	0.91	0.32	43,43,43,43	0
59	MG	BA	3170	1/1	0.91	0.35	41,41,41,41	0
59	MG	AA	1657	1/1	0.91	0.07	32,32,32,32	0
59	MG	AA	1633	1/1	0.91	0.29	52,52,52,52	0
59	MG	BA	3131	1/1	0.91	0.29	33,33,33,33	0
59	MG	AA	1667	1/1	0.91	0.17	33,33,33,33	0
59	MG	BA	3042	1/1	0.91	0.32	45,45,45,45	0
59	MG	BA	3221	1/1	0.91	0.09	43,43,43,43	0
59	MG	BA	3013	1/1	0.91	0.29	37,37,37,37	0
59	MG	BA	3224	1/1	0.91	0.32	32,32,32,32	0
59	MG	BA	3313	1/1	0.91	0.20	36,36,36,36	0
59	MG	BA	3314	1/1	0.91	0.10	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1605	1/1	0.91	0.32	40,40,40,40	0
59	MG	BA	3092	1/1	0.91	0.32	37,37,37,37	0
59	MG	BA	3048	1/1	0.91	0.29	28,28,28,28	0
59	MG	AA	1701	1/1	0.92	0.10	30,30,30,30	0
59	MG	BA	3049	1/1	0.92	0.32	47,47,47,47	0
59	MG	AA	1670	1/1	0.92	0.17	57,57,57,57	0
59	MG	BA	3052	1/1	0.92	0.21	32,32,32,32	0
59	MG	BA	3135	1/1	0.92	0.24	58,58,58,58	0
59	MG	BA	3053	1/1	0.92	0.18	24,24,24,24	0
59	MG	BA	3054	1/1	0.92	0.25	31,31,31,31	0
59	MG	BA	3080	1/1	0.92	0.24	38,38,38,38	0
59	MG	BA	3243	1/1	0.92	0.14	32,32,32,32	0
59	MG	BA	3208	1/1	0.92	0.16	34,34,34,34	0
59	MG	BA	3245	1/1	0.92	0.16	25,25,25,25	0
59	MG	BA	3209	1/1	0.92	0.54	81,81,81,81	0
59	MG	AA	1653	1/1	0.92	0.17	19,19,19,19	0
59	MG	BA	3083	1/1	0.92	0.23	23,23,23,23	0
59	MG	BA	3038	1/1	0.92	0.23	40,40,40,40	0
59	MG	BA	3214	1/1	0.92	0.13	39,39,39,39	0
59	MG	BA	3143	1/1	0.92	0.31	57,57,57,57	0
59	MG	BA	3057	1/1	0.92	0.15	29,29,29,29	0
59	MG	BA	3117	1/1	0.92	0.16	26,26,26,26	0
59	MG	AA	1654	1/1	0.92	0.20	24,24,24,24	0
59	MG	BA	3120	1/1	0.92	0.29	43,43,43,43	0
59	MG	BA	3149	1/1	0.92	0.29	29,29,29,29	0
59	MG	BA	3014	1/1	0.92	0.36	53,53,53,53	0
59	MG	BA	3262	1/1	0.92	0.10	68,68,68,68	0
59	MG	BA	3015	1/1	0.92	0.41	63,63,63,63	0
59	MG	AA	1617	1/1	0.92	0.32	49,49,49,49	0
59	MG	AA	1680	1/1	0.92	0.20	37,37,37,37	0
59	MG	BA	3094	1/1	0.92	0.24	25,25,25,25	0
59	MG	BA	3309	1/1	0.92	0.18	50,50,50,50	0
59	MG	BA	3310	1/1	0.92	0.07	20,20,20,20	0
59	MG	BA	3195	1/1	0.92	0.18	32,32,32,32	0
59	MG	BA	3196	1/1	0.92	0.34	53,53,53,53	0
59	MG	BA	3162	1/1	0.92	0.32	45,45,45,45	0
59	MG	BA	3232	1/1	0.92	0.16	33,33,33,33	0
59	MG	AA	1665	1/1	0.92	0.25	28,28,28,28	0
60	ZN	AD	301	1/1	0.92	0.28	54,54,54,54	0
