Full wwPDB EM Validation Report

Mar 28, 2026 – 12:04 PM UTC

PDB ID	:	4V5M / pdb_00004v5m
EMDB ID	:	EMD-1798
Title	:	tRNA tranlocation on the 70S ribosome: the pre-translocational translocation intermediate TI(PRE)
Authors	:	Ratje, A.H.; Loerke, J.; Mikolajka, A.; Bruenner, M.; Hildebrand, P.W.; Starosta, A.L.; Doenhoefer, A.; Connell, S.R.; Fucini, P.; Mielke, T.; Whitford, P.C.; Onuchic, J.N.; Yu, Y.; Sanbonmatsu, K.Y.; Hartmann, R.K.; Penczek, P.A.; Wilson, D.N.; Spahn, C.M.T.
Deposited on	:	2010-10-01
Resolution	:	7.80 Å(reported)
Based on initial models	:	2WRI, 2WRJ

This is a Full wwPDB EM 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/EMValidationReportHelp
with specific help available everywhere you see the (i) 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 (1)) were used in the production of this report:

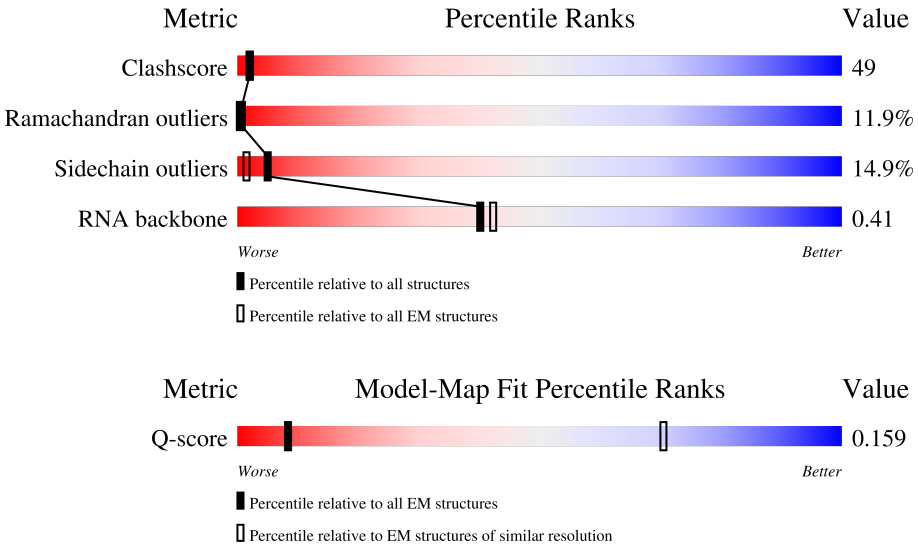
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 7.80 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)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	370 (7.30 - 8.30)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1522	18% 51% 23% 7%

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Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

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Mol	Chain	Length	Quality of chain
2	AB	256	37% 15% 47% 24% 5% 9%
3	AC	239	26% 18% 38% 25% 5% 14%
4	AD	209	26% 24% 49% 22% 5%
5	AE	162	21% 21% 46% 23% 7%
6	AF	101	25% 20% 46% 29% 6%
7	AG	156	35% 22% 46% 27%
8	AH	138	23% 20% 51% 26%
9	AI	128	30% 20% 49% 24% 6%
10	AJ	105	42% 9% 52% 25% 8% 7%
11	AK	129	32% 33% 40% 18% 8%
12	AL	132	38% 18% 46% 27% 6%
13	AM	126	51% 16% 49% 28% 6%
14	AN	61	21% 18% 54% 18% 8%
15	AO	89	22% 26% 39% 29%
16	AP	88	19% 20% 50% 22% 6%
17	AQ	105	22% 30% 40% 21% 6%
18	AR	88	25% 14% 43% 17% 6% 20%
19	AS	93	31% 11% 44% 24% 5% 16%
20	AT	106	23% 18% 39% 32% 5% 7%
21	AU	27	33% 26% 48% 11% 11%
22	AV	77	10% 12% 49% 29% 10%
23	AX	11	64% 36% 45% 18%
24	AY	691	42% 17% 46% 27% 6%
25	B0	85	32% 28% 58% 11%
26	B1	98	20% 19% 43% 29% 5%

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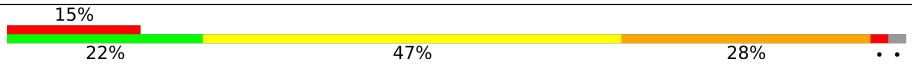
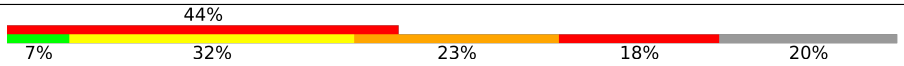
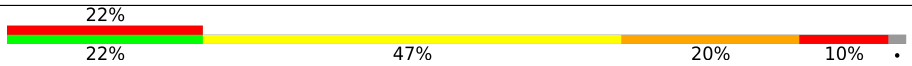
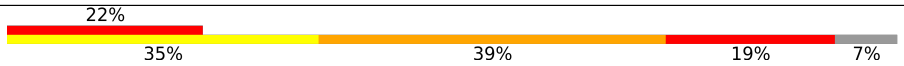
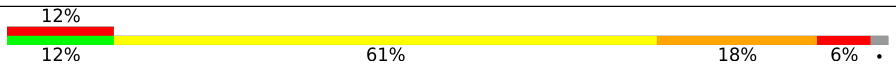
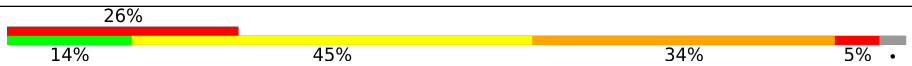
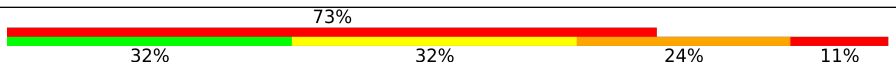
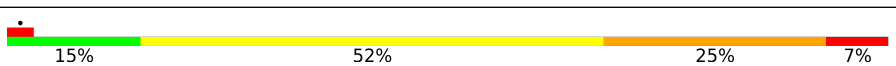
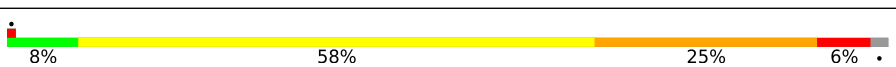
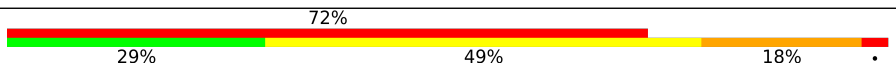
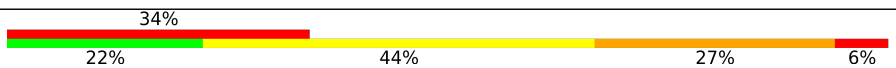
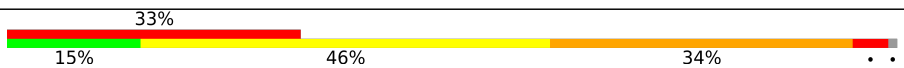
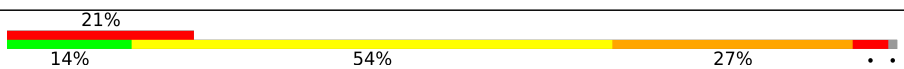
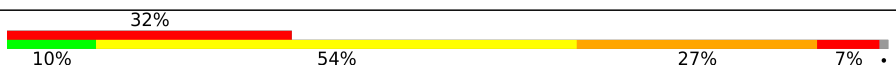
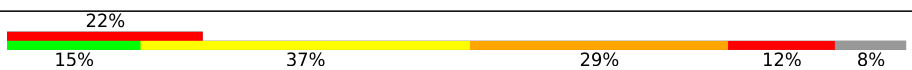
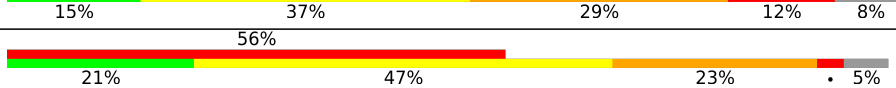
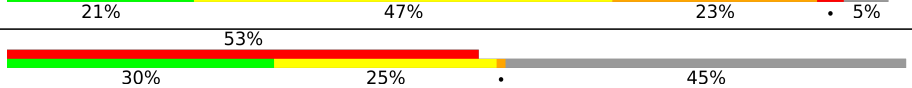
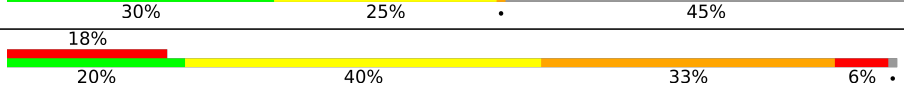
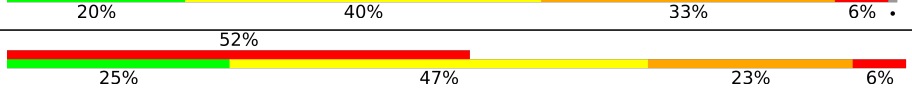
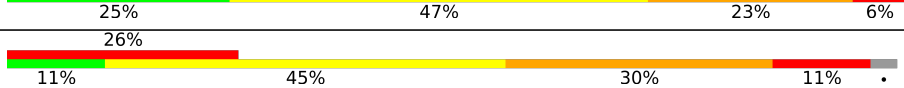
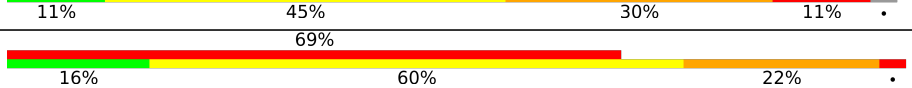
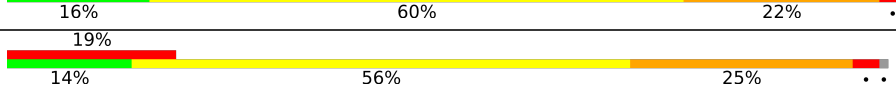
Mol	Chain	Length	Quality of chain
27	B2	72	
28	B3	60	
29	B4	71	
30	B5	60	
31	B6	54	
32	B7	49	
33	B8	65	
34	B9	37	
35	BA	2915	
36	BB	122	
37	BC	229	
38	BD	276	
39	BE	206	
40	BF	210	
41	BG	182	
42	BH	180	
43	BK	147	
44	BL	121	
45	BN	140	
46	BO	122	
47	BP	150	
48	BQ	141	
49	BR	118	
50	BS	112	
51	BT	146	

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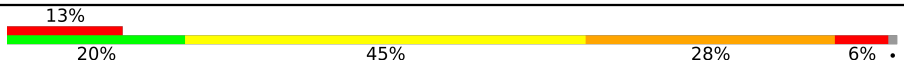
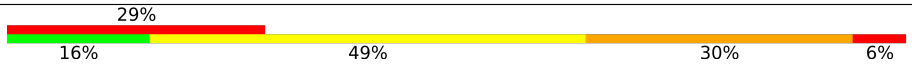
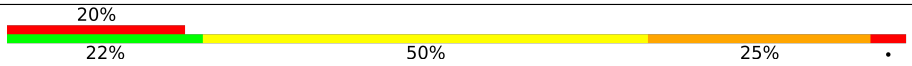
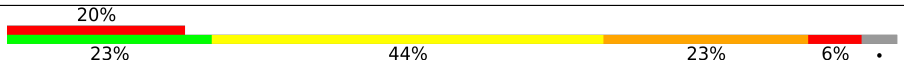
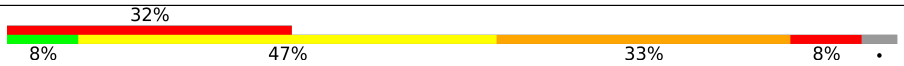
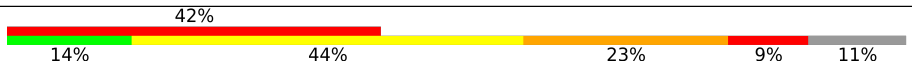
Mol	Chain	Length	Quality of chain
52	BU	118	
53	BV	101	
54	BW	113	
55	BX	96	
56	BY	110	
57	BZ	206	

2 Entry composition (i)

There are 59 unique types of molecules in this entry. The entry contains 152777 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 22 is a RNA chain called TRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	AV	77	Total	C	N	O	P	0	0
			1640	732	297	535	76		

- Molecule 23 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	AX	11	Total	C	N	O	P	0	0
			230	105	41	74	10		

- Molecule 24 is a protein called ELONGATION FACTOR G.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	AY	666	Total	C	N	O	S	0	0
			5214	3316	892	988	18		

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
29	B4	57	Total	C	N	O	S	0	0
			450	285	77	83	5		

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
35	BA	2901	Total	C	N	O	P	0	0
			62474	27806	11681	20087	2900		

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
42	BH	166	Total	C	N	O	S	0	0
			1268	803	237	227	1		

- Molecule 43 is a protein called 50S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	BK	139	Total	C	N	O	S	0	0
			1025	653	181	186	5		

- Molecule 44 is a protein called 50S RIBOSOMAL PROTEIN L7/L12.

Mol	Chain	Residues	Atoms				AltConf	Trace
44	BL	67	Total	C	N	O	0	0
			477	301	81	95		

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms				AltConf	Trace
55	BX	92	Total 725	C 471	N 131	O 123	0	0

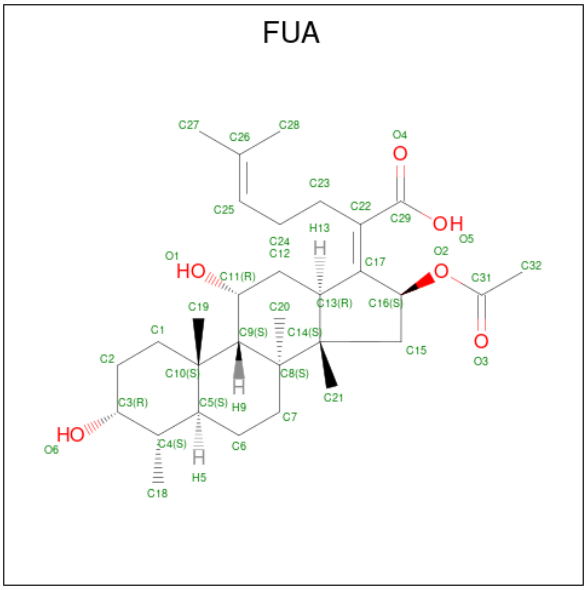
- Molecule 56 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	BY	106	Total	C	N	O	S	0	0
			810	520	154	131	5		

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

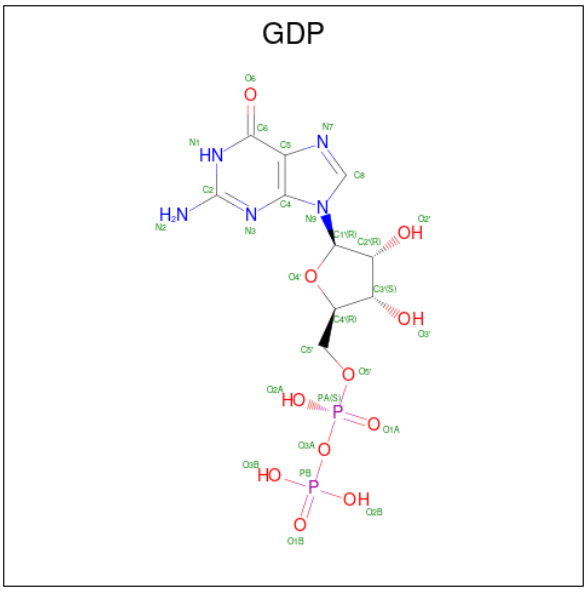
Mol	Chain	Residues	Atoms					AltConf	Trace
57	BZ	184	Total	C	N	O	S	0	0
			1467	936	261	268	2		

- Molecule 58 is FUSIDIC ACID (CCD ID: FUA) (formula: $C_{31}H_{48}O_6$).



Mol	Chain	Residues	Atoms			AltConf
58	AY	1	Total	C	O	0
			37	31	6	

- Molecule 59 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).



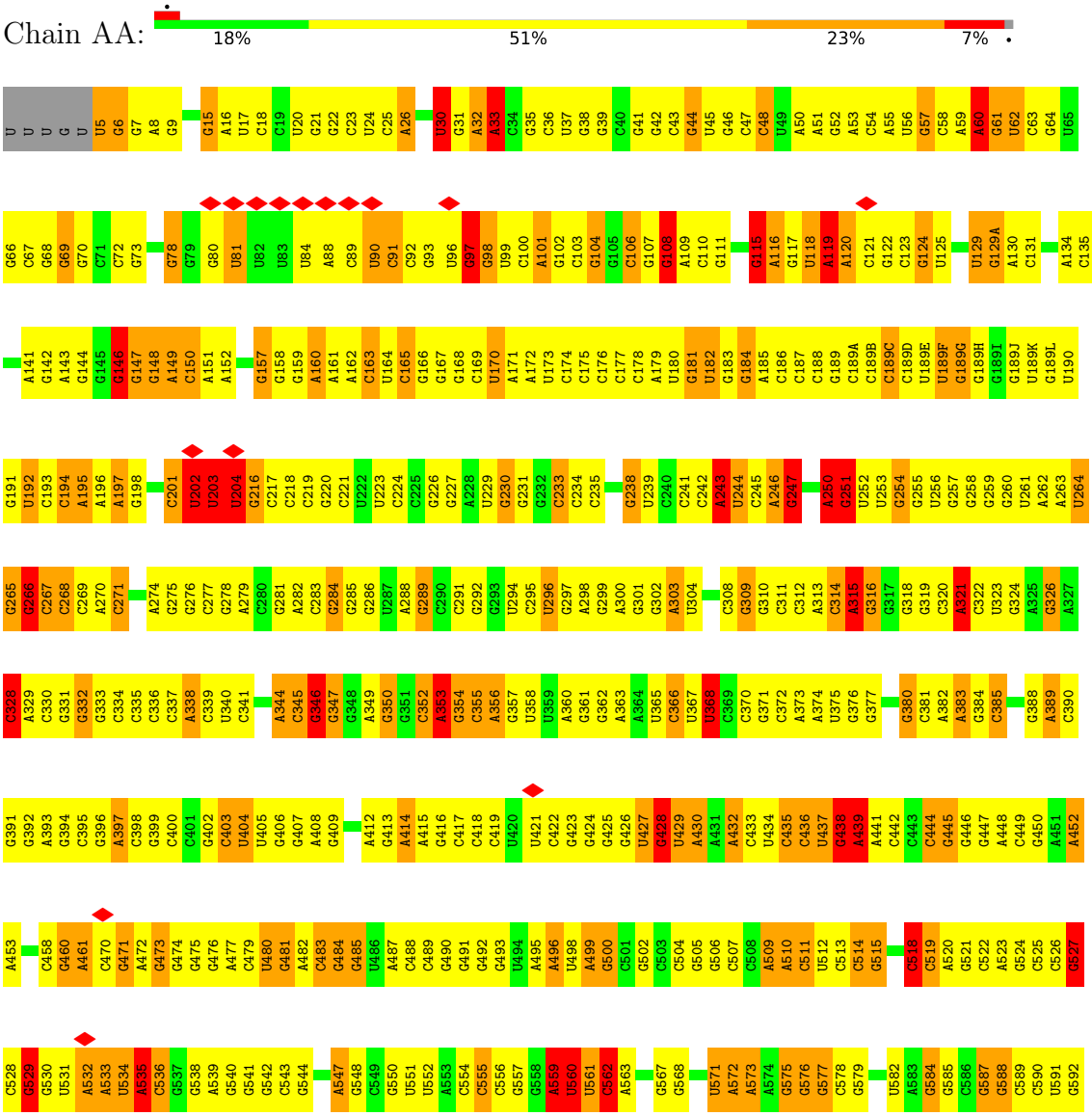
Mol	Chain	Residues	Atoms					AltConf
59	AY	1	Total	C	N	O	P	0
			28	10	5	11	2	

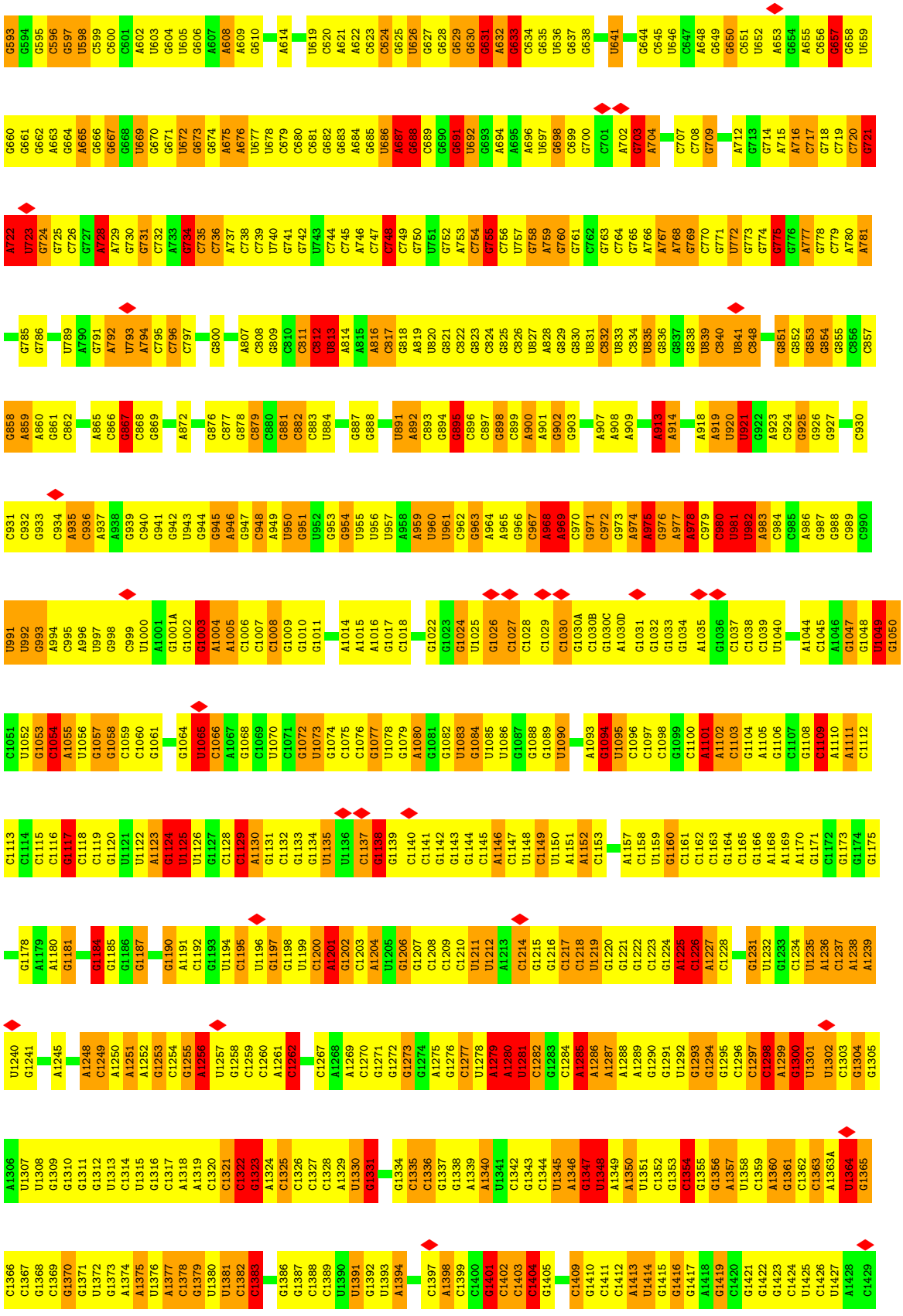
3 Residue-property plots (i)

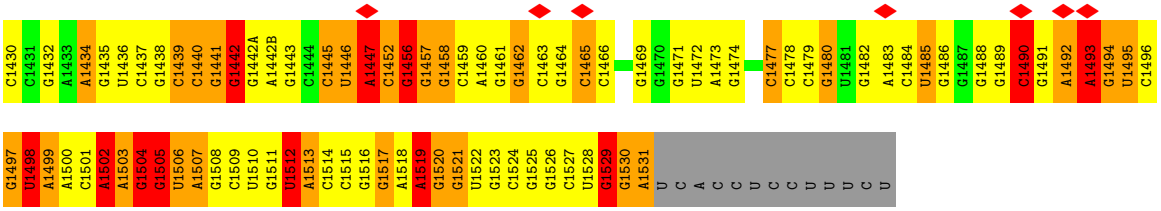
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: 16S RRNA

Chain AA: 18% 51% 23% 7%

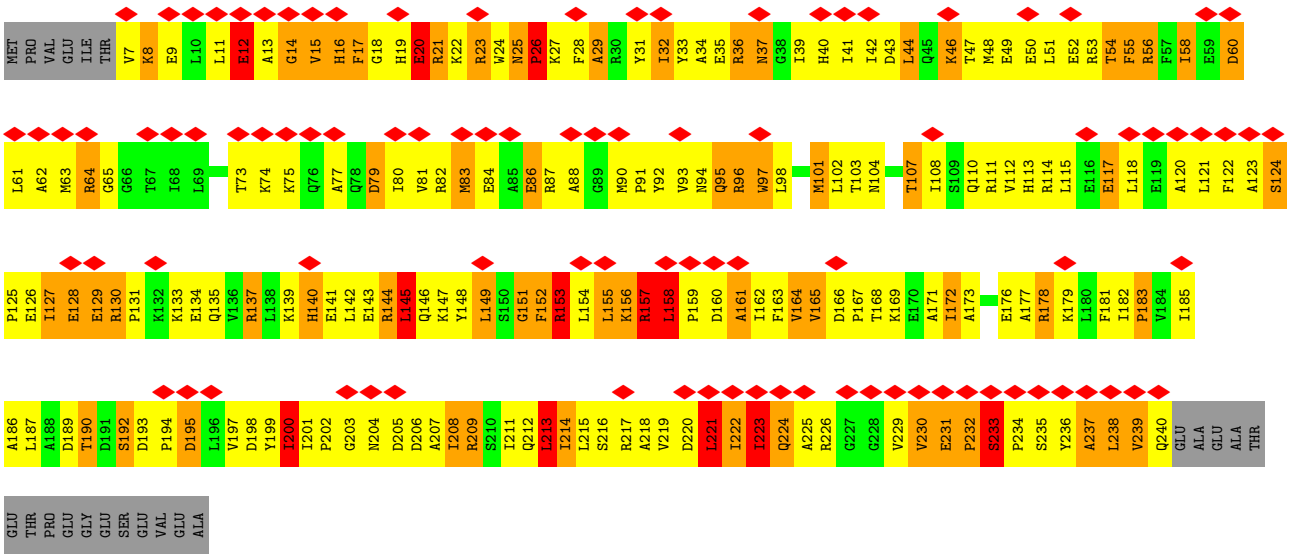






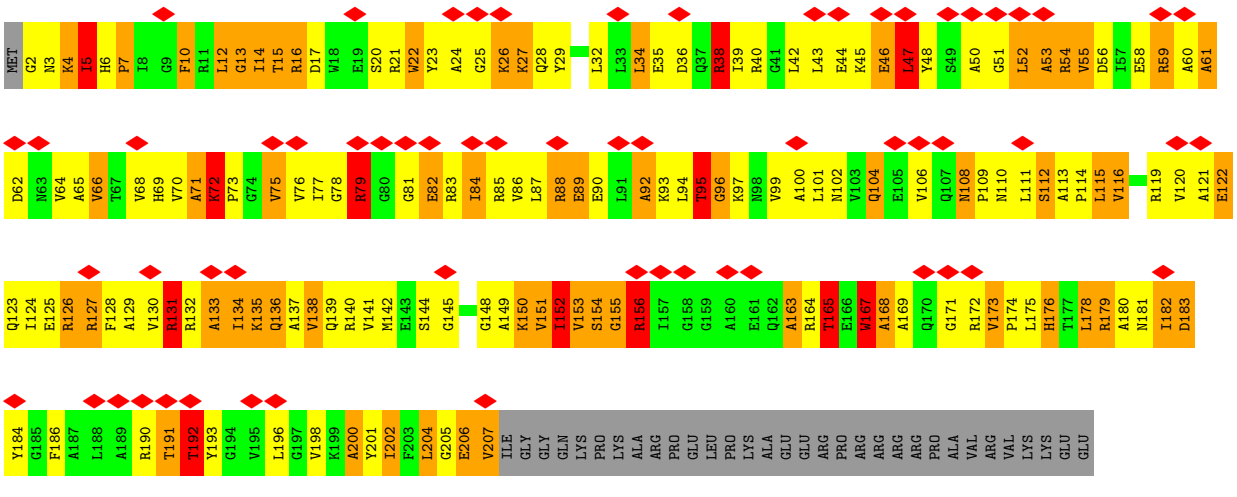
• Molecule 2: 30S RIBOSOMAL PROTEIN S2

Chain AB:



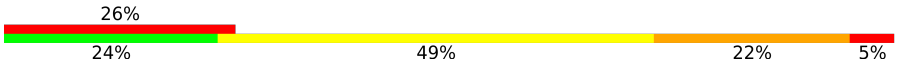
• Molecule 3: 30S RIBOSOMAL PROTEIN S3

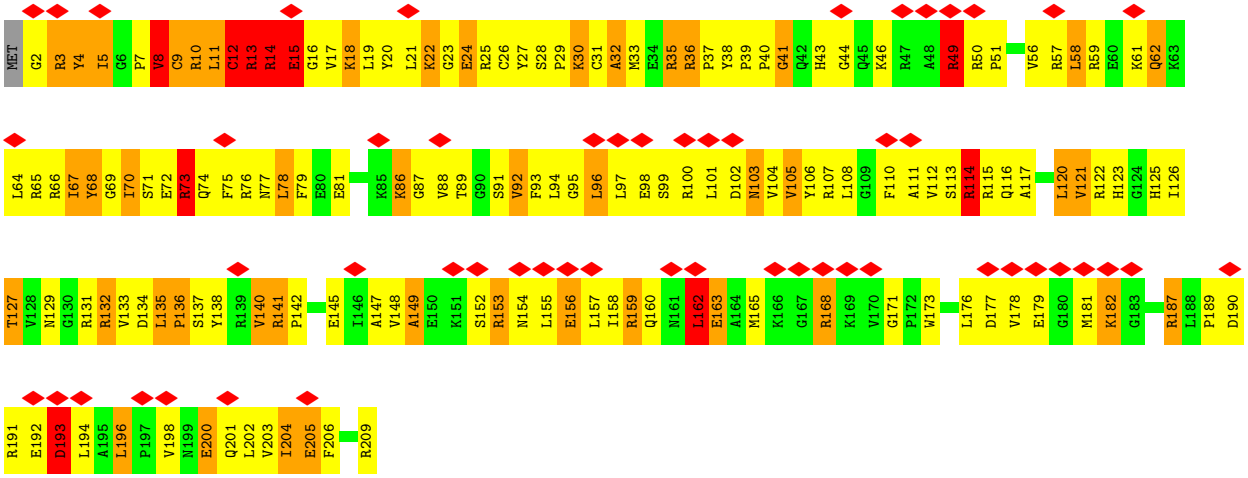
Chain AC:



• Molecule 4: 30S RIBOSOMAL PROTEIN S4

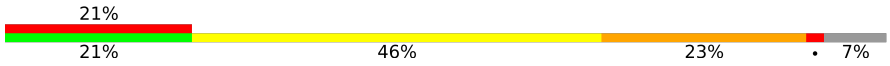
Chain AD:

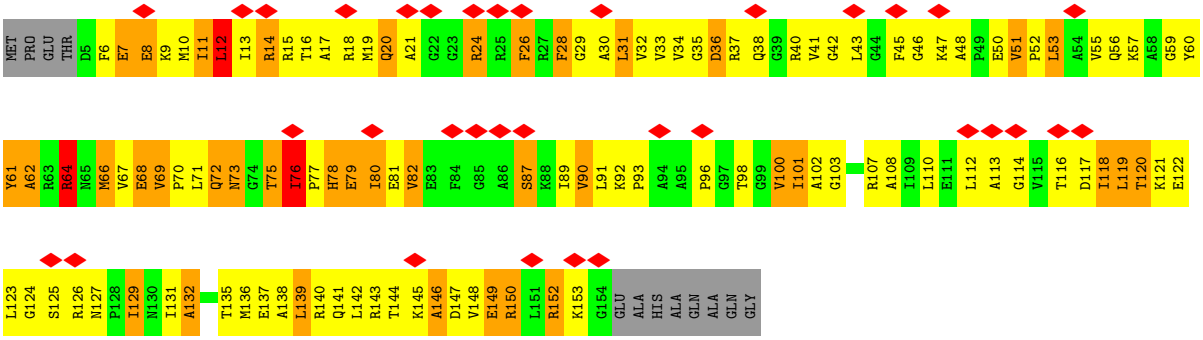




• Molecule 5: 30S RIBOSOMAL PROTEIN S5

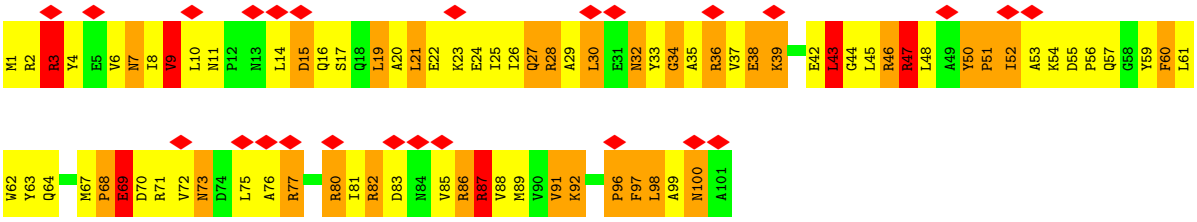
Chain AE:





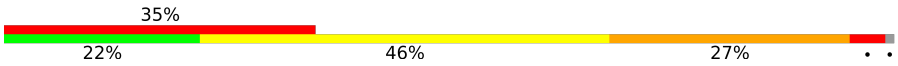
• Molecule 6: 30S RIBOSOMAL PROTEIN S6

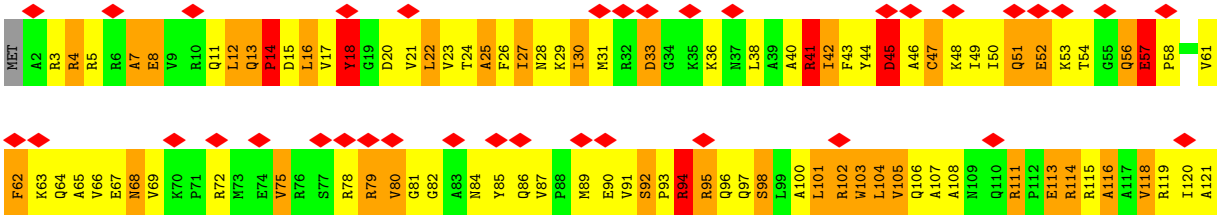
Chain AF:

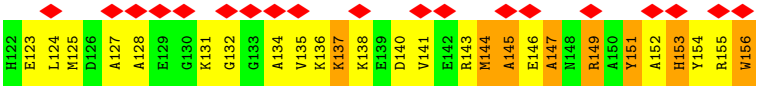


• Molecule 7: 30S RIBOSOMAL PROTEIN S7

Chain AG:

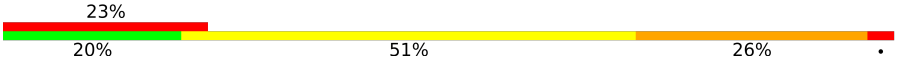


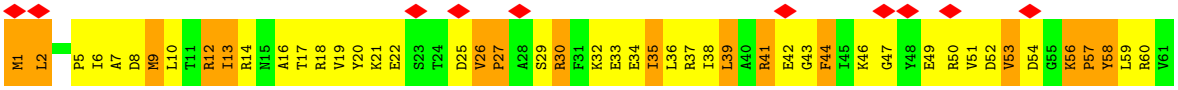


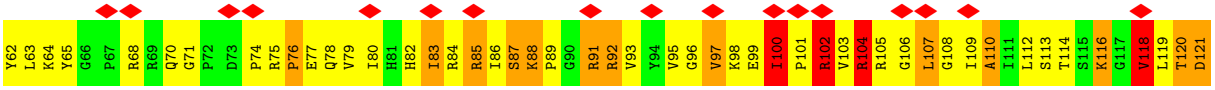


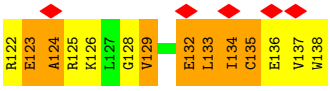
• Molecule 8: 30S RIBOSOMAL PROTEIN S8

Chain AH:



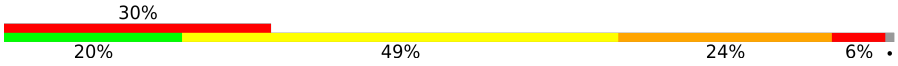


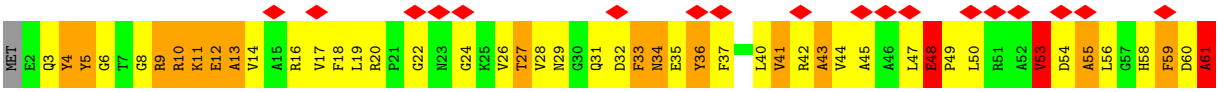


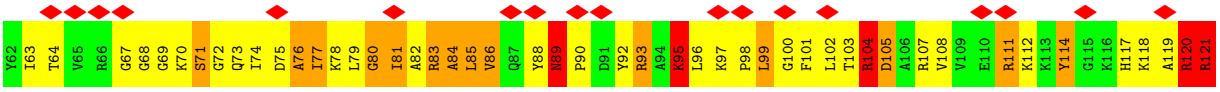


• Molecule 9: 30S RIBOSOMAL PROTEIN S9

Chain AI:

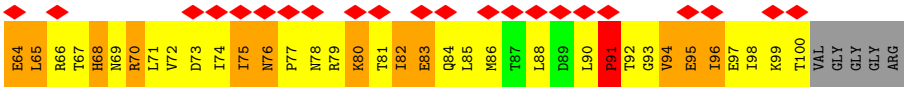






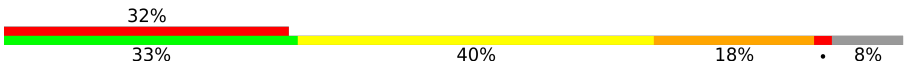
• Molecule 10: 30S RIBOSOMAL PROTEIN S10

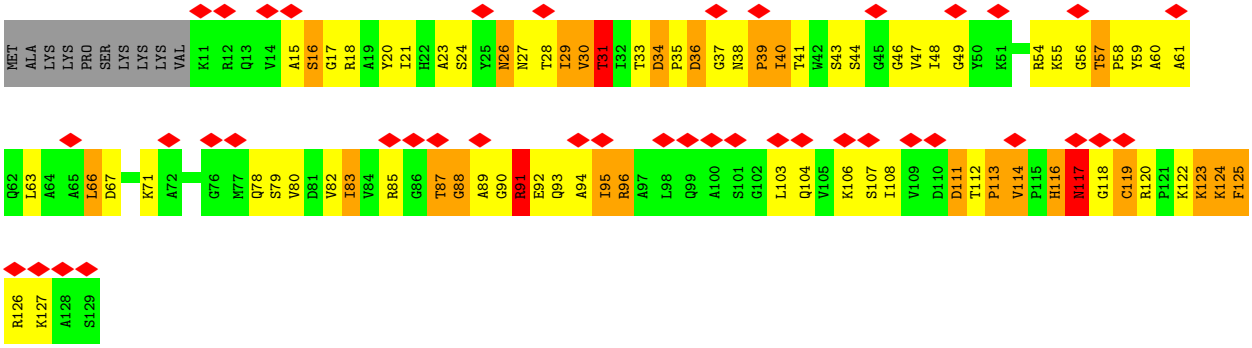
Chain AJ:



• Molecule 11: 30S RIBOSOMAL PROTEIN S11

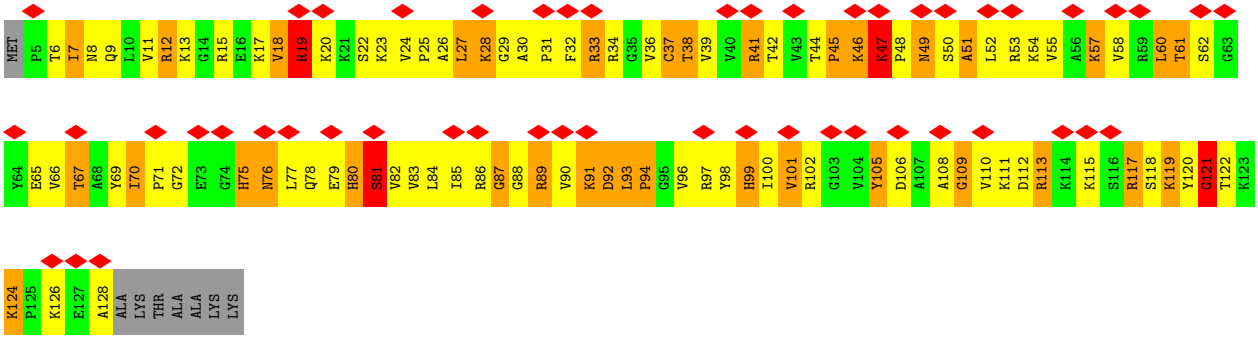
Chain AK:





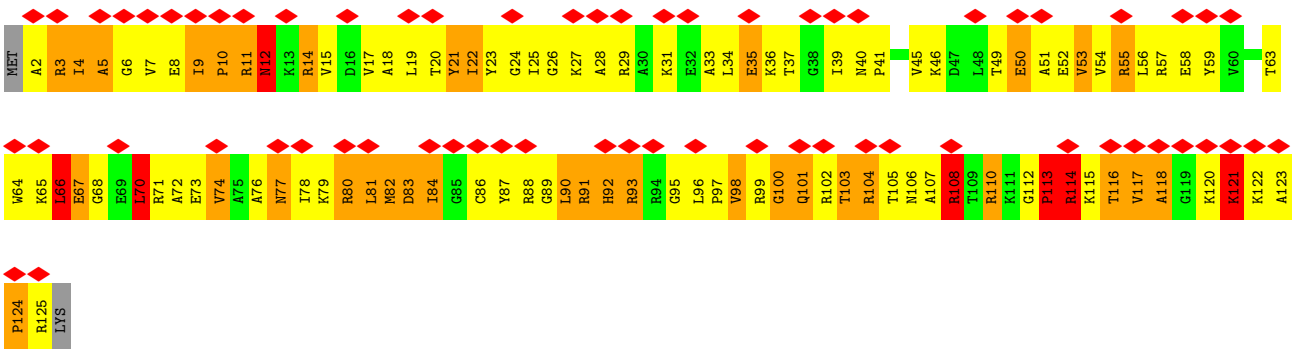
• Molecule 12: 30S RIBOSOMAL PROTEIN S12

Chain AL:



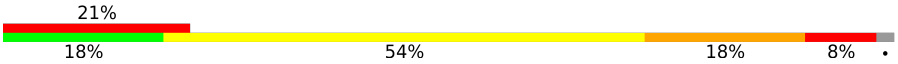
• Molecule 13: 30S RIBOSOMAL PROTEIN S13

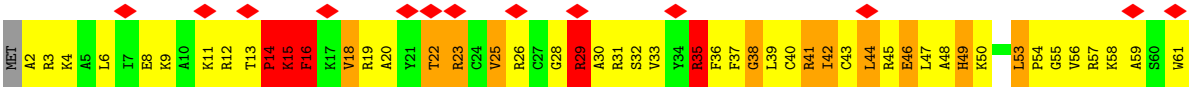
Chain AM:



• Molecule 14: 30S RIBOSOMAL PROTEIN S14 TYPE Z

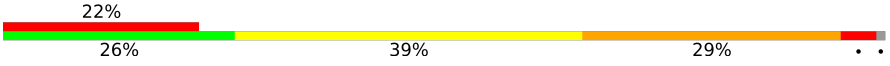
Chain AN:

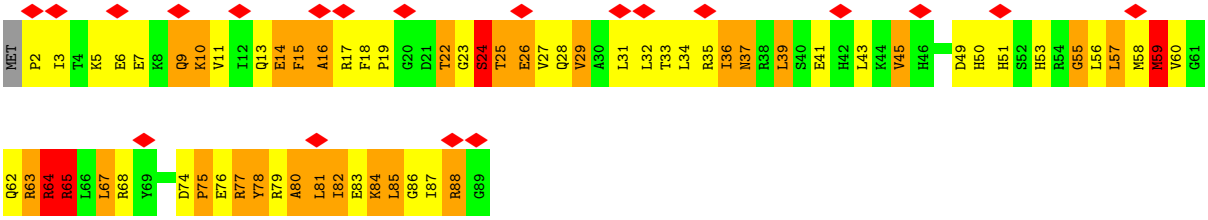




• Molecule 15: 30S RIBOSOMAL PROTEIN S15

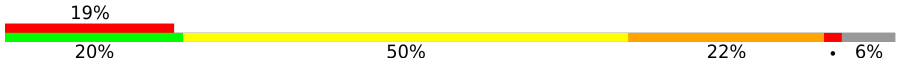
Chain AO:

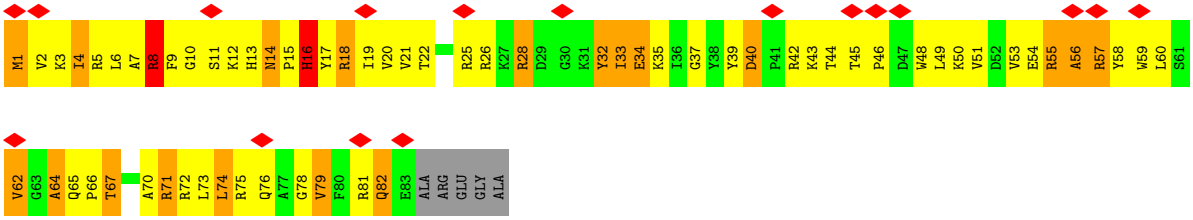




• Molecule 16: 30S RIBOSOMAL PROTEIN S16

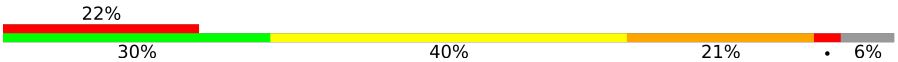
Chain AP:

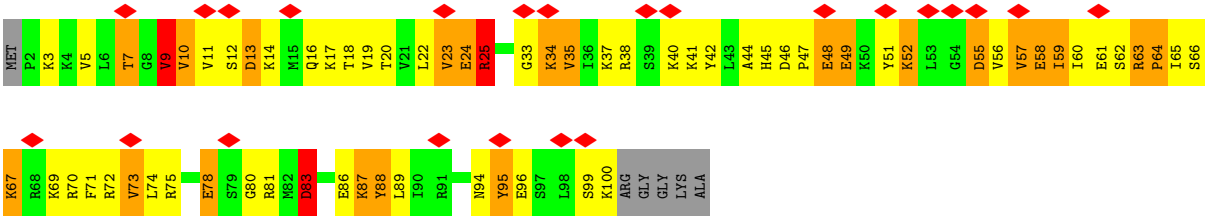




• Molecule 17: 30S RIBOSOMAL PROTEIN S17

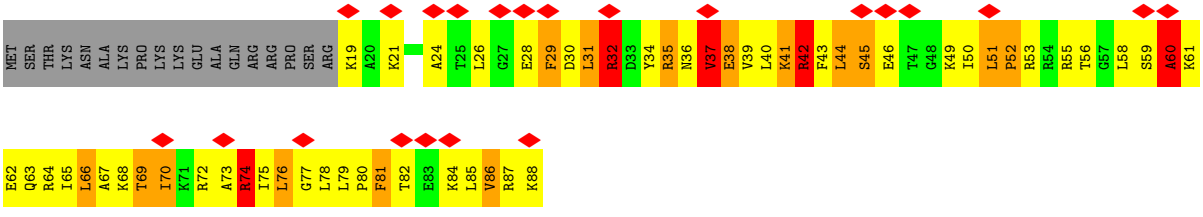
Chain AQ:





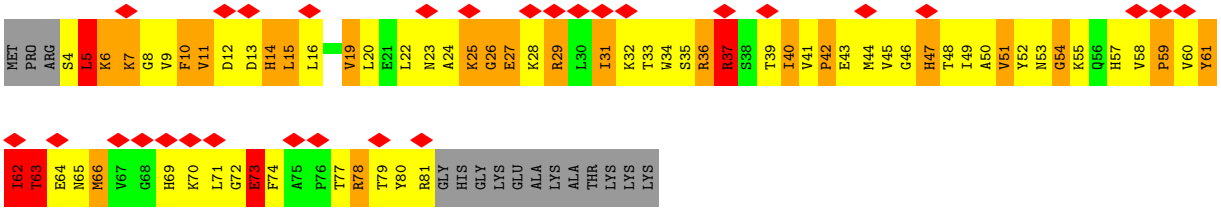
• Molecule 18: 30S RIBOSOMAL PROTEIN S18

Chain AR:



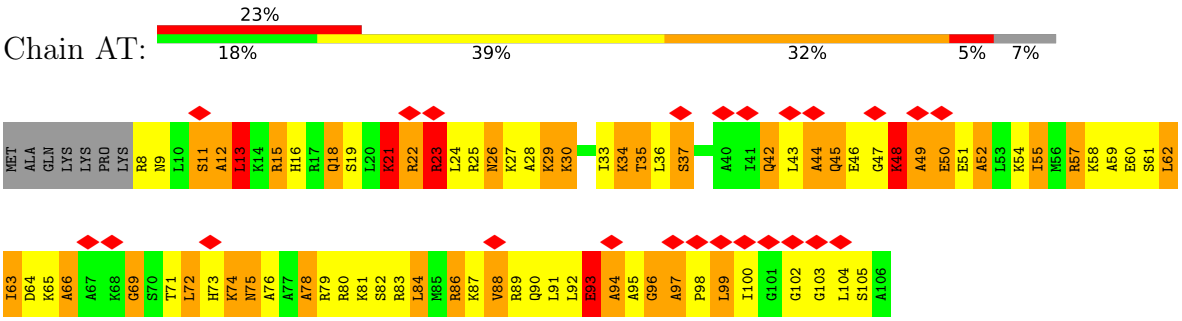
• Molecule 19: 30S RIBOSOMAL PROTEIN S19

Chain AS:



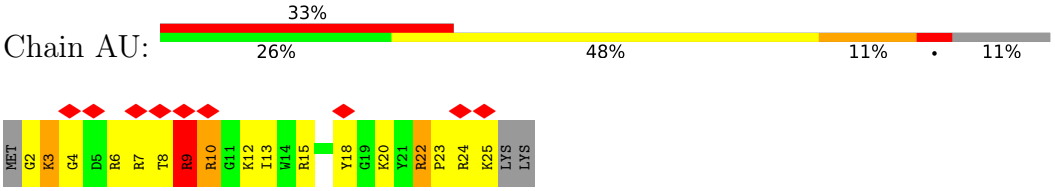
• Molecule 20: 30S RIBOSOMAL PROTEIN S20

Chain AT:



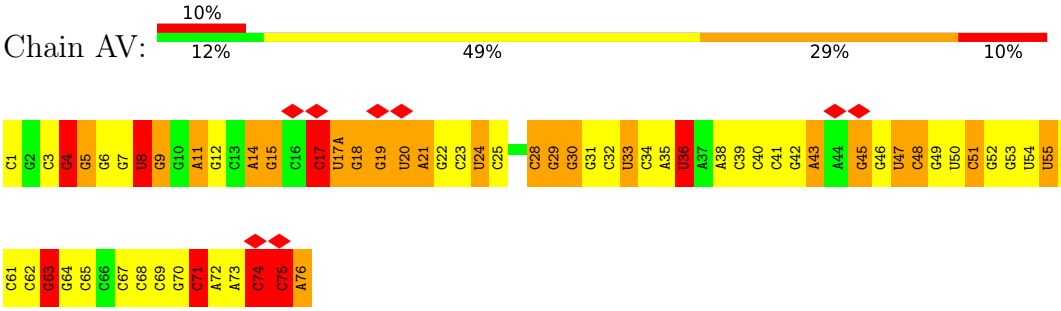
• Molecule 21: 30S RIBOSOMAL PROTEIN THX

Chain AU:



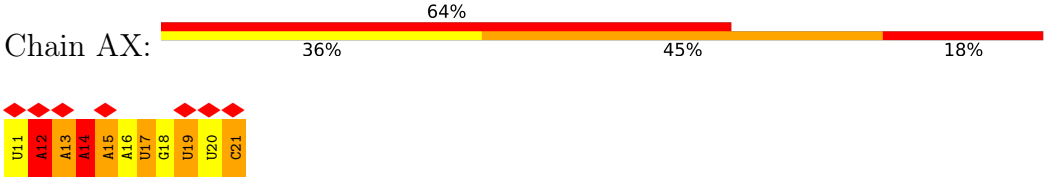
• Molecule 22: TRNA

Chain AV:



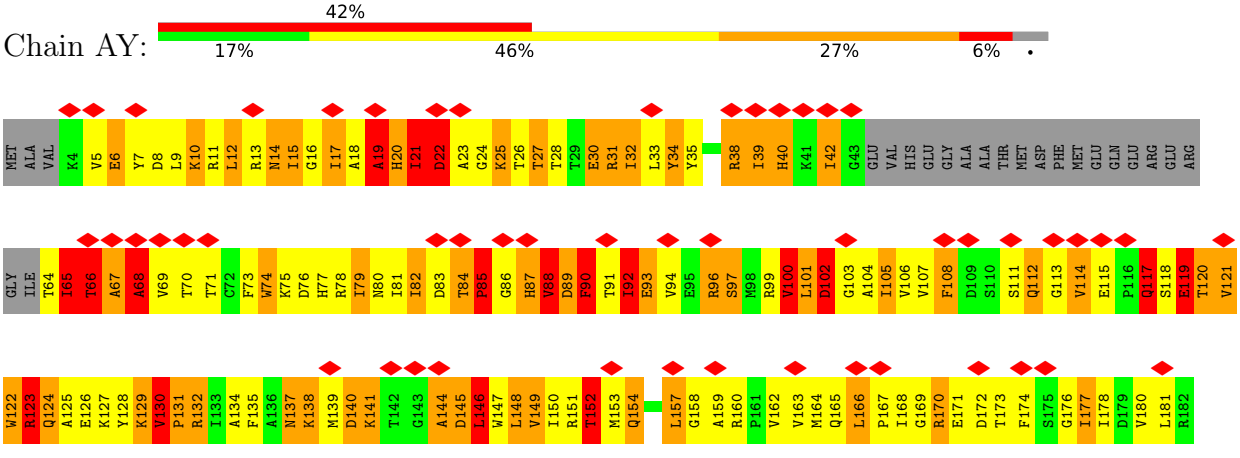
• Molecule 23: MRNA

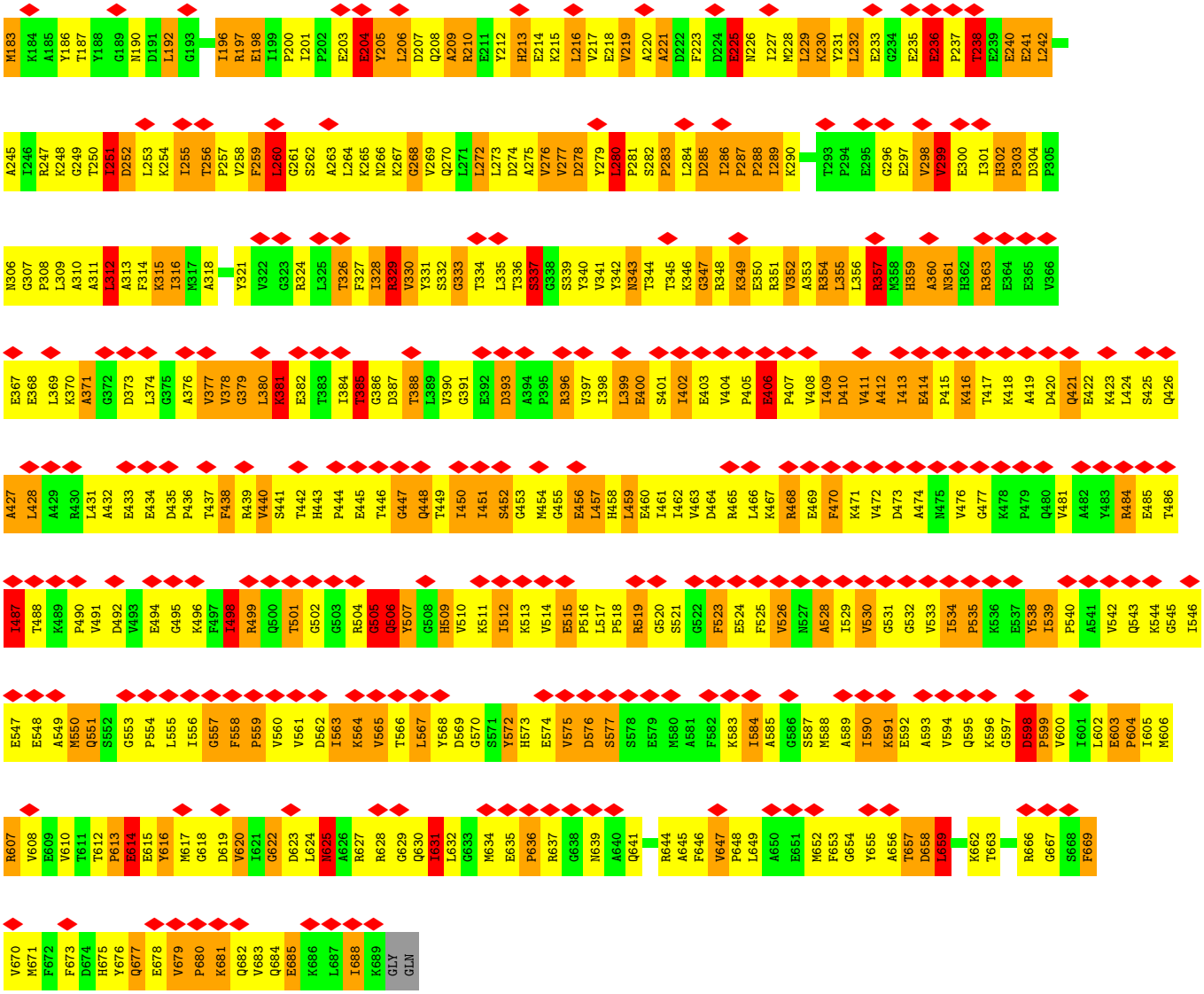
Chain AX:



• Molecule 24: ELONGATION FACTOR G

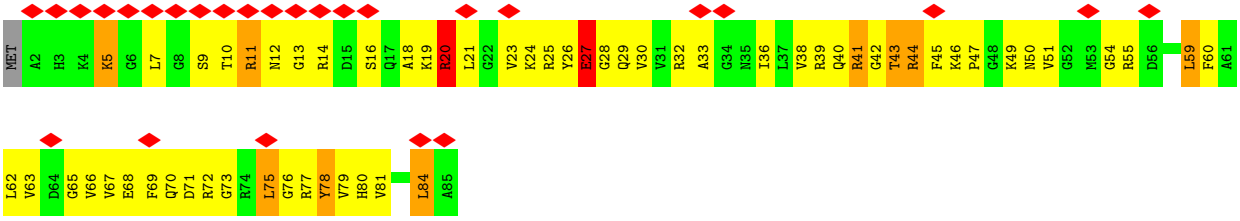
Chain AY:





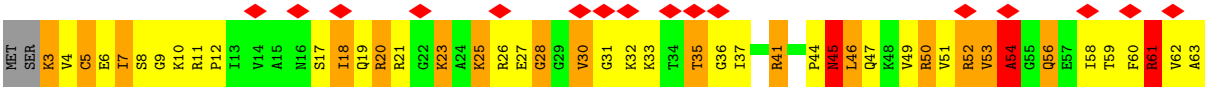
• Molecule 25: 50S RIBOSOMAL PROTEIN L27

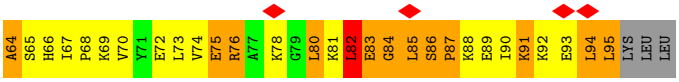
Chain B0:



• Molecule 26: 50S RIBOSOMAL PROTEIN L28

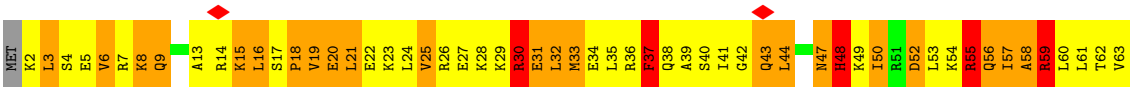
Chain B1:

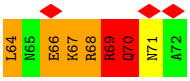




• Molecule 27: 50S RIBOSOMAL PROTEIN L29

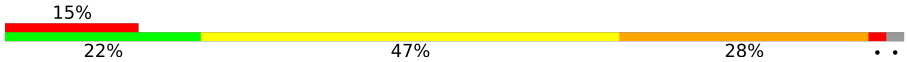
Chain B2:

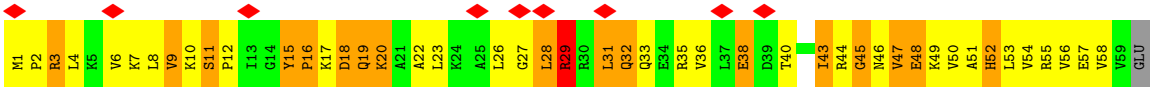




• Molecule 28: 50S RIBOSOMAL PROTEIN L30

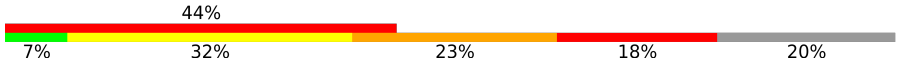
Chain B3:

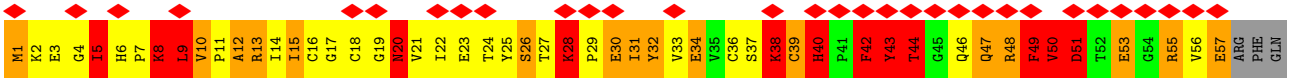




• Molecule 29: 50S RIBOSOMAL PROTEIN L31

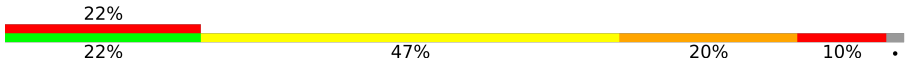
Chain B4:

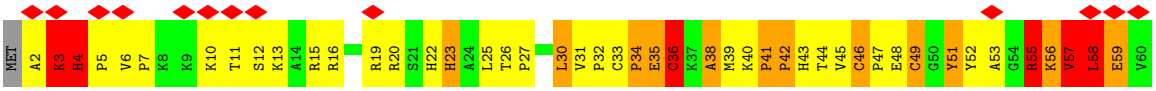




• Molecule 30: 50S RIBOSOMAL PROTEIN L32

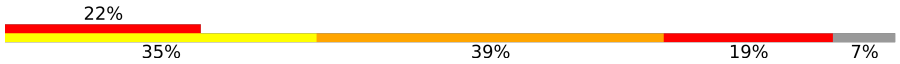
Chain B5:

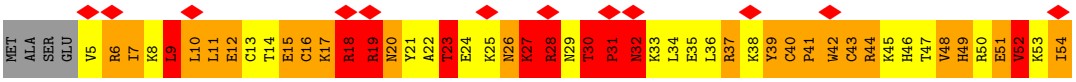




• Molecule 31: 50S RIBOSOMAL PROTEIN L33

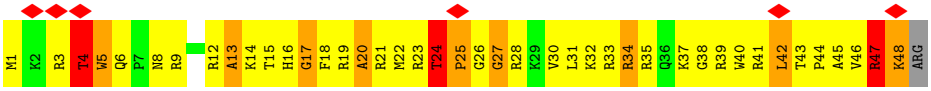
Chain B6:





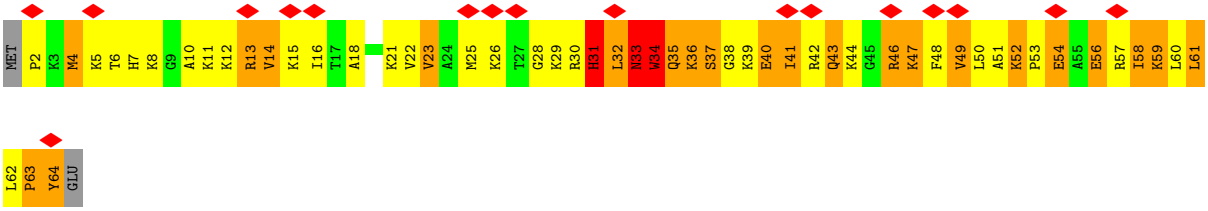
• Molecule 32: 50S RIBOSOMAL PROTEIN L34

Chain B7:



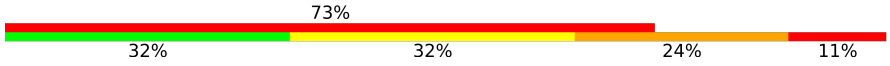
• Molecule 33: 50S RIBOSOMAL PROTEIN L35

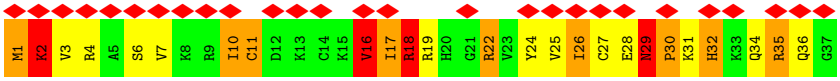
Chain B8:



• Molecule 34: 50S RIBOSOMAL PROTEIN L36

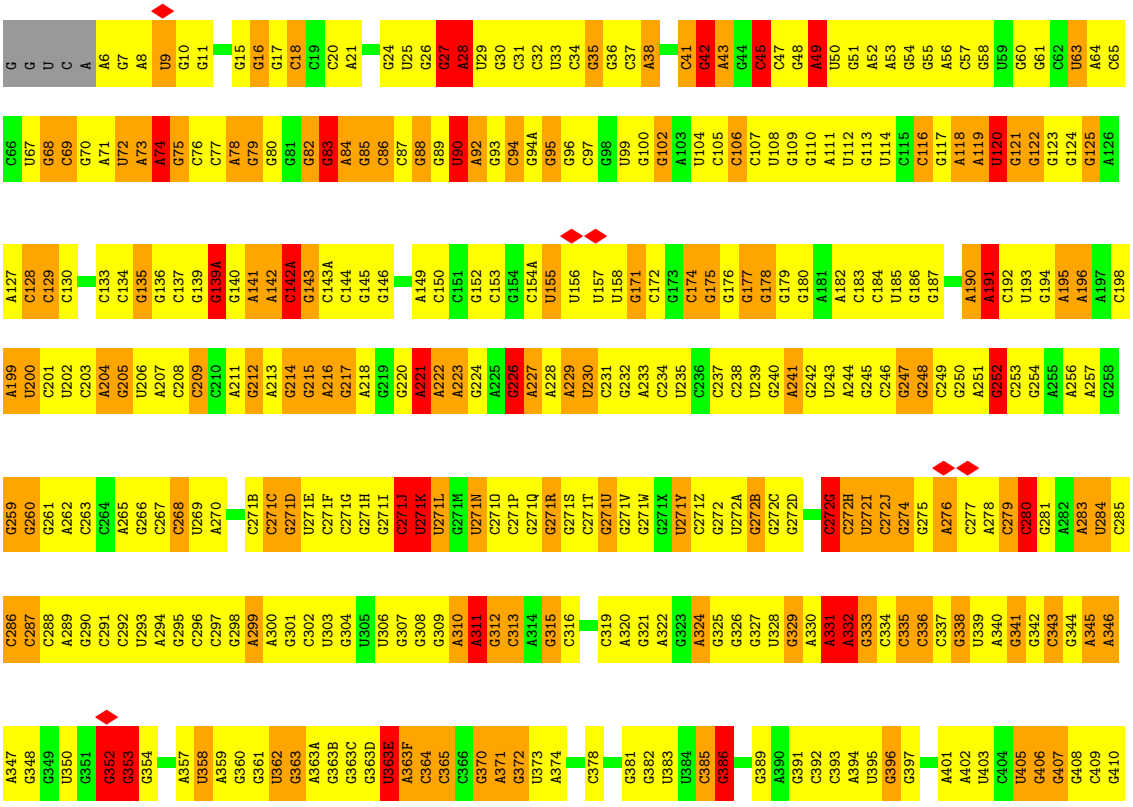
Chain B9:

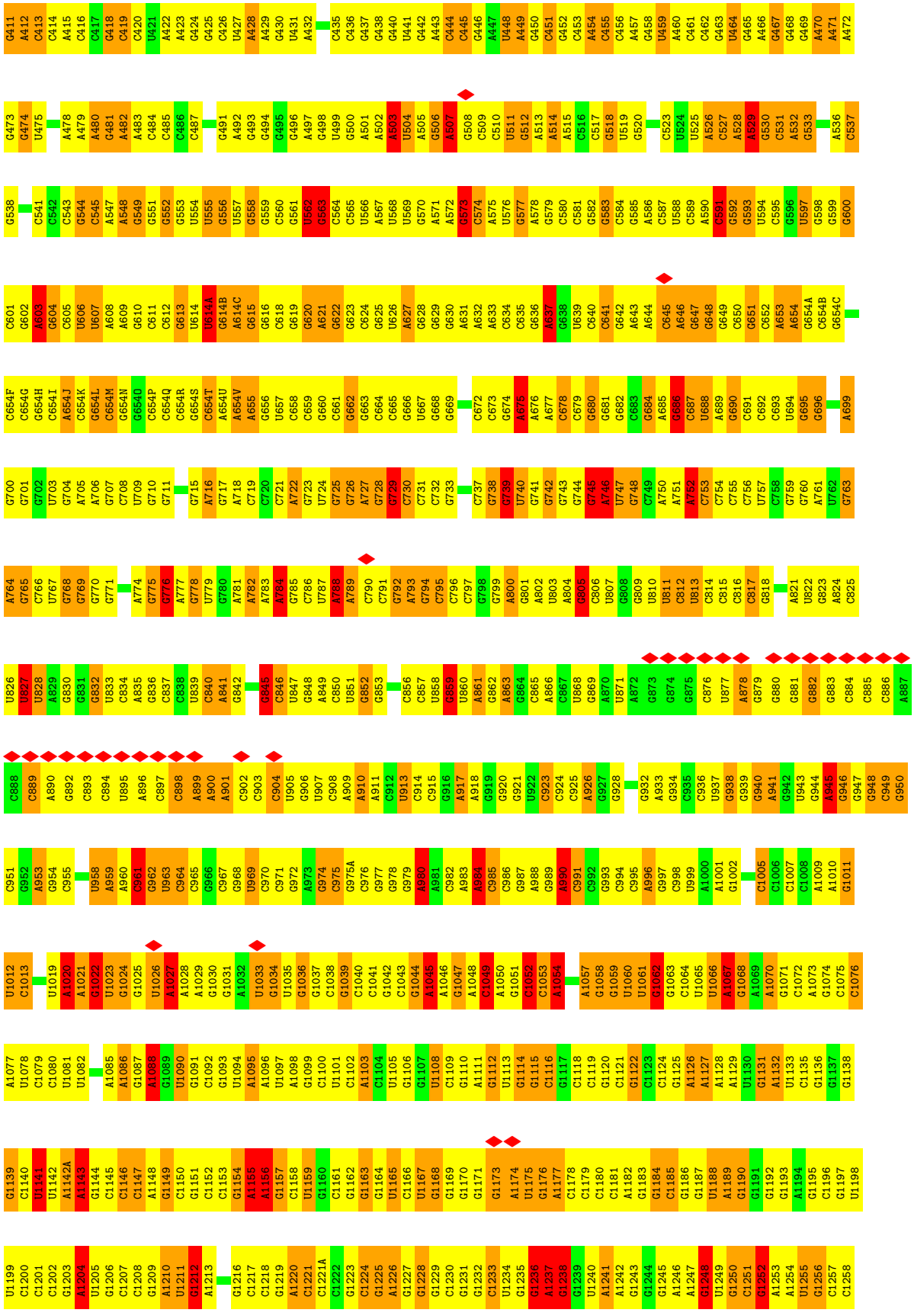


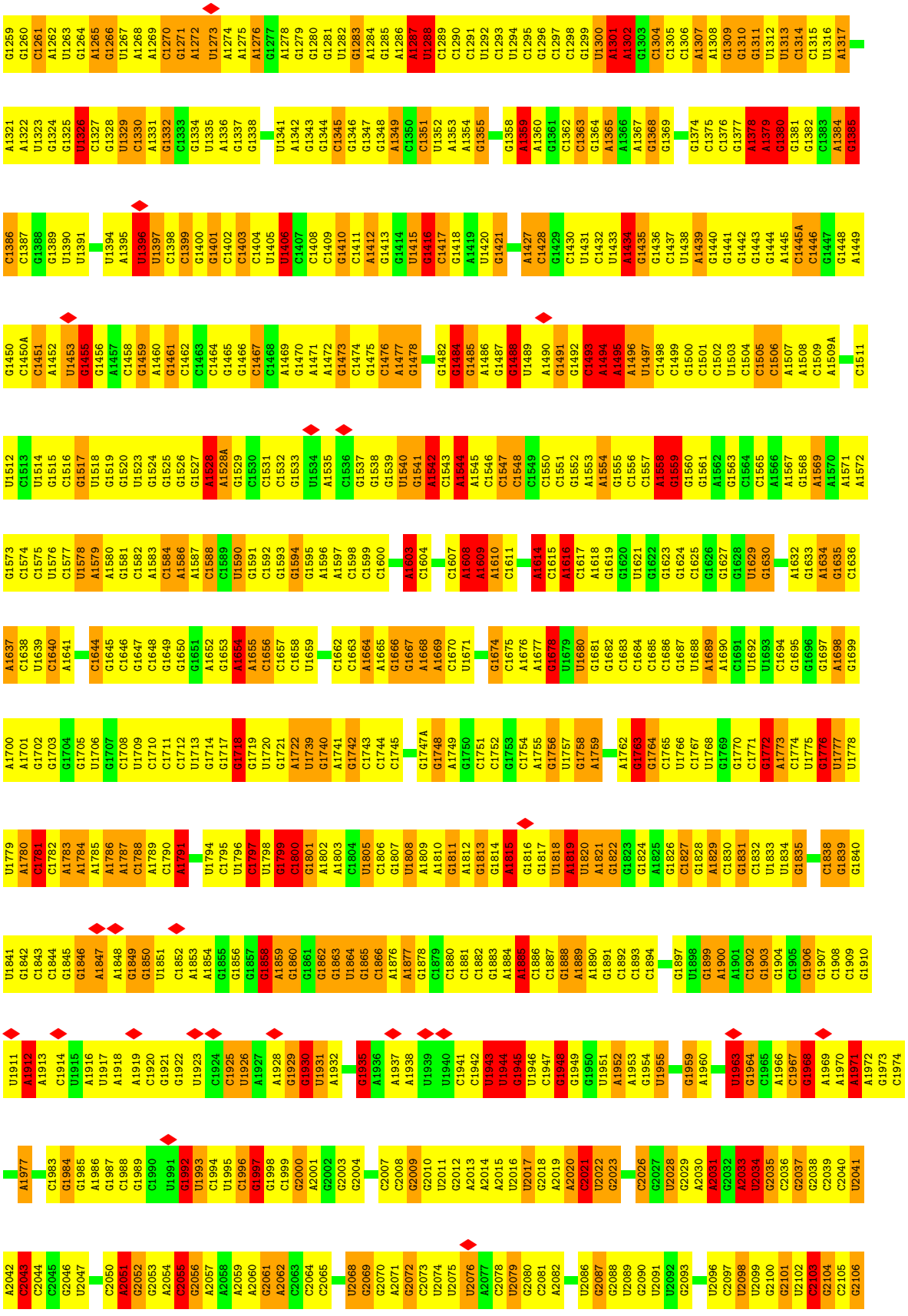


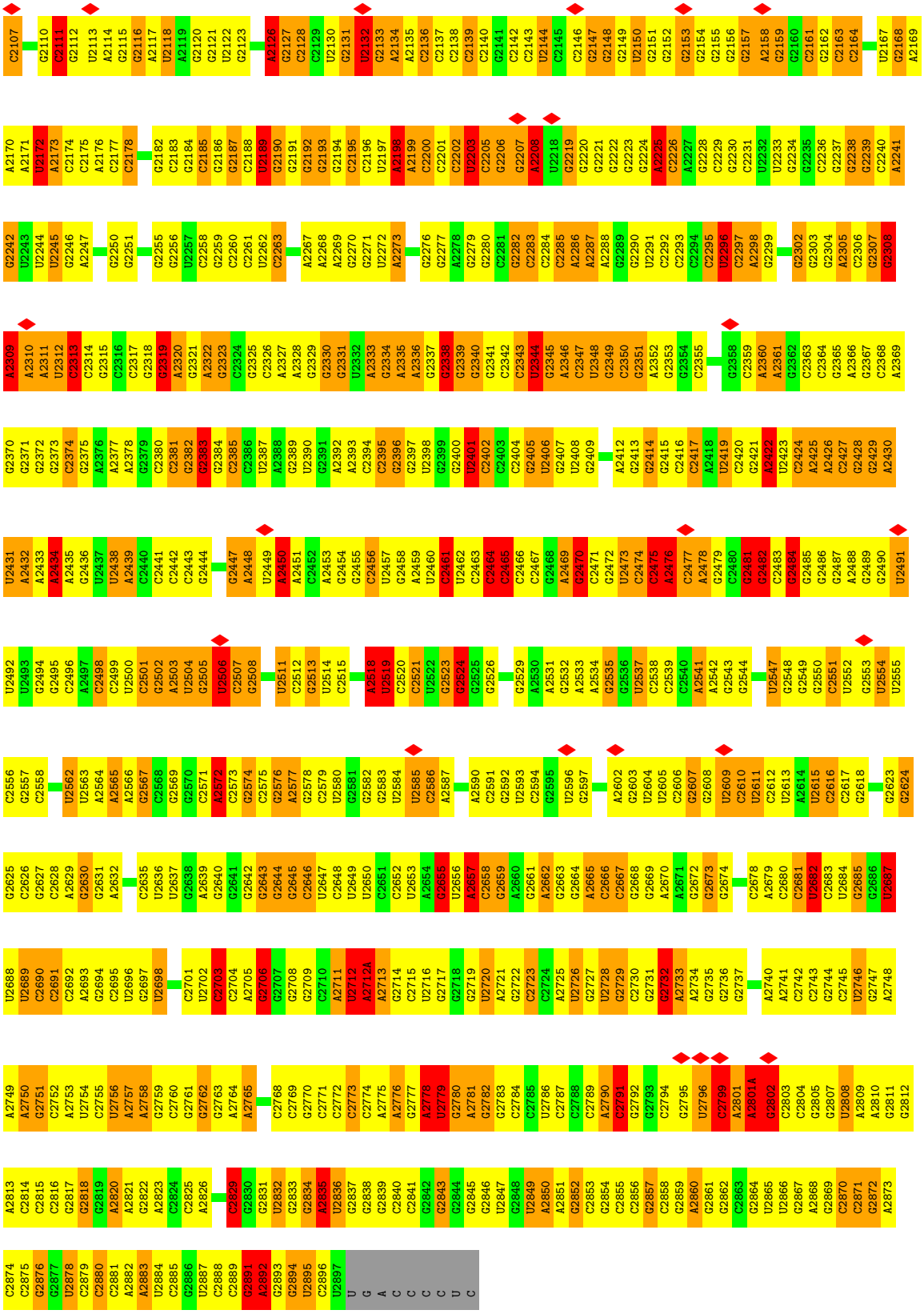
• Molecule 35: 23S RIBOSOMAL RNA

Chain BA:



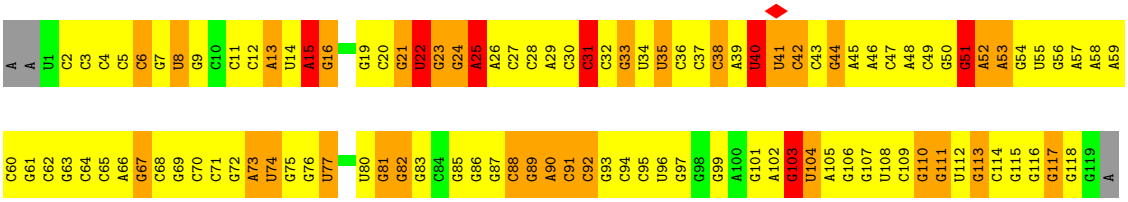






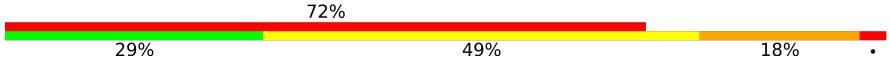
• Molecule 36: 5S RIBOSOMAL RNA

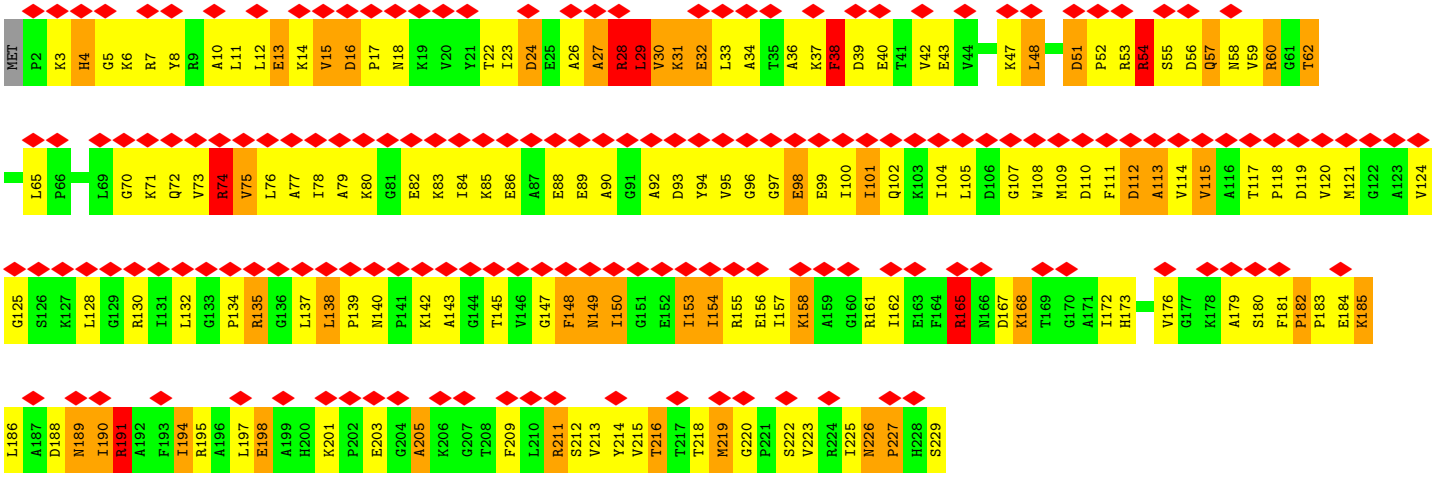
Chain BB:



• Molecule 37: 50S RIBOSOMAL PROTEIN L1

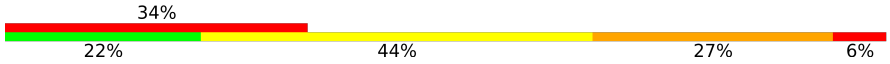
Chain BC:

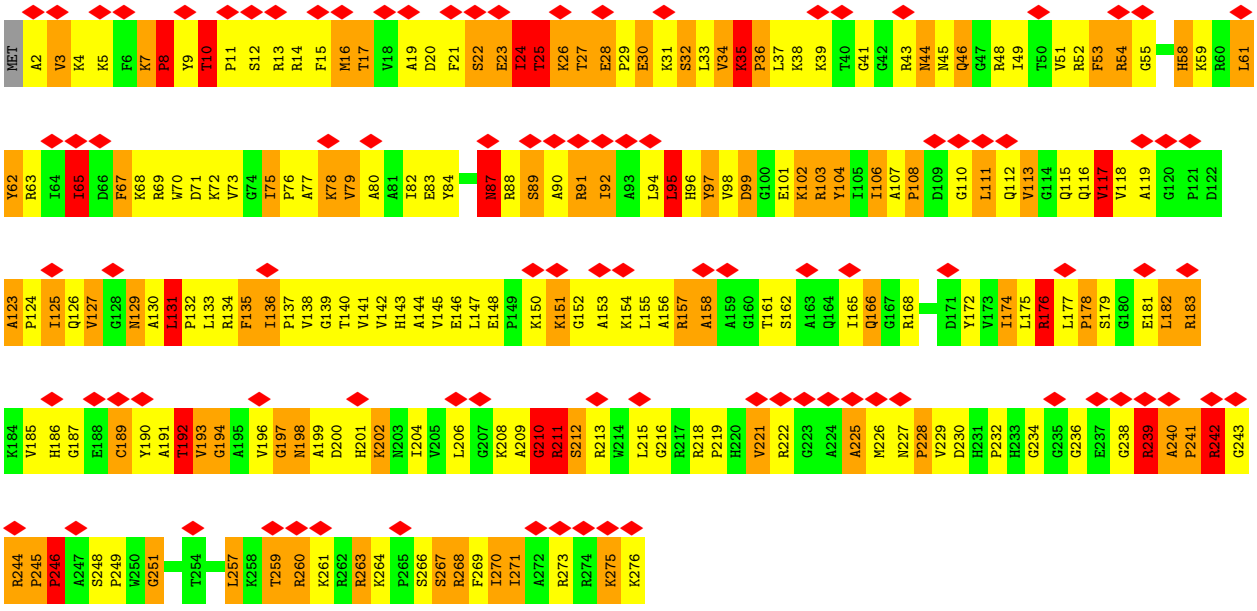




• Molecule 38: 50S RIBOSOMAL PROTEIN L2

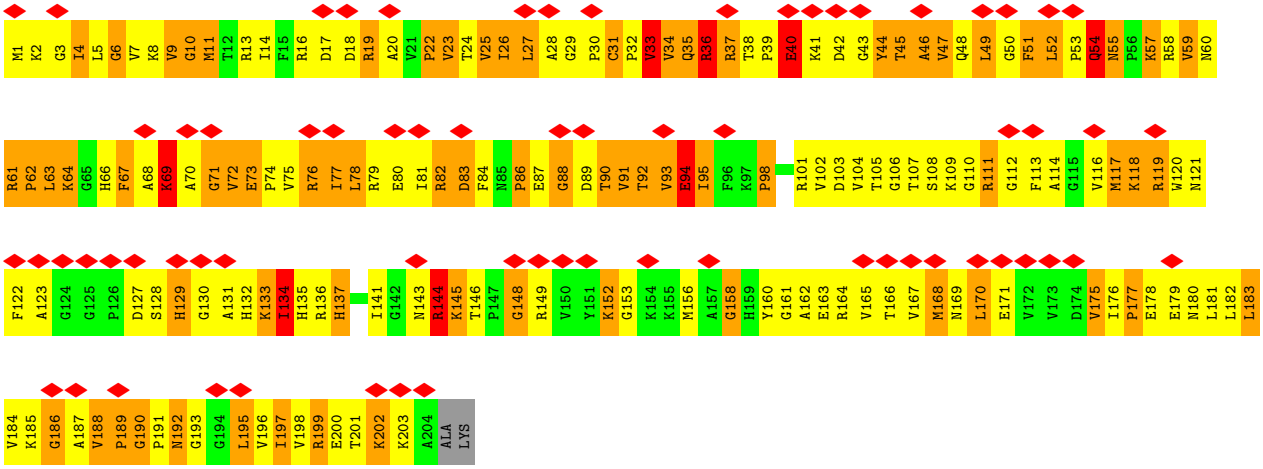
Chain BD:





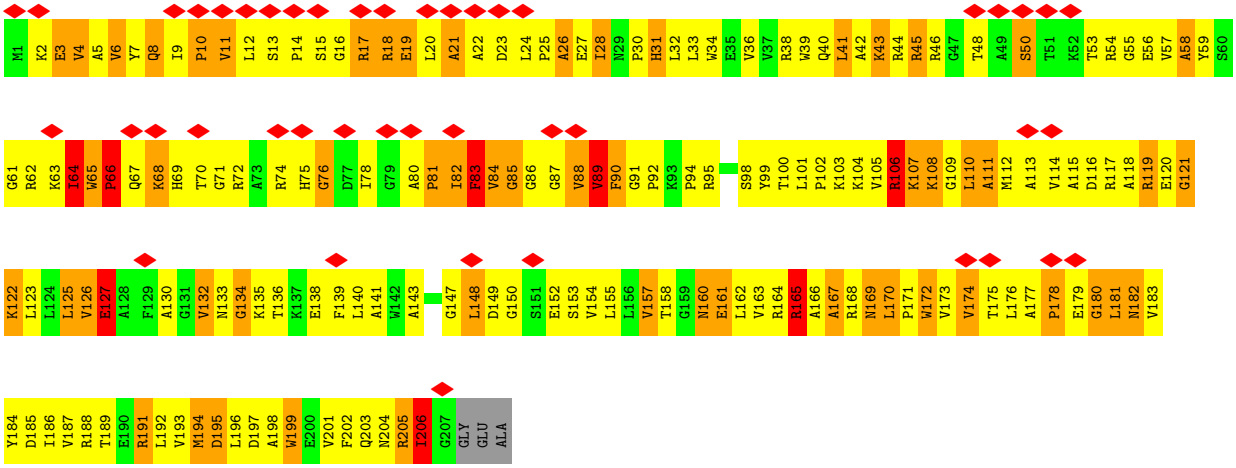
• Molecule 39: 50S RIBOSOMAL PROTEIN L3

Chain BE:



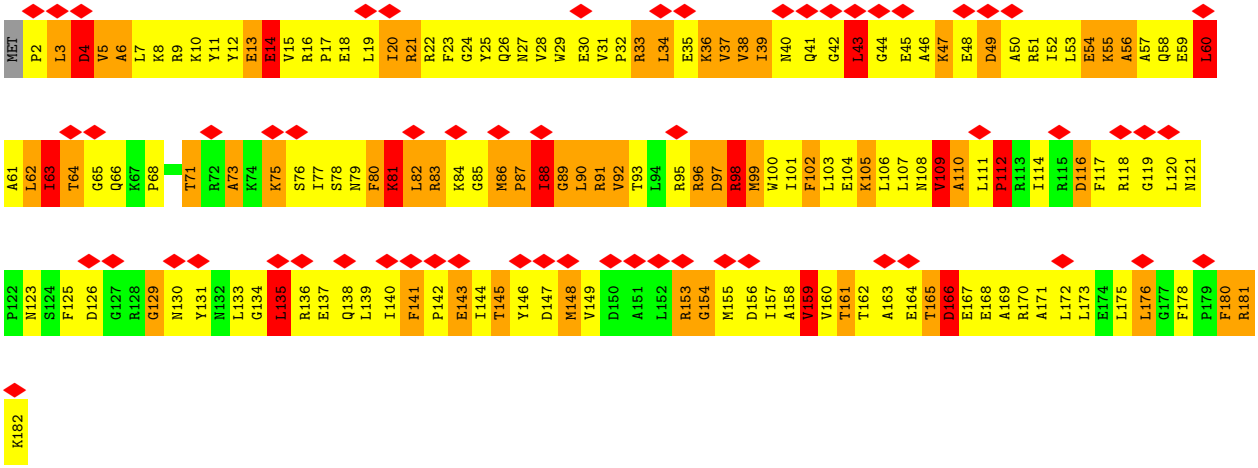
• Molecule 40: 50S RIBOSOMAL PROTEIN L4

Chain BF:



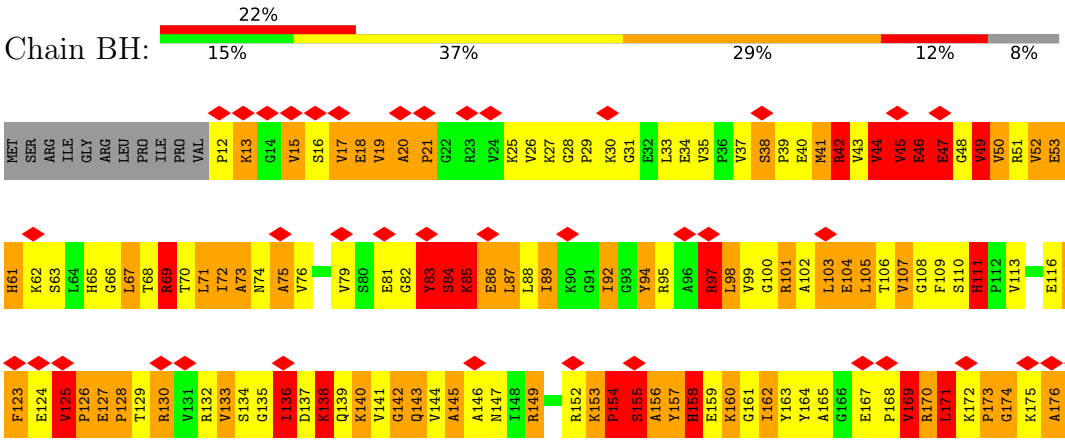
• Molecule 41: 50S RIBOSOMAL PROTEIN L5

Chain BG:



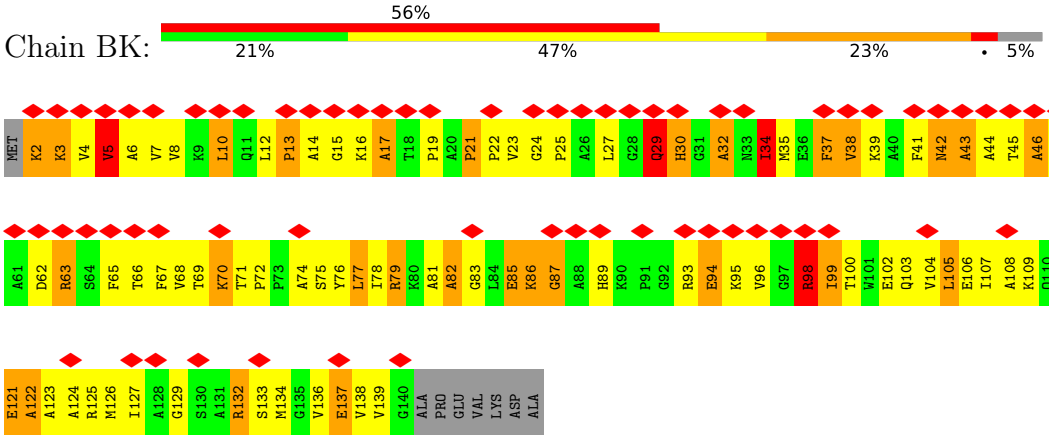
• Molecule 42: 50S RIBOSOMAL PROTEIN L6

Chain BH:



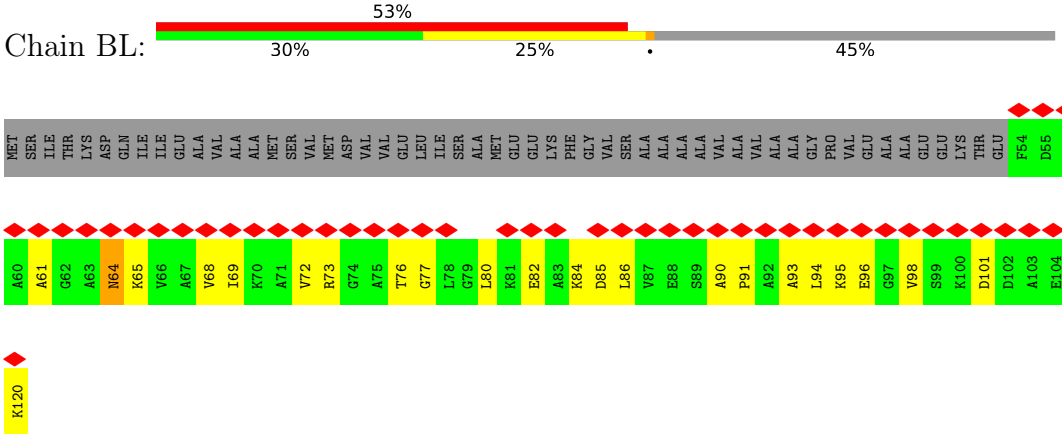
• Molecule 43: 50S RIBOSOMAL PROTEIN L11

Chain BK:



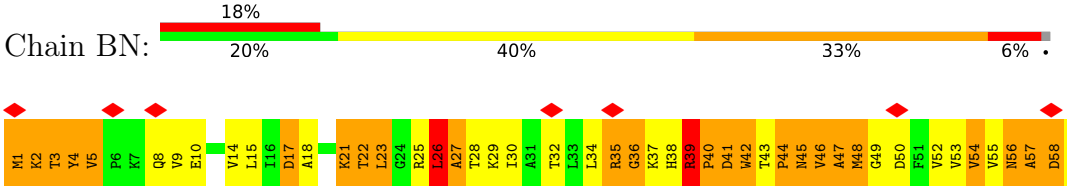
• Molecule 44: 50S RIBOSOMAL PROTEIN L7/L12

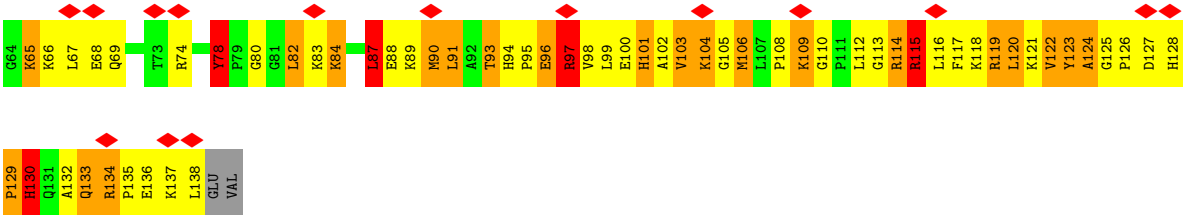
Chain BL:



• Molecule 45: 50S RIBOSOMAL PROTEIN L13

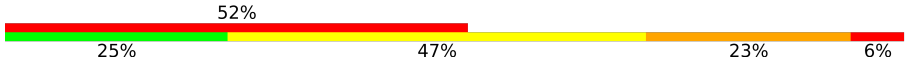
Chain BN:

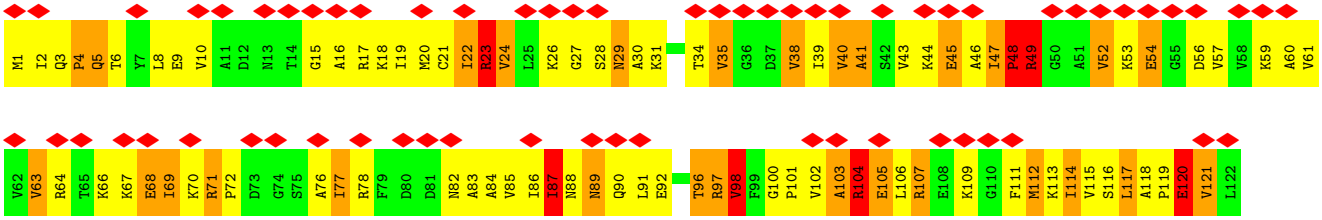




• Molecule 46: 50S RIBOSOMAL PROTEIN L14

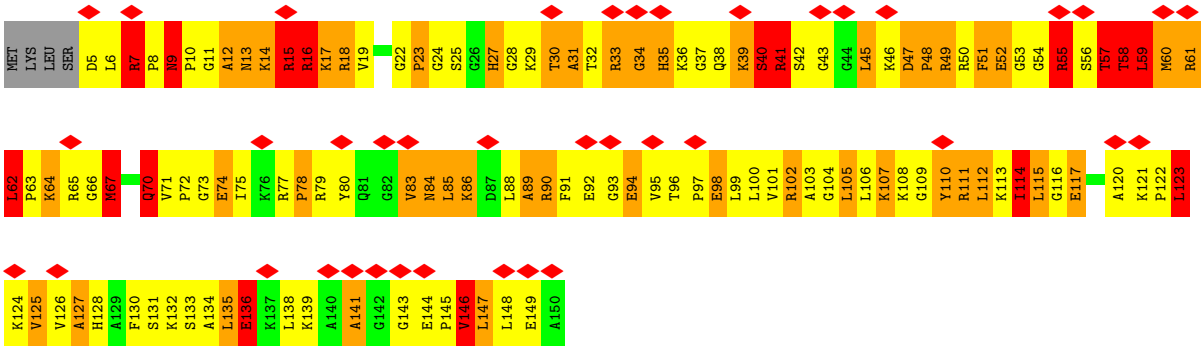
Chain BO:





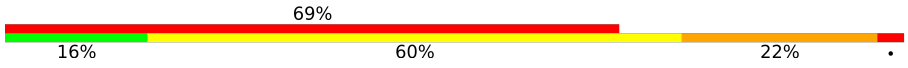
• Molecule 47: 50S RIBOSOMAL PROTEIN L15

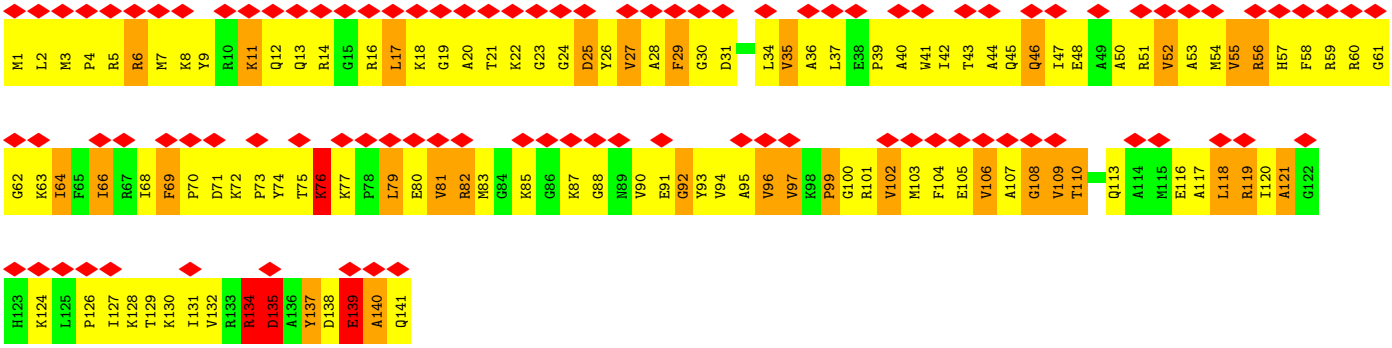
Chain BP:



• Molecule 48: 50S RIBOSOMAL PROTEIN L16

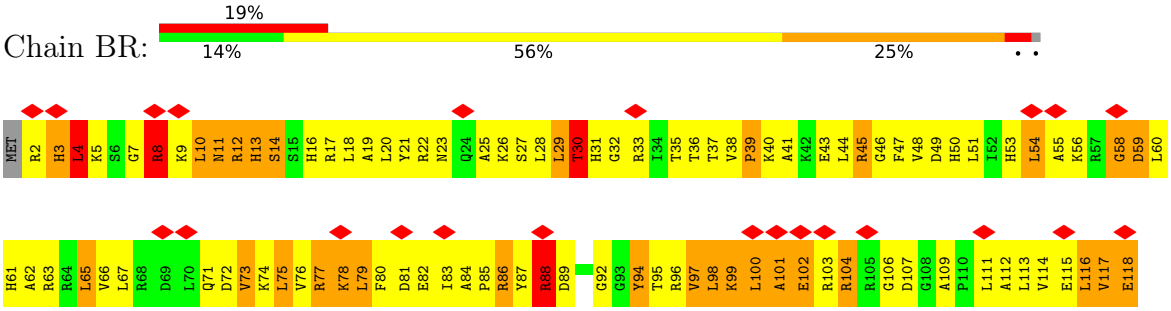
Chain BQ:





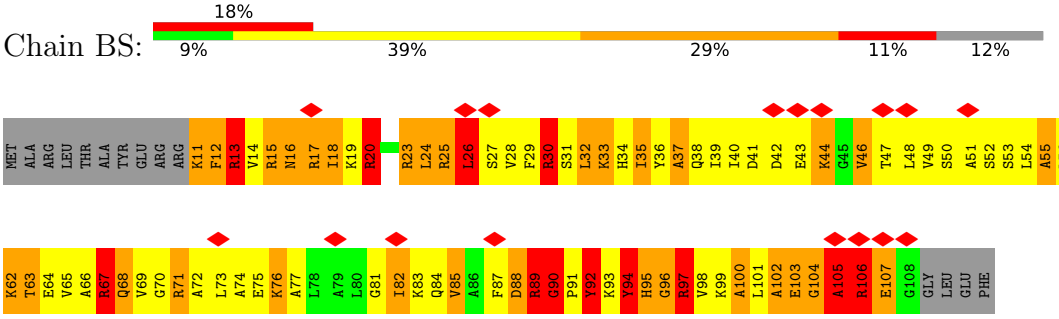
• Molecule 49: 50S RIBOSOMAL PROTEIN L17

Chain BR:



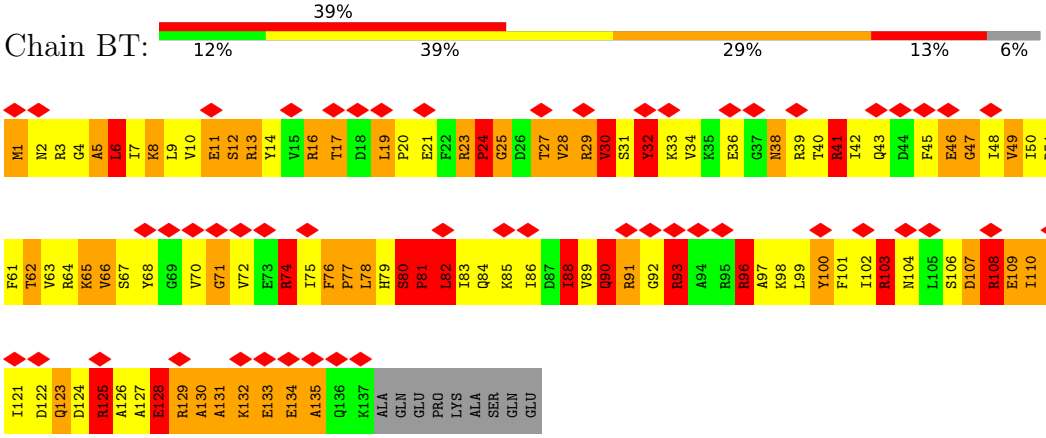
• Molecule 50: 50S RIBOSOMAL PROTEIN L18

Chain BS:



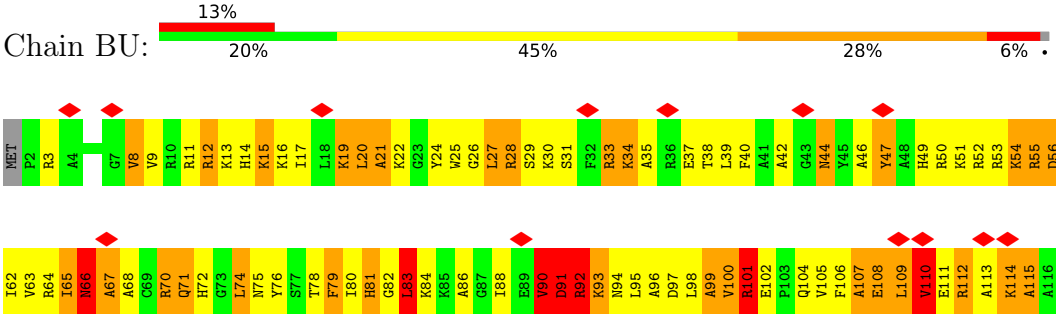
• Molecule 51: 50S RIBOSOMAL PROTEIN L19

Chain BT:



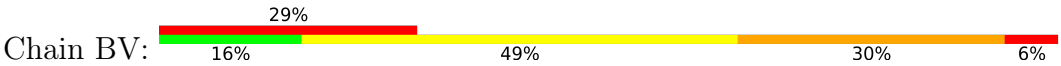
• Molecule 52: 50S RIBOSOMAL PROTEIN L20

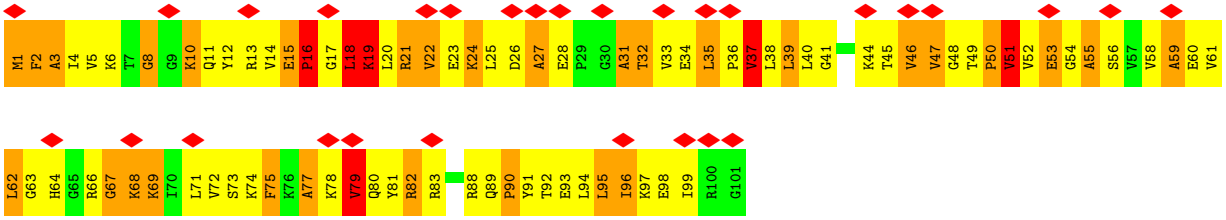
Chain BU:



• Molecule 53: 50S RIBOSOMAL PROTEIN L21

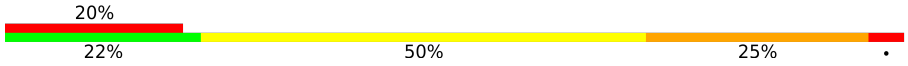
Chain BV:

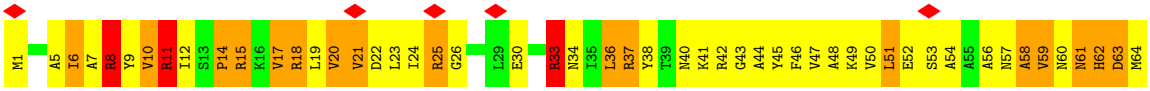


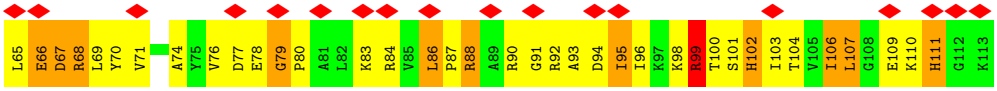


• Molecule 54: 50S RIBOSOMAL PROTEIN L22

Chain BW:

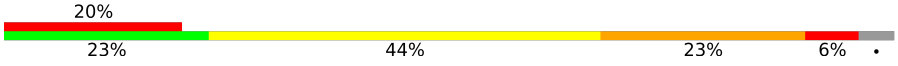


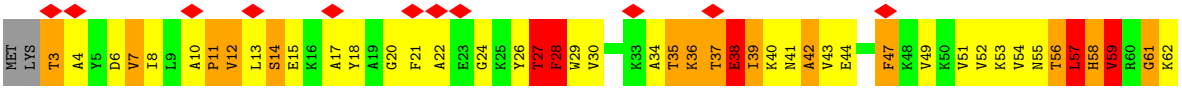


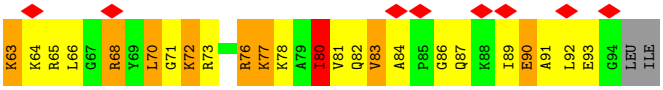


• Molecule 55: 50S RIBOSOMAL PROTEIN L23

Chain BX:

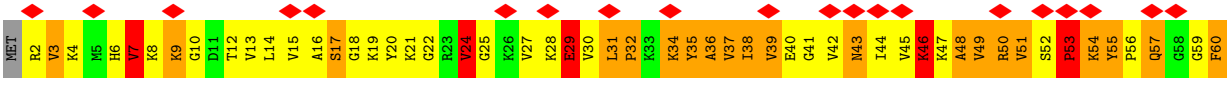


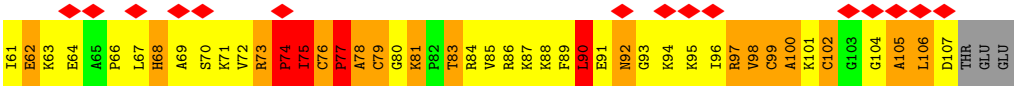




• Molecule 56: 50S RIBOSOMAL PROTEIN L24

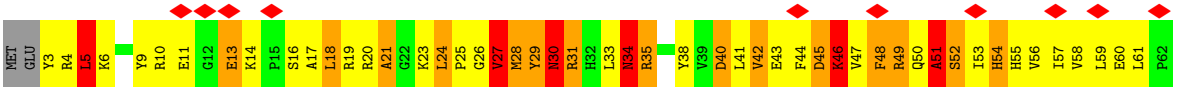
Chain BY:

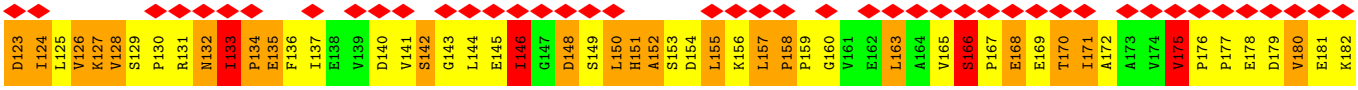


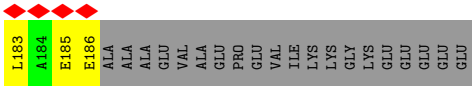


• Molecule 57: 50S RIBOSOMAL PROTEIN L25

Chain BZ:




D123
I124
L125
V126
K127
V128
S129
P130
R131
N132
I133
P134
E135
F136
I137
E138
V139
D140
V141
S142
G143
L144
E145
I146
G147
D148
S149
L150
H151
A152
S153
D154
L155
K156
L157
P158
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
ALA
ALA
ALA
GLU
VAL
ALA
GLU
PRO
GLU
VAL
ILE
LYS
LYS
GLY
LYS
GLU
GLU
GLU
GLU
GLU

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	Not provided	
Resolution determination method	Not provided	
CTF correction method	DEFOCUS GROUPS	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	20	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	65520	Depositor
Image detector	KODAK SO-163 FILM	Depositor
Maximum map value	13410.900	Depositor
Minimum map value	-6356.590	Depositor
Average map value	213.063	Depositor
Map value standard deviation	916.721	Depositor
Recommended contour level	3000	Depositor
Map size (Å)	378, 378, 378	wwPDB
Map dimensions	300, 300, 300	wwPDB
Map angles (°)	90, 90, 90	wwPDB
Pixel spacing (Å)	1.26, 1.26, 1.26	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: GDP, FUA

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	1.60	91/36190 (0.3%)	1.40	307/56486 (0.5%)
2	AB	1.90	24/1935 (1.2%)	1.88	43/2609 (1.6%)
3	AC	2.06	30/1636 (1.8%)	1.87	49/2205 (2.2%)
4	AD	1.86	21/1733 (1.2%)	1.80	28/2318 (1.2%)
5	AE	1.98	23/1162 (2.0%)	1.97	24/1564 (1.5%)
6	AF	1.84	10/856 (1.2%)	1.88	22/1154 (1.9%)
7	AG	1.87	15/1276 (1.2%)	1.83	24/1709 (1.4%)
8	AH	2.00	23/1136 (2.0%)	1.98	32/1527 (2.1%)
9	AI	1.94	11/1029 (1.1%)	2.41	21/1379 (1.5%)
10	AJ	1.90	9/807 (1.1%)	1.81	13/1085 (1.2%)
11	AK	1.97	15/900 (1.7%)	1.81	10/1213 (0.8%)
12	AL	1.96	11/986 (1.1%)	1.96	20/1320 (1.5%)
13	AM	1.86	10/998 (1.0%)	1.88	25/1336 (1.9%)
14	AN	2.00	12/501 (2.4%)	1.86	5/664 (0.8%)
15	AO	1.89	10/745 (1.3%)	1.85	10/992 (1.0%)
16	AP	1.83	8/716 (1.1%)	1.71	8/963 (0.8%)
17	AQ	1.92	8/836 (1.0%)	1.80	13/1117 (1.2%)
18	AR	1.89	5/579 (0.9%)	1.82	13/768 (1.7%)
19	AS	1.69	5/642 (0.8%)	1.68	2/865 (0.2%)
20	AT	1.88	10/765 (1.3%)	1.83	15/1007 (1.5%)
21	AU	1.67	2/212 (0.9%)	1.85	2/277 (0.7%)
22	AV	1.60	6/1832 (0.3%)	1.46	17/2855 (0.6%)
23	AX	1.61	2/257 (0.8%)	1.57	2/398 (0.5%)
24	AY	1.76	45/5312 (0.8%)	1.87	139/7193 (1.9%)
25	B0	1.74	5/671 (0.7%)	1.70	5/892 (0.6%)
26	B1	1.80	9/738 (1.2%)	1.78	10/981 (1.0%)
27	B2	1.68	1/600 (0.2%)	1.95	25/793 (3.2%)
28	B3	1.89	5/472 (1.1%)	1.86	9/634 (1.4%)
29	B4	1.67	4/460 (0.9%)	2.19	18/621 (2.9%)
30	B5	1.81	2/473 (0.4%)	1.87	10/639 (1.6%)
31	B6	1.76	0/440	2.10	20/586 (3.4%)
32	B7	1.88	5/426 (1.2%)	1.89	9/561 (1.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	B8	1.76	4/515 (0.8%)	1.92	15/679 (2.2%)
34	B9	1.82	5/310 (1.6%)	1.84	4/407 (1.0%)
35	BA	1.57	140/69972 (0.2%)	1.39	572/109237 (0.5%)
36	BB	1.57	4/2853 (0.1%)	1.36	24/4451 (0.5%)
37	BC	1.86	20/1774 (1.1%)	1.78	29/2391 (1.2%)
38	BD	1.87	28/2195 (1.3%)	1.91	50/2955 (1.7%)
39	BE	1.85	18/1596 (1.1%)	1.93	43/2153 (2.0%)
40	BF	1.84	10/1658 (0.6%)	1.91	39/2244 (1.7%)
41	BG	1.79	13/1499 (0.9%)	2.33	40/2016 (2.0%)
42	BH	1.74	12/1292 (0.9%)	1.86	33/1744 (1.9%)
43	BK	1.68	6/1044 (0.6%)	1.76	16/1416 (1.1%)
44	BL	1.42	2/478 (0.4%)	1.86	8/640 (1.2%)
45	BN	1.80	9/1131 (0.8%)	1.93	24/1525 (1.6%)
46	BO	1.94	15/943 (1.6%)	1.87	21/1269 (1.7%)
47	BP	1.77	7/1131 (0.6%)	1.95	34/1504 (2.3%)
48	BQ	1.85	13/1143 (1.1%)	1.76	16/1527 (1.0%)
49	BR	1.77	8/974 (0.8%)	1.83	21/1302 (1.6%)
50	BS	1.76	9/778 (1.2%)	1.89	26/1036 (2.5%)
51	BT	1.86	16/1155 (1.4%)	1.98	38/1542 (2.5%)
52	BU	1.87	16/975 (1.6%)	1.87	19/1297 (1.5%)
53	BV	1.77	10/790 (1.3%)	1.78	13/1057 (1.2%)
54	BW	1.78	7/907 (0.8%)	1.80	18/1216 (1.5%)
55	BX	1.83	10/739 (1.4%)	1.84	15/993 (1.5%)
56	BY	1.65	9/823 (1.1%)	1.79	11/1098 (1.0%)
57	BZ	1.78	12/1499 (0.8%)	1.83	29/2035 (1.4%)
All	All	1.67	840/165495 (0.5%)	1.56	2108/246445 (0.9%)

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	107
2	AB	0	5
3	AC	0	3
4	AD	0	3
5	AE	0	4
6	AF	0	6
7	AG	0	6
8	AH	0	4
9	AI	0	5

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Mol	Chain	#Chirality outliers	#Planarity outliers
10	AJ	0	2
11	AK	0	2
12	AL	0	3
13	AM	0	3
14	AN	0	2
15	AO	0	3
16	AP	0	6
17	AQ	0	3
18	AR	0	3
19	AS	0	3
20	AT	0	2
21	AU	0	3
22	AV	0	5
23	AX	0	1
24	AY	0	13
25	B0	0	1
26	B1	0	3
27	B2	0	6
28	B3	0	2
29	B4	0	3
30	B5	0	2
31	B6	0	3
32	B7	0	1
33	B8	0	2
34	B9	0	2
35	BA	1	152
36	BB	0	6
37	BC	0	6
38	BD	0	2
39	BE	0	3
40	BF	0	3
41	BG	0	5
42	BH	0	8
43	BK	0	3
45	BN	0	3
46	BO	0	3
47	BP	0	5
48	BQ	0	3
49	BR	0	2
50	BS	0	6
51	BT	0	6
52	BU	0	4

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Mol	Chain	#Chirality outliers	#Planarity outliers
53	BV	0	2
54	BW	0	4
55	BX	0	2
56	BY	0	3
57	BZ	0	4
All	All	1	457

All (840) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	BG	112	PRO	C-N	13.96	1.53	1.33
9	AI	53	VAL	C-N	12.03	1.50	1.33
9	AI	104	ARG	C-N	11.92	1.50	1.33
3	AC	204	LEU	CA-C	10.06	1.57	1.52
3	AC	167	TRP	CA-C	-9.99	1.48	1.53
11	AK	113	PRO	CA-C	-9.13	1.44	1.52
48	BQ	109	VAL	CA-CB	-8.93	1.49	1.55
51	BT	71	GLY	CA-C	-8.59	1.46	1.52
48	BQ	139	GLU	N-CA	-8.39	1.35	1.46
18	AR	60	ALA	C-N	-8.37	1.23	1.33
46	BO	87	ILE	CA-C	-8.36	1.45	1.52
1	AA	671	G	C3'-O3'	-8.14	1.29	1.42
6	AF	68	PRO	CA-C	-8.03	1.45	1.52
3	AC	196	LEU	C-N	-8.01	1.25	1.33
5	AE	69	VAL	CA-C	-7.96	1.45	1.52
12	AL	99	HIS	CE1-NE2	-7.93	1.24	1.32
39	BE	158	GLY	CA-C	-7.90	1.43	1.51
37	BC	29	LEU	CA-C	-7.83	1.47	1.52
2	AB	107	THR	C-N	-7.76	1.25	1.34
3	AC	108	ASN	C-O	-7.67	1.17	1.24
24	AY	108	PHE	N-CA	-7.62	1.36	1.46
46	BO	98	VAL	C-O	-7.53	1.16	1.24
24	AY	563	ILE	CA-CB	-7.51	1.47	1.55
9	AI	90	PRO	C-O	-7.48	1.15	1.24
48	BQ	108	GLY	C-N	-7.46	1.29	1.33
47	BP	41	ARG	CA-C	-7.45	1.44	1.53
39	BE	175	VAL	C-O	-7.44	1.16	1.24
3	AC	136	GLN	C-N	-7.43	1.24	1.33
35	BA	38	A	C3'-O3'	-7.36	1.31	1.42
14	AN	25	VAL	CA-CB	-7.34	1.46	1.54
38	BD	151	LYS	C-N	-7.30	1.27	1.33
37	BC	158	LYS	C-O	-7.29	1.14	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	AH	88	LYS	N-CA	-7.26	1.40	1.46
16	AP	79	VAL	CA-CB	-7.23	1.45	1.54
50	BS	68	GLN	N-CA	-7.22	1.38	1.46
5	AE	66	MET	CA-CB	-7.21	1.43	1.53
12	AL	101	VAL	CA-C	-7.17	1.44	1.52
51	BT	131	ALA	CA-CB	7.14	1.58	1.53
39	BE	20	ALA	C-N	-7.12	1.26	1.32
20	AT	88	VAL	C-O	-7.08	1.16	1.24
3	AC	141	VAL	CA-CB	-7.08	1.46	1.54
17	AQ	58	GLU	CA-C	-7.07	1.44	1.52
8	AH	118	VAL	N-CA	-7.05	1.38	1.46
38	BD	271	ILE	CA-CB	-7.05	1.46	1.54
42	BH	103	LEU	C-O	-7.03	1.15	1.24
51	BT	16	ARG	CA-C	-7.01	1.45	1.53
24	AY	565	VAL	N-CA	-7.01	1.37	1.46
26	B1	32	LYS	CA-C	-7.00	1.44	1.52
45	BN	17	ASP	CA-C	-6.99	1.47	1.53
7	AG	111	ARG	C-O	-6.97	1.15	1.24
10	AJ	58	ASP	CA-C	-6.95	1.44	1.53
38	BD	131	LEU	C-O	-6.94	1.17	1.24
11	AK	41	THR	N-CA	-6.92	1.37	1.46
35	BA	2572	A	O5'-C5'	-6.91	1.32	1.42
54	BW	62	HIS	CE1-NE2	-6.90	1.25	1.32
56	BY	83	THR	C-O	-6.88	1.15	1.24
8	AH	95	VAL	C-O	-6.88	1.17	1.24
39	BE	112	GLY	CA-C	-6.88	1.44	1.52
1	AA	296	U	C2'-C1'	-6.86	1.43	1.53
35	BA	2161	C	C2'-O2'	-6.86	1.32	1.42
54	BW	95	ILE	CA-CB	-6.84	1.46	1.54
7	AG	75	VAL	CA-C	-6.82	1.44	1.52
33	B8	63	PRO	C-O	-6.81	1.15	1.24
38	BD	113	VAL	CA-C	-6.79	1.45	1.52
3	AC	180	ALA	CA-C	-6.79	1.44	1.52
35	BA	482	A	C1'-N9	-6.72	1.37	1.48
53	BV	20	LEU	N-CA	-6.72	1.41	1.46
16	AP	18	ARG	N-CA	-6.71	1.38	1.46
48	BQ	66	ILE	CA-C	-6.71	1.46	1.53
12	AL	49	ASN	CA-C	-6.69	1.44	1.52
5	AE	87	SER	CA-CB	-6.68	1.43	1.53
7	AG	86	GLN	N-CA	-6.68	1.38	1.46
35	BA	1283	G	C3'-C2'	-6.67	1.42	1.52
52	BU	47	TYR	N-CA	-6.66	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	AC	138	VAL	CA-C	-6.66	1.44	1.52
38	BD	221	VAL	CA-C	-6.64	1.45	1.52
10	AJ	94	VAL	CA-C	-6.62	1.44	1.52
12	AL	67	THR	C-O	-6.62	1.15	1.23
14	AN	46	GLU	C-O	-6.61	1.16	1.24
17	AQ	35	VAL	CA-C	-6.60	1.45	1.53
14	AN	15	LYS	C-O	-6.60	1.15	1.24
51	BT	109	GLU	CA-C	-6.60	1.44	1.52
18	AR	69	THR	C-O	-6.59	1.16	1.24
35	BA	1189	A	C3'-O3'	-6.58	1.32	1.42
16	AP	40	ASP	N-CA	-6.55	1.39	1.46
38	BD	75	ILE	CA-CB	-6.55	1.47	1.53
7	AG	16	LEU	C-N	-6.54	1.24	1.33
38	BD	58	HIS	C-O	-6.54	1.16	1.23
19	AS	11	VAL	N-CA	-6.54	1.39	1.46
25	B0	18	ALA	CA-CB	-6.54	1.45	1.52
49	BR	104	ARG	C-O	-6.53	1.16	1.23
11	AK	117	ASN	C-O	-6.52	1.15	1.24
43	BK	17	ALA	N-CA	-6.51	1.37	1.46
3	AC	206	GLU	N-CA	-6.48	1.37	1.46
40	BF	160	ASN	CA-C	-6.47	1.44	1.52
47	BP	67	MET	C-O	-6.46	1.15	1.24
39	BE	23	VAL	CA-C	-6.44	1.45	1.52
5	AE	62	ALA	CA-C	-6.43	1.44	1.52
11	AK	111	ASP	CA-C	-6.40	1.44	1.52
39	BE	40	GLU	CA-C	-6.39	1.47	1.52
37	BC	62	THR	CA-CB	-6.39	1.44	1.53
4	AD	114	ARG	C-N	-6.38	1.25	1.33
56	BY	68	HIS	CE1-NE2	-6.38	1.26	1.32
55	BX	77	LYS	CA-CB	-6.38	1.46	1.53
8	AH	116	LYS	CA-C	-6.37	1.44	1.53
46	BO	96	THR	N-CA	-6.35	1.38	1.46
45	BN	119	ARG	CZ-NH2	-6.35	1.25	1.33
22	AV	30	G	C2'-C1'	-6.35	1.43	1.53
9	AI	89	ASN	C-O	-6.34	1.16	1.24
10	AJ	65	LEU	CA-C	-6.33	1.46	1.53
26	B1	17	SER	C-O	-6.33	1.16	1.24
3	AC	151	VAL	C-O	-6.32	1.16	1.23
11	AK	118	GLY	CA-C	-6.32	1.48	1.51
1	AA	1124	G	C3'-O3'	-6.30	1.33	1.43
6	AF	39	LYS	C-N	-6.30	1.26	1.33
53	BV	96	ILE	CA-CB	-6.30	1.46	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	AH	113	SER	CA-CB	-6.30	1.44	1.53
26	B1	49	VAL	CA-CB	-6.30	1.46	1.54
51	BT	27	THR	CA-C	-6.29	1.43	1.53
14	AN	53	LEU	N-CA	-6.28	1.39	1.46
35	BA	2698	U	C4'-C3'	-6.27	1.43	1.52
1	AA	969	A	P-O5'	-6.26	1.50	1.59
41	BG	73	ALA	CA-C	-6.26	1.44	1.53
40	BF	6	VAL	C-O	-6.25	1.16	1.24
53	BV	73	SER	CA-C	-6.25	1.45	1.52
39	BE	62	PRO	CA-C	-6.23	1.46	1.53
2	AB	181	PHE	N-CA	-6.22	1.37	1.46
8	AH	57	PRO	C-N	-6.22	1.25	1.33
8	AH	82	HIS	C-O	-6.22	1.16	1.23
4	AD	125	HIS	CG-ND1	-6.22	1.31	1.38
50	BS	96	GLY	C-O	-6.22	1.15	1.23
4	AD	103	ASN	C-O	-6.22	1.17	1.24
24	AY	131	PRO	CA-CB	-6.20	1.47	1.54
50	BS	33	LYS	C-O	-6.20	1.18	1.23
15	AO	55	GLY	CA-C	-6.18	1.45	1.52
37	BC	75	VAL	C-O	-6.18	1.17	1.24
53	BV	32	THR	CA-C	-6.18	1.45	1.52
37	BC	24	ASP	CA-C	-6.18	1.44	1.52
17	AQ	83	ASP	C-O	-6.17	1.16	1.24
25	B0	54	GLY	C-O	-6.17	1.18	1.23
46	BO	29	ASN	CA-CB	-6.17	1.43	1.53
35	BA	748	G	P-O5'	-6.16	1.50	1.59
5	AE	110	LEU	C-O	-6.16	1.17	1.24
35	BA	1818	U	P-O5'	-6.15	1.50	1.59
3	AC	38	ARG	C-N	-6.15	1.25	1.33
52	BU	8	VAL	C-O	-6.15	1.18	1.24
47	BP	104	GLY	CA-C	-6.14	1.48	1.51
35	BA	917	A	C1'-N9	-6.14	1.38	1.48
24	AY	315	LYS	N-CA	-6.14	1.38	1.46
38	BD	187	GLY	CA-C	-6.13	1.45	1.52
53	BV	59	ALA	CA-C	-6.12	1.45	1.52
14	AN	53	LEU	CA-CB	-6.11	1.46	1.53
35	BA	1108	U	C2'-O2'	-6.11	1.33	1.42
1	AA	913	A	C4'-O4'	-6.10	1.36	1.45
47	BP	27	HIS	C-O	-6.10	1.16	1.23
56	BY	74	PRO	C-O	-6.09	1.16	1.24
4	AD	131	ARG	NE-CZ	6.08	1.39	1.33
35	BA	793	A	C5'-C4'	-6.08	1.42	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	AQ	9	VAL	CA-CB	-6.08	1.46	1.54
2	AB	140	HIS	CE1-NE2	-6.08	1.26	1.32
45	BN	91	LEU	C-N	-6.07	1.25	1.34
19	AS	34	TRP	C-O	-6.07	1.16	1.24
3	AC	182	ILE	N-CA	-6.07	1.37	1.46
57	BZ	148	ASP	C-O	-6.07	1.16	1.24
7	AG	107	ALA	C-O	-6.07	1.16	1.24
1	AA	1138	G	P-O5'	-6.07	1.50	1.59
28	B3	9	VAL	CA-CB	-6.06	1.48	1.55
4	AD	73	ARG	N-CA	-6.06	1.39	1.46
1	AA	835	U	C2'-C1'	-6.05	1.44	1.53
49	BR	103	ARG	C-O	-6.05	1.16	1.23
30	B5	23	HIS	N-CA	-6.05	1.38	1.46
3	AC	55	VAL	N-CA	-6.04	1.38	1.46
35	BA	2537	U	C3'-O3'	-6.04	1.33	1.42
4	AD	46	LYS	C-N	-6.03	1.25	1.33
35	BA	1127	A	C2'-C1'	-6.03	1.44	1.53
28	B3	9	VAL	CA-C	-6.03	1.44	1.52
24	AY	152	THR	CA-C	6.03	1.58	1.52
33	B8	36	LYS	N-CA	-6.02	1.39	1.46
1	AA	356	A	C4'-O4'	-6.01	1.36	1.45
8	AH	58	TYR	CA-C	-6.01	1.45	1.52
35	BA	2549	G	O3'-P	-6.01	1.52	1.61
4	AD	193	ASP	C-O	-6.00	1.16	1.24
25	B0	59	LEU	N-CA	-6.00	1.38	1.46
32	B7	31	LEU	C-O	-6.00	1.17	1.24
35	BA	746	A	C3'-C2'	-5.99	1.44	1.52
38	BD	242	ARG	C-O	5.99	1.31	1.24
42	BH	136	ILE	N-CA	-5.99	1.38	1.46
2	AB	222	ILE	CA-CB	-5.99	1.46	1.54
24	AY	437	THR	CA-CB	5.97	1.61	1.53
35	BA	1165	U	C2'-O2'	-5.97	1.33	1.42
46	BO	98	VAL	CA-C	-5.97	1.45	1.52
27	B2	31	GLU	C-O	-5.97	1.17	1.24
38	BD	241	PRO	N-CA	-5.97	1.42	1.47
2	AB	124	SER	N-CA	-5.97	1.39	1.46
41	BG	37	VAL	N-CA	-5.97	1.39	1.46
42	BH	125	VAL	N-CA	-5.97	1.39	1.46
41	BG	109	VAL	N-CA	-5.96	1.39	1.46
11	AK	96	ARG	NE-CZ	-5.95	1.26	1.33
24	AY	397	VAL	C-O	-5.95	1.16	1.23
35	BA	518	G	C1'-N9	-5.95	1.39	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	959	A	C1'-N9	-5.94	1.39	1.48
16	AP	16	HIS	CE1-NE2	-5.94	1.26	1.32
25	B0	44	ARG	C-O	-5.94	1.17	1.24
1	AA	1503	A	C4'-O4'	-5.93	1.36	1.45
41	BG	88	ILE	N-CA	-5.93	1.39	1.46
1	AA	1480	G	C2'-C1'	-5.93	1.44	1.53
4	AD	86	LYS	CA-C	-5.93	1.45	1.52
50	BS	20	ARG	C-O	-5.92	1.17	1.24
47	BP	146	VAL	C-O	-5.92	1.17	1.24
54	BW	33	ARG	C-O	-5.92	1.16	1.24
20	AT	22	ARG	N-CA	-5.92	1.39	1.46
2	AB	198	ASP	N-CA	-5.91	1.39	1.46
35	BA	135	G	C1'-N9	-5.91	1.39	1.48
30	B5	34	PRO	CA-CB	-5.91	1.45	1.53
22	AV	45	G	C1'-N9	-5.90	1.39	1.48
4	AD	110	PHE	C-O	-5.90	1.16	1.24
43	BK	117	THR	CA-C	-5.90	1.45	1.53
24	AY	312	LEU	C-O	-5.90	1.16	1.23
24	AY	238	THR	C-O	-5.89	1.16	1.23
1	AA	855	G	C1'-N9	-5.89	1.39	1.48
17	AQ	10	VAL	C-N	-5.89	1.28	1.33
41	BG	165	THR	C-O	-5.89	1.17	1.23
7	AG	102	ARG	NE-CZ	-5.88	1.26	1.33
41	BG	156	ASP	C-N	-5.88	1.27	1.33
16	AP	26	ARG	NE-CZ	-5.88	1.26	1.33
1	AA	948	C	C2'-O2'	-5.88	1.33	1.42
51	BT	130	ALA	C-O	-5.88	1.16	1.24
4	AD	10	ARG	CA-C	-5.87	1.45	1.52
4	AD	140	VAL	CA-CB	-5.87	1.47	1.54
20	AT	21	LYS	CA-C	-5.87	1.45	1.52
5	AE	48	ALA	C-O	-5.86	1.16	1.24
3	AC	27	LYS	C-O	-5.86	1.16	1.24
52	BU	12	ARG	CA-C	-5.86	1.46	1.53
32	B7	21	ARG	C-O	-5.86	1.17	1.24
35	BA	662	G	O3'-P	-5.86	1.52	1.61
51	BT	88	ILE	N-CA	-5.85	1.39	1.46
42	BH	38	SER	CA-C	-5.85	1.45	1.52
1	AA	1245	A	O4'-C1'	-5.85	1.32	1.41
24	AY	66	THR	C-O	-5.85	1.16	1.24
24	AY	302	HIS	ND1-CE1	-5.85	1.26	1.32
9	AI	55	ALA	C-O	-5.84	1.16	1.24
12	AL	76	ASN	CA-C	-5.84	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	696	G	O3'-P	-5.84	1.52	1.61
42	BH	154	PRO	CA-CB	-5.84	1.45	1.53
24	AY	10	LYS	CA-CB	-5.84	1.43	1.53
24	AY	359	HIS	CD2-NE2	-5.83	1.31	1.37
3	AC	198	VAL	CA-CB	-5.83	1.46	1.54
3	AC	134	ILE	C-O	-5.82	1.17	1.24
7	AG	127	ALA	CA-CB	-5.82	1.44	1.53
26	B1	23	LYS	CA-C	-5.82	1.45	1.52
1	AA	559	A	O3'-P	-5.82	1.52	1.61
4	AD	168	ARG	C-O	-5.81	1.17	1.23
1	AA	223	U	C3'-O3'	-5.81	1.33	1.42
24	AY	599	PRO	N-CA	-5.81	1.40	1.47
24	AY	32	ILE	N-CA	-5.80	1.39	1.46
55	BX	28	PHE	CA-C	-5.80	1.45	1.52
12	AL	69	TYR	CA-C	-5.79	1.45	1.52
35	BA	741	G	C5'-C4'	-5.79	1.42	1.51
24	AY	391	GLY	N-CA	-5.79	1.37	1.45
37	BC	135	ARG	NE-CZ	-5.79	1.26	1.33
19	AS	40	ILE	C-O	-5.79	1.18	1.24
35	BA	1363	C	C4'-C3'	-5.79	1.43	1.52
35	BA	2852	G	C2'-O2'	-5.79	1.33	1.42
1	AA	97	G	C3'-O3'	-5.78	1.34	1.43
1	AA	165	C	O3'-P	-5.78	1.52	1.61
36	BB	111	G	C1'-N9	-5.78	1.39	1.48
3	AC	112	SER	CA-C	-5.77	1.45	1.53
1	AA	1382	C	C2'-O2'	-5.77	1.33	1.42
24	AY	507	TYR	CA-C	-5.76	1.45	1.52
13	AM	21	TYR	C-O	-5.76	1.15	1.24
46	BO	4	PRO	CA-CB	-5.76	1.45	1.53
8	AH	74	PRO	C-O	-5.75	1.17	1.24
35	BA	2054	A	C3'-C2'	-5.75	1.44	1.52
37	BC	70	GLY	C-N	-5.75	1.27	1.33
1	AA	500	G	C4'-C3'	-5.75	1.44	1.52
10	AJ	64	GLU	CA-C	-5.75	1.45	1.52
9	AI	77	ILE	N-CA	-5.75	1.39	1.46
24	AY	562	ASP	CA-C	-5.75	1.45	1.52
35	BA	1689	A	C4'-C3'	-5.75	1.44	1.52
1	AA	1398	A	C1'-N9	-5.74	1.39	1.48
37	BC	27	ALA	N-CA	-5.74	1.39	1.46
52	BU	54	LYS	C-N	-5.74	1.25	1.33
55	BX	61	GLY	C-O	-5.74	1.19	1.24
35	BA	1265	A	P-O5'	-5.74	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
39	BE	22	PRO	C-O	5.74	1.30	1.23
35	BA	525	U	C2'-O2'	-5.74	1.33	1.42
15	AO	51	HIS	N-CA	-5.73	1.39	1.46
24	AY	330	VAL	CA-CB	-5.73	1.48	1.54
19	AS	47	HIS	CE1-NE2	-5.73	1.26	1.32
1	AA	1090	U	C4'-O4'	-5.72	1.36	1.45
4	AD	62	GLN	C-O	-5.72	1.17	1.24
52	BU	14	HIS	CD2-NE2	5.72	1.44	1.37
1	AA	1517	G	C1'-N9	-5.71	1.39	1.48
35	BA	905	U	C4'-O4'	-5.71	1.36	1.45
1	AA	561	U	P-O5'	-5.71	1.51	1.59
1	AA	703	G	C1'-N9	-5.71	1.39	1.48
35	BA	1451	C	O3'-P	-5.70	1.52	1.61
57	BZ	154	ASP	C-O	-5.70	1.17	1.23
11	AK	39	PRO	CA-C	-5.70	1.45	1.52
3	AC	75	VAL	C-O	-5.70	1.17	1.24
11	AK	16	SER	CA-C	-5.70	1.45	1.52
1	AA	1262	C	C1'-N1	-5.69	1.40	1.48
1	AA	758	G	C1'-N9	-5.69	1.39	1.48
39	BE	58	ARG	N-CA	-5.69	1.40	1.46
33	B8	4	MET	C-O	-5.69	1.17	1.23
42	BH	126	PRO	CA-CB	-5.69	1.45	1.53
29	B4	34	GLU	CA-C	-5.68	1.45	1.52
1	AA	630	G	C4'-O4'	-5.68	1.37	1.45
2	AB	12	GLU	CA-C	-5.68	1.45	1.52
35	BA	858	U	O4'-C1'	-5.68	1.33	1.42
8	AH	53	VAL	CA-CB	-5.67	1.46	1.54
35	BA	1995	U	C1'-N1	-5.67	1.40	1.48
13	AM	80	ARG	C-O	-5.67	1.17	1.24
40	BF	48	THR	CA-C	-5.66	1.43	1.52
35	BA	1122	G	C1'-N9	-5.66	1.39	1.48
49	BR	30	THR	C-O	-5.66	1.18	1.24
35	BA	89	G	C2'-O2'	-5.66	1.33	1.42
24	AY	311	ALA	N-CA	-5.65	1.38	1.45
3	AC	151	VAL	N-CA	-5.65	1.39	1.46
43	BK	132	ARG	CZ-NH2	-5.65	1.26	1.33
15	AO	32	LEU	CA-C	-5.65	1.45	1.52
24	AY	141	LYS	N-CA	-5.65	1.38	1.45
35	BA	637	A	O3'-P	-5.65	1.52	1.61
32	B7	34	ARG	N-CA	-5.65	1.39	1.46
35	BA	363(E)	U	C2'-O2'	-5.64	1.33	1.41
45	BN	109	LYS	CA-C	-5.64	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	213	LEU	CA-C	-5.64	1.45	1.52
1	AA	1235	U	P-O5'	-5.64	1.51	1.59
49	BR	39	PRO	N-CA	-5.63	1.40	1.47
1	AA	1375	A	P-O5'	-5.62	1.51	1.59
39	BE	144	ARG	NE-CZ	-5.62	1.26	1.33
1	AA	1219	U	C5'-C4'	-5.62	1.42	1.51
5	AE	132	ALA	C-O	-5.62	1.17	1.24
35	BA	2003	G	P-O5'	-5.62	1.51	1.59
15	AO	36	ILE	N-CA	-5.62	1.40	1.46
5	AE	36	ASP	C-O	-5.61	1.17	1.24
52	BU	79	PHE	N-CA	-5.61	1.39	1.46
3	AC	116	VAL	N-CA	-5.61	1.39	1.46
35	BA	722	A	C3'-O3'	-5.61	1.33	1.42
49	BR	25	ALA	N-CA	-5.61	1.39	1.46
1	AA	1123	A	C1'-N9	-5.60	1.39	1.48
22	AV	14	A	C1'-N9	-5.60	1.39	1.48
53	BV	90	PRO	N-CA	-5.60	1.40	1.47
18	AR	52	PRO	C-N	-5.59	1.26	1.34
24	AY	126	GLU	C-O	-5.59	1.16	1.24
39	BE	177	PRO	CA-CB	-5.59	1.45	1.53
41	BG	38	VAL	CA-CB	-5.59	1.47	1.54
1	AA	334	C	P-O5'	-5.58	1.51	1.59
24	AY	398	ILE	C-O	-5.58	1.18	1.24
40	BF	31	HIS	CA-C	-5.58	1.46	1.52
10	AJ	18	ALA	C-O	-5.58	1.17	1.24
36	BB	74	U	C3'-O3'	-5.58	1.33	1.42
3	AC	115	LEU	N-CA	-5.58	1.39	1.46
57	BZ	30	ASN	CA-C	-5.58	1.45	1.52
42	BH	125	VAL	C-O	-5.57	1.17	1.24
15	AO	45	VAL	CA-CB	-5.57	1.46	1.54
55	BX	63	LYS	CA-C	-5.57	1.45	1.52
1	AA	577	G	C4'-O4'	-5.57	1.37	1.45
35	BA	45	C	O4'-C1'	-5.56	1.33	1.41
24	AY	400	GLU	N-CA	-5.56	1.39	1.46
38	BD	246	PRO	N-CD	-5.56	1.40	1.47
8	AH	92	ARG	C-N	-5.56	1.26	1.33
35	BA	191	A	C3'-C2'	-5.56	1.44	1.52
35	BA	471	A	C1'-N9	-5.55	1.39	1.48
29	B4	12	ALA	N-CA	-5.55	1.39	1.46
41	BG	154	GLY	C-O	-5.55	1.17	1.23
35	BA	1811	G	C1'-N9	-5.55	1.39	1.48
39	BE	141	ILE	CA-CB	-5.55	1.47	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	AO	16	ALA	CA-CB	-5.54	1.44	1.53
24	AY	647	VAL	C-N	-5.54	1.27	1.33
2	AB	171	ALA	C-N	-5.54	1.26	1.33
20	AT	37	SER	N-CA	-5.54	1.39	1.46
8	AH	27	PRO	C-O	-5.54	1.16	1.24
9	AI	72	GLY	CA-C	-5.54	1.45	1.52
35	BA	1397	U	O3'-P	-5.54	1.52	1.61
17	AQ	48	GLU	C-N	5.53	1.41	1.33
24	AY	146	LEU	C-O	-5.53	1.17	1.24
23	AX	21	C	C2'-O2'	-5.53	1.34	1.42
45	BN	54	VAL	CA-C	-5.53	1.45	1.52
24	AY	107	VAL	C-O	-5.53	1.18	1.24
28	B3	43	ILE	N-CA	-5.53	1.39	1.46
24	AY	260	LEU	C-O	-5.53	1.18	1.24
16	AP	40	ASP	CA-CB	-5.53	1.46	1.53
35	BA	2312	U	C3'-C2'	-5.52	1.44	1.52
47	BP	70	GLN	N-CA	-5.52	1.39	1.46
7	AG	68	ASN	C-O	-5.52	1.16	1.24
46	BO	85	VAL	C-O	-5.52	1.18	1.24
1	AA	346	G	C1'-N9	-5.52	1.39	1.48
35	BA	1548	C	C4'-C3'	-5.52	1.44	1.52
35	BA	2571	C	C1'-N1	-5.52	1.40	1.48
51	BT	82	LEU	N-CA	-5.52	1.39	1.46
35	BA	543	C	C2'-O2'	-5.51	1.34	1.42
35	BA	2396	G	O3'-P	-5.51	1.52	1.61
34	B9	32	HIS	CG-ND1	5.50	1.44	1.38
1	AA	1504	G	C5'-C4'	-5.50	1.43	1.51
54	BW	86	LEU	C-O	-5.50	1.20	1.25
46	BO	112	MET	N-CA	-5.49	1.39	1.46
55	BX	72	LYS	CA-C	-5.49	1.45	1.52
20	AT	60	GLU	C-O	-5.49	1.17	1.24
8	AH	88	LYS	CA-CB	-5.49	1.47	1.54
1	AA	170	U	O3'-P	-5.48	1.52	1.61
39	BE	133	LYS	C-O	-5.48	1.17	1.24
2	AB	198	ASP	C-N	-5.48	1.26	1.33
28	B3	12	PRO	N-CA	-5.48	1.40	1.47
24	AY	97	SER	C-N	-5.47	1.26	1.33
34	B9	6	SER	CA-C	-5.47	1.46	1.53
35	BA	2330	G	C4'-C3'	-5.47	1.44	1.52
38	BD	259	THR	CA-CB	-5.47	1.45	1.53
1	AA	1153	C	C3'-O3'	-5.47	1.33	1.42
14	AN	56	VAL	C-N	-5.46	1.26	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	AG	144	MET	CA-C	-5.46	1.46	1.52
35	BA	2047	U	P-O5'	-5.46	1.51	1.59
56	BY	36	ALA	CA-CB	-5.46	1.46	1.53
13	AM	93	ARG	C-O	-5.46	1.17	1.24
24	AY	93	GLU	C-N	-5.46	1.27	1.33
6	AF	77	ARG	CZ-NH2	-5.46	1.26	1.33
1	AA	254	G	C1'-N9	-5.45	1.39	1.48
20	AT	15	ARG	C-N	-5.45	1.26	1.33
35	BA	259	G	C1'-N9	-5.45	1.39	1.48
38	BD	89	SER	C-O	-5.45	1.17	1.24
37	BC	194	ILE	CA-C	-5.44	1.46	1.52
11	AK	83	ILE	C-O	-5.44	1.18	1.24
22	AV	36	U	C3'-C2'	-5.44	1.44	1.52
25	B0	76	GLY	C-O	-5.44	1.18	1.23
32	B7	42	LEU	CA-C	-5.44	1.45	1.52
35	BA	861	A	C2'-O2'	-5.44	1.34	1.42
35	BA	795	C	C2'-O2'	-5.43	1.34	1.42
35	BA	1808	U	C2'-O2'	-5.43	1.34	1.42
35	BA	2731	G	C1'-N9	-5.43	1.39	1.48
40	BF	178	PRO	CA-CB	-5.43	1.46	1.53
42	BH	140	LYS	N-CA	-5.43	1.40	1.46
8	AH	97	VAL	C-O	-5.43	1.18	1.24
35	BA	271(D)	G	C2'-C1'	-5.43	1.45	1.53
1	AA	899	C	C4'-C3'	-5.43	1.44	1.52
12	AL	80	HIS	CG-ND1	-5.43	1.32	1.38
24	AY	620	VAL	C-N	-5.43	1.26	1.33
11	AK	30	VAL	C-O	-5.42	1.18	1.24
46	BO	39	ILE	C-N	5.42	1.40	1.33
57	BZ	51	ALA	CA-CB	-5.42	1.44	1.53
35	BA	1317	A	P-O5'	-5.42	1.51	1.59
41	BG	39	ILE	C-O	-5.42	1.18	1.24
40	BF	148	LEU	C-O	-5.42	1.15	1.23
45	BN	103	VAL	CA-C	-5.42	1.47	1.52
1	AA	555	C	O4'-C1'	-5.41	1.33	1.41
38	BD	189	CYS	CA-C	-5.41	1.45	1.52
56	BY	43	ASN	C-O	-5.41	1.17	1.23
1	AA	404	U	O3'-P	-5.41	1.53	1.61
1	AA	629	G	P-O5'	-5.41	1.51	1.59
4	AD	14	ARG	C-O	-5.41	1.17	1.24
14	AN	35	ARG	CA-C	-5.41	1.46	1.52
35	BA	953	A	C3'-O3'	-5.41	1.34	1.42
35	BA	1195	G	C3'-C2'	-5.41	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	2128	C	P-O5'	-5.41	1.51	1.59
13	AM	9	ILE	C-O	-5.41	1.17	1.24
10	AJ	8	LEU	N-CA	-5.40	1.39	1.46
2	AB	23	ARG	CD-NE	-5.40	1.38	1.46
8	AH	16	ALA	C-O	-5.40	1.17	1.24
8	AH	134	ILE	CA-C	-5.40	1.45	1.52
35	BA	260	G	C1'-N9	-5.40	1.39	1.48
26	B1	82	LEU	CA-C	-5.39	1.46	1.52
54	BW	46	PHE	CA-C	-5.39	1.45	1.52
8	AH	104	ARG	CA-C	-5.39	1.45	1.52
14	AN	22	THR	C-O	-5.39	1.17	1.23
1	AA	1513	A	C3'-O3'	-5.39	1.34	1.42
5	AE	28	PHE	CA-C	-5.39	1.46	1.52
37	BC	112	ASP	CA-C	-5.39	1.48	1.53
13	AM	63	THR	N-CA	-5.39	1.42	1.46
35	BA	1903	G	O3'-P	-5.39	1.53	1.61
24	AY	616	TYR	C-O	-5.38	1.17	1.24
8	AH	35	ILE	N-CA	-5.38	1.40	1.46
35	BA	2026	C	C4'-C3'	-5.38	1.44	1.52
8	AH	133	LEU	C-N	5.38	1.39	1.33
17	AQ	78	GLU	C-O	-5.38	1.17	1.23
5	AE	30	ALA	CA-C	-5.38	1.46	1.52
53	BV	24	LYS	CA-C	-5.38	1.46	1.52
18	AR	42	ARG	C-O	-5.37	1.16	1.24
35	BA	2723	C	C2'-O2'	-5.37	1.34	1.42
1	AA	1054	C	P-O5'	-5.37	1.51	1.59
6	AF	52	ILE	CA-C	-5.37	1.47	1.52
37	BC	191	ARG	C-N	-5.37	1.26	1.33
48	BQ	57	HIS	CG-CD2	-5.37	1.29	1.35
8	AH	44	PHE	C-O	-5.37	1.17	1.24
17	AQ	63	ARG	N-CA	-5.37	1.37	1.46
1	AA	891	U	C1'-N1	-5.36	1.40	1.48
35	BA	272(G)	C	C4'-C3'	-5.36	1.44	1.52
35	BA	1930	G	O4'-C1'	-5.36	1.33	1.41
46	BO	15	GLY	CA-C	-5.36	1.44	1.51
2	AB	26	PRO	C-N	-5.36	1.26	1.33
35	BA	1797	C	P-O5'	-5.35	1.51	1.59
38	BD	221	VAL	N-CA	5.35	1.52	1.46
43	BK	99	ILE	C-O	-5.35	1.18	1.24
11	AK	114	VAL	N-CA	-5.35	1.41	1.45
5	AE	80	ILE	CA-CB	-5.35	1.47	1.54
29	B4	42	PHE	C-O	5.35	1.29	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
40	BF	199	TRP	C-O	-5.35	1.17	1.24
44	BL	96	GLU	CA-C	5.35	1.58	1.52
37	BC	172	ILE	C-O	-5.34	1.18	1.24
1	AA	1491	G	O3'-P	-5.34	1.53	1.61
12	AL	121	GLY	C-N	-5.34	1.26	1.33
35	BA	1997	G	C5'-C4'	5.34	1.59	1.51
26	B1	45	ASN	CA-C	-5.34	1.46	1.52
35	BA	1925	C	O3'-P	-5.34	1.53	1.61
48	BQ	40	ALA	CA-CB	-5.34	1.46	1.53
35	BA	2051	A	P-OP2	-5.33	1.38	1.49
35	BA	1968	G	C2'-O2'	-5.33	1.34	1.42
1	AA	189(J)	G	C3'-C2'	-5.33	1.44	1.52
35	BA	1743	C	C5'-C4'	-5.33	1.43	1.51
42	BH	125	VAL	CA-C	5.33	1.58	1.52
1	AA	230	G	C5'-C4'	-5.32	1.43	1.51
35	BA	16	G	C4'-C3'	-5.32	1.44	1.52
35	BA	1703	G	O3'-P	-5.32	1.53	1.61
35	BA	949	C	C5'-C4'	-5.32	1.43	1.51
40	BF	205	ARG	CA-CB	-5.32	1.45	1.53
54	BW	7	ALA	C-O	-5.32	1.16	1.23
21	AU	7	ARG	CA-C	-5.32	1.45	1.52
38	BD	62	TYR	C-O	-5.32	1.17	1.24
48	BQ	55	VAL	N-CA	-5.32	1.40	1.46
3	AC	152	ILE	CA-CB	-5.32	1.47	1.55
5	AE	78	HIS	C-O	-5.32	1.17	1.24
9	AI	121	ARG	C-O	-5.32	1.17	1.24
48	BQ	69	PHE	N-CA	-5.31	1.38	1.46
1	AA	1024	G	C2'-O2'	-5.31	1.34	1.42
55	BX	35	THR	C-O	-5.31	1.17	1.23
14	AN	23	ARG	C-O	-5.31	1.17	1.23
35	BA	953	A	O3'-P	-5.31	1.53	1.61
52	BU	101	ARG	N-CA	-5.31	1.39	1.46
11	AK	43	SER	CA-C	-5.30	1.46	1.52
42	BH	142	GLY	C-O	-5.30	1.17	1.23
8	AH	68	ARG	CA-C	-5.30	1.45	1.53
46	BO	104	ARG	CA-C	-5.30	1.45	1.52
23	AX	17	U	C5'-C4'	-5.30	1.43	1.51
37	BC	42	VAL	C-O	-5.30	1.16	1.23
35	BA	882	G	C2'-O2'	-5.29	1.34	1.42
38	BD	210	GLY	C-O	-5.29	1.16	1.23
39	BE	27	LEU	C-N	-5.29	1.27	1.33
5	AE	14	ARG	NE-CZ	-5.29	1.27	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	63	MET	C-O	-5.29	1.17	1.24
10	AJ	28	ARG	CA-C	-5.29	1.46	1.52
37	BC	125	GLY	C-N	-5.29	1.26	1.33
1	AA	1404	C	C4'-C3'	-5.29	1.44	1.52
1	AA	1354	C	O3'-P	-5.29	1.53	1.61
1	AA	362	G	P-O5'	-5.28	1.51	1.59
24	AY	270	GLN	C-O	-5.28	1.17	1.24
15	AO	81	LEU	N-CA	-5.28	1.40	1.46
52	BU	107	ALA	C-O	-5.28	1.17	1.24
6	AF	6	VAL	CA-CB	-5.28	1.48	1.54
48	BQ	121	ALA	N-CA	-5.28	1.39	1.46
24	AY	74	TRP	C-O	-5.28	1.18	1.23
44	BL	93	ALA	C-O	-5.27	1.17	1.24
7	AG	147	ALA	C-O	-5.27	1.17	1.24
13	AM	17	VAL	CA-CB	-5.27	1.49	1.55
24	AY	87	HIS	ND1-CE1	-5.27	1.27	1.32
41	BG	13	GLU	CA-C	-5.27	1.47	1.53
38	BD	97	TYR	C-O	-5.26	1.17	1.23
50	BS	94	TYR	C-O	-5.26	1.17	1.24
55	BX	90	GLU	C-O	-5.26	1.17	1.24
1	AA	1090	U	C3'-C2'	-5.26	1.44	1.52
51	BT	117	ASP	C-O	-5.26	1.17	1.23
42	BH	138	LYS	C-N	-5.26	1.26	1.33
1	AA	44	G	C2'-O2'	-5.26	1.34	1.42
24	AY	412	ALA	N-CA	-5.26	1.39	1.46
1	AA	473	G	N7-C5	-5.26	1.28	1.39
57	BZ	85	HIS	CA-C	-5.26	1.45	1.52
24	AY	221	ALA	CA-C	-5.25	1.45	1.52
26	B1	41	ARG	CA-C	-5.25	1.46	1.52
35	BA	2331	G	C2'-O2'	-5.25	1.34	1.42
7	AG	18	TYR	C-N	-5.25	1.25	1.33
24	AY	329	ARG	NE-CZ	-5.25	1.27	1.33
35	BA	1116	C	C1'-N1	-5.25	1.40	1.48
34	B9	26	ILE	CA-CB	-5.25	1.47	1.54
57	BZ	133	ILE	C-O	-5.25	1.17	1.24
7	AG	69	VAL	C-O	-5.25	1.19	1.24
18	AR	80	PRO	C-O	-5.25	1.17	1.23
1	AA	657	G	C3'-C2'	-5.24	1.44	1.52
28	B3	16	PRO	CA-C	-5.24	1.46	1.52
48	BQ	57	HIS	C-O	-5.24	1.18	1.24
5	AE	82	VAL	CA-C	-5.24	1.46	1.52
7	AG	25	ALA	C-N	-5.24	1.27	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
39	BE	98	PRO	C-O	-5.24	1.17	1.24
35	BA	1777	U	C4'-O4'	-5.24	1.37	1.45
1	AA	853	G	C1'-N9	-5.24	1.40	1.48
32	B7	12	ARG	CA-C	-5.24	1.45	1.52
41	BG	97	ASP	C-O	-5.23	1.17	1.24
1	AA	233	C	C1'-N1	-5.23	1.40	1.48
6	AF	38	GLU	CA-C	-5.23	1.48	1.53
45	BN	44	PRO	N-CA	-5.23	1.40	1.47
35	BA	1902	C	O3'-P	-5.23	1.53	1.61
1	AA	1251	A	C5'-C4'	-5.23	1.43	1.51
1	AA	967	C	C2'-O2'	-5.22	1.34	1.42
35	BA	1815	A	C4'-C3'	-5.22	1.45	1.53
22	AV	74	C	O5'-C5'	5.22	1.50	1.42
56	BY	16	ALA	CA-CB	-5.22	1.46	1.53
35	BA	357	A	C2'-C1'	-5.22	1.45	1.53
35	BA	2706	G	C2'-O2'	-5.22	1.34	1.42
38	BD	99	ASP	C-O	-5.22	1.18	1.24
49	BR	77	ARG	CZ-NH2	-5.22	1.26	1.33
4	AD	132	ARG	CA-C	-5.22	1.46	1.52
38	BD	79	VAL	CA-CB	-5.22	1.47	1.54
35	BA	2323	G	C5'-C4'	-5.21	1.43	1.51
35	BA	2874	C	C1'-N1	-5.21	1.40	1.48
48	BQ	106	VAL	N-CA	-5.21	1.39	1.46
2	AB	23	ARG	CA-C	-5.21	1.46	1.52
5	AE	146	ALA	C-O	-5.21	1.17	1.24
6	AF	51	PRO	CA-CB	-5.21	1.46	1.53
35	BA	1406	U	C3'-O3'	-5.21	1.34	1.42
1	AA	1446	U	C4'-O4'	-5.21	1.37	1.45
51	BT	134	GLU	C-O	-5.21	1.17	1.23
1	AA	1401	G	C1'-N9	-5.21	1.40	1.48
11	AK	125	PHE	N-CA	-5.21	1.39	1.46
35	BA	2302	G	C1'-N9	-5.20	1.40	1.48
1	AA	1442	G	O5'-C5'	5.20	1.50	1.42
38	BD	96	HIS	CD2-NE2	5.20	1.43	1.37
7	AG	7	ALA	N-CA	-5.20	1.39	1.46
35	BA	630	G	C3'-C2'	-5.20	1.45	1.52
14	AN	14	PRO	N-CA	-5.20	1.40	1.47
35	BA	2144	U	C1'-N1	-5.20	1.40	1.48
10	AJ	12	ASP	CA-C	-5.19	1.46	1.52
46	BO	46	ALA	CA-C	-5.19	1.46	1.52
1	AA	483	C	C5'-C4'	-5.19	1.43	1.51
37	BC	205	ALA	CA-C	-5.19	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	BD	176	ARG	NE-CZ	-5.19	1.27	1.33
49	BR	3	HIS	CE1-NE2	-5.19	1.27	1.32
13	AM	108	ARG	CA-C	-5.19	1.45	1.52
14	AN	20	ALA	CA-C	-5.19	1.46	1.52
16	AP	16	HIS	CA-C	-5.19	1.47	1.52
24	AY	123	ARG	CD-NE	-5.19	1.39	1.46
40	BF	76	GLY	CA-C	-5.19	1.44	1.51
57	BZ	54	HIS	CB-CG	-5.19	1.42	1.50
24	AY	590	ILE	C-O	-5.18	1.18	1.24
24	AY	675	HIS	CG-ND1	-5.18	1.32	1.38
34	B9	24	TYR	C-O	-5.18	1.17	1.23
35	BA	1416	G	C4'-O4'	-5.18	1.38	1.45
52	BU	8	VAL	CA-C	-5.18	1.46	1.53
5	AE	113	ALA	CA-CB	-5.18	1.45	1.53
1	AA	385	C	C1'-N1	-5.18	1.40	1.48
9	AI	84	ALA	CA-CB	-5.18	1.45	1.53
34	B9	17	ILE	C-N	-5.18	1.27	1.33
35	BA	1813	G	C2'-O2'	-5.18	1.34	1.42
41	BG	135	LEU	CB-CG	-5.18	1.43	1.53
38	BD	176	ARG	CA-C	-5.18	1.46	1.53
13	AM	103	THR	C-O	5.18	1.30	1.23
1	AA	879	C	C2'-C1'	-5.17	1.45	1.53
52	BU	21	ALA	CA-C	-5.17	1.45	1.52
39	BE	36	ARG	NE-CZ	-5.17	1.27	1.33
50	BS	23	ARG	NE-CZ	-5.17	1.27	1.33
51	BT	103	ARG	NE-CZ	-5.17	1.27	1.33
1	AA	972	C	C2'-O2'	-5.17	1.34	1.42
16	AP	64	ALA	CA-CB	-5.17	1.44	1.53
26	B1	74	VAL	CA-CB	-5.17	1.48	1.54
35	BA	1788	C	C4'-C3'	-5.17	1.44	1.52
35	BA	2361	A	C2'-O2'	-5.17	1.34	1.42
46	BO	4	PRO	CA-C	-5.17	1.46	1.52
2	AB	149	LEU	CA-C	-5.17	1.46	1.52
3	AC	133	ALA	C-O	-5.17	1.18	1.24
15	AO	36	ILE	CA-CB	-5.17	1.48	1.54
35	BA	386	G	O4'-C1'	-5.17	1.34	1.42
35	BA	1777	U	C4'-C3'	-5.17	1.44	1.52
37	BC	226	ASN	N-CA	-5.16	1.39	1.46
51	BT	32	TYR	CA-CB	-5.16	1.47	1.53
36	BB	57	A	C2'-O2'	-5.16	1.34	1.42
1	AA	1398	A	C5'-C4'	-5.16	1.43	1.51
57	BZ	124	ILE	N-CA	-5.16	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	AD	132	ARG	CD-NE	5.16	1.53	1.46
46	BO	103	ALA	CA-CB	-5.16	1.46	1.53
54	BW	99	ARG	N-CA	-5.16	1.39	1.46
6	AF	47	ARG	CA-C	-5.16	1.46	1.52
21	AU	9	ARG	C-N	-5.16	1.26	1.33
1	AA	1204	A	P-O5'	-5.15	1.52	1.59
5	AE	90	VAL	CA-CB	-5.15	1.48	1.54
37	BC	113	ALA	C-O	-5.15	1.17	1.23
37	BC	182	PRO	CA-C	-5.15	1.47	1.52
12	AL	124	LYS	C-O	-5.15	1.17	1.24
50	BS	95	HIS	ND1-CE1	-5.15	1.27	1.32
1	AA	1364	U	O4'-C1'	-5.15	1.34	1.42
3	AC	186	PHE	CA-C	-5.15	1.46	1.52
7	AG	118	VAL	CA-CB	-5.15	1.48	1.54
38	BD	222	ARG	CA-C	-5.15	1.46	1.52
3	AC	81	GLY	C-O	-5.14	1.17	1.23
5	AE	53	LEU	C-N	-5.14	1.27	1.33
38	BD	8	PRO	CA-CB	-5.14	1.46	1.53
38	BD	68	LYS	CA-C	-5.14	1.48	1.53
35	BA	687	C	C2'-O2'	-5.14	1.34	1.42
35	BA	2817	G	C5'-C4'	-5.14	1.43	1.51
51	BT	113	LYS	C-N	-5.14	1.26	1.33
2	AB	23	ARG	N-CA	-5.14	1.40	1.46
2	AB	153	ARG	NE-CZ	5.14	1.38	1.33
8	AH	87	SER	C-O	-5.14	1.17	1.24
35	BA	1996	C	O4'-C1'	-5.13	1.34	1.42
13	AM	92	HIS	CE1-NE2	-5.13	1.27	1.32
35	BA	217	G	C4'-C3'	-5.13	1.44	1.52
52	BU	19	LYS	N-CA	-5.13	1.40	1.46
1	AA	768	A	C1'-N9	-5.13	1.40	1.48
47	BP	117	GLU	C-O	-5.13	1.16	1.23
4	AD	163	GLU	N-CA	-5.12	1.40	1.46
35	BA	2611	U	C1'-N1	-5.12	1.40	1.48
35	BA	2728	U	C3'-O3'	5.12	1.49	1.42
45	BN	106	MET	CA-C	-5.12	1.46	1.52
57	BZ	92	SER	CA-C	-5.12	1.46	1.52
35	BA	1168	G	C2'-O2'	-5.12	1.34	1.42
35	BA	1863	G	C4'-C3'	-5.12	1.44	1.52
29	B4	15	ILE	C-O	-5.12	1.18	1.24
6	AF	91	VAL	CA-C	-5.11	1.46	1.52
11	AK	31	THR	CA-C	-5.11	1.46	1.52
35	BA	837	C	C5'-C4'	-5.11	1.43	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	1248	G	C5'-C4'	-5.11	1.43	1.51
37	BC	148	PHE	C-O	-5.11	1.17	1.24
48	BQ	92	GLY	N-CA	-5.11	1.41	1.45
2	AB	139	LYS	C-O	-5.11	1.18	1.24
2	AB	140	HIS	CD2-NE2	-5.11	1.32	1.37
35	BA	2535	G	C1'-N9	-5.11	1.40	1.48
1	AA	597	G	C2'-O2'	-5.11	1.34	1.42
52	BU	19	LYS	C-O	-5.11	1.18	1.24
57	BZ	35	ARG	CA-C	-5.11	1.46	1.52
56	BY	49	VAL	C-O	-5.11	1.17	1.24
1	AA	1394	A	P-O5'	-5.11	1.52	1.59
35	BA	2492	U	O3'-P	-5.11	1.53	1.61
35	BA	2730	C	O3'-P	-5.11	1.53	1.61
42	BH	87	LEU	CA-C	-5.11	1.46	1.52
2	AB	58	ILE	CA-CB	-5.11	1.48	1.54
53	BV	79	VAL	N-CA	-5.11	1.40	1.46
9	AI	86	VAL	C-O	-5.10	1.19	1.24
15	AO	49	ASP	N-CA	-5.10	1.39	1.46
43	BK	83	GLY	C-O	-5.10	1.16	1.23
48	BQ	127	ILE	CA-C	-5.10	1.46	1.52
3	AC	12	LEU	C-O	-5.10	1.17	1.24
52	BU	44	ASN	C-N	-5.10	1.27	1.33
1	AA	527	G	O5'-C5'	5.10	1.50	1.42
3	AC	72	LYS	N-CA	-5.10	1.41	1.46
5	AE	18	ARG	NE-CZ	5.10	1.38	1.33
39	BE	33	VAL	C-N	-5.10	1.26	1.33
1	AA	1322	C	C3'-C2'	-5.09	1.45	1.52
4	AD	13	ARG	C-O	-5.09	1.17	1.24
35	BA	1781	C	O4'-C1'	-5.09	1.34	1.42
1	AA	813	U	C1'-N1	-5.09	1.40	1.48
1	AA	1035	A	C1'-N9	-5.09	1.40	1.48
1	AA	1337	G	C2'-O2'	-5.09	1.34	1.42
35	BA	1065	U	C1'-N1	-5.09	1.40	1.48
35	BA	2280	G	C2'-C1'	-5.09	1.45	1.53
38	BD	78	LYS	CA-C	-5.09	1.46	1.52
52	BU	109	LEU	C-O	-5.09	1.18	1.24
13	AM	104	ARG	CZ-NH2	5.09	1.40	1.33
53	BV	16	PRO	N-CA	-5.09	1.40	1.47
55	BX	63	LYS	C-N	-5.09	1.26	1.33
35	BA	1088	A	P-O5'	-5.09	1.52	1.59
52	BU	55	ARG	C-O	-5.09	1.17	1.23
2	AB	200	ILE	C-N	-5.09	1.27	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	383	A	C3'-C2'	-5.08	1.45	1.52
24	AY	591	LYS	CA-C	-5.08	1.46	1.52
35	BA	2355	C	C1'-N1	-5.08	1.40	1.48
57	BZ	46	LYS	C-N	-5.08	1.26	1.33
20	AT	35	THR	CA-C	-5.08	1.46	1.52
26	B1	54	ALA	N-CA	-5.08	1.39	1.46
50	BS	26	LEU	C-N	-5.08	1.27	1.33
15	AO	29	VAL	CA-CB	-5.07	1.47	1.54
35	BA	371	A	C4'-C3'	-5.07	1.45	1.53
35	BA	2465	C	C1'-N1	-5.07	1.40	1.48
43	BK	76	TYR	C-N	-5.07	1.27	1.33
1	AA	978	A	C2'-O2'	-5.07	1.34	1.42
19	AS	31	ILE	CA-C	-5.07	1.48	1.53
35	BA	1805	U	C2'-C1'	-5.07	1.45	1.53
51	BT	111	ARG	N-CA	-5.07	1.40	1.46
35	BA	2630	G	C4'-C3'	-5.07	1.45	1.52
1	AA	15	G	C2'-O2'	-5.06	1.34	1.42
1	AA	1457	G	O5'-C5'	5.06	1.50	1.42
5	AE	53	LEU	CA-C	-5.06	1.46	1.52
52	BU	90	VAL	N-CA	-5.06	1.40	1.46
50	BS	82	ILE	C-N	-5.06	1.26	1.33
12	AL	22	SER	CA-C	-5.05	1.46	1.52
53	BV	37	VAL	C-N	-5.05	1.27	1.33
1	AA	1072	G	C4'-C3'	-5.05	1.45	1.52
2	AB	8	LYS	CA-C	-5.05	1.50	1.52
12	AL	33	ARG	C-O	-5.05	1.18	1.23
35	BA	2098	U	C2'-C1'	-5.05	1.45	1.53
37	BC	4	HIS	ND1-CE1	5.05	1.37	1.32
1	AA	851	G	C4'-C3'	-5.04	1.45	1.52
2	AB	87	ARG	C-O	-5.04	1.17	1.24
10	AJ	68	HIS	CB-CG	-5.04	1.43	1.50
11	AK	26	ASN	C-O	-5.04	1.17	1.24
45	BN	82	LEU	C-O	-5.04	1.17	1.23
55	BX	39	ILE	C-O	-5.04	1.18	1.24
4	AD	43	HIS	N-CA	-5.04	1.41	1.46
20	AT	11	SER	CA-CB	-5.04	1.46	1.52
56	BY	70	SER	C-N	-5.04	1.26	1.33
6	AF	83	ASP	CA-C	-5.04	1.45	1.52
35	BA	2034	U	P-O5'	-5.04	1.52	1.59
14	AN	33	VAL	CA-CB	-5.03	1.48	1.54
35	BA	42	G	C2'-O2'	-5.03	1.34	1.42
56	BY	97	ARG	NE-CZ	-5.03	1.27	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	AD	121	VAL	CA-CB	-5.03	1.47	1.54
38	BD	178	PRO	C-N	-5.03	1.27	1.33
35	BA	2021	C	P-O5'	-5.03	1.52	1.59
49	BR	13	HIS	C-O	-5.03	1.17	1.23
35	BA	143	G	O3'-P	-5.03	1.55	1.61
35	BA	464	U	C1'-N1	-5.03	1.41	1.48
35	BA	2026	C	C5'-C4'	-5.03	1.43	1.51
35	BA	2381	C	C4'-O4'	-5.03	1.38	1.45
35	BA	2523	G	C1'-N9	-5.03	1.40	1.48
35	BA	2883	A	C1'-N9	-5.03	1.40	1.48
55	BX	58	HIS	CG-ND1	-5.03	1.32	1.38
1	AA	954	G	O5'-C5'	5.02	1.50	1.42
5	AE	73	ASN	C-N	-5.02	1.27	1.33
35	BA	2891	G	C1'-N9	-5.02	1.40	1.48
1	AA	1356	G	C2'-O2'	-5.02	1.34	1.42
24	AY	251	ILE	CA-CB	-5.02	1.47	1.54
35	BA	470	A	C2'-O2'	-5.02	1.34	1.42
39	BE	5	LEU	C-N	-5.02	1.27	1.33
51	BT	24	PRO	C-N	-5.02	1.29	1.33
35	BA	563	G	C3'-C2'	-5.02	1.45	1.52
57	BZ	135	GLU	N-CA	-5.02	1.39	1.46
35	BA	2643	G	C4'-O4'	-5.02	1.38	1.45
35	BA	2730	C	C4'-C3'	-5.02	1.45	1.52
51	BT	110	ILE	CB-CG1	-5.02	1.43	1.53
1	AA	251	G	C1'-N9	-5.02	1.39	1.47
46	BO	38	VAL	CA-CB	-5.02	1.48	1.54
5	AE	139	LEU	C-O	-5.02	1.17	1.24
20	AT	18	GLN	CA-C	-5.01	1.46	1.52
35	BA	2374	C	O5'-C5'	-5.01	1.34	1.42
3	AC	75	VAL	N-CA	-5.01	1.40	1.46
24	AY	564	LYS	N-CA	-5.01	1.40	1.46
35	BA	1495	A	C2'-O2'	-5.01	1.34	1.42
9	AI	107	ARG	C-O	-5.01	1.18	1.23
20	AT	30	LYS	N-CA	-5.01	1.40	1.46
35	BA	358	U	C1'-N1	-5.01	1.41	1.48
36	BB	19	G	C5-C6	-5.01	1.32	1.42
1	AA	1527	C	O3'-P	-5.01	1.53	1.61
4	AD	73	ARG	C-N	-5.01	1.27	1.33
8	AH	132	GLU	N-CA	-5.01	1.39	1.46
33	B8	14	VAL	CA-C	-5.01	1.46	1.52
35	BA	1149	G	C5'-C4'	-5.01	1.43	1.51
40	BF	111	ALA	N-CA	-5.01	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	96	ARG	NE-CZ	-5.00	1.27	1.33
35	BA	1763	G	C1'-N9	-5.00	1.40	1.48
35	BA	2708	G	C2-N3	-5.00	1.22	1.32
1	AA	1504	G	N9-C4	-5.00	1.27	1.38
22	AV	11	A	O4'-C1'	-5.00	1.34	1.41
1	AA	832	C	C3'-C2'	-5.00	1.45	1.52
3	AC	7	PRO	C-N	-5.00	1.26	1.33
3	AC	47	LEU	N-CA	-5.00	1.39	1.46
5	AE	110	LEU	CA-C	-5.00	1.46	1.52
35	BA	2476	A	C2'-O2'	-5.00	1.34	1.42