59	MG	BA	3273	1/1	0.92	0.56	72,72,72,72	0
59	MG	BA	3155	1/1	0.93	0.35	60,60,60,60	0
59	MG	BA	3066	1/1	0.93	0.14	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3159	1/1	0.93	0.15	36,36,36,36	0
59	MG	BA	3250	1/1	0.93	0.18	53,53,53,53	0
59	MG	BA	3067	1/1	0.93	0.28	71,71,71,71	0
59	MG	BA	3086	1/1	0.93	0.22	46,46,46,46	0
59	MG	BA	3192	1/1	0.93	0.18	51,51,51,51	0
59	MG	BA	3254	1/1	0.93	0.15	18,18,18,18	0
59	MG	AA	1795	1/1	0.93	0.07	46,46,46,46	0
59	MG	BA	3256	1/1	0.93	0.33	52,52,52,52	0
59	MG	BA	3069	1/1	0.93	0.20	18,18,18,18	0
59	MG	BA	3089	1/1	0.93	0.14	18,18,18,18	0
59	MG	AA	1751	1/1	0.93	0.09	46,46,46,46	0
59	MG	AA	1687	1/1	0.93	0.17	30,30,30,30	0
59	MG	AA	1603	1/1	0.93	0.28	38,38,38,38	0
59	MG	BA	3298	1/1	0.93	0.11	20,20,20,20	0
59	MG	AY	702	1/1	0.93	0.13	23,23,23,23	0
59	MG	AA	1749	1/1	0.93	0.08	38,38,38,38	0
59	MG	BA	3096	1/1	0.93	0.12	23,23,23,23	0
59	MG	BA	3145	1/1	0.93	0.17	32,32,32,32	0
59	MG	BA	3123	1/1	0.93	0.28	32,32,32,32	0
59	MG	BA	3235	1/1	0.93	0.19	29,29,29,29	0
59	MG	AA	1662	1/1	0.93	0.21	34,34,34,34	0
59	MG	BA	3001	1/1	0.93	0.09	35,35,35,35	0
59	MG	BA	3178	1/1	0.93	0.21	43,43,43,43	0
59	MG	BA	3101	1/1	0.93	0.27	29,29,29,29	0
59	MG	BA	3311	1/1	0.93	0.11	22,22,22,22	0
59	MG	BA	3272	1/1	0.93	0.40	52,52,52,52	0
59	MG	BA	3181	1/1	0.93	0.13	32,32,32,32	0
59	MG	BA	3210	1/1	0.93	0.23	23,23,23,23	0
59	MG	BA	3006	1/1	0.93	0.23	30,30,30,30	0
59	MG	BA	3319	1/1	0.93	0.09	35,35,35,35	0
59	MG	AA	1787	1/1	0.93	0.25	55,55,55,55	0
59	MG	BA	3153	1/1	0.93	0.18	54,54,54,54	0
59	MG	BA	3185	1/1	0.93	0.33	36,36,36,36	0
59	MG	BA	3285	1/1	0.94	0.23	40,40,40,40	0
59	MG	AA	1625	1/1	0.94	0.26	17,17,17,17	0
59	MG	AA	1746	1/1	0.94	0.27	47,47,47,47	0
59	MG	BA	3031	1/1	0.94	0.23	35,35,35,35	0
59	MG	BA	3099	1/1	0.94	0.13	19,19,19,19	0
59	MG	BA	3078	1/1	0.94	0.14	26,26,26,26	0
59	MG	AA	1619	1/1	0.94	0.27	37,37,37,37	0
59	MG	BA	3104	1/1	0.94	0.18	30,30,30,30	0
59	MG	AA	1698	1/1	0.94	0.32	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1631	1/1	0.94	0.19	40,40,40,40	0
59	MG	BA	3037	1/1	0.94	0.27	49,49,49,49	0
59	MG	BA	3017	1/1	0.94	0.23	37,37,37,37	0
59	MG	BA	3110	1/1	0.94	0.28	31,31,31,31	0
59	MG	AA	1723	1/1	0.94	0.10	10,10,10,10	0
59	MG	AA	1736	1/1	0.94	0.08	29,29,29,29	0