All (2108) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	BG	112	PRO	O-C-N	-48.13	57.66	122.64
9	AI	53	VAL	O-C-N	-46.64	64.27	122.57
9	AI	104	ARG	O-C-N	-36.45	74.11	122.59
41	BG	112	PRO	CA-C-N	-24.58	84.00	122.59
41	BG	112	PRO	C-N-CA	-24.58	84.00	122.59
29	B4	42	PHE	N-CA-C	15.28	128.41	108.24
1	AA	575	G	C2'-C3'-O3'	15.11	132.17	109.50
35	BA	1992	G	C2'-C3'-O3'	14.95	131.93	109.50
12	AL	26	ALA	N-CA-C	-13.39	97.93	112.93
45	BN	3	THR	N-CA-C	-13.18	90.97	109.95
9	AI	86	VAL	N-CA-C	-12.80	98.45	113.42
5	AE	45	PHE	CA-C-N	-12.73	113.39	122.18
5	AE	45	PHE	C-N-CA	-12.73	113.39	122.18
11	AK	118	GLY	N-CA-C	12.52	121.61	110.21
29	B4	47	GLN	N-CA-C	12.41	125.20	108.07
7	AG	116	ALA	N-CA-C	12.38	124.77	111.03
1	AA	115	G	C2'-C3'-O3'	12.34	128.01	109.50
1	AA	1498	U	C2'-C3'-O3'	12.29	127.94	109.50
35	BA	1799	G	C2'-C3'-O3'	12.19	127.78	109.50
57	BZ	93	ASP	N-CA-C	-12.08	100.85	114.62
29	B4	43	TYR	N-CA-C	11.97	136.30	110.80
24	AY	539	ILE	CB-CA-C	-11.70	101.95	114.35
36	BB	103	G	C5'-C4'-C3'	-11.07	99.39	116.00
51	BT	4	GLY	N-CA-C	-11.01	99.52	112.73
8	AH	100	ILE	CA-C-N	10.90	130.67	120.21
8	AH	100	ILE	C-N-CA	10.90	130.67	120.21
41	BG	176	LEU	N-CA-C	-10.87	100.05	113.97
8	AH	13	ILE	N-CA-C	-10.74	101.46	111.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	AR	81	PHE	N-CA-C	-10.66	100.41	113.41
39	BE	168	MET	N-CA-C	10.62	126.88	110.42
39	BE	119	ARG	N-CA-C	-10.58	98.90	112.23
8	AH	134	ILE	N-CA-C	10.48	121.20	111.45
12	AL	44	THR	CA-C-N	10.34	132.76	119.84
12	AL	44	THR	C-N-CA	10.34	132.76	119.84
31	B6	21	TYR	N-CA-C	10.18	126.04	109.96
39	BE	199	ARG	NE-CZ-NH2	10.12	128.31	119.20
1	AA	1285	A	C2'-C3'-O3'	10.11	124.67	109.50
2	AB	25	ASN	O-C-N	10.09	127.33	121.27
24	AY	154	GLN	N-CA-C	-10.04	101.81	114.56
50	BS	44	LYS	N-CA-C	-10.01	102.14	114.75
51	BT	108	ARG	N-CA-C	-10.00	100.62	113.12
1	AA	328	C	C2'-C3'-O3'	9.89	124.33	109.50
55	BX	14	SER	N-CA-C	9.88	123.02	108.60
24	AY	137	ASN	N-CA-C	9.80	121.91	111.03
9	AI	93	ARG	N-CA-C	-9.78	100.21	114.39
42	BH	101	ARG	N-CA-C	-9.73	101.35	113.02
2	AB	14	GLY	N-CA-C	9.66	123.71	112.50
52	BU	115	ALA	N-CA-C	-9.65	99.84	112.68
51	BT	23	ARG	CA-C-N	9.58	131.81	119.84
51	BT	23	ARG	C-N-CA	9.58	131.81	119.84
38	BD	240	ALA	N-CA-C	9.57	116.59	108.07
57	BZ	175	VAL	CA-C-N	9.55	130.22	120.38
57	BZ	175	VAL	C-N-CA	9.55	130.22	120.38
35	BA	2225	A	C2'-C3'-O3'	9.52	123.78	109.50
43	BK	43	ALA	N-CA-C	-9.50	101.82	113.41
41	BG	86	MET	CA-C-N	-9.50	107.97	119.84
41	BG	86	MET	C-N-CA	-9.50	107.97	119.84
47	BP	136	GLU	N-CA-C	-9.48	100.02	111.69
35	BA	2799	C	C2'-C3'-O3'	9.47	123.71	109.50
24	AY	286	ILE	CA-C-N	9.40	130.06	120.38
24	AY	286	ILE	C-N-CA	9.40	130.06	120.38
5	AE	76	ILE	CA-C-N	9.34	128.95	119.24
5	AE	76	ILE	C-N-CA	9.34	128.95	119.24
45	BN	97	ARG	N-CA-C	-9.31	101.00	111.71
46	BO	40	VAL	N-CA-C	-9.27	95.20	108.17
39	BE	93	VAL	N-CA-C	-9.25	104.93	113.71
39	BE	163	GLU	N-CA-C	9.22	120.88	107.88
38	BD	194	GLY	CA-C-O	-9.22	114.09	122.57
37	BC	219	MET	N-CA-C	9.17	124.92	112.90
4	AD	89	THR	N-CA-C	9.15	122.41	111.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	AM	87	TYR	N-CA-C	-9.13	101.30	111.07
51	BT	31	SER	N-CA-C	9.08	119.90	108.19
1	AA	60	A	C2'-C3'-O3'	9.05	123.07	109.50
24	AY	462	ILE	N-CA-C	-9.04	101.14	111.00
55	BX	61	GLY	O-C-N	9.04	129.04	122.62
35	BA	1427	A	C2'-C3'-O3'	9.04	123.06	109.50
26	B1	20	ARG	NE-CZ-NH2	-8.98	111.11	119.20
15	AO	55	GLY	N-CA-C	-8.97	101.63	112.49
4	AD	11	LEU	N-CA-C	-8.96	100.94	112.23
1	AA	1502	A	N9-C1'-C2'	8.93	127.39	114.00
57	BZ	154	ASP	CA-CB-CG	8.91	121.51	112.60
54	BW	66	GLU	N-CA-C	8.90	121.88	111.02
55	BX	37	THR	N-CA-C	-8.89	102.00	113.12
35	BA	2864	G	C4'-C3'-C2'	-8.84	93.76	102.60
29	B4	53	GLU	N-CA-C	8.81	124.09	109.46
55	BX	47	PHE	N-CA-C	-8.81	101.12	114.16
31	B6	23	THR	N-CA-C	8.80	129.55	110.80
40	BF	71	GLY	N-CA-C	-8.79	103.50	113.79
8	AH	56	LYS	CA-C-N	8.76	130.79	119.84
8	AH	56	LYS	C-N-CA	8.76	130.79	119.84
47	BP	52	GLU	N-CA-C	8.76	129.45	110.80
1	AA	921	U	C5'-C4'-C3'	-8.73	102.91	116.00
9	AI	48	GLU	CA-C-O	8.72	126.44	117.98
47	BP	104	GLY	O-C-N	-8.70	116.98	121.85
7	AG	107	ALA	N-CA-C	-8.63	100.86	111.40
55	BX	38	GLU	N-CA-C	-8.61	101.98	111.36
29	B4	42	PHE	CA-C-N	8.60	137.97	121.54
29	B4	42	PHE	C-N-CA	8.60	137.97	121.54
40	BF	83	PHE	N-CA-C	8.60	123.34	111.55
28	B3	11	SER	CA-C-N	8.60	128.32	119.64
28	B3	11	SER	C-N-CA	8.60	128.32	119.64
1	AA	428	G	C2'-C3'-O3'	8.59	122.38	109.50
40	BF	205	ARG	N-CA-C	-8.57	103.35	113.21
51	BT	112	ARG	N-CA-C	-8.56	101.97	114.39
41	BG	54	GLU	N-CA-C	-8.56	102.97	113.50
1	AA	626	U	C4'-C3'-O3'	-8.55	100.18	113.00
51	BT	29	ARG	N-CA-C	8.54	122.25	108.76
1	AA	533	A	C2'-C3'-O3'	8.52	122.28	109.50
20	AT	12	ALA	N-CA-C	-8.52	102.04	114.39
41	BG	88	ILE	N-CA-C	8.51	122.73	108.86
2	AB	23	ARG	N-CA-C	-8.47	100.40	113.02
39	BE	51	PHE	N-CA-C	8.46	121.50	108.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
47	BP	58	THR	N-CA-C	-8.46	92.77	110.80
38	BD	59	LYS	N-CA-C	-8.46	97.97	110.23
30	B5	46	CYS	N-CA-C	8.44	120.40	109.93
39	BE	31	CYS	CA-C-N	8.42	129.74	119.98
39	BE	31	CYS	C-N-CA	8.42	129.74	119.98
45	BN	87	LEU	N-CA-C	8.42	120.23	111.14
26	B1	91	LYS	N-CA-C	-8.41	101.01	111.11
24	AY	126	GLU	N-CA-C	-8.41	102.92	113.01
35	BA	2172	U	C2'-C3'-O3'	8.40	122.10	109.50
4	AD	67	ILE	CB-CA-C	-8.39	101.05	112.04
47	BP	116	GLY	N-CA-C	8.38	121.27	111.63
1	AA	1190	G	N9-C1'-C2'	8.38	124.57	112.00
35	BA	1799	G	C4'-C3'-O3'	8.37	121.96	109.40
31	B6	40	CYS	CA-C-N	8.36	130.29	119.84
31	B6	40	CYS	C-N-CA	8.36	130.29	119.84
32	B7	27	GLY	N-CA-C	-8.36	102.29	113.24
38	BD	53	PHE	N-CA-C	8.36	123.03	111.74
51	BT	25	GLY	O-C-N	8.34	126.52	121.85
51	BT	30	VAL	N-CA-C	8.33	126.66	109.34
47	BP	51	PHE	N-CA-C	8.32	122.77	109.79
7	AG	145	ALA	N-CA-C	-8.32	99.55	110.53
35	BA	2343	C	N1-C1'-C2'	8.30	124.45	112.00
16	AP	79	VAL	N-CA-C	8.29	119.08	110.62
1	AA	1531	A	C2'-C3'-O3'	-8.28	97.09	109.50
8	AH	38	ILE	CB-CA-C	-8.28	101.51	111.94
26	B1	5	CYS	N-CA-C	8.26	123.25	110.20
1	AA	480	U	C4'-C3'-O3'	-8.25	100.62	113.00
8	AH	125	ARG	N-CA-C	-8.24	101.84	112.23
35	BA	503	A	C2'-C3'-O3'	8.24	121.85	109.50
13	AM	82	MET	N-CA-C	-8.19	102.59	112.59
24	AY	260	LEU	N-CA-C	8.19	119.43	107.88
35	BA	1838	C	C2'-C3'-O3'	8.19	121.78	109.50
2	AB	154	LEU	N-CA-C	-8.17	103.43	113.15
24	AY	329	ARG	NE-CZ-NH1	-8.17	113.33	121.50
41	BG	98	ARG	N-CA-C	-8.15	102.33	111.71
8	AH	71	GLY	CA-C-N	-8.15	112.46	120.52
8	AH	71	GLY	C-N-CA	-8.15	112.46	120.52
24	AY	433	GLU	N-CA-C	-8.15	103.47	113.41
3	AC	109	PRO	N-CA-C	-8.14	103.48	113.98
43	BK	46	ALA	N-CA-C	-8.13	103.34	113.18
40	BF	106	ARG	N-CA-C	-8.12	102.83	112.89
1	AA	687	A	C3'-C2'-O2'	-8.11	102.44	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	BD	261	LYS	N-CA-C	8.10	122.17	110.10
57	BZ	76	LEU	N-CA-C	8.10	122.75	109.96
35	BA	945	A	N9-C1'-C2'	8.08	126.11	114.00
57	BZ	52	SER	CB-CA-C	-8.05	105.06	116.34
41	BG	20	ILE	N-CA-C	-8.05	102.85	110.42
40	BF	26	ALA	N-CA-C	-8.04	101.59	111.40
49	BR	10	LEU	N-CA-C	8.04	121.20	107.93
1	AA	243	A	C2'-C3'-O3'	8.04	121.56	109.50
35	BA	739	G	C4'-C3'-O3'	8.01	121.42	109.40
1	AA	1111	A	C3'-C2'-O2'	7.98	122.67	110.70
24	AY	219	VAL	N-CA-C	-7.97	103.09	110.82
52	BU	57	PHE	N-CA-C	-7.97	102.68	111.36
3	AC	167	TRP	CA-C-O	7.94	123.33	118.33
2	AB	209	ARG	O-C-N	7.93	130.28	122.03
29	B4	55	ARG	N-CA-C	-7.90	100.77	110.88
35	BA	817	C	C4'-C3'-C2'	-7.88	94.72	102.60
4	AD	8	VAL	N-CA-CB	7.87	118.09	111.64
47	BP	54	GLY	N-CA-C	-7.87	104.15	115.64
1	AA	6	G	C4'-C3'-O3'	-7.83	101.26	113.00
20	AT	13	LEU	N-CA-C	-7.82	102.99	112.54
4	AD	114	ARG	NE-CZ-NH2	7.82	126.24	119.20
24	AY	236	GLU	CA-C-N	7.81	127.86	119.90
24	AY	236	GLU	C-N-CA	7.81	127.86	119.90
35	BA	1434	A	C5'-C4'-C3'	-7.79	104.32	116.00
20	AT	94	ALA	N-CA-C	-7.77	102.63	113.20
24	AY	539	ILE	N-CA-CB	7.77	115.40	110.50
1	AA	314	C	O4'-C4'-C3'	7.77	111.77	104.00
35	BA	1212	G	C4'-C3'-O3'	7.75	121.03	109.40
51	BT	80	SER	N-CA-C	7.75	126.95	109.81
44	BL	101	ASP	CA-CB-CG	7.75	120.35	112.60
47	BP	53	GLY	N-CA-C	-7.75	94.82	113.18
50	BS	16	ASN	N-CA-C	-7.73	103.67	113.72
39	BE	137	HIS	CA-C-N	7.69	127.34	119.19
39	BE	137	HIS	C-N-CA	7.69	127.34	119.19
42	BH	57	ASP	CA-CB-CG	-7.69	104.91	112.60
35	BA	1156	A	C1'-C2'-O2'	-7.68	100.28	111.80
35	BA	315	G	C5'-C4'-C3'	-7.66	104.52	116.00
24	AY	166	LEU	CA-C-N	7.65	127.94	119.90
24	AY	166	LEU	C-N-CA	7.65	127.94	119.90
35	BA	129	C	C4'-C3'-O3'	-7.65	101.52	113.00
35	BA	49	A	C2'-C3'-O3'	7.65	120.97	109.50
50	BS	18	ILE	N-CA-C	-7.64	104.01	112.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	15	ILE	N-CA-C	7.63	121.57	108.90
35	BA	1818	U	C4'-C3'-O3'	-7.63	101.55	113.00
35	BA	1313	U	N1-C1'-C2'	7.62	123.43	112.00
35	BA	1558	A	C2'-C3'-O3'	7.61	120.92	109.50
41	BG	26	GLN	OE1-CD-NE2	-7.59	115.01	122.60
8	AH	22	GLU	N-CA-C	7.58	119.33	111.14
28	B3	15	TYR	CA-C-N	7.58	127.59	119.78
28	B3	15	TYR	C-N-CA	7.58	127.59	119.78
9	AI	36	TYR	N-CA-C	-7.58	103.83	113.23
31	B6	9	LEU	N-CA-C	7.58	126.95	110.80
24	AY	151	ARG	NE-CZ-NH2	7.58	126.02	119.20
57	BZ	157	LEU	CA-C-N	7.58	128.18	120.38
57	BZ	157	LEU	C-N-CA	7.58	128.18	120.38
2	AB	56	ARG	N-CA-C	-7.56	102.97	111.14
35	BA	1584	C	N1-C1'-C2'	7.55	123.33	112.00
53	BV	68	LYS	N-CA-C	-7.55	100.58	110.33
40	BF	191	ARG	NE-CZ-NH2	7.54	125.98	119.20
41	BG	3	LEU	N-CA-C	-7.53	103.47	114.39
11	AK	40	ILE	CB-CA-C	-7.53	104.07	111.30
40	BF	45	ARG	NE-CZ-NH2	7.53	125.97	119.20
35	BA	1237	A	C2'-C3'-O3'	7.51	120.76	109.50
35	BA	2111	C	C4'-C3'-O3'	7.51	120.66	109.40
41	BG	118	ARG	NE-CZ-NH1	-7.50	114.00	121.50
35	BA	1897	G	C4'-C3'-O3'	-7.49	101.77	113.00
52	BU	14	HIS	N-CA-C	7.47	119.50	111.36
1	AA	438	G	C4'-C3'-O3'	7.46	120.59	109.40
2	AB	233	SER	CA-C-N	-7.45	112.24	120.14
2	AB	233	SER	C-N-CA	-7.45	112.24	120.14
1	AA	250	A	O4'-C1'-C2'	7.45	113.25	105.80
39	BE	39	PRO	N-CA-C	-7.43	105.06	114.35
35	BA	614(A)	U	N1-C1'-C2'	7.43	123.14	112.00
39	BE	44	TYR	N-CA-C	7.43	126.62	110.80
47	BP	64	LYS	N-CA-C	-7.43	103.95	113.16
35	BA	2799	C	C4'-C3'-O3'	7.42	120.53	109.40
35	BA	1237	A	N9-C1'-C2'	7.42	125.13	114.00
20	AT	55	ILE	CB-CA-C	-7.42	102.33	112.04
37	BC	88	GLU	N-CA-C	-7.42	103.28	111.36
1	AA	330	C	C5'-C4'-C3'	-7.42	104.88	116.00
1	AA	1084	G	C4'-C3'-O3'	-7.40	101.90	113.00
27	B2	71	ASN	OD1-CG-ND2	-7.40	115.20	122.60
13	AM	84	ILE	N-CA-C	-7.39	103.25	110.72
24	AY	122	TRP	N-CA-C	7.39	118.97	111.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	B2	54	LYS	N-CA-C	-7.39	103.16	111.14
55	BX	27	THR	N-CA-C	7.38	122.53	107.69
8	AH	99	GLU	N-CA-C	7.38	122.57	112.90
5	AE	61	TYR	N-CA-C	-7.38	103.26	111.82
31	B6	17	LYS	N-CA-C	-7.38	101.78	111.74
1	AA	250	A	C2'-C3'-O3'	7.38	120.56	109.50
8	AH	52	ASP	CA-CB-CG	7.38	119.98	112.60
20	AT	88	VAL	CB-CA-C	-7.37	102.37	112.02
45	BN	27	ALA	N-CA-C	-7.36	104.44	113.19
49	BR	78	LYS	N-CA-C	-7.34	103.42	112.38
1	AA	1135	U	N1-C1'-C2'	7.34	123.00	112.00
35	BA	1061	U	C2'-C3'-O3'	-7.34	102.70	113.70
52	BU	70	ARG	N-CA-C	-7.33	103.80	112.89
38	BD	136	ILE	CB-CA-C	-7.33	102.35	110.78
57	BZ	21	ALA	N-CA-C	-7.33	102.98	110.97
1	AA	115	G	C4'-C3'-O3'	7.32	120.39	109.40
24	AY	557	GLY	CA-C-O	7.32	125.65	118.77
35	BA	1819	A	C2'-C3'-O3'	7.32	120.48	109.50
39	BE	148	GLY	CA-C-O	7.31	127.37	119.03
35	BA	1458	C	C2'-C3'-O3'	-7.30	102.74	113.70
27	B2	28	LYS	N-CA-C	-7.28	103.33	111.71
6	AF	87	ARG	NE-CZ-NH1	-7.28	114.22	121.50
1	AA	346	G	N9-C1'-C2'	7.28	122.91	112.00
12	AL	61	THR	N-CA-C	-7.27	103.36	111.28
47	BP	40	SER	N-CA-C	-7.27	102.18	111.92
10	AJ	33	GLN	O-C-N	7.27	132.26	122.59
7	AG	57	GLU	N-CA-C	-7.27	100.60	109.83
52	BU	105	VAL	CB-CA-C	-7.26	102.19	112.22
1	AA	626	U	C5'-C4'-C3'	-7.26	105.11	116.00
8	AH	107	LEU	N-CA-C	7.25	118.83	111.07
35	BA	226	G	C4'-C3'-O3'	7.25	120.27	109.40
35	BA	2732	G	N9-C1'-C2'	7.25	122.87	112.00
54	BW	56	ALA	N-CA-C	-7.25	103.07	110.97
42	BH	145	ALA	N-CA-C	-7.22	103.10	110.97
46	BO	77	ILE	O-C-N	-7.22	115.03	123.05
45	BN	115	ARG	NE-CZ-NH1	-7.22	114.28	121.50
1	AA	1498	U	C4'-C3'-C2'	7.22	109.82	102.60
35	BA	2344	U	O4'-C1'-C2'	7.22	113.02	105.80
35	BA	675	A	N9-C1'-C2'	7.21	122.82	112.00
1	AA	734	G	C4'-C3'-O3'	-7.21	102.19	113.00
35	BA	74	A	O4'-C1'-C2'	7.21	113.01	105.80
49	BR	109	ALA	N-CA-C	7.19	121.16	109.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	BO	47	ILE	CA-C-N	7.19	128.82	119.84
46	BO	47	ILE	C-N-CA	7.19	128.82	119.84
3	AC	173	VAL	CA-C-N	7.18	128.82	119.84
3	AC	173	VAL	C-N-CA	7.18	128.82	119.84
7	AG	68	ASN	CA-CB-CG	7.18	119.78	112.60
40	BF	68	LYS	CA-C-O	-7.17	115.69	119.77
9	AI	120	ARG	NE-CZ-NH1	-7.16	114.34	121.50
43	BK	98	ARG	N-CA-C	7.16	119.45	108.42
26	B1	64	ALA	N-CA-C	-7.15	104.54	113.55
35	BA	2026	C	C5'-C4'-C3'	-7.15	105.28	116.00
49	BR	86	ARG	NE-CZ-NH2	7.15	125.63	119.20
33	B8	12	LYS	N-CA-C	7.15	121.69	113.19
1	AA	946	A	C4'-C3'-O3'	-7.13	102.31	113.00
40	BF	65	TRP	CA-C-N	7.13	128.75	119.84
40	BF	65	TRP	C-N-CA	7.13	128.75	119.84
1	AA	7	G	C5'-C4'-C3'	-7.12	104.51	115.20
17	AQ	11	VAL	N-CA-C	-7.12	106.36	113.20
1	AA	167	G	C4'-C3'-O3'	-7.12	102.31	113.00
5	AE	26	PHE	N-CA-C	7.12	120.89	109.86
18	AR	37	VAL	N-CA-C	7.12	124.15	109.34
1	AA	1201	A	C2'-C3'-O3'	7.11	120.17	109.50
37	BC	51	ASP	CA-C-N	7.10	126.59	118.85
37	BC	51	ASP	C-N-CA	7.10	126.59	118.85
35	BA	2778	A	C3'-C2'-C1'	7.10	108.60	101.50
41	BG	159	VAL	N-CA-C	7.10	118.56	107.28
2	AB	133	LYS	N-CA-C	-7.09	103.24	110.97
35	BA	2524	G	O4'-C1'-C2'	-7.09	100.51	107.60
35	BA	1652	A	N9-C1'-C2'	7.09	122.63	112.00
14	AN	23	ARG	NE-CZ-NH1	-7.08	114.42	121.50
1	AA	194	C	N1-C1'-C2'	7.08	122.62	112.00
43	BK	121	GLU	N-CA-C	-7.08	103.90	112.54
41	BG	180	PHE	N-CA-C	7.08	121.16	107.71
5	AE	150	ARG	N-CA-C	-7.06	104.40	113.16
14	AN	49	HIS	O-C-N	7.06	129.61	122.12
13	AM	101	GLN	N-CA-C	7.06	117.81	108.07
1	AA	1363	C	N1-C1'-C2'	7.05	122.58	112.00
12	AL	70	ILE	CA-C-N	7.05	128.66	119.84
12	AL	70	ILE	C-N-CA	7.05	128.66	119.84
35	BA	752	A	C4'-C3'-C2'	7.05	109.65	102.60
35	BA	2519	U	C1'-C2'-O2'	-7.04	101.25	111.80
41	BG	60	LEU	N-CA-C	-7.02	104.83	113.19
47	BP	41	ARG	N-CA-C	-7.02	94.75	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	BH	139	GLN	N-CA-C	-7.01	103.82	112.38
47	BP	62	LEU	N-CA-C	7.00	118.54	109.64
10	AJ	95	GLU	N-CA-C	7.00	121.08	108.69
35	BA	221	A	C2'-C3'-O3'	7.00	119.99	109.50
19	AS	37	ARG	N-CA-C	6.99	121.83	113.16
35	BA	1669	A	N9-C1'-C2'	6.99	122.48	112.00
35	BA	353	G	C3'-C2'-O2'	6.98	121.17	110.70
8	AH	44	PHE	CA-C-N	-6.98	113.54	123.03
8	AH	44	PHE	C-N-CA	-6.98	113.54	123.03
9	AI	32	ASP	CA-CB-CG	6.97	119.58	112.60
35	BA	788	A	N9-C1'-C2'	6.97	122.46	112.00
35	BA	2491	U	C5'-C4'-C3'	-6.97	105.54	116.00
3	AC	200	ALA	CA-C-N	-6.97	112.94	122.77
3	AC	200	ALA	C-N-CA	-6.97	112.94	122.77
35	BA	133	C	C3'-C2'-O2'	6.96	121.14	110.70
44	BL	73	ARG	NE-CZ-NH1	-6.96	114.54	121.50
1	AA	1458	G	C5'-C4'-C3'	-6.96	105.57	116.00
2	AB	117	GLU	N-CA-C	-6.96	103.43	112.68
35	BA	2251	G	N9-C1'-C2'	6.95	122.43	112.00
37	BC	226	ASN	CA-C-N	6.94	128.52	119.84
37	BC	226	ASN	C-N-CA	6.94	128.52	119.84
39	BE	183	LEU	N-CA-C	6.93	120.96	109.46
35	BA	2689	U	C4'-C3'-O3'	6.93	119.79	109.40
52	BU	15	LYS	N-CA-C	-6.92	104.09	112.54
45	BN	104	LYS	N-CA-C	-6.92	103.94	112.38
35	BA	529	A	C5'-C4'-C3'	6.92	125.57	115.20
51	BT	31	SER	CA-C-O	6.91	128.06	120.80
49	BR	59	ASP	CA-CB-CG	6.91	119.51	112.60
21	AU	22	ARG	CA-C-N	6.90	126.89	119.78
21	AU	22	ARG	C-N-CA	6.90	126.89	119.78
2	AB	157	ARG	NE-CZ-NH1	-6.90	114.60	121.50
8	AH	13	ILE	CB-CA-C	-6.89	102.89	111.92
51	BT	36	GLU	N-CA-CB	-6.89	101.82	112.30
35	BA	2610	C	O4'-C1'-C2'	6.89	112.69	105.80
24	AY	538	TYR	N-CA-C	6.89	121.77	113.23
40	BF	54	ARG	NE-CZ-NH1	-6.88	114.62	121.50
41	BG	56	ALA	N-CA-C	-6.88	104.61	112.87
39	BE	13	ARG	NE-CZ-NH1	-6.87	114.63	121.50
35	BA	1280	G	O4'-C1'-C2'	-6.87	100.73	107.60
6	AF	60	PHE	N-CA-C	6.86	121.49	109.96
2	AB	135	GLN	CA-C-O	-6.86	113.56	120.90
42	BH	167	GLU	N-CA-C	6.86	119.30	110.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	AG	140	ASP	CA-CB-CG	6.85	119.45	112.60
39	BE	135	HIS	N-CA-C	6.85	118.74	111.28
24	AY	12	LEU	N-CA-C	6.84	120.81	109.46
39	BE	119	ARG	NE-CZ-NH2	6.84	125.35	119.20
54	BW	30	GLU	N-CA-C	-6.84	103.44	111.03
24	AY	391	GLY	CA-C-O	-6.83	113.16	122.31
35	BA	474	G	C2'-C3'-O3'	6.83	119.75	109.50
51	BT	125	ARG	N-CA-C	-6.83	103.76	111.07
52	BU	28	ARG	NE-CZ-NH2	6.83	125.35	119.20
35	BA	1252	G	N9-C1'-C2'	6.83	122.24	112.00
6	AF	38	GLU	CA-C-O	-6.83	115.27	120.19
24	AY	90	PHE	CA-CB-CG	6.83	120.63	113.80
35	BA	614(C)	A	C2'-C3'-O3'	6.82	119.74	109.50
45	BN	109	LYS	N-CA-C	6.82	120.08	111.69
48	BQ	31	ASP	N-CA-C	-6.82	105.59	114.04
15	AO	65	ARG	NE-CZ-NH1	-6.81	114.69	121.50
24	AY	576	ASP	N-CA-C	6.80	118.70	111.28
39	BE	63	LEU	N-CA-C	-6.80	104.45	112.89
12	AL	93	LEU	O-C-N	6.80	127.58	121.19
12	AL	119	LYS	N-CA-C	-6.79	99.53	110.32
16	AP	67	THR	N-CA-C	-6.79	101.57	110.53
35	BA	1020	A	C2'-C3'-O3'	6.79	123.88	113.70
38	BD	192	THR	N-CA-C	6.78	119.99	109.07
35	BA	654(V)	A	N9-C1'-C2'	6.77	122.16	112.00
36	BB	102	A	C5'-C4'-C3'	-6.76	105.86	116.00
38	BD	108	PRO	CA-C-N	6.76	130.35	120.82
38	BD	108	PRO	C-N-CA	6.76	130.35	120.82
35	BA	2401	U	O4'-C4'-C3'	6.75	110.75	104.00
43	BK	47	ASN	CA-CB-CG	-6.75	105.85	112.60
6	AF	10	LEU	N-CA-C	6.75	120.51	109.85
35	BA	2630	G	C5'-C4'-C3'	-6.74	105.88	116.00
43	BK	37	PHE	CA-CB-CG	6.74	120.54	113.80
35	BA	1831	G	O4'-C1'-C2'	6.73	114.33	107.60
20	AT	93	GLU	N-CA-C	-6.73	105.05	113.20
8	AH	38	ILE	N-CA-C	6.73	118.71	111.58
1	AA	1463	C	C4'-C3'-C2'	-6.72	95.88	102.60
45	BN	122	VAL	N-CA-C	6.72	118.16	108.48
1	AA	1377	A	C5'-C4'-O4'	-6.72	99.72	109.80
6	AF	50	TYR	CA-C-N	6.72	128.24	119.84
6	AF	50	TYR	C-N-CA	6.72	128.24	119.84
26	B1	50	ARG	NE-CZ-NH1	-6.72	114.78	121.50
35	BA	913	U	C3'-C2'-O2'	-6.72	104.53	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	BG	141	PHE	CA-C-N	6.72	126.34	119.56
41	BG	141	PHE	C-N-CA	6.72	126.34	119.56
24	AY	280	LEU	CA-C-N	6.71	126.73	119.89
24	AY	280	LEU	C-N-CA	6.71	126.73	119.89
18	AR	32	ARG	N-CA-C	-6.71	106.04	114.56
51	BT	29	ARG	CA-C-N	6.71	134.04	121.97
51	BT	29	ARG	C-N-CA	6.71	134.04	121.97
35	BA	963	U	C1'-O4'-C4'	-6.70	103.20	109.90
17	AQ	38	ARG	NE-CZ-NH2	6.69	125.22	119.20
40	BF	194	MET	N-CA-C	6.69	120.08	109.50
35	BA	1188	U	C1'-O4'-C4'	-6.69	103.21	109.90
42	BH	75	ALA	N-CA-C	-6.69	104.06	111.82
42	BH	38	SER	CA-C-N	6.68	128.19	119.84
42	BH	38	SER	C-N-CA	6.68	128.19	119.84
35	BA	748	G	N9-C1'-C2'	6.67	122.01	112.00
57	BZ	120	ILE	CB-CA-C	-6.67	100.34	111.29
50	BS	20	ARG	NE-CZ-NH1	-6.67	114.83	121.50
35	BA	1654	A	C4'-C3'-C2'	-6.67	95.93	102.60
31	B6	26	ASN	CA-CB-CG	6.67	119.27	112.60
28	B3	47	VAL	CB-CA-C	-6.66	103.31	112.04
39	BE	58	ARG	CA-C-O	6.66	125.85	118.52
7	AG	106	GLN	N-CA-C	6.66	119.37	111.71
2	AB	200	ILE	N-CA-C	6.66	118.70	109.45
39	BE	19	ARG	O-C-N	-6.65	114.52	123.10
49	BR	25	ALA	N-CA-C	-6.65	103.84	112.68
1	AA	1488	G	C1'-C2'-O2'	6.65	118.37	108.40
24	AY	533	VAL	N-CA-C	-6.64	102.32	111.89
53	BV	82	ARG	NE-CZ-NH2	6.64	125.17	119.20
35	BA	284	U	C3'-C2'-C1'	6.63	107.93	101.30
12	AL	12	ARG	NE-CZ-NH1	-6.63	114.87	121.50
40	BF	130	ALA	N-CA-C	-6.63	103.98	111.07
8	AH	110	ALA	CA-C-N	6.62	129.38	120.50
8	AH	110	ALA	C-N-CA	6.62	129.38	120.50
27	B2	15	LYS	CA-C-N	-6.62	111.66	121.99
27	B2	15	LYS	C-N-CA	-6.62	111.66	121.99
3	AC	108	ASN	CA-C-N	6.62	126.30	119.82
3	AC	108	ASN	C-N-CA	6.62	126.30	119.82
35	BA	2033	A	O4'-C1'-C2'	6.61	112.41	105.80
49	BR	81	ASP	CA-CB-CG	-6.61	105.99	112.60
33	B8	4	MET	O-C-N	6.61	131.28	122.82
1	AA	118	U	O3'-P-O5'	6.60	113.91	104.00
35	BA	2779	U	C5'-C4'-C3'	-6.60	105.30	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	120	U	O4'-C1'-N1	6.60	118.10	108.20
38	BD	17	THR	N-CA-C	-6.59	99.92	110.14
1	AA	1457	G	N9-C1'-C2'	-6.59	102.11	112.00
17	AQ	62	SER	N-CA-C	6.59	118.15	108.86
35	BA	2296	U	C4'-C3'-O3'	6.59	119.28	109.40
45	BN	130	HIS	CA-CB-CG	6.58	120.38	113.80
35	BA	1351	C	C5'-C4'-C3'	-6.58	106.13	116.00
35	BA	2835	A	N9-C1'-C2'	6.58	121.87	112.00
24	AY	272	LEU	N-CA-C	-6.58	103.94	112.23
51	BT	103	ARG	NE-CZ-NH1	-6.58	114.92	121.50
24	AY	381	LYS	N-CA-C	-6.57	104.44	113.18
35	BA	1495	A	N9-C1'-C2'	6.57	121.86	112.00
27	B2	8	LYS	N-CA-C	-6.57	103.74	111.03
31	B6	51	GLU	N-CA-C	-6.57	102.33	110.41
1	AA	588	G	O4'-C1'-N9	6.56	118.34	108.50
35	BA	1912	A	N9-C1'-C2'	6.56	121.84	112.00
18	AR	44	LEU	N-CA-C	6.56	118.91	110.65
3	AC	88	ARG	N-CA-C	-6.56	104.17	111.71
30	B5	30	LEU	N-CA-C	6.55	119.78	110.14
35	BA	2194	G	C2'-C3'-O3'	-6.55	103.87	113.70
35	BA	332	A	C2'-C3'-O3'	6.55	119.33	109.50
35	BA	1225	G	N9-C1'-C2'	6.54	121.81	112.00
1	AA	90	U	C3'-C2'-C1'	6.54	107.84	101.30
24	AY	607	ARG	N-CA-C	-6.54	98.55	109.07
4	AD	15	GLU	N-CA-C	-6.54	105.03	112.87
35	BA	1963	U	O4'-C1'-C2'	6.54	112.33	105.80
35	BA	2126	A	N9-C1'-C2'	6.54	123.80	114.00
35	BA	2498	C	C4'-C3'-O3'	-6.54	103.19	113.00
38	BD	75	ILE	CA-C-O	6.53	122.78	119.12
35	BA	1459	G	N9-C1'-C2'	6.53	121.79	112.00
35	BA	1666	G	C4'-C3'-C2'	-6.53	96.08	102.60
50	BS	15	ARG	NE-CZ-NH2	6.53	125.07	119.20
35	BA	1273	U	C4'-C3'-C2'	-6.52	96.08	102.60
29	B4	28	LYS	CA-C-N	6.52	127.99	119.84
29	B4	28	LYS	C-N-CA	6.52	127.99	119.84
52	BU	100	VAL	N-CA-C	-6.52	104.67	111.58
1	AA	571	U	C4'-C3'-O3'	-6.52	103.22	113.00
3	AC	176	HIS	CE1-NE2-CD2	6.52	115.52	109.00
24	AY	96	ARG	NE-CZ-NH2	6.52	125.07	119.20
35	BA	1095	A	N9-C1'-C2'	6.51	121.77	112.00
31	B6	30	THR	N-CA-C	-6.51	100.57	110.01
35	BA	1899	G	C4'-C3'-O3'	-6.51	103.23	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	AF	48	LEU	CA-C-O	-6.50	114.04	121.72
40	BF	170	LEU	CA-C-N	6.50	127.34	120.12
40	BF	170	LEU	C-N-CA	6.50	127.34	120.12
35	BA	1997	G	C5'-C4'-C3'	6.50	125.75	116.00
43	BK	44	ALA	N-CA-C	-6.50	105.17	113.23
6	AF	100	ASN	N-CA-C	-6.49	102.97	111.74
4	AD	162	LEU	N-CA-C	-6.49	105.22	113.01
35	BA	2729	G	O4'-C4'-C3'	6.49	110.49	104.00
42	BH	138	LYS	N-CA-C	-6.49	96.98	110.80
1	AA	587	G	C4'-C3'-C2'	6.48	109.08	102.60
4	AD	24	GLU	N-CA-C	6.48	118.03	110.97
35	BA	2103	C	C3'-C2'-O2'	6.47	120.41	110.70
37	BC	39	ASP	CA-C-O	-6.47	114.93	122.37
1	AA	1441	G	C4'-C3'-O3'	-6.47	103.30	113.00
33	B8	13	ARG	NE-CZ-NH2	6.47	125.02	119.20
49	BR	101	ALA	N-CA-C	-6.47	102.46	110.41
35	BA	1301	A	C2'-C3'-O3'	6.46	119.20	109.50
35	BA	908	C	C2'-C3'-O3'	-6.46	104.02	113.70
35	BA	1241	A	O4'-C4'-C3'	-6.46	97.54	104.00
24	AY	100	VAL	N-CA-C	6.45	116.56	110.30
39	BE	121	ASN	CA-CB-CG	-6.45	106.15	112.60
46	BO	77	ILE	CA-C-O	6.45	127.86	120.76
35	BA	577	G	C1'-C2'-O2'	6.44	118.06	108.40
1	AA	895	G	C4'-C3'-O3'	-6.44	103.34	113.00
5	AE	69	VAL	CA-C-N	6.44	127.89	119.84
5	AE	69	VAL	C-N-CA	6.44	127.89	119.84
35	BA	606	U	O4'-C4'-C3'	6.44	110.44	104.00
41	BG	91	ARG	N-CA-C	6.43	118.63	108.79
45	BN	39	ARG	CA-C-N	6.43	127.88	119.84
45	BN	39	ARG	C-N-CA	6.43	127.88	119.84
39	BE	164	ARG	N-CA-C	6.43	118.92	108.63
51	BT	111	ARG	NE-CZ-NH1	6.43	127.93	121.50
37	BC	5	GLY	N-CA-C	6.43	119.40	112.33
35	BA	1236	G	N9-C1'-C2'	6.42	121.64	112.00
8	AH	124	ALA	N-CA-C	6.42	120.72	113.01
45	BN	114	ARG	N-CA-C	-6.42	105.10	113.12
40	BF	205	ARG	NE-CZ-NH1	-6.42	115.08	121.50
1	AA	303	A	C5'-C4'-C3'	-6.41	106.38	116.00
49	BR	104	ARG	NE-CZ-NH1	-6.41	115.09	121.50
3	AC	192	THR	CA-C-O	-6.40	113.76	120.55
35	BA	128	C	C3'-C2'-O2'	6.40	120.30	110.70
42	BH	121	ILE	N-CA-C	6.40	117.51	108.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	38	ARG	N-CA-C	-6.40	104.96	112.89
35	BA	1141	U	N1-C1'-C2'	6.40	121.59	112.00
24	AY	278	ASP	N-CA-C	6.39	119.94	111.75
35	BA	990	A	C5'-C4'-O4'	-6.39	100.21	109.80
35	BA	1520	G	C4'-C3'-C2'	-6.39	96.21	102.60
35	BA	2506	U	C2'-C3'-O3'	6.39	119.08	109.50
1	AA	30	U	N1-C1'-C2'	6.39	123.58	114.00
33	B8	18	ALA	CA-C-O	-6.39	114.11	120.82
33	B8	47	LYS	N-CA-C	6.39	118.48	108.96
35	BA	1609	A	C5'-C4'-C3'	-6.39	106.42	116.00
48	BQ	96	VAL	CB-CA-C	-6.39	104.39	111.35
2	AB	186	ALA	N-CA-C	6.38	118.84	108.76
35	BA	1528	A	C1'-C2'-O2'	-6.38	102.24	111.80
43	BK	104	VAL	N-CA-C	-6.38	104.82	111.58
35	BA	1992	G	C4'-C3'-C2'	6.37	108.97	102.60
35	BA	2198	A	C2'-C3'-O3'	6.37	119.05	109.50
35	BA	2802	G	N9-C1'-C2'	6.37	121.55	112.00
35	BA	614(C)	A	O4'-C1'-C2'	6.37	112.17	105.80
24	AY	102	ASP	CA-C-N	-6.36	115.67	122.67
24	AY	102	ASP	C-N-CA	-6.36	115.67	122.67
11	AK	15	ALA	N-CA-C	6.36	121.18	113.17
35	BA	2858	C	O4'-C1'-N1	6.36	118.03	108.50
37	BC	59	VAL	N-CA-C	6.36	117.75	108.53
5	AE	12	LEU	N-CA-C	6.36	119.48	110.14
35	BA	1022	G	C2'-C3'-O3'	6.35	119.03	109.50
57	BZ	107	THR	CA-C-O	6.35	125.78	119.49
54	BW	58	ALA	N-CA-C	-6.35	104.23	112.68
35	BA	1568	G	C4'-C3'-O3'	-6.35	103.48	113.00
15	AO	78	TYR	N-CA-C	-6.34	103.06	111.24
41	BG	55	LYS	N-CA-C	-6.34	103.67	111.40
1	AA	772	U	C4'-C3'-C2'	-6.34	96.26	102.60
5	AE	114	GLY	CA-C-O	6.34	125.29	118.95
35	BA	74	A	C4'-C3'-C2'	6.33	108.93	102.60
39	BE	59	VAL	N-CA-C	6.33	117.84	110.62
42	BH	123	PHE	N-CA-C	6.33	119.05	108.73
4	AD	187	ARG	NE-CZ-NH2	6.33	124.89	119.20
35	BA	2304	G	C4'-C3'-O3'	-6.32	103.52	113.00
54	BW	37	ARG	NE-CZ-NH2	6.32	124.89	119.20
1	AA	356	A	C2'-C3'-O3'	-6.32	104.22	113.70
27	B2	16	LEU	N-CA-C	6.32	123.87	113.89
57	BZ	49	ARG	N-CA-C	-6.32	103.53	111.11
43	BK	29	GLN	N-CA-C	-6.32	104.88	112.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	BL	61	ALA	O-C-N	6.31	129.61	122.22
29	B4	42	PHE	O-C-N	6.31	129.98	122.72
3	AC	207	VAL	CA-C-O	-6.31	110.08	120.80
5	AE	150	ARG	NE-CZ-NH2	6.30	124.87	119.20
14	AN	38	GLY	O-C-N	6.30	128.97	122.54
3	AC	75	VAL	N-CA-C	6.30	117.80	110.62
2	AB	122	PHE	N-CA-C	-6.30	104.41	111.28
35	BA	1396	U	N1-C1'-C2'	6.29	123.44	114.00
1	AA	1528	U	C2'-C3'-O3'	-6.29	100.06	109.50
29	B4	5	ILE	CB-CA-C	-6.29	100.97	111.29
1	AA	1192	C	O4'-C4'-C3'	6.29	110.29	104.00
1	AA	1195	C	C3'-C2'-O2'	6.29	120.13	110.70
37	BC	37	LYS	CA-C-O	-6.29	114.09	122.51
35	BA	1256	G	C3'-C2'-C1'	6.28	107.58	101.30
42	BH	128	PRO	N-CA-C	-6.28	104.07	114.75
38	BD	91	ARG	NE-CZ-NH1	-6.28	115.22	121.50
52	BU	59	ARG	N-CA-C	6.28	119.34	111.24
24	AY	280	LEU	CA-C-O	6.28	124.81	119.66
35	BA	243	U	C4'-C3'-O3'	-6.28	103.58	113.00
24	AY	679	VAL	CA-C-N	6.27	127.68	119.84
24	AY	679	VAL	C-N-CA	6.27	127.68	119.84
11	AK	36	ASP	CA-CB-CG	-6.27	106.33	112.60
1	AA	1206	G	C3'-C2'-O2'	6.27	120.10	110.70
5	AE	17	ALA	N-CA-C	6.27	119.47	108.75
4	AD	141	ARG	N-CA-C	-6.26	102.93	110.13
35	BA	1786	A	N9-C1'-C2'	6.26	123.40	114.00
10	AJ	46	ARG	N-CA-C	6.26	119.91	109.95
6	AF	96	PRO	N-CA-CB	-6.26	98.06	103.32
35	BA	1045	A	C4'-C3'-C2'	6.26	108.86	102.60
45	BN	2	LYS	N-CA-C	6.25	119.06	107.99
3	AC	82	GLU	N-CA-C	-6.25	106.62	114.56
1	AA	1070	U	C4'-C3'-O3'	-6.25	103.63	113.00
5	AE	150	ARG	NE-CZ-NH1	-6.25	115.25	121.50
3	AC	92	ALA	N-CA-C	-6.24	104.53	111.71
18	AR	64	ARG	N-CA-C	6.24	118.60	111.11
35	BA	1439	A	C4'-C3'-O3'	-6.24	103.64	113.00
41	BG	62	LEU	N-CA-C	-6.24	104.54	111.71
56	BY	75	ILE	N-CA-C	6.24	122.31	109.34
35	BA	654(J)	A	C3'-C2'-O2'	6.23	120.05	110.70
12	AL	94	PRO	CA-C-O	-6.23	114.56	121.23
35	BA	413	C	O5'-C5'-C4'	-6.23	102.15	111.50
35	BA	1311	G	C3'-C2'-C1'	6.23	107.73	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	BH	69	ARG	NE-CZ-NH2	6.23	124.81	119.20
48	BQ	117	ALA	N-CA-C	-6.23	104.41	111.07
1	AA	532	A	C5'-C4'-O4'	-6.23	100.46	109.80
24	AY	130	VAL	CA-C-N	6.23	128.35	120.51
24	AY	130	VAL	C-N-CA	6.23	128.35	120.51
3	AC	38	ARG	CA-C-O	6.22	126.59	119.18
7	AG	92	SER	CA-C-O	6.22	124.76	119.66
35	BA	2655	G	C1'-O4'-C4'	-6.22	103.68	109.90
1	AA	432	A	C4'-C3'-O3'	-6.22	103.67	113.00
7	AG	45	ASP	N-CA-C	-6.22	104.56	111.71
35	BA	412	A	O4'-C4'-C3'	-6.21	97.78	104.00
5	AE	24	ARG	NE-CZ-NH1	-6.21	115.29	121.50
1	AA	1248	A	P-O5'-C5'	6.21	130.21	120.90
3	AC	122	GLU	O-C-N	6.21	128.49	122.03
36	BB	11	C	N1-C1'-C2'	6.21	121.31	112.00
35	BA	1022	G	C1'-C2'-O2'	-6.21	102.49	111.80
1	AA	1065	U	C1'-C2'-O2'	-6.21	102.49	111.80
35	BA	783	A	C4'-C3'-O3'	6.21	122.31	113.00
35	BA	1903	G	C3'-C2'-C1'	6.21	107.50	101.30
1	AA	838	G	O4'-C4'-C3'	-6.20	97.80	104.00
1	AA	1068	G	C5'-C4'-C3'	6.20	125.30	116.00
20	AT	23	ARG	O-C-N	6.20	128.54	122.09
51	BT	76	PHE	CA-C-N	6.20	127.00	120.12
51	BT	76	PHE	C-N-CA	6.20	127.00	120.12
7	AG	147	ALA	CA-C-O	6.20	127.14	120.20
24	AY	598	ASP	CA-C-N	6.19	126.10	119.85
24	AY	598	ASP	C-N-CA	6.19	126.10	119.85
45	BN	124	ALA	N-CA-CB	-6.18	102.66	110.45
41	BG	89	GLY	N-CA-C	-6.18	98.53	113.18
35	BA	49	A	C4'-C3'-O3'	6.17	118.66	109.40
40	BF	107	LYS	N-CA-C	-6.17	101.63	111.02
24	AY	149	VAL	CB-CA-C	-6.17	103.94	112.02
35	BA	1132	A	C4'-C3'-O3'	-6.17	103.74	113.00
35	BA	1906	G	C1'-C2'-O2'	6.17	117.65	108.40
1	AA	635	G	C4'-C3'-C2'	-6.17	96.43	102.60
35	BA	1904	G	C5'-C4'-C3'	-6.17	106.75	116.00
40	BF	87	GLY	CA-C-O	-6.16	114.87	122.82
46	BO	22	ILE	CB-CA-C	-6.16	105.64	111.06
1	AA	1304	G	C5'-C4'-C3'	-6.16	106.76	116.00
1	AA	1361	G	C4'-C3'-O3'	-6.16	103.76	113.00
35	BA	2799	C	C4'-C3'-C2'	6.16	108.76	102.60
17	AQ	5	VAL	CB-CA-C	-6.16	104.26	111.09