59	MG	AA	1700	1/1	0.94	0.22	27,27,27,27	0
59	MG	BA	3114	1/1	0.94	0.11	29,29,29,29	0
59	MG	BA	3115	1/1	0.94	0.34	52,52,52,52	0
59	MG	BA	3306	1/1	0.94	0.10	39,39,39,39	0
59	MG	BA	3065	1/1	0.94	0.15	21,21,21,21	0
59	MG	AA	1645	1/1	0.94	0.24	22,22,22,22	0
59	MG	AA	1664	1/1	0.94	0.24	29,29,29,29	0
59	MG	BA	3119	1/1	0.94	0.15	24,24,24,24	0
59	MG	AA	1610	1/1	0.94	0.45	46,46,46,46	0
59	MG	AA	1686	1/1	0.94	0.19	34,34,34,34	0
59	MG	AA	1706	1/1	0.94	0.16	43,43,43,43	0
59	MG	BA	3011	1/1	0.94	0.29	46,46,46,46	0
59	MG	BA	3316	1/1	0.94	0.25	34,34,34,34	0
59	MG	BA	3154	1/1	0.94	0.35	59,59,59,59	0
59	MG	BA	3124	1/1	0.94	0.17	15,15,15,15	0
59	MG	BA	3157	1/1	0.94	0.10	17,17,17,17	0
59	MG	BA	3125	1/1	0.94	0.27	122,122,122,122	0
59	MG	BA	3127	1/1	0.95	0.12	38,38,38,38	0
59	MG	AA	1742	1/1	0.95	0.24	45,45,45,45	0
59	MG	AA	1648	1/1	0.95	0.26	29,29,29,29	0
59	MG	AA	1734	1/1	0.95	0.11	41,41,41,41	0
59	MG	AA	1768	1/1	0.95	0.36	34,34,34,34	0
59	MG	AA	1688	1/1	0.95	0.16	30,30,30,30	0
59	MG	AA	1675	1/1	0.95	0.20	45,45,45,45	0
59	MG	AA	1747	1/1	0.95	0.07	23,23,23,23	0
59	MG	BA	3005	1/1	0.95	0.25	16,16,16,16	0
59	MG	BA	3189	1/1	0.95	0.11	26,26,26,26	0
59	MG	BA	3024	1/1	0.95	0.27	44,44,44,44	0
59	MG	AA	1649	1/1	0.95	0.24	23,23,23,23	0
59	MG	BA	3008	1/1	0.95	0.33	45,45,45,45	0
59	MG	AA	1616	1/1	0.95	0.22	30,30,30,30	0
59	MG	BA	3050	1/1	0.95	0.08	23,23,23,23	0
59	MG	BA	3141	1/1	0.95	0.17	29,29,29,29	0
59	MG	BA	3010	1/1	0.95	0.30	33,33,33,33	0
59	MG	BA	3074	1/1	0.95	0.21	3,3,3,3	0
59	MG	AA	1761	1/1	0.95	0.04	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1739	1/1	0.95	0.26	28,28,28,28	0
59	MG	BA	3173	1/1	0.95	0.14	20,20,20,20	0
59	MG	AA	1614	1/1	0.95	0.22	26,26,26,26	0
59	MG	AA	1612	1/1	0.95	0.36	47,47,47,47	0
59	MG	BA	3287	1/1	0.95	0.14	41,41,41,41	0
59	MG	BA	3317	1/1	0.95	0.21	29,29,29,29	0
59	MG	BA	3288	1/1	0.95	0.13	24,24,24,24	0
59	MG	BA	3103	1/1	0.95	0.16	35,35,35,35	0
59	MG	BU	201	1/1	0.95	0.10	28,28,28,28	0
59	MG	BA	3033	1/1	0.95	0.16	41,41,41,41	0
59	MG	BA	3150	1/1	0.95	0.07	15,15,15,15	0
59	MG	BA	3286	1/1	0.96	0.26	42,42,42,42	0
59	MG	AA	1721	1/1	0.96	0.05	17,17,17,17	0
59	MG	BA	3063	1/1	0.96	0.10	22,22,22,22	0
59	MG	BA	3100	1/1	0.96	0.08	24,24,24,24	0