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AX	14	A	C3'-C2'-O2'	6.16	119.93	110.70
39	BE	197	ILE	CA-C-O	6.16	126.34	120.25
3	AC	126	ARG	N-CA-C	-6.15	105.64	113.02
24	AY	561	VAL	N-CA-C	6.15	116.03	108.53
32	B7	20	ALA	CA-C-O	-6.15	114.55	121.00
35	BA	271(W)	G	C4'-C3'-O3'	-6.15	103.78	113.00
35	BA	1054	A	O4'-C4'-C3'	6.15	110.15	104.00
40	BF	111	ALA	N-CA-C	-6.14	104.21	111.03
35	BA	1071	G	C5'-C4'-C3'	-6.14	106.79	116.00
35	BA	1575	C	C4'-C3'-O3'	-6.14	103.79	113.00
2	AB	183	PRO	CA-C-N	-6.13	114.27	122.98
2	AB	183	PRO	C-N-CA	-6.13	114.27	122.98
35	BA	2033	A	C2'-C3'-O3'	6.13	118.70	109.50
37	BC	3	LYS	N-CA-C	-6.13	105.63	113.23
10	AJ	4	ILE	CA-C-N	-6.13	114.13	122.77
10	AJ	4	ILE	C-N-CA	-6.13	114.13	122.77
35	BA	341	G	C4'-C3'-O3'	-6.13	103.81	113.00
35	BA	1654	A	C5'-C4'-C3'	6.13	125.19	116.00
50	BS	58	LEU	CA-C-O	-6.13	115.11	122.03
1	AA	795	C	C4'-C3'-O3'	-6.12	103.81	113.00
17	AQ	73	VAL	CB-CA-C	-6.12	103.12	111.33
40	BF	121	GLY	N-CA-C	-6.12	107.80	115.08
51	BT	93	ARG	N-CA-C	-6.12	105.06	113.56
1	AA	775	G	C5'-C4'-C3'	-6.12	106.83	116.00
24	AY	149	VAL	N-CA-C	-6.11	104.78	110.53
35	BA	1086	A	O4'-C1'-C2'	6.11	113.71	107.60
35	BA	1959	G	C5'-C4'-C3'	-6.11	106.83	116.00
1	AA	499	A	C5'-C4'-C3'	-6.11	106.04	115.20
35	BA	1916	A	C5'-C4'-C3'	-6.11	106.84	116.00
35	BA	2176	A	C5'-C4'-C3'	-6.11	106.84	116.00
40	BF	174	VAL	N-CA-CB	-6.11	105.54	111.89
12	AL	99	HIS	ND1-CE1-NE2	6.10	114.50	108.40
7	AG	94	ARG	NE-CZ-NH1	-6.10	115.40	121.50
1	AA	978	A	C5'-C4'-C3'	-6.10	106.86	116.00
4	AD	182	LYS	O-C-N	6.09	129.54	122.84
35	BA	1923	U	C4'-C3'-O3'	-6.09	103.86	113.00
18	AR	35	ARG	NE-CZ-NH2	-6.09	113.72	119.20
2	AB	86	GLU	N-CA-C	-6.09	104.64	111.28
42	BH	67	LEU	N-CA-C	-6.09	101.38	111.37
1	AA	1280	A	C3'-C2'-O2'	-6.09	105.47	114.60
35	BA	454	A	C3'-C2'-C1'	6.09	107.59	101.50
35	BA	2422	A	C2'-C3'-O3'	6.09	122.83	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	827	U	C2'-C3'-O3'	-6.09	104.57	113.70
1	AA	792	A	C5'-C4'-C3'	-6.08	106.07	115.20
24	AY	685	GLU	N-CA-C	-6.08	105.82	113.18
4	AD	14	ARG	NE-CZ-NH1	-6.08	115.42	121.50
35	BA	2139	C	C5'-C4'-C3'	-6.08	106.87	116.00
53	BV	77	ALA	N-CA-C	6.08	118.56	110.53
35	BA	1020	A	O4'-C4'-C3'	6.08	110.08	104.00
2	AB	223	ILE	O-C-N	6.08	128.22	121.90
50	BS	105	ALA	CA-C-N	6.08	128.42	120.28
50	BS	105	ALA	C-N-CA	6.08	128.42	120.28
1	AA	572	A	N9-C1'-C2'	6.08	121.11	112.00
42	BH	133	VAL	N-CA-C	6.07	118.12	108.89
1	AA	661	G	C3'-C2'-C1'	-6.07	95.23	101.30
52	BU	28	ARG	N-CA-C	-6.07	105.73	113.01
35	BA	2434	A	C5'-C4'-C3'	-6.07	106.90	116.00
20	AT	57	ARG	N-CA-C	-6.06	104.74	111.71
2	AB	153	ARG	NE-CZ-NH2	6.06	124.66	119.20
38	BD	54	ARG	NE-CZ-NH1	-6.06	115.44	121.50
4	AD	41	GLY	CA-C-N	6.06	128.32	120.44
4	AD	41	GLY	C-N-CA	6.06	128.32	120.44
24	AY	584	ILE	CB-CA-C	-6.06	104.10	112.04
35	BA	2267	A	C3'-C2'-O2'	6.06	119.79	110.70
49	BR	23	ASN	CA-CB-CG	6.06	118.66	112.60
2	AB	208	ILE	N-CA-C	-6.06	103.71	110.62
35	BA	2333	A	C4'-C3'-O3'	-6.06	103.91	113.00
24	AY	413	ILE	CB-CA-C	-6.06	104.37	111.09
35	BA	1418	G	O5'-C5'-C4'	-6.06	102.42	111.50
35	BA	2302	G	C5'-C4'-C3'	-6.05	106.93	116.00
54	BW	24	ILE	N-CA-C	6.05	119.46	113.53
1	AA	722	A	C4'-C3'-O3'	-6.05	103.93	113.00
35	BA	1609	A	N9-C1'-C2'	6.05	121.07	112.00
39	BE	11	MET	N-CA-C	6.04	118.60	109.23
41	BG	63	ILE	CB-CA-C	-6.04	101.38	111.29
54	BW	77	ASP	CA-CB-CG	6.04	118.64	112.60
1	AA	1490	C	O4'-C1'-C2'	-6.04	101.56	107.60
35	BA	86	C	C1'-O4'-C4'	6.04	115.94	109.90
35	BA	2843	G	C5'-C4'-C3'	-6.04	106.94	116.00
46	BO	49	ARG	CA-C-N	6.04	126.77	121.58
46	BO	49	ARG	C-N-CA	6.04	126.77	121.58
46	BO	63	VAL	CB-CA-C	-6.04	104.73	110.70
24	AY	585	ALA	O-C-N	6.03	128.37	122.09
32	B7	5	TRP	N-CA-C	6.03	118.61	108.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1885	A	C3'-C2'-C1'	-6.03	95.27	101.30
35	BA	784	A	C3'-C2'-C1'	6.03	107.33	101.30
35	BA	2417	C	C3'-C2'-C1'	6.03	107.33	101.30
22	AV	17	C	C3'-C2'-C1'	6.03	107.33	101.30
38	BD	239	ARG	NE-CZ-NH1	-6.03	115.47	121.50
51	BT	125	ARG	CA-C-N	6.03	128.35	120.28
51	BT	125	ARG	C-N-CA	6.03	128.35	120.28
25	B0	27	GLU	N-CA-C	-6.02	102.58	110.53
35	BA	2059	A	P-O5'-C5'	-6.02	111.87	120.90
47	BP	22	GLY	CA-C-N	-6.01	112.33	119.84
47	BP	22	GLY	C-N-CA	-6.01	112.33	119.84
54	BW	17	VAL	N-CA-C	6.01	116.13	110.30
35	BA	1992	G	C4'-C3'-O3'	6.01	118.41	109.40
24	AY	154	GLN	OE1-CD-NE2	6.01	128.61	122.60
35	BA	2295	C	C4'-C3'-O3'	-6.01	103.99	113.00
50	BS	23	ARG	NE-CZ-NH2	6.01	124.61	119.20
56	BY	68	HIS	O-C-N	6.01	130.26	122.87
24	AY	523	PHE	CA-CB-CG	6.00	119.80	113.80
35	BA	1849	G	C5'-C4'-C3'	-6.00	107.00	116.00
35	BA	2871	C	C2'-C3'-O3'	-6.00	104.70	113.70
1	AA	1502	A	C3'-C2'-O2'	-6.00	105.61	114.60
35	BA	545	C	N1-C1'-C2'	6.00	121.00	112.00
35	BA	1818	U	N1-C1'-C2'	6.00	120.99	112.00
35	BA	2041	U	O3'-P-O5'	-6.00	95.01	104.00
15	AO	9	GLN	N-CA-C	-5.99	104.38	111.03
40	BF	54	ARG	CA-C-O	5.99	126.65	119.10
52	BU	63	VAL	CB-CA-C	-5.99	104.05	112.14
35	BA	311	A	O3'-P-O5'	-5.99	95.01	104.00
35	BA	669	G	C3'-C2'-C1'	5.99	107.49	101.50
35	BA	2801(A)	A	C4'-C3'-O3'	-5.99	104.02	113.00
24	AY	427	ALA	CA-C-O	-5.98	114.02	121.02
39	BE	91	VAL	CB-CA-C	-5.98	103.38	111.15
35	BA	271(C)	C	O5'-C5'-C4'	-5.97	102.54	111.50
35	BA	745	G	N9-C1'-C2'	5.97	120.96	112.00
1	AA	1493	A	C2'-C3'-O3'	5.97	118.46	109.50
27	B2	71	ASN	N-CA-C	-5.97	106.61	114.31
35	BA	378	C	C2'-C3'-O3'	5.97	122.66	113.70
35	BA	1359	A	C1'-C2'-O2'	5.97	117.36	108.40
36	BB	23	G	C1'-C2'-O2'	5.97	117.35	108.40
2	AB	208	ILE	O-C-N	5.97	127.74	121.89
35	BA	1718	G	C5'-C4'-C3'	-5.97	107.05	116.00
56	BY	24	VAL	N-CA-C	5.97	121.75	109.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
47	BP	22	GLY	O-C-N	-5.96	115.81	121.77
1	AA	1225	A	C4'-C3'-O3'	5.96	118.34	109.40
18	AR	66	LEU	N-CA-C	-5.96	104.70	111.14
27	B2	6	VAL	N-CA-C	5.96	116.14	110.42
1	AA	608	A	C3'-C2'-O2'	5.96	119.64	110.70
35	BA	2551	C	C1'-C2'-O2'	-5.96	99.47	108.40
50	BS	13	ARG	NE-CZ-NH1	-5.96	115.55	121.50
1	AA	326	G	O4'-C4'-C3'	5.95	109.95	104.00
35	BA	1835	G	C5'-C4'-C3'	-5.95	107.07	116.00
38	BD	91	ARG	N-CA-C	-5.95	98.94	109.06
1	AA	150	C	N1-C1'-C2'	5.95	120.93	112.00
13	AM	104	ARG	NE-CZ-NH2	5.95	124.56	119.20
35	BA	944	G	N9-C1'-C2'	5.95	120.93	112.00
39	BE	190	GLY	CA-C-N	5.95	127.28	120.85
39	BE	190	GLY	C-N-CA	5.95	127.28	120.85
1	AA	366	C	C4'-C3'-O3'	5.95	118.32	109.40
43	BK	122	ALA	N-CA-C	-5.95	105.02	112.93
40	BF	68	LYS	O-C-N	5.94	125.23	120.83
22	AV	43	A	C3'-C2'-O2'	5.94	119.61	110.70
35	BA	924	C	C5'-C4'-C3'	-5.94	107.09	116.00
42	BH	61	HIS	N-CA-C	5.94	117.45	110.97
13	AM	5	ALA	CA-C-N	-5.94	116.39	122.27
13	AM	5	ALA	C-N-CA	-5.94	116.39	122.27
53	BV	20	LEU	N-CA-C	-5.94	103.05	108.75
24	AY	487	ILE	N-CA-C	5.94	115.78	108.53
35	BA	1498	C	C3'-C2'-O2'	5.94	119.61	110.70
8	AH	84	ARG	NE-CZ-NH1	-5.94	115.56	121.50
35	BA	1603	A	C4'-C3'-O3'	-5.94	104.09	113.00
35	BA	1762	A	C2'-C3'-O3'	-5.93	104.80	113.70
1	AA	1024	G	N9-C1'-C2'	5.93	120.90	112.00
24	AY	526	VAL	N-CA-C	5.93	117.44	107.18
35	BA	467	G	C4'-C3'-C2'	-5.93	96.67	102.60
35	BA	2191	G	C4'-C3'-O3'	-5.93	104.10	113.00
35	BA	961	C	C5'-C4'-C3'	5.93	124.10	115.20
54	BW	20	VAL	N-CA-C	-5.93	105.34	110.74
27	B2	33	MET	O-C-N	5.93	128.26	122.09
1	AA	964	A	C4'-C3'-C2'	5.93	108.53	102.60
22	AV	19	G	C2'-C3'-O3'	-5.93	100.61	109.50
24	AY	19	ALA	CA-C-O	-5.93	112.03	120.51
56	BY	35	TYR	N-CA-C	5.93	119.53	111.17
35	BA	1987	G	C5'-C4'-C3'	-5.92	107.11	116.00
50	BS	89	ARG	NH1-CZ-NH2	-5.92	111.60	119.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	2507	C	C3'-C2'-O2'	5.92	119.58	110.70
1	AA	438	G	C1'-C2'-O2'	-5.92	102.92	111.80
1	AA	1325	C	C1'-C2'-O2'	5.92	117.28	108.40
1	AA	728	A	C2'-C3'-O3'	5.92	122.58	113.70
35	BA	2712(A)	A	C2'-C3'-O3'	-5.91	104.83	113.70
4	AD	196	LEU	CA-C-N	5.91	127.23	119.84
4	AD	196	LEU	C-N-CA	5.91	127.23	119.84
35	BA	1379	A	N9-C1'-C2'	5.91	122.87	114.00
35	BA	2450	A	O4'-C4'-C3'	5.91	109.91	104.00
1	AA	189(C)	C	C3'-C2'-O2'	5.91	119.56	110.70
35	BA	906	G	C5'-C4'-C3'	-5.91	107.14	116.00
45	BN	84	LYS	CA-C-O	5.91	126.68	120.36
35	BA	1139	G	C5'-C4'-C3'	5.90	124.85	116.00
1	AA	1348	U	O4'-C1'-C2'	5.90	113.50	107.60
24	AY	96	ARG	NE-CZ-NH1	-5.89	115.61	121.50
47	BP	15	ARG	N-CA-C	5.89	118.06	108.63
1	AA	811	C	C4'-C3'-O3'	-5.89	104.16	113.00
4	AD	136	PRO	N-CA-C	-5.89	105.69	113.65
5	AE	100	VAL	N-CA-CB	5.89	117.72	111.00
35	BA	614(A)	U	C5'-C4'-O4'	-5.89	100.96	109.80
35	BA	2730	C	C4'-C3'-C2'	5.89	108.49	102.60
50	BS	30	ARG	NE-CZ-NH1	-5.89	115.61	121.50
2	AB	14	GLY	CA-C-O	-5.89	114.64	121.00
1	AA	869	G	C3'-C2'-O2'	5.89	119.53	110.70
11	AK	38	ASN	CA-C-N	5.89	126.23	119.93
11	AK	38	ASN	C-N-CA	5.89	126.23	119.93
1	AA	925	G	C5'-C4'-C3'	-5.89	107.17	116.00
38	BD	44	ASN	N-CA-C	5.88	116.32	108.38
32	B7	47	ARG	O-C-N	5.88	129.28	123.46
1	AA	353	A	C1'-O4'-C4'	5.88	115.78	109.90
3	AC	167	TRP	CB-CA-C	-5.88	107.88	116.53
35	BA	271(J)	C	O5'-C5'-C4'	-5.88	102.68	111.50
35	BA	506	G	O5'-C5'-C4'	-5.88	102.88	111.70
35	BA	2501	C	C4'-C3'-O3'	-5.88	104.18	113.00
35	BA	1406	U	O5'-C5'-C4'	-5.88	102.69	111.50
35	BA	2720	U	O4'-C4'-C3'	5.88	109.88	104.00
1	AA	1267	C	C4'-C3'-C2'	-5.87	96.73	102.60
35	BA	352	G	O4'-C4'-C3'	5.87	109.87	104.00
35	BA	1307	A	C4'-C3'-O3'	-5.87	104.19	113.00
1	AA	243	A	C5'-C4'-C3'	-5.87	106.40	115.20
30	B5	57	VAL	N-CA-C	5.87	121.55	109.34
1	AA	253	U	C4'-C3'-C2'	-5.86	96.74	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	403	C	C3'-C2'-O2'	5.86	119.50	110.70
1	AA	1465	C	O4'-C1'-C2'	-5.86	101.74	107.60
24	AY	140	ASP	CA-CB-CG	5.86	118.46	112.60
35	BA	1758	G	N9-C1'-C2'	5.86	122.79	114.00
24	AY	397	VAL	N-CA-C	5.86	118.19	109.17
24	AY	677	GLN	CA-C-N	5.86	130.04	121.31
24	AY	677	GLN	C-N-CA	5.86	130.04	121.31
46	BO	87	ILE	N-CA-CB	-5.86	105.58	112.32
35	BA	2195	C	C1'-O4'-C4'	-5.86	104.05	109.90
27	B2	34	GLU	N-CA-C	-5.85	104.90	111.28
35	BA	1783	A	C3'-C2'-O2'	5.85	119.48	110.70
35	BA	964	C	C5'-C4'-C3'	-5.85	107.22	116.00
6	AF	97	PHE	CA-C-O	-5.85	114.04	120.24
36	BB	40	U	N1-C1'-C2'	5.85	120.77	112.00
35	BA	272(J)	C	O4'-C1'-N1	5.85	117.27	108.50
1	AA	108	G	C3'-C2'-O2'	5.84	119.47	110.70
13	AM	70	LEU	N-CA-C	-5.84	98.36	110.80
35	BA	1635	G	O4'-C4'-C3'	5.84	109.84	104.00
1	AA	812	C	C2'-C3'-O3'	5.84	118.26	109.50
24	AY	501	THR	N-CA-C	-5.84	105.41	113.18
28	B3	20	LYS	O-C-N	5.84	129.05	122.22
35	BA	901	A	C5'-C4'-C3'	-5.84	107.24	116.00
3	AC	10	PHE	N-CA-C	-5.84	105.65	112.89
12	AL	80	HIS	N-CA-C	-5.84	101.04	110.32
3	AC	78	GLY	N-CA-C	-5.84	102.20	112.77
35	BA	1786	A	O4'-C1'-C2'	-5.84	99.96	105.80
35	BA	1948	G	C5'-C4'-O4'	-5.84	101.04	109.80
40	BF	18	ARG	NE-CZ-NH2	5.84	124.45	119.20
1	AA	119	A	C3'-C2'-C1'	5.83	107.33	101.50
35	BA	2481	G	N9-C1'-C2'	5.83	122.75	114.00
35	BA	86	C	O4'-C1'-C2'	-5.83	101.77	107.60
35	BA	1945	G	C3'-C2'-C1'	5.83	107.13	101.30
1	AA	309	G	C1'-O4'-C4'	-5.83	104.07	109.90
35	BA	2285	C	C3'-C2'-O2'	5.83	119.44	110.70
35	BA	2351	G	N9-C1'-C2'	5.83	120.74	112.00
1	AA	366	C	C4'-C3'-C2'	5.82	108.42	102.60
1	AA	913	A	C4'-C3'-C2'	5.82	108.42	102.60
1	AA	1469	G	O3'-P-O5'	-5.82	95.28	104.00
35	BA	2106	G	C3'-C2'-O2'	5.82	119.42	110.70
1	AA	483	C	C3'-C2'-O2'	5.81	119.42	110.70
13	AM	12	ASN	N-CA-C	5.81	123.18	110.80
1	AA	698	G	O3'-P-O5'	-5.81	95.28	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	B1	61	ARG	NE-CZ-NH1	-5.81	115.69	121.50
24	AY	302	HIS	CA-C-N	5.80	127.10	119.84
24	AY	302	HIS	C-N-CA	5.80	127.10	119.84
32	B7	4	THR	N-CA-C	5.80	120.89	111.37
24	AY	604	PRO	N-CA-C	5.80	120.01	110.55
35	BA	1280	G	C4'-C3'-O3'	-5.80	104.30	113.00
35	BA	1902	C	C4'-C3'-O3'	-5.80	104.30	113.00
38	BD	135	PHE	N-CA-C	-5.80	105.53	113.30
17	AQ	24	GLU	N-CA-C	-5.80	100.87	109.86
35	BA	385	C	C4'-C3'-O3'	-5.80	104.30	113.00
35	BA	2712	U	N1-C1'-C2'	5.80	120.70	112.00
1	AA	562	C	C3'-C2'-O2'	-5.80	105.90	114.60
38	BD	88	ARG	N-CA-C	5.80	117.33	108.52
1	AA	1290	G	C5'-C4'-C3'	-5.79	107.31	116.00
35	BA	1310	G	C5'-C4'-C3'	5.79	124.69	116.00
35	BA	852	G	C4'-C3'-O3'	-5.79	104.31	113.00
1	AA	1403	C	N1-C1'-C2'	5.79	120.68	112.00
13	AM	117	VAL	N-CA-C	5.79	116.40	107.78
1	AA	1226	C	C1'-C2'-O2'	-5.79	103.12	111.80
1	AA	366	C	C2'-C3'-O3'	5.78	118.18	109.50
48	BQ	140	ALA	N-CA-C	-5.78	98.48	110.80
9	AI	76	ALA	N-CA-C	-5.78	105.49	112.54
24	AY	138	LYS	N-CA-C	5.78	119.66	110.70
55	BX	28	PHE	CA-CB-CG	5.78	119.58	113.80
22	AV	51	C	C4'-C3'-C2'	5.78	108.38	102.60
35	BA	2464	C	N1-C1'-C2'	-5.78	105.34	114.00
1	AA	1505	G	O4'-C4'-C3'	5.77	109.77	104.00
41	BG	159	VAL	N-CA-CB	-5.77	104.62	111.90
35	BA	1992	G	C1'-C2'-O2'	-5.77	103.14	111.80
41	BG	49	ASP	CA-CB-CG	-5.77	106.83	112.60
50	BS	46	VAL	CB-CA-C	-5.77	101.78	110.55
52	BU	19	LYS	N-CA-C	-5.77	104.68	110.97
49	BR	98	LEU	CA-C-N	5.77	129.03	120.95
49	BR	98	LEU	C-N-CA	5.77	129.03	120.95
53	BV	20	LEU	CA-C-O	5.77	121.97	118.33
35	BA	1294	U	C5'-C4'-C3'	-5.77	107.35	116.00
22	AV	74	C	O4'-C4'-C3'	5.77	109.77	104.00
40	BF	68	LYS	N-CA-C	5.77	117.30	108.30
38	BD	7	LYS	CA-C-N	5.76	127.05	119.84
38	BD	7	LYS	C-N-CA	5.76	127.05	119.84
16	AP	8	ARG	NE-CZ-NH1	-5.76	115.74	121.50
57	BZ	132	ASN	OD1-CG-ND2	-5.76	116.84	122.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	112	VAL	N-CA-C	-5.76	106.10	111.45
35	BA	1020	A	C4'-C3'-O3'	-5.75	104.37	113.00
20	AT	9	ASN	N-CA-C	5.75	117.71	109.14
53	BV	8	GLY	N-CA-C	-5.75	106.81	115.32
35	BA	1859	A	C3'-C2'-O2'	5.75	119.33	110.70
1	AA	532	A	O4'-C1'-N9	-5.75	99.88	108.50
47	BP	55	ARG	NE-CZ-NH2	-5.75	114.03	119.20
35	BA	863	A	C3'-C2'-O2'	5.75	119.32	110.70
37	BC	16	ASP	CA-C-O	5.74	123.02	119.29
1	AA	1138	G	C3'-C2'-C1'	5.74	107.04	101.30
1	AA	1360	A	N9-C1'-C2'	5.74	120.61	112.00
14	AN	49	HIS	CA-C-O	-5.74	114.47	120.55
1	AA	150	C	C1'-O4'-C4'	5.74	115.64	109.90
7	AG	95	ARG	CA-C-O	5.74	126.84	120.82
32	B7	20	ALA	N-CA-C	-5.74	104.72	110.97
51	BT	8	LYS	N-CA-C	-5.74	104.93	111.07
53	BV	27	ALA	N-CA-C	5.73	116.97	108.60
1	AA	1224	G	C3'-C2'-O2'	-5.73	106.00	114.60
2	AB	145	LEU	CA-C-O	5.73	126.82	120.63
24	AY	117	GLN	N-CA-C	5.73	120.28	112.88
35	BA	175	G	C5'-C4'-C3'	5.73	124.60	116.00
1	AA	550	G	C3'-C2'-O2'	5.73	119.29	110.70
44	BL	98	VAL	O-C-N	5.73	128.72	122.76
40	BF	50	SER	N-CA-C	5.73	117.74	108.41
6	AF	92	LYS	N-CA-C	-5.72	99.96	109.46
35	BA	1188	U	O4'-C4'-C3'	5.72	109.72	104.00
35	BA	2031	A	C4'-C3'-O3'	-5.72	104.41	113.00
1	AA	243	A	O3'-P-O5'	5.72	112.58	104.00
27	B2	48	HIS	CA-CB-CG	5.72	119.52	113.80
35	BA	1959	G	C4'-C3'-O3'	-5.72	104.42	113.00
35	BA	2667	C	C4'-C3'-O3'	-5.72	104.42	113.00
35	BA	1352	U	O5'-C5'-C4'	-5.72	102.92	111.50
35	BA	2020	A	C3'-C2'-C1'	5.72	107.02	101.30
1	AA	1184	G	C1'-C2'-O2'	5.72	116.98	108.40
1	AA	1378	C	O5'-C5'-C4'	-5.72	102.92	111.50
9	AI	126	SER	N-CA-C	5.72	119.96	112.13
24	AY	22	ASP	N-CA-C	-5.72	98.62	110.80
35	BA	856	C	C1'-C2'-O2'	5.72	116.98	108.40
55	BX	36	LYS	N-CA-C	-5.72	106.28	113.20
17	AQ	67	LYS	N-CA-C	-5.71	102.81	110.24
35	BA	1378	A	O4'-C1'-C2'	5.71	111.51	105.80
24	AY	256	THR	CA-C-N	5.71	126.97	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	256	THR	C-N-CA	5.71	126.97	119.84
35	BA	1167	U	P-O5'-C5'	-5.71	112.34	120.90
43	BK	94	GLU	N-CA-C	5.71	118.36	107.75
33	B8	54	GLU	N-CA-C	-5.70	104.06	111.02
35	BA	397	G	C4'-C3'-C2'	5.70	108.30	102.60
35	BA	603	A	C2'-C3'-O3'	5.70	118.05	109.50
1	AA	1101	A	C1'-C2'-O2'	-5.70	103.26	111.80
35	BA	725	G	C3'-C2'-C1'	5.70	107.00	101.30
1	AA	840	C	C1'-O4'-C4'	5.69	115.39	109.70
35	BA	1369	G	C4'-C3'-O3'	-5.69	104.46	113.00
47	BP	41	ARG	NE-CZ-NH2	5.69	124.32	119.20
1	AA	1047	G	C4'-C3'-C2'	-5.69	96.91	102.60
1	AA	1103	C	C1'-O4'-C4'	5.69	115.59	109.90
31	B6	48	VAL	N-CA-C	5.69	121.17	109.34
1	AA	1085	U	C3'-C2'-O2'	-5.69	106.07	114.60
35	BA	2195	C	O4'-C1'-C2'	5.69	113.29	107.60
1	AA	796	C	O4'-C1'-N1	-5.68	99.97	108.50
1	AA	1363	C	O4'-C1'-C2'	5.68	113.28	107.60
37	BC	38	PHE	CA-CB-CG	5.68	119.48	113.80
45	BN	115	ARG	N-CA-C	-5.68	105.17	111.36
15	AO	37	ASN	CA-CB-CG	5.68	118.28	112.60
16	AP	82	GLN	N-CA-C	5.68	120.21	112.88
35	BA	1864	U	C5'-C4'-C3'	-5.68	107.48	116.00
35	BA	2565	A	C2'-C3'-O3'	-5.68	105.18	113.70
38	BD	22	SER	N-CA-C	-5.68	106.19	113.01
1	AA	735	C	C2'-C3'-O3'	5.68	122.22	113.70
49	BR	86	ARG	NE-CZ-NH1	-5.68	115.82	121.50
35	BA	33	U	O5'-C5'-C4'	-5.67	103.19	111.70
1	AA	854	G	C3'-C2'-C1'	5.67	106.97	101.30
4	AD	191	ARG	NE-CZ-NH1	-5.67	115.83	121.50
50	BS	15	ARG	NE-CZ-NH1	-5.67	115.83	121.50
24	AY	22	ASP	CA-C-N	5.67	132.37	121.54
24	AY	22	ASP	C-N-CA	5.67	132.37	121.54
35	BA	1147	C	C1'-C2'-O2'	5.67	116.90	108.40
37	BC	220	GLY	N-CA-C	5.67	119.07	112.10
42	BH	116	GLU	CB-CA-C	5.67	118.32	109.42
47	BP	78	PRO	O-C-N	-5.67	118.71	122.73
22	AV	18	G	C2'-C3'-O3'	5.67	118.00	109.50
2	AB	55	PHE	CA-CB-CG	-5.66	108.14	113.80
35	BA	2843	G	O4'-C1'-N9	-5.66	100.00	108.50
1	AA	692	U	C4'-C3'-O3'	-5.66	104.51	113.00
11	AK	91	ARG	NE-CZ-NH1	-5.66	115.84	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1755	A	O4'-C4'-C3'	5.66	109.66	104.00
35	BA	2746	U	C3'-C2'-C1'	5.66	106.96	101.30
1	AA	33	A	C5'-C4'-C3'	-5.66	107.51	116.00
22	AV	75	C	N1-C1'-C2'	5.66	120.48	112.00
15	AO	15	PHE	CA-CB-CG	5.66	119.45	113.80
35	BA	142(A)	C	C4'-C3'-O3'	-5.66	104.52	113.00
1	AA	24	U	C3'-C2'-O2'	5.65	119.18	110.70
1	AA	1044	A	C5'-C4'-C3'	-5.65	107.52	116.00
1	AA	1304	G	N9-C1'-C2'	5.65	120.48	112.00
22	AV	1	C	N1-C1'-C2'	5.65	120.48	112.00
24	AY	484	ARG	NE-CZ-NH1	-5.65	115.85	121.50
16	AP	33	ILE	CA-C-O	-5.65	113.72	120.78
24	AY	328	ILE	N-CA-C	5.65	118.07	108.86
40	BF	17	ARG	N-CA-C	5.65	116.67	107.23
1	AA	168	G	C3'-C2'-O2'	5.65	119.17	110.70
35	BA	2782	G	C5'-C4'-O4'	-5.65	101.33	109.80
3	AC	138	VAL	N-CA-C	-5.65	105.60	110.74
19	AS	36	ARG	NE-CZ-NH2	5.65	124.28	119.20
38	BD	151	LYS	N-CA-C	-5.65	106.06	113.12
1	AA	1294	G	N9-C1'-C2'	-5.64	103.53	112.00
35	BA	1304	C	C4'-C3'-O3'	-5.64	104.53	113.00
35	BA	2417	C	C4'-C3'-C2'	-5.64	96.96	102.60
54	BW	15	ARG	CA-C-N	-5.64	113.20	120.65
54	BW	15	ARG	C-N-CA	-5.64	113.20	120.65
1	AA	428	G	C3'-C2'-C1'	5.64	107.14	101.50
1	AA	1279	A	C4'-C3'-C2'	5.64	108.24	102.60
7	AG	12	LEU	N-CA-C	5.64	117.82	110.43
22	AV	9	G	C2'-C3'-O3'	-5.64	101.04	109.50
35	BA	2172	U	C4'-C3'-O3'	-5.64	100.94	109.40
36	BB	34	U	N1-C1'-C2'	5.64	120.46	112.00
35	BA	2414	G	O4'-C4'-C3'	5.64	109.64	104.00
1	AA	1093	A	O4'-C4'-C3'	5.64	109.64	104.00
35	BA	984	A	C3'-C2'-C1'	5.64	106.94	101.30
1	AA	528	C	C5'-C4'-C3'	5.63	124.45	116.00
35	BA	1800	C	P-O5'-C5'	5.63	129.35	120.90
36	BB	34	U	C3'-C2'-O2'	5.63	119.15	110.70
40	BF	161	GLU	CB-CA-C	5.63	118.21	111.22
46	BO	23	ARG	NE-CZ-NH1	-5.63	115.86	121.50
57	BZ	40	ASP	N-CA-C	-5.63	102.94	110.55
1	AA	1340	A	C5'-C4'-C3'	5.63	124.45	116.00
7	AG	103	TRP	O-C-N	5.63	128.09	122.12
41	BG	118	ARG	NE-CZ-NH2	5.63	124.27	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	19	ALA	O-C-N	5.63	130.08	122.59
3	AC	79	ARG	NE-CZ-NH2	-5.63	114.14	119.20
37	BC	165	ARG	NE-CZ-NH1	-5.63	115.87	121.50
38	BD	87	ASN	CB-CA-C	-5.63	101.66	110.94
57	BZ	13	GLU	N-CA-C	5.63	117.41	107.61
1	AA	245	C	C2'-C3'-O3'	-5.63	105.26	113.70
5	AE	120	THR	N-CA-C	5.63	117.95	109.23
8	AH	85	ARG	NE-CZ-NH2	5.63	124.26	119.20
45	BN	26	LEU	N-CA-C	-5.62	106.96	113.88
47	BP	102	ARG	N-CA-C	-5.62	106.19	113.16
16	AP	4	ILE	CB-CA-C	-5.62	104.63	111.88
27	B2	50	ILE	N-CA-C	5.62	115.86	110.74
40	BF	4	VAL	CA-C-O	5.62	125.95	120.27
34	B9	16	VAL	CB-CA-C	-5.62	105.84	111.80
38	BD	95	LEU	N-CA-C	5.62	118.62	109.24
35	BA	2136	C	O5'-C5'-C4'	-5.62	103.08	111.50
31	B6	32	ASN	N-CA-C	5.61	117.19	107.93
37	BC	57	GLN	N-CA-C	5.61	119.44	112.59
1	AA	201	C	N1-C1'-C2'	5.61	120.42	112.00
38	BD	58	HIS	N-CA-C	5.61	118.21	110.35
22	AV	71	C	C5'-C4'-C3'	-5.61	107.58	116.00
35	BA	1943	U	C2'-C3'-O3'	5.61	117.91	109.50
1	AA	427	U	N1-C1'-C2'	5.61	120.41	112.00
8	AH	12	ARG	NE-CZ-NH2	-5.61	114.15	119.20
38	BD	103	ARG	N-CA-C	5.61	117.59	109.07
38	BD	117	VAL	CA-C-O	-5.61	117.25	121.68
52	BU	110	VAL	CA-C-O	-5.61	113.77	120.78
57	BZ	35	ARG	NE-CZ-NH2	5.61	124.25	119.20
10	AJ	54	PHE	CA-C-O	5.61	126.54	120.43
32	B7	47	ARG	NE-CZ-NH2	5.61	124.24	119.20
57	BZ	95	PRO	CA-C-O	5.61	127.42	121.03
5	AE	45	PHE	CA-CB-CG	5.60	119.40	113.80
54	BW	102	HIS	CB-CA-C	-5.60	103.26	111.77
3	AC	131	ARG	NE-CZ-NH2	5.60	124.24	119.20
42	BH	50	VAL	N-CA-C	5.60	117.88	109.20
35	BA	374	A	O4'-C1'-C2'	5.60	113.20	107.60
47	BP	59	LEU	N-CA-C	-5.60	107.04	112.97
1	AA	544	G	C2'-C3'-O3'	-5.59	105.31	113.70
35	BA	1417	C	O4'-C4'-C3'	5.59	109.59	104.00
48	BQ	132	VAL	CA-C-O	5.59	128.68	121.80
35	BA	114	U	N1-C1'-C2'	5.59	120.39	112.00
35	BA	1646	C	O4'-C1'-C2'	-5.59	102.01	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1377	A	C3'-C2'-C1'	-5.59	95.71	101.30
33	B8	36	LYS	N-CA-C	-5.59	98.07	108.02
35	BA	2500	U	C2'-C3'-O3'	-5.59	105.32	113.70
35	BA	2031	A	N9-C1'-C2'	5.59	120.38	112.00
1	AA	839	U	C2'-C3'-O3'	-5.58	105.33	113.70
10	AJ	55	LYS	N-CA-C	5.58	122.69	110.80
36	BB	35	U	C3'-C2'-O2'	5.58	119.08	110.70
1	AA	1045	C	C5'-C4'-C3'	-5.58	107.63	116.00
24	AY	154	GLN	CB-CA-C	5.58	117.84	109.13
6	AF	47	ARG	NE-CZ-NH2	5.58	124.22	119.20
14	AN	13	THR	O-C-N	5.58	126.50	121.04
1	AA	754	C	N1-C1'-C2'	5.57	120.36	112.00
3	AC	176	HIS	ND1-CE1-NE2	-5.57	102.83	108.40
50	BS	23	ARG	N-CA-C	5.57	122.67	110.80
1	AA	5	U	O5'-C5'-C4'	5.57	120.06	111.70
35	BA	2565	A	C1'-C2'-O2'	5.57	116.76	108.40
38	BD	107	ALA	CA-C-N	5.57	126.94	120.98
38	BD	107	ALA	C-N-CA	5.57	126.94	120.98
50	BS	97	ARG	N-CA-C	5.57	122.67	110.80
35	BA	1654	A	C2'-C3'-O3'	-5.57	105.35	113.70
2	AB	54	THR	N-CA-C	-5.57	105.29	111.36
35	BA	573	G	C5'-C4'-C3'	5.57	123.55	115.20
36	BB	91	C	C4'-C3'-O3'	-5.57	104.65	113.00
47	BP	51	PHE	O-C-N	5.57	129.03	121.74
57	BZ	46	LYS	CA-C-N	-5.57	117.46	123.08
57	BZ	46	LYS	C-N-CA	-5.57	117.46	123.08
24	AY	625	ASN	N-CA-C	-5.56	105.13	111.14
1	AA	1226	C	C2'-C3'-O3'	5.56	117.84	109.50
35	BA	2000	G	P-O5'-C5'	-5.56	112.56	120.90
35	BA	2309	A	O4'-C4'-C3'	5.56	109.56	104.00
1	AA	33	A	C4'-C3'-O3'	-5.56	104.66	113.00
33	B8	52	LYS	CA-C-N	5.56	124.91	118.85
33	B8	52	LYS	C-N-CA	5.56	124.91	118.85
24	AY	177	ILE	N-CA-C	5.56	118.13	108.90
35	BA	139(A)	G	C4'-C3'-O3'	-5.56	104.66	113.00
35	BA	739	G	C3'-C2'-O2'	-5.56	106.26	114.60
35	BA	788	A	C4'-C3'-O3'	-5.56	104.66	113.00
35	BA	729	G	C4'-C3'-C2'	5.56	108.16	102.60
35	BA	1664	A	C5'-C4'-C3'	-5.56	107.66	116.00
1	AA	1381	U	C5'-C4'-C3'	-5.56	107.67	116.00
35	BA	2313	C	C5'-C4'-O4'	-5.56	101.47	109.80
48	BQ	96	VAL	N-CA-C	5.55	115.56	108.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	19	ARG	NE-CZ-NH1	-5.55	115.95	121.50
17	AQ	55	ASP	CA-CB-CG	5.55	118.15	112.60
35	BA	1984	G	C1'-O4'-C4'	-5.55	104.35	109.90
1	AA	1255	G	O4'-C4'-C3'	5.55	109.55	104.00
35	BA	507	A	C4'-C3'-C2'	-5.55	97.05	102.60
1	AA	1456	G	N9-C1'-C2'	5.55	120.32	112.00
17	AQ	63	ARG	CA-C-N	5.55	126.78	119.84
17	AQ	63	ARG	C-N-CA	5.55	126.78	119.84
24	AY	93	GLU	N-CA-C	-5.55	105.15	111.14
35	BA	752	A	C4'-C3'-O3'	5.55	117.72	109.40
35	BA	2405	G	C4'-C3'-O3'	-5.55	104.68	113.00
35	BA	2319	G	C3'-C2'-C1'	5.54	107.05	101.50
1	AA	146	G	O5'-C5'-C4'	-5.54	103.19	111.50
35	BA	899	A	O4'-C4'-C3'	5.54	109.54	104.00
1	AA	514	C	O3'-P-O5'	-5.54	95.69	104.00
27	B2	67	LYS	CB-CA-C	-5.54	102.36	110.95
7	AG	105	VAL	CB-CA-C	-5.54	104.61	111.70
3	AC	75	VAL	CB-CA-C	-5.54	104.79	112.04
31	B6	52	VAL	CA-C-N	5.54	132.11	121.54
31	B6	52	VAL	C-N-CA	5.54	132.11	121.54
35	BA	271(N)	U	C4'-C3'-C2'	5.54	108.14	102.60
35	BA	859	G	C4'-C3'-O3'	-5.54	101.10	109.40
1	AA	723	U	C2'-C3'-O3'	-5.53	105.40	113.70
18	AR	70	ILE	CB-CA-C	-5.53	103.97	112.05
22	AV	24	U	P-O5'-C5'	-5.53	112.60	120.90
35	BA	1226	A	C5'-C4'-C3'	-5.53	107.70	116.00
4	AD	10	ARG	CA-C-O	5.53	128.42	120.51
1	AA	1442	G	C4'-C3'-O3'	-5.53	104.70	113.00
35	BA	2616	C	C1'-C2'-O2'	5.53	116.69	108.40
35	BA	2878	U	O4'-C4'-C3'	5.53	109.53	104.00
1	AA	1225	A	C2'-C3'-O3'	-5.53	101.21	109.50
38	BD	211	ARG	N-CA-C	-5.53	99.02	110.80
1	AA	839	U	N1-C1'-C2'	5.53	120.29	112.00
35	BA	1493	C	N1-C1'-C2'	5.53	122.29	114.00
48	BQ	99	PRO	CA-C-O	-5.53	115.31	121.23
1	AA	584	G	P-O5'-C5'	-5.53	112.61	120.90
4	AD	120	LEU	N-CA-C	-5.53	104.95	110.97
12	AL	55	VAL	CB-CA-C	-5.53	102.64	110.82
35	BA	614(A)	U	C2'-C3'-O3'	-5.52	105.41	113.70
44	BL	84	LYS	O-C-N	5.52	127.76	122.07
35	BA	1233	C	O4'-C4'-C3'	5.52	109.52	104.00
6	AF	19	LEU	N-CA-C	-5.52	105.42	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	280	C	C3'-C2'-C1'	5.52	106.82	101.30
39	BE	137	HIS	N-CA-C	5.52	116.77	109.93
35	BA	214	G	N9-C1'-C2'	5.52	120.28	112.00
39	BE	37	ARG	NE-CZ-NH1	-5.52	115.98	121.50
35	BA	142	A	OP2-P-O3'	5.51	117.33	105.20
35	BA	1026	U	C2'-C3'-O3'	-5.51	105.43	113.70
3	AC	53	ALA	CA-C-O	5.51	125.99	119.48
35	BA	1948	G	O4'-C1'-C2'	-5.51	102.09	107.60
27	B2	66	GLU	N-CA-C	-5.51	105.37	111.71
35	BA	2308	G	C2'-C3'-O3'	-5.51	105.44	113.70
1	AA	1354	C	C5'-C4'-C3'	-5.51	107.74	116.00
7	AG	51	GLN	N-CA-C	-5.51	105.29	112.23
27	B2	67	LYS	N-CA-C	-5.51	104.92	111.03
35	BA	2424	C	C2'-C3'-O3'	-5.50	105.44	113.70
1	AA	157	G	O5'-C5'-C4'	-5.50	103.24	111.50
27	B2	34	GLU	CA-C-N	5.50	127.92	120.65
27	B2	34	GLU	C-N-CA	5.50	127.92	120.65
35	BA	412	A	C1'-O4'-C4'	5.50	115.40	109.90
35	BA	2245	U	N1-C1'-C2'	5.50	120.25	112.00
35	BA	2164	C	C3'-C2'-O2'	5.50	118.95	110.70
28	B3	19	GLN	N-CA-C	5.50	117.08	111.14
35	BA	312	G	N9-C1'-C2'	5.50	120.25	112.00
35	BA	331	A	N9-C1'-C2'	5.50	122.25	114.00
38	BD	174	ILE	N-CA-C	5.50	116.02	107.99
1	AA	148	G	C4'-C3'-O3'	-5.50	104.75	113.00
1	AA	1080	A	C2'-C3'-O3'	-5.50	105.46	113.70
35	BA	2597	G	C4'-C3'-O3'	-5.50	104.75	113.00
38	BD	65	ILE	N-CA-C	5.50	117.71	108.81
2	AB	37	ASN	N-CA-C	-5.50	105.21	112.24
24	AY	498	ILE	N-CA-C	5.50	120.77	109.34
48	BQ	135	ASP	N-CA-C	5.50	122.50	110.80
35	BA	1156	A	N9-C1'-C2'	5.49	122.24	114.00
35	BA	1935	G	C3'-C2'-O2'	5.49	118.94	110.70
35	BA	2876	G	C2'-C3'-O3'	-5.49	105.46	113.70
51	BT	19	LEU	CA-C-O	5.49	123.69	119.46
35	BA	2687	U	N1-C1'-C2'	5.49	120.24	112.00
1	AA	203	U	N1-C1'-C2'	5.49	122.23	114.00
35	BA	1090	U	O3'-P-O5'	-5.49	95.77	104.00
38	BD	182	LEU	N-CA-C	-5.49	100.75	109.76
52	BU	81	HIS	CA-CB-CG	-5.49	108.31	113.80
3	AC	192	THR	O-C-N	5.49	127.94	122.12
11	AK	116	HIS	N-CA-C	-5.49	103.91	111.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	543	GLN	OE1-CD-NE2	5.49	128.09	122.60
30	B5	34	PRO	N-CA-CB	-5.49	98.33	103.27
9	AI	5	TYR	N-CA-C	5.49	118.17	109.50
1	AA	635	G	O4'-C1'-C2'	-5.49	102.11	107.60
35	BA	1246	A	C3'-C2'-O2'	5.49	118.93	110.70
35	BA	2068	U	C3'-C2'-O2'	5.49	118.93	110.70
42	BH	127	GLU	CA-C-N	-5.49	114.60	120.47
42	BH	127	GLU	C-N-CA	-5.49	114.60	120.47
3	AC	200	ALA	N-CA-C	5.48	118.40	109.24
27	B2	59	ARG	NE-CZ-NH1	-5.48	116.02	121.50
43	BK	5	VAL	O-C-N	5.48	129.42	122.57
1	AA	137	C	C3'-C2'-O2'	5.48	118.92	110.70
24	AY	505	GLY	N-CA-C	5.48	126.17	113.18
40	BF	172	TRP	N-CA-C	-5.48	104.53	113.19
1	AA	518	C	O4'-C1'-C2'	-5.48	100.32	105.80
1	AA	1350	A	O5'-C5'-C4'	-5.48	103.28	111.50
35	BA	2037	G	C3'-C2'-O2'	5.48	118.92	110.70
56	BY	7	VAL	N-CA-C	5.48	120.73	109.34
35	BA	805	G	C1'-C2'-O2'	5.48	120.02	111.80
41	BG	49	ASP	O-C-N	5.48	128.87	121.97
3	AC	84	ILE	CB-CA-C	-5.47	102.31	111.29
35	BA	479	A	N9-C1'-C2'	5.47	122.21	114.00
35	BA	2870	C	C5'-C4'-O4'	-5.47	101.59	109.80
46	BO	24	VAL	CB-CA-C	-5.47	104.12	110.91
24	AY	288	PRO	N-CA-C	5.47	119.81	111.11
47	BP	114	ILE	N-CA-CB	5.47	116.68	110.72
35	BA	1256	G	C4'-C3'-C2'	-5.47	97.13	102.60
40	BF	197	ASP	N-CA-C	-5.47	105.40	111.36
24	AY	658	ASP	CA-CB-CG	-5.47	107.13	112.60
38	BD	185	VAL	O-C-N	-5.47	116.77	123.00
1	AA	346	G	P-O5'-C5'	5.46	129.10	120.90
35	BA	1656	C	O4'-C1'-N1	-5.46	100.30	108.50
35	BA	1865	G	O4'-C4'-C3'	5.46	109.47	104.00
42	BH	162	ILE	N-CA-C	5.46	114.47	106.55
7	AG	33	ASP	CA-CB-CG	-5.46	107.14	112.60
35	BA	335	C	O3'-P-O5'	-5.46	95.81	104.00
35	BA	1185	C	C5'-C4'-C3'	-5.46	107.81	116.00
24	AY	470	PHE	CA-CB-CG	-5.46	108.34	113.80
33	B8	41	ILE	O-C-N	5.46	129.40	122.57
35	BA	114	U	O4'-C4'-C3'	5.46	109.46	104.00
35	BA	574	C	N1-C1'-C2'	5.46	122.19	114.00
35	BA	1484	G	C3'-C2'-O2'	5.46	118.89	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	BD	141	VAL	CB-CA-C	-5.46	105.33	111.45
35	BA	1904	G	O5'-C5'-C4'	-5.46	103.31	111.50
9	AI	111	ARG	NE-CZ-NH2	-5.46	114.29	119.20
24	AY	318	ALA	CA-C-O	-5.46	114.74	120.58
35	BA	1988	C	C1'-C2'-O2'	5.46	116.59	108.40
38	BD	62	TYR	N-CA-C	5.46	117.64	108.96
39	BE	52	LEU	CA-C-N	5.46	126.66	119.84
39	BE	52	LEU	C-N-CA	5.46	126.66	119.84
1	AA	560	U	N1-C1'-C2'	5.46	120.19	112.00
22	AV	28	C	C3'-C2'-O2'	5.45	118.88	110.70
41	BG	4	ASP	N-CA-C	5.45	122.42	110.80
1	AA	560	U	O4'-C4'-C3'	5.45	109.45	104.00
13	AM	93	ARG	CD-NE-CZ	5.45	132.03	124.40
35	BA	576	U	C3'-C2'-O2'	5.45	118.88	110.70
35	BA	1476	C	C4'-C3'-O3'	-5.45	104.83	113.00
45	BN	122	VAL	CB-CA-C	-5.45	102.50	110.62
1	AA	1298	C	C4'-C3'-O3'	-5.45	104.83	113.00
35	BA	2876	G	C5'-C4'-C3'	5.45	124.17	116.00
36	BB	51	G	C2'-C3'-O3'	-5.45	105.53	113.70
55	BX	37	THR	CA-C-N	5.45	128.03	120.29
55	BX	37	THR	C-N-CA	5.45	128.03	120.29
1	AA	1409	C	O4'-C4'-C3'	5.45	109.44	104.00
12	AL	72	GLY	N-CA-C	5.45	126.09	113.18
48	BQ	82	ARG	N-CA-C	5.45	117.93	109.60
8	AH	47	GLY	N-CA-C	5.44	117.58	112.08
39	BE	25	VAL	CB-CA-C	-5.44	102.44	110.82
47	BP	16	ARG	N-CA-C	-5.44	105.94	113.18
28	B3	9	VAL	N-CA-C	5.44	116.84	111.67
35	BA	2360	A	C5'-C4'-C3'	-5.44	107.84	116.00
55	BX	57	LEU	CA-C-O	-5.44	115.11	121.10
35	BA	729	G	C4'-C3'-O3'	-5.44	104.84	113.00
1	AA	266	G	C2'-C3'-O3'	-5.44	101.34	109.50
31	B6	18	ARG	N-CA-C	5.44	122.38	110.80
35	BA	1614	A	C1'-O4'-C4'	-5.44	104.46	109.90
1	AA	1521	G	O5'-C5'-C4'	-5.44	103.35	111.50
3	AC	204	LEU	O-C-N	5.44	125.60	120.71
35	BA	1276	A	C1'-C2'-O2'	5.44	116.55	108.40
36	BB	72	G	N9-C1'-C2'	5.44	120.15	112.00
3	AC	190	ARG	N-CA-C	5.43	117.16	108.41
24	AY	603	GLU	CA-C-N	5.43	126.27	120.13
24	AY	603	GLU	C-N-CA	5.43	126.27	120.13
35	BA	1270	C	C5'-C4'-O4'	-5.43	101.65	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	BD	88	ARG	CA-C-N	5.43	127.88	120.54
38	BD	88	ARG	C-N-CA	5.43	127.88	120.54
42	BH	44	VAL	O-C-N	-5.43	117.21	122.92
52	BU	99	ALA	N-CA-C	-5.43	106.78	113.41
8	AH	124	ALA	CA-C-O	5.43	126.11	119.05
23	AX	15	A	C5'-C4'-C3'	-5.43	107.85	116.00
35	BA	1062	G	C4'-C3'-O3'	-5.43	104.85	113.00
26	B1	21	ARG	NE-CZ-NH1	-5.42	116.08	121.50
1	AA	258	G	O3'-P-O5'	-5.42	95.87	104.00
27	B2	55	ARG	O-C-N	5.42	129.38	122.33
35	BA	784	A	N9-C1'-C2'	5.42	120.13	112.00
35	BA	1309	G	C2'-C3'-O3'	-5.42	105.57	113.70
3	AC	163	ALA	N-CA-C	5.42	117.56	109.59
1	AA	572	A	C4'-C3'-O3'	-5.42	104.87	113.00
1	AA	1065	U	C2'-C3'-O3'	5.42	117.63	109.50
37	BC	74	ARG	CA-C-N	5.42	127.97	120.49
37	BC	74	ARG	C-N-CA	5.42	127.97	120.49
1	AA	1026	G	O4'-C4'-C3'	5.42	109.42	104.00
35	BA	68	G	N9-C1'-C2'	5.42	120.12	112.00
35	BA	1052	C	C3'-C2'-O2'	5.42	118.82	110.70
35	BA	2322	A	C2'-C3'-O3'	-5.42	105.58	113.70
38	BD	225	ALA	CA-C-O	5.42	128.25	120.51
2	AB	21	ARG	N-CA-C	5.41	117.03	107.61
35	BA	1066	U	C1'-O4'-C4'	5.41	115.31	109.90
46	BO	89	ASN	N-CA-C	5.41	122.33	110.80
7	AG	100	ALA	CA-C-N	5.41	127.48	120.44
7	AG	100	ALA	C-N-CA	5.41	127.48	120.44
1	AA	202	U	C1'-O4'-C4'	5.41	115.11	109.70
35	BA	906	G	C4'-C3'-C2'	5.41	108.01	102.60
35	BA	252	G	C2'-C3'-O3'	-5.41	105.59	113.70
35	BA	2028	U	N1-C1'-C2'	5.41	120.11	112.00
45	BN	42	TRP	N-CA-C	5.41	118.41	110.30
1	AA	338	A	P-O5'-C5'	-5.41	112.79	120.90
35	BA	1163	G	P-O5'-C5'	-5.41	112.79	120.90
1	AA	194	C	C3'-C2'-O2'	5.41	118.81	110.70
2	AB	141	GLU	CA-C-N	-5.41	113.04	120.28
2	AB	141	GLU	C-N-CA	-5.41	113.04	120.28
35	BA	2637	U	C4'-C3'-O3'	-5.41	104.89	113.00
2	AB	46	LYS	N-CA-C	-5.40	105.82	112.90
56	BY	76	CYS	CA-C-N	5.40	126.59	119.84
56	BY	76	CYS	C-N-CA	5.40	126.59	119.84
35	BA	2417	C	C5'-C4'-O4'	-5.40	101.70	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	BS	17	ARG	NE-CZ-NH1	-5.40	116.10	121.50
3	AC	59	ARG	NE-CZ-NH2	5.40	124.06	119.20
36	BB	42	C	N1-C1'-C2'	5.40	120.10	112.00
50	BS	67	ARG	N-CA-C	-5.40	104.73	112.13
1	AA	633	G	O4'-C1'-C2'	-5.40	102.20	107.60
24	AY	233	GLU	N-CA-C	-5.40	105.83	112.90
26	B1	45	ASN	CA-C-N	-5.40	113.99	122.73
26	B1	45	ASN	C-N-CA	-5.40	113.99	122.73
30	B5	15	ARG	CA-C-O	-5.40	114.70	120.42
35	BA	2033	A	C1'-C2'-O2'	-5.40	103.70	111.80
35	BA	2132	U	C4'-C3'-O3'	-5.40	104.90	113.00
3	AC	191	THR	CB-CA-C	-5.39	102.13	112.43
35	BA	1067	A	C5'-C4'-O4'	-5.39	101.71	109.80
35	BA	1225	G	O4'-C1'-C2'	-5.39	102.20	107.60
35	BA	83	G	N9-C1'-C2'	5.39	120.09	112.00
49	BR	58	GLY	N-CA-C	5.39	125.96	113.18
1	AA	721	G	P-O5'-C5'	5.39	128.99	120.90
29	B4	43	TYR	CA-C-N	5.39	131.83	121.54
29	B4	43	TYR	C-N-CA	5.39	131.83	121.54
35	BA	2017	U	C2'-C3'-O3'	-5.39	105.62	113.70
13	AM	77	ASN	O-C-N	5.39	127.63	122.03
35	BA	2657	A	C1'-C2'-O2'	5.39	116.48	108.40
39	BE	6	GLY	N-CA-C	5.39	119.00	111.19
1	AA	675	A	O5'-C5'-C4'	-5.38	103.42	111.50
35	BA	1494	A	C2'-C3'-O3'	5.38	121.78	113.70
38	BD	241	PRO	N-CA-CB	5.38	106.34	102.79
8	AH	104	ARG	NE-CZ-NH2	5.38	124.04	119.20
31	B6	19	ARG	NE-CZ-NH2	5.38	124.04	119.20
24	AY	558	PHE	CA-CB-CG	-5.38	108.42	113.80
35	BA	1678	G	O4'-C1'-N9	-5.38	100.43	108.50
1	AA	246	A	O5'-C5'-C4'	-5.38	103.63	111.70
24	AY	575	VAL	CB-CA-C	-5.38	106.14	111.30
38	BD	240	ALA	CB-CA-C	-5.38	104.20	110.76
2	AB	21	ARG	CD-NE-CZ	-5.38	116.87	124.40
13	AM	20	THR	O-C-N	5.38	128.33	122.20
24	AY	213	HIS	N-CA-C	-5.38	106.72	113.28
52	BU	19	LYS	O-C-N	5.38	127.62	122.03
18	AR	51	LEU	CA-C-N	5.37	125.58	120.31
18	AR	51	LEU	C-N-CA	5.37	125.58	120.31
35	BA	597	U	C5'-C4'-C3'	5.37	124.06	116.00
35	BA	1307	A	O4'-C1'-C2'	-5.37	102.23	107.60
1	AA	266	G	C3'-C2'-C1'	5.37	106.87	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1398	A	C5'-C4'-C3'	-5.37	107.94	116.00
24	AY	30	GLU	N-CA-C	-5.37	105.53	111.71
35	BA	1488	G	C5'-C4'-C3'	-5.37	107.94	116.00
45	BN	80	GLY	O-C-N	5.37	129.49	122.35
20	AT	29	LYS	N-CA-C	-5.37	105.99	112.54
35	BA	2681	C	C2'-C3'-O3'	-5.37	101.45	109.50
55	BX	28	PHE	N-CA-C	5.37	118.33	109.85
22	AV	63	G	C4'-C3'-O3'	-5.37	104.95	113.00
35	BA	2101	G	C3'-C2'-C1'	-5.37	95.93	101.30
35	BA	2484	G	C3'-C2'-C1'	-5.37	95.94	101.30
35	BA	2781	A	C4'-C3'-C2'	5.37	107.97	102.60
2	AB	32	ILE	N-CA-C	5.36	115.84	108.12
12	AL	60	LEU	N-CA-C	5.36	118.42	110.48
35	BA	648	G	O5'-C5'-C4'	-5.36	103.46	111.50
44	BL	118	GLU	CB-CG-CD	-5.36	103.49	112.60
1	AA	593	G	C4'-C3'-O3'	-5.36	104.96	113.00
38	BD	16	MET	N-CA-CB	-5.36	100.49	109.28
1	AA	519	C	C4'-C3'-O3'	-5.36	104.97	113.00
1	AA	982	U	O3'-P-O5'	5.36	112.03	104.00
1	AA	1440	C	P-O5'-C5'	-5.36	112.87	120.90
35	BA	725	G	O4'-C1'-C2'	-5.36	102.24	107.60
35	BA	2043	C	N1-C1'-C2'	5.36	120.03	112.00
2	AB	153	ARG	NE-CZ-NH1	-5.35	116.15	121.50
35	BA	324	A	C3'-C2'-C1'	5.35	106.65	101.30
1	AA	1441	G	N9-C1'-C2'	5.35	120.03	112.00
38	BD	251	GLY	N-CA-C	5.35	121.11	114.37
1	AA	26	A	C1'-O4'-C4'	5.35	115.25	109.90
35	BA	1443	G	C4'-C3'-O3'	-5.35	104.98	113.00
35	BA	1443	G	C5'-C4'-C3'	-5.35	107.98	116.00
48	BQ	64	ILE	CA-C-O	-5.35	114.63	120.72
1	AA	347	G	C4'-C3'-O3'	-5.34	104.98	113.00
1	AA	575	G	C4'-C3'-O3'	5.34	117.42	109.40
1	AA	1008	C	C3'-C2'-O2'	5.34	118.72	110.70
13	AM	123	ALA	CA-C-N	5.34	126.52	119.84
13	AM	123	ALA	C-N-CA	5.34	126.52	119.84
35	BA	2461	C	N1-C1'-C2'	5.34	120.02	112.00
36	BB	22	U	O4'-C1'-N1	-5.34	100.48	108.50
51	BT	128	GLU	N-CA-C	-5.34	106.02	112.54
9	AI	104	ARG	CA-C-N	-5.34	111.34	121.54
9	AI	104	ARG	C-N-CA	-5.34	111.34	121.54
35	BA	2456	C	C1'-C2'-O2'	5.34	116.41	108.40
46	BO	46	ALA	N-CA-C	5.34	117.38	108.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	919	A	C4'-C3'-O3'	-5.34	104.99	113.00
35	BA	90	U	C3'-C2'-O2'	5.34	118.71	110.70
35	BA	2178	C	C5'-C4'-C3'	5.34	124.01	116.00
1	AA	1052	U	C2'-C3'-O3'	-5.34	105.69	113.70
29	B4	44	THR	N-CA-C	5.34	122.17	110.80
35	BA	614(A)	U	P-O3'-C3'	5.34	126.11	119.70
10	AJ	37	PRO	CA-C-N	-5.34	118.13	123.04
10	AJ	37	PRO	C-N-CA	-5.34	118.13	123.04
35	BA	1415	U	C1'-O4'-C4'	-5.33	104.57	109.90
22	AV	4	G	N9-C1'-C2'	-5.33	106.00	114.00
15	AO	2	PRO	N-CA-CB	5.33	108.86	103.00
28	B3	3	ARG	NE-CZ-NH1	-5.33	116.17	121.50
54	BW	8	ARG	NE-CZ-NH1	-5.33	116.17	121.50
35	BA	79	G	C3'-C2'-C1'	5.33	106.63	101.30
54	BW	111	HIS	CA-CB-CG	5.33	119.13	113.80
1	AA	119	A	C4'-C3'-O3'	5.33	117.39	109.40
1	AA	767	A	C5'-C4'-C3'	-5.33	108.01	116.00
6	AF	69	GLU	N-CA-C	5.33	118.88	112.38
27	B2	25	VAL	O-C-N	5.33	127.27	121.94
35	BA	2501	C	C3'-C2'-O2'	5.33	118.69	110.70
24	AY	376	ALA	N-CA-C	5.32	118.13	109.24
35	BA	272(J)	C	C5'-C4'-C3'	-5.32	108.02	116.00
1	AA	458	C	N1-C1'-C2'	5.32	119.98	112.00
17	AQ	38	ARG	NE-CZ-NH1	-5.32	116.18	121.50
37	BC	13	GLU	O-C-N	5.32	127.77	122.08
42	BH	161	GLY	CA-C-N	-5.32	116.10	122.22
42	BH	161	GLY	C-N-CA	-5.32	116.10	122.22
54	BW	79	GLY	CA-C-N	5.32	125.62	119.93
54	BW	79	GLY	C-N-CA	5.32	125.62	119.93
20	AT	66	ALA	CA-C-O	5.32	126.11	120.10
37	BC	16	ASP	CA-C-N	5.32	126.49	119.84
37	BC	16	ASP	C-N-CA	5.32	126.49	119.84
1	AA	900	A	C4'-C3'-C2'	5.32	107.92	102.60
5	AE	114	GLY	O-C-N	-5.32	116.21	122.38
1	AA	1076	C	O4'-C4'-C3'	5.31	109.31	104.00
1	AA	1109	C	C4'-C3'-C2'	-5.31	97.29	102.60
37	BC	102	GLN	OE1-CD-NE2	-5.31	117.29	122.60
18	AR	74	ARG	NE-CZ-NH1	-5.31	116.19	121.50
35	BA	2624	G	C4'-C3'-C2'	-5.31	97.29	102.60
48	BQ	77	LYS	CA-C-N	5.31	126.48	119.84
48	BQ	77	LYS	C-N-CA	5.31	126.48	119.84
35	BA	2072	G	C5'-C4'-O4'	5.31	117.77	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	688	G	O4'-C1'-C2'	-5.31	102.29	107.60
1	AA	748	C	N1-C1'-C2'	5.31	119.96	112.00
4	AD	103	ASN	N-CA-C	-5.31	103.44	111.56
9	AI	9	ARG	N-CA-C	5.31	118.04	108.48
35	BA	1385	G	N9-C1'-C2'	5.31	121.97	114.00
35	BA	2052	G	C1'-O4'-C4'	5.31	115.21	109.90
35	BA	228	A	C4'-C3'-O3'	5.31	120.96	113.00
35	BA	2035	G	N9-C1'-C2'	5.31	121.96	114.00
41	BG	53	LEU	O-C-N	5.31	129.65	122.59
35	BA	2562	U	O5'-C5'-C4'	-5.31	103.54	111.50
6	AF	38	GLU	N-CA-C	-5.30	102.39	108.49
35	BA	2674	G	C5'-C4'-C3'	-5.30	108.04	116.00
1	AA	298	A	O4'-C4'-C3'	5.30	109.30	104.00
35	BA	2758	A	C3'-C2'-C1'	-5.30	96.00	101.30
36	BB	33	G	C3'-C2'-O2'	5.30	118.65	110.70
37	BC	190	ILE	N-CA-C	-5.30	104.47	111.09
42	BH	117	PRO	O-C-N	-5.30	115.21	121.46
13	AM	21	TYR	CA-C-N	-5.30	116.12	122.90
13	AM	21	TYR	C-N-CA	-5.30	116.12	122.90
24	AY	563	ILE	N-CA-C	5.30	115.19	107.88
25	B0	20	ARG	NE-CZ-NH2	5.30	123.97	119.20
35	BA	352	G	N9-C1'-C2'	5.29	119.94	112.00
35	BA	1062	G	C1'-O4'-C4'	-5.29	104.61	109.90
35	BA	2311	A	C5'-C4'-C3'	5.29	123.14	115.20
53	BV	75	PHE	CA-CB-CG	5.29	119.09	113.80
1	AA	1484	C	C3'-C2'-O2'	5.29	118.64	110.70
35	BA	1230	C	C1'-C2'-O2'	5.29	116.34	108.40
1	AA	769	G	N9-C1'-C2'	5.29	119.94	112.00
7	AG	13	GLN	CA-C-N	5.29	126.45	119.84
7	AG	13	GLN	C-N-CA	5.29	126.45	119.84
1	AA	1079	G	C4'-C3'-O3'	-5.29	105.07	113.00
1	AA	1253	G	O5'-C5'-C4'	-5.29	103.57	111.50
50	BS	90	GLY	CA-C-O	-5.29	113.96	121.52
1	AA	1049	U	C2'-C3'-O3'	5.29	117.43	109.50
20	AT	86	ARG	N-CA-C	-5.29	105.03	112.12
35	BA	419	C	C3'-C2'-O2'	5.29	118.63	110.70
35	BA	1637	A	C1'-C2'-O2'	-5.29	100.47	108.40
1	AA	1054	C	N1-C1'-C2'	5.29	119.93	112.00
35	BA	2682	U	C5'-C4'-C3'	5.29	123.93	116.00
4	AD	140	VAL	CA-C-N	-5.28	113.92	122.48
4	AD	140	VAL	C-N-CA	-5.28	113.92	122.48
24	AY	21	ILE	CB-CA-C	-5.28	102.63	111.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1027	A	C5'-C4'-C3'	5.28	123.92	116.00
57	BZ	166	SER	CA-C-O	-5.28	112.92	120.16
47	BP	141	ALA	N-CA-C	5.28	122.04	110.80
49	BR	73	VAL	CA-C-N	5.28	127.67	120.54
49	BR	73	VAL	C-N-CA	5.28	127.67	120.54
1	AA	631	G	C4'-C3'-O3'	-5.28	105.08	113.00
2	AB	156	LYS	N-CA-C	-5.28	100.80	109.40
35	BA	1590	U	C5'-C4'-C3'	5.28	123.92	116.00
35	BA	2505	G	C4'-C3'-C2'	-5.28	97.32	102.60
35	BA	1369	G	C3'-C2'-O2'	5.28	118.61	110.70
41	BG	48	GLU	N-CA-C	5.28	116.90	110.41
10	AJ	56	HIS	N-CA-C	-5.27	99.57	110.80
24	AY	219	VAL	CB-CA-C	-5.27	105.13	112.04
24	AY	659	LEU	N-CA-C	-5.27	105.20	111.69
30	B5	41	PRO	O-C-N	-5.27	115.24	121.46
35	BA	271(R)	G	O4'-C4'-C3'	-5.27	98.73	104.00
35	BA	778	G	C2'-C3'-O3'	-5.27	105.79	113.70
45	BN	78	TYR	CA-C-N	5.27	125.44	119.90
45	BN	78	TYR	C-N-CA	5.27	125.44	119.90
1	AA	754	C	C1'-O4'-C4'	5.27	115.17	109.90
1	AA	920	U	C5'-C4'-C3'	-5.27	108.09	116.00
35	BA	672	C	C4'-C3'-O3'	-5.27	105.09	113.00
8	AH	9	MET	CA-C-N	5.27	127.34	120.28
8	AH	9	MET	C-N-CA	5.27	127.34	120.28
24	AY	241	GLU	N-CA-C	-5.27	106.69	113.23
33	B8	47	LYS	CA-C-O	-5.27	115.81	121.45
1	AA	1187	G	C5'-C4'-C3'	-5.27	108.10	116.00
2	AB	108	ILE	N-CA-C	-5.27	106.15	113.00
24	AY	659	LEU	CA-C-O	-5.26	114.40	120.24
33	B8	52	LYS	O-C-N	-5.26	115.27	121.32
35	BA	1380	G	C1'-C2'-O2'	-5.26	100.50	108.40
46	BO	28	SER	N-CA-C	-5.26	106.09	112.88
35	BA	2574	G	C5'-C4'-C3'	-5.26	108.11	116.00
43	BK	52	ILE	CA-C-O	5.26	127.36	120.78
1	AA	1236	A	O4'-C1'-C2'	5.26	112.86	107.60
35	BA	1261	C	C5'-C4'-C3'	-5.26	108.11	116.00
38	BD	35	LYS	N-CA-C	5.26	121.44	109.81
1	AA	529	G	C1'-C2'-O2'	-5.26	100.51	108.40
24	AY	104	ALA	N-CA-C	5.26	116.51	108.52
24	AY	639	ASN	N-CA-C	-5.26	106.86	113.28
35	BA	462	C	O4'-C4'-C3'	5.26	109.26	104.00
27	B2	57	ILE	N-CA-C	-5.26	104.48	111.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1143	A	C5'-C4'-C3'	-5.26	107.31	115.20
4	AD	12	CYS	N-CA-C	-5.26	102.69	111.37
24	AY	299	VAL	CB-CA-C	-5.26	102.67	111.29
35	BA	512	G	C4'-C3'-O3'	-5.26	105.12	113.00
51	BT	110	ILE	CB-CA-C	-5.25	105.05	112.14
1	AA	271	C	C4'-C3'-O3'	-5.25	105.12	113.00
38	BD	102	LYS	CA-C-O	-5.25	115.03	120.70
38	BD	264	LYS	CA-C-O	-5.25	115.02	119.59
55	BX	58	HIS	CA-CB-CG	5.25	119.05	113.80
1	AA	78	G	O4'-C4'-C3'	-5.25	98.75	104.00
30	B5	38	ALA	CA-C-O	5.25	128.02	120.51
50	BS	96	GLY	O-C-N	5.25	129.53	122.70
40	BF	18	ARG	NH1-CZ-NH2	-5.25	112.47	119.30
35	BA	959	A	C4'-C3'-O3'	-5.25	105.13	113.00
49	BR	11	ASN	N-CA-C	-5.25	101.78	109.81
51	BT	47	GLY	N-CA-C	5.25	119.27	110.56
34	B9	17	ILE	CB-CA-C	-5.25	104.03	111.38
35	BA	41	C	C3'-C2'-O2'	5.25	118.57	110.70
35	BA	763	G	N9-C1'-C2'	5.25	119.87	112.00
35	BA	2779	U	C1'-C2'-O2'	-5.25	103.93	111.80
10	AJ	50	ILE	N-CA-C	5.25	116.30	108.54
35	BA	1495	A	C4'-C3'-C2'	5.25	107.84	102.60
35	BA	2521	C	N1-C1'-C2'	5.25	119.87	112.00
3	AC	21	ARG	N-CA-C	5.24	118.66	107.70
35	BA	411	G	C3'-C2'-C1'	5.24	106.74	101.50
40	BF	107	LYS	O-C-N	5.24	127.79	121.76
50	BS	23	ARG	NE-CZ-NH1	-5.24	116.26	121.50
50	BS	81	GLY	CA-C-O	5.24	124.82	119.10
35	BA	752	A	C2'-C3'-O3'	5.24	117.36	109.50
54	BW	8	ARG	NH1-CZ-NH2	-5.24	112.48	119.30
1	AA	266	G	C1'-C2'-O2'	-5.24	103.94	111.80
1	AA	1492	A	O4'-C1'-N9	5.24	116.36	108.50
46	BO	71	ARG	CD-NE-CZ	5.24	131.74	124.40
31	B6	12	GLU	N-CA-C	5.24	117.99	109.24
44	BL	64	ASN	CB-CG-ND2	-5.24	108.54	116.40
41	BG	4	ASP	CA-CB-CG	5.24	117.83	112.60
13	AM	35	GLU	N-CA-C	-5.23	105.58	111.28
35	BA	654(F)	C	O5'-C5'-C4'	-5.23	103.65	111.50
50	BS	55	ALA	N-CA-C	-5.23	106.15	112.54
3	AC	5	ILE	CA-C-O	-5.23	116.35	121.58
24	AY	287	PRO	CA-C-N	5.23	125.23	119.89
24	AY	287	PRO	C-N-CA	5.23	125.23	119.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	680	G	C4'-C3'-C2'	-5.23	97.37	102.60
9	AI	13	ALA	O-C-N	5.23	129.18	123.27
24	AY	268	GLY	N-CA-C	-5.23	108.10	115.32
35	BA	1718	G	O4'-C1'-C2'	-5.23	102.37	107.60
1	AA	1505	G	N9-C1'-C2'	5.23	119.84	112.00
1	AA	286	G	C4'-C3'-O3'	-5.23	105.16	113.00
1	AA	1512	U	C1'-C2'-O2'	-5.23	100.56	108.40
24	AY	355	LEU	CA-C-O	-5.23	115.25	121.16
35	BA	1059	G	O4'-C4'-C3'	5.23	109.23	104.00
35	BA	2140	C	C4'-C3'-O3'	-5.23	105.16	113.00
35	BA	2150	U	C4'-C3'-O3'	-5.23	105.16	113.00
37	BC	15	VAL	CB-CA-C	-5.23	102.72	111.29
40	BF	104	LYS	N-CA-C	-5.23	106.93	113.15
1	AA	975	A	C3'-C2'-C1'	5.22	106.72	101.50
13	AM	66	LEU	N-CA-C	5.22	118.31	108.65
24	AY	337	SER	N-CA-C	5.22	116.67	109.15
1	AA	238	G	C4'-C3'-C2'	-5.22	97.38	102.60
1	AA	945	G	C1'-C2'-O2'	5.22	116.23	108.40
24	AY	450	ILE	CB-CA-C	-5.22	103.90	111.68
35	BA	226	G	O4'-C4'-C3'	-5.22	100.88	106.10
35	BA	122	G	N9-C1'-C2'	-5.22	104.17	112.00
35	BA	747	U	C4'-C3'-O3'	-5.22	105.17	113.00
1	AA	119	A	N9-C1'-C2'	5.22	121.83	114.00
15	AO	63	ARG	CB-CA-C	-5.22	102.65	110.90
35	BA	191	A	C2'-C3'-O3'	-5.22	105.87	113.70
49	BR	73	VAL	N-CA-C	-5.22	105.41	110.42
1	AA	1065	U	C3'-C2'-O2'	-5.21	106.78	114.60
8	AH	102	ARG	NE-CZ-NH2	-5.21	114.51	119.20
8	AH	134	ILE	CB-CA-C	-5.21	105.09	111.92
12	AL	109	GLY	N-CA-C	-5.21	104.59	112.41
35	BA	1049	C	C5'-C4'-O4'	-5.21	101.98	109.80
35	BA	1952	A	C3'-C2'-O2'	5.21	118.52	110.70
47	BP	138	LEU	N-CA-C	-5.21	105.59	112.94
35	BA	54	G	O3'-P-O5'	-5.21	96.18	104.00
24	AY	363	ARG	N-CA-C	5.21	117.94	107.41
35	BA	445	C	C4'-C3'-C2'	5.21	107.81	102.60
35	BA	474	G	O4'-C1'-C2'	5.21	111.01	105.80
35	BA	1616	A	C3'-C2'-C1'	-5.21	96.29	101.50
45	BN	17	ASP	CB-CA-C	-5.21	104.32	111.51
1	AA	1201	A	O3'-P-O5'	5.21	111.81	104.00
1	AA	1211	U	N1-C1'-C2'	5.21	119.81	112.00
15	AO	59	MET	CA-C-O	-5.21	115.53	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1462	G	O5'-C5'-C4'	-5.21	103.69	111.50
2	AB	123	ALA	CB-CA-C	-5.21	104.64	112.09
3	AC	127	ARG	NE-CZ-NH1	-5.21	116.29	121.50
57	BZ	34	ASN	CA-CB-CG	5.21	117.81	112.60
35	BA	2712(A)	A	C3'-C2'-O2'	5.20	118.51	110.70
2	AB	164	VAL	N-CA-C	5.20	117.26	109.20
39	BE	58	ARG	N-CA-C	-5.20	106.46	114.16
43	BK	32	ALA	N-CA-C	5.20	117.89	110.24
46	BO	121	VAL	CB-CA-C	-5.20	103.96	111.19
1	AA	1237	C	C2'-C3'-O3'	-5.20	105.90	113.70
3	AC	71	ALA	N-CA-C	-5.20	105.61	112.94
5	AE	127	ASN	CA-C-N	5.20	126.34	119.84
5	AE	127	ASN	C-N-CA	5.20	126.34	119.84
35	BA	247	G	C1'-O4'-C4'	-5.20	104.70	109.90
35	BA	1192	G	O4'-C1'-C2'	-5.20	102.40	107.60
35	BA	1506	C	N1-C1'-C2'	5.20	119.80	112.00
24	AY	229	LEU	N-CA-C	-5.20	105.31	110.97
35	BA	2635	C	C1'-O4'-C4'	5.20	115.10	109.90
35	BA	2778	A	N9-C1'-C2'	5.20	121.80	114.00
42	BH	86	GLU	N-CA-C	5.20	116.88	109.14
50	BS	32	LEU	N-CA-C	-5.20	105.04	111.33
24	AY	631	ILE	N-CA-C	5.20	117.99	109.78
35	BA	1284	A	C1'-O4'-C4'	5.20	115.09	109.90
35	BA	2382	G	O4'-C1'-C2'	-5.20	100.61	105.80
35	BA	2768	C	C3'-C2'-O2'	5.20	118.50	110.70
4	AD	140	VAL	N-CA-C	5.19	116.38	109.37
3	AC	183	ASP	N-CA-C	-5.19	102.80	110.48
35	BA	499	U	O4'-C4'-C3'	5.19	109.19	104.00
35	BA	591	C	C4'-C3'-O3'	-5.19	105.21	113.00
35	BA	2335	A	C4'-C3'-C2'	-5.19	97.41	102.60
1	AA	888	G	C4'-C3'-C2'	5.19	107.79	102.60
24	AY	79	ILE	N-CA-C	5.19	116.05	108.53
35	BA	177	G	C1'-O4'-C4'	-5.19	104.51	109.70
35	BA	1399	C	P-O5'-C5'	-5.19	113.12	120.90
35	BA	1412	A	C3'-C2'-O2'	5.19	118.48	110.70
35	BA	1646	C	O4'-C4'-C3'	-5.19	98.81	104.00
46	BO	41	ALA	N-CA-C	5.19	117.27	109.23
2	AB	73	THR	N-CA-C	5.19	121.85	110.80
35	BA	678	C	C2'-C3'-O3'	-5.19	105.92	113.70
35	BA	949	C	C1'-C2'-O2'	5.19	116.18	108.40
39	BE	10	GLY	N-CA-C	-5.19	103.20	110.88
30	B5	42	PRO	N-CA-C	5.18	119.34	111.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	284	U	O4'-C1'-N1	-5.18	100.72	108.50
35	BA	1155	A	N9-C1'-C2'	5.18	119.78	112.00
37	BC	191	ARG	NE-CZ-NH1	-5.18	116.31	121.50
38	BD	193	VAL	N-CA-C	5.18	120.12	109.34
52	BU	108	GLU	N-CA-C	-5.18	104.89	111.11
35	BA	917	A	C5'-C4'-C3'	5.18	123.77	116.00
35	BA	2269	A	C5'-C4'-C3'	5.18	123.77	116.00
47	BP	35	HIS	N-CA-C	-5.18	99.76	110.80
1	AA	535	A	O4'-C1'-C2'	5.18	110.98	105.80
35	BA	1935	G	O4'-C1'-N9	-5.18	100.73	108.50
45	BN	35	ARG	CB-CA-C	-5.18	104.40	112.07
1	AA	458	C	C5'-C4'-C3'	-5.18	108.23	116.00
26	B1	25	LYS	N-CA-C	-5.18	106.81	113.23
35	BA	728	G	C4'-C3'-O3'	5.18	117.17	109.40
35	BA	2645	G	C5'-C4'-C3'	-5.18	107.43	115.20
42	BH	141	VAL	N-CA-C	5.18	115.39	110.42
35	BA	514	A	C4'-C3'-O3'	-5.18	105.23	113.00
35	BA	1190	G	C5'-C4'-C3'	-5.18	108.23	116.00
1	AA	233	C	C4'-C3'-O3'	-5.18	105.23	113.00
1	AA	511	C	N1-C1'-C2'	5.18	121.77	114.00
3	AC	13	GLY	CA-C-N	-5.18	115.34	122.69
3	AC	13	GLY	C-N-CA	-5.18	115.34	122.69
9	AI	61	ALA	N-CA-C	5.18	121.83	110.80
51	BT	71	GLY	CA-C-O	-5.18	115.57	120.64
36	BB	31	C	N1-C1'-C2'	5.17	119.76	112.00
51	BT	93	ARG	CD-NE-CZ	5.17	131.64	124.40
35	BA	1544	A	C4'-C3'-O3'	-5.17	105.24	113.00
1	AA	515	G	C5'-C4'-O4'	5.17	117.56	109.80
29	B4	50	VAL	N-CA-C	5.17	120.09	109.34
35	BA	2096	U	P-O5'-C5'	5.17	128.66	120.90
41	BG	137	GLU	N-CA-C	5.17	117.50	108.76
46	BO	45	GLU	CA-C-O	-5.17	115.20	120.89
51	BT	19	LEU	CA-C-N	5.17	126.31	119.84
51	BT	19	LEU	C-N-CA	5.17	126.31	119.84
1	AA	1497	G	C1'-C2'-O2'	-5.17	100.64	108.40
57	BZ	87	ASP	CA-C-N	-5.17	114.22	121.72
57	BZ	87	ASP	C-N-CA	-5.17	114.22	121.72
1	AA	428	G	C5'-C4'-C3'	-5.17	107.45	115.20
1	AA	936	C	C5'-C4'-C3'	5.17	123.75	116.00
5	AE	87	SER	CB-CA-C	5.17	118.28	109.80
24	AY	151	ARG	N-CA-C	-5.17	107.04	113.19
35	BA	2706	G	C1'-C2'-O2'	5.17	116.15	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	BS	68	GLN	CB-CA-C	-5.17	103.00	110.96
54	BW	10	VAL	CA-C-O	-5.17	114.73	120.46
35	BA	1410	G	C3'-C2'-O2'	5.16	118.45	110.70
39	BE	119	ARG	NE-CZ-NH1	-5.16	116.34	121.50
24	AY	613	PRO	N-CA-C	-5.16	102.59	110.95
35	BA	1664	A	C4'-C3'-O3'	-5.16	105.26	113.00
56	BY	46	LYS	N-CA-C	-5.16	99.81	110.80
1	AA	389	A	C2'-C3'-O3'	-5.16	105.96	113.70
1	AA	1300	G	O5'-C5'-C4'	-5.16	103.76	111.50
35	BA	1326	U	C5'-C4'-O4'	-5.16	102.06	109.80
35	BA	2681	C	O3'-P-O5'	-5.16	96.26	104.00
35	BA	2703	C	C4'-C3'-C2'	-5.16	97.44	102.60
41	BG	123	ASN	N-CA-C	5.16	119.14	111.87
1	AA	760	G	C2'-C3'-O3'	-5.16	105.96	113.70
41	BG	13	GLU	N-CA-C	5.16	117.85	110.68
1	AA	1517	G	C3'-C2'-C1'	5.16	106.45	101.30
6	AF	73	ASN	N-CA-C	5.16	116.90	111.28
48	BQ	35	VAL	N-CA-C	5.16	117.26	108.86
43	BK	85	GLU	N-CA-C	-5.15	99.82	110.80
48	BQ	118	LEU	CA-C-O	-5.15	115.09	120.55
35	BA	357	A	C3'-C2'-C1'	5.15	106.45	101.30
48	BQ	11	LYS	N-CA-C	5.15	117.96	109.72
1	AA	284	G	C1'-C2'-O2'	5.15	116.13	108.40
51	BT	96	ARG	N-CA-C	5.15	116.90	109.07
1	AA	1218	C	C1'-O4'-C4'	-5.15	104.75	109.90
18	AR	26	LEU	N-CA-C	5.15	117.24	109.41
35	BA	2666	C	C5'-C4'-C3'	-5.15	108.28	116.00
32	B7	13	ALA	CA-C-O	5.15	126.00	120.70
46	BO	116	SER	CA-C-O	5.14	125.58	119.10
1	AA	1298	C	N1-C1'-C2'	5.14	119.71	112.00
31	B6	17	LYS	CA-C-N	5.14	131.36	121.54
31	B6	17	LYS	C-N-CA	5.14	131.36	121.54
31	B6	33	LYS	N-CA-C	-5.14	99.85	110.80
35	BA	1984	G	C4'-C3'-C2'	-5.14	97.46	102.60
1	AA	321	A	C4'-C3'-C2'	-5.14	97.46	102.60
1	AA	902	G	O4'-C4'-C3'	5.14	109.14	104.00
4	AD	94	LEU	O-C-N	5.14	127.36	122.07
17	AQ	34	LYS	CA-C-O	-5.14	115.81	120.95
35	BA	1311	G	C4'-C3'-O3'	-5.14	101.69	109.40
35	BA	1399	C	O5'-C5'-C4'	-5.14	103.79	111.50
57	BZ	155	LEU	N-CA-C	5.14	116.88	108.76
12	AL	108	ALA	CA-C-N	-5.14	117.18	122.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	108	ALA	C-N-CA	-5.14	117.18	122.27
17	AQ	87	LYS	N-CA-C	-5.14	105.17	111.75
51	BT	16	ARG	NE-CZ-NH1	5.14	126.64	121.50
1	AA	124	G	N9-C1'-C2'	5.14	119.70	112.00
24	AY	561	VAL	CB-CA-C	-5.14	103.41	110.91
35	BA	2732	G	C4'-C3'-O3'	-5.14	105.30	113.00
11	AK	28	THR	CB-CA-C	-5.13	100.31	109.71
24	AY	534	ILE	N-CA-C	-5.13	103.07	108.15
33	B8	56	GLU	N-CA-C	5.13	116.73	111.03
41	BG	90	LEU	N-CA-C	5.13	116.87	108.55
35	BA	223	A	C1'-O4'-C4'	-5.13	104.77	109.90
35	BA	1630	G	C3'-C2'-O2'	5.13	118.40	110.70
36	BB	24	G	C3'-C2'-C1'	5.13	106.63	101.50
1	AA	1458	G	C2'-C3'-O3'	5.13	121.40	113.70
13	AM	40	ASN	CA-CB-CG	5.13	117.73	112.60
1	AA	1383	C	C4'-C3'-C2'	5.13	107.73	102.60
9	AI	99	LEU	N-CA-C	-5.13	101.91	110.17
24	AY	487	ILE	CB-CA-C	-5.13	103.42	110.91
35	BA	195	A	N9-C1'-C2'	5.13	119.69	112.00
35	BA	2296	U	O4'-C1'-N1	-5.13	100.51	108.20
34	B9	29	ASN	OD1-CG-ND2	5.13	127.73	122.60
35	BA	1027	A	C3'-C2'-C1'	5.13	106.43	101.30
35	BA	2339	G	C3'-C2'-C1'	-5.13	96.17	101.30
35	BA	2475	C	C3'-C2'-C1'	5.13	106.43	101.30
36	BB	22	U	C5'-C4'-C3'	-5.13	108.31	116.00
36	BB	44	G	N9-C1'-C2'	5.13	119.69	112.00
47	BP	110	TYR	CB-CA-C	-5.13	110.68	116.63
35	BA	2892	A	C1'-C2'-O2'	5.12	116.09	108.40
55	BX	80	ILE	N-CA-C	5.12	116.91	108.97
35	BA	209	C	C3'-C2'-O2'	5.12	118.39	110.70
35	BA	343	C	C3'-C2'-O2'	5.12	118.39	110.70
35	BA	654(L)	G	N9-C1'-C2'	5.12	119.68	112.00
35	BA	1103	A	C4'-C3'-C2'	5.12	107.72	102.60
35	BA	1493	C	C1'-O4'-C4'	5.12	114.82	109.70
2	AB	158	LEU	N-CA-C	5.12	121.13	109.81
35	BA	700	G	C3'-C2'-O2'	5.12	118.38	110.70
35	BA	961	C	N1-C1'-C2'	5.12	121.68	114.00
35	BA	1184	G	C4'-C3'-C2'	-5.12	97.48	102.60
35	BA	2436	G	C2'-C3'-O3'	-5.12	106.02	113.70
1	AA	192	U	O4'-C1'-C2'	5.12	112.72	107.60
12	AL	102	ARG	CA-C-O	-5.12	114.85	120.43
1	AA	274	A	C5'-C4'-C3'	-5.12	107.52	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AD	142	PRO	N-CA-CB	-5.12	99.80	103.23
18	AR	37	VAL	CB-CA-C	-5.12	102.89	111.29
24	AY	414	GLU	CA-C-N	5.12	126.24	119.84
24	AY	414	GLU	C-N-CA	5.12	126.24	119.84
35	BA	898	C	C3'-C2'-O2'	5.12	118.38	110.70
35	BA	2511	U	C5'-C4'-C3'	-5.12	108.32	116.00
38	BD	210	GLY	N-CA-C	-5.12	101.05	113.18
24	AY	379	GLY	N-CA-C	-5.12	101.05	113.18
51	BT	111	ARG	NE-CZ-NH2	-5.12	114.59	119.20
53	BV	69	LYS	N-CA-C	5.12	117.58	109.24
3	AC	155	GLY	CA-C-N	5.12	131.31	121.54
3	AC	155	GLY	C-N-CA	5.12	131.31	121.54
20	AT	48	LYS	CA-C-O	5.12	127.83	120.51
29	B4	30	GLU	CB-CA-C	-5.12	101.80	110.19
44	BL	116	GLU	O-C-N	5.12	129.07	122.93
10	AJ	21	GLN	O-C-N	5.11	129.39	122.59
36	BB	6	C	C1'-O4'-C4'	-5.11	104.79	109.90
47	BP	94	GLU	CA-C-O	-5.11	113.99	120.28
35	BA	1188	U	O4'-C1'-C2'	5.11	112.71	107.60
6	AF	48	LEU	O-C-N	5.11	128.66	122.94
20	AT	52	ALA	O-C-N	5.11	128.04	122.11
25	B0	43	THR	CA-C-N	5.11	127.89	120.79
25	B0	43	THR	C-N-CA	5.11	127.89	120.79
35	BA	738	G	C4'-C3'-O3'	-5.11	105.33	113.00
35	BA	1163	G	C2'-C3'-O3'	-5.11	106.03	113.70
35	BA	1446	C	C4'-C3'-O3'	5.11	120.67	113.00
35	BA	1542	A	C5'-C4'-C3'	-5.11	108.33	116.00
55	BX	47	PHE	O-C-N	5.11	127.11	121.85
24	AY	452	SER	O-C-N	-5.11	116.52	122.96
35	BA	2126	A	C2'-C3'-O3'	5.11	117.16	109.50
39	BE	94	GLU	CA-C-O	5.11	125.54	119.10
42	BH	97	ARG	NE-CZ-NH1	-5.11	116.39	121.50
1	AA	1077	G	C4'-C3'-C2'	-5.11	97.49	102.60
8	AH	14	ARG	NE-CZ-NH1	-5.11	116.39	121.50
10	AJ	16	LEU	N-CA-C	-5.11	106.56	112.89
1	AA	691	G	C3'-C2'-O2'	5.10	118.36	110.70
1	AA	1321	C	C3'-C2'-O2'	5.10	118.36	110.70
34	B9	32	HIS	ND1-CE1-NE2	5.10	113.50	108.40
47	BP	115	LEU	CA-C-O	-5.10	115.88	121.14
57	BZ	74	VAL	O-C-N	5.10	127.56	122.97
1	AA	1323	G	C4'-C3'-O3'	-5.10	105.34	113.00
6	AF	9	VAL	CA-C-O	-5.10	115.03	120.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	271(K)	U	O4'-C4'-C3'	5.10	111.20	106.10
35	BA	512	G	C3'-C2'-C1'	5.10	106.40	101.30
35	BA	2242	G	N9-C1'-C2'	5.10	119.65	112.00
24	AY	528	ALA	CA-C-N	-5.10	116.17	123.11
24	AY	528	ALA	C-N-CA	-5.10	116.17	123.11
27	B2	37	PHE	O-C-N	5.10	127.98	122.11
3	AC	54	ARG	NE-CZ-NH1	-5.10	116.40	121.50
6	AF	50	TYR	O-C-N	-5.10	117.85	121.83
33	B8	59	LYS	O-C-N	5.10	127.65	122.09
13	AM	87	TYR	O-C-N	5.10	127.32	122.07
35	BA	1131	G	C2'-C3'-O3'	-5.10	101.85	109.50
35	BA	1621	U	C3'-C2'-O2'	5.10	118.35	110.70
35	BA	2208	A	C2'-C3'-O3'	-5.10	106.06	113.70
6	AF	25	ILE	N-CA-CB	5.09	119.36	110.65
35	BA	2298	A	C5'-C4'-C3'	5.09	123.64	116.00
35	BA	2470	G	C5'-C4'-O4'	5.09	117.44	109.80
35	BA	2860	A	C2'-C3'-O3'	-5.09	106.06	113.70
24	AY	411	VAL	CB-CA-C	-5.09	104.22	111.40
35	BA	1667	G	C5'-C4'-C3'	-5.09	107.56	115.20
35	BA	2521	C	P-O5'-C5'	5.09	128.54	120.90
37	BC	153	ILE	CB-CA-C	-5.09	105.30	111.87
40	BF	147	GLY	N-CA-C	-5.09	106.73	115.08
1	AA	1022	G	C5'-C4'-O4'	5.09	117.44	109.80
5	AE	129	ILE	CB-CA-C	-5.09	102.94	111.29
35	BA	2791	C	O5'-C5'-C4'	-5.09	104.06	111.70
24	AY	68	ALA	CA-C-O	5.09	127.79	120.51
35	BA	1255	U	C5'-C4'-C3'	5.09	123.63	116.00
1	AA	368	U	C4'-C3'-O3'	-5.09	105.37	113.00
9	AI	54	ASP	CA-CB-CG	5.09	117.69	112.60
35	BA	283	A	C3'-C2'-C1'	-5.09	96.41	101.50
35	BA	418	G	C5'-C4'-C3'	5.09	123.63	116.00
35	BA	1608	A	C4'-C3'-O3'	5.09	117.03	109.40
13	AM	104	ARG	NE-CZ-NH1	-5.09	116.41	121.50
40	BF	165	ARG	N-CA-C	-5.09	105.86	111.71
41	BG	81	LYS	N-CA-C	5.09	121.63	110.80
56	BY	34	LYS	N-CA-C	-5.08	106.92	113.02
1	AA	1495	U	C1'-C2'-O2'	-5.08	100.78	108.40
35	BA	279	C	C1'-O4'-C4'	5.08	114.98	109.90
35	BA	728	G	C2'-C3'-O3'	5.08	117.13	109.50
36	BB	77	U	C3'-C2'-O2'	5.08	118.33	110.70
49	BR	79	LEU	CA-C-N	5.08	127.09	120.28
49	BR	79	LEU	C-N-CA	5.08	127.09	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	AP	28	ARG	NE-CZ-NH1	-5.08	116.42	121.50
37	BC	154	ILE	CA-C-O	-5.08	115.77	121.05
52	BU	8	VAL	CA-C-O	5.08	124.08	119.20
24	AY	204	GLU	N-CA-C	5.08	121.62	110.80
31	B6	19	ARG	NE-CZ-NH1	-5.08	116.42	121.50
50	BS	61	ASN	CB-CG-ND2	-5.08	108.78	116.40
7	AG	75	VAL	N-CA-C	5.08	115.28	108.17
24	AY	357	ARG	NE-CZ-NH1	-5.08	116.42	121.50
35	BA	1287	A	N9-C1'-C2'	5.08	119.62	112.00
35	BA	2107	C	O5'-C5'-C4'	-5.08	103.88	111.50
35	BA	2449	U	N1-C1'-C2'	5.08	121.62	114.00
43	BK	21	PRO	N-CA-C	5.08	116.90	110.70
35	BA	1347	G	O4'-C1'-C2'	-5.08	102.52	107.60
1	AA	518	C	C5'-C4'-O4'	5.08	116.71	109.10
13	AM	14	ARG	NE-CZ-NH2	5.08	123.77	119.20
22	AV	55	U	O5'-C5'-C4'	-5.08	103.89	111.50
25	B0	27	GLU	CA-C-O	-5.08	115.98	121.87
35	BA	2103	C	C1'-O4'-C4'	-5.08	104.83	109.90
35	BA	2711	A	C2'-C3'-O3'	-5.08	106.09	113.70
1	AA	264	U	C4'-C3'-O3'	-5.07	105.39	113.00
1	AA	983	A	P-O5'-C5'	-5.07	113.29	120.90
1	AA	1439	C	C5'-C4'-C3'	-5.07	108.39	116.00
35	BA	2148	G	O5'-C5'-C4'	-5.07	103.89	111.50
36	BB	6	C	C3'-C2'-O2'	5.07	118.31	110.70
2	AB	214	ILE	N-CA-C	5.07	115.19	110.42
35	BA	2644	G	P-O5'-C5'	-5.07	113.29	120.90
24	AY	225	GLU	CA-C-N	5.07	127.07	120.28
24	AY	225	GLU	C-N-CA	5.07	127.07	120.28
35	BA	923	C	C1'-O4'-C4'	-5.07	104.83	109.90
36	BB	19	G	O4'-C4'-C3'	5.07	109.07	104.00
42	BH	153	LYS	CA-C-N	5.07	126.18	119.84
42	BH	153	LYS	C-N-CA	5.07	126.18	119.84
47	BP	30	THR	N-CA-C	5.07	117.25	109.95
1	AA	527	G	O5'-C5'-C4'	-5.07	103.90	111.50
29	B4	49	PHE	N-CA-C	5.07	121.60	110.80
39	BE	152	LYS	N-CA-C	-5.07	103.84	110.53
1	AA	717	C	C4'-C3'-O3'	-5.07	101.80	109.40
22	AV	71	C	C4'-C3'-C2'	-5.07	97.53	102.60
35	BA	679	C	O3'-P-O5'	5.07	111.60	104.00
35	BA	1359	A	C3'-C2'-C1'	-5.07	96.23	101.30
27	B2	9	GLN	N-CA-C	-5.07	103.06	111.37
1	AA	1022	G	C4'-C3'-C2'	5.06	107.66	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	2731	G	C3'-C2'-O2'	-5.06	103.11	110.70
1	AA	1200	C	N1-C1'-C2'	-5.06	106.41	114.00
35	BA	1351	C	C3'-C2'-O2'	5.06	118.29	110.70
41	BG	167	GLU	N-CA-C	-5.06	105.04	111.11
9	AI	71	SER	N-CA-C	5.06	116.61	111.14
35	BA	2709	G	O5'-C5'-C4'	-5.06	103.91	111.50
57	BZ	30	ASN	N-CA-C	-5.06	100.02	110.80
1	AA	172	A	O4'-C1'-C2'	5.06	112.66	107.60
15	AO	64	ARG	NE-CZ-NH1	-5.06	116.44	121.50
35	BA	2073	C	C5'-C4'-C3'	-5.06	108.41	116.00
1	AA	672	U	C4'-C3'-O3'	-5.06	105.41	113.00
24	AY	669	PHE	N-CA-C	5.06	116.67	109.14
51	BT	74	ARG	NE-CZ-NH1	-5.06	116.44	121.50
53	BV	77	ALA	CA-C-O	-5.06	116.01	121.87
57	BZ	45	ASP	N-CA-C	-5.06	100.03	110.80
1	AA	1256	A	O5'-C5'-C4'	-5.05	103.92	111.50
3	AC	164	ARG	NE-CZ-NH2	5.05	123.75	119.20
35	BA	229	A	C4'-C3'-O3'	-5.05	105.42	113.00
35	BA	1024	G	O4'-C4'-C3'	5.05	109.05	104.00
35	BA	2241	A	C4'-C3'-O3'	-5.05	105.42	113.00
40	BF	18	ARG	N-CA-C	-5.05	102.98	110.46
41	BG	20	ILE	CB-CA-C	-5.05	105.35	111.87
1	AA	624	C	C5'-C4'-O4'	-5.05	102.22	109.80
35	BA	1443	G	O3'-P-O5'	-5.05	96.42	104.00
24	AY	163	VAL	O-C-N	-5.05	117.25	122.66
35	BA	801	G	C5'-C4'-C3'	5.05	122.78	115.20
35	BA	2624	G	N9-C1'-C2'	-5.05	104.42	112.00
53	BV	37	VAL	CB-CA-C	-5.05	105.84	111.35
16	AP	12	LYS	N-CA-C	-5.05	103.38	110.50
24	AY	551	GLN	N-CA-C	5.05	116.63	111.03
37	BC	98	GLU	N-CA-C	-5.05	107.09	113.20
40	BF	8	GLN	O-C-N	5.05	129.31	123.30
42	BH	17	VAL	N-CA-C	5.05	114.45	106.32
35	BA	313	C	N1-C1'-C2'	5.05	119.57	112.00
57	BZ	27	VAL	CB-CA-C	-5.05	103.01	111.29
1	AA	1094	G	C5'-C4'-O4'	-5.05	102.23	109.80
1	AA	1149	C	C1'-O4'-C4'	5.05	114.95	109.90
35	BA	1772	G	C5'-C4'-C3'	-5.05	108.43	116.00
35	BA	2858	C	O4'-C4'-C3'	5.05	109.05	104.00
42	BH	34	GLU	N-CA-C	5.05	117.14	107.75
51	BT	39	ARG	CA-C-N	-5.05	115.50	122.16
51	BT	39	ARG	C-N-CA	-5.05	115.50	122.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	224	C	C3'-C2'-O2'	5.04	118.27	110.70
35	BA	82	G	C3'-C2'-O2'	5.04	118.27	110.70
35	BA	2829	C	P-O5'-C5'	-5.04	113.33	120.90
47	BP	9	ASN	CA-CB-CG	-5.04	107.56	112.60
1	AA	315	A	O5'-C5'-C4'	-5.04	103.93	111.50
1	AA	614	A	C5'-C4'-C3'	-5.04	108.44	116.00
2	AB	60	ASP	CA-CB-CG	-5.04	107.56	112.60
35	BA	2438	U	C1'-C2'-O2'	5.04	115.96	108.40
39	BE	92	THR	CA-C-N	5.04	128.59	121.53
39	BE	92	THR	C-N-CA	5.04	128.59	121.53
1	AA	247	G	N9-C1'-C2'	-5.04	104.44	112.00
35	BA	832	G	N9-C1'-C2'	5.04	119.56	112.00
53	BV	27	ALA	CA-C-N	5.04	128.31	120.60
53	BV	27	ALA	C-N-CA	5.04	128.31	120.60
35	BA	1141	U	C2'-C3'-O3'	-5.04	106.14	113.70
7	AG	143	ARG	N-CA-C	-5.04	105.23	111.33
20	AT	72	LEU	N-CA-C	-5.04	102.70	109.95
24	AY	459	LEU	CB-CA-C	-5.04	102.11	110.68
33	B8	23	VAL	N-CA-C	5.04	116.61	108.85
35	BA	2310	A	C4'-C3'-O3'	-5.04	101.84	109.40
35	BA	2773	C	O4'-C1'-N1	5.04	116.06	108.50
6	AF	28	ARG	N-CA-C	-5.04	105.07	111.11
35	BA	73	A	C5'-C4'-C3'	-5.04	108.44	116.00
39	BE	170	LEU	CA-C-O	-5.04	116.21	121.55
51	BT	77	PRO	N-CA-C	5.04	120.24	114.20
1	AA	1321	C	O3'-P-O5'	5.04	111.55	104.00
7	AG	4	ARG	NE-CZ-NH1	-5.04	116.47	121.50
30	B5	12	SER	CA-C-N	5.04	127.03	120.28
30	B5	12	SER	C-N-CA	5.04	127.03	120.28
35	BA	1680	U	O4'-C4'-C3'	5.04	109.03	104.00
48	BQ	61	GLY	O-C-N	5.04	127.14	122.81
5	AE	72	GLN	O-C-N	5.03	129.29	122.59
1	AA	439	A	C2'-C3'-O3'	-5.03	106.15	113.70
1	AA	576	G	O4'-C4'-C3'	5.03	111.13	106.10
9	AI	83	ARG	N-CA-C	-5.03	106.65	112.89
1	AA	57	G	C1'-O4'-C4'	-5.03	104.87	109.90
24	AY	183	MET	N-CA-C	5.03	121.51	110.80
35	BA	501	A	C4'-C3'-C2'	-5.03	97.57	102.60
35	BA	1154	G	C5'-C4'-C3'	-5.03	108.45	116.00
35	BA	2481	G	C2'-C3'-O3'	5.03	117.05	109.50
47	BP	90	ARG	NE-CZ-NH2	5.03	123.73	119.20
57	BZ	48	PHE	N-CA-C	-5.03	106.40	112.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	204	U	C1'-O4'-C4'	-5.03	104.67	109.70
1	AA	355	C	O5'-C5'-C4'	-5.03	103.96	111.50
1	AA	1057	G	C5'-C4'-C3'	5.03	123.54	116.00
1	AA	1173	G	O3'-P-O5'	-5.03	96.46	104.00
35	BA	1031	G	C5'-C4'-C3'	-5.03	108.46	116.00
35	BA	1288	U	C3'-C2'-O2'	-5.03	107.06	114.60
35	BA	2287	A	C1'-O4'-C4'	5.03	114.72	109.70
36	BB	92	C	C2'-C3'-O3'	-5.03	106.16	113.70
37	BC	53	ARG	N-CA-C	5.03	119.26	113.18
41	BG	105	LYS	CB-CA-C	-5.03	103.16	110.95
1	AA	1077	G	C5'-C4'-O4'	5.02	117.34	109.80
1	AA	1477	C	C3'-C2'-O2'	5.02	118.23	110.70
6	AF	3	ARG	NE-CZ-NH2	-5.02	114.68	119.20
29	B4	46	GLN	O-C-N	-5.02	118.00	123.52
35	BA	722	A	N9-C1'-C2'	5.02	119.53	112.00
35	BA	813	U	C5'-C4'-C3'	-5.02	108.47	116.00
39	BE	177	PRO	N-CA-C	-5.02	106.55	113.53
3	AC	153	VAL	CB-CA-C	-5.02	103.09	110.82
35	BA	1360	A	P-O5'-C5'	-5.02	113.37	120.90
35	BA	2338	G	C4'-C3'-C2'	5.02	107.62	102.60
35	BA	2662	A	C3'-C2'-C1'	5.02	106.32	101.30
46	BO	31	LYS	N-CA-C	5.02	117.86	111.69
49	BR	116	LEU	N-CA-C	5.02	119.12	113.15
1	AA	303	A	O4'-C1'-C2'	-5.02	102.58	107.60
13	AM	21	TYR	CA-C-O	5.02	126.94	118.91
24	AY	100	VAL	CB-CA-C	-5.02	105.54	111.81
35	BA	32	C	C4'-C3'-O3'	-5.02	105.47	113.00
35	BA	2189	U	C3'-C2'-O2'	5.02	118.23	110.70
52	BU	56	ASP	N-CA-C	-5.02	105.28	111.40
27	B2	69	ARG	O-C-N	5.02	127.53	121.76
35	BA	441	U	C1'-C2'-O2'	5.02	115.92	108.40
38	BD	158	ALA	N-CA-C	-5.02	104.06	110.53
35	BA	768	G	C4'-C3'-C2'	5.01	107.61	102.60
35	BA	2003	G	C5'-C4'-C3'	-5.01	108.48	116.00
1	AA	989	C	C5'-C4'-C3'	-5.01	108.48	116.00
1	AA	1090	U	O4'-C1'-C2'	-5.01	102.59	107.60
32	B7	24	THR	CA-C-O	-5.01	114.79	119.80
42	BH	19	VAL	O-C-N	-5.01	116.31	122.57
1	AA	330	C	O4'-C4'-C3'	5.01	109.01	104.00
1	AA	1281	U	C2'-C3'-O3'	-5.01	106.19	113.70
24	AY	666	ARG	CA-C-N	-5.01	118.24	121.65
24	AY	666	ARG	C-N-CA	-5.01	118.24	121.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	459	U	P-O5'-C5'	5.01	128.41	120.90
35	BA	784	A	O4'-C4'-C3'	5.01	109.01	104.00
35	BA	2414	G	C5'-C4'-O4'	-5.01	102.29	109.80
36	BB	15	A	C4'-C3'-C2'	5.01	107.61	102.60
35	BA	641	C	N1-C1'-C2'	5.01	119.51	112.00
47	BP	127	ALA	N-CA-CB	-5.01	103.51	111.62
13	AM	114	ARG	N-CA-C	5.01	121.46	110.80
35	BA	1594	G	C1'-C2'-O2'	5.01	115.91	108.40
40	BF	182	ASN	OD1-CG-ND2	-5.01	117.59	122.60
56	BY	73	ARG	NE-CZ-NH2	-5.01	114.69	119.20
56	BY	106	LEU	O-C-N	5.01	127.24	121.88
1	AA	254	G	C5'-C4'-C3'	5.00	123.51	116.00
35	BA	769	G	C4'-C3'-O3'	-5.00	105.49	113.00
35	BA	1954	G	C5'-C4'-C3'	5.00	122.71	115.20
35	BA	2482	G	N9-C1'-C2'	5.00	119.51	112.00
38	BD	91	ARG	NH1-CZ-NH2	5.00	125.81	119.30
1	AA	315	A	O4'-C4'-C3'	5.00	109.00	104.00
3	AC	165	THR	CA-C-N	-5.00	115.68	122.93
3	AC	165	THR	C-N-CA	-5.00	115.68	122.93
4	AD	204	ILE	CB-CA-C	-5.00	105.56	111.81
11	AK	66	LEU	N-CA-C	-5.00	105.74	111.14
22	AV	4	G	C5'-C4'-C3'	-5.00	107.70	115.20