59	MG	BA	3043	1/1	0.96	0.13	28,28,28,28	0
59	MG	BA	3076	1/1	0.96	0.17	18,18,18,18	0
59	MG	BA	3171	1/1	0.96	0.14	19,19,19,19	0
59	MG	BA	3045	1/1	0.96	0.37	54,54,54,54	0
59	MG	AA	1681	1/1	0.96	0.24	34,34,34,34	0
59	MG	BA	3223	1/1	0.96	0.24	32,32,32,32	0
59	MG	BA	3007	1/1	0.96	0.24	26,26,26,26	0
59	MG	AA	1769	1/1	0.96	0.26	33,33,33,33	0
59	MG	BA	3081	1/1	0.96	0.18	23,23,23,23	0
59	MG	AA	1794	1/1	0.96	0.29	53,53,53,53	0
59	MG	BA	3320	1/1	0.96	0.14	39,39,39,39	0
59	MG	BA	3002	1/1	0.96	0.14	39,39,39,39	0
59	MG	BA	3004	1/1	0.96	0.26	24,24,24,24	0
59	MG	BA	3180	1/1	0.96	0.28	47,47,47,47	0
59	MG	BA	3165	1/1	0.96	0.26	29,29,29,29	0
59	MG	AA	1783	1/1	0.97	0.07	43,43,43,43	0
59	MG	BA	3021	1/1	0.97	0.22	37,37,37,37	0
59	MG	AA	1778	1/1	0.97	0.07	6,6,6,6	0
59	MG	AA	1785	1/1	0.97	0.05	47,47,47,47	0
59	MG	AA	1629	1/1	0.97	0.25	44,44,44,44	0
59	MG	BA	3044	1/1	0.97	0.27	21,21,21,21	0
59	MG	BA	3156	1/1	0.97	0.06	25,25,25,25	0
59	MG	BA	3318	1/1	0.97	0.07	46,46,46,46	0
59	MG	AA	1694	1/1	0.97	0.09	19,19,19,19	0
59	MG	AA	1720	1/1	0.97	0.27	37,37,37,37	0
59	MG	BA	3307	1/1	0.97	0.12	40,40,40,40	0
59	MG	AA	1705	1/1	0.97	0.04	23,23,23,23	0

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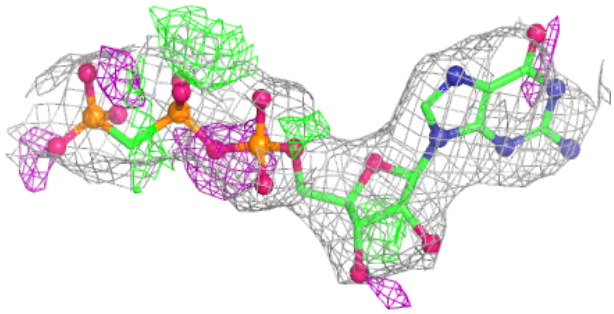
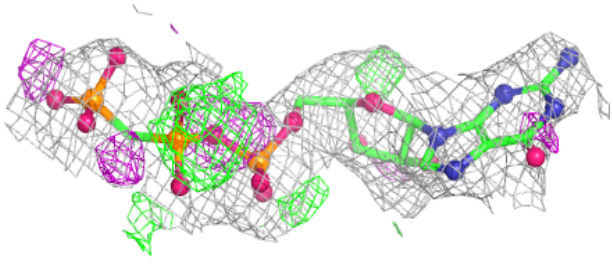
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3003	1/1	0.97	0.22	20,20,20,20	0
59	MG	BA	3070	1/1	0.97	0.27	25,25,25,25	0
59	MG	AA	1641	1/1	0.98	0.04	17,17,17,17	0
59	MG	BA	3109	1/1	0.98	0.22	20,20,20,20	0
59	MG	BA	3091	1/1	0.98	0.09	21,21,21,21	0
59	MG	AA	1660	1/1	0.98	0.07	19,19,19,19	0
59	MG	BA	3062	1/1	0.98	0.11	13,13,13,13	0
59	MG	AA	1602	1/1	0.98	0.27	42,42,42,42	0
59	MG	BA	3231	1/1	0.98	0.19	13,13,13,13	0
59	MG	BA	3035	1/1	0.98	0.32	31,31,31,31	0
59	MG	BA	3199	1/1	0.98	0.16	26,26,26,26	0
59	MG	BA	3249	1/1	0.99	0.17	22,22,22,22	0
59	MG	BA	3229	1/1	0.99	0.03	5,5,5,5	0
60	ZN	B9	101	1/1	1.00	0.02	49,49,49,49	0
60	ZN	AN	101	1/1	1.00	0.03	45,45,45,45	0

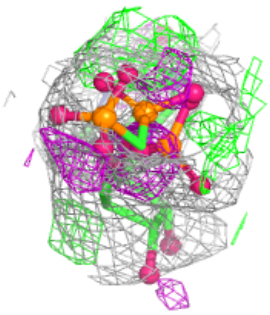
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around GCP AY 701:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)







6.5 Other polymers (i)

There are no such residues in this entry.