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
35	BA	1992	G	C3'

All (457) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1003	G	Sidechain
1	AA	1053	G	Sidechain
1	AA	1055	A	Sidechain
1	AA	1058	G	Sidechain
1	AA	106	C	Sidechain
1	AA	1064	G	Sidechain
1	AA	1065	U	Sidechain
1	AA	1073	U	Sidechain
1	AA	1077	G	Sidechain
1	AA	108	G	Sidechain
1	AA	1083	U	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1109	C	Sidechain
1	AA	1117	G	Sidechain
1	AA	1125	U	Sidechain
1	AA	1129	C	Sidechain
1	AA	1184	G	Sidechain
1	AA	1191	A	Sidechain
1	AA	1214	C	Sidechain
1	AA	1231	G	Sidechain
1	AA	1239	A	Sidechain
1	AA	1262	C	Sidechain
1	AA	1277	C	Sidechain
1	AA	1279	A	Sidechain
1	AA	129	U	Sidechain
1	AA	1293	G	Sidechain
1	AA	1330	U	Sidechain
1	AA	1331	G	Sidechain
1	AA	1345	U	Sidechain
1	AA	1347	G	Sidechain
1	AA	1355	G	Sidechain
1	AA	1357	A	Sidechain
1	AA	1370	G	Sidechain
1	AA	1383	C	Sidechain
1	AA	1391	U	Sidechain
1	AA	1401	G	Sidechain
1	AA	1402	C	Sidechain
1	AA	1413	A	Sidechain
1	AA	1414	U	Sidechain
1	AA	1416	G	Sidechain
1	AA	1421	G	Sidechain
1	AA	1447	A	Sidechain
1	AA	146	G	Sidechain
1	AA	1485	U	Sidechain
1	AA	1502	A	Sidechain
1	AA	1512	U	Sidechain
1	AA	1519	A	Sidechain
1	AA	1529	G	Sidechain
1	AA	181	G	Sidechain
1	AA	184	G	Sidechain
1	AA	189(G)	G	Sidechain
1	AA	203	U	Sidechain
1	AA	250	A	Sidechain
1	AA	262	A	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	265	G	Sidechain
1	AA	30	U	Sidechain
1	AA	315	A	Sidechain
1	AA	328	C	Sidechain
1	AA	368	U	Sidechain
1	AA	380	G	Sidechain
1	AA	436	C	Sidechain
1	AA	445	G	Sidechain
1	AA	493	G	Sidechain
1	AA	5	U	Sidechain
1	AA	529	G	Sidechain
1	AA	551	U	Sidechain
1	AA	560	U	Sidechain
1	AA	568	G	Sidechain
1	AA	573	A	Sidechain
1	AA	598	U	Sidechain
1	AA	633	G	Sidechain
1	AA	641	U	Sidechain
1	AA	648	A	Sidechain
1	AA	655	A	Sidechain
1	AA	657	G	Sidechain
1	AA	667	G	Sidechain
1	AA	669	U	Sidechain
1	AA	676	A	Sidechain
1	AA	688	G	Sidechain
1	AA	69	G	Sidechain
1	AA	691	G	Sidechain
1	AA	694	A	Sidechain
1	AA	702	A	Sidechain
1	AA	709	G	Sidechain
1	AA	712	A	Sidechain
1	AA	716	A	Sidechain
1	AA	720	C	Sidechain
1	AA	730	G	Sidechain
1	AA	736	C	Sidechain
1	AA	755	G	Sidechain
1	AA	758	G	Sidechain
1	AA	775	G	Sidechain
1	AA	781	A	Sidechain
1	AA	835	U	Sidechain
1	AA	867	G	Sidechain
1	AA	872	A	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	881	G	Sidechain
1	AA	882	C	Sidechain
1	AA	887	G	Sidechain
1	AA	892	A	Sidechain
1	AA	898	G	Sidechain
1	AA	950	U	Sidechain
1	AA	963	G	Sidechain
1	AA	968	A	Sidechain
1	AA	971	G	Sidechain
1	AA	980	C	Sidechain
1	AA	981	U	Sidechain
1	AA	991	U	Sidechain
2	AB	137	ARG	Sidechain
2	AB	144	ARG	Sidechain
2	AB	157	ARG	Sidechain
2	AB	231	GLU	Sidechain
2	AB	240	GLN	Sidechain
3	AC	104	GLN	Sidechain
3	AC	79	ARG	Sidechain
3	AC	89	GLU	Sidechain
4	AD	14	ARG	Sidechain
4	AD	35	ARG	Sidechain
4	AD	49	ARG	Sidechain
5	AE	14	ARG	Sidechain
5	AE	152	ARG	Sidechain
5	AE	64	ARG	Sidechain
5	AE	7	GLU	Sidechain
6	AF	27	GLN	Sidechain
6	AF	3	ARG	Sidechain
6	AF	46	ARG	Sidechain
6	AF	7	ASN	Sidechain
6	AF	82	ARG	Sidechain
6	AF	86	ARG	Sidechain
7	AG	115	ARG	Sidechain
7	AG	149	ARG	Sidechain
7	AG	45	ASP	Sidechain
7	AG	56	GLN	Sidechain
7	AG	72	ARG	Sidechain
7	AG	94	ARG	Sidechain
8	AH	102	ARG	Sidechain
8	AH	18	ARG	Sidechain
8	AH	41	ARG	Sidechain

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Mol	Chain	Res	Type	Group
8	AH	70	GLN	Sidechain
9	AI	104	ARG	Mainchain
9	AI	120	ARG	Sidechain
9	AI	121	ARG	Sidechain
9	AI	48	GLU	Sidechain
9	AI	53	VAL	Mainchain
10	AJ	60	ARG	Sidechain
10	AJ	76	ASN	Sidechain
11	AK	78	GLN	Sidechain
11	AK	93	GLN	Sidechain
12	AL	117	ARG	Sidechain
12	AL	41	ARG	Sidechain
12	AL	97	ARG	Sidechain
13	AM	110	ARG	Sidechain
13	AM	29	ARG	Sidechain
13	AM	3	ARG	Sidechain
14	AN	26	ARG	Sidechain
14	AN	35	ARG	Sidechain
15	AO	64	ARG	Sidechain
15	AO	65	ARG	Sidechain
15	AO	88	ARG	Sidechain
16	AP	14	ASN	Sidechain
16	AP	55	ARG	Sidechain
16	AP	57	ARG	Sidechain
16	AP	71	ARG	Sidechain
16	AP	8	ARG	Sidechain
16	AP	81	ARG	Sidechain
17	AQ	25	ARG	Sidechain
17	AQ	75	ARG	Sidechain
17	AQ	83	ASP	Sidechain
18	AR	32	ARG	Sidechain
18	AR	42	ARG	Sidechain
18	AR	74	ARG	Sidechain
19	AS	37	ARG	Sidechain
19	AS	73	GLU	Sidechain
19	AS	78	ARG	Sidechain
20	AT	23	ARG	Sidechain
20	AT	8	ARG	Sidechain
21	AU	10	ARG	Sidechain
21	AU	22	ARG	Sidechain
21	AU	9	ARG	Sidechain
22	AV	15	G	Sidechain

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Mol	Chain	Res	Type	Group
22	AV	29	G	Sidechain
22	AV	33	U	Sidechain
22	AV	4	G	Sidechain
22	AV	8	U	Sidechain
23	AX	12	A	Sidechain
24	AY	119	GLU	Sidechain
24	AY	123	ARG	Sidechain
24	AY	145	ASP	Sidechain
24	AY	170	ARG	Sidechain
24	AY	190	ASN	Sidechain
24	AY	198	GLU	Sidechain
24	AY	236	GLU	Sidechain
24	AY	31	ARG	Sidechain
24	AY	329	ARG	Sidechain
24	AY	354	ARG	Sidechain
24	AY	393	ASP	Sidechain
24	AY	473	ASP	Sidechain
24	AY	619	ASP	Sidechain
25	B0	72	ARG	Sidechain
26	B1	20	ARG	Sidechain
26	B1	61	ARG	Sidechain
26	B1	76	ARG	Sidechain
27	B2	22	GLU	Sidechain
27	B2	55	ARG	Sidechain
27	B2	56	GLN	Sidechain
27	B2	59	ARG	Sidechain
27	B2	69	ARG	Sidechain
27	B2	70	GLN	Sidechain
28	B3	29	ARG	Sidechain
28	B3	38	GLU	Sidechain
29	B4	38	LYS	Peptide
29	B4	47	GLN	Sidechain
29	B4	57	GLU	Sidechain
30	B5	51	TYR	Sidechain
30	B5	55	ARG	Sidechain
31	B6	28	ARG	Sidechain
31	B6	32	ASN	Sidechain
31	B6	37	ARG	Sidechain
32	B7	47	ARG	Sidechain
33	B8	35	GLN	Sidechain
33	B8	46	ARG	Sidechain
34	B9	18	ARG	Sidechain

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Mol	Chain	Res	Type	Group
34	B9	22	ARG	Sidechain
35	BA	1112	G	Sidechain
35	BA	1155	A	Sidechain
35	BA	1156	A	Sidechain
35	BA	1204	A	Sidechain
35	BA	1228	G	Sidechain
35	BA	1236	G	Sidechain
35	BA	1238	G	Sidechain
35	BA	1249	U	Sidechain
35	BA	1283	G	Sidechain
35	BA	1302	A	Sidechain
35	BA	1304	C	Sidechain
35	BA	1355	G	Sidechain
35	BA	1380	G	Sidechain
35	BA	1401	G	Sidechain
35	BA	1416	G	Sidechain
35	BA	1444	G	Sidechain
35	BA	1455	G	Sidechain
35	BA	1473	G	Sidechain
35	BA	1554	A	Sidechain
35	BA	1559	G	Sidechain
35	BA	1614	A	Sidechain
35	BA	1619	G	Sidechain
35	BA	1627	G	Sidechain
35	BA	1629	U	Sidechain
35	BA	1645	G	Sidechain
35	BA	1654	A	Sidechain
35	BA	1655	A	Sidechain
35	BA	1690	A	Sidechain
35	BA	1742	G	Sidechain
35	BA	1745	C	Sidechain
35	BA	1772	G	Sidechain
35	BA	1776	G	Sidechain
35	BA	178	G	Sidechain
35	BA	1791	A	Sidechain
35	BA	1797	C	Sidechain
35	BA	1822	G	Sidechain
35	BA	1827	C	Sidechain
35	BA	1858	G	Sidechain
35	BA	1860	G	Sidechain
35	BA	1920	C	Sidechain
35	BA	1926	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	1929	G	Sidechain
35	BA	1935	G	Sidechain
35	BA	1944	U	Sidechain
35	BA	1966	A	Sidechain
35	BA	1968	G	Sidechain
35	BA	1971	A	Sidechain
35	BA	1977	A	Sidechain
35	BA	1992	G	Sidechain
35	BA	200	U	Sidechain
35	BA	2009	G	Sidechain
35	BA	2031	A	Sidechain
35	BA	2051	A	Sidechain
35	BA	2055	C	Sidechain
35	BA	2079	U	Sidechain
35	BA	2087	G	Sidechain
35	BA	2126	A	Sidechain
35	BA	2153	G	Sidechain
35	BA	2168	G	Sidechain
35	BA	2203	U	Sidechain
35	BA	2250	G	Sidechain
35	BA	2276	G	Sidechain
35	BA	2296	U	Sidechain
35	BA	2299	G	Sidechain
35	BA	2338	G	Sidechain
35	BA	2340	G	Sidechain
35	BA	2344	U	Sidechain
35	BA	2382	G	Sidechain
35	BA	2383	G	Sidechain
35	BA	2384	G	Sidechain
35	BA	2387	U	Sidechain
35	BA	2395	C	Sidechain
35	BA	2401	U	Sidechain
35	BA	2419	U	Sidechain
35	BA	2432	A	Sidechain
35	BA	2434	A	Sidechain
35	BA	2447	G	Sidechain
35	BA	2450	A	Sidechain
35	BA	2464	C	Sidechain
35	BA	2481	G	Sidechain
35	BA	2494	G	Sidechain
35	BA	2504	U	Sidechain
35	BA	2506	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	2508	G	Sidechain
35	BA	2518	A	Sidechain
35	BA	2541	A	Sidechain
35	BA	2547	U	Sidechain
35	BA	2564	A	Sidechain
35	BA	2567	G	Sidechain
35	BA	2569	G	Sidechain
35	BA	2576	G	Sidechain
35	BA	2607	G	Sidechain
35	BA	2659	G	Sidechain
35	BA	2665	A	Sidechain
35	BA	268	C	Sidechain
35	BA	2685	G	Sidechain
35	BA	2687	U	Sidechain
35	BA	27	G	Sidechain
35	BA	271(U)	G	Sidechain
35	BA	271(Y)	U	Sidechain
35	BA	2732	G	Sidechain
35	BA	2776	A	Sidechain
35	BA	2778	A	Sidechain
35	BA	28	A	Sidechain
35	BA	2818	G	Sidechain
35	BA	2826	A	Sidechain
35	BA	2829	C	Sidechain
35	BA	2857	G	Sidechain
35	BA	306	U	Sidechain
35	BA	329	G	Sidechain
35	BA	331	A	Sidechain
35	BA	338	G	Sidechain
35	BA	34	C	Sidechain
35	BA	363(E)	U	Sidechain
35	BA	401	A	Sidechain
35	BA	45	C	Sidechain
35	BA	507	A	Sidechain
35	BA	511	U	Sidechain
35	BA	537	C	Sidechain
35	BA	558	G	Sidechain
35	BA	562	U	Sidechain
35	BA	583	G	Sidechain
35	BA	593	G	Sidechain
35	BA	600	G	Sidechain
35	BA	603	A	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	621	A	Sidechain
35	BA	632	A	Sidechain
35	BA	647	G	Sidechain
35	BA	684	G	Sidechain
35	BA	686	G	Sidechain
35	BA	688	U	Sidechain
35	BA	690	G	Sidechain
35	BA	699	A	Sidechain
35	BA	715	G	Sidechain
35	BA	716	A	Sidechain
35	BA	726	G	Sidechain
35	BA	742	G	Sidechain
35	BA	776	G	Sidechain
35	BA	78	A	Sidechain
35	BA	788	A	Sidechain
35	BA	792	G	Sidechain
35	BA	83	G	Sidechain
35	BA	845	G	Sidechain
35	BA	913	U	Sidechain
35	BA	938	G	Sidechain
35	BA	945	A	Sidechain
35	BA	950	G	Sidechain
35	BA	958	U	Sidechain
35	BA	980	A	Sidechain
35	BA	984	A	Sidechain
35	BA	990	A	Sidechain
35	BA	995	C	Sidechain
36	BB	117	G	Sidechain
36	BB	21	G	Sidechain
36	BB	25	A	Sidechain
36	BB	31	C	Sidechain
36	BB	38	C	Sidechain
36	BB	51	G	Sidechain
37	BC	165	ARG	Sidechain
37	BC	188	ASP	Sidechain
37	BC	24	ASP	Sidechain
37	BC	28	ARG	Sidechain
37	BC	32	GLU	Sidechain
37	BC	54	ARG	Sidechain
38	BD	168	ARG	Sidechain
38	BD	211	ARG	Sidechain
39	BE	19	ARG	Sidechain

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Mol	Chain	Res	Type	Group
39	BE	36	ARG	Sidechain
39	BE	54	GLN	Sidechain
40	BF	119	ARG	Sidechain
40	BF	127	GLU	Sidechain
40	BF	95	ARG	Sidechain
41	BG	112	PRO	Mainchain,Peptide
41	BG	121	ASN	Sidechain
41	BG	153	ARG	Sidechain
41	BG	21	ARG	Sidechain
42	BH	101	ARG	Sidechain
42	BH	130	ARG	Sidechain
42	BH	149	ARG	Sidechain
42	BH	18	GLU	Sidechain
42	BH	47	GLU	Sidechain
42	BH	54	ARG	Sidechain
42	BH	60	ARG	Sidechain
42	BH	97	ARG	Sidechain
43	BK	42	ASN	Sidechain
43	BK	5	VAL	Peptide
43	BK	98	ARG	Sidechain
45	BN	114	ARG	Sidechain
45	BN	115	ARG	Sidechain
45	BN	97	ARG	Sidechain
46	BO	105	GLU	Sidechain
46	BO	107	ARG	Sidechain
46	BO	120	GLU	Sidechain
47	BP	15	ARG	Sidechain
47	BP	55	ARG	Sidechain
47	BP	7	ARG	Sidechain
47	BP	74	GLU	Sidechain
47	BP	9	ASN	Sidechain
48	BQ	119	ARG	Sidechain
48	BQ	25	ASP	Sidechain
48	BQ	6	ARG	Sidechain
49	BR	102	GLU	Sidechain
49	BR	88	ARG	Sidechain
50	BS	106	ARG	Sidechain
50	BS	13	ARG	Sidechain
50	BS	20	ARG	Sidechain
50	BS	30	ARG	Sidechain
50	BS	38	GLN	Sidechain
50	BS	71	ARG	Sidechain

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Mol	Chain	Res	Type	Group
51	BT	103	ARG	Sidechain
51	BT	123	GLN	Sidechain
51	BT	125	ARG	Sidechain
51	BT	41	ARG	Sidechain
51	BT	58	ASN	Sidechain
51	BT	74	ARG	Sidechain
52	BU	33	ARG	Sidechain
52	BU	66	ASN	Sidechain
52	BU	71	GLN	Sidechain
52	BU	91	ASP	Sidechain
53	BV	15	GLU	Sidechain
53	BV	53	GLU	Sidechain
54	BW	33	ARG	Sidechain
54	BW	60	ASN	Sidechain
54	BW	68	ARG	Sidechain
54	BW	8	ARG	Sidechain
55	BX	68	ARG	Sidechain
55	BX	76	ARG	Sidechain
56	BY	29	GLU	Sidechain
56	BY	50	ARG	Sidechain
56	BY	57	GLN	Sidechain
57	BZ	30	ASN	Sidechain
57	BZ	72	ARG	Sidechain
57	BZ	77	ASP	Sidechain
57	BZ	80	ARG	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	32329	0	16041	1546	0
2	AB	1900	0	1951	260	0
3	AC	1612	0	1677	220	0
4	AD	1703	0	1767	213	0
5	AE	1146	0	1207	148	0
6	AF	843	0	857	99	0
7	AG	1257	0	1296	128	0
8	AH	1116	0	1177	124	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	AI	1010	0	1037	151	0
10	AJ	794	0	840	195	0
11	AK	885	0	904	94	0
12	AL	970	0	1057	147	0
13	AM	987	0	1059	145	0
14	AN	492	0	533	77	0
15	AO	734	0	771	78	0
16	AP	700	0	720	86	0
17	AQ	823	0	891	72	0
18	AR	574	0	644	82	0
19	AS	629	0	652	122	0
20	AT	763	0	861	119	0
21	AU	208	0	221	29	0
22	AV	1640	0	831	100	0
23	AX	230	0	114	17	0
24	AY	5214	0	5288	826	0
25	B0	662	0	688	94	0
26	B1	731	0	808	117	0
27	B2	598	0	653	104	0
28	B3	467	0	523	55	0
29	B4	450	0	449	98	0
30	B5	459	0	480	104	0
31	B6	433	0	461	154	0
32	B7	418	0	467	60	0
33	B8	507	0	576	107	0
34	B9	307	0	338	36	0
35	BA	62474	0	31032	3288	0
36	BB	2551	0	1281	164	0
37	BC	1742	0	1798	179	0
38	BD	2145	0	2234	316	0
39	BE	1563	0	1629	259	0
40	BF	1623	0	1677	294	0
41	BG	1474	0	1535	301	0
42	BH	1268	0	1337	235	0
43	BK	1025	0	1066	182	0
44	BL	477	0	509	15	0
45	BN	1104	0	1180	207	0
46	BO	933	0	996	132	0
47	BP	1114	0	1187	302	0
48	BQ	1122	0	1179	173	0
49	BR	960	0	1021	166	0
50	BS	770	0	832	179	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
51	BT	1141	0	1202	239	0
52	BU	958	0	1015	183	0
53	BV	779	0	852	157	0
54	BW	896	0	953	109	0
55	BX	725	0	778	98	0
56	BY	810	0	901	193	0
57	BZ	1467	0	1492	238	0
58	AY	37	0	47	12	0
59	AY	28	0	12	7	0
All	All	152777	0	105584	12557	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 49.

All (12557) 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)
1:AA:509:A:H5'	1:AA:510:A:OP2	1.26	1.30
24:AY:496:LYS:HE2	24:AY:498:ILE:CD1	1.66	1.25
53:BV:15:GLU:HB3	53:BV:16:PRO:HD2	1.23	1.20
24:AY:550:MET:HE3	24:AY:563:ILE:HD11	1.24	1.19
41:BG:63:ILE:HA	41:BG:143:GLU:HG3	1.22	1.19
35:BA:925:C:H2'	35:BA:926:A:H5"	1.24	1.18
35:BA:996:A:H4'	52:BU:92:ARG:HE	1.01	1.18
39:BE:36:ARG:HH11	39:BE:36:ARG:HG2	1.07	1.17
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.19	1.17
1:AA:793:U:H3'	1:AA:794:A:H5"	1.25	1.16
35:BA:1503:U:H2'	35:BA:1504:C:H6	1.07	1.16
50:BS:13:ARG:HG3	50:BS:14:VAL:H	1.03	1.16
55:BX:12:VAL:HB	55:BX:17:ALA:HB1	1.23	1.16
24:AY:546:ILE:HG23	24:AY:590:ILE:HG13	1.26	1.16
37:BC:118:PRO:HA	37:BC:121:MET:CG	1.73	1.16
40:BF:53:THR:HG22	40:BF:56:GLU:HG3	1.22	1.14
4:AD:49:ARG:HE	4:AD:49:ARG:HA	1.03	1.14
1:AA:697:U:H2'	1:AA:698:G:H5'	1.23	1.14
7:AG:41:ARG:HG2	7:AG:41:ARG:HH11	1.02	1.13
42:BH:98:LEU:HB2	42:BH:125:VAL:HG21	1.25	1.13
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.25	1.13
56:BY:28:LYS:HB3	56:BY:37:VAL:HB	1.24	1.13
42:BH:16:SER:HB2	42:BH:27:LYS:HB2	1.30	1.13
45:BN:9:VAL:HG11	45:BN:39:ARG:HH22	1.02	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:46:VAL:HG13	45:BN:48:MET:HE2	1.26	1.13
41:BG:68:PRO:HA	41:BG:92:VAL:HG12	1.27	1.12
22:AV:17:C:H5"	22:AV:17(A):U:H6	1.12	1.12
35:BA:1378:A:O2'	35:BA:1379:A:H5"	1.48	1.12
26:B1:81:LYS:HE2	35:BA:271(H):G:H4'	1.32	1.11
40:BF:40:GLN:HE22	40:BF:182:ASN:HB2	1.06	1.11
55:BX:12:VAL:HG23	55:BX:13:LEU:H	1.14	1.11
35:BA:2133:G:H2'	35:BA:2157:G:H22	1.14	1.11
35:BA:1747(A):G:H2'	35:BA:1748:G:H5"	1.19	1.11
49:BR:99:LYS:H	49:BR:99:LYS:HD3	1.05	1.11
24:AY:409:ILE:HD11	24:AY:654:GLY:HA2	1.25	1.10
31:B6:10:LEU:H	31:B6:10:LEU:CD2	1.61	1.10
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.08	1.10
31:B6:5:VAL:HG23	35:BA:2283:C:H5'	1.32	1.10
35:BA:1845:G:H2'	35:BA:1846:G:H5"	1.28	1.10
43:BK:99:ILE:HG23	43:BK:103:GLN:HB2	1.30	1.10
10:AJ:6:ILE:HD11	10:AJ:72:VAL:CB	1.82	1.10
22:AV:17:C:H5"	22:AV:17(A):U:C6	1.85	1.10
35:BA:2473:U:H3'	35:BA:2474:C:H5"	1.12	1.10
39:BE:131:ALA:HB3	39:BE:134:ILE:HD11	1.32	1.10
1:AA:1321:C:H3'	1:AA:1322:C:H5"	1.28	1.09
41:BG:77:ILE:HG22	41:BG:80:PHE:H	1.08	1.09
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.14	1.09
38:BD:263:ARG:HH11	38:BD:263:ARG:HB2	1.05	1.09
35:BA:612:C:H2'	35:BA:613:G:H5"	1.33	1.09
35:BA:1747(A):G:C2'	35:BA:1748:G:H5"	1.80	1.09
40:BF:154:VAL:HG22	40:BF:191:ARG:HB3	1.22	1.09
24:AY:196:ILE:O	24:AY:197:ARG:HB2	1.50	1.09
42:BH:17:VAL:HG11	42:BH:50:VAL:HG21	1.31	1.09
57:BZ:151:HIS:HA	57:BZ:171:ILE:HG23	1.33	1.09
18:AR:37:VAL:HG23	18:AR:38:GLU:H	1.11	1.08
27:B2:69:ARG:HH22	35:BA:111:A:H4'	1.12	1.08
35:BA:2572:A:H5'	35:BA:2574:G:H4'	1.35	1.08
56:BY:76:CYS:SG	56:BY:77:PRO:HD2	1.91	1.08
10:AJ:6:ILE:CD1	10:AJ:72:VAL:HB	1.83	1.08
51:BT:65:LYS:HE3	51:BT:66:VAL:H	1.15	1.08
35:BA:272(J):C:H3'	35:BA:274:G:H5"	1.32	1.08
35:BA:286:C:H6	35:BA:286:C:H5'	1.17	1.08
35:BA:1884:A:H2'	35:BA:1885:A:H5"	1.35	1.08
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	1.16	1.07
35:BA:1203:G:H4'	47:BP:7:ARG:HD2	1.34	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:85:PRO:HA	24:AY:94:VAL:HG22	1.27	1.07
24:AY:496:LYS:HE2	24:AY:498:ILE:HD11	1.35	1.07
35:BA:212:G:H8	35:BA:212:G:H5'	0.97	1.07
39:BE:59:VAL:HG11	39:BE:63:LEU:HG	1.31	1.07
40:BF:53:THR:HG23	40:BF:55:GLY:N	1.69	1.07
43:BK:109:LYS:HA	43:BK:112:MET:HE3	1.36	1.07
1:AA:979:C:H3'	1:AA:980:C:H5"	1.07	1.07
35:BA:2012:G:H4'	54:BW:96:ILE:HD11	1.33	1.07
35:BA:903:C:H2'	35:BA:904:C:H5"	1.33	1.07
45:BN:48:MET:CE	45:BN:48:MET:H	1.68	1.07
47:BP:59:LEU:HA	47:BP:61:ARG:NE	1.70	1.07
40:BF:84:VAL:HG12	40:BF:85:GLY:H	1.20	1.06
55:BX:35:THR:HG22	55:BX:37:THR:H	1.20	1.06
35:BA:142:A:H1'	35:BA:1408:C:H1'	1.37	1.06
3:AC:70:VAL:HG12	3:AC:72:LYS:H	0.91	1.06
58:AY:701:FUA:H202	58:AY:701:FUA:H5	1.09	1.06
31:B6:10:LEU:H	31:B6:10:LEU:HD23	0.94	1.06
35:BA:212:G:H5'	35:BA:212:G:C8	1.89	1.06
42:BH:157:TYR:HE1	42:BH:171:LEU:CD2	1.67	1.06
35:BA:965:C:H5'	35:BA:2273:A:H1'	1.35	1.06
23:AX:13:A:C3'	23:AX:14:A:H5"	1.85	1.05
26:B1:76:ARG:HH12	26:B1:95:LEU:HD22	1.19	1.05
42:BH:171:LEU:HD23	42:BH:171:LEU:C	1.78	1.05
22:AV:21:A:H61	22:AV:46:G:H2'	1.17	1.05
37:BC:118:PRO:HA	37:BC:121:MET:HG2	1.10	1.05
1:AA:979:C:C3'	1:AA:980:C:H5"	1.85	1.05
24:AY:119:GLU:O	24:AY:121:VAL:HG22	1.55	1.05
43:BK:93:ARG:NH1	43:BK:94:GLU:HB2	1.71	1.05
35:BA:272(I):U:O4	35:BA:363(A):A:N1	1.89	1.05
40:BF:53:THR:HG23	40:BF:55:GLY:H	0.88	1.05
12:AL:38:THR:HG23	12:AL:39:VAL:HG23	1.36	1.04
23:AX:13:A:H3'	23:AX:14:A:H5"	1.38	1.04
2:AB:168:THR:HG23	2:AB:192:SER:HB3	1.39	1.04
41:BG:133:LEU:HD11	41:BG:157:ILE:HD12	1.36	1.04
42:BH:157:TYR:CE1	42:BH:171:LEU:HD22	1.91	1.04
55:BX:11:PRO:HA	55:BX:28:PHE:HB3	1.36	1.04
2:AB:223:ILE:HG12	2:AB:226:ARG:NH2	1.72	1.04
45:BN:48:MET:H	45:BN:48:MET:HE3	1.15	1.04
24:AY:496:LYS:HE2	24:AY:498:ILE:HD13	1.38	1.04
35:BA:2476:A:H2'	35:BA:2477:C:H5"	1.40	1.04
27:B2:3:LEU:HD22	27:B2:7:ARG:HH12	1.21	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:272(H):C:H2'	35:BA:272(I):U:H5"	1.38	1.03
50:BS:24:LEU:HB3	50:BS:85:VAL:HG12	1.38	1.03
24:AY:428:LEU:HD13	24:AY:440:VAL:HG11	1.38	1.03
35:BA:2110:G:O2'	35:BA:2120:G:H5'	1.58	1.03
24:AY:238:THR:HG22	24:AY:241:GLU:HG2	1.05	1.03
35:BA:1818:U:H5"	38:BD:157:ARG:HB2	1.40	1.03
40:BF:192:LEU:HD21	40:BF:194:MET:HG3	1.36	1.03
47:BP:55:ARG:HG2	47:BP:56:SER:H	1.20	1.03
48:BQ:110:THR:HG23	48:BQ:113:GLN:HG3	1.39	1.03
24:AY:490:PRO:HG3	24:AY:516:PRO:HD2	1.40	1.03
40:BF:3:GLU:HA	40:BF:24:LEU:HG	1.40	1.03
10:AJ:75:ILE:HG13	10:AJ:76:ASN:H	1.16	1.03
24:AY:21:ILE:HD13	24:AY:21:ILE:H	1.22	1.03
38:BD:34:VAL:HG23	38:BD:35:LYS:H	1.23	1.03
47:BP:85:LEU:HD23	47:BP:85:LEU:H	1.16	1.03
35:BA:2645:G:H4'	35:BA:2732:G:O2'	1.59	1.02
57:BZ:28:MET:HB3	57:BZ:88:PHE:HB2	1.36	1.02
10:AJ:8:LEU:HD23	10:AJ:96:ILE:HG22	1.40	1.02
22:AV:46:G:H4'	22:AV:47:U:H5	1.20	1.02
42:BH:41:MET:CG	42:BH:43:VAL:HG13	1.89	1.02
5:AE:87:SER:HB3	5:AE:131:ILE:HD13	1.35	1.02
35:BA:272(G):C:H2'	35:BA:272(H):C:H5"	1.37	1.02
39:BE:111:ARG:HA	49:BR:2:ARG:HB3	1.39	1.02
24:AY:637:ARG:HH11	24:AY:637:ARG:HG3	1.22	1.02
28:B3:8:LEU:HD22	28:B3:31:LEU:HD23	1.38	1.02
35:BA:2310:A:O2'	35:BA:2311:A:H5'	1.60	1.02
35:BA:2796:U:H3'	35:BA:2799:C:H5'	1.42	1.02
1:AA:96:U:HO2'	1:AA:97:G:H8	1.07	1.01
35:BA:1803:A:O3'	38:BD:259:THR:HG21	1.60	1.01
50:BS:106:ARG:HB3	50:BS:106:ARG:HH11	1.23	1.01
1:AA:975:A:H4'	1:AA:976:G:H5"	1.40	1.01
35:BA:1301:A:O2'	35:BA:1302:A:H2'	1.58	1.01
43:BK:68:VAL:HG12	43:BK:70:LYS:NZ	1.75	1.01
52:BU:20:LEU:H	52:BU:20:LEU:HD22	1.24	1.01
24:AY:238:THR:HG22	24:AY:241:GLU:CG	1.89	1.01
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.40	1.01
19:AS:14:HIS:HD2	19:AS:15:LEU:HD23	1.25	1.01
35:BA:27:G:H22	35:BA:512:G:H2'	1.24	1.01
35:BA:2444:G:OP2	40:BF:68:LYS:HE2	1.59	1.01
40:BF:64:ILE:HD11	40:BF:65:TRP:CE2	1.96	1.01
35:BA:1814:G:H3'	35:BA:1815:A:H5"	1.41	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:64:THR:HG23	41:BG:66:GLN:H	1.26	1.00
50:BS:65:VAL:O	50:BS:69:VAL:HG12	1.60	1.00
1:AA:1128:C:C2'	1:AA:1129:C:H5"	1.91	1.00
30:B5:44:THR:HG21	49:BR:101:ALA:HB2	1.42	1.00
35:BA:1503:U:H2'	35:BA:1504:C:C6	1.95	1.00
47:BP:30:THR:HG22	47:BP:31:ALA:H	1.25	1.00
40:BF:157:VAL:CG2	40:BF:194:MET:HG2	1.90	1.00
45:BN:1:MET:HE1	45:BN:3:THR:OG1	1.62	1.00
1:AA:656:C:H4'	15:AO:62:GLN:HE22	1.26	1.00
39:BE:36:ARG:HH11	39:BE:36:ARG:CG	1.73	1.00
1:AA:1128:C:H2'	1:AA:1129:C:H5"	1.43	1.00
5:AE:7:GLU:HG2	5:AE:112:LEU:HD22	1.39	1.00
57:BZ:171:ILE:HG13	57:BZ:172:ALA:N	1.73	1.00
18:AR:29:PHE:H	18:AR:29:PHE:HD2	1.09	1.00
40:BF:8:GLN:HB3	40:BF:126:VAL:HA	1.40	1.00
15:AO:82:ILE:HD13	15:AO:82:ILE:C	1.86	0.99
35:BA:612:C:C2'	35:BA:613:G:H5"	1.92	0.99
42:BH:157:TYR:HE1	42:BH:171:LEU:HD21	1.25	0.99
35:BA:1899:G:N2	35:BA:1902:C:H41	1.58	0.99
40:BF:84:VAL:HG12	40:BF:85:GLY:N	1.72	0.99
35:BA:211:A:C2'	35:BA:212:G:H5"	1.92	0.99
37:BC:191:ARG:HH11	37:BC:191:ARG:HG3	1.25	0.99
41:BG:172:LEU:HD23	41:BG:176:LEU:HD11	1.43	0.99
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.24	0.99
4:AD:96:LEU:HD22	4:AD:96:LEU:H	1.27	0.99
28:B3:29:ARG:HB2	28:B3:29:ARG:HH11	1.25	0.99
35:BA:806:C:OP2	47:BP:39:LYS:HD3	1.62	0.99
38:BD:35:LYS:HD2	38:BD:36:PRO:N	1.78	0.99
41:BG:59:GLU:HA	41:BG:62:LEU:HD13	1.42	0.99
47:BP:102:ARG:HB3	47:BP:102:ARG:NH1	1.77	0.99
24:AY:427:ALA:HB1	24:AY:466:LEU:HD11	1.45	0.99
35:BA:1541:G:H4'	35:BA:1542:A:O5'	1.59	0.99
42:BH:137:ASP:HB2	42:BH:140:LYS:HD2	1.44	0.99
43:BK:106:GLU:HA	43:BK:109:LYS:HD3	1.41	0.99
24:AY:628:ARG:HH12	24:AY:680:PRO:HG2	1.25	0.98
39:BE:107:THR:O	39:BE:190:GLY:HA2	1.63	0.98
28:B3:17:LYS:HG2	35:BA:969:U:OP1	1.62	0.98
42:BH:12:PRO:HD3	42:BH:49:VAL:HG12	1.41	0.98
55:BX:24:GLY:O	55:BX:82:GLN:HA	1.62	0.98
3:AC:70:VAL:HG12	3:AC:72:LYS:N	1.76	0.98
40:BF:157:VAL:HG21	40:BF:194:MET:HG2	1.45	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:77:ILE:HG22	41:BG:80:PHE:N	1.79	0.98
51:BT:38:ASN:C	51:BT:38:ASN:HD22	1.66	0.98
24:AY:276:VAL:HA	24:AY:280:LEU:HD23	1.44	0.98
35:BA:621:A:H2'	35:BA:622:G:H5'	1.44	0.98
37:BC:138:LEU:HD22	37:BC:139:PRO:HD2	1.45	0.98
35:BA:1043:C:H2'	35:BA:1044:G:H5"	1.46	0.98
35:BA:2523:G:H2'	35:BA:2524:G:H5"	1.43	0.98
42:BH:157:TYR:CE1	42:BH:171:LEU:CD2	2.43	0.98
36:BB:112:U:H2'	36:BB:113:G:H8	1.29	0.97
41:BG:82:LEU:HD11	41:BG:87:PRO:HB3	1.43	0.97
35:BA:1845:G:C2'	35:BA:1846:G:H5"	1.95	0.97
47:BP:41:ARG:HA	47:BP:41:ARG:HH11	1.24	0.97
1:AA:80:G:H3'	1:AA:81:U:H5'	1.47	0.97
10:AJ:8:LEU:CD2	10:AJ:96:ILE:HG22	1.93	0.97
13:AM:96:LEU:HB3	13:AM:97:PRO:CD	1.93	0.97
35:BA:1142(A):A:C2'	35:BA:1143:A:H5"	1.95	0.97
40:BF:24:LEU:HB3	40:BF:25:PRO:HD2	1.46	0.97
46:BO:111:PHE:HB3	46:BO:114:ILE:HD13	1.44	0.97
25:B0:7:LEU:HD12	48:BQ:85:LYS:HE2	1.44	0.97
35:BA:1884:A:C2'	35:BA:1885:A:H5"	1.95	0.97
38:BD:70:TRP:CH2	38:BD:150:LYS:HA	1.99	0.97
31:B6:8:LYS:HZ1	35:BA:2285:C:H5	1.07	0.97
41:BG:76:SER:CB	41:BG:83:ARG:HB3	1.95	0.97
12:AL:20:LYS:HD3	12:AL:20:LYS:H	1.27	0.97
47:BP:27:HIS:HD2	47:BP:28:GLY:N	1.61	0.97
3:AC:90:GLU:O	3:AC:93:LYS:HB3	1.65	0.97
35:BA:2138:C:H2'	35:BA:2139:C:H6	1.25	0.97
41:BG:97:ASP:H	41:BG:100:TRP:HD1	1.12	0.97
55:BX:27:THR:HB	55:BX:80:ILE:HG22	1.44	0.97
58:AY:701:FUA:H5	58:AY:701:FUA:C20	1.94	0.97
31:B6:5:VAL:CG2	35:BA:2283:C:H5'	1.95	0.97
35:BA:2262:U:H2'	35:BA:2263:C:H5'	1.46	0.97
53:BV:45:THR:O	53:BV:46:VAL:HG12	1.62	0.97
24:AY:409:ILE:CD1	24:AY:654:GLY:HA2	1.95	0.96
27:B2:15:LYS:O	27:B2:16:LEU:HD23	1.65	0.96
52:BU:90:VAL:HG21	53:BV:47:VAL:HG21	1.47	0.96
3:AC:16:ARG:HH11	3:AC:16:ARG:HB2	1.30	0.96
35:BA:2811:G:OP1	39:BE:60:ASN:HB2	1.64	0.96
37:BC:118:PRO:CA	37:BC:121:MET:HG2	1.94	0.96
46:BO:114:ILE:H	46:BO:114:ILE:HD12	1.29	0.96
38:BD:9:TYR:C	38:BD:10:THR:HG22	1.91	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:20:VAL:HG21	16:AP:32:TYR:HB2	1.44	0.96
38:BD:32:SER:O	38:BD:36:PRO:HG3	1.66	0.96
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.01	0.96
30:B5:55:ARG:HH22	49:BR:33:ARG:HD2	1.28	0.96
35:BA:2732:G:H3'	35:BA:2733:A:H5'	1.46	0.96
53:BV:62:LEU:HD21	53:BV:95:LEU:HB2	1.48	0.96
49:BR:73:VAL:O	49:BR:76:VAL:HG12	1.66	0.95
1:AA:1116:C:H2'	1:AA:1117:G:H5"	1.46	0.95
1:AA:1452:C:H1'	1:AA:1456:G:N2	1.79	0.95
2:AB:22:LYS:HE2	2:AB:22:LYS:HA	1.46	0.95
30:B5:16:ARG:HH11	30:B5:16:ARG:HG2	1.29	0.95
38:BD:134:ARG:HG3	38:BD:135:PHE:HD1	1.25	0.95
47:BP:55:ARG:HG2	47:BP:56:SER:N	1.74	0.95
57:BZ:53:ILE:HG22	57:BZ:71:VAL:HB	1.48	0.95
18:AR:58:LEU:HB3	18:AR:62:GLU:HB3	1.48	0.95
4:AD:114:ARG:HH11	4:AD:114:ARG:HG3	1.31	0.95
19:AS:15:LEU:HD21	19:AS:33:THR:OG1	1.67	0.95
33:B8:56:GLU:HA	33:B8:59:LYS:NZ	1.80	0.95
35:BA:195:A:OP1	47:BP:46:LYS:HE2	1.65	0.95
17:AQ:47:PRO:HG2	17:AQ:48:GLU:OE2	1.67	0.95
24:AY:228:MET:HE3	24:AY:229:LEU:CD2	1.94	0.95
33:B8:33:ASN:HD22	33:B8:33:ASN:H	1.15	0.95
35:BA:925:C:C2'	35:BA:926:A:H5"	1.97	0.95
35:BA:2103:C:H2'	35:BA:2104:G:H5"	1.49	0.95
24:AY:416:LYS:HD3	24:AY:417:THR:H	1.32	0.95
35:BA:211:A:H2'	35:BA:212:G:H5"	1.49	0.95
35:BA:212:G:H8	35:BA:212:G:C5'	1.80	0.95
35:BA:2133:G:H2'	35:BA:2157:G:N2	1.80	0.95
20:AT:23:ARG:O	20:AT:27:LYS:HB2	1.67	0.95
43:BK:6:ALA:HB3	43:BK:59:ILE:HG22	1.48	0.95
58:AY:701:FUA:H202	58:AY:701:FUA:C5	1.94	0.95
50:BS:13:ARG:HG3	50:BS:14:VAL:N	1.79	0.95
35:BA:1658:C:H2'	35:BA:1659:U:H6	1.32	0.94
43:BK:7:VAL:HG13	43:BK:7:VAL:O	1.67	0.94
1:AA:1502:A:H2	1:AA:1505:G:H1	1.05	0.94
35:BA:1826:G:H4'	38:BD:242:ARG:HH21	1.32	0.94
35:BA:1782:C:H1'	35:BA:2609:U:H5'	1.45	0.94
47:BP:7:ARG:HB3	47:BP:8:PRO:HD3	1.46	0.94
3:AC:152:ILE:HG22	3:AC:167:TRP:HA	1.50	0.94
43:BK:77:LEU:HD23	43:BK:77:LEU:H	1.32	0.94
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.02	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:52:LEU:H	3:AC:52:LEU:HD23	1.31	0.94
43:BK:34:ILE:O	43:BK:35:MET:HE2	1.65	0.94
48:BQ:110:THR:CG2	48:BQ:113:GLN:HG3	1.97	0.94
29:B4:1:MET:HE2	41:BG:66:GLN:OE1	1.65	0.94
5:AE:101:ILE:HD11	5:AE:119:LEU:HD22	1.47	0.94
35:BA:1242:A:H5'	35:BA:1243:G:OP2	1.68	0.94
35:BA:1658:C:H2'	35:BA:1659:U:C6	2.03	0.94
35:BA:2473:U:H3'	35:BA:2474:C:C5'	1.98	0.94
35:BA:2742:C:O2'	35:BA:2743:C:H5'	1.66	0.94
1:AA:1054:C:O2'	1:AA:1055:A:H5"	1.68	0.93
35:BA:1517:G:H5'	35:BA:1517:G:H8	1.32	0.93
1:AA:509:A:C5'	1:AA:510:A:OP2	2.16	0.93
35:BA:2308:G:N7	35:BA:2310:A:H5'	1.83	0.93
10:AJ:92:THR:HG23	10:AJ:93:GLY:H	1.33	0.93
30:B5:2:ALA:HA	35:BA:2015:A:H1'	1.49	0.93
45:BN:133:GLN:HG2	45:BN:135:PRO:HD3	1.51	0.93
24:AY:238:THR:CG2	24:AY:241:GLU:HG2	1.97	0.93
35:BA:2425:A:H5'	35:BA:2427:C:O4'	1.69	0.93
50:BS:89:ARG:HG3	50:BS:92:TYR:CA	1.98	0.93
31:B6:10:LEU:HD23	31:B6:10:LEU:N	1.79	0.93
40:BF:167:ALA:HB1	40:BF:173:VAL:HG11	1.51	0.93
45:BN:90:MET:HE1	45:BN:97:ARG:HD2	1.51	0.93
35:BA:813:U:H2'	35:BA:814:C:C6	2.04	0.93
39:BE:116:VAL:O	39:BE:117:MET:HB3	1.67	0.93
1:AA:686:U:HO2'	1:AA:687:A:H8	0.96	0.93
12:AL:25:PRO:C	12:AL:27:LEU:H	1.76	0.93
24:AY:33:LEU:HD23	24:AY:360:ALA:HB2	1.51	0.93
31:B6:43:CYS:CB	31:B6:44:ARG:HH21	1.82	0.93
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.50	0.93
13:AM:97:PRO:HA	13:AM:110:ARG:HD3	1.48	0.93
24:AY:35:TYR:OH	24:AY:266:ASN:HB3	1.69	0.93
24:AY:555:LEU:HD11	24:AY:599:PRO:HB2	1.51	0.93
50:BS:15:ARG:HB3	50:BS:18:ILE:HD11	1.47	0.93
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.50	0.93
38:BD:44:ASN:HB3	38:BD:49:ILE:HA	1.48	0.93
35:BA:1059:G:H2'	35:BA:1060:U:C5	2.04	0.93
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.51	0.92
35:BA:2524:G:H8	35:BA:2524:G:H5'	1.35	0.92
35:BA:107:C:H2'	35:BA:108:U:H6	1.33	0.92
35:BA:900:A:H5'	35:BA:900:A:H8	1.32	0.92
43:BK:77:LEU:HD12	43:BK:107:ILE:HG23	1.50	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:94:LYS:C	56:BY:102:CYS:HB2	1.94	0.92
4:AD:129:ASN:HD21	4:AD:145:GLU:H	1.16	0.92
26:B1:46:LEU:HB3	26:B1:63:ALA:HA	1.50	0.92
36:BB:7:G:H2'	36:BB:8:U:H5"	1.51	0.92
47:BP:38:GLN:HG3	47:BP:39:LYS:H	1.35	0.92
56:BY:46:LYS:H	56:BY:62:GLU:HB2	1.35	0.92
4:AD:49:ARG:HE	4:AD:49:ARG:CA	1.80	0.92
24:AY:491:VAL:HG11	24:AY:596:LYS:HD3	1.51	0.92
51:BT:28:VAL:HG22	51:BT:46:GLU:HA	1.52	0.92
35:BA:1539:G:C2	35:BA:1540:U:H1'	2.04	0.92
50:BS:49:VAL:HG12	50:BS:50:SER:H	1.35	0.92
26:B1:86:SER:HB3	26:B1:89:GLU:HB2	1.51	0.92
38:BD:134:ARG:HG3	38:BD:135:PHE:CD1	2.04	0.92
56:BY:86:ARG:HB3	56:BY:88:LYS:HZ2	1.32	0.92
56:BY:7:VAL:HB	56:BY:8:LYS:HD2	1.51	0.92
36:BB:65:C:N4	36:BB:109:C:H2'	1.85	0.91
50:BS:95:HIS:CG	50:BS:96:GLY:H	1.87	0.91
8:AH:41:ARG:HH22	8:AH:123:GLU:CD	1.77	0.91
35:BA:1845:G:H2'	35:BA:1846:G:C5'	2.01	0.91
57:BZ:56:VAL:C	57:BZ:57:ILE:HD12	1.95	0.91
53:BV:6:LYS:O	53:BV:37:VAL:HG21	1.71	0.91
24:AY:517:LEU:HD23	24:AY:521:SER:HB3	1.53	0.91
57:BZ:69:THR:HG22	57:BZ:90:VAL:HA	1.49	0.91
1:AA:980:C:H5	1:AA:981:U:C2	1.89	0.91
35:BA:2761:G:H2'	35:BA:2762:G:H5"	1.49	0.91
43:BK:93:ARG:HB2	57:BZ:112:ARG:HH21	1.34	0.91
1:AA:625:G:H4'	16:AP:16:HIS:CD2	2.05	0.91
1:AA:1238:A:H5'	1:AA:1336:C:N4	1.85	0.91
2:AB:223:ILE:HG12	2:AB:226:ARG:CZ	2.01	0.91
36:BB:66:A:H61	36:BB:108:U:H2'	1.33	0.91
24:AY:438:PHE:HD2	24:AY:438:PHE:C	1.77	0.91
35:BA:279:C:H3'	35:BA:280:C:H5"	1.52	0.91
35:BA:666:G:H4'	47:BP:49:ARG:HH21	1.33	0.91
51:BT:134:GLU:O	51:BT:135:ALA:HB2	1.70	0.91
3:AC:206:GLU:HG2	3:AC:207:VAL:H	1.36	0.91
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.51	0.91
40:BF:64:ILE:HD11	40:BF:65:TRP:CZ2	2.05	0.91
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.06	0.91
1:AA:1261:A:H2'	1:AA:1262:C:H5'	1.53	0.91
22:AV:17:C:H6	22:AV:17(A):U:H5	1.11	0.91
37:BC:201:LYS:HE3	37:BC:209:PHE:HB2	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:697:U:C2'	1:AA:698:G:H5'	2.01	0.91
57:BZ:4:ARG:HH12	57:BZ:66:SER:HB2	1.36	0.91
35:BA:2463:C:O2'	35:BA:2464:C:H5'	1.71	0.90
40:BF:40:GLN:NE2	40:BF:182:ASN:HB2	1.85	0.90
1:AA:662:G:H2'	1:AA:663:A:C8	2.06	0.90
33:B8:48:PHE:O	33:B8:49:VAL:HG13	1.71	0.90
35:BA:1494:A:C2'	35:BA:1495:A:H5"	2.00	0.90
39:BE:38:THR:HB	39:BE:41:LYS:HG2	1.52	0.90
35:BA:192:C:H2'	35:BA:193:U:H5'	1.52	0.90
35:BA:666:G:H4'	47:BP:49:ARG:NH2	1.86	0.90
2:AB:44:LEU:H	2:AB:44:LEU:HD12	1.35	0.90
33:B8:56:GLU:HA	33:B8:59:LYS:HZ1	1.35	0.90
35:BA:2756:U:H4'	35:BA:2757:A:OP1	1.68	0.90
35:BA:2787:C:H1'	39:BE:61:ARG:HG3	1.51	0.90
38:BD:76:PRO:HG2	38:BD:98:VAL:HG21	1.53	0.90
51:BT:27:THR:O	51:BT:28:VAL:HG23	1.71	0.90
24:AY:157:LEU:H	24:AY:157:LEU:HD23	1.35	0.90
49:BR:84:ALA:HB3	49:BR:85:PRO:HD3	1.51	0.90
24:AY:423:LYS:HB3	24:AY:472:VAL:HG22	1.53	0.90
35:BA:2240:C:O2'	35:BA:2241:A:H5'	1.71	0.90
40:BF:155:LEU:HA	40:BF:174:VAL:HB	1.52	0.90
24:AY:84:THR:H	24:AY:85:PRO:HD2	1.35	0.90
29:B4:48:ARG:O	29:B4:48:ARG:HG2	1.70	0.90
35:BA:1494:A:O2'	35:BA:1495:A:H5"	1.71	0.90
41:BG:135:LEU:HD11	41:BG:155:MET:CG	2.02	0.90
56:BY:79:CYS:SG	56:BY:80:GLY:N	2.45	0.90
35:BA:674:G:H1'	40:BF:74:ARG:HD3	1.52	0.90
35:BA:2287:A:H62	35:BA:2344:U:H3	1.14	0.90
38:BD:44:ASN:CB	38:BD:49:ILE:HA	2.00	0.90
42:BH:43:VAL:HG11	42:BH:52:VAL:HA	1.53	0.90
47:BP:105:LEU:N	47:BP:105:LEU:HD12	1.86	0.90
24:AY:342:TYR:CE2	24:AY:396:ARG:HD2	2.07	0.89
24:AY:530:VAL:HG13	24:AY:531:GLY:H	1.34	0.89
24:AY:550:MET:CE	24:AY:563:ILE:HD11	2.02	0.89
35:BA:1223:G:H3'	35:BA:1224:C:H5"	1.54	0.89
35:BA:2138:C:H2'	35:BA:2139:C:C6	2.07	0.89
38:BD:65:ILE:HG22	38:BD:104:TYR:HB3	1.52	0.89
39:BE:36:ARG:HG2	39:BE:36:ARG:NH1	1.85	0.89
41:BG:108:ASN:O	41:BG:109:VAL:HG23	1.72	0.89
27:B2:3:LEU:HD22	27:B2:7:ARG:NH1	1.86	0.89
35:BA:358:U:H2'	35:BA:359:A:H8	1.37	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:9:VAL:HG11	45:BN:39:ARG:NH2	1.87	0.89
43:BK:115:LEU:HD13	43:BK:126:MET:SD	2.12	0.89
3:AC:34:LEU:HD22	3:AC:38:ARG:HD2	1.54	0.89
12:AL:126:LYS:HG3	12:AL:128:ALA:H	1.37	0.89
35:BA:996:A:H4'	52:BU:92:ARG:NE	1.87	0.89
35:BA:1899:G:H22	35:BA:1902:C:N4	1.69	0.89
38:BD:35:LYS:HG2	38:BD:63:ARG:HA	1.52	0.89
39:BE:24:THR:HG22	39:BE:186:GLY:HA2	1.52	0.89
51:BT:57:PHE:O	51:BT:59:THR:HG23	1.72	0.89
1:AA:80:G:H3'	1:AA:81:U:C5'	2.01	0.89
1:AA:129(A):G:O2'	1:AA:189(F):U:H2'	1.71	0.89
1:AA:979:C:H3'	1:AA:980:C:C5'	2.00	0.89
7:AG:78:ARG:HH12	7:AG:79:ARG:HE	1.19	0.89
35:BA:1899:G:N2	35:BA:1902:C:N4	2.19	0.89
35:BA:2591:C:H2'	35:BA:2592:G:C8	2.07	0.89
35:BA:2807:G:H3'	35:BA:2808:U:H5"	1.54	0.89
46:BO:91:LEU:HD22	46:BO:91:LEU:N	1.86	0.89
24:AY:355:LEU:HD12	24:AY:369:LEU:HD13	1.52	0.89
35:BA:1609:A:H5'	35:BA:1610:A:OP2	1.73	0.89
36:BB:48:A:H4'	50:BS:95:HIS:HD2	1.37	0.89
39:BE:48:GLN:HE21	39:BE:78:LEU:HD22	1.36	0.89
19:AS:14:HIS:CD2	19:AS:15:LEU:HD23	2.08	0.89
19:AS:64:GLU:HG2	29:B4:48:ARG:NH2	1.87	0.89
24:AY:415:PRO:HA	24:AY:474:ALA:HB2	1.53	0.89
35:BA:2296:U:H4'	35:BA:2297:C:OP1	1.69	0.89
42:BH:13:LYS:HE2	42:BH:13:LYS:HA	1.53	0.89
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.53	0.89
15:AO:80:ALA:HB1	15:AO:84:LYS:HE2	1.54	0.89
24:AY:431:LEU:HD22	24:AY:466:LEU:HD13	1.55	0.89
34:B9:27:CYS:SG	34:B9:28:GLU:N	2.43	0.89
35:BA:203:C:H3'	35:BA:204:A:H5"	1.53	0.89
1:AA:179:A:H2'	1:AA:180:U:C6	2.08	0.89
1:AA:1364:U:H2'	1:AA:1364:U:O2	1.72	0.89
43:BK:4:VAL:HG12	43:BK:5:VAL:H	1.36	0.89
40:BF:152:GLU:O	40:BF:154:VAL:HG23	1.73	0.89
1:AA:194:C:H2'	1:AA:195:A:H5"	1.54	0.88
13:AM:66:LEU:HD12	13:AM:66:LEU:N	1.88	0.88
35:BA:2804:C:H2'	35:BA:2805:G:C8	2.08	0.88
49:BR:99:LYS:HD3	49:BR:99:LYS:N	1.87	0.88
24:AY:67:ALA:HB1	24:AY:327:PHE:CZ	2.09	0.88
35:BA:286:C:H5'	35:BA:286:C:C6	2.09	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2789:C:H1'	35:BA:2892:A:C2	2.07	0.88
45:BN:102:ALA:O	45:BN:106:MET:HE2	1.72	0.88
51:BT:46:GLU:O	51:BT:65:LYS:HD2	1.73	0.88
25:B0:47:PRO:HG3	25:B0:59:LEU:HD21	1.53	0.88
35:BA:1697:G:H3'	35:BA:1698:A:H5"	1.55	0.88
46:BO:97:ARG:HG3	46:BO:97:ARG:HH11	1.36	0.88
51:BT:16:ARG:HG3	51:BT:16:ARG:HH11	1.35	0.88
55:BX:8:ILE:H	55:BX:8:ILE:HD12	1.37	0.88
1:AA:973:G:H1'	10:AJ:55:LYS:NZ	1.89	0.88
11:AK:29:ILE:HB	11:AK:44:SER:HB2	1.54	0.88
35:BA:1876:A:H2'	35:BA:1877:A:H8	1.35	0.88
35:BA:1946:U:H2'	35:BA:1947:C:H6	1.37	0.88
54:BW:36:LEU:N	54:BW:36:LEU:HD23	1.88	0.88
35:BA:27:G:N2	35:BA:512:G:H2'	1.88	0.88
43:BK:17:ALA:CB	43:BK:38:VAL:HG22	2.03	0.88
13:AM:78:ILE:HA	13:AM:81:LEU:HD23	1.53	0.88
50:BS:13:ARG:CG	50:BS:14:VAL:H	1.83	0.88
1:AA:1053:G:N7	1:AA:1200:C:H5"	1.88	0.88
24:AY:252:ASP:CB	24:AY:254:LYS:HE3	2.02	0.88
47:BP:126:VAL:HA	47:BP:145:PRO:HB2	1.54	0.88
52:BU:31:SER:HB3	52:BU:34:LYS:HB2	1.55	0.88
1:AA:103:C:H3'	1:AA:104:G:H8	1.37	0.88
1:AA:483:C:H3'	1:AA:484:G:H5"	1.53	0.88
11:AK:27:ASN:HD22	11:AK:29:ILE:HG22	1.36	0.88
40:BF:110:LEU:C	40:BF:110:LEU:HD13	1.98	0.88
43:BK:100:THR:HA	43:BK:139:VAL:HB	1.53	0.88
4:AD:30:LYS:C	4:AD:32:ALA:H	1.77	0.88
4:AD:49:ARG:HA	4:AD:49:ARG:NE	1.88	0.88
10:AJ:44:VAL:HG22	10:AJ:66:ARG:HG2	1.55	0.88
35:BA:64:A:C4	55:BX:66:LEU:HD13	2.09	0.88
41:BG:172:LEU:CD2	41:BG:176:LEU:HD11	2.04	0.88
43:BK:93:ARG:HG3	57:BZ:112:ARG:HE	1.39	0.88
55:BX:12:VAL:HG23	55:BX:13:LEU:N	1.89	0.88
25:B0:27:GLU:H	25:B0:27:GLU:CD	1.82	0.88
35:BA:1485:G:H1'	35:BA:1505:C:H42	1.38	0.88
35:BA:2291:U:H2'	35:BA:2292:C:C6	2.08	0.88
48:BQ:27:VAL:HG11	48:BQ:134:ARG:HD3	1.53	0.88
51:BT:28:VAL:HG13	51:BT:46:GLU:HA	1.54	0.88
53:BV:15:GLU:HB3	53:BV:16:PRO:CD	2.03	0.88
55:BX:12:VAL:HG12	55:BX:27:THR:O	1.72	0.88
8:AH:1:MET:HE2	8:AH:1:MET:N	1.89	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG22	1.55	0.87
14:AN:37:PHE:HB3	14:AN:39:LEU:HD12	1.56	0.87
12:AL:83:VAL:HG11	12:AL:100:ILE:HD13	1.55	0.87
31:B6:15:GLU:HG3	31:B6:47:THR:HG21	1.56	0.87
35:BA:2245:U:H5'	35:BA:2246:G:H5'	1.55	0.87
47:BP:27:HIS:CD2	47:BP:28:GLY:N	2.43	0.87
24:AY:438:PHE:C	24:AY:438:PHE:CD2	2.44	0.87
30:B5:55:ARG:O	30:B5:56:LYS:HB2	1.72	0.87
35:BA:2307:G:N2	35:BA:2308:G:H5"	1.89	0.87
35:BA:2666:C:H5'	35:BA:2667:C:OP2	1.75	0.87
42:BH:83:TYR:HB3	42:BH:134:SER:HA	1.57	0.87
52:BU:47:TYR:HA	52:BU:50:ARG:NH1	1.88	0.87
53:BV:21:ARG:HB3	53:BV:91:TYR:CD2	2.09	0.87
24:AY:9:LEU:HD21	24:AY:284:LEU:HB2	1.54	0.87
35:BA:1064:C:H4'	43:BK:89:HIS:HD2	1.38	0.87
24:AY:413:ILE:HD11	24:AY:474:ALA:HB3	1.56	0.87
30:B5:3:LYS:HD2	30:B5:5:PRO:HD2	1.57	0.87
35:BA:1494:A:H2'	35:BA:1495:A:H5"	1.55	0.87
38:BD:71:ASP:HB2	38:BD:103:ARG:HH22	1.39	0.87
48:BQ:97:VAL:HG11	48:BQ:103:MET:HE3	1.55	0.87
51:BT:23:ARG:HG2	51:BT:120:ARG:HH12	1.39	0.87
1:AA:1296:C:H5'	1:AA:1297:C:OP2	1.73	0.87
6:AF:36:ARG:NH1	6:AF:36:ARG:HB3	1.89	0.87
35:BA:2312:U:H2'	35:BA:2313:C:H5"	1.53	0.87
35:BA:2518:A:H5"	35:BA:2519:U:OP2	1.73	0.87
1:AA:1457:G:H8	1:AA:1457:G:O5'	1.57	0.87
4:AD:98:GLU:CG	4:AD:189:PRO:HG3	2.05	0.87
14:AN:23:ARG:HD2	14:AN:28:GLY:O	1.73	0.87
24:AY:21:ILE:HD13	24:AY:21:ILE:N	1.88	0.87
24:AY:513:LYS:CB	24:AY:566:THR:HB	2.05	0.87
31:B6:8:LYS:HE3	31:B6:25:LYS:HD3	1.57	0.87
35:BA:1946:U:H2'	35:BA:1947:C:C6	2.09	0.87
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.09	0.87
26:B1:76:ARG:NH1	26:B1:95:LEU:HD22	1.88	0.87
35:BA:108:U:H2'	35:BA:109:G:C8	2.10	0.87
35:BA:500:G:N2	35:BA:502:A:H3'	1.90	0.87
42:BH:171:LEU:CD2	42:BH:171:LEU:C	2.48	0.87
48:BQ:3:MET:HB2	48:BQ:4:PRO:HD2	1.54	0.87
30:B5:41:PRO:HG2	30:B5:44:THR:OG1	1.74	0.86
35:BA:299:A:H5'	35:BA:300:A:OP2	1.75	0.86
35:BA:759:G:H2'	35:BA:760:G:H8	1.39	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2287:A:N6	35:BA:2344:U:H3	1.73	0.86
35:BA:2454:G:C2'	35:BA:2455:G:H5'	2.05	0.86
40:BF:160:ASN:OD1	40:BF:163:VAL:HG23	1.73	0.86
31:B6:37:ARG:NH1	35:BA:2286:A:N7	2.22	0.86
35:BA:2876:G:H4'	51:BT:3:ARG:HE	1.40	0.86
43:BK:68:VAL:HG12	43:BK:70:LYS:HZ2	1.34	0.86
1:AA:1404:C:H1'	1:AA:1499:A:C2	2.11	0.86
35:BA:1538:G:H2'	35:BA:1539:G:C8	2.10	0.86
35:BA:2584:U:H2'	35:BA:2585:U:H5'	1.56	0.86
39:BE:38:THR:HG22	39:BE:40:GLU:H	1.38	0.86
56:BY:8:LYS:HB2	56:BY:28:LYS:NZ	1.89	0.86
1:AA:1502:A:H2	1:AA:1505:G:N1	1.72	0.86
24:AY:228:MET:HE3	24:AY:229:LEU:HD23	1.55	0.86
26:B1:86:SER:O	26:B1:90:ILE:HG12	1.75	0.86
35:BA:1314:C:H6	35:BA:1314:C:H5'	1.40	0.86
35:BA:1876:A:H2'	35:BA:1877:A:C8	2.09	0.86
35:BA:2076:U:H5'	35:BA:2238:G:H22	1.40	0.86
38:BD:144:ALA:HB3	38:BD:192:THR:HG23	1.56	0.86
45:BN:46:VAL:HG13	45:BN:47:ALA:H	1.37	0.86
7:AG:41:ARG:HH11	7:AG:41:ARG:CG	1.84	0.86
18:AR:37:VAL:HG23	18:AR:38:GLU:N	1.85	0.86
27:B2:69:ARG:NH2	35:BA:111:A:H4'	1.91	0.86
35:BA:107:C:H2'	35:BA:108:U:C6	2.11	0.86
40:BF:3:GLU:CA	40:BF:24:LEU:HG	2.05	0.86
31:B6:6:ARG:O	31:B6:7:ILE:HB	1.73	0.86
31:B6:43:CYS:HB2	31:B6:44:ARG:HH21	1.38	0.86
35:BA:272(H):C:H6	35:BA:272(H):C:H5'	1.40	0.86
8:AH:12:ARG:NH1	8:AH:27:PRO:HD3	1.90	0.86
24:AY:343:ASN:HD21	24:AY:345:THR:HB	1.37	0.86
37:BC:176:VAL:HG21	37:BC:190:ILE:CD1	2.06	0.86
49:BR:100:LEU:H	49:BR:100:LEU:HD22	1.40	0.86
1:AA:1117:G:H5'	1:AA:1117:G:H8	1.39	0.86
55:BX:7:VAL:HG12	55:BX:8:ILE:N	1.89	0.86
10:AJ:82:ILE:HD13	10:AJ:82:ILE:N	1.91	0.86
24:AY:453:GLY:HA3	24:AY:459:LEU:HD11	1.57	0.86
24:AY:466:LEU:HA	24:AY:470:PHE:CD2	2.11	0.86
26:B1:45:ASN:HB2	35:BA:2230:G:H1'	1.57	0.86
41:BG:111:LEU:HB2	41:BG:112:PRO:HD3	1.55	0.86
52:BU:44:ASN:HD21	53:BV:75:PHE:HB3	1.37	0.86
5:AE:9:LYS:HB2	5:AE:112:LEU:HD11	1.57	0.86
35:BA:154(A):C:H5"	35:BA:155:U:H5"	1.58	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2543:G:H5'	35:BA:2543:G:H8	1.39	0.86
35:BA:2577:A:H5'	35:BA:2578:G:H5'	1.58	0.86
36:BB:112:U:H2'	36:BB:113:G:C8	2.10	0.86
45:BN:47:ALA:H	45:BN:48:MET:HE2	1.41	0.86
1:AA:353:A:H8	1:AA:353:A:H5'	1.40	0.85
35:BA:978:G:H1	35:BA:985:C:N4	1.73	0.85
35:BA:2171:A:H1'	35:BA:2172:U:C6	2.09	0.85
37:BC:73:VAL:HG11	37:BC:158:LYS:HA	1.58	0.85
22:AV:17:C:H6	22:AV:17(A):U:C5	1.93	0.85
33:B8:25:MET:HB2	47:BP:62:LEU:HD21	1.58	0.85
35:BA:1504:C:H2'	35:BA:1505:C:H5"	1.56	0.85
41:BG:171:ALA:O	41:BG:175:LEU:HG	1.76	0.85
4:AD:16:GLY:HA2	4:AD:33:MET:HE1	1.57	0.85
13:AM:6:GLY:C	13:AM:8:GLU:H	1.80	0.85
15:AO:78:TYR:O	15:AO:82:ILE:HG22	1.75	0.85
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.56	0.85
35:BA:2523:G:C2'	35:BA:2524:G:H5"	2.05	0.85
16:AP:53:VAL:HG23	16:AP:54:GLU:N	1.89	0.85
24:AY:512:ILE:H	24:AY:512:ILE:HD13	1.41	0.85
38:BD:263:ARG:HB2	38:BD:263:ARG:NH1	1.89	0.85
35:BA:2735:G:H2'	35:BA:2736:G:H8	1.40	0.85
35:BA:1747(A):G:H2'	35:BA:1748:G:C5'	2.06	0.85
37:BC:138:LEU:HD22	37:BC:139:PRO:CD	2.06	0.85
43:BK:30:HIS:HA	43:BK:59:ILE:HD12	1.58	0.85
54:BW:107:LEU:HD13	54:BW:107:LEU:N	1.91	0.85
56:BY:44:ILE:HG22	56:BY:45:VAL:H	1.41	0.85
42:BH:171:LEU:HD23	42:BH:172:LYS:N	1.91	0.85
47:BP:30:THR:HG22	47:BP:31:ALA:N	1.92	0.85
47:BP:34:GLY:O	47:BP:35:HIS:HB2	1.77	0.85
50:BS:34:HIS:HB3	50:BS:53:SER:HB3	1.55	0.85
53:BV:38:LEU:HD23	53:BV:39:LEU:N	1.91	0.85
1:AA:474:G:H2'	1:AA:475:G:H8	1.40	0.85
1:AA:1004:A:H61	1:AA:1034:G:H2'	1.40	0.85
22:AV:71:C:O2	22:AV:71:C:H2'	1.75	0.85
35:BA:979:G:H3'	35:BA:980:A:C5'	2.07	0.85
39:BE:82:ARG:HG3	39:BE:83:ASP:H	1.42	0.85
22:AV:75:C:C6	22:AV:76:A:C8	2.65	0.85
25:B0:50:ASN:HA	25:B0:62:LEU:HD12	1.55	0.85
31:B6:19:ARG:HG2	35:BA:2400:G:O5'	1.77	0.85
35:BA:2438:U:O3'	35:BA:2439:A:H4'	1.76	0.85
49:BR:62:ALA:O	49:BR:66:VAL:HG23	1.77	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BU:20:LEU:HD22	52:BU:20:LEU:N	1.90	0.85
9:AI:4:TYR:CD2	9:AI:88:TYR:HB2	2.11	0.85
24:AY:15:ILE:HD11	24:AY:81:ILE:HG12	1.58	0.85
35:BA:903:C:C2'	35:BA:904:C:H5"	2.05	0.85
33:B8:4:MET:O	33:B8:62:LEU:HD12	1.76	0.84
57:BZ:151:HIS:HB3	57:BZ:170:THR:HA	1.58	0.84
58:AY:701:FUA:H211	58:AY:701:FUA:O2	1.76	0.84
43:BK:93:ARG:CZ	43:BK:94:GLU:HB2	2.06	0.84
53:BV:13:ARG:HH11	53:BV:13:ARG:CG	1.90	0.84
53:BV:77:ALA:O	53:BV:79:VAL:HG23	1.77	0.84
1:AA:631:G:H5'	1:AA:631:G:H8	1.42	0.84
5:AE:101:ILE:HD11	5:AE:119:LEU:CD2	2.07	0.84
25:B0:20:ARG:H	25:B0:20:ARG:HD2	1.41	0.84
35:BA:2502:G:H5"	35:BA:2503:A:H5'	1.58	0.84
52:BU:20:LEU:H	52:BU:20:LEU:CD2	1.91	0.84
1:AA:1321:C:C3'	1:AA:1322:C:H5"	2.04	0.84
36:BB:87:G:H2'	36:BB:88:C:H3'	1.57	0.84
38:BD:95:LEU:HD12	38:BD:103:ARG:O	1.78	0.84
40:BF:110:LEU:HD12	40:BF:206:ILE:HD11	1.56	0.84
48:BQ:87:LYS:HG2	48:BQ:88:GLY:H	1.40	0.84
1:AA:1234:C:O2'	1:AA:1235:U:H5'	1.78	0.84
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.58	0.84
41:BG:68:PRO:HA	41:BG:92:VAL:CG1	2.07	0.84
43:BK:115:LEU:HD22	43:BK:126:MET:HE2	1.60	0.84
51:BT:107:ASP:CG	51:BT:108:ARG:H	1.85	0.84
41:BG:63:ILE:HA	41:BG:143:GLU:CG	2.07	0.84
43:BK:19:PRO:HB3	43:BK:34:ILE:HD12	1.60	0.84
11:AK:27:ASN:ND2	11:AK:29:ILE:HG22	1.91	0.84
2:AB:233:SER:HB2	2:AB:234:PRO:CD	2.08	0.84
13:AM:15:VAL:HG12	13:AM:45:VAL:CG2	2.06	0.84
31:B6:35:GLU:OE1	31:B6:35:GLU:HA	1.76	0.84
35:BA:861:A:H2'	35:BA:862:G:O4'	1.77	0.84
35:BA:1038:C:H3'	35:BA:1039:G:H5"	1.59	0.84
35:BA:1718:G:H5'	35:BA:1718:G:H8	1.43	0.84
35:BA:2852:G:H2'	35:BA:2853:C:C6	2.13	0.84
39:BE:101:ARG:NE	39:BE:171:GLU:HB2	1.93	0.84
40:BF:170:LEU:HB2	40:BF:173:VAL:HB	1.56	0.84
50:BS:67:ARG:HB3	50:BS:71:ARG:HH22	1.41	0.84
52:BU:61:TRP:O	52:BU:65:ILE:HG13	1.77	0.84
24:AY:647:VAL:HG21	24:AY:652:MET:SD	2.18	0.84
25:B0:14:ARG:HB2	25:B0:14:ARG:HH11	1.43	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:733:G:H8	35:BA:733:G:O5'	1.59	0.84
35:BA:1847:A:H3'	35:BA:1848:A:H5'	1.60	0.84
7:AG:41:ARG:HG2	7:AG:41:ARG:NH1	1.84	0.83
26:B1:41:ARG:NH2	35:BA:1365:A:H5'	1.93	0.83
45:BN:61:ARG:HH11	45:BN:61:ARG:HG3	1.43	0.83
51:BT:65:LYS:HE3	51:BT:66:VAL:N	1.91	0.83
53:BV:18:LEU:HD13	53:BV:19:LYS:N	1.93	0.83
1:AA:1473:A:O2'	1:AA:1474:G:H5'	1.78	0.83
3:AC:150:LYS:HB2	3:AC:169:ALA:CB	2.08	0.83
41:BG:76:SER:CA	41:BG:83:ARG:HB3	2.08	0.83
1:AA:792:A:O2'	1:AA:794:A:N7	2.11	0.83
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.60	0.83
35:BA:954:G:H4'	48:BQ:13:GLN:NE2	1.92	0.83
35:BA:978:G:H1	35:BA:985:C:H42	1.20	0.83
49:BR:12:ARG:HH11	49:BR:12:ARG:HG3	1.43	0.83
10:AJ:92:THR:HG23	10:AJ:93:GLY:N	1.93	0.83
13:AM:65:LYS:C	13:AM:66:LEU:HD12	2.03	0.83
25:B0:20:ARG:HG2	25:B0:20:ARG:HH11	1.42	0.83
30:B5:25:LEU:CD1	54:BW:19:LEU:HB3	2.08	0.83
35:BA:613:G:H5'	35:BA:613:G:H8	1.43	0.83
47:BP:41:ARG:HH11	47:BP:41:ARG:CA	1.90	0.83
1:AA:1226:C:N4	13:AM:104:ARG:HD2	1.92	0.83
24:AY:613:PRO:C	24:AY:615:GLU:H	1.84	0.83
31:B6:48:VAL:HG23	31:B6:49:HIS:N	1.92	0.83
49:BR:63:ARG:HH22	49:BR:77:ARG:HG2	1.42	0.83
52:BU:110:VAL:HG12	52:BU:114:LYS:HD3	1.60	0.83
53:BV:24:LYS:HA	53:BV:92:THR:HG23	1.60	0.83
1:AA:631:G:H2'	1:AA:632:A:C8	2.13	0.83
1:AA:814:A:H2'	1:AA:816:A:H5'	1.60	0.83
4:AD:158:ILE:O	4:AD:162:LEU:HB2	1.79	0.83
24:AY:264:LEU:O	24:AY:264:LEU:HD23	1.79	0.83
35:BA:598:G:H5'	47:BP:15:ARG:HB2	1.60	0.83
45:BN:14:VAL:HG11	45:BN:137:LYS:HD2	1.60	0.83
50:BS:85:VAL:HG23	50:BS:106:ARG:HG3	1.60	0.83
52:BU:88:ILE:HG13	52:BU:88:ILE:O	1.77	0.83
46:BO:4:PRO:O	46:BO:5:GLN:HB2	1.77	0.83
47:BP:115:LEU:HA	47:BP:134:ALA:HB3	1.61	0.83
1:AA:1206:G:H4'	3:AC:192:THR:O	1.79	0.83
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.42	0.83
35:BA:240:G:H3'	35:BA:241:A:H5"	1.59	0.83
33:B8:29:LYS:HD2	33:B8:44:LYS:HG2	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1348:G:H2'	35:BA:1349:A:H5"	1.59	0.83
35:BA:2147:G:H2'	35:BA:2148:G:O4'	1.79	0.83
47:BP:16:ARG:HD3	47:BP:18:ARG:H	1.44	0.83
35:BA:940:G:H5'	35:BA:941:A:OP2	1.79	0.83
35:BA:2712:U:HO2'	35:BA:2712(A):A:H8	0.84	0.83
39:BE:49:LEU:HD22	39:BE:49:LEU:N	1.94	0.83
43:BK:81:ALA:HB1	43:BK:99:ILE:HD11	1.61	0.83
45:BN:65:LYS:HB3	45:BN:69:GLN:HG3	1.61	0.83
1:AA:201:C:H2'	1:AA:202:U:H5"	1.60	0.82
16:AP:53:VAL:HG23	16:AP:54:GLU:H	1.43	0.82
27:B2:7:ARG:HH11	27:B2:7:ARG:HG3	1.42	0.82
35:BA:1217:C:OP2	52:BU:15:LYS:NZ	2.12	0.82
42:BH:17:VAL:HG11	42:BH:50:VAL:CG2	2.09	0.82
45:BN:62:VAL:HG22	45:BN:66:LYS:HG3	1.58	0.82
28:B3:31:LEU:HD13	28:B3:32:GLN:HG2	1.61	0.82
35:BA:320:A:H2'	40:BF:136:THR:OG1	1.79	0.82
47:BP:146:VAL:HG13	47:BP:147:LEU:N	1.92	0.82
1:AA:1116:C:C2'	1:AA:1117:G:H5"	2.07	0.82
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	1.90	0.82
45:BN:46:VAL:HG13	45:BN:48:MET:CE	2.08	0.82
50:BS:95:HIS:CG	50:BS:96:GLY:N	2.46	0.82
5:AE:76:ILE:HG13	5:AE:142:LEU:HD13	1.61	0.82
18:AR:85:LEU:HD12	18:AR:86:VAL:H	1.43	0.82
24:AY:18:ALA:O	24:AY:19:ALA:HB2	1.79	0.82
26:B1:41:ARG:HH22	35:BA:1365:A:H5'	1.43	0.82
35:BA:1070:A:H5'	35:BA:1072:C:OP2	1.77	0.82
42:BH:41:MET:HG2	42:BH:43:VAL:HG13	1.61	0.82
42:BH:41:MET:HG3	42:BH:43:VAL:HG13	1.59	0.82
12:AL:34:ARG:HG3	12:AL:105:TYR:HE1	1.44	0.82
24:AY:113:GLY:C	24:AY:115:GLU:H	1.84	0.82
24:AY:688:ILE:O	24:AY:688:ILE:HG22	1.80	0.82
39:BE:98:PRO:HG3	39:BE:175:VAL:HG12	1.59	0.82
1:AA:1281:U:H5"	1:AA:1282:C:H5	1.42	0.82
3:AC:86:VAL:HG23	3:AC:87:LEU:HD23	1.60	0.82
35:BA:1080:C:O2'	43:BK:126:MET:HG3	1.80	0.82
35:BA:1115:G:H5'	35:BA:1115:G:H8	1.42	0.82
38:BD:43:ARG:HB3	38:BD:54:ARG:HB2	1.61	0.82
52:BU:47:TYR:HA	52:BU:50:ARG:HH11	1.43	0.82
57:BZ:42:VAL:HG13	57:BZ:43:GLU:H	1.44	0.82
3:AC:46:GLU:O	3:AC:47:LEU:HB2	1.78	0.82
6:AF:36:ARG:HB3	6:AF:36:ARG:CZ	2.08	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B5:34:PRO:O	30:B5:35:GLU:HB2	1.77	0.82
35:BA:871:U:OP1	48:BQ:5:ARG:HG3	1.80	0.82
35:BA:1223:G:H3'	35:BA:1224:C:C5'	2.10	0.82
37:BC:99:GLU:O	37:BC:100:ILE:HD13	1.80	0.82
41:BG:55:LYS:O	41:BG:58:GLN:HG3	1.80	0.82
49:BR:2:ARG:HD2	49:BR:5:LYS:HE2	1.58	0.82
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.60	0.82
30:B5:2:ALA:CA	35:BA:2015:A:H1'	2.09	0.82
41:BG:97:ASP:H	41:BG:100:TRP:CD1	1.98	0.82
47:BP:106:LEU:O	47:BP:107:LYS:HG2	1.78	0.82
35:BA:288:C:H2'	35:BA:289:A:C8	2.15	0.82
35:BA:2852:G:H2'	35:BA:2853:C:H6	1.42	0.82
41:BG:86:MET:N	41:BG:87:PRO:HD3	1.95	0.82
43:BK:17:ALA:HB1	43:BK:38:VAL:HG22	1.61	0.82
48:BQ:59:ARG:HA	57:BZ:180:VAL:HG23	1.61	0.82
1:AA:1152:A:H5"	10:AJ:13:HIS:HD2	1.44	0.82
1:AA:1489:G:H2'	1:AA:1490:C:H5"	1.61	0.82
10:AJ:61:GLU:OE1	14:AN:49:HIS:HE1	1.63	0.82
1:AA:163:C:O2'	1:AA:164:U:H5'	1.79	0.81
5:AE:116:THR:HG22	5:AE:117:ASP:OD1	1.79	0.81
6:AF:55:ASP:OD1	6:AF:56:PRO:HD2	1.80	0.81
10:AJ:63:PHE:HB3	14:AN:58:LYS:HA	1.61	0.81
27:B2:41:ILE:HD11	27:B2:44:LEU:HD12	1.62	0.81
35:BA:882:G:H2'	35:BA:883:G:C8	2.15	0.81
35:BA:2189:U:H2'	35:BA:2190:G:H5"	1.62	0.81
36:BB:87:G:C3'	36:BB:88:C:H5"	2.10	0.81
51:BT:32:TYR:N	51:BT:32:TYR:CD1	2.48	0.81
57:BZ:115:GLY:HA2	57:BZ:177:PRO:HD3	1.61	0.81
2:AB:155:LEU:HD13	2:AB:155:LEU:C	2.05	0.81
3:AC:83:ARG:O	3:AC:86:VAL:HG22	1.78	0.81
11:AK:21:ILE:HG13	11:AK:30:VAL:HG12	1.62	0.81
11:AK:111:ASP:OD2	18:AR:84:LYS:HE2	1.79	0.81
24:AY:180:VAL:HG23	24:AY:181:LEU:H	1.45	0.81
35:BA:965:C:C5'	35:BA:2273:A:H1'	2.09	0.81
35:BA:2396:G:O2'	35:BA:2397:G:H5'	1.79	0.81
50:BS:89:ARG:HG2	50:BS:89:ARG:HH11	1.44	0.81
1:AA:662:G:H2'	1:AA:663:A:H8	1.44	0.81
11:AK:23:ALA:HB1	11:AK:88:GLY:HA3	1.62	0.81
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.09	0.81
13:AM:68:GLY:H	13:AM:71:ARG:HB3	1.43	0.81
19:AS:6:LYS:HE3	19:AS:6:LYS:H	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:218:A:C2	35:BA:235:U:H4'	2.15	0.81
36:BB:54:G:O2'	36:BB:55:U:H5'	1.80	0.81
36:BB:60:C:H2'	36:BB:61:G:H8	1.45	0.81
39:BE:179:GLU:O	39:BE:180:ASN:HB2	1.81	0.81
42:BH:157:TYR:CD1	42:BH:171:LEU:HD22	2.15	0.81
45:BN:115:ARG:HH11	45:BN:115:ARG:HG3	1.44	0.81
51:BT:6:LEU:HD23	51:BT:6:LEU:C	2.05	0.81
52:BU:88:ILE:HG22	53:BV:47:VAL:O	1.81	0.81
52:BU:91:ASP:OD1	52:BU:96:ALA:HB2	1.80	0.81
35:BA:2258:C:O2'	35:BA:2426:A:H4'	1.80	0.81
36:BB:20:C:O2'	36:BB:21:G:H5"	1.81	0.81
45:BN:45:ASN:HD22	45:BN:45:ASN:H	1.28	0.81
47:BP:57:THR:OG1	47:BP:59:LEU:HB3	1.79	0.81
49:BR:117:VAL:O	49:BR:118:GLU:HB2	1.80	0.81
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.14	0.81
11:AK:48:ILE:HG22	11:AK:49:GLY:H	1.44	0.81
19:AS:6:LYS:H	19:AS:6:LYS:CE	1.93	0.81
33:B8:13:ARG:HB3	47:BP:63:PRO:HB3	1.60	0.81
35:BA:1913:A:H4'	35:BA:1914:C:H5"	1.62	0.81
38:BD:110:GLY:O	38:BD:112:GLN:HG3	1.79	0.81
40:BF:176:LEU:HG	40:BF:177:ALA:O	1.80	0.81
42:BH:41:MET:HE2	42:BH:43:VAL:HG12	1.61	0.81
47:BP:147:LEU:C	47:BP:148:LEU:HD12	2.05	0.81
49:BR:38:VAL:HB	49:BR:39:PRO:HD3	1.61	0.81
53:BV:18:LEU:HD22	53:BV:19:LYS:H	1.43	0.81
4:AD:13:ARG:HA	4:AD:33:MET:HE3	1.63	0.81
24:AY:227:ILE:HD11	24:AY:241:GLU:O	1.80	0.81
35:BA:2461:C:H5'	35:BA:2462:U:OP2	1.81	0.81
35:BA:2645:G:H3'	35:BA:2646:C:H5'	1.61	0.81
54:BW:95:ILE:O	54:BW:95:ILE:HG13	1.81	0.81
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.61	0.81
24:AY:21:ILE:O	24:AY:22:ASP:HB2	1.81	0.81
35:BA:533:G:H5"	52:BU:24:TYR:CE1	2.14	0.81
35:BA:745:G:H5'	35:BA:746:A:OP2	1.78	0.81
35:BA:2175:C:H4'	37:BC:219:MET:O	1.81	0.81
35:BA:2389:G:H5"	35:BA:2390:U:H5'	1.63	0.81
38:BD:263:ARG:HH11	38:BD:263:ARG:CB	1.90	0.81
45:BN:129:PRO:O	45:BN:130:HIS:HB3	1.80	0.81
50:BS:89:ARG:HG3	50:BS:92:TYR:CB	2.10	0.81
1:AA:461:A:O2'	1:AA:470:C:H5'	1.80	0.81
4:AD:114:ARG:HG3	4:AD:114:ARG:NH1	1.91	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:67:ALA:HB1	24:AY:327:PHE:HZ	1.42	0.81
35:BA:1899:G:H22	35:BA:1902:C:H41	1.23	0.81
52:BU:90:VAL:CG2	53:BV:47:VAL:HG21	2.11	0.81
1:AA:1219:U:H2'	1:AA:1220:G:H8	1.45	0.81
3:AC:16:ARG:HB2	3:AC:16:ARG:NH1	1.94	0.81
6:AF:71:ARG:HH11	6:AF:71:ARG:HG3	1.45	0.81
24:AY:530:VAL:HG13	24:AY:531:GLY:N	1.96	0.81
35:BA:907:U:OP1	48:BQ:24:GLY:N	2.13	0.81
35:BA:2476:A:C2'	35:BA:2477:C:H5"	2.11	0.81
35:BA:2514:U:H2'	35:BA:2515:C:H6	1.46	0.81
40:BF:64:ILE:HG22	40:BF:76:GLY:O	1.81	0.81
47:BP:77:ARG:HB2	47:BP:78:PRO:HD2	1.62	0.81
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.15	0.81
9:AI:4:TYR:CE2	9:AI:88:TYR:HB2	2.16	0.81
31:B6:48:VAL:HG23	31:B6:49:HIS:H	1.46	0.81
35:BA:545:C:H2'	35:BA:547:A:H5"	1.63	0.81
35:BA:1036:G:OP1	42:BH:59:ARG:HD2	1.80	0.81
35:BA:1058:G:H21	43:BK:126:MET:HE3	1.45	0.81
38:BD:145:VAL:HG22	38:BD:191:ALA:HB1	1.63	0.81
46:BO:69:ILE:HD13	46:BO:77:ILE:HG23	1.62	0.81
47:BP:85:LEU:HD12	47:BP:120:ALA:HB2	1.63	0.81
2:AB:230:VAL:HG23	2:AB:231:GLU:N	1.96	0.80
24:AY:277:VAL:HG13	24:AY:278:ASP:N	1.96	0.80
35:BA:2712:U:O2'	35:BA:2712(A):A:H8	1.62	0.80
36:BB:91:C:OP1	48:BQ:16:ARG:HG3	1.80	0.80
46:BO:43:VAL:HG23	46:BO:56:ASP:O	1.80	0.80
1:AA:1382:C:H2'	1:AA:1383:C:H6	1.46	0.80
5:AE:87:SER:HB3	5:AE:131:ILE:CD1	2.10	0.80
35:BA:2228:G:H2'	35:BA:2229:C:C6	2.16	0.80
35:BA:2579:C:H4'	39:BE:134:ILE:HG12	1.62	0.80
1:AA:491:G:H2'	1:AA:492:G:H8	1.46	0.80
49:BR:7:GLY:O	49:BR:8:ARG:HB2	1.80	0.80
50:BS:54:LEU:O	50:BS:54:LEU:HD13	1.82	0.80
48:BQ:6:ARG:O	48:BQ:7:MET:HG3	1.80	0.80
48:BQ:75:THR:HG22	48:BQ:76:LYS:N	1.94	0.80
55:BX:35:THR:HG22	55:BX:37:THR:N	1.96	0.80
35:BA:970:C:H2'	35:BA:971:C:H6	1.46	0.80
42:BH:105:LEU:HD23	42:BH:113:VAL:HB	1.62	0.80
43:BK:99:ILE:HG23	43:BK:103:GLN:CB	2.09	0.80
50:BS:15:ARG:HB3	50:BS:18:ILE:CD1	2.10	0.80
1:AA:627:G:O2'	1:AA:628:G:H5'	1.80	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:20:ALA:C	10:AJ:22:LYS:H	1.86	0.80
19:AS:32:LYS:HA	19:AS:50:ALA:HB3	1.62	0.80
24:AY:122:TRP:CE3	24:AY:132:ARG:HD2	2.17	0.80
29:B4:5:ILE:O	29:B4:5:ILE:HG12	1.82	0.80
35:BA:1061:U:H4'	35:BA:1070:A:H1'	1.64	0.80
35:BA:1285:G:H2'	35:BA:1286:A:H5'	1.64	0.80
35:BA:2585:U:O2'	35:BA:2586:C:H5'	1.82	0.80
36:BB:15:A:H3'	36:BB:16:G:H5'	1.62	0.80
51:BT:129:ARG:O	51:BT:129:ARG:HG2	1.79	0.80
1:AA:1270:C:H2'	1:AA:1271:G:C8	2.16	0.80
12:AL:47:LYS:HB3	12:AL:47:LYS:HZ2	1.45	0.80
16:AP:49:LEU:HD22	16:AP:73:LEU:HD22	1.64	0.80
29:B4:27:THR:O	29:B4:28:LYS:HB3	1.81	0.80
35:BA:1020:A:N1	35:BA:1141:U:H2'	1.96	0.80
35:BA:1884:A:H2'	35:BA:1885:A:C5'	2.12	0.80
35:BA:1947:C:C2'	35:BA:1948:G:H5"	2.11	0.80
47:BP:146:VAL:HG22	47:BP:147:LEU:H	1.46	0.80
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.17	0.80
12:AL:75:HIS:HD2	12:AL:77:LEU:HD12	1.46	0.80
19:AS:64:GLU:HG2	29:B4:48:ARG:HH22	1.46	0.80
20:AT:13:LEU:HD12	20:AT:13:LEU:H	1.47	0.80
37:BC:26:ALA:O	37:BC:30:VAL:HG23	1.82	0.80
40:BF:192:LEU:HD23	40:BF:192:LEU:C	2.06	0.80
41:BG:135:LEU:HD11	41:BG:155:MET:HG2	1.64	0.80
4:AD:129:ASN:ND2	4:AD:145:GLU:H	1.79	0.80
10:AJ:55:LYS:CE	10:AJ:55:LYS:H	1.94	0.80
25:B0:40:GLN:NE2	25:B0:43:THR:HA	1.95	0.80
33:B8:33:ASN:H	33:B8:33:ASN:ND2	1.74	0.80
35:BA:2521:C:H42	35:BA:2544:G:H1	1.29	0.80
35:BA:1846:G:H5'	35:BA:1846:G:H8	1.45	0.80
40:BF:20:LEU:HD23	40:BF:21:ALA:N	1.97	0.80
41:BG:56:ALA:HA	41:BG:59:GLU:OE1	1.82	0.80
50:BS:89:ARG:HG3	50:BS:92:TYR:HA	1.62	0.80
9:AI:53:VAL:C	9:AI:55:ALA:H	1.90	0.79
24:AY:512:ILE:H	24:AY:512:ILE:CD1	1.94	0.79
35:BA:2303:G:N2	35:BA:2313:C:O2	2.15	0.79
35:BA:2761:G:C2'	35:BA:2762:G:H5"	2.12	0.79
51:BT:23:ARG:HG2	51:BT:120:ARG:NH1	1.96	0.79
1:AA:625:G:H2'	1:AA:626:U:C6	2.18	0.79
1:AA:1004:A:N6	1:AA:1034:G:H2'	1.97	0.79
3:AC:70:VAL:CG1	3:AC:72:LYS:H	1.85	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:101:ILE:HD11	5:AE:119:LEU:HA	1.63	0.79
14:AN:29:ARG:HH11	14:AN:29:ARG:HG3	1.48	0.79
24:AY:555:LEU:HD21	24:AY:599:PRO:HG3	1.65	0.79
36:BB:50:G:OP1	50:BS:63:THR:HG23	1.81	0.79
42:BH:98:LEU:CB	42:BH:125:VAL:HG21	2.11	0.79
1:AA:559:A:H4'	1:AA:560:U:H5'	1.64	0.79
13:AM:68:GLY:N	13:AM:71:ARG:HB3	1.97	0.79
35:BA:847:U:O4	35:BA:933:A:N6	2.15	0.79
35:BA:2195:C:O2'	35:BA:2196:C:H5'	1.81	0.79
35:BA:2815:C:H2'	35:BA:2816:C:C6	2.17	0.79
38:BD:35:LYS:HZ3	38:BD:36:PRO:HD3	1.45	0.79
41:BG:34:LEU:HB2	41:BG:99:MET:HE1	1.63	0.79
43:BK:57:ILE:H	43:BK:57:ILE:HD12	1.44	0.79
54:BW:5:ALA:HB2	54:BW:54:ALA:HB2	1.63	0.79
3:AC:70:VAL:HG12	3:AC:71:ALA:N	1.91	0.79
25:B0:14:ARG:HB2	25:B0:14:ARG:NH1	1.97	0.79
26:B1:7:ILE:HG22	26:B1:8:SER:N	1.97	0.79
35:BA:406:G:C8	35:BA:406:G:OP2	2.36	0.79
35:BA:612:C:H2'	35:BA:613:G:C5'	2.12	0.79
35:BA:1902:C:H4'	38:BD:244:ARG:HB2	1.63	0.79
35:BA:2483:C:H3'	35:BA:2484:G:H5"	1.65	0.79
36:BB:103:G:H5'	36:BB:104:U:OP2	1.82	0.79
40:BF:148:LEU:HD23	40:BF:191:ARG:NH1	1.95	0.79
40:BF:181:LEU:HB3	40:BF:205:ARG:NH1	1.97	0.79
47:BP:40:SER:O	47:BP:41:ARG:HD2	1.80	0.79
1:AA:973:G:H1'	10:AJ:55:LYS:CE	2.13	0.79
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	1.82	0.79
10:AJ:64:GLU:HG2	14:AN:59:ALA:HB2	1.64	0.79
12:AL:24:VAL:O	12:AL:24:VAL:HG12	1.82	0.79
14:AN:41:ARG:HG2	14:AN:41:ARG:HH11	1.46	0.79
27:B2:63:VAL:HA	27:B2:66:GLU:HG2	1.65	0.79
35:BA:226:G:H4'	35:BA:227:A:OP1	1.83	0.79
35:BA:322:A:OP2	40:BF:169:ASN:HB2	1.81	0.79
35:BA:2012:G:C4'	54:BW:96:ILE:HD11	2.12	0.79
36:BB:115:G:H2'	36:BB:116:G:H8	1.48	0.79
43:BK:3:LYS:HB3	43:BK:29:GLN:HB3	1.63	0.79
56:BY:10:GLY:CA	56:BY:27:VAL:HG13	2.12	0.79
24:AY:380:LEU:O	24:AY:381:LYS:HE2	1.83	0.79
33:B8:6:THR:CG2	33:B8:63:PRO:HD3	2.13	0.79
52:BU:104:GLN:HB3	53:BV:44:LYS:NZ	1.98	0.79
53:BV:15:GLU:CB	53:BV:16:PRO:HD2	2.10	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:97:ARG:HH11	56:BY:97:ARG:HG3	1.48	0.79
1:AA:294:U:H2'	1:AA:295:C:C6	2.17	0.79
30:B5:58:LEU:HD13	30:B5:58:LEU:C	2.07	0.79
35:BA:751:A:H5'	54:BW:90:ARG:HA	1.65	0.79
36:BB:7:G:C2'	36:BB:8:U:H5"	2.12	0.79
41:BG:106:LEU:HA	41:BG:110:ALA:HB3	1.64	0.79
24:AY:198:GLU:HG3	24:AY:198:GLU:O	1.83	0.79
24:AY:526:VAL:HB	24:AY:566:THR:HA	1.63	0.79
27:B2:7:ARG:NH1	27:B2:7:ARG:HG3	1.96	0.79
31:B6:5:VAL:HG12	31:B6:6:ARG:H	1.47	0.79
35:BA:1452:A:H3'	35:BA:1453:U:C5'	2.12	0.79
35:BA:2796:U:H3'	35:BA:2799:C:C5'	2.12	0.79
39:BE:81:ILE:O	39:BE:81:ILE:HG22	1.81	0.79
41:BG:56:ALA:HB1	41:BG:153:ARG:CZ	2.12	0.79
42:BH:16:SER:CB	42:BH:27:LYS:HB2	2.12	0.79
56:BY:8:LYS:HD2	56:BY:8:LYS:H	1.47	0.79
1:AA:243:A:H4'	1:AA:244:U:O5'	1.83	0.79
2:AB:165:VAL:HG23	2:AB:166:ASP:N	1.92	0.79
12:AL:17:LYS:HD3	12:AL:18:VAL:HG22	1.65	0.79
19:AS:43:GLU:O	19:AS:45:VAL:HG13	1.81	0.79
25:B0:60:PHE:CE2	35:BA:2365:G:H4'	2.17	0.79
29:B4:14:ILE:O	29:B4:21:VAL:HG13	1.83	0.79
35:BA:894:C:O2'	35:BA:895:U:H5'	1.81	0.79
35:BA:2555:U:H2'	35:BA:2556:C:H5'	1.65	0.79
41:BG:9:ARG:HD3	41:BG:13:GLU:OE2	1.83	0.79
47:BP:85:LEU:HD23	47:BP:85:LEU:N	1.93	0.79
2:AB:126:GLU:HA	2:AB:129:GLU:OE1	1.83	0.79
35:BA:2591:C:OP2	38:BD:239:ARG:HB3	1.83	0.79
10:AJ:22:LYS:HD2	10:AJ:22:LYS:C	2.08	0.78
13:AM:96:LEU:CB	13:AM:97:PRO:HD2	2.05	0.78
22:AV:46:G:H4'	22:AV:47:U:C5	2.12	0.78
24:AY:400:GLU:O	24:AY:402:ILE:HD12	1.83	0.78
24:AY:488:THR:O	24:AY:516:PRO:HG3	1.82	0.78
32:B7:41:ARG:HH22	35:BA:460:A:P	2.07	0.78
35:BA:528:A:C2	35:BA:2043:C:H5'	2.18	0.78
35:BA:1796:U:OP1	38:BD:276:LYS:HE3	1.83	0.78
38:BD:142:VAL:HG23	38:BD:192:THR:C	2.08	0.78
38:BD:158:ALA:HB3	38:BD:161:THR:HG21	1.65	0.78
38:BD:226:MET:HB3	38:BD:230:ASP:HB2	1.63	0.78
39:BE:9:VAL:CG2	39:BE:10:GLY:N	2.46	0.78
42:BH:170:ARG:O	42:BH:171:LEU:HB3	1.83	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:125:ARG:HH11	51:BT:125:ARG:HA	1.47	0.78
57:BZ:84:GLU:O	57:BZ:85:HIS:HB2	1.82	0.78
1:AA:294:U:H2'	1:AA:295:C:H6	1.48	0.78
1:AA:998:G:H2'	1:AA:999:C:C2	2.17	0.78
10:AJ:22:LYS:HD2	10:AJ:22:LYS:O	1.82	0.78
24:AY:309:LEU:O	24:AY:390:VAL:HA	1.83	0.78
30:B5:40:LYS:NZ	30:B5:46:CYS:H	1.81	0.78
31:B6:14:THR:O	31:B6:49:HIS:HA	1.83	0.78
35:BA:1375:C:H2'	35:BA:1376:C:H6	1.48	0.78
35:BA:2723:C:H5"	49:BR:2:ARG:HH11	1.48	0.78
43:BK:93:ARG:CG	57:BZ:112:ARG:HE	1.96	0.78
50:BS:28:VAL:HG12	50:BS:29:PHE:H	1.48	0.78
52:BU:54:LYS:O	52:BU:58:ARG:HG3	1.83	0.78
2:AB:22:LYS:HE2	2:AB:22:LYS:CA	2.12	0.78
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HD22	1.47	0.78
24:AY:416:LYS:CD	24:AY:417:THR:H	1.95	0.78
41:BG:28:VAL:O	41:BG:31:VAL:HG12	1.83	0.78
1:AA:269:C:H2'	1:AA:270:A:C8	2.19	0.78
2:AB:90:MET:HE2	2:AB:90:MET:HA	1.63	0.78
5:AE:102:ALA:HB2	5:AE:120:THR:OG1	1.83	0.78
13:AM:23:TYR:HB3	13:AM:67:GLU:HB3	1.62	0.78
19:AS:78:ARG:HB2	19:AS:81:ARG:HH11	1.47	0.78
27:B2:3:LEU:CD2	27:B2:7:ARG:HH12	1.94	0.78
27:B2:21:LEU:O	27:B2:24:LEU:HB3	1.84	0.78
35:BA:2241:A:H2'	35:BA:2242:G:H8	1.48	0.78
35:BA:2348:U:C2'	35:BA:2349:G:H5"	2.13	0.78
41:BG:41:GLN:HB3	41:BG:43:LEU:CD2	2.12	0.78
57:BZ:166:SER:HB2	57:BZ:167:PRO:C	2.09	0.78
1:AA:973:G:O4'	10:AJ:55:LYS:HG3	1.83	0.78
29:B4:48:ARG:O	29:B4:49:PHE:HD1	1.67	0.78
35:BA:739:G:H4'	35:BA:740:U:OP1	1.83	0.78
35:BA:756:C:O2'	35:BA:757:U:H5'	1.84	0.78
36:BB:106:G:H5"	57:BZ:31:ARG:HB3	1.66	0.78
40:BF:158:THR:HG23	40:BF:160:ASN:H	1.49	0.78
49:BR:21:TYR:HB3	49:BR:47:PHE:CD2	2.19	0.78
11:AK:16:SER:O	11:AK:35:PRO:HG3	1.83	0.78
35:BA:272(H):C:C2'	35:BA:272(I):U:H5"	2.14	0.78
35:BA:392:C:H5"	35:BA:409:C:H5"	1.64	0.78
35:BA:784:A:H5"	38:BD:227:ASN:ND2	1.98	0.78
35:BA:1243:G:H1'	47:BP:8:PRO:HB3	1.65	0.78
35:BA:2103:C:C2'	35:BA:2104:G:H5"	2.13	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2313:C:H5'	35:BA:2313:C:H6	1.46	0.78
41:BG:41:GLN:HB3	41:BG:43:LEU:HD21	1.65	0.78
41:BG:135:LEU:HD11	41:BG:155:MET:HG3	1.65	0.78
43:BK:23:VAL:HG13	43:BK:27:LEU:HD22	1.64	0.78
46:BO:115:VAL:HG13	46:BO:121:VAL:HG21	1.64	0.78
53:BV:28:GLU:OE1	53:BV:31:ALA:HB2	1.83	0.78
22:AV:53:G:O2'	22:AV:54:U:H5'	1.84	0.78
35:BA:651:G:H2'	35:BA:652:C:H5'	1.65	0.78
35:BA:1188:U:O2'	35:BA:1189:A:H5'	1.84	0.78
35:BA:1721:G:C6	35:BA:1739:U:H5'	2.19	0.78
41:BG:173:LEU:HA	41:BG:176:LEU:HD12	1.65	0.78
45:BN:104:LYS:HE3	45:BN:117:PHE:CD2	2.18	0.78
2:AB:118:LEU:HB3	2:AB:142:LEU:HD12	1.66	0.78
4:AD:162:LEU:HD11	4:AD:181:MET:HG2	1.65	0.78
9:AI:114:TYR:HE1	10:AJ:60:ARG:H	1.32	0.78
22:AV:46:G:O3'	22:AV:47:U:H6	1.66	0.78
35:BA:548:A:H2'	35:BA:549:G:H5'	1.65	0.78
2:AB:22:LYS:H	2:AB:40:HIS:CE1	2.02	0.78
2:AB:83:MET:HG3	2:AB:234:PRO:HG3	1.66	0.78
9:AI:48:GLU:N	9:AI:49:PRO:HD2	1.99	0.78
10:AJ:32:ALA:HB2	10:AJ:76:ASN:ND2	1.98	0.78
29:B4:10:VAL:HG23	29:B4:11:PRO:HD2	1.63	0.78
35:BA:154(A):C:H3'	35:BA:155:U:C5'	2.13	0.78
35:BA:288:C:H2'	35:BA:289:A:H8	1.47	0.78
35:BA:833:U:H5"	47:BP:48:PRO:HB3	1.63	0.78
35:BA:1748:G:H5'	35:BA:1748:G:H8	1.47	0.78
35:BA:2306:C:H5"	35:BA:2307:G:O4'	1.84	0.78
47:BP:79:ARG:O	47:BP:111:ARG:HB2	1.84	0.78
4:AD:98:GLU:HG2	4:AD:189:PRO:HG3	1.66	0.78
10:AJ:50:ILE:HD11	14:AN:41:ARG:NH1	1.99	0.78
24:AY:406:GLU:HB3	24:AY:407:PRO:HD2	1.66	0.78
35:BA:142:A:H8	35:BA:1595:G:H21	1.31	0.78
35:BA:1722:A:O2'	35:BA:1739:U:H5"	1.84	0.78
35:BA:2126:A:H4'	35:BA:2127:G:O5'	1.83	0.78
56:BY:28:LYS:C	56:BY:38:ILE:HG22	2.09	0.78
24:AY:141:LYS:O	24:AY:144:ALA:HB2	1.84	0.77
24:AY:513:LYS:HB2	24:AY:566:THR:HB	1.66	0.77
35:BA:195:A:H5"	35:BA:196:A:OP2	1.84	0.77
35:BA:1649:G:O2'	35:BA:1650:G:H5'	1.85	0.77
35:BA:2720:U:H2'	35:BA:2721:A:H8	1.48	0.77
41:BG:82:LEU:CD1	41:BG:87:PRO:HB3	2.13	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1219:U:H2'	1:AA:1220:G:C8	2.19	0.77
24:AY:453:GLY:HA3	24:AY:459:LEU:CD1	2.14	0.77
24:AY:519:ARG:NH1	24:AY:678:GLU:HB2	2.00	0.77
25:B0:16:SER:HB2	35:BA:2262:U:H5	1.49	0.77
35:BA:1142(A):A:H2'	35:BA:1143:A:H5"	1.65	0.77
35:BA:2055:C:H4'	35:BA:2056:G:H5"	1.67	0.77
35:BA:2348:U:H2'	35:BA:2349:G:H5"	1.66	0.77
38:BD:165:ILE:HD13	38:BD:175:LEU:HD21	1.66	0.77
43:BK:112:MET:HG3	43:BK:113:PRO:HD3	1.66	0.77
45:BN:23:LEU:HB3	45:BN:60:ILE:HG21	1.65	0.77
51:BT:13:ARG:NH1	51:BT:13:ARG:HA	1.99	0.77
53:BV:40:LEU:HA	53:BV:45:THR:HB	1.66	0.77
1:AA:161:A:H2'	1:AA:162:A:C8	2.20	0.77
8:AH:17:THR:HB	8:AH:78:GLN:OE1	1.84	0.77
27:B2:47:ASN:ND2	35:BA:94(A):G:H21	1.82	0.77
41:BG:77:ILE:CG2	41:BG:80:PHE:H	1.92	0.77
41:BG:91:ARG:HD2	41:BG:92:VAL:N	2.00	0.77
47:BP:84:ASN:HA	47:BP:115:LEU:O	1.83	0.77
47:BP:102:ARG:NH1	47:BP:102:ARG:CB	2.47	0.77
47:BP:126:VAL:HA	47:BP:145:PRO:CB	2.13	0.77
56:BY:7:VAL:HB	56:BY:8:LYS:CD	2.13	0.77
1:AA:438:G:H4'	1:AA:439:A:OP1	1.85	0.77
3:AC:50:ALA:O	3:AC:70:VAL:HG13	1.83	0.77
12:AL:76:ASN:CG	12:AL:76:ASN:O	2.27	0.77
24:AY:637:ARG:HG3	24:AY:637:ARG:NH1	1.99	0.77
27:B2:69:ARG:HH22	35:BA:111:A:C4'	1.94	0.77
35:BA:1348:G:C2'	35:BA:1349:A:H5"	2.14	0.77
35:BA:2562:U:H1'	46:BO:23:ARG:HH11	1.50	0.77
40:BF:107:LYS:O	40:BF:110:LEU:N	2.17	0.77
41:BG:76:SER:HB3	41:BG:83:ARG:HB3	1.66	0.77
53:BV:2:PHE:O	53:BV:3:ALA:HB3	1.83	0.77
1:AA:1026:G:H2'	1:AA:1027:C:H5'	1.65	0.77
3:AC:101:LEU:HD23	3:AC:101:LEU:C	2.10	0.77
3:AC:207:VAL:O	3:AC:207:VAL:HG12	1.82	0.77
7:AG:101:LEU:N	7:AG:101:LEU:HD23	1.98	0.77
7:AG:151:TYR:OH	11:AK:54:ARG:HD3	1.84	0.77
8:AH:109:ILE:HG12	8:AH:110:ALA:N	1.97	0.77
24:AY:9:LEU:CD2	24:AY:284:LEU:HB2	2.14	0.77
24:AY:276:VAL:HG12	24:AY:277:VAL:N	1.98	0.77
35:BA:533:G:H5"	52:BU:24:TYR:CD1	2.18	0.77
35:BA:894:C:C2'	35:BA:895:U:H5'	2.14	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:35:VAL:HG23	48:BQ:101:ARG:O	1.84	0.77
1:AA:1030(D):A:H2'	1:AA:1031:G:H5'	1.66	0.77
3:AC:20:SER:HB3	3:AC:40:ARG:HH22	1.50	0.77
12:AL:86:ARG:NH2	12:AL:99:HIS:CD2	2.53	0.77
16:AP:20:VAL:HG21	16:AP:32:TYR:CB	2.14	0.77
24:AY:12:LEU:O	24:AY:283:PRO:HD3	1.84	0.77
26:B1:56:GLN:HA	26:B1:56:GLN:HE21	1.50	0.77
35:BA:537:C:H2'	35:BA:538:G:H8	1.50	0.77
35:BA:1434:A:H61	35:BA:1558:A:N6	1.82	0.77
36:BB:86:G:H2'	36:BB:87:G:C8	2.19	0.77
37:BC:101:ILE:O	37:BC:105:LEU:HB2	1.84	0.77
38:BD:9:TYR:CD1	38:BD:10:THR:HG22	2.20	0.77
38:BD:132:PRO:HG3	38:BD:190:TYR:CE1	2.19	0.77
43:BK:17:ALA:HB3	43:BK:38:VAL:HG13	1.66	0.77
45:BN:104:LYS:HE3	45:BN:117:PHE:CE2	2.18	0.77
51:BT:65:LYS:HA	51:BT:65:LYS:NZ	1.99	0.77
53:BV:21:ARG:HG2	53:BV:21:ARG:HH11	1.49	0.77
1:AA:708:C:H2'	1:AA:709:G:H8	1.48	0.77
4:AD:36:ARG:CB	4:AD:36:ARG:HH11	1.98	0.77
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.09	0.77
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.66	0.77
24:AY:9:LEU:HD23	24:AY:9:LEU:C	2.08	0.77
35:BA:2132:U:C4	37:BC:6:LYS:HD2	2.20	0.77
36:BB:48:A:H4'	50:BS:95:HIS:CD2	2.18	0.77
40:BF:157:VAL:HG22	40:BF:194:MET:HG2	1.67	0.77
47:BP:85:LEU:H	47:BP:85:LEU:CD2	1.95	0.77
54:BW:20:VAL:HG23	54:BW:21:VAL:N	1.98	0.77
1:AA:1319:A:OP1	19:AS:10:PHE:CE1	2.37	0.77
10:AJ:49:VAL:CG2	14:AN:41:ARG:HB2	2.15	0.77
35:BA:1390:U:O2'	35:BA:1391:U:H5'	1.85	0.77
35:BA:2439:A:O2'	35:BA:2587:A:H5"	1.83	0.77
2:AB:178:ARG:NH1	2:AB:178:ARG:HG2	1.98	0.77
2:AB:222:ILE:HB	2:AB:226:ARG:HH21	1.49	0.77
12:AL:28:LYS:HE2	12:AL:33:ARG:HH12	1.48	0.77
35:BA:272(H):C:H2'	35:BA:272(I):U:C5'	2.15	0.77
35:BA:845:G:H8	35:BA:845:G:OP2	1.68	0.77
35:BA:2807:G:C3'	35:BA:2808:U:H5"	2.13	0.77
56:BY:8:LYS:HB2	56:BY:28:LYS:HZ1	1.48	0.77
1:AA:773:G:O2'	1:AA:774:G:H5'	1.85	0.77
1:AA:1318:A:H1'	19:AS:37:ARG:HH21	1.49	0.77
1:AA:1423:G:C5'	46:BO:49:ARG:HH22	1.97	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:16:ARG:HH11	3:AC:16:ARG:CB	1.96	0.77
15:AO:56:LEU:O	15:AO:60:VAL:HG23	1.84	0.77
18:AR:37:VAL:CG2	18:AR:38:GLU:H	1.95	0.77
58:AY:701:FUA:H231	58:AY:701:FUA:H122	1.64	0.77
35:BA:878:A:H2'	35:BA:879:G:O4'	1.84	0.77
40:BF:187:VAL:HG12	47:BP:7:ARG:NH2	2.00	0.77
42:BH:76:VAL:O	42:BH:79:VAL:HG22	1.85	0.77
54:BW:68:ARG:O	54:BW:109:GLU:HA	1.85	0.77
5:AE:50:GLU:OE2	5:AE:51:VAL:HG23	1.84	0.76
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.49	0.76
17:AQ:57:VAL:HG23	17:AQ:58:GLU:N	2.00	0.76
24:AY:466:LEU:HA	24:AY:470:PHE:HD2	1.47	0.76
25:B0:7:LEU:CD1	48:BQ:85:LYS:HE2	2.15	0.76
35:BA:654(G):C:H2'	35:BA:654(H):G:H8	1.50	0.76
35:BA:1043:C:C2'	35:BA:1044:G:H5"	2.14	0.76
35:BA:1265:A:H5'	35:BA:1267:U:H1'	1.65	0.76
35:BA:2183:C:O2'	35:BA:2184:G:H5'	1.85	0.76
37:BC:65:LEU:HD11	37:BC:162:ILE:HD13	1.67	0.76
37:BC:92:ALA:HB2	37:BC:154:ILE:HD13	1.67	0.76
38:BD:35:LYS:HG3	38:BD:63:ARG:HG3	1.67	0.76
46:BO:104:ARG:HH21	51:BT:33:LYS:HE3	1.50	0.76
51:BT:6:LEU:C	51:BT:6:LEU:CD2	2.59	0.76
11:AK:33:THR:HG22	11:AK:39:PRO:HA	1.67	0.76
30:B5:55:ARG:NH2	49:BR:33:ARG:HD2	2.00	0.76
31:B6:43:CYS:HB2	31:B6:44:ARG:NH2	1.98	0.76
35:BA:41:C:H2'	35:BA:42:G:O4'	1.84	0.76
35:BA:2454:G:H2'	35:BA:2455:G:H5'	1.66	0.76
36:BB:13:A:O2'	36:BB:14:U:H3'	1.84	0.76
24:AY:491:VAL:CG1	24:AY:596:LYS:HD3	2.15	0.76
33:B8:61:LEU:HD12	33:B8:62:LEU:H	1.48	0.76
35:BA:2636:U:H4'	39:BE:80:GLU:OE1	1.86	0.76
36:BB:87:G:H3'	36:BB:88:C:H5"	1.67	0.76
40:BF:53:THR:HG22	40:BF:56:GLU:CG	2.12	0.76
1:AA:793:U:H3'	1:AA:794:A:C5'	2.11	0.76
4:AD:88:VAL:O	4:AD:92:VAL:HG23	1.85	0.76
37:BC:215:VAL:HG23	37:BC:225:ILE:HG12	1.68	0.76
45:BN:67:LEU:CD2	45:BN:87:LEU:HB3	2.16	0.76
52:BU:95:LEU:HD12	53:BV:11:GLN:HG3	1.67	0.76
8:AH:1:MET:HE2	8:AH:1:MET:H2	1.45	0.76
35:BA:336:C:H4'	56:BY:7:VAL:HG21	1.65	0.76
35:BA:406:G:HO2'	35:BA:407:G:H8	1.31	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2317:C:C2'	35:BA:2318:G:H5'	2.14	0.76
2:AB:107:THR:HA	2:AB:110:GLN:HE21	1.50	0.76
11:AK:29:ILE:O	11:AK:29:ILE:HG12	1.84	0.76
34:B9:29:ASN:HD22	34:B9:29:ASN:H	1.33	0.76
35:BA:363(B):G:H2'	35:BA:363(C):G:H8	1.48	0.76
35:BA:1053:C:C3'	35:BA:1054:A:H5"	2.15	0.76
35:BA:2074:U:H2'	35:BA:2075:U:C6	2.20	0.76
35:BA:2314:C:O2'	35:BA:2315:G:H5'	1.86	0.76
42:BH:98:LEU:HD12	42:BH:102:ALA:O	1.84	0.76
49:BR:45:ARG:HG3	49:BR:46:GLY:H	1.50	0.76
51:BT:28:VAL:CG2	51:BT:46:GLU:HA	2.16	0.76
1:AA:625:G:H2'	1:AA:626:U:H6	1.48	0.76
9:AI:79:LEU:HD11	9:AI:83:ARG:HD2	1.67	0.76
35:BA:272(G):C:C2'	35:BA:272(H):C:H5"	2.14	0.76
35:BA:2133:G:C2'	35:BA:2157:G:H22	1.97	0.76
36:BB:26:A:H2'	36:BB:27:C:C6	2.20	0.76
41:BG:98:ARG:N	41:BG:98:ARG:HH11	1.82	0.76
49:BR:79:LEU:C	49:BR:79:LEU:HD13	2.11	0.76
50:BS:34:HIS:CE1	50:BS:54:LEU:HB3	2.19	0.76
1:AA:41:G:H2'	1:AA:42:G:H8	1.50	0.76
28:B3:23:LEU:HA	28:B3:26:LEU:HD12	1.67	0.76
33:B8:13:ARG:NH1	47:BP:59:LEU:HG	2.01	0.76
35:BA:621:A:C2'	35:BA:622:G:H5'	2.15	0.76
35:BA:900:A:H5'	35:BA:900:A:C8	2.20	0.76
35:BA:2178:C:H4'	37:BC:47:LYS:HD3	1.67	0.76
37:BC:48:LEU:N	37:BC:48:LEU:HD12	2.01	0.76
41:BG:68:PRO:CB	41:BG:90:LEU:HD11	2.16	0.76
41:BG:135:LEU:N	41:BG:135:LEU:HD12	1.98	0.76
5:AE:7:GLU:HG2	5:AE:112:LEU:CD2	2.15	0.76
35:BA:279:C:C3'	35:BA:280:C:H5"	2.14	0.76
35:BA:301:G:H1'	35:BA:302:C:C6	2.21	0.76
35:BA:328:U:H4'	56:BY:68:HIS:CD2	2.21	0.76
35:BA:484:C:OP1	56:BY:50:ARG:HG3	1.86	0.76
35:BA:1097:U:H2'	35:BA:1098:A:H5'	1.68	0.76
35:BA:2262:U:C2'	35:BA:2263:C:H5'	2.15	0.76
41:BG:49:ASP:O	41:BG:50:ALA:HB3	1.86	0.76
51:BT:80:SER:HB3	51:BT:81:PRO:HD3	1.66	0.76
24:AY:6:GLU:O	24:AY:6:GLU:HG2	1.86	0.76
24:AY:169:GLY:HA3	24:AY:173:THR:O	1.86	0.76
24:AY:605:ILE:HD11	24:AY:677:GLN:HG2	1.68	0.76
35:BA:395:U:H2'	35:BA:396:G:N7	2.00	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:481:G:OP2	56:BY:47:LYS:HD3	1.86	0.76
35:BA:955:C:OP2	48:BQ:14:ARG:HD2	1.85	0.76
35:BA:1540:U:H3'	35:BA:1541:G:H3'	1.65	0.76
35:BA:1779:U:H5	35:BA:1784:A:N7	1.84	0.76
39:BE:111:ARG:CZ	49:BR:2:ARG:HH21	1.99	0.76
40:BF:26:ALA:O	40:BF:27:GLU:HG3	1.85	0.76
50:BS:85:VAL:C	50:BS:106:ARG:HG2	2.10	0.76
13:AM:90:LEU:O	13:AM:93:ARG:N	2.19	0.75
24:AY:513:LYS:HB3	24:AY:566:THR:HB	1.67	0.75
35:BA:142:A:H5'	35:BA:142(A):C:OP2	1.86	0.75
41:BG:34:LEU:HB2	41:BG:99:MET:CE	2.16	0.75
43:BK:75:SER:O	43:BK:79:ARG:HG3	1.86	0.75
56:BY:50:ARG:HD2	56:BY:50:ARG:O	1.86	0.75
2:AB:17:PHE:HB3	2:AB:44:LEU:HD21	1.68	0.75
35:BA:605:C:H2'	35:BA:606:U:H6	1.52	0.75
35:BA:2020:A:C2'	35:BA:2021:C:H5"	2.16	0.75
41:BG:34:LEU:HA	41:BG:161:THR:HA	1.68	0.75
1:AA:1328:C:H2'	1:AA:1329:A:H8	1.50	0.75
11:AK:58:PRO:HA	11:AK:90:GLY:HA3	1.68	0.75
12:AL:54:LYS:HB3	12:AL:70:ILE:HD11	1.67	0.75
14:AN:31:ARG:O	14:AN:32:SER:HB2	1.85	0.75
25:B0:25:ARG:HD2	25:B0:29:GLN:HE21	1.52	0.75
28:B3:52:HIS:H	28:B3:52:HIS:CD2	2.00	0.75
35:BA:2454:G:O2'	35:BA:2455:G:H5'	1.85	0.75
41:BG:97:ASP:O	41:BG:101:ILE:HG13	1.86	0.75
46:BO:114:ILE:HD12	46:BO:114:ILE:N	2.00	0.75
56:BY:89:PHE:C	56:BY:90:LEU:HD23	2.11	0.75
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.69	0.75
5:AE:76:ILE:HG13	5:AE:142:LEU:CD1	2.17	0.75
12:AL:47:LYS:HD2	12:AL:48:PRO:HD3	1.68	0.75
24:AY:201:ILE:H	24:AY:201:ILE:HD12	1.50	0.75
25:B0:27:GLU:HA	25:B0:67:VAL:O	1.87	0.75
26:B1:45:ASN:C	26:B1:45:ASN:HD22	1.94	0.75
31:B6:40:CYS:HB2	31:B6:46:HIS:CE1	2.22	0.75
35:BA:1174:A:H5'	35:BA:1175:U:H5"	1.66	0.75
35:BA:2171:A:H1'	35:BA:2172:U:C5	2.21	0.75
38:BD:44:ASN:HB2	38:BD:48:ARG:O	1.87	0.75
40:BF:178:PRO:HG2	40:BF:179:GLU:OE1	1.86	0.75
41:BG:131:TYR:HB3	41:BG:159:VAL:HG13	1.66	0.75
42:BH:169:VAL:HG22	42:BH:170:ARG:H	1.51	0.75
1:AA:512:U:H2'	1:AA:513:C:H6	1.52	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1208:C:H2'	1:AA:1209:C:H6	1.52	0.75
10:AJ:16:LEU:O	10:AJ:16:LEU:HD13	1.87	0.75
18:AR:74:ARG:HB3	18:AR:81:PHE:CE2	2.21	0.75
24:AY:416:LYS:HD3	24:AY:417:THR:N	2.02	0.75
35:BA:1887:C:H3'	35:BA:1888:G:H5"	1.69	0.75
45:BN:32:THR:HG23	45:BN:37:LYS:HB3	1.68	0.75
57:BZ:42:VAL:HG13	57:BZ:43:GLU:N	2.00	0.75
1:AA:584:G:H2'	1:AA:585:G:C8	2.22	0.75
1:AA:1497:G:O2'	1:AA:1498:U:H5'	1.87	0.75
3:AC:113:ALA:HB3	3:AC:183:ASP:OD2	1.86	0.75
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.49	0.75
24:AY:555:LEU:HD21	24:AY:599:PRO:CG	2.17	0.75
35:BA:389:G:H1	47:BP:71:VAL:HG12	1.51	0.75
35:BA:631:A:OP1	47:BP:64:LYS:HE2	1.86	0.75
39:BE:44:TYR:O	39:BE:45:THR:HB	1.85	0.75
40:BF:4:VAL:HG13	40:BF:19:GLU:OE2	1.87	0.75
41:BG:68:PRO:HB3	41:BG:90:LEU:HD11	1.66	0.75
43:BK:112:MET:HE2	43:BK:120:LEU:HD21	1.68	0.75
53:BV:79:VAL:O	53:BV:80:GLN:HB2	1.86	0.75
1:AA:1037:C:H2'	1:AA:1038:C:C2	2.22	0.75
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	1.67	0.75
3:AC:14:ILE:HG13	3:AC:15:THR:N	2.02	0.75
6:AF:100:ASN:O	18:AR:28:GLU:HG2	1.86	0.75
24:AY:84:THR:H	24:AY:85:PRO:CD	1.98	0.75
26:B1:18:ILE:HD11	26:B1:37:ILE:HG12	1.68	0.75
35:BA:1035:U:H2'	35:BA:1036:G:H8	1.51	0.75
35:BA:2572:A:H5'	35:BA:2574:G:C4'	2.15	0.75
38:BD:9:TYR:O	38:BD:10:THR:HG22	1.87	0.75
51:BT:55:ASN:N	51:BT:59:THR:HG22	2.02	0.75
56:BY:7:VAL:HB	56:BY:8:LYS:CE	2.17	0.75
57:BZ:137:ILE:HG21	57:BZ:155:LEU:HD12	1.68	0.75
1:AA:1239:A:H2'	1:AA:1298:C:H42	1.51	0.75
24:AY:25:LYS:HZ2	24:AY:86:GLY:HA2	1.50	0.75
35:BA:914:C:H2'	35:BA:915:C:H5'	1.68	0.75
35:BA:1080:C:H4'	43:BK:125:ARG:HB3	1.69	0.75
35:BA:1538:G:H2'	35:BA:1539:G:H8	1.49	0.75
35:BA:1541:G:H1'	35:BA:1542:A:C4	2.21	0.75
35:BA:2801(A):A:H4'	35:BA:2802:G:C8	2.21	0.75
56:BY:76:CYS:HB3	56:BY:96:ILE:HD11	1.69	0.75
56:BY:105:ALA:C	56:BY:107:ASP:H	1.95	0.75
24:AY:348:ARG:NH1	24:AY:382:GLU:HG3	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:64:ALA:HA	26:B1:67:ILE:HG13	1.69	0.75
31:B6:35:GLU:HB2	31:B6:51:GLU:HB2	1.67	0.75
35:BA:1058:G:N2	43:BK:126:MET:HE3	2.02	0.75
50:BS:98:VAL:C	50:BS:100:ALA:H	1.92	0.75
1:AA:477:A:O2'	1:AA:479:C:H5'	1.86	0.74
24:AY:230:LYS:HB2	24:AY:230:LYS:HZ2	1.51	0.74
32:B7:46:VAL:HG12	32:B7:47:ARG:H	1.52	0.74
35:BA:1759:A:H5'	35:BA:2715:C:H1'	1.68	0.74
35:BA:2425:A:H4'	35:BA:2426:A:H5"	1.69	0.74
42:BH:105:LEU:CD2	42:BH:113:VAL:HB	2.17	0.74
57:BZ:179:ASP:HB3	57:BZ:182:LYS:HD2	1.68	0.74
1:AA:707:C:O2'	1:AA:708:C:H5'	1.87	0.74
2:AB:101:MET:C	2:AB:102:LEU:HD12	2.12	0.74
3:AC:123:GLN:HB3	3:AC:128:PHE:HD2	1.53	0.74
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	1.69	0.74
23:AX:13:A:H3'	23:AX:14:A:C5'	2.16	0.74
29:B4:8:LYS:O	29:B4:9:LEU:HB2	1.85	0.74
35:BA:2008:C:H2'	35:BA:2009:G:H8	1.50	0.74
37:BC:211:ARG:HH11	37:BC:211:ARG:HG3	1.52	0.74
38:BD:43:ARG:HD2	38:BD:44:ASN:OD1	1.87	0.74
48:BQ:2:LEU:HD12	48:BQ:3:MET:H	1.52	0.74
56:BY:17:SER:CB	56:BY:71:LYS:HD2	2.17	0.74
3:AC:86:VAL:O	3:AC:90:GLU:HG2	1.86	0.74
4:AD:36:ARG:HH11	4:AD:36:ARG:HB3	1.50	0.74
15:AO:83:GLU:C	15:AO:85:LEU:H	1.94	0.74
24:AY:252:ASP:HB2	24:AY:254:LYS:HE3	1.68	0.74
24:AY:554:PRO:HG3	24:AY:594:VAL:HG12	1.69	0.74
30:B5:55:ARG:HH22	49:BR:33:ARG:CD	2.00	0.74
35:BA:1113:U:H2'	35:BA:1114:G:C8	2.21	0.74
35:BA:1678:G:N2	35:BA:1989:G:H22	1.85	0.74
38:BD:45:ASN:CG	38:BD:46:GLN:H	1.95	0.74
38:BD:76:PRO:HG2	38:BD:98:VAL:CG2	2.16	0.74
1:AA:656:C:H4'	15:AO:62:GLN:NE2	2.02	0.74
3:AC:32:LEU:HB3	3:AC:59:ARG:HH22	1.51	0.74
5:AE:101:ILE:HD13	5:AE:118:ILE:O	1.87	0.74
9:AI:95:LYS:HD3	9:AI:96:LEU:N	2.02	0.74
24:AY:423:LYS:HB3	24:AY:472:VAL:CG2	2.18	0.74
24:AY:505:GLY:HA3	24:AY:576:ASP:CG	2.12	0.74
25:B0:43:THR:H	35:BA:2331:G:H4'	1.52	0.74
26:B1:18:ILE:CD1	26:B1:37:ILE:HG12	2.18	0.74
37:BC:84:ILE:HG23	37:BC:95:VAL:HG12	1.66	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:19:VAL:HG12	42:BH:20:ALA:H	1.52	0.74
48:BQ:79:LEU:HD23	48:BQ:80:GLU:H	1.52	0.74
1:AA:182:U:H5'	1:AA:183:G:OP2	1.87	0.74
1:AA:490:G:H2'	1:AA:491:G:H8	1.52	0.74
1:AA:1346:A:H61	1:AA:1374:A:H3'	1.52	0.74
24:AY:655:TYR:OH	24:AY:659:LEU:HD23	1.87	0.74
35:BA:621:A:H2'	35:BA:622:G:C5'	2.17	0.74
35:BA:2334:G:H5'	50:BS:13:ARG:HD3	1.69	0.74
35:BA:2735:G:H2'	35:BA:2736:G:C8	2.22	0.74
41:BG:138:GLN:OE1	41:BG:153:ARG:HG2	1.86	0.74
45:BN:26:LEU:C	45:BN:26:LEU:HD12	2.13	0.74
57:BZ:77:ASP:O	57:BZ:79:ARG:N	2.20	0.74
1:AA:474:G:H2'	1:AA:475:G:C8	2.21	0.74
1:AA:1006:C:H2'	1:AA:1007:C:C6	2.23	0.74
3:AC:150:LYS:HB2	3:AC:169:ALA:HB2	1.70	0.74
9:AI:104:ARG:O	9:AI:105:ASP:HB3	1.86	0.74
12:AL:75:HIS:CD2	12:AL:77:LEU:HB2	2.22	0.74
22:AV:21:A:N6	22:AV:46:G:H2'	1.99	0.74
29:B4:15:ILE:HB	29:B4:32:TYR:HA	1.68	0.74
35:BA:1203:G:H3'	35:BA:1204:A:H5"	1.69	0.74
37:BC:74:ARG:HG2	37:BC:74:ARG:HH11	1.52	0.74
42:BH:169:VAL:HG13	42:BH:170:ARG:N	2.02	0.74
46:BO:76:ALA:HB3	51:BT:75:ILE:HB	1.69	0.74
47:BP:30:THR:CG2	47:BP:31:ALA:H	1.99	0.74
1:AA:793:U:C3'	1:AA:794:A:H5"	2.13	0.74
2:AB:178:ARG:CG	2:AB:178:ARG:HH11	2.00	0.74
4:AD:13:ARG:HA	4:AD:33:MET:CE	2.17	0.74
10:AJ:9:ARG:HG2	10:AJ:69:ASN:OD1	1.88	0.74
13:AM:10:PRO:HG2	13:AM:11:ARG:H	1.51	0.74
27:B2:2:LYS:HB2	35:BA:97:C:H5"	1.69	0.74
33:B8:2:PRO:HA	35:BA:591:C:O2	1.87	0.74
35:BA:120:U:O2	35:BA:120:U:H2'	1.86	0.74
35:BA:419:C:H2'	35:BA:420:C:C6	2.22	0.74
35:BA:1064:C:H4'	43:BK:89:HIS:CD2	2.22	0.74
35:BA:1790:C:H5"	35:BA:1791:A:OP1	1.88	0.74
35:BA:2591:C:H2'	35:BA:2592:G:H8	1.52	0.74
38:BD:91:ARG:HG2	38:BD:91:ARG:HH11	1.53	0.74
1:AA:8:A:N6	4:AD:209:ARG:HB2	2.02	0.74
1:AA:663:A:O2'	1:AA:664:G:H5'	1.88	0.74
2:AB:29:ALA:O	2:AB:32:ILE:HG22	1.88	0.74
35:BA:88:G:OP1	35:BA:90:U:H5	1.71	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:229:A:H3'	35:BA:230:U:H5'	1.68	0.74
35:BA:1917:U:C2'	35:BA:1918:A:H5'	2.18	0.74
37:BC:30:VAL:HA	37:BC:33:LEU:HD12	1.69	0.74
1:AA:250:A:H4'	1:AA:251:G:O5'	1.87	0.74
33:B8:54:GLU:O	33:B8:58:ILE:HG12	1.88	0.74
35:BA:83:G:N2	35:BA:102:G:H2'	2.03	0.74
35:BA:1434:A:H61	35:BA:1558:A:H62	1.34	0.74
46:BO:1:MET:HG3	46:BO:67:LYS:HG2	1.70	0.74
1:AA:1238:A:N7	1:AA:1303:C:H1'	2.03	0.74
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.23	0.74
6:AF:67:MET:SD	6:AF:75:LEU:HD22	2.28	0.74
10:AJ:63:PHE:HB2	14:AN:57:ARG:O	1.87	0.74
25:B0:36:ILE:O	25:B0:36:ILE:HG13	1.86	0.74
35:BA:311:A:H5'	35:BA:332:A:C2	2.23	0.74
35:BA:395:U:H2'	35:BA:396:G:C8	2.22	0.74
41:BG:54:GLU:O	41:BG:57:ALA:HB3	1.87	0.74
41:BG:172:LEU:O	41:BG:176:LEU:HG	1.87	0.74
42:BH:83:TYR:O	42:BH:84:SER:HB3	1.88	0.74
43:BK:93:ARG:HG3	57:BZ:112:ARG:NE	2.02	0.74
51:BT:28:VAL:CG1	51:BT:46:GLU:HA	2.18	0.74
1:AA:736:C:H2'	1:AA:737:A:C8	2.23	0.73
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.23	0.73
3:AC:181:ASN:ND2	3:AC:204:LEU:HB2	2.01	0.73
24:AY:408:VAL:HG22	24:AY:454:MET:HA	1.70	0.73
24:AY:427:ALA:HB1	24:AY:466:LEU:CD1	2.17	0.73
25:B0:11:ARG:HH11	25:B0:11:ARG:HB2	1.51	0.73
35:BA:1812:A:O2'	35:BA:1813:G:H5'	1.87	0.73
35:BA:2189:U:C2'	35:BA:2190:G:H5"	2.18	0.73
48:BQ:75:THR:CG2	48:BQ:76:LYS:N	2.51	0.73
1:AA:178:C:O2'	1:AA:179:A:H5'	1.88	0.73
1:AA:1152:A:H5"	10:AJ:13:HIS:CD2	2.21	0.73
2:AB:233:SER:CB	2:AB:234:PRO:CD	2.66	0.73
9:AI:26:VAL:HG22	9:AI:61:ALA:HB3	1.70	0.73
35:BA:1062:G:H21	43:BK:133:SER:HA	1.53	0.73
35:BA:1075:C:H5'	35:BA:1076:C:OP2	1.88	0.73
35:BA:2122:U:H2'	35:BA:2123:G:C8	2.23	0.73
42:BH:52:VAL:O	42:BH:52:VAL:HG12	1.86	0.73
47:BP:146:VAL:O	47:BP:148:LEU:HD12	1.87	0.73
55:BX:12:VAL:CG2	55:BX:13:LEU:H	1.95	0.73
56:BY:76:CYS:SG	56:BY:77:PRO:CD	2.74	0.73
10:AJ:49:VAL:O	10:AJ:60:ARG:HB3	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:113:ARG:HD2	12:AL:115:LYS:H	1.52	0.73
24:AY:261:GLY:HA3	24:AY:267:LYS:O	1.87	0.73
24:AY:632:LEU:HD12	24:AY:645:ALA:HA	1.70	0.73
28:B3:6:VAL:HB	28:B3:54:VAL:HG11	1.69	0.73
29:B4:1:MET:N	29:B4:1:MET:HE3	2.03	0.73
35:BA:145:G:H2'	35:BA:146:G:H8	1.51	0.73
35:BA:1378:A:H4'	35:BA:1379:A:OP1	1.87	0.73
35:BA:1504:C:C2'	35:BA:1505:C:H5"	2.18	0.73
35:BA:1917:U:O2'	35:BA:1918:A:H5'	1.88	0.73
35:BA:2720:U:H2'	35:BA:2721:A:C8	2.23	0.73
47:BP:41:ARG:HH11	47:BP:41:ARG:CB	2.00	0.73
47:BP:96:THR:O	47:BP:99:LEU:HB3	1.88	0.73
47:BP:146:VAL:HG13	47:BP:147:LEU:H	1.53	0.73
51:BT:102:ILE:HG22	51:BT:110:ILE:HD12	1.71	0.73
55:BX:7:VAL:HG12	55:BX:8:ILE:HD12	1.70	0.73
57:BZ:4:ARG:NH1	57:BZ:66:SER:HB2	2.04	0.73
1:AA:382:A:H2'	1:AA:383:A:C8	2.23	0.73
1:AA:1294:G:O2'	1:AA:1295:G:H5'	1.89	0.73
3:AC:70:VAL:O	3:AC:106:VAL:HG23	1.87	0.73
19:AS:78:ARG:HB2	19:AS:81:ARG:NH1	2.02	0.73
24:AY:343:ASN:HD22	24:AY:343:ASN:C	1.96	0.73
35:BA:2023:G:H5'	35:BA:2617:C:H4'	1.71	0.73
35:BA:2220:G:H2'	35:BA:2221:G:H8	1.54	0.73
37:BC:31:LYS:HE3	37:BC:179:ALA:O	1.88	0.73
38:BD:94:LEU:HD23	38:BD:95:LEU:N	2.02	0.73
43:BK:24:GLY:H	43:BK:25:PRO:HD2	1.52	0.73
43:BK:59:ILE:HG12	43:BK:60:TYR:H	1.53	0.73
48:BQ:59:ARG:HB3	57:BZ:180:VAL:HG21	1.70	0.73
1:AA:584:G:H2'	1:AA:585:G:H8	1.53	0.73
11:AK:33:THR:HA	11:AK:40:ILE:HG12	1.70	0.73
13:AM:46:LYS:O	13:AM:46:LYS:HD3	1.88	0.73
26:B1:5:CYS:SG	26:B1:62:VAL:HA	2.27	0.73
27:B2:25:VAL:C	27:B2:27:GLU:H	1.92	0.73
30:B5:44:THR:HG22	30:B5:45:VAL:H	1.53	0.73
30:B5:56:LYS:HG3	30:B5:57:VAL:H	1.52	0.73
31:B6:35:GLU:CB	31:B6:51:GLU:HB2	2.19	0.73
32:B7:24:THR:C	32:B7:26:GLY:H	1.94	0.73
35:BA:528:A:H2	35:BA:2043:C:H5'	1.51	0.73
35:BA:1409:C:H2'	35:BA:1410:G:C8	2.24	0.73
35:BA:2713:A:H3'	35:BA:2714:G:H5'	1.71	0.73
38:BD:34:VAL:HG23	38:BD:35:LYS:N	2.03	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:187:VAL:HG12	47:BP:7:ARG:HH22	1.51	0.73
45:BN:43:THR:O	45:BN:46:VAL:HG12	1.87	0.73
45:BN:46:VAL:O	45:BN:47:ALA:HB3	1.87	0.73
1:AA:423:G:H2'	1:AA:424:G:H5'	1.68	0.73
1:AA:1100:C:H2'	1:AA:1101:A:H5"	1.71	0.73
1:AA:1221:G:H4'	19:AS:77:THR:HG21	1.71	0.73
7:AG:45:ASP:O	7:AG:49:ILE:HG12	1.88	0.73
24:AY:115:GLU:CD	24:AY:118:SER:HB3	2.13	0.73
25:B0:20:ARG:HH11	25:B0:20:ARG:CG	1.97	0.73
35:BA:286:C:H6	35:BA:286:C:C5'	1.99	0.73
35:BA:839:U:H2'	35:BA:840:C:C6	2.22	0.73
35:BA:2551:C:H2'	35:BA:2552:U:C6	2.24	0.73
38:BD:153:ALA:C	38:BD:154:LYS:HG3	2.14	0.73
39:BE:4:ILE:CD1	39:BE:28:ALA:HB1	2.18	0.73
39:BE:24:THR:HG22	39:BE:186:GLY:CA	2.18	0.73
41:BG:91:ARG:HD2	41:BG:91:ARG:C	2.13	0.73
43:BK:21:PRO:HA	43:BK:23:VAL:N	2.02	0.73
52:BU:86:ALA:HB3	52:BU:88:ILE:HG12	1.70	0.73
57:BZ:86:VAL:HG12	57:BZ:87:ASP:H	1.53	0.73
4:AD:173:TRP:HB3	4:AD:187:ARG:NH1	2.04	0.73
6:AF:37:VAL:HG12	6:AF:38:GLU:H	1.54	0.73
7:AG:64:GLN:HG3	7:AG:128:ALA:HB1	1.70	0.73
9:AI:41:VAL:O	9:AI:41:VAL:HG12	1.87	0.73
24:AY:71:THR:HG22	24:AY:80:ASN:OD1	1.87	0.73
31:B6:15:GLU:OE2	31:B6:44:ARG:NH2	2.21	0.73
35:BA:1007:C:H4'	45:BN:108:PRO:HD3	1.71	0.73
35:BA:1658:C:OP1	39:BE:132:HIS:ND1	2.15	0.73
36:BB:92:C:H2'	36:BB:93:G:H8	1.53	0.73
40:BF:84:VAL:CG1	40:BF:85:GLY:N	2.44	0.73
47:BP:7:ARG:CB	47:BP:8:PRO:HD3	2.17	0.73
56:BY:8:LYS:HD2	56:BY:8:LYS:N	2.03	0.73
1:AA:882:C:O2'	1:AA:883:C:H5'	1.88	0.73
20:AT:33:ILE:HD13	20:AT:63:ILE:HG12	1.70	0.73
22:AV:5:G:N2	22:AV:69:C:C2	2.57	0.73
24:AY:14:ASN:HB2	24:AY:102:ASP:OD1	1.88	0.73
34:B9:1:MET:O	34:B9:34:GLN:HG2	1.89	0.73
35:BA:654(S):G:H3'	35:BA:654(T):C:C5'	2.18	0.73
40:BF:34:TRP:HB2	47:BP:10:PRO:HB2	1.70	0.73
48:BQ:27:VAL:HG12	48:BQ:28:ALA:N	2.01	0.73
48:BQ:27:VAL:HG23	48:BQ:137:TYR:CD2	2.23	0.73
50:BS:89:ARG:HE	50:BS:91:PRO:HG2	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:939:G:H5”	7:AG:102:ARG:NH2	2.04	0.73
1:AA:1014:A:H4’	19:AS:14:HIS:ND1	2.04	0.73
3:AC:10:PHE:CE1	3:AC:178:LEU:HD11	2.24	0.73
24:AY:252:ASP:HB2	24:AY:254:LYS:HG2	1.71	0.73
35:BA:810:U:OP1	35:BA:1253:A:N7	2.22	0.73
35:BA:2691:C:H6	35:BA:2691:C:H5’	1.53	0.73
48:BQ:43:THR:O	48:BQ:47:ILE:HG13	1.89	0.73
53:BV:25:LEU:H	53:BV:92:THR:HG21	1.54	0.73
10:AJ:82:ILE:O	10:AJ:86:MET:HB2	1.89	0.73
12:AL:75:HIS:NE2	12:AL:77:LEU:HB2	2.03	0.73
31:B6:15:GLU:OE2	31:B6:44:ARG:NH1	2.21	0.73
35:BA:85:G:OP1	56:BY:30:VAL:HB	1.88	0.73
35:BA:1395:A:H4’	35:BA:1397:U:C5	2.24	0.73
35:BA:2394:C:OP1	47:BP:63:PRO:HD2	1.88	0.73
35:BA:2584:U:C2’	35:BA:2585:U:H5’	2.18	0.73
40:BF:32:LEU:C	40:BF:32:LEU:HD23	2.12	0.73
41:BG:31:VAL:CG2	41:BG:32:PRO:HD2	2.19	0.73
47:BP:23:PRO:HB2	47:BP:33:ARG:HG3	1.70	0.73
51:BT:13:ARG:HA	51:BT:13:ARG:CZ	2.19	0.73
55:BX:41:ASN:O	55:BX:43:VAL:N	2.22	0.73
1:AA:1284:C:H3’	1:AA:1285:A:H5”	1.70	0.72
3:AC:90:GLU:HA	3:AC:93:LYS:HB3	1.70	0.72
6:AF:1:MET:HE1	6:AF:68:PRO:HD3	1.70	0.72
13:AM:15:VAL:O	13:AM:19:LEU:HD23	1.89	0.72
19:AS:22:LEU:O	19:AS:26:GLY:HA2	1.89	0.72
24:AY:128:TYR:O	24:AY:129:LYS:HB2	1.86	0.72
24:AY:415:PRO:HA	24:AY:474:ALA:CB	2.19	0.72
25:B0:78:TYR:N	25:B0:78:TYR:CD1	2.56	0.72
31:B6:51:GLU:O	31:B6:52:VAL:HB	1.87	0.72
35:BA:2105:C:H42	35:BA:2184:G:H1	1.37	0.72
35:BA:2312:U:C2’	35:BA:2313:C:H5”	2.20	0.72
41:BG:98:ARG:HH11	41:BG:98:ARG:H	1.37	0.72
43:BK:58:THR:O	43:BK:66:THR:HG22	1.89	0.72
4:AD:28:SER:HB3	4:AD:29:PRO:HD2	1.71	0.72
17:AQ:52:LYS:H	17:AQ:52:LYS:HD2	1.53	0.72
18:AR:44:LEU:CD2	18:AR:79:LEU:HD22	2.19	0.72
24:AY:100:VAL:HG23	24:AY:329:ARG:HG2	1.70	0.72
35:BA:82:G:H5”	35:BA:296:C:H5’	1.70	0.72
35:BA:292:C:O2’	35:BA:293:U:H5’	1.89	0.72
35:BA:322:A:H3’	40:BF:169:ASN:HD21	1.54	0.72
35:BA:1833:U:H2’	35:BA:1834:U:H6	1.52	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:48:GLN:NE2	39:BE:78:LEU:HD22	2.03	0.72
42:BH:50:VAL:HG12	42:BH:51:ARG:N	2.04	0.72
43:BK:57:ILE:HA	43:BK:66:THR:O	1.88	0.72
43:BK:121:GLU:CD	43:BK:121:GLU:H	1.97	0.72
47:BP:13:ASN:O	47:BP:14:LYS:HB2	1.87	0.72
56:BY:47:LYS:HG3	56:BY:60:PHE:HE1	1.51	0.72
1:AA:356:A:H2'	1:AA:357:G:H8	1.53	0.72
1:AA:1388:C:H2'	1:AA:1389:C:H6	1.54	0.72
4:AD:18:LYS:HE2	4:AD:20:TYR:HE2	1.53	0.72
7:AG:64:GLN:CG	7:AG:128:ALA:HB1	2.19	0.72
14:AN:12:ARG:NH1	14:AN:12:ARG:HB2	2.05	0.72
37:BC:92:ALA:HB3	37:BC:95:VAL:HG22	1.71	0.72
37:BC:118:PRO:HA	37:BC:121:MET:HG3	1.68	0.72
42:BH:149:ARG:HA	42:BH:162:ILE:CD1	2.18	0.72
42:BH:149:ARG:HD3	42:BH:164:TYR:CE1	2.24	0.72
57:BZ:103:ARG:HD2	57:BZ:136:PHE:CD2	2.25	0.72
1:AA:1208:C:H2'	1:AA:1209:C:C6	2.23	0.72
8:AH:83:ILE:HD12	8:AH:137:VAL:HG22	1.69	0.72
24:AY:21:ILE:H	24:AY:21:ILE:CD1	2.00	0.72
28:B3:28:LEU:HA	28:B3:33:GLN:OE1	1.88	0.72
35:BA:643:A:O2'	35:BA:644:A:H5'	1.90	0.72
35:BA:1115:G:H5'	35:BA:1115:G:C8	2.25	0.72
36:BB:13:A:O2'	36:BB:15:A:H5"	1.89	0.72
51:BT:34:VAL:O	51:BT:34:VAL:HG12	1.89	0.72
53:BV:18:LEU:CD2	53:BV:19:LYS:H	2.02	0.72
1:AA:1129:C:O2'	1:AA:1130:A:C8	2.40	0.72
21:AU:23:PRO:C	21:AU:25:LYS:H	1.96	0.72
22:AV:68:C:H2'	22:AV:69:C:C6	2.25	0.72
29:B4:56:VAL:O	29:B4:56:VAL:HG12	1.88	0.72
35:BA:49:A:H5"	35:BA:51:G:O4'	1.89	0.72
35:BA:108:U:H2'	35:BA:109:G:H8	1.55	0.72
35:BA:2020:A:O2'	35:BA:2021:C:H5"	1.88	0.72
38:BD:83:GLU:HB2	38:BD:92:ILE:HD11	1.72	0.72
47:BP:41:ARG:HA	47:BP:41:ARG:NH1	2.01	0.72
47:BP:122:PRO:HB3	47:BP:141:ALA:HB1	1.70	0.72
55:BX:27:THR:CB	55:BX:80:ILE:HG22	2.18	0.72
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.25	0.72
1:AA:1318:A:H2'	1:AA:1319:A:H5'	1.69	0.72
1:AA:1442:G:C6	1:AA:1442(B):A:H2	2.07	0.72
11:AK:111:ASP:HA	18:AR:84:LYS:HD2	1.72	0.72
24:AY:277:VAL:HG13	24:AY:278:ASP:H	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:485:GLU:HB2	24:AY:560:VAL:HG22	1.71	0.72
29:B4:39:CYS:O	29:B4:40:HIS:HB2	1.90	0.72
31:B6:27:LYS:HD2	31:B6:27:LYS:O	1.89	0.72
35:BA:2142:C:O2'	35:BA:2143:C:H5'	1.89	0.72
35:BA:2523:G:H2'	35:BA:2524:G:C5'	2.19	0.72
40:BF:192:LEU:HD23	40:BF:193:VAL:N	2.04	0.72
51:BT:55:ASN:H	51:BT:59:THR:HG21	1.54	0.72
19:AS:13:ASP:C	19:AS:15:LEU:H	1.94	0.72
24:AY:139:MET:CE	24:AY:167:PRO:HG3	2.19	0.72
24:AY:431:LEU:CD2	24:AY:466:LEU:HD13	2.19	0.72
30:B5:4:HIS:HB3	30:B5:5:PRO:HD3	1.72	0.72
33:B8:52:LYS:N	33:B8:53:PRO:HD2	2.04	0.72
35:BA:1301:A:O2'	35:BA:1302:A:C2'	2.38	0.72
35:BA:2241:A:H2'	35:BA:2242:G:C8	2.25	0.72
35:BA:2807:G:H1	35:BA:2893:G:H1	1.35	0.72
36:BB:115:G:O4'	50:BS:47:THR:HB	1.90	0.72
37:BC:90:ALA:HA	37:BC:155:ARG:NH1	2.04	0.72
40:BF:204:ASN:C	40:BF:206:ILE:H	1.94	0.72
42:BH:18:GLU:HB2	42:BH:25:LYS:HB2	1.71	0.72
45:BN:48:MET:HE3	45:BN:48:MET:N	1.98	0.72
47:BP:102:ARG:HB3	47:BP:102:ARG:CZ	2.17	0.72
51:BT:42:ILE:HD13	51:BT:83:ILE:CD1	2.18	0.72
52:BU:96:ALA:C	52:BU:98:LEU:H	1.98	0.72
1:AA:692:U:OP1	11:AK:124:LYS:HE2	1.89	0.72
1:AA:717:C:H5"	1:AA:717:C:H6	1.55	0.72
35:BA:320:A:H4'	35:BA:322:A:C8	2.23	0.72
35:BA:419:C:H2'	35:BA:420:C:H6	1.53	0.72
35:BA:1682:G:H2'	35:BA:1683:C:C6	2.25	0.72
35:BA:1718:G:H5'	35:BA:1718:G:C8	2.23	0.72
35:BA:2103:C:C3'	35:BA:2104:G:H5"	2.20	0.72
35:BA:2286:A:H4'	35:BA:2287:A:H5'	1.70	0.72
36:BB:40:U:O2	36:BB:43:C:H5"	1.88	0.72
37:BC:138:LEU:CD2	37:BC:139:PRO:HD2	2.18	0.72
24:AY:227:ILE:O	24:AY:227:ILE:HG22	1.90	0.72
35:BA:83:G:O2'	35:BA:84:A:H8	1.73	0.72
35:BA:2337:G:H2'	35:BA:2338:G:H8	1.54	0.72
47:BP:102:ARG:CB	47:BP:102:ARG:HH11	2.02	0.72
49:BR:75:LEU:O	49:BR:75:LEU:HD13	1.89	0.72
52:BU:111:GLU:O	52:BU:115:ALA:HB2	1.90	0.72
1:AA:368:U:P	24:AY:353:ALA:HB1	2.30	0.72
1:AA:630:G:H2'	1:AA:631:G:H5'	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1014:A:H4'	19:AS:14:HIS:CE1	2.24	0.72
7:AG:31:MET:SD	7:AG:36:LYS:HB2	2.30	0.72
24:AY:92:ILE:HG21	24:AY:454:MET:HE1	1.72	0.72
24:AY:517:LEU:HB3	24:AY:521:SER:CB	2.20	0.72
30:B5:27:PRO:HG3	54:BW:23:LEU:HD11	1.71	0.72
35:BA:2198:A:H4'	35:BA:2199:A:OP1	1.88	0.72
38:BD:27:THR:CG2	38:BD:83:GLU:HG2	2.19	0.72
39:BE:111:ARG:HG3	49:BR:2:ARG:HG2	1.72	0.72
45:BN:9:VAL:CG1	45:BN:39:ARG:HH22	1.93	0.72
46:BO:2:ILE:HD11	46:BO:82:ASN:HD22	1.54	0.72
5:AE:60:TYR:HE1	5:AE:64:ARG:HH21	1.33	0.71
9:AI:79:LEU:HD13	9:AI:83:ARG:HB2	1.70	0.71
12:AL:47:LYS:HB3	12:AL:47:LYS:NZ	2.04	0.71
24:AY:77:HIS:NE2	24:AY:277:VAL:HG21	2.05	0.71
24:AY:177:ILE:HG22	24:AY:178:ILE:N	2.05	0.71
27:B2:24:LEU:HD23	27:B2:24:LEU:C	2.14	0.71
35:BA:64:A:H2'	35:BA:65:C:C6	2.25	0.71
35:BA:662:G:OP1	47:BP:18:ARG:HD2	1.88	0.71
35:BA:871:U:H4'	48:BQ:69:PHE:CE2	2.25	0.71
35:BA:940:G:H3'	35:BA:941:A:H5"	1.70	0.71
35:BA:2068:U:N3	35:BA:2430:A:H2	1.87	0.71
35:BA:2593:U:H2'	35:BA:2594:C:H6	1.53	0.71
36:BB:15:A:H3'	36:BB:16:G:C5'	2.17	0.71
38:BD:117:VAL:HG23	38:BD:129:ASN:HA	1.72	0.71
57:BZ:13:GLU:C	57:BZ:14:LYS:HG3	2.14	0.71
1:AA:1358:U:P	14:AN:35:ARG:HG3	2.30	0.71
2:AB:204:ASN:HD22	2:AB:205:ASP:N	1.87	0.71
3:AC:86:VAL:O	3:AC:89:GLU:HB3	1.89	0.71
5:AE:81:GLU:HG2	5:AE:90:VAL:HG22	1.72	0.71
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.72	0.71
25:B0:40:GLN:HE22	25:B0:43:THR:HA	1.55	0.71
35:BA:1059:G:H2'	35:BA:1060:U:C6	2.25	0.71
35:BA:1223:G:C3'	35:BA:1224:C:H5"	2.20	0.71
35:BA:1272:A:OP2	35:BA:1647:G:OP1	2.08	0.71
38:BD:131:LEU:HD12	38:BD:131:LEU:N	2.04	0.71
40:BF:100:THR:O	40:BF:100:THR:HG22	1.89	0.71
40:BF:117:ARG:NH2	47:BP:5:ASP:N	2.38	0.71
45:BN:22:THR:HA	45:BN:61:ARG:O	1.88	0.71
15:AO:82:ILE:HD13	15:AO:83:GLU:N	2.05	0.71
19:AS:31:ILE:HG23	19:AS:49:ILE:HG23	1.72	0.71
26:B1:76:ARG:HH12	26:B1:95:LEU:CD2	1.99	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:45:LYS:HE3	35:BA:2371:G:H5"	1.71	0.71
35:BA:184:C:H2'	35:BA:185:U:C6	2.24	0.71
37:BC:23:ILE:HB	37:BC:229:SER:OXT	1.91	0.71
39:BE:34:VAL:HG12	39:BE:48:GLN:O	1.88	0.71
40:BF:38:ARG:O	40:BF:42:ALA:HB2	1.90	0.71
51:BT:134:GLU:O	51:BT:135:ALA:CB	2.38	0.71
53:BV:32:THR:HG23	53:BV:59:ALA:O	1.90	0.71
57:BZ:180:VAL:HG12	57:BZ:181:GLU:HG2	1.72	0.71
1:AA:460:G:H5'	1:AA:461:A:OP2	1.90	0.71
4:AD:96:LEU:HD22	4:AD:96:LEU:N	2.03	0.71
24:AY:137:ASN:O	24:AY:262:SER:HA	1.90	0.71
24:AY:413:ILE:HG22	24:AY:449:THR:O	1.91	0.71
28:B3:45:GLY:HA3	35:BA:851:U:O2'	1.91	0.71
30:B5:36:CYS:SG	30:B5:48:GLU:O	2.48	0.71
35:BA:78:A:O2'	35:BA:79:G:H5'	1.90	0.71
35:BA:1053:C:H2'	35:BA:1054:A:H5"	1.72	0.71
35:BA:2462:U:H2'	35:BA:2463:C:C6	2.24	0.71
36:BB:53:A:H2'	36:BB:53:A:N3	2.04	0.71
48:BQ:27:VAL:HG21	48:BQ:134:ARG:HG2	1.73	0.71
49:BR:9:LYS:O	49:BR:10:LEU:HD23	1.90	0.71
49:BR:21:TYR:OH	49:BR:43:GLU:HG2	1.89	0.71
51:BT:29:ARG:CB	51:BT:85:LYS:HA	2.21	0.71
57:BZ:182:LYS:C	57:BZ:183:LEU:HG	2.15	0.71
1:AA:833:U:H2'	1:AA:834:C:C6	2.24	0.71
1:AA:1478:C:O2'	1:AA:1479:C:H5'	1.90	0.71
3:AC:70:VAL:HG12	3:AC:71:ALA:H	1.56	0.71
25:B0:66:VAL:HG23	25:B0:84:LEU:HD23	1.71	0.71
25:B0:78:TYR:H	25:B0:78:TYR:HD1	1.36	0.71
27:B2:2:LYS:HD2	27:B2:5:GLU:OE1	1.89	0.71
35:BA:284:U:H2'	35:BA:285:C:H6	1.55	0.71
35:BA:406:G:OP2	35:BA:406:G:H8	1.73	0.71
35:BA:759:G:H2'	35:BA:760:G:C8	2.24	0.71
43:BK:3:LYS:HD3	43:BK:29:GLN:HG2	1.72	0.71
1:AA:631:G:H5'	1:AA:631:G:C8	2.25	0.71
1:AA:1038:C:H2'	1:AA:1039:C:C5	2.26	0.71
19:AS:42:PRO:C	19:AS:43:GLU:HG3	2.14	0.71
22:AV:6:G:H1	22:AV:67:C:H42	1.36	0.71
35:BA:145:G:H2'	35:BA:146:G:C8	2.25	0.71
35:BA:936:C:H2'	35:BA:937:U:C6	2.26	0.71
35:BA:997:G:OP1	52:BU:93:LYS:HD3	1.91	0.71
35:BA:2415:G:O3'	47:BP:66:GLY:HA3	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:66:GLY:HA2	42:BH:69:ARG:HB3	1.72	0.71
47:BP:106:LEU:HD21	47:BP:112:LEU:HG	1.72	0.71
1:AA:1134:G:C2'	1:AA:1135:U:H5'	2.20	0.71
6:AF:80:ARG:HH11	6:AF:88:VAL:HB	1.56	0.71
7:AG:65:ALA:HB2	7:AG:128:ALA:HB2	1.73	0.71
19:AS:41:VAL:HG21	19:AS:44:MET:HB2	1.73	0.71
24:AY:146:LEU:HD22	24:AY:147:TRP:CZ3	2.25	0.71
24:AY:265:LYS:HB3	24:AY:267:LYS:HE3	1.73	0.71
28:B3:40:THR:OG1	28:B3:43:ILE:HG12	1.91	0.71
35:BA:710:G:H1	35:BA:721:C:H42	1.39	0.71
35:BA:1582:C:H2'	35:BA:1583:A:H8	1.55	0.71
35:BA:2439:A:H2'	35:BA:2439:A:N3	2.06	0.71
1:AA:392:G:H2'	1:AA:393:A:H8	1.55	0.71
5:AE:19:MET:HE1	5:AE:24:ARG:HH21	1.56	0.71
12:AL:57:LYS:HG2	12:AL:67:THR:HG22	1.72	0.71
26:B1:47:GLN:HG3	35:BA:2091:U:O2'	1.90	0.71
35:BA:2230:G:H2'	35:BA:2231:C:H6	1.56	0.71
35:BA:2776:A:H4'	35:BA:2777:G:H5"	1.72	0.71
43:BK:17:ALA:HB3	43:BK:38:VAL:HG22	1.73	0.71
47:BP:24:GLY:CA	47:BP:33:ARG:NH1	2.53	0.71
52:BU:90:VAL:HG13	53:BV:39:LEU:HG	1.71	0.71
1:AA:715:A:H2'	1:AA:716:A:C8	2.25	0.71
1:AA:943:U:H2'	1:AA:944:G:H5'	1.70	0.71
1:AA:1160:G:N3	1:AA:1160:G:H2'	2.05	0.71
7:AG:57:GLU:H	7:AG:57:GLU:CD	1.97	0.71
26:B1:4:VAL:HG23	26:B1:10:LYS:O	1.89	0.71
30:B5:3:LYS:NZ	35:BA:2613:U:H2'	2.06	0.71
31:B6:27:LYS:HB3	31:B6:30:THR:HG22	1.73	0.71
31:B6:43:CYS:O	31:B6:44:ARG:HB2	1.90	0.71
35:BA:545:C:C2'	35:BA:547:A:H5"	2.20	0.71
35:BA:654(M):C:HO2'	35:BA:654(N):G:H8	1.36	0.71
35:BA:1774:C:O2	38:BD:11:PRO:HB2	1.91	0.71
35:BA:2524:G:H5'	35:BA:2524:G:C8	2.23	0.71
38:BD:147:LEU:HD13	38:BD:155:LEU:HD11	1.73	0.71
42:BH:43:VAL:CG1	42:BH:52:VAL:HA	2.19	0.71
42:BH:85:LYS:HE3	42:BH:145:ALA:HB1	1.71	0.71
45:BN:133:GLN:HG2	45:BN:134:ARG:N	2.06	0.71
51:BT:28:VAL:HG22	51:BT:47:GLY:N	2.05	0.71
53:BV:13:ARG:HH11	53:BV:13:ARG:HG3	1.55	0.71
1:AA:1298:C:H1'	1:AA:1299:A:C6	2.26	0.71
9:AI:104:ARG:O	9:AI:105:ASP:CB	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:28:LYS:HE2	12:AL:33:ARG:NH1	2.06	0.71
19:AS:51:VAL:HG22	19:AS:71:LEU:HD13	1.73	0.71
30:B5:55:ARG:HH12	49:BR:33:ARG:HG2	1.54	0.71
31:B6:54:ILE:CD1	35:BA:2420:C:H5'	2.21	0.71
35:BA:654(L):G:H2'	35:BA:654(M):C:H4'	1.72	0.71
35:BA:1142(A):A:O2'	35:BA:1143:A:H5"	1.90	0.71
35:BA:1709:U:H2'	35:BA:1710:C:C6	2.25	0.71
35:BA:1751:C:O2'	35:BA:1752:C:H5'	1.90	0.71
37:BC:78:ILE:O	37:BC:120:VAL:HG21	1.89	0.71
42:BH:16:SER:HB2	42:BH:27:LYS:CB	2.17	0.71
47:BP:91:PHE:CE2	47:BP:95:VAL:HG12	2.25	0.71
55:BX:57:LEU:HD13	55:BX:57:LEU:N	2.06	0.71
57:BZ:79:ARG:O	57:BZ:80:ARG:HB2	1.89	0.71
1:AA:1117:G:O2'	9:AI:104:ARG:HD3	1.90	0.70
1:AA:1328:C:H2'	1:AA:1329:A:C8	2.26	0.70
10:AJ:4:ILE:HB	10:AJ:74:ILE:CG1	2.21	0.70
13:AM:97:PRO:CA	13:AM:110:ARG:HD3	2.21	0.70
35:BA:321:G:C2	35:BA:341:G:H4'	2.27	0.70
35:BA:581:C:H2'	35:BA:582:G:C8	2.26	0.70
35:BA:2122:U:H1'	37:BC:167:ASP:OD2	1.91	0.70
38:BD:248:SER:HB2	38:BD:249:PRO:HD2	1.73	0.70
40:BF:65:TRP:HZ3	40:BF:75:HIS:HD2	1.39	0.70
41:BG:96:ARG:O	41:BG:97:ASP:HB2	1.91	0.70
54:BW:10:VAL:HG23	54:BW:101:SER:O	1.90	0.70
1:AA:473:G:H2'	1:AA:474:G:H8	1.56	0.70
1:AA:559:A:H4'	1:AA:560:U:C5'	2.21	0.70
7:AG:27:ILE:CD1	7:AG:40:ALA:HA	2.22	0.70
9:AI:93:ARG:HA	9:AI:96:LEU:HB2	1.73	0.70
12:AL:111:LYS:O	12:AL:112:ASP:HB2	1.89	0.70
22:AV:3:C:H2'	22:AV:4:G:H5'	1.73	0.70
24:AY:388:THR:HG21	24:AY:399:LEU:H	1.55	0.70
28:B3:11:SER:HB3	35:BA:988:A:P	2.30	0.70
29:B4:2:LYS:HG2	36:BB:44:G:OP2	1.90	0.70
30:B5:25:LEU:HD11	54:BW:19:LEU:HB3	1.73	0.70
35:BA:2262:U:H2'	35:BA:2263:C:C5'	2.20	0.70
37:BC:74:ARG:H	37:BC:112:ASP:HB2	1.54	0.70
55:BX:54:VAL:HG13	55:BX:81:VAL:HG12	1.72	0.70
56:BY:10:GLY:HA2	56:BY:27:VAL:HG13	1.73	0.70
57:BZ:108:PRO:HB3	57:BZ:141:VAL:CG1	2.21	0.70
1:AA:35:G:H2'	1:AA:36:C:C6	2.26	0.70
2:AB:147:LYS:HE2	2:AB:148:TYR:CE1	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:82:ILE:C	15:AO:82:ILE:CD1	2.60	0.70
16:AP:32:TYR:HD2	16:AP:32:TYR:O	1.74	0.70
35:BA:154(A):C:C5'	35:BA:155:U:H5"	2.21	0.70
35:BA:272(B):G:H2'	35:BA:272(C):G:H8	1.55	0.70
35:BA:559:G:H22	52:BU:49:HIS:CD2	2.08	0.70
35:BA:1068:G:H21	35:BA:1096:A:H5'	1.54	0.70
35:BA:2428:G:H5'	35:BA:2429:G:OP1	1.91	0.70
41:BG:145:THR:HG23	41:BG:148:MET:HB2	1.72	0.70
46:BO:97:ARG:HG3	46:BO:97:ARG:NH1	2.05	0.70
57:BZ:167:PRO:O	57:BZ:168:GLU:HB2	1.88	0.70
1:AA:447:G:H2'	1:AA:485:G:N2	2.06	0.70
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.73	0.70
17:AQ:80:GLY:O	17:AQ:81:ARG:HD2	1.92	0.70
20:AT:43:LEU:HB3	20:AT:48:LYS:HB2	1.74	0.70
33:B8:6:THR:HG22	33:B8:63:PRO:HD3	1.72	0.70
35:BA:514:A:H2'	35:BA:515:A:C8	2.25	0.70
35:BA:1012:U:C5	45:BN:28:THR:HG21	2.26	0.70
41:BG:31:VAL:HG23	41:BG:32:PRO:HD2	1.73	0.70
52:BU:25:TRP:CD1	52:BU:26:GLY:N	2.59	0.70
1:AA:1338:G:O2'	22:AV:42:G:H5'	1.92	0.70
1:AA:1409:C:H2'	1:AA:1410:G:H8	1.54	0.70
1:AA:1439:C:H6	1:AA:1439:C:H5"	1.56	0.70
1:AA:1479:C:H2'	1:AA:1480:G:H8	1.56	0.70
4:AD:121:VAL:HA	4:AD:126:ILE:HD13	1.73	0.70
35:BA:226:G:O2'	35:BA:227:A:C8	2.42	0.70
35:BA:1028:A:N6	35:BA:1125:G:H2'	2.06	0.70
45:BN:35:ARG:O	45:BN:37:LYS:HB2	1.91	0.70
53:BV:18:LEU:CG	53:BV:19:LYS:H	2.03	0.70
19:AS:51:VAL:O	19:AS:58:VAL:HG22	1.91	0.70
26:B1:86:SER:HB2	26:B1:90:ILE:HD11	1.73	0.70
31:B6:5:VAL:HG12	31:B6:6:ARG:N	2.05	0.70
35:BA:297:C:H2'	35:BA:298:G:O4'	1.91	0.70
35:BA:1430:C:H2'	35:BA:1431:U:C6	2.27	0.70
35:BA:2745:C:H2'	35:BA:2746:U:C6	2.27	0.70
35:BA:2887:U:H2'	35:BA:2888:C:C6	2.27	0.70
38:BD:72:LYS:HE2	38:BD:101:GLU:OE1	1.91	0.70
41:BG:85:GLY:C	41:BG:87:PRO:HD3	2.15	0.70
46:BO:60:ALA:HA	46:BO:87:ILE:CD1	2.21	0.70
48:BQ:108:GLY:HA3	57:BZ:116:VAL:HG11	1.73	0.70
51:BT:28:VAL:HG22	51:BT:46:GLU:CA	2.21	0.70
53:BV:62:LEU:HD22	53:BV:62:LEU:N	2.07	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:423:G:C2’	1:AA:424:G:H5’	2.21	0.70
1:AA:1003:G:H2’	1:AA:1004:A:C4’	2.11	0.70
1:AA:1128:C:H2’	1:AA:1129:C:C5’	2.21	0.70
1:AA:1258:G:O2’	1:AA:1259:C:H5’	1.92	0.70
29:B4:16:CYS:SG	29:B4:17:GLY:N	2.64	0.70
35:BA:272(B):G:H2’	35:BA:272(C):G:C8	2.26	0.70
35:BA:1814:G:C3’	35:BA:1815:A:H5”	2.21	0.70
35:BA:2532:G:H2’	35:BA:2533:A:O4’	1.92	0.70
39:BE:9:VAL:HG22	39:BE:10:GLY:N	2.07	0.70
40:BF:65:TRP:CZ3	40:BF:75:HIS:HD2	2.09	0.70
40:BF:140:LEU:O	40:BF:143:ALA:HB3	1.91	0.70
41:BG:108:ASN:O	41:BG:109:VAL:CG2	2.39	0.70
42:BH:19:VAL:O	42:BH:20:ALA:HB2	1.92	0.70
49:BR:97:VAL:HA	49:BR:113:LEU:O	1.92	0.70
1:AA:1134:G:H2’	1:AA:1135:U:H5’	1.73	0.70
2:AB:189:ASP:OD1	2:AB:205:ASP:HB3	1.92	0.70
3:AC:84:ILE:O	3:AC:88:ARG:HG3	1.92	0.70
4:AD:152:SER:O	4:AD:155:LEU:HG	1.90	0.70
10:AJ:67:THR:HG22	10:AJ:67:THR:O	1.92	0.70
20:AT:26:ASN:O	20:AT:30:LYS:HB2	1.92	0.70
31:B6:15:GLU:OE1	31:B6:44:ARG:NH2	2.24	0.70
35:BA:1052:C:H2’	35:BA:1053:C:C6	2.26	0.70
35:BA:1094:U:H2’	35:BA:1096:A:OP2	1.92	0.70
47:BP:59:LEU:HA	47:BP:61:ARG:CZ	2.21	0.70
51:BT:55:ASN:N	51:BT:59:THR:CG2	2.55	0.70
57:BZ:99:TYR:HE1	57:BZ:125:LEU:HD13	1.57	0.70
2:AB:114:ARG:HH11	2:AB:118:LEU:HD21	1.57	0.70
4:AD:107:ARG:HH21	4:AD:194:LEU:HD12	1.57	0.70
22:AV:20:U:H3’	22:AV:21:A:H5’	1.72	0.70
35:BA:84:A:H5”	56:BY:9:LYS:HZ3	1.53	0.70
35:BA:582:G:H2’	35:BA:583:G:H8	1.57	0.70
35:BA:2408:U:H2’	35:BA:2409:G:C8	2.27	0.70
42:BH:83:TYR:HB3	42:BH:135:GLY:H	1.56	0.70
53:BV:64:HIS:ND1	53:BV:92:THR:HG22	2.05	0.70
53:BV:88:ARG:O	53:BV:90:PRO:HD3	1.92	0.70
54:BW:20:VAL:HG23	54:BW:21:VAL:H	1.54	0.70
2:AB:22:LYS:H	2:AB:40:HIS:HE1	1.38	0.70
20:AT:50:GLU:HB3	20:AT:99:LEU:HB2	1.73	0.70
20:AT:73:HIS:H	20:AT:76:ALA:HB3	1.56	0.70
24:AY:326:THR:O	24:AY:328:ILE:HG23	1.91	0.70
24:AY:464:ASP:O	24:AY:468:ARG:HB2	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:1:MET:HE3	29:B4:1:MET:H1	1.54	0.70
35:BA:208:C:H2'	35:BA:209:C:H6	1.57	0.70
35:BA:406:G:O2'	35:BA:407:G:H8	1.75	0.70
35:BA:2377:A:H2'	35:BA:2378:A:C8	2.27	0.70
35:BA:2645:G:H3'	35:BA:2646:C:C5'	2.20	0.70
35:BA:2754:U:H2'	35:BA:2756:U:OP1	1.90	0.70
37:BC:84:ILE:O	37:BC:95:VAL:HG11	1.92	0.70
39:BE:170:LEU:H	39:BE:170:LEU:HD12	1.57	0.70
49:BR:2:ARG:CD	49:BR:5:LYS:HE2	2.21	0.70
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.56	0.69
5:AE:122:GLU:O	5:AE:123:LEU:HD23	1.91	0.69
7:AG:82:GLY:HA3	23:AX:13:A:N1	2.06	0.69
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.21	0.69
19:AS:23:ASN:OD1	19:AS:44:MET:HE2	1.92	0.69
24:AY:446:THR:HG23	24:AY:446:THR:O	1.91	0.69
30:B5:25:LEU:HD12	54:BW:19:LEU:HB3	1.74	0.69
35:BA:629:G:H5"	35:BA:650:C:O2'	1.91	0.69
38:BD:146:GLU:HG2	38:BD:152:GLY:C	2.17	0.69
41:BG:45:GLU:O	41:BG:51:ARG:HD3	1.91	0.69
42:BH:41:MET:HE2	42:BH:43:VAL:CG1	2.20	0.69
45:BN:46:VAL:HG13	45:BN:47:ALA:N	2.06	0.69
51:BT:16:ARG:HG3	51:BT:16:ARG:NH1	2.02	0.69
57:BZ:41:LEU:O	57:BZ:44:PHE:N	2.24	0.69
1:AA:1358:U:OP1	14:AN:35:ARG:HG3	1.92	0.69
2:AB:33:TYR:HB2	2:AB:43:ASP:HB2	1.74	0.69
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.25	0.69
32:B7:8:ASN:HD22	32:B7:9:ARG:N	1.90	0.69
35:BA:1125:G:H3'	35:BA:1126:A:H5"	1.71	0.69
35:BA:1472:A:O2'	35:BA:1473:G:H5'	1.92	0.69
36:BB:66:A:N6	36:BB:108:U:H2'	2.07	0.69
1:AA:20:U:H2'	1:AA:21:G:O4'	1.93	0.69
2:AB:55:PHE:HA	2:AB:58:ILE:HD12	1.73	0.69
10:AJ:16:LEU:HD12	10:AJ:70:ARG:HD3	1.74	0.69
11:AK:30:VAL:O	11:AK:30:VAL:HG23	1.92	0.69
16:AP:33:ILE:O	16:AP:34:GLU:HB2	1.91	0.69
17:AQ:69:LYS:O	17:AQ:70:ARG:HD2	1.93	0.69
28:B3:56:VAL:HG12	28:B3:57:GLU:H	1.57	0.69
35:BA:1717:G:C3'	35:BA:1718:G:H5"	2.22	0.69
37:BC:117:THR:HG22	37:BC:147:GLY:O	1.92	0.69
43:BK:37:PHE:O	43:BK:41:PHE:HB3	1.91	0.69
50:BS:106:ARG:O	50:BS:107:GLU:HB2	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:88:LYS:HE2	56:BY:93:GLY:HA3	1.73	0.69
56:BY:91:GLU:O	56:BY:92:ASN:HB2	1.93	0.69
1:AA:405:U:H3'	1:AA:406:G:H5'	1.73	0.69
1:AA:1123:A:O3'	10:AJ:36:GLY:HA3	1.92	0.69
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.06	0.69
2:AB:165:VAL:CG2	2:AB:166:ASP:H	1.98	0.69
12:AL:25:PRO:C	12:AL:27:LEU:N	2.51	0.69
13:AM:106:ASN:O	13:AM:107:ALA:HB3	1.91	0.69
25:B0:43:THR:HG22	35:BA:2331:G:O3'	1.93	0.69
35:BA:214:G:H1'	35:BA:216:A:O2'	1.91	0.69
35:BA:676:A:H8	35:BA:2069:G:H21	1.40	0.69
35:BA:2681:C:H5	35:BA:2725:A:H62	1.39	0.69
35:BA:2804:C:H2'	35:BA:2805:G:H8	1.55	0.69
40:BF:174:VAL:HG21	40:BF:189:THR:CG2	2.22	0.69
41:BG:76:SER:HA	41:BG:83:ARG:HB3	1.74	0.69
47:BP:101:VAL:HG12	47:BP:106:LEU:CB	2.22	0.69
55:BX:12:VAL:HG12	55:BX:27:THR:HG23	1.74	0.69
1:AA:392:G:H2'	1:AA:393:A:C8	2.27	0.69
3:AC:167:TRP:HE3	3:AC:168:ALA:H	1.39	0.69
5:AE:79:GLU:HB3	5:AE:93:PRO:HD2	1.75	0.69
16:AP:20:VAL:HG23	16:AP:34:GLU:O	1.91	0.69
35:BA:67:U:H2'	35:BA:68:G:C8	2.28	0.69
35:BA:545:C:C3'	35:BA:547:A:H5"	2.22	0.69
35:BA:1409:C:H2'	35:BA:1410:G:H8	1.55	0.69
35:BA:1607:C:H4'	35:BA:1608:A:O5'	1.91	0.69
37:BC:139:PRO:HA	37:BC:145:THR:HB	1.73	0.69
50:BS:12:PHE:O	50:BS:14:VAL:HG23	1.93	0.69
56:BY:31:LEU:HD22	56:BY:31:LEU:N	2.07	0.69
1:AA:41:G:H2'	1:AA:42:G:C8	2.27	0.69
1:AA:54:C:H2'	1:AA:352:C:H41	1.57	0.69
11:AK:54:ARG:O	11:AK:57:THR:HG22	1.93	0.69
27:B2:36:ARG:HA	27:B2:39:ALA:HB3	1.74	0.69
33:B8:32:LEU:HB3	33:B8:36:LYS:NZ	2.07	0.69
35:BA:27:G:HO2'	35:BA:28:A:H8	1.41	0.69
35:BA:958:U:OP2	48:BQ:14:ARG:NH1	2.25	0.69
40:BF:78:ILE:HA	40:BF:83:PHE:CD2	2.28	0.69
42:BH:12:PRO:HB2	42:BH:15:VAL:HG11	1.74	0.69
47:BP:108:LYS:HD2	47:BP:108:LYS:N	2.08	0.69
50:BS:67:ARG:HB3	50:BS:71:ARG:NH2	2.07	0.69
3:AC:46:GLU:HB3	3:AC:83:ARG:HH22	1.57	0.69
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.20	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:85:LEU:HD12	18:AR:86:VAL:N	2.06	0.69
20:AT:45:GLN:HB2	20:AT:91:LEU:HD13	1.74	0.69
20:AT:84:LEU:C	20:AT:86:ARG:H	2.01	0.69
24:AY:510:VAL:HG13	24:AY:569:ASP:O	1.92	0.69
26:B1:76:ARG:HH22	26:B1:95:LEU:HD13	1.56	0.69
35:BA:2056:G:H2'	35:BA:2056:G:N3	2.08	0.69
35:BA:2629:A:H2'	35:BA:2629:A:N3	2.07	0.69
43:BK:109:LYS:O	43:BK:112:MET:HG2	1.92	0.69
50:BS:106:ARG:HB3	50:BS:106:ARG:NH1	2.04	0.69
54:BW:1:MET:HE2	54:BW:62:HIS:HD2	1.58	0.69
56:BY:9:LYS:HD3	56:BY:94:LYS:HE2	1.75	0.69
1:AA:986:A:H1'	19:AS:54:GLY:O	1.92	0.69
1:AA:1321:C:H5"	1:AA:1322:C:H5"	1.74	0.69
1:AA:1321:C:H5"	1:AA:1322:C:C5'	2.23	0.69
2:AB:21:ARG:HB3	2:AB:39:ILE:HG12	1.75	0.69
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.73	0.69
3:AC:6:HIS:HD2	3:AC:7:PRO:HD2	1.56	0.69
5:AE:43:LEU:HD21	5:AE:132:ALA:HB1	1.74	0.69
8:AH:7:ALA:HB2	8:AH:85:ARG:HD3	1.75	0.69
10:AJ:3:LYS:O	10:AJ:100:THR:HG23	1.92	0.69
15:AO:5:LYS:O	15:AO:9:GLN:HG2	1.92	0.69
15:AO:74:ASP:OD2	15:AO:77:ARG:HG2	1.92	0.69
17:AQ:45:HIS:CB	17:AQ:65:ILE:HD13	2.23	0.69
24:AY:606:MET:CE	24:AY:671:MET:HE3	2.22	0.69
28:B3:29:ARG:HH11	28:B3:29:ARG:CB	2.03	0.69
31:B6:15:GLU:CD	31:B6:44:ARG:NH1	2.51	0.69
32:B7:23:ARG:C	32:B7:28:ARG:HH12	2.01	0.69
33:B8:48:PHE:C	33:B8:49:VAL:HG22	2.16	0.69
35:BA:1316:U:O2'	35:BA:1317:A:H5'	1.92	0.69
35:BA:1452:A:C3'	35:BA:1453:U:H5"	2.23	0.69
35:BA:1656:C:H2'	35:BA:1657:C:H6	1.57	0.69
35:BA:1921:G:O2'	35:BA:1922:G:H5'	1.93	0.69
35:BA:2012:G:H4'	54:BW:96:ILE:CD1	2.19	0.69
40:BF:10:PRO:HG2	40:BF:11:VAL:H	1.56	0.69
40:BF:174:VAL:HG21	40:BF:189:THR:HG21	1.74	0.69
41:BG:7:LEU:O	41:BG:11:TYR:N	2.26	0.69
41:BG:106:LEU:HA	41:BG:110:ALA:CB	2.21	0.69
41:BG:114:ILE:O	41:BG:114:ILE:HG22	1.90	0.69
41:BG:133:LEU:HD11	41:BG:157:ILE:CD1	2.20	0.69
43:BK:23:VAL:O	43:BK:23:VAL:HG12	1.92	0.69
43:BK:99:ILE:HD12	43:BK:103:GLN:HB3	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BO:20:MET:HE3	46:BO:44:LYS:HE3	1.74	0.69
47:BP:23:PRO:HB2	47:BP:33:ARG:NE	2.07	0.69
47:BP:27:HIS:CD2	47:BP:27:HIS:C	2.71	0.69
48:BQ:24:GLY:O	48:BQ:102:VAL:HG23	1.93	0.69
49:BR:28:LEU:HD23	49:BR:29:LEU:HD12	1.75	0.69
50:BS:49:VAL:HG12	50:BS:50:SER:N	2.01	0.69
50:BS:89:ARG:HG3	50:BS:92:TYR:HB3	1.75	0.69
54:BW:8:ARG:HG3	54:BW:8:ARG:HH11	1.57	0.69
57:BZ:56:VAL:HG12	57:BZ:57:ILE:N	2.06	0.69
57:BZ:120:ILE:HG22	57:BZ:120:ILE:O	1.92	0.69
1:AA:664:G:H22	1:AA:741:G:H1	1.41	0.69
1:AA:1325:C:H2'	1:AA:1326:C:H6	1.58	0.69
24:AY:213:HIS:O	24:AY:217:VAL:HG23	1.93	0.69
31:B6:10:LEU:CD2	31:B6:10:LEU:N	2.39	0.69
31:B6:37:ARG:HH22	35:BA:2286:A:H62	1.41	0.69
32:B7:34:ARG:HB3	32:B7:42:LEU:HD22	1.73	0.69
35:BA:1452:A:H3'	35:BA:1453:U:H5"	1.72	0.69
40:BF:132:VAL:HG22	40:BF:133:ASN:N	2.06	0.69
49:BR:72:ASP:OD2	49:BR:75:LEU:HB2	1.93	0.69
1:AA:1030(A):G:H1'	1:AA:1031:G:H1	1.55	0.69
1:AA:1227:A:C2	13:AM:117:VAL:HG11	2.27	0.69
1:AA:1356:G:H2'	1:AA:1357:A:H8	1.55	0.69
5:AE:9:LYS:CB	5:AE:112:LEU:HD11	2.23	0.69
13:AM:74:VAL:O	13:AM:77:ASN:HB2	1.93	0.69
24:AY:165:GLN:HE21	24:AY:177:ILE:HG21	1.58	0.69
30:B5:16:ARG:HG2	30:B5:16:ARG:NH1	2.00	0.69
35:BA:1190:G:H5'	47:BP:35:HIS:H	1.58	0.69
35:BA:1578:U:H2'	35:BA:1579:A:H5"	1.75	0.69
36:BB:3:C:N4	36:BB:118:G:H1	1.91	0.69
38:BD:35:LYS:CG	38:BD:63:ARG:HG3	2.23	0.69
55:BX:35:THR:HB	55:BX:38:GLU:HB2	1.75	0.69
1:AA:170:U:O2'	1:AA:171:A:H5'	1.92	0.68
3:AC:5:ILE:HD13	3:AC:5:ILE:N	2.07	0.68
35:BA:9:U:H5	35:BA:2629:A:N6	1.92	0.68
35:BA:154(A):C:C5	35:BA:155:U:H1'	2.28	0.68
35:BA:481:G:H2'	35:BA:507:A:N1	2.08	0.68
39:BE:1:MET:HB3	39:BE:200:GLU:OE2	1.92	0.68
1:AA:731:G:OP1	1:AA:766:A:H1'	1.92	0.68
1:AA:1148:U:H2'	1:AA:1149:C:O4'	1.93	0.68
3:AC:16:ARG:HD3	3:AC:17:ASP:H	1.57	0.68
10:AJ:82:ILE:HD13	10:AJ:82:ILE:H	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:81:LEU:HD12	13:AM:86:CYS:SG	2.34	0.68
20:AT:50:GLU:HG3	20:AT:51:GLU:N	2.07	0.68
24:AY:165:GLN:HB2	24:AY:260:LEU:HD11	1.74	0.68
24:AY:438:PHE:HD2	24:AY:438:PHE:O	1.76	0.68
24:AY:613:PRO:O	24:AY:615:GLU:N	2.26	0.68
24:AY:637:ARG:HH11	24:AY:637:ARG:CG	1.99	0.68
25:B0:51:VAL:HG22	25:B0:81:VAL:HG23	1.73	0.68
28:B3:1:MET:HB3	28:B3:2:PRO:HD2	1.74	0.68
35:BA:191:A:H2'	35:BA:192:C:H6	1.56	0.68
35:BA:549:G:H8	35:BA:549:G:O5'	1.76	0.68
35:BA:674:G:C1'	40:BF:74:ARG:HD3	2.23	0.68
35:BA:840:C:H2'	35:BA:841:A:H5"	1.74	0.68
35:BA:975(A):G:O2'	35:BA:976:C:H5'	1.93	0.68
37:BC:28:ARG:HG2	37:BC:183:PRO:HB3	1.74	0.68
37:BC:77:ALA:HB3	37:BC:95:VAL:HA	1.75	0.68
39:BE:11:MET:HB2	39:BE:23:VAL:O	1.93	0.68
39:BE:95:ILE:HD13	39:BE:95:ILE:N	2.08	0.68
1:AA:194:C:C2'	1:AA:195:A:H5"	2.24	0.68
1:AA:275:G:H5"	17:AQ:14:LYS:CB	2.23	0.68
1:AA:1275:A:O2'	1:AA:1276:G:H5'	1.92	0.68
1:AA:1370:G:C2	1:AA:1371:G:C8	2.81	0.68
19:AS:6:LYS:O	19:AS:7:LYS:HE3	1.94	0.68
35:BA:363(B):G:H2'	35:BA:363(C):G:C8	2.28	0.68
35:BA:581:C:H2'	35:BA:582:G:H8	1.59	0.68
35:BA:614(A):U:H4'	35:BA:614(B):G:H5"	1.74	0.68
35:BA:695:G:OP1	35:BA:1380:G:H4'	1.93	0.68
39:BE:117:MET:HA	39:BE:122:PHE:H	1.57	0.68
46:BO:22:ILE:HG12	46:BO:41:ALA:HA	1.75	0.68
56:BY:28:LYS:O	56:BY:38:ILE:HG22	1.93	0.68
56:BY:74:PRO:O	56:BY:80:GLY:HA2	1.92	0.68
57:BZ:4:ARG:HH12	57:BZ:66:SER:CB	2.06	0.68
1:AA:148:G:H2'	1:AA:149:A:C8	2.29	0.68
1:AA:579:G:H5'	1:AA:728:A:H1'	1.75	0.68
2:AB:178:ARG:HG2	2:AB:178:ARG:HH11	1.57	0.68
8:AH:6:ILE:HD12	8:AH:6:ILE:N	2.06	0.68
20:AT:48:LYS:HB3	20:AT:51:GLU:HG2	1.75	0.68
24:AY:92:ILE:HG12	24:AY:405:PRO:HG2	1.76	0.68
24:AY:342:TYR:HE2	24:AY:396:ARG:HD2	1.54	0.68
35:BA:296:C:O2'	35:BA:297:C:H5'	1.93	0.68
35:BA:528:A:H2	35:BA:2043:C:C5'	2.06	0.68
35:BA:1290:C:H2'	35:BA:1291:C:C6	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1809:A:H2'	35:BA:1810:A:C8	2.29	0.68
38:BD:276:LYS:C	38:BD:276:LYS:HD3	2.17	0.68
43:BK:115:LEU:HB3	43:BK:126:MET:HE1	1.74	0.68
46:BO:91:LEU:N	46:BO:91:LEU:CD2	2.56	0.68
56:BY:7:VAL:CG1	56:BY:8:LYS:HE3	2.24	0.68
1:AA:1170:A:H2'	1:AA:1171:G:O4'	1.94	0.68
4:AD:57:ARG:H	4:AD:57:ARG:HD2	1.58	0.68
22:AV:20:U:C3'	22:AV:21:A:H5'	2.23	0.68
26:B1:26:ARG:HG3	26:B1:27:GLU:HG3	1.75	0.68
35:BA:510:C:H3'	35:BA:510:C:OP1	1.93	0.68
35:BA:1099:G:H2'	35:BA:1100:C:O4'	1.93	0.68
35:BA:1205:U:C5	40:BF:171:PRO:HA	2.28	0.68
35:BA:1812:A:H2'	35:BA:1813:G:H8	1.55	0.68
35:BA:2672:G:C3'	35:BA:2673:G:H5"	2.24	0.68
38:BD:26:LYS:H	38:BD:26:LYS:HE2	1.56	0.68
38:BD:26:LYS:O	38:BD:27:THR:HG22	1.92	0.68
38:BD:145:VAL:HG12	38:BD:146:GLU:N	2.07	0.68
41:BG:56:ALA:HB1	41:BG:153:ARG:NE	2.08	0.68
47:BP:23:PRO:C	47:BP:33:ARG:CZ	2.67	0.68
48:BQ:53:ALA:HA	48:BQ:56:ARG:HB2	1.76	0.68
51:BT:10:VAL:O	51:BT:13:ARG:HG2	1.94	0.68
8:AH:17:THR:HG22	8:AH:63:LEU:HD12	1.74	0.68
35:BA:123:G:O2'	35:BA:124:G:H5'	1.93	0.68
35:BA:693:C:O2'	35:BA:694:U:H5'	1.92	0.68
35:BA:1951:U:H2'	35:BA:1953:A:OP2	1.92	0.68
35:BA:2146:C:H4'	35:BA:2147:G:C8	2.28	0.68
36:BB:4:C:H2'	36:BB:5:C:C6	2.28	0.68
36:BB:20:C:H2'	36:BB:21:G:H5'	1.75	0.68
40:BF:63:LYS:HG3	40:BF:76:GLY:HA2	1.74	0.68
40:BF:110:LEU:HD13	40:BF:110:LEU:O	1.94	0.68
41:BG:68:PRO:CA	41:BG:92:VAL:HG12	2.17	0.68
42:BH:46:GLU:HG3	42:BH:51:ARG:H	1.59	0.68
45:BN:115:ARG:HA	45:BN:118:LYS:HE2	1.75	0.68
56:BY:84:ARG:HB2	56:BY:97:ARG:HB2	1.75	0.68
1:AA:183:G:H2'	1:AA:184:G:C8	2.28	0.68
1:AA:818:G:O2'	1:AA:819:A:H5'	1.93	0.68
4:AD:18:LYS:HE2	4:AD:20:TYR:CE2	2.29	0.68
10:AJ:4:ILE:HD12	10:AJ:4:ILE:N	2.09	0.68
10:AJ:6:ILE:HD12	10:AJ:6:ILE:O	1.93	0.68
10:AJ:71:LEU:HD12	10:AJ:72:VAL:H	1.59	0.68
24:AY:97:SER:O	24:AY:100:VAL:HG13	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2019:A:O3'	52:BU:27:LEU:HD12	1.94	0.68
36:BB:3:C:H42	36:BB:118:G:H1	1.40	0.68
41:BG:144:ILE:HD11	41:BG:149:VAL:HB	1.76	0.68
48:BQ:12:GLN:HE21	48:BQ:73:PRO:HD2	1.58	0.68
1:AA:1308:U:H5"	13:AM:98:VAL:HG23	1.76	0.68
3:AC:138:VAL:O	3:AC:139:GLN:C	2.36	0.68
12:AL:70:ILE:HG22	12:AL:100:ILE:HD12	1.76	0.68
20:AT:12:ALA:O	20:AT:15:ARG:HB2	1.92	0.68
24:AY:18:ALA:O	24:AY:19:ALA:CB	2.42	0.68
24:AY:20:HIS:HB2	24:AY:87:HIS:HD2	1.58	0.68
24:AY:388:THR:HG21	24:AY:399:LEU:HD13	1.76	0.68
28:B3:28:LEU:HD23	28:B3:28:LEU:N	2.09	0.68
35:BA:556:G:H2'	35:BA:557:U:C6	2.28	0.68
35:BA:637:A:C6	35:BA:652:C:H4'	2.29	0.68
35:BA:654:A:N7	35:BA:654(V):A:H4'	2.09	0.68
35:BA:781:A:C8	38:BD:219:PRO:HG3	2.29	0.68
35:BA:848:G:N3	35:BA:933:A:H1'	2.09	0.68
35:BA:1819:A:H4'	35:BA:1820:U:H5'	1.76	0.68
35:BA:2657:A:H2'	35:BA:2658:C:H5'	1.76	0.68
37:BC:60:ARG:HG3	37:BC:165:ARG:HG3	1.76	0.68
40:BF:7:TYR:HB3	40:BF:16:GLY:C	2.18	0.68
42:BH:105:LEU:HD23	42:BH:105:LEU:H	1.58	0.68
48:BQ:109:VAL:CG1	48:BQ:113:GLN:HB2	2.23	0.68
49:BR:117:VAL:HG12	49:BR:118:GLU:N	2.09	0.68
1:AA:179:A:H2'	1:AA:180:U:H6	1.57	0.68
1:AA:269:C:H2'	1:AA:270:A:H8	1.59	0.68
1:AA:512:U:H2'	1:AA:513:C:C6	2.29	0.68
1:AA:1082:G:O2'	1:AA:1083:U:H5'	1.94	0.68
5:AE:33:VAL:HG12	5:AE:112:LEU:HD12	1.76	0.68
10:AJ:7:LYS:O	10:AJ:96:ILE:HA	1.94	0.68
23:AX:13:A:C2'	23:AX:14:A:H5"	2.24	0.68
24:AY:335:LEU:HD11	24:AY:352:VAL:HG11	1.75	0.68
26:B1:26:ARG:HG3	26:B1:27:GLU:H	1.59	0.68
35:BA:120:U:H5'	35:BA:121:G:OP1	1.93	0.68
35:BA:206:U:O2	35:BA:206:U:H2'	1.93	0.68
35:BA:381:G:O2'	35:BA:382:G:H5'	1.93	0.68
35:BA:483:A:H4'	56:BY:49:VAL:HA	1.75	0.68
35:BA:1717:G:H2'	35:BA:1718:G:H5"	1.76	0.68
35:BA:2018:G:H21	52:BU:34:LYS:NZ	1.92	0.68
35:BA:2161:C:O2'	35:BA:2162:G:H5'	1.94	0.68
35:BA:2313:C:H5'	35:BA:2313:C:C6	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:70:TRP:CD1	38:BD:70:TRP:C	2.72	0.68
40:BF:99:TYR:CE2	40:BF:101:LEU:HD13	2.28	0.68
42:BH:89:ILE:C	42:BH:89:ILE:HD12	2.19	0.68
42:BH:159:GLU:OE1	42:BH:159:GLU:HA	1.93	0.68
43:BK:21:PRO:HA	43:BK:23:VAL:H	1.59	0.68
48:BQ:29:PHE:HB2	48:BQ:105:GLU:OE2	1.94	0.68
51:BT:128:GLU:O	51:BT:129:ARG:HD3	1.94	0.68
52:BU:34:LYS:HE2	52:BU:34:LYS:HA	1.76	0.68
52:BU:83:LEU:HD12	52:BU:113:ALA:HB2	1.75	0.68
1:AA:1318:A:H1'	19:AS:37:ARG:NH2	2.09	0.68
2:AB:121:LEU:HD22	2:AB:126:GLU:HB2	1.76	0.68
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.74	0.68
35:BA:622:G:O2'	35:BA:623:G:H5'	1.93	0.68
35:BA:710:G:H2'	35:BA:711:G:H8	1.59	0.68
35:BA:2455:G:H2'	35:BA:2456:C:C6	2.29	0.68
36:BB:65:C:H41	36:BB:109:C:H2'	1.58	0.68
40:BF:126:VAL:HG23	40:BF:127:GLU:N	2.07	0.68
43:BK:100:THR:OG1	43:BK:103:GLN:HG3	1.94	0.68
49:BR:12:ARG:HH11	49:BR:12:ARG:CG	2.06	0.68
53:BV:32:THR:HG22	53:BV:33:VAL:N	2.07	0.68
1:AA:390:C:H2'	1:AA:391:G:C8	2.29	0.67
9:AI:4:TYR:CE1	9:AI:88:TYR:CD2	2.82	0.67
15:AO:18:PHE:CD1	15:AO:18:PHE:O	2.47	0.67
35:BA:67:U:H2'	35:BA:68:G:H8	1.57	0.67
35:BA:1035:U:H2'	35:BA:1036:G:C8	2.29	0.67
35:BA:2334:G:C4	50:BS:15:ARG:HD3	2.29	0.67
37:BC:104:ILE:HG23	37:BC:108:TRP:O	1.92	0.67
38:BD:161:THR:O	38:BD:196:VAL:HG23	1.95	0.67
43:BK:7:VAL:O	43:BK:7:VAL:CG1	2.40	0.67
55:BX:35:THR:O	55:BX:39:ILE:HG12	1.94	0.67
1:AA:265:G:H2'	1:AA:267:C:H5	1.60	0.67
1:AA:275:G:H5"	17:AQ:14:LYS:HB2	1.76	0.67
1:AA:708:C:H2'	1:AA:709:G:C8	2.28	0.67
1:AA:1133:G:N2	1:AA:1143:G:H1'	2.10	0.67
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.47	0.67
1:AA:1346:A:N1	1:AA:1374:A:H5"	2.08	0.67
3:AC:6:HIS:ND1	14:AN:49:HIS:HB3	2.10	0.67
5:AE:100:VAL:O	5:AE:100:VAL:HG23	1.93	0.67
8:AH:109:ILE:HG12	8:AH:110:ALA:H	1.57	0.67
10:AJ:3:LYS:HZ2	10:AJ:76:ASN:HA	1.59	0.67
13:AM:49:THR:HB	13:AM:52:GLU:HG3	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:78:ILE:CA	13:AM:81:LEU:HD23	2.23	0.67
24:AY:424:LEU:O	24:AY:427:ALA:HB3	1.94	0.67
33:B8:33:ASN:O	33:B8:34:TRP:HB3	1.94	0.67
35:BA:176:G:O2'	35:BA:177:G:H5'	1.94	0.67
35:BA:654(M):C:O2'	35:BA:654(N):G:H8	1.77	0.67
35:BA:1183:G:O2'	35:BA:1184:G:H5'	1.94	0.67
35:BA:1847:A:H3'	35:BA:1848:A:C5'	2.23	0.67
45:BN:23:LEU:HD23	45:BN:23:LEU:O	1.93	0.67
45:BN:115:ARG:HH11	45:BN:115:ARG:CG	2.02	0.67
50:BS:46:VAL:HG12	50:BS:47:THR:N	2.09	0.67
51:BT:55:ASN:H	51:BT:59:THR:CG2	2.08	0.67
1:AA:974:A:H8	1:AA:974:A:OP1	1.77	0.67
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.09	0.67
1:AA:1292:U:H2'	1:AA:1293:G:C8	2.29	0.67
1:AA:1489:G:C2'	1:AA:1490:C:H5"	2.23	0.67
3:AC:148:GLY:HA3	3:AC:172:ARG:O	1.93	0.67
4:AD:33:MET:O	4:AD:37:PRO:HG3	1.94	0.67
5:AE:144:THR:O	5:AE:148:VAL:HG23	1.94	0.67
6:AF:69:GLU:CD	6:AF:69:GLU:H	2.02	0.67
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.24	0.67
11:AK:85:ARG:HG2	11:AK:111:ASP:O	1.93	0.67
12:AL:75:HIS:CD2	12:AL:77:LEU:HD12	2.29	0.67
13:AM:78:ILE:O	13:AM:82:MET:HG2	1.94	0.67
24:AY:17:ILE:O	24:AY:85:PRO:HG2	1.93	0.67
30:B5:44:THR:HG21	49:BR:101:ALA:CB	2.21	0.67
35:BA:519:U:H5"	54:BW:25:ARG:NH2	2.10	0.67
35:BA:548:A:C2'	35:BA:549:G:H5'	2.24	0.67
35:BA:1910:G:O2'	35:BA:1911:U:H5'	1.94	0.67
35:BA:2393:A:H5"	47:BP:62:LEU:HB3	1.76	0.67
48:BQ:59:ARG:HB3	57:BZ:180:VAL:CG2	2.24	0.67
51:BT:28:VAL:HG21	51:BT:46:GLU:HG3	1.77	0.67
52:BU:56:ASP:O	52:BU:59:ARG:HB2	1.95	0.67
22:AV:17:C:C6	22:AV:17(A):U:H5	2.02	0.67
22:AV:75:C:C6	22:AV:76:A:N7	2.63	0.67
24:AY:380:LEU:O	24:AY:381:LYS:CE	2.43	0.67
35:BA:884:C:H41	35:BA:886:C:H42	1.41	0.67
35:BA:1163:G:O2'	35:BA:1164:G:H5'	1.94	0.67
35:BA:2205:C:H5'	35:BA:2206:G:OP2	1.94	0.67
37:BC:190:ILE:O	37:BC:194:ILE:HG12	1.94	0.67
40:BF:114:VAL:HG21	40:BF:202:PHE:CE1	2.28	0.67
41:BG:57:ALA:O	41:BG:68:PRO:HG2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:157:TYR:CE1	42:BH:171:LEU:HD21	2.17	0.67
51:BT:29:ARG:HB3	51:BT:85:LYS:HA	1.75	0.67
1:AA:943:U:C2'	1:AA:944:G:H5'	2.24	0.67
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.24	0.67
1:AA:1095:U:P	1:AA:1108:G:H1	2.18	0.67
1:AA:1261:A:C2'	1:AA:1262:C:H5'	2.23	0.67
1:AA:1485:U:O2'	1:AA:1486:G:H5'	1.94	0.67
3:AC:206:GLU:HG2	3:AC:207:VAL:N	2.07	0.67
24:AY:343:ASN:ND2	24:AY:345:THR:H	1.92	0.67
24:AY:411:VAL:CG1	24:AY:412:ALA:N	2.57	0.67
26:B1:86:SER:CB	26:B1:89:GLU:HB2	2.23	0.67
35:BA:191:A:H2'	35:BA:192:C:C6	2.29	0.67
35:BA:302:C:P	56:BY:73:ARG:HH12	2.17	0.67
35:BA:1120:G:H2'	35:BA:1121:C:C6	2.29	0.67
35:BA:1967:C:H2'	35:BA:1968:G:H5'	1.74	0.67
35:BA:2308:G:O6	35:BA:2310:A:H2'	1.93	0.67
35:BA:2344:U:H4'	35:BA:2345:G:OP1	1.95	0.67
35:BA:2774:C:H2'	35:BA:2775:A:O4'	1.95	0.67
35:BA:2850:A:C2	49:BR:61:HIS:CD2	2.83	0.67
39:BE:78:LEU:O	39:BE:79:ARG:HD2	1.95	0.67
48:BQ:51:ARG:O	48:BQ:54:MET:HB3	1.95	0.67
51:BT:80:SER:HB3	51:BT:81:PRO:CD	2.24	0.67
56:BY:17:SER:HB2	56:BY:71:LYS:HD2	1.75	0.67
57:BZ:130:PRO:O	57:BZ:133:ILE:HD11	1.95	0.67
1:AA:1003:G:C2	1:AA:1004:A:H1'	2.29	0.67
1:AA:1510:U:H2'	1:AA:1511:G:H8	1.58	0.67
4:AD:62:GLN:O	4:AD:66:ARG:HB2	1.94	0.67
8:AH:5:PRO:O	8:AH:8:ASP:HB3	1.93	0.67
9:AI:4:TYR:CE2	9:AI:88:TYR:CB	2.78	0.67
19:AS:44:MET:N	19:AS:44:MET:SD	2.67	0.67
22:AV:46:G:O3'	22:AV:47:U:C6	2.47	0.67
24:AY:554:PRO:HG3	24:AY:594:VAL:CG1	2.25	0.67
26:B1:3:LYS:HE3	35:BA:1364:G:C8	2.30	0.67
31:B6:15:GLU:CG	31:B6:47:THR:HG21	2.24	0.67
32:B7:24:THR:HG23	32:B7:27:GLY:H	1.60	0.67
35:BA:2039:C:H2'	35:BA:2040:C:H6	1.59	0.67
35:BA:2705:A:H2'	35:BA:2706:G:O4'	1.94	0.67
35:BA:2762:G:H5'	35:BA:2762:G:C8	2.29	0.67
47:BP:80:TYR:CE1	47:BP:111:ARG:HG2	2.30	0.67
49:BR:87:TYR:C	49:BR:89:ASP:H	2.01	0.67
52:BU:83:LEU:CD1	52:BU:83:LEU:H	2.07	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BU:99:ALA:HB2	52:BU:106:PHE:CE1	2.30	0.67
57:BZ:23:LYS:CD	57:BZ:38:TYR:HE2	2.08	0.67
57:BZ:142:SER:H	57:BZ:144:LEU:HD23	1.60	0.67
1:AA:1392:G:N2	1:AA:1502:A:H8	1.93	0.67
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.76	0.67
19:AS:9:VAL:O	19:AS:11:VAL:N	2.28	0.67
24:AY:65:ILE:CD1	24:AY:65:ILE:H	2.08	0.67
24:AY:468:ARG:C	24:AY:470:PHE:H	2.02	0.67
29:B4:22:ILE:HG22	29:B4:23:GLU:N	2.10	0.67
35:BA:218:A:H2	35:BA:235:U:H4'	1.59	0.67
35:BA:271(I):G:H3'	35:BA:271(J):C:H6	1.60	0.67
35:BA:1573:G:H2'	35:BA:1574:C:H5'	1.77	0.67
35:BA:2193:G:H5'	35:BA:2193:G:H8	1.59	0.67
35:BA:2668:G:O2'	35:BA:2669:G:H5'	1.94	0.67
50:BS:34:HIS:NE2	50:BS:54:LEU:HB3	2.10	0.67
52:BU:109:LEU:O	52:BU:112:ARG:HB2	1.94	0.67
1:AA:22:G:O2'	1:AA:913:A:N1	2.26	0.67
1:AA:183:G:H2'	1:AA:184:G:H8	1.58	0.67
5:AE:77:PRO:HD2	5:AE:142:LEU:HD13	1.77	0.67
24:AY:252:ASP:HB3	24:AY:254:LYS:HE3	1.74	0.67
24:AY:414:GLU:O	24:AY:474:ALA:HB1	1.95	0.67
24:AY:546:ILE:HG23	24:AY:590:ILE:CG1	2.17	0.67
26:B1:76:ARG:HH22	26:B1:95:LEU:HD22	1.59	0.67
32:B7:34:ARG:HH12	32:B7:39:ARG:HD2	1.60	0.67
35:BA:211:A:H2'	35:BA:212:G:C5'	2.24	0.67
35:BA:492:A:O2'	35:BA:493:G:H5'	1.94	0.67
35:BA:965:C:H5'	35:BA:2273:A:C1'	2.19	0.67
35:BA:1323:U:H3	35:BA:1331:A:H61	1.43	0.67
35:BA:1328:G:H8	35:BA:1328:G:O5'	1.77	0.67
35:BA:2202:C:H2'	38:BD:151:LYS:NZ	2.09	0.67
40:BF:3:GLU:HA	40:BF:24:LEU:CG	2.22	0.67
40:BF:170:LEU:CB	40:BF:173:VAL:HB	2.23	0.67
48:BQ:27:VAL:HG11	48:BQ:134:ARG:CD	2.25	0.67
49:BR:78:LYS:O	49:BR:83:ILE:HG12	1.95	0.67
55:BX:41:ASN:C	55:BX:43:VAL:H	2.01	0.67
1:AA:148:G:H2'	1:AA:149:A:H8	1.60	0.67
1:AA:673:G:H2'	1:AA:674:G:C8	2.29	0.67
1:AA:720:C:H3'	1:AA:721:G:H5"	1.77	0.67
1:AA:972:C:H4'	10:AJ:57:LYS:HB2	1.76	0.67
10:AJ:32:ALA:N	10:AJ:78:ASN:ND2	2.43	0.67
12:AL:117:ARG:CZ	12:AL:124:LYS:HA	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:116:THR:HG22	13:AM:117:VAL:N	2.10	0.67
24:AY:337:SER:HA	24:AY:355:LEU:HD23	1.77	0.67
24:AY:514:VAL:HG21	24:AY:593:ALA:CB	2.25	0.67
24:AY:517:LEU:HB3	24:AY:521:SER:HB2	1.75	0.67
24:AY:534:ILE:HG13	24:AY:570:GLY:O	1.94	0.67
35:BA:198:C:H42	35:BA:248:G:H1	1.40	0.67
35:BA:1541:G:H5"	35:BA:1542:A:OP1	1.95	0.67
35:BA:1656:C:H2'	35:BA:1657:C:C6	2.30	0.67
35:BA:1827:C:O2'	35:BA:1828:G:H5'	1.94	0.67
35:BA:2291:U:H2'	35:BA:2292:C:H6	1.59	0.67
39:BE:11:MET:CB	39:BE:24:THR:HA	2.24	0.67
41:BG:46:ALA:C	41:BG:51:ARG:HG3	2.20	0.67
1:AA:1057:G:H5"	3:AC:154:SER:CB	2.25	0.67
1:AA:1318:A:C2'	1:AA:1319:A:H5'	2.25	0.67
3:AC:20:SER:HB3	3:AC:40:ARG:NH2	2.11	0.67
3:AC:82:GLU:O	3:AC:86:VAL:HG13	1.95	0.67
3:AC:206:GLU:CG	3:AC:207:VAL:H	1.99	0.67
19:AS:19:VAL:HG13	19:AS:44:MET:HG2	1.77	0.67
24:AY:432:ALA:HA	24:AY:438:PHE:CZ	2.29	0.67
35:BA:1948:G:C8	35:BA:1948:G:H5'	2.30	0.67
35:BA:2132:U:C5	37:BC:6:LYS:HD2	2.30	0.67
38:BD:127:VAL:HG22	38:BD:194:GLY:HA3	1.76	0.67
39:BE:4:ILE:HD11	39:BE:28:ALA:HB1	1.77	0.67
41:BG:77:ILE:HG21	41:BG:80:PHE:CB	2.25	0.67
45:BN:60:ILE:HG22	45:BN:61:ARG:N	2.10	0.67
1:AA:103:C:H3'	1:AA:104:G:C8	2.26	0.66
1:AA:353:A:H5'	1:AA:353:A:C8	2.27	0.66
1:AA:678:U:H2'	1:AA:679:C:C6	2.30	0.66
1:AA:737:A:H2'	1:AA:738:C:C6	2.30	0.66
2:AB:148:TYR:O	2:AB:149:LEU:HD23	1.94	0.66
10:AJ:3:LYS:NZ	10:AJ:76:ASN:HA	2.10	0.66
16:AP:8:ARG:HB3	16:AP:28:ARG:HH12	1.59	0.66
24:AY:238:THR:HG23	24:AY:240:GLU:H	1.60	0.66
35:BA:272(J):C:C3'	35:BA:274:G:H5"	2.18	0.66
35:BA:591:C:H6	35:BA:591:C:H5"	1.59	0.66
35:BA:2011:U:H2'	35:BA:2012:G:H5'	1.77	0.66
35:BA:2552:U:C2	35:BA:2554:U:H5'	2.31	0.66
35:BA:2787:C:H1'	39:BE:61:ARG:CG	2.25	0.66
40:BF:185:ASP:HA	40:BF:188:ARG:CG	2.24	0.66
41:BG:46:ALA:CB	41:BG:88:ILE:HG12	2.26	0.66
52:BU:110:VAL:HG12	52:BU:114:LYS:CD	2.24	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1456:G:H2'	1:AA:1457:G:H5'	1.76	0.66
2:AB:12:GLU:O	2:AB:14:GLY:N	2.27	0.66
5:AE:101:ILE:CD1	5:AE:119:LEU:HD22	2.23	0.66
24:AY:468:ARG:HH11	24:AY:468:ARG:HG3	1.60	0.66
24:AY:512:ILE:CD1	24:AY:512:ILE:N	2.58	0.66
35:BA:2317:C:H2'	35:BA:2318:G:H5'	1.78	0.66
35:BA:2498:C:O2'	35:BA:2499:C:H5'	1.95	0.66
35:BA:2750:A:H2'	35:BA:2752:C:H41	1.60	0.66
38:BD:131:LEU:HD13	38:BD:136:ILE:HD11	1.78	0.66
40:BF:64:ILE:HD11	40:BF:65:TRP:CD2	2.30	0.66
41:BG:59:GLU:C	41:BG:61:ALA:H	2.02	0.66
43:BK:4:VAL:HG12	43:BK:5:VAL:N	2.09	0.66
47:BP:108:LYS:C	47:BP:110:TYR:H	2.02	0.66
52:BU:113:ALA:C	52:BU:115:ALA:H	2.01	0.66
1:AA:161:A:H2'	1:AA:162:A:H8	1.61	0.66
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.76	0.66
6:AF:33:TYR:HA	6:AF:71:ARG:NH2	2.11	0.66
9:AI:128:ARG:O	13:AM:125:ARG:HD2	1.95	0.66
18:AR:59:SER:H	18:AR:62:GLU:HB2	1.60	0.66
24:AY:33:LEU:HD23	24:AY:360:ALA:CB	2.25	0.66
24:AY:122:TRP:CZ3	24:AY:132:ARG:HD2	2.30	0.66
24:AY:334:THR:HG21	24:AY:370:LYS:HG2	1.77	0.66
30:B5:4:HIS:O	35:BA:2056:G:N2	2.28	0.66
30:B5:40:LYS:HE2	30:B5:46:CYS:HB2	1.76	0.66
35:BA:1242:A:C6	47:BP:8:PRO:HG2	2.29	0.66
35:BA:2850:A:H2	49:BR:61:HIS:CD2	2.13	0.66
42:BH:53:GLU:OE1	42:BH:53:GLU:HA	1.95	0.66
45:BN:46:VAL:CG1	45:BN:48:MET:HE2	2.17	0.66
55:BX:12:VAL:O	55:BX:13:LEU:HB2	1.94	0.66
1:AA:995:C:O2'	1:AA:996:A:H5'	1.93	0.66
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	0.88	0.66
18:AR:29:PHE:CD2	18:AR:29:PHE:N	2.57	0.66
24:AY:329:ARG:HD3	24:AY:374:LEU:HD11	1.76	0.66
24:AY:388:THR:CG2	24:AY:399:LEU:HD13	2.24	0.66
24:AY:518:PRO:HD2	24:AY:521:SER:OG	1.95	0.66
34:B9:31:LYS:HD3	35:BA:2478:A:OP1	1.95	0.66
35:BA:27:G:O2'	35:BA:28:A:H8	1.79	0.66
35:BA:76:C:O2'	35:BA:77:C:H5'	1.95	0.66
35:BA:902:C:H2'	35:BA:903:C:C6	2.29	0.66
35:BA:961:C:N4	35:BA:2031:A:H1'	2.10	0.66
35:BA:2196:C:O2'	35:BA:2197:U:H5'	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2726:U:H4'	46:BO:1:MET:HE1	1.77	0.66
36:BB:88:C:H2'	36:BB:89:G:C8	2.30	0.66
37:BC:225:ILE:HD12	37:BC:225:ILE:O	1.95	0.66
50:BS:89:ARG:CG	50:BS:92:TYR:HA	2.25	0.66
52:BU:107:ALA:HA	52:BU:110:VAL:CG2	2.25	0.66
1:AA:720:C:O5'	1:AA:720:C:H6	1.77	0.66
1:AA:1404:C:H1'	1:AA:1499:A:N1	2.10	0.66
2:AB:129:GLU:O	2:AB:130:ARG:HB2	1.96	0.66
2:AB:233:SER:HB2	2:AB:234:PRO:HD3	1.76	0.66
24:AY:215:LYS:O	24:AY:219:VAL:N	2.28	0.66
24:AY:331:TYR:O	24:AY:371:ALA:HB1	1.94	0.66
31:B6:9:LEU:HD22	31:B6:26:ASN:HD22	1.59	0.66
35:BA:769:G:H2'	35:BA:770:G:H8	1.61	0.66
36:BB:28:C:O2'	36:BB:29:A:H5'	1.95	0.66
38:BD:123:ALA:HB3	38:BD:131:LEU:HG	1.78	0.66
43:BK:109:LYS:HA	43:BK:112:MET:CE	2.19	0.66
43:BK:115:LEU:HD22	43:BK:126:MET:CE	2.24	0.66
53:BV:46:VAL:HG22	53:BV:47:VAL:H	1.61	0.66
1:AA:738:C:H5"	6:AF:69:GLU:HB2	1.77	0.66
1:AA:833:U:H2'	1:AA:834:C:H6	1.60	0.66
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.31	0.66
3:AC:70:VAL:CG1	3:AC:71:ALA:N	2.55	0.66
3:AC:114:PRO:HD3	3:AC:183:ASP:OD2	1.96	0.66
4:AD:96:LEU:H	4:AD:96:LEU:CD2	2.06	0.66
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HD12	1.76	0.66
24:AY:409:ILE:HG12	24:AY:656:ALA:CB	2.25	0.66
35:BA:28:A:N6	35:BA:512:G:H1'	2.10	0.66
35:BA:1053:C:C2'	35:BA:1054:A:H5"	2.26	0.66
35:BA:2552:U:O2	35:BA:2554:U:H5'	1.93	0.66
35:BA:2593:U:H2'	35:BA:2594:C:C6	2.30	0.66
38:BD:102:LYS:O	38:BD:103:ARG:HG2	1.96	0.66
1:AA:241:C:O2'	1:AA:242:C:H5'	1.95	0.66
1:AA:740:U:O2'	1:AA:741:G:H5'	1.96	0.66
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.58	0.66
12:AL:38:THR:CG2	12:AL:39:VAL:HG23	2.20	0.66
35:BA:20:C:O2'	35:BA:21:A:H5'	1.96	0.66
35:BA:545:C:H3'	35:BA:547:A:H5"	1.78	0.66
35:BA:1400:G:H2'	35:BA:1401:G:C8	2.30	0.66
35:BA:2223:G:H2'	35:BA:2224:G:H5'	1.77	0.66
37:BC:29:LEU:O	37:BC:32:GLU:HG2	1.94	0.66
39:BE:10:GLY:HA2	39:BE:192:ASN:HD21	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BO:119:PRO:O	46:BO:120:GLU:HB2	1.94	0.66
47:BP:23:PRO:HB2	47:BP:33:ARG:CD	2.26	0.66
51:BT:89:VAL:CG1	51:BT:91:ARG:HG3	2.26	0.66
1:AA:190:U:O2'	1:AA:191:G:H5'	1.96	0.66
1:AA:1423:G:H5'	46:BO:49:ARG:HH22	1.61	0.66
5:AE:6:PHE:HB3	5:AE:35:GLY:O	1.96	0.66
14:AN:12:ARG:HB2	14:AN:12:ARG:HH11	1.61	0.66
15:AO:62:GLN:HA	15:AO:65:ARG:HD3	1.78	0.66
24:AY:124:GLN:HA	24:AY:127:LYS:HD2	1.77	0.66
24:AY:530:VAL:HG22	24:AY:531:GLY:N	2.11	0.66
30:B5:3:LYS:NZ	35:BA:2613:U:C2'	2.58	0.66
35:BA:551:G:H2'	35:BA:552:G:H5'	1.76	0.66
35:BA:582:G:H2'	35:BA:583:G:C8	2.31	0.66
35:BA:1345:C:O2'	35:BA:1346:G:H5'	1.96	0.66
35:BA:2579:C:C4'	39:BE:134:ILE:HG12	2.24	0.66
35:BA:2873:A:H4'	49:BR:8:ARG:NH2	2.10	0.66
38:BD:35:LYS:HG2	38:BD:63:ARG:CA	2.25	0.66
40:BF:99:TYR:HE2	40:BF:101:LEU:CD1	2.09	0.66
40:BF:185:ASP:HA	40:BF:188:ARG:HG2	1.76	0.66
42:BH:121:ILE:CD1	42:BH:144:VAL:HG21	2.26	0.66
47:BP:89:ALA:O	47:BP:121:LYS:HD2	1.96	0.66
47:BP:95:VAL:C	47:BP:96:THR:HG23	2.21	0.66
53:BV:66:ARG:CZ	53:BV:88:ARG:HH21	2.08	0.66
1:AA:449:C:O2	16:AP:42:ARG:HD2	1.96	0.66
1:AA:1316:G:O2'	14:AN:18:VAL:HG11	1.96	0.66
5:AE:150:ARG:NH1	5:AE:150:ARG:HB2	2.11	0.66
9:AI:40:LEU:CD1	9:AI:70:LYS:HG2	2.26	0.66
24:AY:13:ARG:HB2	24:AY:79:ILE:HG12	1.78	0.66
24:AY:490:PRO:HG3	24:AY:516:PRO:CD	2.23	0.66
25:B0:5:LYS:HB2	48:BQ:80:GLU:O	1.96	0.66
27:B2:38:GLN:O	27:B2:41:ILE:HG12	1.96	0.66
35:BA:144:C:H2'	35:BA:145:G:H8	1.60	0.66
35:BA:402:A:C2'	35:BA:403:U:H5'	2.26	0.66
35:BA:1516:C:H2'	35:BA:1517:G:C5'	2.25	0.66
35:BA:1943:U:O2	35:BA:1943:U:H2'	1.96	0.66
37:BC:73:VAL:HG13	37:BC:73:VAL:O	1.96	0.66
38:BD:70:TRP:HH2	38:BD:150:LYS:HA	1.57	0.66
38:BD:176:ARG:HG2	38:BD:176:ARG:HH11	1.60	0.66
42:BH:137:ASP:HB3	42:BH:140:LYS:HB2	1.77	0.66
57:BZ:109:ALA:C	57:BZ:111:VAL:H	2.04	0.66
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:70:LEU:HD23	13:AM:70:LEU:C	2.21	0.66
24:AY:303:PRO:HA	24:AY:331:TYR:O	1.94	0.66
25:B0:51:VAL:CG2	25:B0:81:VAL:HG23	2.26	0.66
26:B1:26:ARG:HG3	26:B1:27:GLU:N	2.09	0.66
30:B5:2:ALA:N	35:BA:2014:A:HO2'	1.93	0.66
35:BA:271(B):C:O2'	35:BA:271(C):C:H5'	1.95	0.66
35:BA:2801:A:H4'	35:BA:2801(A):A:O4'	1.96	0.66
41:BG:77:ILE:HG22	41:BG:77:ILE:O	1.96	0.66
42:BH:50:VAL:CG1	42:BH:51:ARG:N	2.59	0.66
43:BK:112:MET:CE	43:BK:120:LEU:HD21	2.26	0.66
57:BZ:103:ARG:HB2	57:BZ:136:PHE:HB2	1.76	0.66
1:AA:188:C:H2'	1:AA:189:G:H8	1.61	0.65
1:AA:191:G:H1'	20:AT:105:SER:HA	1.78	0.65
1:AA:291:C:O2'	1:AA:292:G:H5'	1.95	0.65
1:AA:741:G:O2'	1:AA:742:G:H5'	1.95	0.65
1:AA:1126:U:O4'	1:AA:1281:U:H1'	1.96	0.65
2:AB:62:ALA:O	2:AB:64:ARG:N	2.28	0.65
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.77	0.65
25:B0:16:SER:HB2	35:BA:2262:U:C5	2.29	0.65
31:B6:11:LEU:HG	31:B6:26:ASN:ND2	2.10	0.65
31:B6:54:ILE:HD11	35:BA:2420:C:H5'	1.78	0.65
35:BA:1943:U:O2'	35:BA:1944:U:O5'	2.14	0.65
35:BA:2068:U:N3	35:BA:2430:A:C2	2.64	0.65
35:BA:2639:A:H2'	35:BA:2640:G:O4'	1.95	0.65
54:BW:62:HIS:O	54:BW:64:MET:HG3	1.96	0.65
1:AA:129(A):G:H8	1:AA:129(A):G:H5"	1.61	0.65
8:AH:119:LEU:HD12	8:AH:124:ALA:HB2	1.78	0.65
9:AI:88:TYR:O	9:AI:89:ASN:HB2	1.97	0.65
24:AY:25:LYS:HE3	59:AY:702:GDP:O2B	1.97	0.65
35:BA:175:G:O2'	35:BA:176:G:H5'	1.94	0.65
35:BA:491:G:H2'	35:BA:492:A:H8	1.59	0.65
35:BA:606:U:O2	35:BA:606:U:H2'	1.93	0.65
35:BA:654(S):G:H3'	35:BA:654(T):C:H5"	1.77	0.65
35:BA:1516:C:C2'	35:BA:1517:G:H5"	2.25	0.65
35:BA:2753:A:O2'	35:BA:2754:U:H5'	1.96	0.65
37:BC:74:ARG:HG2	37:BC:74:ARG:NH1	2.11	0.65
39:BE:152:LYS:HG3	39:BE:153:GLY:N	2.12	0.65
41:BG:8:LYS:HE3	41:BG:12:TYR:HE2	1.62	0.65
46:BO:52:VAL:O	46:BO:53:LYS:HG3	1.97	0.65
52:BU:104:GLN:HB3	53:BV:44:LYS:HZ1	1.61	0.65
54:BW:9:TYR:H	54:BW:102:HIS:HD2	1.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:84:GLU:O	57:BZ:85:HIS:CB	2.44	0.65
10:AJ:92:THR:CG2	10:AJ:93:GLY:H	2.08	0.65
12:AL:47:LYS:HZ3	12:AL:48:PRO:HD3	1.60	0.65
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	2.26	0.65
16:AP:21:VAL:O	16:AP:33:ILE:HB	1.97	0.65
17:AQ:63:ARG:HG2	17:AQ:64:PRO:HD2	1.78	0.65
22:AV:68:C:H2'	22:AV:69:C:H6	1.58	0.65
25:B0:47:PRO:HB3	25:B0:51:VAL:O	1.97	0.65
26:B1:86:SER:HB2	26:B1:90:ILE:CD1	2.26	0.65
30:B5:43:HIS:CD2	35:BA:2815:C:O2'	2.49	0.65
35:BA:675:A:OP1	40:BF:63:LYS:HE2	1.97	0.65
35:BA:676:A:H2	35:BA:802:A:H61	1.44	0.65
35:BA:1599:C:H2'	35:BA:1600:C:H6	1.62	0.65
35:BA:1788:C:O2'	35:BA:1789:A:H5'	1.96	0.65
35:BA:2478:A:H2'	35:BA:2479:G:O4'	1.97	0.65
41:BG:31:VAL:O	41:BG:33:ARG:HD3	1.96	0.65
41:BG:131:TYR:HB3	41:BG:159:VAL:CG1	2.25	0.65
42:BH:86:GLU:HB2	42:BH:132:ARG:HB3	1.78	0.65
43:BK:6:ALA:CB	43:BK:59:ILE:HG22	2.26	0.65
47:BP:125:VAL:O	47:BP:145:PRO:HD2	1.96	0.65
51:BT:6:LEU:HD23	51:BT:6:LEU:O	1.96	0.65
51:BT:11:GLU:C	51:BT:13:ARG:H	2.03	0.65
51:BT:29:ARG:NE	51:BT:30:VAL:HG13	2.12	0.65
51:BT:33:LYS:HE2	51:BT:43:GLN:CD	2.21	0.65
51:BT:108:ARG:HA	51:BT:111:ARG:NH1	2.12	0.65
54:BW:78:GLU:OE2	54:BW:99:ARG:HD2	1.97	0.65
56:BY:84:ARG:HG2	56:BY:84:ARG:HH11	1.59	0.65
1:AA:1030:C:H2'	1:AA:1030(A):G:H5'	1.77	0.65
1:AA:1168:A:H8	1:AA:1168:A:OP1	1.79	0.65
6:AF:71:ARG:HG3	6:AF:71:ARG:NH1	2.08	0.65
24:AY:122:TRP:C	24:AY:124:GLN:H	2.02	0.65
26:B1:76:ARG:NH2	26:B1:95:LEU:HD13	2.12	0.65
35:BA:272(G):C:H42	35:BA:363(C):G:H1	1.44	0.65
35:BA:492:A:C2'	35:BA:493:G:H5'	2.27	0.65
35:BA:1245:G:C5'	40:BF:34:TRP:HZ2	2.10	0.65
41:BG:77:ILE:HG22	41:BG:80:PHE:CA	2.27	0.65
51:BT:91:ARG:O	51:BT:117:ASP:HB2	1.95	0.65
52:BU:59:ARG:HG2	52:BU:59:ARG:HH11	1.62	0.65
53:BV:28:GLU:HB2	53:BV:31:ALA:CB	2.26	0.65
55:BX:8:ILE:HD12	55:BX:8:ILE:N	2.08	0.65
1:AA:50:A:N6	1:AA:361:G:H4'	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:192:U:H2'	1:AA:193:C:C6	2.31	0.65
13:AM:116:THR:CG2	13:AM:117:VAL:N	2.60	0.65
33:B8:32:LEU:HB3	33:B8:36:LYS:HZ3	1.60	0.65
35:BA:27:G:N2	35:BA:512:G:C2'	2.59	0.65
35:BA:799:G:H3'	35:BA:800:A:H5"	1.77	0.65
35:BA:814:C:H2'	35:BA:815:C:H6	1.61	0.65
35:BA:979:G:H3'	35:BA:980:A:H5'	1.78	0.65
35:BA:1885:A:H8	35:BA:1885:A:H5'	1.62	0.65
41:BG:60:LEU:O	41:BG:63:ILE:HD11	1.97	0.65
47:BP:114:ILE:O	47:BP:130:PHE:HA	1.96	0.65
49:BR:10:LEU:HD22	49:BR:17:ARG:CD	2.27	0.65
49:BR:21:TYR:HB3	49:BR:47:PHE:CE2	2.31	0.65
1:AA:160:A:H1'	1:AA:344:A:C5	2.31	0.65
1:AA:992:U:H1'	1:AA:993:G:C2	2.31	0.65
1:AA:1369:C:H2'	1:AA:1370:G:H8	1.60	0.65
11:AK:124:LYS:HD2	11:AK:125:PHE:CE1	2.32	0.65
22:AV:71:C:O2	22:AV:71:C:C2'	2.41	0.65
27:B2:3:LEU:HD22	27:B2:7:ARG:HH22	1.62	0.65
35:BA:518:G:H4'	54:BW:18:ARG:NH1	2.12	0.65
35:BA:641:C:H2'	35:BA:642:G:O4'	1.97	0.65
35:BA:764:A:N3	38:BD:213:ARG:NH1	2.44	0.65
35:BA:883:G:O2'	35:BA:884:C:H5'	1.96	0.65
35:BA:1053:C:H3'	35:BA:1054:A:H5"	1.77	0.65
35:BA:1485:G:C1'	35:BA:1505:C:H42	2.08	0.65
36:BB:114:C:H2'	36:BB:115:G:C8	2.32	0.65
39:BE:101:ARG:NH1	39:BE:169:ASN:HD22	1.94	0.65
40:BF:24:LEU:HB3	40:BF:25:PRO:CD	2.24	0.65
52:BU:55:ARG:HA	52:BU:58:ARG:CG	2.26	0.65
56:BY:81:LYS:HD3	56:BY:97:ARG:O	1.97	0.65
1:AA:299:G:H2'	1:AA:300:A:C8	2.31	0.65
1:AA:596:C:O5'	1:AA:596:C:H6	1.79	0.65
1:AA:689:C:P	11:AK:46:GLY:HA3	2.37	0.65
3:AC:131:ARG:NH2	3:AC:168:ALA:HB2	2.11	0.65
9:AI:33:PHE:HD2	9:AI:34:ASN:OD1	1.79	0.65
19:AS:6:LYS:HE3	19:AS:6:LYS:N	2.10	0.65
25:B0:16:SER:OG	35:BA:2261:C:H3'	1.96	0.65
29:B4:1:MET:SD	41:BG:98:ARG:HG2	2.37	0.65
35:BA:482:A:H4'	56:BY:47:LYS:HG2	1.79	0.65
35:BA:555:U:H2'	35:BA:556:G:C8	2.32	0.65
35:BA:1571:A:H8	35:BA:1571:A:O5'	1.79	0.65
35:BA:1578:U:H2'	35:BA:1578:U:O2	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1819:A:H4'	35:BA:1820:U:C5'	2.25	0.65
35:BA:2262:U:C2'	35:BA:2263:C:C5'	2.74	0.65
35:BA:2313:C:O2'	35:BA:2314:C:H5'	1.97	0.65
41:BG:135:LEU:HD12	41:BG:135:LEU:H	1.59	0.65
56:BY:14:LEU:HD11	56:BY:22:GLY:HA2	1.78	0.65
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.32	0.65
1:AA:267:C:H2'	1:AA:268:C:H6	1.62	0.65
1:AA:1269:A:N1	1:AA:1312:G:O2'	2.26	0.65
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.79	0.65
1:AA:1490:C:H6	1:AA:1490:C:C5'	2.10	0.65
11:AK:108:ILE:N	11:AK:108:ILE:HD12	2.11	0.65
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.32	0.65
23:AX:15:A:H5'	23:AX:16:A:OP1	1.97	0.65
24:AY:92:ILE:CG2	24:AY:454:MET:HE1	2.27	0.65
24:AY:507:TYR:CD1	24:AY:507:TYR:C	2.72	0.65
35:BA:58:G:H1	35:BA:69:C:H42	1.45	0.65
35:BA:654(V):A:H3'	35:BA:655:A:H2'	1.79	0.65
35:BA:664:C:O2'	35:BA:665:C:H5'	1.97	0.65
35:BA:811:U:O2'	35:BA:812:C:H5"	1.97	0.65
35:BA:1203:G:C4'	47:BP:7:ARG:HD2	2.19	0.65
35:BA:1278:A:O2'	35:BA:1279:G:H5'	1.97	0.65
35:BA:2472:G:H3'	35:BA:2475:C:H42	1.59	0.65
37:BC:93:ASP:O	37:BC:94:TYR:CD1	2.49	0.65
45:BN:57:ALA:H	45:BN:124:ALA:HA	1.62	0.65
51:BT:106:SER:HB2	51:BT:110:ILE:HG13	1.78	0.65
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.12	0.65
2:AB:223:ILE:HA	2:AB:226:ARG:HB3	1.77	0.65
6:AF:47:ARG:HH11	6:AF:47:ARG:HG2	1.60	0.65
12:AL:82:VAL:HG12	12:AL:105:TYR:HD1	1.62	0.65
18:AR:88:LYS:C	18:AR:88:LYS:HD3	2.21	0.65
24:AY:128:TYR:O	24:AY:129:LYS:CB	2.45	0.65
24:AY:316:ILE:N	24:AY:316:ILE:HD13	2.11	0.65
24:AY:610:VAL:HG12	24:AY:669:PHE:HB3	1.77	0.65
29:B4:42:PHE:N	29:B4:42:PHE:CD1	2.65	0.65
35:BA:229:A:H8	35:BA:229:A:OP1	1.80	0.65
35:BA:284:U:H2'	35:BA:285:C:C6	2.32	0.65
35:BA:1142(A):A:H4'	45:BN:25:ARG:HH22	1.61	0.65
35:BA:1380:G:H2'	35:BA:1381:G:H8	1.61	0.65
35:BA:1505:C:C5	35:BA:1506:C:H1'	2.32	0.65
35:BA:1558:A:H4'	35:BA:1559:G:O5'	1.96	0.65
35:BA:1677:A:H2'	35:BA:1678:G:C8	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2348:U:H2'	35:BA:2349:G:C5'	2.26	0.65
38:BD:206:LEU:HD23	38:BD:211:ARG:HG2	1.79	0.65
41:BG:135:LEU:CD1	41:BG:155:MET:HG2	2.27	0.65
43:BK:93:ARG:HD2	43:BK:93:ARG:C	2.22	0.65
45:BN:48:MET:CE	45:BN:48:MET:N	2.52	0.65
51:BT:106:SER:HB2	51:BT:110:ILE:CG1	2.27	0.65
52:BU:47:TYR:CA	52:BU:50:ARG:NH1	2.60	0.65
1:AA:226:G:O2'	1:AA:227:G:H5'	1.97	0.65
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.31	0.65
5:AE:98:THR:HB	5:AE:117:ASP:HB3	1.79	0.65
10:AJ:40:LEU:N	10:AJ:40:LEU:HD23	2.11	0.65
12:AL:20:LYS:H	12:AL:20:LYS:CD	2.07	0.65
12:AL:54:LYS:O	12:AL:70:ILE:HG12	1.97	0.65
19:AS:9:VAL:O	19:AS:9:VAL:HG12	1.96	0.65
35:BA:1258:C:O4'	40:BF:84:VAL:HG21	1.96	0.65
35:BA:1473:G:H2'	35:BA:1474:C:O4'	1.97	0.65
35:BA:1578:U:C2'	35:BA:1579:A:H5"	2.26	0.65
35:BA:2645:G:H4'	35:BA:2732:G:HO2'	1.61	0.65
37:BC:28:ARG:NH1	37:BC:183:PRO:HB2	2.11	0.65
46:BO:60:ALA:HA	46:BO:87:ILE:HD11	1.79	0.65
51:BT:28:VAL:HG22	51:BT:47:GLY:H	1.62	0.65
56:BY:105:ALA:O	56:BY:106:LEU:HB2	1.97	0.65
57:BZ:151:HIS:HA	57:BZ:171:ILE:CG2	2.21	0.65
1:AA:218:C:H5'	1:AA:470:C:N4	2.12	0.64
1:AA:264:U:O2'	17:AQ:64:PRO:HB2	1.97	0.64
1:AA:644:G:C5	1:AA:645:C:C5	2.85	0.64
2:AB:129:GLU:O	2:AB:130:ARG:CB	2.45	0.64
3:AC:123:GLN:HB3	3:AC:128:PHE:CD2	2.31	0.64
5:AE:51:VAL:O	5:AE:55:VAL:HG23	1.97	0.64
7:AG:80:VAL:HG23	7:AG:81:GLY:N	2.12	0.64
10:AJ:47:PHE:CZ	14:AN:37:PHE:HE2	2.16	0.64
24:AY:486:THR:HG21	24:AY:602:LEU:HD11	1.78	0.64
26:B1:68:PRO:C	26:B1:70:VAL:H	2.05	0.64
27:B2:13:ALA:HA	27:B2:16:LEU:CD1	2.27	0.64
31:B6:5:VAL:HG22	35:BA:2283:C:OP1	1.97	0.64
35:BA:566:U:O2'	35:BA:567:A:H5'	1.96	0.64
35:BA:637:A:H2'	47:BP:117:GLU:OE2	1.97	0.64
35:BA:651:G:C2'	35:BA:652:C:H5'	2.27	0.64
35:BA:1539:G:N3	35:BA:1540:U:H1'	2.11	0.64
35:BA:2230:G:H2'	35:BA:2231:C:C6	2.31	0.64
35:BA:2749:A:N1	35:BA:2750:A:N6	2.44	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2778:A:H5'	35:BA:2779:U:OP2	1.97	0.64
37:BC:111:PHE:HE1	37:BC:137:LEU:HD13	1.60	0.64
37:BC:191:ARG:HH11	37:BC:191:ARG:CG	2.04	0.64
43:BK:59:ILE:HG12	43:BK:60:TYR:N	2.10	0.64
46:BO:4:PRO:O	46:BO:5:GLN:CB	2.43	0.64
47:BP:23:PRO:HB2	47:BP:33:ARG:CG	2.27	0.64
50:BS:56:LEU:HD23	50:BS:56:LEU:O	1.96	0.64
56:BY:95:LYS:HD3	56:BY:100:ALA:HB1	1.78	0.64
1:AA:332:G:H2'	1:AA:333:G:H8	1.62	0.64
1:AA:499:A:H4'	1:AA:500:G:OP1	1.97	0.64
1:AA:980:C:C5	1:AA:981:U:C2	2.78	0.64
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.32	0.64
1:AA:1424:C:H2'	1:AA:1425:U:H6	1.62	0.64
3:AC:150:LYS:HB2	3:AC:169:ALA:HB1	1.78	0.64
10:AJ:16:LEU:HD11	10:AJ:70:ARG:HB2	1.79	0.64
22:AV:56:C:N4	35:BA:2169:A:C2	2.65	0.64
22:AV:75:C:C5	22:AV:76:A:N7	2.64	0.64
29:B4:31:ILE:HG23	29:B4:33:VAL:HG23	1.80	0.64
35:BA:36:G:H2'	35:BA:37:C:H6	1.60	0.64
35:BA:947:G:H2'	35:BA:948:G:H8	1.61	0.64
36:BB:7:G:C3'	36:BB:8:U:H5"	2.27	0.64
38:BD:183:ARG:HD2	38:BD:270:ILE:HG23	1.78	0.64
39:BE:36:ARG:HH21	39:BE:88:GLY:CA	2.10	0.64
39:BE:52:LEU:O	39:BE:74:PRO:HA	1.97	0.64
43:BK:77:LEU:HD23	43:BK:77:LEU:N	2.08	0.64
47:BP:101:VAL:HB	47:BP:107:LYS:HA	1.78	0.64
52:BU:74:LEU:CD1	52:BU:74:LEU:C	2.70	0.64
53:BV:38:LEU:O	53:BV:39:LEU:HD13	1.96	0.64
55:BX:7:VAL:HG12	55:BX:8:ILE:CD1	2.26	0.64
1:AA:309:G:H1'	1:AA:608:A:C2	2.32	0.64
2:AB:48:MET:HA	2:AB:51:LEU:HD12	1.80	0.64
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.79	0.64
12:AL:126:LYS:HE2	12:AL:128:ALA:N	2.12	0.64
24:AY:5:VAL:HG13	24:AY:6:GLU:N	2.12	0.64
35:BA:139:G:C6	35:BA:140:G:H2'	2.32	0.64
35:BA:359:A:H2'	35:BA:360:G:O4'	1.98	0.64
35:BA:613:G:H5'	35:BA:613:G:C8	2.30	0.64
35:BA:1541:G:H4'	35:BA:1542:A:C5'	2.26	0.64
35:BA:2097:C:H2'	35:BA:2098:U:C6	2.32	0.64
35:BA:2186:G:C3'	35:BA:2187:G:H5"	2.27	0.64
38:BD:77:ALA:O	38:BD:116:GLN:HG3	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:20:ALA:HB1	42:BH:21:PRO:CD	2.27	0.64
45:BN:67:LEU:O	45:BN:68:GLU:HB2	1.97	0.64
48:BQ:30:GLY:HA2	48:BQ:107:ALA:HB2	1.78	0.64
57:BZ:29:TYR:HB3	57:BZ:34:ASN:HB2	1.78	0.64
1:AA:384:G:H2'	1:AA:385:C:C6	2.32	0.64
1:AA:525:C:OP1	12:AL:91:LYS:HE2	1.98	0.64
1:AA:1090:U:C4'	1:AA:1170:A:H2	2.11	0.64
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.33	0.64
1:AA:1415:G:H2'	1:AA:1416:G:H8	1.62	0.64
2:AB:43:ASP:OD2	2:AB:46:LYS:HB2	1.98	0.64
2:AB:220:ASP:O	2:AB:223:ILE:HG13	1.97	0.64
9:AI:47:LEU:C	9:AI:49:PRO:HD2	2.22	0.64
10:AJ:4:ILE:HB	10:AJ:74:ILE:HD11	1.80	0.64
20:AT:93:GLU:C	20:AT:95:ALA:H	2.04	0.64
25:B0:42:GLY:HA3	35:BA:2331:G:O4'	1.96	0.64
30:B5:42:PRO:HB2	30:B5:43:HIS:CD2	2.32	0.64
35:BA:756:C:C2'	35:BA:757:U:H5'	2.27	0.64
35:BA:2534:A:H2'	35:BA:2535:G:O5'	1.98	0.64
36:BB:68:C:H2'	36:BB:69:G:H8	1.61	0.64
45:BN:123:TYR:CD1	45:BN:123:TYR:N	2.66	0.64
50:BS:35:ILE:HD11	50:BS:99:LYS:HE3	1.77	0.64
51:BT:51:ARG:O	51:BT:61:PHE:HA	1.96	0.64
1:AA:757:U:O2'	1:AA:879:C:H1'	1.98	0.64
3:AC:94:LEU:O	3:AC:95:THR:HG23	1.98	0.64
5:AE:72:GLN:O	5:AE:73:ASN:HB2	1.97	0.64
7:AG:7:ALA:O	7:AG:8:GLU:HB2	1.98	0.64
12:AL:6:THR:HG23	12:AL:9:GLN:HE21	1.62	0.64
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.62	0.64
22:AV:47:U:H3'	22:AV:48:C:H5'	1.80	0.64
24:AY:137:ASN:ND2	24:AY:263:ALA:H	1.95	0.64
24:AY:496:LYS:CE	24:AY:498:ILE:HD13	2.23	0.64
30:B5:35:GLU:O	30:B5:36:CYS:HB3	1.96	0.64
31:B6:28:ARG:O	31:B6:32:ASN:HB2	1.97	0.64
35:BA:1097:U:C2'	35:BA:1098:A:H5'	2.28	0.64
35:BA:1514:U:H2'	35:BA:1515:G:C8	2.33	0.64
35:BA:1689:A:H62	35:BA:1698:A:H2	1.43	0.64
35:BA:2039:C:H2'	35:BA:2040:C:C6	2.33	0.64
36:BB:115:G:H2'	36:BB:116:G:C8	2.31	0.64
39:BE:11:MET:HB3	39:BE:24:THR:HA	1.78	0.64
43:BK:13:PRO:HA	43:BK:52:ILE:HA	1.80	0.64
48:BQ:34:LEU:HB2	48:BQ:118:LEU:HD22	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:1:MET:N	51:BT:7:ILE:HD11	2.12	0.64
51:BT:29:ARG:HD3	51:BT:86:ILE:HG22	1.78	0.64
53:BV:2:PHE:O	53:BV:3:ALA:CB	2.44	0.64
55:BX:70:LEU:HD23	55:BX:71:GLY:N	2.11	0.64
57:BZ:20:ARG:NH1	57:BZ:20:ARG:HB2	2.12	0.64
1:AA:189:G:H2'	1:AA:189(A):C:C6	2.33	0.64
1:AA:723:U:H5'	1:AA:724:G:OP2	1.98	0.64
2:AB:155:LEU:HD13	2:AB:155:LEU:O	1.96	0.64
2:AB:223:ILE:C	2:AB:225:ALA:H	2.05	0.64
4:AD:64:LEU:HB2	4:AD:198:VAL:HG11	1.77	0.64
7:AG:27:ILE:HD11	7:AG:40:ALA:HA	1.80	0.64
9:AI:3:GLN:NE2	9:AI:20:ARG:HH21	1.94	0.64
14:AN:44:LEU:HD12	14:AN:44:LEU:O	1.97	0.64
16:AP:4:ILE:HG13	16:AP:64:ALA:HB1	1.79	0.64
22:AV:61:C:O2'	22:AV:62:C:H5'	1.97	0.64
24:AY:8:ASP:O	24:AY:9:LEU:HB3	1.98	0.64
25:B0:51:VAL:HG21	25:B0:79:VAL:O	1.98	0.64
27:B2:3:LEU:HD22	27:B2:7:ARG:CZ	2.28	0.64
27:B2:67:LYS:O	27:B2:70:GLN:HG3	1.98	0.64
35:BA:723:G:H2'	35:BA:724:U:C6	2.32	0.64
35:BA:1034:G:H8	35:BA:1034:G:OP1	1.79	0.64
35:BA:1485:G:N3	35:BA:1505:C:N3	2.45	0.64
35:BA:1887:C:C3'	35:BA:1888:G:H5"	2.27	0.64
35:BA:2713:A:H3'	35:BA:2714:G:C5'	2.28	0.64
42:BH:89:ILE:O	42:BH:89:ILE:HG13	1.97	0.64
45:BN:102:ALA:O	45:BN:106:MET:CE	2.46	0.64
46:BO:69:ILE:HD12	46:BO:69:ILE:N	2.13	0.64
46:BO:87:ILE:HD13	46:BO:87:ILE:N	2.12	0.64
47:BP:40:SER:C	47:BP:41:ARG:HD2	2.22	0.64
53:BV:47:VAL:O	53:BV:47:VAL:HG23	1.96	0.64
1:AA:203:U:H5"	1:AA:204:U:OP1	1.97	0.64
1:AA:1239:A:H2'	1:AA:1298:C:N4	2.13	0.64
1:AA:1298:C:O2	1:AA:1298:C:H2'	1.96	0.64
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.61	0.64
1:AA:1342:C:O2'	1:AA:1343:G:H5'	1.98	0.64
3:AC:90:GLU:C	3:AC:93:LYS:HB3	2.22	0.64
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	2.13	0.64
18:AR:74:ARG:HD3	18:AR:81:PHE:CD2	2.33	0.64
20:AT:54:LYS:HA	20:AT:57:ARG:NH2	2.13	0.64
24:AY:105:ILE:N	24:AY:105:ILE:HD12	2.13	0.64
30:B5:48:GLU:O	30:B5:49:CYS:CB	2.43	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:203:C:C3'	35:BA:204:A:H5"	2.26	0.64
35:BA:1947:C:H2'	35:BA:1948:G:H5"	1.79	0.64
35:BA:2170:A:H5"	37:BC:135:ARG:HH21	1.61	0.64
39:BE:8:LYS:HG2	39:BE:192:ASN:HA	1.79	0.64
43:BK:30:HIS:CE1	43:BK:59:ILE:HB	2.33	0.64
46:BO:10:VAL:HG21	46:BO:16:ALA:O	1.98	0.64
51:BT:28:VAL:HG13	51:BT:46:GLU:CA	2.26	0.64
1:AA:630:G:H2'	1:AA:631:G:C5'	2.27	0.64
3:AC:70:VAL:CG1	3:AC:71:ALA:H	2.09	0.64
3:AC:131:ARG:HH21	3:AC:168:ALA:HB2	1.63	0.64
11:AK:48:ILE:HG22	11:AK:49:GLY:N	2.13	0.64
16:AP:53:VAL:CG2	16:AP:54:GLU:H	2.10	0.64
24:AY:614:GLU:HA	24:AY:617:MET:HB2	1.78	0.64
27:B2:50:ILE:C	27:B2:52:ASP:H	2.06	0.64
28:B3:56:VAL:HG12	28:B3:57:GLU:N	2.13	0.64
35:BA:360:G:O2'	35:BA:361:G:H5'	1.98	0.64
35:BA:514:A:H2'	35:BA:515:A:H8	1.63	0.64
35:BA:1767:C:H2'	35:BA:1768:U:O4'	1.98	0.64
35:BA:2111:C:C2	35:BA:2147:G:N2	2.66	0.64
35:BA:2748:A:H2	42:BH:63:SER:HG	1.44	0.64
38:BD:9:TYR:C	38:BD:10:THR:CG2	2.64	0.64
41:BG:16:ARG:O	41:BG:20:ILE:HG13	1.97	0.64
45:BN:135:PRO:O	45:BN:136:GLU:C	2.40	0.64
47:BP:71:VAL:O	47:BP:71:VAL:HG22	1.98	0.64
51:BT:66:VAL:HA	51:BT:71:GLY:HA2	1.80	0.64
52:BU:107:ALA:HA	52:BU:110:VAL:HG23	1.80	0.64
53:BV:1:MET:HA	53:BV:1:MET:HE2	1.79	0.64
1:AA:1305:G:OP1	21:AU:2:GLY:N	2.31	0.64
1:AA:1363(A):A:H4'	1:AA:1364:U:H5"	1.80	0.64
4:AD:194:LEU:HB3	4:AD:196:LEU:CD1	2.28	0.64
4:AD:203:VAL:O	4:AD:206:PHE:HB3	1.97	0.64
7:AG:153:HIS:CE1	11:AK:58:PRO:HD2	2.33	0.64
10:AJ:32:ALA:HB3	10:AJ:78:ASN:HD21	1.63	0.64
24:AY:162:VAL:HG21	24:AY:255:ILE:HD11	1.79	0.64
24:AY:343:ASN:HD22	24:AY:344:THR:N	1.94	0.64
29:B4:4:GLY:O	29:B4:5:ILE:HG23	1.98	0.64
35:BA:271(F):C:O2'	35:BA:271(G):C:H5'	1.98	0.64
35:BA:1717:G:C2'	35:BA:1718:G:H5"	2.28	0.64
35:BA:2076:U:H5'	35:BA:2238:G:N2	2.12	0.64
35:BA:2150:U:H2'	35:BA:2151:G:C8	2.33	0.64
35:BA:2345:G:O2'	35:BA:2381:C:H2'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:21:G:H2'	36:BB:21:G:N3	2.11	0.64
40:BF:132:VAL:O	40:BF:133:ASN:HB2	1.97	0.64
42:BH:124:GLU:HB2	42:BH:132:ARG:HG3	1.79	0.64
43:BK:8:VAL:HG12	43:BK:10:LEU:HG	1.80	0.64
43:BK:42:ASN:O	43:BK:46:ALA:HB2	1.98	0.64
45:BN:30:ILE:HG22	45:BN:34:LEU:CD2	2.28	0.64
48:BQ:56:ARG:HH21	57:BZ:180:VAL:HG21	1.63	0.64
50:BS:30:ARG:NH2	50:BS:62:LYS:HD2	2.11	0.64
51:BT:42:ILE:HG13	51:BT:42:ILE:O	1.98	0.64
51:BT:99:LEU:CB	51:BT:101:PHE:HE1	2.11	0.64
1:AA:192:U:O4'	20:AT:103:GLY:HA2	1.98	0.64
10:AJ:55:LYS:H	10:AJ:55:LYS:HE3	1.62	0.64
11:AK:21:ILE:N	11:AK:21:ILE:HD12	2.13	0.64
24:AY:139:MET:HE2	24:AY:167:PRO:HG3	1.80	0.64
24:AY:553:GLY:HA2	24:AY:560:VAL:CG2	2.28	0.64
35:BA:84:A:H5"	56:BY:9:LYS:NZ	2.12	0.64
35:BA:933:A:H2'	35:BA:934:G:O4'	1.98	0.64
35:BA:1849:G:H2'	35:BA:1849:G:N3	2.12	0.64
35:BA:1948:G:H5'	35:BA:1948:G:H8	1.63	0.64
35:BA:2219:G:H8	35:BA:2219:G:O5'	1.80	0.64
38:BD:139:GLY:H	38:BD:165:ILE:HB	1.62	0.64
47:BP:24:GLY:HA2	47:BP:33:ARG:NH1	2.13	0.64
47:BP:48:PRO:O	47:BP:49:ARG:C	2.39	0.64
50:BS:77:ALA:HB1	50:BS:82:ILE:HB	1.80	0.64
51:BT:126:ALA:C	51:BT:128:GLU:H	2.04	0.64
53:BV:16:PRO:O	53:BV:96:ILE:O	2.16	0.64
55:BX:10:ALA:O	55:BX:28:PHE:HB2	1.97	0.64
1:AA:261:U:O2	1:AA:263:A:C8	2.51	0.63
1:AA:1377:A:H2'	7:AG:7:ALA:HB2	1.80	0.63
2:AB:82:ARG:O	2:AB:86:GLU:HG3	1.98	0.63
7:AG:78:ARG:NH1	7:AG:79:ARG:HE	1.92	0.63
11:AK:103:LEU:CD2	11:AK:103:LEU:N	2.60	0.63
22:AV:3:C:H42	22:AV:70:G:H1	1.45	0.63
24:AY:10:LYS:HE3	24:AY:284:LEU:HD23	1.80	0.63
27:B2:32:LEU:HG	27:B2:53:LEU:HD13	1.79	0.63
35:BA:253:C:H2'	35:BA:254:G:O4'	1.99	0.63
35:BA:904:C:H5'	35:BA:904:C:H6	1.64	0.63
35:BA:1052:C:H3'	35:BA:1052:C:H6	1.63	0.63
35:BA:2137:C:O2'	35:BA:2138:C:H5'	1.97	0.63
35:BA:2539:C:O2	35:BA:2539:C:H2'	1.98	0.63
35:BA:2672:G:C2'	35:BA:2673:G:H5"	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:107:THR:O	39:BE:107:THR:HG22	1.98	0.63
41:BG:36:LYS:HA	41:BG:99:MET:SD	2.38	0.63
41:BG:82:LEU:HD21	41:BG:87:PRO:HG3	1.80	0.63
43:BK:37:PHE:C	43:BK:39:LYS:H	2.06	0.63
47:BP:16:ARG:CZ	47:BP:18:ARG:HB2	2.29	0.63
47:BP:64:LYS:O	47:BP:64:LYS:HD3	1.98	0.63
47:BP:147:LEU:O	47:BP:148:LEU:HB2	1.98	0.63
48:BQ:110:THR:HG23	48:BQ:113:GLN:CG	2.22	0.63
51:BT:129:ARG:O	51:BT:129:ARG:CG	2.47	0.63
57:BZ:151:HIS:CB	57:BZ:170:THR:HA	2.28	0.63
1:AA:300:A:H2'	1:AA:301:G:O4'	1.97	0.63
1:AA:356:A:H2'	1:AA:357:G:C8	2.31	0.63
2:AB:12:GLU:HA	2:AB:16:HIS:ND1	2.13	0.63
4:AD:8:VAL:HB	4:AD:21:LEU:HD12	1.80	0.63
10:AJ:90:LEU:H	10:AJ:91:PRO:HD3	1.63	0.63
12:AL:34:ARG:O	12:AL:61:THR:HG23	1.97	0.63
12:AL:70:ILE:HD12	12:AL:75:HIS:CD2	2.33	0.63
16:AP:53:VAL:CG2	16:AP:54:GLU:N	2.61	0.63
26:B1:90:ILE:HG22	26:B1:94:LEU:CD1	2.28	0.63
35:BA:1435:G:H5'	35:BA:1436:G:OP2	1.98	0.63
39:BE:49:LEU:N	39:BE:49:LEU:CD2	2.61	0.63
41:BG:91:ARG:C	41:BG:91:ARG:CD	2.71	0.63
41:BG:133:LEU:C	41:BG:133:LEU:HD12	2.23	0.63
42:BH:170:ARG:O	42:BH:171:LEU:CB	2.44	0.63
45:BN:54:VAL:HB	45:BN:122:VAL:HG22	1.80	0.63
45:BN:119:ARG:HH11	45:BN:119:ARG:HG3	1.64	0.63
46:BO:98:VAL:CG2	46:BO:118:ALA:HA	2.29	0.63
47:BP:23:PRO:O	47:BP:33:ARG:HD2	1.98	0.63
47:BP:27:HIS:HD2	47:BP:28:GLY:H	1.46	0.63
51:BT:7:ILE:O	51:BT:10:VAL:HB	1.98	0.63
51:BT:107:ASP:CG	51:BT:108:ARG:N	2.54	0.63
56:BY:84:ARG:HD2	56:BY:97:ARG:HD2	1.78	0.63
1:AA:1005:A:OP1	1:AA:1006:C:N3	2.32	0.63
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.34	0.63
2:AB:8:LYS:O	2:AB:11:LEU:N	2.31	0.63
5:AE:145:LYS:HA	8:AH:107:LEU:HD21	1.80	0.63
11:AK:29:ILE:HB	11:AK:44:SER:CB	2.28	0.63
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.33	0.63
24:AY:228:MET:HE3	24:AY:229:LEU:HD21	1.80	0.63
25:B0:43:THR:HG23	25:B0:43:THR:O	1.99	0.63
26:B1:67:ILE:N	26:B1:68:PRO:HD2	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:21:VAL:O	29:B4:21:VAL:HG12	1.97	0.63
31:B6:18:ARG:HG3	31:B6:19:ARG:H	1.63	0.63
35:BA:1996:C:H4'	35:BA:1997:G:H5'	1.81	0.63
35:BA:2345:G:C5'	35:BA:2346:A:H5'	2.28	0.63
35:BA:2462:U:H2'	35:BA:2463:C:H6	1.62	0.63
38:BD:9:TYR:HD1	38:BD:10:THR:HG22	1.60	0.63
40:BF:125:LEU:HD23	40:BF:125:LEU:H	1.62	0.63
41:BG:27:ASN:HB3	41:BG:30:GLU:HB2	1.80	0.63
41:BG:146:TYR:O	41:BG:149:VAL:HG12	1.98	0.63
47:BP:112:LEU:O	47:BP:128:HIS:HB2	1.99	0.63
54:BW:20:VAL:CG2	54:BW:21:VAL:H	2.11	0.63
1:AA:975:A:H5'	1:AA:975:A:H8	1.63	0.63
1:AA:1348:U:H2'	1:AA:1349:A:H8	1.64	0.63
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.62	0.63
22:AV:75:C:C6	22:AV:76:A:H8	2.14	0.63
24:AY:624:LEU:HD11	24:AY:655:TYR:OH	1.98	0.63
35:BA:319:C:O2'	35:BA:320:A:H5'	1.99	0.63
35:BA:528:A:C2	35:BA:2043:C:C5'	2.81	0.63
35:BA:1145:C:H2'	35:BA:1146:C:C6	2.34	0.63
35:BA:1237:A:O2'	35:BA:1238:G:O4'	2.16	0.63
35:BA:1835:G:H1'	35:BA:1931:U:O2	1.99	0.63
35:BA:2186:G:H2'	35:BA:2187:G:H5"	1.81	0.63
35:BA:2228:G:H2'	35:BA:2229:C:H6	1.62	0.63
35:BA:2769:C:O2'	35:BA:2770:G:H5'	1.99	0.63
38:BD:43:ARG:HB3	38:BD:54:ARG:CB	2.28	0.63
38:BD:155:LEU:HD23	38:BD:177:LEU:HD22	1.80	0.63
41:BG:139:LEU:HA	41:BG:144:ILE:HD13	1.81	0.63
42:BH:44:VAL:O	42:BH:46:GLU:HG2	1.96	0.63
43:BK:74:ALA:HB2	43:BK:111:LYS:HE2	1.80	0.63
45:BN:46:VAL:O	45:BN:47:ALA:CB	2.46	0.63
51:BT:42:ILE:HD13	51:BT:83:ILE:HD11	1.80	0.63
51:BT:45:PHE:CE2	51:BT:74:ARG:HB2	2.32	0.63
4:AD:13:ARG:O	4:AD:16:GLY:N	2.30	0.63
6:AF:87:ARG:HH11	6:AF:87:ARG:CG	2.11	0.63
7:AG:27:ILE:O	7:AG:27:ILE:HG23	1.97	0.63
7:AG:121:ALA:O	7:AG:125:MET:HG3	1.98	0.63
24:AY:170:ARG:O	24:AY:171:GLU:HG2	1.98	0.63
24:AY:544:LYS:O	24:AY:548:GLU:HB2	1.99	0.63
29:B4:27:THR:O	29:B4:28:LYS:CB	2.47	0.63
30:B5:34:PRO:O	30:B5:35:GLU:CB	2.44	0.63
30:B5:58:LEU:O	30:B5:58:LEU:HD22	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:8:LYS:NZ	35:BA:2285:C:H5	1.90	0.63
35:BA:221:A:H61	35:BA:265:A:H8	1.46	0.63
35:BA:580:C:H2'	35:BA:581:C:H6	1.63	0.63
35:BA:1203:G:H3'	35:BA:1204:A:C5'	2.29	0.63
35:BA:2583:G:H2'	35:BA:2584:U:O2	1.98	0.63
35:BA:2810:A:H2'	39:BE:61:ARG:NH2	2.13	0.63
35:BA:2891:G:H4'	35:BA:2892:A:OP1	1.96	0.63
37:BC:176:VAL:HG21	37:BC:190:ILE:HD11	1.81	0.63
38:BD:26:LYS:HE2	38:BD:26:LYS:N	2.14	0.63
47:BP:38:GLN:HG3	47:BP:39:LYS:N	2.12	0.63
48:BQ:119:ARG:HG2	48:BQ:119:ARG:HH11	1.64	0.63
52:BU:37:GLU:O	52:BU:40:PHE:HB2	1.98	0.63
52:BU:90:VAL:HG21	53:BV:47:VAL:CG2	2.25	0.63
1:AA:961:U:OP2	1:AA:1223:C:H4'	1.99	0.63
20:AT:75:ASN:O	20:AT:76:ALA:C	2.38	0.63
35:BA:402:A:O2'	35:BA:403:U:H5'	1.98	0.63
35:BA:821:A:H2'	35:BA:946:G:H5"	1.81	0.63
35:BA:1775:U:H2'	35:BA:1776:G:C5'	2.29	0.63
35:BA:2008:C:H2'	35:BA:2009:G:C8	2.32	0.63
35:BA:2750:A:H2'	35:BA:2752:C:N4	2.14	0.63
35:BA:2790:A:N3	35:BA:2790:A:H2'	2.14	0.63
45:BN:61:ARG:HG3	45:BN:61:ARG:NH1	2.08	0.63
45:BN:67:LEU:HD23	45:BN:87:LEU:HB3	1.80	0.63
45:BN:89:LYS:O	45:BN:93:THR:HG22	1.99	0.63
47:BP:80:TYR:CD1	47:BP:111:ARG:HB3	2.34	0.63
53:BV:2:PHE:CE1	53:BV:13:ARG:NH1	2.66	0.63
53:BV:49:THR:O	53:BV:50:PRO:C	2.40	0.63
54:BW:5:ALA:O	54:BW:6:ILE:HB	1.97	0.63
1:AA:1015:A:H2'	1:AA:1016:A:O4'	1.99	0.63
1:AA:1080:A:H5"	5:AE:16:THR:HG21	1.79	0.63
1:AA:1226:C:H41	13:AM:104:ARG:HD2	1.62	0.63
2:AB:233:SER:OG	2:AB:234:PRO:HD2	1.98	0.63
4:AD:30:LYS:C	4:AD:32:ALA:N	2.49	0.63
17:AQ:45:HIS:HB2	17:AQ:65:ILE:HD13	1.79	0.63
19:AS:31:ILE:HG23	19:AS:31:ILE:O	1.97	0.63
24:AY:314:PHE:HD1	24:AY:315:LYS:HB2	1.63	0.63
27:B2:25:VAL:C	27:B2:27:GLU:N	2.56	0.63
35:BA:272(J):C:H5'	35:BA:274:G:OP2	1.98	0.63
35:BA:892:G:H2'	35:BA:893:C:C6	2.33	0.63
35:BA:1542:A:H8	35:BA:1542:A:H3'	1.63	0.63
39:BE:119:ARG:HD2	39:BE:120:TRP:NE1	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:42:ARG:HG3	42:BH:42:ARG:NH1	2.13	0.63
43:BK:93:ARG:HB2	57:BZ:112:ARG:NH2	2.10	0.63
50:BS:85:VAL:HG23	50:BS:106:ARG:CG	2.28	0.63
51:BT:30:VAL:HG21	51:BT:84:GLN:H	1.63	0.63
52:BU:51:LYS:HA	52:BU:54:LYS:HE2	1.81	0.63
55:BX:36:LYS:HB3	55:BX:56:THR:HG21	1.80	0.63
57:BZ:89:PHE:HE2	57:BZ:96:VAL:HG21	1.62	0.63
1:AA:1329:A:P	13:AM:28:ALA:HB3	2.39	0.63
4:AD:122:ARG:NH1	4:AD:134:ASP:HB2	2.13	0.63
12:AL:45:PRO:HG3	12:AL:53:ARG:HD3	1.81	0.63
33:B8:31:HIS:HE1	35:BA:2392:A:OP2	1.81	0.63
35:BA:212:G:C8	35:BA:212:G:C5'	2.65	0.63
35:BA:1225:G:H2'	35:BA:1226:A:C8	2.34	0.63
35:BA:2142:C:C2'	35:BA:2143:C:H5'	2.29	0.63
35:BA:2244:U:O2	35:BA:2434:A:H2'	1.99	0.63
35:BA:2577:A:C5'	35:BA:2578:G:H5'	2.26	0.63
36:BB:82:G:O2'	36:BB:83:G:H5'	1.99	0.63
39:BE:25:VAL:CG1	39:BE:26:ILE:N	2.61	0.63
41:BG:131:TYR:HE2	41:BG:133:LEU:HD23	1.63	0.63
43:BK:121:GLU:CD	43:BK:121:GLU:N	2.57	0.63
46:BO:106:LEU:O	46:BO:107:ARG:C	2.41	0.63
52:BU:70:ARG:NH2	52:BU:75:ASN:HB2	2.14	0.63
56:BY:43:ASN:ND2	56:BY:64:GLU:HG3	2.14	0.63
1:AA:1409:C:H2'	1:AA:1410:G:C8	2.33	0.63
6:AF:91:VAL:HG12	6:AF:92:LYS:O	1.98	0.63
24:AY:25:LYS:HB2	59:AY:702:GDP:O2B	1.98	0.63
24:AY:132:ARG:O	24:AY:132:ARG:HG2	1.99	0.63
24:AY:415:PRO:CB	24:AY:421:GLN:HA	2.28	0.63
28:B3:40:THR:HG23	28:B3:43:ILE:HG13	1.80	0.63
29:B4:6:HIS:HB3	29:B4:7:PRO:CD	2.29	0.63
34:B9:29:ASN:HD21	34:B9:32:HIS:CG	2.17	0.63
35:BA:6:A:O2'	45:BN:130:HIS:HB2	1.99	0.63
35:BA:1012:U:H3	45:BN:25:ARG:HE	1.46	0.63
35:BA:1058:G:N2	35:BA:1081:U:H1'	2.14	0.63
35:BA:2472:G:H3'	35:BA:2475:C:N4	2.14	0.63
35:BA:2832:U:H1'	35:BA:2834:G:N3	2.14	0.63
41:BG:60:LEU:C	41:BG:63:ILE:HD11	2.24	0.63
51:BT:42:ILE:HD13	51:BT:83:ILE:HD13	1.81	0.63
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.17	0.62
2:AB:236:TYR:O	2:AB:237:ALA:C	2.41	0.62
4:AD:153:ARG:NH1	4:AD:153:ARG:HG2	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:19:LEU:O	6:AF:19:LEU:HD23	1.99	0.62
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.99	0.62
35:BA:16:G:O2'	35:BA:17:G:H5'	1.99	0.62
35:BA:71:A:H4'	35:BA:72:U:H5"	1.81	0.62
35:BA:580:C:H2'	35:BA:581:C:C6	2.33	0.62
35:BA:603:A:H4'	35:BA:604:G:O5'	1.99	0.62
35:BA:991:C:H6	35:BA:991:C:H5'	1.63	0.62
35:BA:1081:U:O3'	43:BK:117:THR:HG22	1.99	0.62
35:BA:1529:G:C2	35:BA:1541:G:N2	2.67	0.62
35:BA:1782:C:H2'	35:BA:1783:A:H5'	1.80	0.62
35:BA:2309:A:H2'	35:BA:2310:A:H5"	1.81	0.62
35:BA:2747:G:O2'	42:BH:67:LEU:HD12	1.99	0.62
39:BE:170:LEU:HD12	39:BE:170:LEU:N	2.14	0.62
41:BG:77:ILE:HG21	41:BG:80:PHE:HB2	1.81	0.62
41:BG:117:PHE:HE1	41:BG:119:GLY:C	2.07	0.62
42:BH:171:LEU:CD2	42:BH:172:LYS:O	2.47	0.62
43:BK:27:LEU:HA	43:BK:30:HIS:HB2	1.80	0.62
49:BR:100:LEU:HD22	49:BR:100:LEU:N	2.12	0.62
53:BV:54:GLY:O	53:BV:55:ALA:HB2	1.98	0.62
54:BW:64:MET:O	54:BW:65:LEU:HB3	1.99	0.62
1:AA:992:U:H4'	1:AA:993:G:O5'	1.99	0.62
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.63	0.62
1:AA:1348:U:H4'	9:AI:120:ARG:HG3	1.81	0.62
2:AB:167:PRO:HG2	2:AB:192:SER:OG	1.98	0.62
18:AR:31:LEU:HD23	18:AR:31:LEU:H	1.64	0.62
29:B4:12:ALA:HB1	29:B4:29:PRO:HA	1.81	0.62
35:BA:285:C:O2'	35:BA:286:C:H5"	1.99	0.62
35:BA:325:G:O2'	35:BA:326:G:H5'	1.99	0.62
35:BA:528:A:C2	35:BA:2043:C:H4'	2.34	0.62
35:BA:536:A:H2'	35:BA:537:C:C6	2.34	0.62
35:BA:1268:A:H2'	35:BA:1269:A:O4'	1.98	0.62
35:BA:2122:U:H2'	35:BA:2123:G:H8	1.62	0.62
38:BD:27:THR:HG21	38:BD:83:GLU:HG2	1.81	0.62
41:BG:63:ILE:HD12	41:BG:64:THR:HB	1.81	0.62
47:BP:146:VAL:O	47:BP:148:LEU:CD1	2.47	0.62
52:BU:70:ARG:HA	52:BU:74:LEU:O	1.99	0.62
54:BW:25:ARG:HB2	54:BW:25:ARG:NH1	2.15	0.62
56:BY:62:GLU:HG2	56:BY:63:LYS:H	1.64	0.62
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.80	0.62
1:AA:1525:G:H2'	1:AA:1526:G:H8	1.64	0.62
3:AC:90:GLU:HA	3:AC:93:LYS:CB	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:64:GLN:O	7:AG:67:GLU:HB3	2.00	0.62
10:AJ:4:ILE:HD11	10:AJ:77:PRO:HB3	1.80	0.62
24:AY:255:ILE:HG12	24:AY:256:THR:N	2.15	0.62
29:B4:9:LEU:C	29:B4:10:VAL:HG12	2.24	0.62
29:B4:19:GLY:O	29:B4:21:VAL:HG23	2.00	0.62
30:B5:3:LYS:HZ1	35:BA:2613:U:C2'	2.12	0.62
31:B6:41:PRO:HD2	31:B6:45:LYS:O	1.99	0.62
35:BA:363(A):A:H2'	35:BA:363(B):G:H8	1.62	0.62
35:BA:455:C:N3	35:BA:473:G:H5'	2.14	0.62
35:BA:528:A:H2	35:BA:2043:C:C4'	2.13	0.62
35:BA:567:A:N1	35:BA:571:A:H8	1.97	0.62
35:BA:653:A:H5'	35:BA:654:A:P	2.39	0.62
35:BA:1259:G:O2'	35:BA:1260:G:H5'	1.98	0.62
35:BA:1779:U:C5	35:BA:1784:A:N7	2.68	0.62
35:BA:2476:A:N1	35:BA:2477:C:C5	2.67	0.62
35:BA:2815:C:H2'	35:BA:2816:C:H6	1.59	0.62
37:BC:191:ARG:HG3	37:BC:191:ARG:NH1	2.05	0.62
38:BD:91:ARG:HG2	38:BD:91:ARG:NH1	2.13	0.62
39:BE:9:VAL:HG22	39:BE:10:GLY:H	1.63	0.62
40:BF:64:ILE:CD1	40:BF:65:TRP:CD2	2.81	0.62
41:BG:111:LEU:HA	41:BG:114:ILE:HD12	1.81	0.62
47:BP:127:ALA:C	47:BP:148:LEU:HD11	2.24	0.62
53:BV:28:GLU:HB2	53:BV:31:ALA:HB2	1.81	0.62
53:BV:39:LEU:CD1	53:BV:51:VAL:HA	2.29	0.62
54:BW:59:VAL:O	54:BW:59:VAL:HG12	1.99	0.62
57:BZ:180:VAL:HG12	57:BZ:181:GLU:N	2.13	0.62
1:AA:72:C:H2'	1:AA:73:G:H8	1.63	0.62
1:AA:368:U:OP1	24:AY:353:ALA:HB1	1.99	0.62
1:AA:1310:G:O2'	1:AA:1311:G:H5'	1.99	0.62
1:AA:1513:A:H2'	1:AA:1514:C:H6	1.63	0.62
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.34	0.62
6:AF:98:LEU:H	6:AF:98:LEU:HD12	1.64	0.62
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.64	0.62
24:AY:192:LEU:O	24:AY:192:LEU:HD13	1.99	0.62
35:BA:55:G:H2'	35:BA:56:A:H8	1.64	0.62
35:BA:99:U:O2	35:BA:99:U:H2'	1.99	0.62
35:BA:272(I):U:O2	35:BA:272(I):U:H3'	1.99	0.62
35:BA:2260:C:H2'	35:BA:2261:C:H6	1.64	0.62
37:BC:74:ARG:N	37:BC:112:ASP:HB2	2.14	0.62
39:BE:45:THR:O	39:BE:46:ALA:HB2	1.99	0.62
40:BF:4:VAL:HG22	40:BF:19:GLU:OE1	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:42:GLY:HA2	41:BG:89:GLY:HA2	1.82	0.62
45:BN:35:ARG:O	45:BN:37:LYS:N	2.32	0.62
47:BP:47:ASP:HB2	47:BP:51:PHE:HB2	1.80	0.62
47:BP:58:THR:O	47:BP:61:ARG:NE	2.23	0.62
49:BR:10:LEU:HD22	49:BR:17:ARG:HD3	1.80	0.62
49:BR:83:ILE:HA	49:BR:86:ARG:HD3	1.80	0.62
50:BS:66:ALA:O	50:BS:99:LYS:HA	1.99	0.62
50:BS:98:VAL:HG12	50:BS:100:ALA:H	1.63	0.62
2:AB:75:LYS:C	2:AB:75:LYS:HD3	2.24	0.62
2:AB:168:THR:HG23	2:AB:192:SER:CB	2.24	0.62
5:AE:152:ARG:HA	8:AH:64:LYS:HZ3	1.65	0.62
6:AF:22:GLU:O	6:AF:26:ILE:HG13	1.99	0.62
10:AJ:61:GLU:OE1	14:AN:49:HIS:CE1	2.50	0.62
12:AL:86:ARG:HH22	12:AL:99:HIS:CD2	2.17	0.62
16:AP:9:PHE:CE2	16:AP:18:ARG:CZ	2.82	0.62
18:AR:31:LEU:H	18:AR:31:LEU:CD2	2.12	0.62
24:AY:20:HIS:CG	24:AY:117:GLN:HB3	2.35	0.62
24:AY:177:ILE:C	24:AY:178:ILE:HD12	2.24	0.62
24:AY:215:LYS:HA	24:AY:218:GLU:HB3	1.81	0.62
24:AY:404:VAL:N	24:AY:405:PRO:HD3	2.13	0.62
24:AY:411:VAL:HG12	24:AY:412:ALA:N	2.12	0.62
27:B2:3:LEU:HD22	27:B2:7:ARG:NH2	2.14	0.62
31:B6:43:CYS:HB3	31:B6:44:ARG:HH21	1.63	0.62
35:BA:1010:A:H1'	35:BA:1153:C:H1'	1.79	0.62
35:BA:1708:C:O2'	35:BA:1709:U:H5'	1.99	0.62
35:BA:1865:G:H2'	35:BA:1866:C:H5"	1.81	0.62
35:BA:2346:A:C2	35:BA:2383:G:C2	2.87	0.62
35:BA:2840:C:H5"	49:BR:53:HIS:CD2	2.34	0.62
35:BA:2876:G:H4'	51:BT:3:ARG:NE	2.12	0.62
45:BN:62:VAL:CG2	45:BN:66:LYS:HG3	2.28	0.62
47:BP:107:LYS:C	47:BP:109:GLY:N	2.57	0.62
51:BT:50:ILE:HG23	51:BT:99:LEU:O	2.00	0.62
57:BZ:115:GLY:H	57:BZ:177:PRO:CG	2.13	0.62
1:AA:1133:G:H22	1:AA:1143:G:H1'	1.64	0.62
2:AB:7:VAL:C	2:AB:11:LEU:HG	2.23	0.62
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.82	0.62
8:AH:42:GLU:HG3	8:AH:109:ILE:HD12	1.81	0.62
9:AI:63:ILE:HG22	9:AI:64:THR:N	2.14	0.62
9:AI:79:LEU:CD1	9:AI:83:ARG:HD2	2.28	0.62
13:AM:3:ARG:HA	13:AM:9:ILE:HG13	1.80	0.62
14:AN:44:LEU:HD12	14:AN:44:LEU:C	2.25	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:33:MET:HE3	27:B2:37:PHE:CE1	2.35	0.62
35:BA:569:U:C4	35:BA:570:G:C6	2.86	0.62
35:BA:979:G:H2'	35:BA:982:C:N4	2.15	0.62
35:BA:2162:G:H2'	35:BA:2163:C:C6	2.34	0.62
35:BA:2346:A:H1'	35:BA:2383:G:C8	2.35	0.62
35:BA:2662:A:H2'	35:BA:2663:G:O4'	2.00	0.62
35:BA:2732:G:H3'	35:BA:2733:A:C5'	2.27	0.62
36:BB:104:U:H6	36:BB:104:U:H5"	1.65	0.62
38:BD:45:ASN:CG	38:BD:46:GLN:N	2.55	0.62
40:BF:182:ASN:ND2	40:BF:185:ASP:OD2	2.30	0.62
45:BN:40:PRO:HB2	52:BU:100:VAL:HG22	1.80	0.62
46:BO:60:ALA:C	46:BO:87:ILE:HD11	2.24	0.62
51:BT:85:LYS:NZ	51:BT:85:LYS:HB3	2.15	0.62
1:AA:1325:C:H2'	1:AA:1326:C:C6	2.34	0.62
2:AB:223:ILE:HA	2:AB:226:ARG:NE	2.15	0.62
3:AC:142:MET:CE	3:AC:171:GLY:HA3	2.29	0.62
6:AF:87:ARG:HH11	6:AF:87:ARG:HG2	1.63	0.62
24:AY:276:VAL:CA	24:AY:280:LEU:HD23	2.26	0.62
28:B3:44:ARG:O	28:B3:48:GLU:HG2	1.98	0.62
30:B5:56:LYS:HG3	30:B5:57:VAL:N	2.14	0.62
34:B9:31:LYS:HE2	35:BA:2478:A:H5'	1.81	0.62
35:BA:30:G:O2'	35:BA:31:C:H5'	1.99	0.62
35:BA:825:C:H2'	35:BA:826:U:O4'	1.99	0.62
35:BA:1657:C:O2'	35:BA:1658:C:H5'	1.99	0.62
35:BA:1662:C:H2'	35:BA:1663:C:C6	2.34	0.62
35:BA:2037:G:H2'	35:BA:2038:G:C8	2.35	0.62
35:BA:2543:G:H5'	35:BA:2543:G:C8	2.29	0.62
38:BD:112:GLN:H	38:BD:115:GLN:NE2	1.98	0.62
39:BE:101:ARG:HB3	39:BE:201:THR:HG21	1.82	0.62
47:BP:41:ARG:NH1	47:BP:41:ARG:HB3	2.14	0.62
52:BU:72:HIS:HE1	52:BU:107:ALA:HB2	1.65	0.62
54:BW:6:ILE:HG13	54:BW:104:THR:HG23	1.82	0.62
55:BX:63:LYS:HA	55:BX:72:LYS:HA	1.82	0.62
1:AA:129(A):G:H5"	1:AA:129(A):G:C8	2.35	0.62
1:AA:176:C:H2'	1:AA:177:C:H6	1.62	0.62
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.34	0.62
1:AA:1347:G:O2'	1:AA:1348:U:P	2.58	0.62
4:AD:108:LEU:O	4:AD:165:MET:HE2	2.00	0.62
5:AE:20:GLN:O	5:AE:21:ALA:C	2.43	0.62
28:B3:28:LEU:CD2	28:B3:35:ARG:HD2	2.30	0.62
31:B6:16:CYS:SG	31:B6:48:VAL:CG2	2.88	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:24:GLU:OE2	35:BA:2346:A:H8	1.83	0.62
35:BA:880:G:H2'	35:BA:881:G:H8	1.64	0.62
35:BA:889:C:H2'	35:BA:890:A:O4'	1.99	0.62
35:BA:1437:C:H2'	35:BA:1438:U:C6	2.34	0.62
35:BA:1771:C:H2'	35:BA:1772:G:H8	1.64	0.62
35:BA:2189:U:C3'	35:BA:2190:G:H5"	2.30	0.62
37:BC:138:LEU:HD22	37:BC:139:PRO:N	2.15	0.62
38:BD:134:ARG:HD3	38:BD:135:PHE:HE1	1.65	0.62
40:BF:20:LEU:HD22	40:BF:23:ASP:OD2	1.98	0.62
40:BF:177:ALA:HB1	40:BF:178:PRO:HD2	1.82	0.62
42:BH:153:LYS:HG3	42:BH:154:PRO:HD2	1.81	0.62
44:BL:90:ALA:HB1	44:BL:91:PRO:HA	1.82	0.62
47:BP:106:LEU:N	47:BP:106:LEU:HD12	2.14	0.62
56:BY:28:LYS:HB3	56:BY:37:VAL:CB	2.17	0.62
57:BZ:153:SER:C	57:BZ:155:LEU:HD23	2.25	0.62
10:AJ:3:LYS:HD2	10:AJ:77:PRO:CD	2.30	0.62
24:AY:247:ARG:O	24:AY:251:ILE:HG13	1.99	0.62
26:B1:86:SER:HA	26:B1:89:GLU:OE2	2.00	0.62
27:B2:48:HIS:HD1	35:BA:95:G:HO2'	1.48	0.62
30:B5:40:LYS:HZ1	30:B5:46:CYS:H	1.46	0.62
33:B8:33:ASN:HA	33:B8:36:LYS:HG3	1.81	0.62
34:B9:7:VAL:HG13	34:B9:34:GLN:CD	2.25	0.62
35:BA:364:C:H2'	35:BA:365:C:C5'	2.29	0.62
35:BA:1043:C:O5'	35:BA:1043:C:H6	1.82	0.62
35:BA:1212:G:O2'	35:BA:1236:G:N2	2.33	0.62
35:BA:1386:C:H2'	35:BA:1387:C:H6	1.64	0.62
35:BA:2110:G:HO2'	35:BA:2120:G:H5'	1.65	0.62
35:BA:2186:G:C2'	35:BA:2187:G:H5"	2.30	0.62
35:BA:2336:A:N3	35:BA:2385:C:H1'	2.15	0.62
40:BF:9:ILE:HG12	40:BF:14:PRO:HA	1.80	0.62
42:BH:137:ASP:CB	42:BH:140:LYS:HD2	2.26	0.62
42:BH:144:VAL:HA	42:BH:147:ASN:HB2	1.82	0.62
47:BP:39:LYS:HE2	47:BP:40:SER:H	1.65	0.62
47:BP:114:ILE:HD12	47:BP:115:LEU:N	2.14	0.62
53:BV:6:LYS:HE2	53:BV:37:VAL:HG11	1.81	0.62
1:AA:78:G:H1	1:AA:91:C:N4	1.98	0.62
1:AA:176:C:H2'	1:AA:177:C:C6	2.34	0.62
1:AA:688:G:H2'	1:AA:689:C:H6	1.65	0.62
1:AA:950:U:H2'	1:AA:951:G:C8	2.35	0.62
1:AA:1002:G:H22	1:AA:1039:C:H2'	1.65	0.62
1:AA:1029:C:O2'	1:AA:1032:G:N2	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1057:G:H5”	3:AC:154:SER:HB2	1.80	0.62
2:AB:86:GLU:C	2:AB:88:ALA:H	2.08	0.62
2:AB:155:LEU:C	2:AB:155:LEU:CD1	2.71	0.62
4:AD:114:ARG:NH1	4:AD:114:ARG:CG	2.60	0.62
15:AO:17:ARG:HG3	15:AO:17:ARG:NH1	2.15	0.62
15:AO:74:ASP:C	15:AO:76:GLU:H	2.08	0.62
18:AR:44:LEU:HD22	18:AR:79:LEU:HD22	1.81	0.62
29:B4:37:SER:O	29:B4:38:LYS:HB2	1.99	0.62
33:B8:13:ARG:HD3	47:BP:61:ARG:O	2.00	0.62
34:B9:10:ILE:O	34:B9:11:CYS:HB3	1.99	0.62
35:BA:1465:G:H2’	35:BA:1466:G:H8	1.65	0.62
35:BA:2223:G:C2’	35:BA:2224:G:H5’	2.30	0.62
35:BA:2312:U:OP1	41:BG:73:ALA:HA	1.98	0.62
38:BD:35:LYS:HD2	38:BD:36:PRO:CA	2.29	0.62
38:BD:130:ALA:HB2	38:BD:192:THR:HB	1.81	0.62
43:BK:10:LEU:HD12	43:BK:57:ILE:HD13	1.82	0.62
43:BK:103:GLN:O	43:BK:106:GLU:HG2	1.99	0.62
46:BO:64:ARG:NE	51:BT:70:VAL:HG21	2.15	0.62
46:BO:104:ARG:HE	51:BT:33:LYS:HE3	1.65	0.62
48:BQ:48:GLU:O	48:BQ:52:VAL:HG23	2.00	0.62
50:BS:104:GLY:C	50:BS:106:ARG:H	2.08	0.62
52:BU:49:HIS:O	52:BU:52:ARG:HB2	2.00	0.62
57:BZ:5:LEU:HB3	57:BZ:59:LEU:HD23	1.81	0.62
1:AA:119:A:O2’	1:AA:120:A:OP2	2.18	0.61
1:AA:718:G:C8	11:AK:116:HIS:HB3	2.34	0.61
2:AB:155:LEU:O	2:AB:155:LEU:CD1	2.48	0.61
3:AC:154:SER:O	3:AC:165:THR:HA	2.00	0.61
12:AL:126:LYS:HE2	12:AL:128:ALA:H	1.65	0.61
26:B1:84:GLY:O	26:B1:86:SER:N	2.33	0.61
35:BA:55:G:H2’	35:BA:56:A:C8	2.35	0.61
35:BA:586:A:H5’	40:BF:89:VAL:HG21	1.82	0.61
35:BA:1001:A:H2’	35:BA:1002:G:O4’	2.00	0.61
35:BA:1416:G:HO2’	35:BA:1417:C:H5	1.47	0.61
35:BA:1663:C:O2’	35:BA:1664:A:H5’	1.99	0.61
35:BA:1771:C:H2’	35:BA:1772:G:C8	2.35	0.61
35:BA:1803:A:O3’	38:BD:259:THR:CG2	2.44	0.61
35:BA:2415:G:H4’	47:BP:66:GLY:C	2.25	0.61
35:BA:2631:G:N2	39:BE:61:ARG:HH12	1.98	0.61
45:BN:126:PRO:O	45:BN:127:ASP:HB2	1.99	0.61
53:BV:8:GLY:O	53:BV:10:LYS:CE	2.48	0.61
57:BZ:18:LEU:O	57:BZ:21:ALA:HB3	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:110:C:H6	1:AA:110:C:O5'	1.82	0.61
4:AD:57:ARG:HB3	4:AD:206:PHE:HB2	1.82	0.61
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	1.82	0.61
13:AM:81:LEU:HD22	13:AM:81:LEU:N	2.15	0.61
16:AP:1:MET:HG3	16:AP:65:GLN:HG3	1.82	0.61
24:AY:21:ILE:HG21	24:AY:88:VAL:HG13	1.82	0.61
24:AY:25:LYS:HE3	59:AY:702:GDP:PB	2.40	0.61
24:AY:248:LYS:O	24:AY:248:LYS:HG2	2.00	0.61
24:AY:298:VAL:HG13	24:AY:299:VAL:N	2.15	0.61
24:AY:343:ASN:ND2	24:AY:345:THR:N	2.47	0.61
31:B6:6:ARG:HB2	31:B6:7:ILE:HD13	1.83	0.61
35:BA:6:A:H2'	35:BA:6:A:N3	2.15	0.61
35:BA:295:G:H2'	35:BA:296:C:H6	1.65	0.61
35:BA:346:A:H2'	35:BA:346:A:N3	2.14	0.61
35:BA:825:C:O2'	35:BA:826:U:H5'	1.99	0.61
35:BA:936:C:H2'	35:BA:937:U:H6	1.65	0.61
35:BA:2626:C:H2'	35:BA:2627:G:O4'	2.00	0.61
35:BA:2631:G:N2	39:BE:61:ARG:NH1	2.48	0.61
35:BA:2672:G:H2'	35:BA:2673:G:H5"	1.82	0.61
35:BA:2884:U:H2'	35:BA:2885:C:H5'	1.82	0.61
38:BD:183:ARG:NH1	38:BD:183:ARG:HG2	2.15	0.61
38:BD:276:LYS:HD3	38:BD:276:LYS:OXT	1.99	0.61
40:BF:59:TYR:HE2	40:BF:85:GLY:O	1.83	0.61
40:BF:64:ILE:CD1	40:BF:65:TRP:CE2	2.81	0.61
42:BH:28:GLY:HA3	42:BH:79:VAL:CG2	2.30	0.61
42:BH:136:ILE:HD12	42:BH:136:ILE:N	2.15	0.61
47:BP:107:LYS:C	47:BP:109:GLY:H	2.07	0.61
57:BZ:59:LEU:O	57:BZ:66:SER:HA	2.00	0.61
1:AA:728:A:H2'	1:AA:729:A:C8	2.35	0.61
1:AA:1160:G:O6	1:AA:1181:G:O6	2.17	0.61
2:AB:230:VAL:HG23	2:AB:231:GLU:H	1.64	0.61
3:AC:181:ASN:HD22	3:AC:204:LEU:HB2	1.63	0.61
6:AF:50:TYR:CE1	18:AR:77:GLY:HA2	2.34	0.61
10:AJ:48:THR:HG23	10:AJ:62:HIS:ND1	2.16	0.61
14:AN:42:ILE:HG22	14:AN:43:CYS:N	2.15	0.61
24:AY:82:ILE:HD12	24:AY:101:LEU:HD22	1.80	0.61
25:B0:73:GLY:C	25:B0:75:LEU:H	2.08	0.61
29:B4:20:ASN:OD1	29:B4:36:CYS:SG	2.58	0.61
30:B5:56:LYS:CG	30:B5:57:VAL:H	2.10	0.61
34:B9:4:ARG:HH12	35:BA:2477:C:N4	1.98	0.61
35:BA:455:C:N3	35:BA:472:A:H2'	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:710:G:H2'	35:BA:711:G:C8	2.35	0.61
35:BA:1576:U:H2'	35:BA:1577:C:C6	2.35	0.61
35:BA:1722:A:H2	35:BA:1740:G:H2'	1.65	0.61
45:BN:137:LYS:O	45:BN:138:LEU:HD23	2.00	0.61
57:BZ:156:LYS:O	57:BZ:158:PRO:HD3	1.99	0.61
1:AA:59:A:H2'	1:AA:59:A:N3	2.13	0.61
1:AA:707:C:H2'	1:AA:708:C:C6	2.35	0.61
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.15	0.61
1:AA:1303:C:H2'	1:AA:1304:G:H5'	1.82	0.61
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.64	0.61
13:AM:54:VAL:O	13:AM:56:LEU:N	2.32	0.61
15:AO:74:ASP:OD1	15:AO:76:GLU:HB3	2.01	0.61
17:AQ:48:GLU:O	17:AQ:49:GLU:C	2.43	0.61
24:AY:134:ALA:HB3	24:AY:258:VAL:HG22	1.81	0.61
24:AY:510:VAL:HA	24:AY:570:GLY:HA3	1.82	0.61
35:BA:2645:G:C3'	35:BA:2646:C:H5'	2.31	0.61
39:BE:104:VAL:HG22	39:BE:198:VAL:HG22	1.81	0.61
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.00	0.61
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.82	0.61
6:AF:37:VAL:HG12	6:AF:38:GLU:N	2.15	0.61
7:AG:145:ALA:O	7:AG:146:GLU:HB2	2.00	0.61
9:AI:92:TYR:O	9:AI:96:LEU:HD22	2.00	0.61
10:AJ:3:LYS:N	10:AJ:74:ILE:O	2.33	0.61
14:AN:37:PHE:HE1	14:AN:53:LEU:HD22	1.65	0.61
24:AY:606:MET:HE3	24:AY:671:MET:HG2	1.80	0.61
35:BA:276:A:O2'	35:BA:277:C:H5'	2.00	0.61
35:BA:537:C:H2'	35:BA:538:G:C8	2.34	0.61
35:BA:1035:U:O5'	42:BH:59:ARG:NH1	2.33	0.61
35:BA:1102:C:H2'	35:BA:1103:A:H8	1.65	0.61
35:BA:1301:A:H2'	35:BA:1302:A:H3'	1.83	0.61
35:BA:1973:G:H2'	35:BA:1974:C:C6	2.35	0.61
35:BA:2712:U:O2'	35:BA:2712(A):A:O5'	2.18	0.61
37:BC:115:VAL:HA	37:BC:145:THR:HG22	1.81	0.61
38:BD:127:VAL:HA	38:BD:193:VAL:HG13	1.82	0.61
40:BF:110:LEU:HD12	40:BF:206:ILE:CD1	2.28	0.61
43:BK:14:ALA:HA	43:BK:41:PHE:CE2	2.36	0.61
43:BK:109:LYS:CA	43:BK:112:MET:HE3	2.22	0.61
1:AA:345:C:H5'	1:AA:346:G:OP1	1.99	0.61
1:AA:663:A:C2'	1:AA:664:G:H5'	2.31	0.61
1:AA:1392:G:N2	1:AA:1502:A:C8	2.67	0.61
7:AG:91:VAL:HG12	7:AG:92:SER:H	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:118:VAL:O	8:AH:119:LEU:HD23	2.00	0.61
17:AQ:47:PRO:CG	17:AQ:48:GLU:OE2	2.45	0.61
19:AS:46:GLY:N	19:AS:62:ILE:HG23	2.14	0.61
24:AY:542:VAL:O	24:AY:542:VAL:HG22	2.01	0.61
30:B5:46:CYS:SG	30:B5:47:PRO:HD2	2.41	0.61
34:B9:36:GLN:OE1	35:BA:1124:C:H1'	2.01	0.61
35:BA:650:C:C3'	35:BA:651:G:H5"	2.30	0.61
35:BA:1168:G:H2'	35:BA:1169:G:C8	2.35	0.61
35:BA:1638:C:H2'	35:BA:1639:U:O4'	2.01	0.61
35:BA:2151:G:O2'	35:BA:2152:G:H5'	1.99	0.61
35:BA:2193:G:H5'	35:BA:2193:G:C8	2.36	0.61
35:BA:2287:A:N6	35:BA:2344:U:N3	2.46	0.61
35:BA:2378:A:C2	50:BS:19:LYS:HE3	2.36	0.61
35:BA:2474:C:H5'	35:BA:2475:C:C5	2.35	0.61
35:BA:2704:C:O2'	35:BA:2705:A:H5'	2.01	0.61
38:BD:106:ILE:HD11	38:BD:196:VAL:HG13	1.83	0.61
40:BF:32:LEU:HD13	40:BF:112:MET:HE1	1.81	0.61
41:BG:61:ALA:HA	41:BG:64:THR:HG22	1.82	0.61
45:BN:62:VAL:HG13	45:BN:62:VAL:O	1.99	0.61
1:AA:108:G:H5'	1:AA:109:A:H5"	1.83	0.61
1:AA:357:G:O2'	1:AA:358:U:H5'	2.01	0.61
1:AA:579:G:C5'	1:AA:728:A:H1'	2.30	0.61
1:AA:1026:G:C2'	1:AA:1027:C:H5'	2.30	0.61
1:AA:1130:A:C2	1:AA:1146:A:C4	2.88	0.61
1:AA:1277:C:H3'	1:AA:1277:C:H6	1.64	0.61
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.58	0.61
4:AD:24:GLU:O	4:AD:27:TYR:HB2	2.01	0.61
5:AE:72:GLN:HE22	5:AE:144:THR:HG22	1.66	0.61
5:AE:78:HIS:O	5:AE:93:PRO:HD3	2.01	0.61
10:AJ:32:ALA:HB3	10:AJ:76:ASN:O	2.00	0.61
12:AL:90:VAL:O	12:AL:92:ASP:N	2.34	0.61
24:AY:210:ARG:O	24:AY:213:HIS:N	2.34	0.61
24:AY:539:ILE:HA	24:AY:542:VAL:HG12	1.81	0.61
27:B2:64:LEU:HD13	27:B2:64:LEU:C	2.25	0.61
35:BA:83:G:O2'	35:BA:84:A:C8	2.54	0.61
35:BA:910:A:C5	48:BQ:13:GLN:HG3	2.36	0.61
35:BA:990:A:N6	35:BA:1186:G:H1'	2.15	0.61
35:BA:1156:A:O2'	35:BA:1157:G:OP1	2.18	0.61
35:BA:1523:U:H2'	35:BA:1524:G:C8	2.35	0.61
36:BB:25:A:C2	36:BB:26:A:C4	2.89	0.61
41:BG:111:LEU:HA	41:BG:114:ILE:CD1	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:173:LEU:HA	41:BG:176:LEU:CD1	2.31	0.61
45:BN:74:ARG:NH2	45:BN:83:LYS:HD3	2.16	0.61
47:BP:135:LEU:HD13	47:BP:135:LEU:O	2.00	0.61
50:BS:35:ILE:HG22	50:BS:53:SER:HB2	1.83	0.61
1:AA:626:U:O2	1:AA:626:U:H2'	1.99	0.61
1:AA:1101:A:H4'	1:AA:1102:A:C4'	2.31	0.61
6:AF:91:VAL:HG12	6:AF:92:LYS:N	2.16	0.61
10:AJ:6:ILE:HG13	10:AJ:72:VAL:O	2.00	0.61
10:AJ:55:LYS:H	10:AJ:55:LYS:HE2	1.64	0.61
12:AL:47:LYS:NZ	12:AL:48:PRO:HD3	2.14	0.61
12:AL:117:ARG:NH2	12:AL:124:LYS:HB2	2.16	0.61
19:AS:64:GLU:O	29:B4:48:ARG:NH2	2.34	0.61
24:AY:530:VAL:CG1	24:AY:531:GLY:H	2.05	0.61
31:B6:15:GLU:CD	31:B6:44:ARG:NH2	2.58	0.61
33:B8:50:LEU:C	33:B8:53:PRO:HD2	2.26	0.61
35:BA:271(K):U:H3'	35:BA:271(L):U:H5"	1.83	0.61
35:BA:1030:G:OP2	48:BQ:128:LYS:HE2	2.01	0.61
35:BA:1079:C:H1'	43:BK:132:ARG:HH22	1.65	0.61
35:BA:1240:U:O2'	35:BA:1241:A:H5'	2.00	0.61
35:BA:1381:G:N2	35:BA:1382:G:H1'	2.15	0.61
39:BE:31:CYS:HB3	39:BE:49:LEU:HB3	1.83	0.61
40:BF:110:LEU:C	40:BF:110:LEU:CD1	2.70	0.61
40:BF:179:GLU:C	40:BF:181:LEU:H	2.09	0.61
52:BU:64:ARG:O	52:BU:65:ILE:C	2.43	0.61
53:BV:32:THR:OG1	53:BV:60:GLU:HG3	2.01	0.61
54:BW:96:ILE:O	54:BW:96:ILE:HG23	2.00	0.61
56:BY:50:ARG:O	56:BY:50:ARG:CD	2.49	0.61
57:BZ:56:VAL:O	57:BZ:57:ILE:HD12	2.01	0.61
1:AA:939:G:H5"	7:AG:102:ARG:HH22	1.65	0.61
1:AA:1459:C:H2'	1:AA:1460:A:H8	1.65	0.61
13:AM:66:LEU:N	13:AM:66:LEU:CD1	2.61	0.61
24:AY:459:LEU:H	24:AY:459:LEU:HD12	1.66	0.61
31:B6:11:LEU:HD22	31:B6:12:GLU:N	2.15	0.61
35:BA:137:C:O2	35:BA:137:C:H2'	2.00	0.61
35:BA:221:A:H4'	35:BA:222:A:O5'	2.00	0.61
35:BA:573:G:O2'	35:BA:574:C:H3'	2.01	0.61
35:BA:848:G:H5'	35:BA:849:A:OP2	2.01	0.61
35:BA:2337:G:H2'	35:BA:2338:G:C8	2.35	0.61
37:BC:10:ALA:O	37:BC:13:GLU:HG2	1.99	0.61
41:BG:77:ILE:CG2	41:BG:80:PHE:CB	2.78	0.61
46:BO:105:GLU:O	46:BO:109:LYS:HG2	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:105:LEU:N	47:BP:105:LEU:CD1	2.59	0.61
47:BP:112:LEU:HD22	47:BP:113:LYS:N	2.16	0.61
47:BP:146:VAL:HG22	47:BP:147:LEU:N	2.15	0.61
48:BQ:54:MET:HG2	48:BQ:64:ILE:HD13	1.81	0.61
56:BY:12:THR:HA	56:BY:25:GLY:O	2.01	0.61
56:BY:31:LEU:HD23	56:BY:36:ALA:H	1.66	0.61
1:AA:201:C:C2'	1:AA:202:U:H5"	2.31	0.61
1:AA:945:G:C2	1:AA:946:A:C8	2.89	0.61
1:AA:1104:G:O5'	2:AB:111:ARG:HD2	2.01	0.61
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.16	0.61
1:AA:1457:G:O5'	1:AA:1457:G:C8	2.48	0.61
2:AB:124:SER:OG	2:AB:125:PRO:HD2	2.01	0.61
13:AM:11:ARG:HG2	13:AM:12:ASN:H	1.65	0.61
19:AS:13:ASP:C	19:AS:15:LEU:N	2.59	0.61
21:AU:2:GLY:O	21:AU:4:GLY:N	2.34	0.61
24:AY:28:THR:O	24:AY:32:ILE:HG13	2.00	0.61
24:AY:165:GLN:NE2	24:AY:177:ILE:HG21	2.15	0.61
35:BA:406:G:O2'	35:BA:407:G:C8	2.50	0.61
35:BA:925:C:H2'	35:BA:926:A:C5'	2.15	0.61
36:BB:105:A:P	57:BZ:72:ARG:HH12	2.24	0.61
42:BH:33:LEU:HD12	42:BH:75:ALA:O	2.00	0.61
45:BN:55:VAL:HG22	45:BN:126:PRO:HA	1.83	0.61
45:BN:57:ALA:HB3	45:BN:124:ALA:HA	1.82	0.61
47:BP:59:LEU:CA	47:BP:61:ARG:NE	2.58	0.61
47:BP:96:THR:HG22	47:BP:126:VAL:HB	1.83	0.61
47:BP:128:HIS:ND1	47:BP:148:LEU:HD13	2.16	0.61
50:BS:29:PHE:HB3	50:BS:36:TYR:HB2	1.83	0.61
51:BT:89:VAL:HG12	51:BT:91:ARG:H	1.65	0.61
56:BY:95:LYS:CD	56:BY:101:LYS:H	2.13	0.61
1:AA:6:G:H2'	5:AE:119:LEU:CD1	2.31	0.60
1:AA:67:C:H2'	1:AA:68:G:C8	2.36	0.60
1:AA:282:A:H3'	1:AA:283:C:C6	2.36	0.60
1:AA:940:C:O2'	1:AA:941:G:H5'	2.01	0.60
4:AD:58:LEU:HD23	4:AD:58:LEU:C	2.26	0.60
4:AD:152:SER:O	4:AD:154:ASN:N	2.34	0.60
4:AD:153:ARG:HG2	4:AD:153:ARG:HH11	1.66	0.60
9:AI:4:TYR:CE2	9:AI:59:PHE:HE2	2.19	0.60
20:AT:13:LEU:HD12	20:AT:13:LEU:N	2.15	0.60
24:AY:177:ILE:HG22	24:AY:178:ILE:H	1.65	0.60
35:BA:422:A:H2'	35:BA:423:A:C8	2.36	0.60
35:BA:1156:A:C2'	35:BA:1157:G:OP1	2.48	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1713:U:O2'	35:BA:1714:G:H5'	2.00	0.60
35:BA:2199:A:H3'	35:BA:2200:C:H6	1.64	0.60
35:BA:2506:U:H4'	35:BA:2507:C:OP1	2.00	0.60
35:BA:2761:G:C3'	35:BA:2762:G:H5"	2.30	0.60
36:BB:106:G:H2'	36:BB:107:G:H8	1.66	0.60
38:BD:142:VAL:HG23	38:BD:192:THR:O	2.00	0.60
39:BE:59:VAL:HG22	39:BE:62:PRO:O	2.01	0.60
41:BG:172:LEU:HD23	41:BG:176:LEU:CD1	2.27	0.60
46:BO:64:ARG:HH21	46:BO:100:GLY:HA3	1.66	0.60
47:BP:112:LEU:HD22	47:BP:112:LEU:C	2.25	0.60
49:BR:32:GLY:HA2	49:BR:116:LEU:HD12	1.81	0.60
51:BT:25:GLY:HA2	51:BT:92:GLY:HA2	1.83	0.60
52:BU:80:ILE:O	52:BU:84:LYS:HB2	2.00	0.60
57:BZ:10:ARG:NH2	57:BZ:26:GLY:O	2.33	0.60
1:AA:608:A:C2'	1:AA:609:A:H5'	2.31	0.60
1:AA:1094:G:O2'	1:AA:1095:U:OP2	2.19	0.60
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.36	0.60
3:AC:14:ILE:HG13	3:AC:15:THR:H	1.62	0.60
8:AH:60:ARG:HG2	8:AH:62:TYR:CE2	2.36	0.60
8:AH:103:VAL:HG12	8:AH:108:GLY:HA3	1.83	0.60
10:AJ:50:ILE:HD13	10:AJ:50:ILE:H	1.64	0.60
16:AP:28:ARG:HG2	16:AP:28:ARG:NH1	2.16	0.60
20:AT:42:GLN:HA	20:AT:42:GLN:HE21	1.66	0.60
22:AV:52:G:C2	22:AV:53:G:C8	2.90	0.60
24:AY:121:VAL:HG23	24:AY:122:TRP:H	1.66	0.60
33:B8:56:GLU:O	33:B8:59:LYS:HE3	2.00	0.60
35:BA:784:A:H5"	38:BD:227:ASN:HD21	1.64	0.60
35:BA:1248:G:C2	52:BU:3:ARG:HD2	2.37	0.60
35:BA:1517:G:H5'	35:BA:1517:G:C8	2.24	0.60
35:BA:1993:U:H4'	39:BE:128:SER:OG	2.01	0.60
35:BA:2408:U:H2'	35:BA:2409:G:H8	1.66	0.60
35:BA:2783:G:N2	35:BA:2784:C:O2	2.34	0.60
35:BA:2816:C:O2	35:BA:2883:A:O2'	2.18	0.60
41:BG:164:GLU:O	41:BG:165:THR:HG23	2.01	0.60
42:BH:86:GLU:CB	42:BH:132:ARG:HB3	2.30	0.60
45:BN:74:ARG:HH21	45:BN:83:LYS:HD3	1.66	0.60
47:BP:58:THR:C	47:BP:61:ARG:HE	2.07	0.60
47:BP:107:LYS:HG3	47:BP:107:LYS:O	2.01	0.60
52:BU:96:ALA:C	52:BU:98:LEU:N	2.57	0.60
1:AA:60:A:H5"	1:AA:331:G:H22	1.67	0.60
1:AA:402:G:O2'	1:AA:403:C:H5'	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.37	0.60
2:AB:140:HIS:O	2:AB:143:GLU:HB2	2.00	0.60
4:AD:5:ILE:HA	4:AD:115:ARG:HH12	1.66	0.60
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.83	0.60
22:AV:17:C:C6	22:AV:17(A):U:C5	2.83	0.60
24:AY:181:LEU:HB2	24:AY:216:LEU:HD11	1.83	0.60
24:AY:335:LEU:CD2	24:AY:355:LEU:HD11	2.31	0.60
24:AY:406:GLU:HB3	24:AY:407:PRO:CD	2.30	0.60
24:AY:603:GLU:C	24:AY:676:TYR:HD1	2.09	0.60
29:B4:16:CYS:HB3	29:B4:20:ASN:O	2.01	0.60
30:B5:55:ARG:C	30:B5:55:ARG:HD3	2.27	0.60
32:B7:34:ARG:HB3	32:B7:42:LEU:CD2	2.31	0.60
35:BA:271(D):G:O2'	35:BA:271(E):U:H5'	2.00	0.60
35:BA:751:A:C5'	54:BW:90:ARG:HA	2.31	0.60
35:BA:2428:G:H4'	35:BA:2429:G:O5'	2.01	0.60
37:BC:85:LYS:O	37:BC:89:GLU:HG3	2.02	0.60
38:BD:14:ARG:HG3	38:BD:15:PHE:N	2.14	0.60
39:BE:167:VAL:HG13	39:BE:170:LEU:HD11	1.83	0.60
40:BF:116:ASP:OD2	47:BP:5:ASP:HB2	2.00	0.60
41:BG:42:GLY:O	41:BG:44:GLY:N	2.34	0.60
41:BG:131:TYR:CE2	41:BG:133:LEU:HD23	2.36	0.60
45:BN:67:LEU:HB3	45:BN:88:GLU:HG2	1.83	0.60
49:BR:28:LEU:CD2	49:BR:29:LEU:HD12	2.30	0.60
50:BS:51:ALA:HB3	50:BS:73:LEU:HD12	1.82	0.60
51:BT:23:ARG:O	51:BT:25:GLY:N	2.33	0.60
51:BT:118:ARG:HA	51:BT:121:ILE:HB	1.81	0.60
1:AA:328:C:O2	1:AA:328:C:H2'	1.99	0.60
6:AF:15:ASP:C	6:AF:17:SER:N	2.58	0.60
8:AH:120:THR:HG23	8:AH:123:GLU:OE1	2.01	0.60
14:AN:41:ARG:HG2	14:AN:41:ARG:NH1	2.14	0.60
16:AP:48:TRP:CD1	16:AP:48:TRP:H	2.18	0.60
26:B1:76:ARG:NH2	26:B1:95:LEU:HD22	2.17	0.60
28:B3:17:LYS:NZ	28:B3:20:LYS:HE3	2.17	0.60
32:B7:4:THR:O	35:BA:687:C:H5'	2.01	0.60
32:B7:24:THR:C	32:B7:26:GLY:N	2.59	0.60
35:BA:493:G:H2'	35:BA:494:G:O4'	2.01	0.60
35:BA:572:A:C2	35:BA:2033:A:C2	2.89	0.60
35:BA:1514:U:H2'	35:BA:1515:G:H8	1.65	0.60
35:BA:2131:G:C8	35:BA:2133:G:N2	2.69	0.60
35:BA:2174:C:O2'	35:BA:2175:C:H5'	2.02	0.60
38:BD:209:ALA:C	38:BD:210:GLY:O	2.42	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BK:6:ALA:O	43:BK:58:THR:HG23	2.01	0.60
47:BP:101:VAL:HG12	47:BP:106:LEU:HB2	1.83	0.60
47:BP:112:LEU:H	47:BP:128:HIS:CD2	2.18	0.60
48:BQ:52:VAL:O	48:BQ:55:VAL:HG12	2.01	0.60
48:BQ:55:VAL:HG21	57:BZ:178:GLU:HG2	1.83	0.60
49:BR:72:ASP:CG	49:BR:75:LEU:H	2.08	0.60
50:BS:74:ALA:HB1	50:BS:103:GLU:CB	2.31	0.60
50:BS:106:ARG:HH11	50:BS:106:ARG:CB	2.06	0.60
53:BV:69:LYS:HE3	53:BV:71:LEU:HD21	1.83	0.60
1:AA:52:G:O2'	1:AA:53:A:H5'	2.02	0.60
1:AA:1131:G:C6	1:AA:1132:C:N4	2.70	0.60
10:AJ:20:ALA:C	10:AJ:22:LYS:N	2.53	0.60
13:AM:22:ILE:HD12	13:AM:22:ILE:N	2.15	0.60
16:AP:25:ARG:HH11	16:AP:25:ARG:HG3	1.67	0.60
20:AT:16:HIS:O	20:AT:19:SER:HB3	2.01	0.60
24:AY:343:ASN:HD21	24:AY:345:THR:CB	2.10	0.60
26:B1:41:ARG:HH22	35:BA:1365:A:C5'	2.12	0.60
35:BA:212:G:C8	35:BA:212:G:H3'	2.36	0.60
35:BA:389:G:N1	47:BP:71:VAL:HG12	2.16	0.60
35:BA:640:C:C4	35:BA:641:C:N4	2.69	0.60
35:BA:814:C:H2'	35:BA:815:C:C6	2.36	0.60
35:BA:949:C:H2'	35:BA:950:G:H8	1.66	0.60
35:BA:1012:U:H5	45:BN:28:THR:HG21	1.66	0.60
35:BA:1059:G:H4'	43:BK:115:LEU:HD23	1.82	0.60
35:BA:1063:G:O2'	43:BK:87:GLY:HA3	2.01	0.60
35:BA:1495:A:C8	35:BA:1495:A:OP1	2.55	0.60
35:BA:1654:A:OP2	49:BR:3:HIS:HB2	2.01	0.60
35:BA:1775:U:C2'	35:BA:1776:G:H5'	2.32	0.60
35:BA:2113:U:H2'	35:BA:2114:A:H8	1.65	0.60
41:BG:61:ALA:HB1	41:BG:66:GLN:O	2.01	0.60
46:BO:114:ILE:H	46:BO:114:ILE:CD1	2.10	0.60
48:BQ:26:TYR:CE2	48:BQ:140:ALA:HB3	2.36	0.60
51:BT:49:VAL:O	51:BT:49:VAL:HG22	2.01	0.60
51:BT:50:ILE:HA	51:BT:99:LEU:CD1	2.31	0.60
52:BU:79:PHE:HE1	52:BU:83:LEU:HD11	1.66	0.60
57:BZ:180:VAL:HG12	57:BZ:181:GLU:CG	2.30	0.60
1:AA:658:G:H2'	1:AA:659:U:C6	2.36	0.60
1:AA:1116:C:H2'	1:AA:1117:G:C5'	2.26	0.60
3:AC:14:ILE:CG1	3:AC:15:THR:N	2.64	0.60
10:AJ:47:PHE:HD2	14:AN:44:LEU:HD21	1.66	0.60
17:AQ:9:VAL:CG1	17:AQ:56:VAL:HG22	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:21:ILE:CG2	24:AY:88:VAL:HG13	2.31	0.60
24:AY:485:GLU:HG3	24:AY:553:GLY:HA3	1.81	0.60
24:AY:510:VAL:HG22	24:AY:534:ILE:CD1	2.32	0.60
24:AY:515:GLU:CD	24:AY:564:LYS:HD3	2.27	0.60
26:B1:87:PRO:HG2	26:B1:88:LYS:H	1.66	0.60
31:B6:48:VAL:CG2	31:B6:49:HIS:N	2.65	0.60
32:B7:35:ARG:O	32:B7:38:GLY:N	2.34	0.60
35:BA:286:C:H2'	35:BA:287:C:C6	2.36	0.60
35:BA:425:G:H2'	35:BA:426:C:H6	1.65	0.60
35:BA:859:G:N2	35:BA:917:A:OP2	2.27	0.60
35:BA:1278:A:H5"	49:BR:36:THR:HG22	1.84	0.60
35:BA:1948:G:H2'	35:BA:1949:G:H5'	1.82	0.60
37:BC:185:LYS:O	37:BC:186:LEU:C	2.44	0.60
38:BD:267:SER:O	38:BD:269:PHE:N	2.33	0.60
41:BG:41:GLN:CB	41:BG:43:LEU:HD21	2.29	0.60
45:BN:30:ILE:HG22	45:BN:34:LEU:HD23	1.82	0.60
45:BN:120:LEU:HD11	45:BN:122:VAL:HG23	1.82	0.60
48:BQ:75:THR:CG2	48:BQ:76:LYS:H	2.14	0.60
54:BW:15:ARG:HA	54:BW:18:ARG:HD2	1.84	0.60
1:AA:631:G:C2'	1:AA:632:A:C8	2.83	0.60
1:AA:812:C:O2'	1:AA:813:U:OP2	2.15	0.60
1:AA:1057:G:N2	1:AA:1204:A:H1'	2.15	0.60
4:AD:73:ARG:HD2	4:AD:77:ASN:HD21	1.65	0.60
5:AE:101:ILE:HD13	5:AE:101:ILE:H	1.66	0.60
8:AH:49:GLU:HG3	8:AH:51:VAL:HG13	1.84	0.60
24:AY:66:THR:O	24:AY:67:ALA:HB3	2.01	0.60
24:AY:70:THR:O	24:AY:80:ASN:HA	2.02	0.60
24:AY:427:ALA:O	24:AY:431:LEU:HB2	2.00	0.60
24:AY:441:SER:O	24:AY:449:THR:HG23	2.01	0.60
58:AY:701:FUA:H12	58:AY:701:FUA:O1	2.00	0.60
27:B2:63:VAL:CG1	27:B2:67:LYS:HE2	2.31	0.60
33:B8:52:LYS:HE2	35:BA:834:C:H4'	1.82	0.60
35:BA:143(A):C:H4'	55:BX:38:GLU:OE2	2.02	0.60
35:BA:287:C:H2'	35:BA:288:C:H6	1.66	0.60
35:BA:1105:U:H2'	35:BA:1106:G:O4'	2.02	0.60
35:BA:1541:G:O2'	35:BA:1542:A:H5"	2.02	0.60
35:BA:2305:A:C4	41:BG:154:GLY:HA3	2.37	0.60
36:BB:20:C:H2'	36:BB:21:G:C5'	2.30	0.60
36:BB:106:G:C5'	57:BZ:31:ARG:HB3	2.30	0.60
41:BG:55:LYS:HD3	41:BG:55:LYS:C	2.26	0.60
41:BG:97:ASP:CB	41:BG:98:ARG:HH12	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:107:LEU:HD23	41:BG:111:LEU:CD1	2.32	0.60
42:BH:104:GLU:HA	42:BH:113:VAL:O	2.02	0.60
49:BR:101:ALA:O	49:BR:102:GLU:HB2	2.01	0.60
51:BT:1:MET:SD	51:BT:1:MET:C	2.85	0.60
55:BX:18:TYR:C	55:BX:20:GLY:H	2.09	0.60
55:BX:27:THR:HB	55:BX:80:ILE:CG2	2.27	0.60
56:BY:84:ARG:HG2	56:BY:84:ARG:NH1	2.16	0.60
1:AA:950:U:H2'	1:AA:951:G:H8	1.67	0.60
1:AA:1303:C:C2'	1:AA:1304:G:H5'	2.32	0.60
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.67	0.60
1:AA:1423:G:P	46:BO:49:ARG:HH22	2.25	0.60
2:AB:51:LEU:CD2	2:AB:201:ILE:HG23	2.31	0.60
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.99	0.60
10:AJ:5:ARG:HA	10:AJ:73:ASP:OD1	2.02	0.60
12:AL:38:THR:CG2	12:AL:57:LYS:HB3	2.31	0.60
12:AL:80:HIS:O	12:AL:81:SER:HB2	2.02	0.60
28:B3:8:LEU:HD22	28:B3:31:LEU:CD2	2.23	0.60
35:BA:363:G:H2'	35:BA:363(A):A:H8	1.67	0.60
35:BA:1328:G:H2'	35:BA:1330:C:C4	2.37	0.60
35:BA:2860:A:C2'	35:BA:2861:G:H5'	2.31	0.60
39:BE:7:VAL:HG12	39:BE:27:LEU:HB3	1.84	0.60
39:BE:25:VAL:HG11	39:BE:181:LEU:HD12	1.84	0.60
39:BE:33:VAL:HG12	39:BE:90:THR:H	1.66	0.60
39:BE:78:LEU:C	39:BE:79:ARG:HD2	2.27	0.60
45:BN:133:GLN:CG	45:BN:134:ARG:N	2.62	0.60
47:BP:101:VAL:HG12	47:BP:106:LEU:HB3	1.84	0.60
48:BQ:97:VAL:HG11	48:BQ:103:MET:CE	2.31	0.60
50:BS:12:PHE:C	50:BS:12:PHE:CD1	2.79	0.60
1:AA:1312:G:O2'	1:AA:1313:U:H5'	2.01	0.60
1:AA:1314:C:OP2	19:AS:6:LYS:HD3	2.02	0.60
1:AA:1360:A:H2'	1:AA:1361:G:O4'	2.02	0.60
7:AG:78:ARG:HG3	7:AG:79:ARG:N	2.16	0.60
8:AH:19:VAL:O	8:AH:19:VAL:HG23	2.02	0.60
10:AJ:33:GLN:N	10:AJ:75:ILE:HD11	2.17	0.60
24:AY:277:VAL:CG1	24:AY:278:ASP:H	2.14	0.60
24:AY:435:ASP:OD1	58:AY:701:FUA:H22	2.00	0.60
28:B3:15:TYR:HB3	28:B3:19:GLN:NE2	2.17	0.60
30:B5:4:HIS:CB	30:B5:5:PRO:HD3	2.32	0.60
33:B8:6:THR:HG21	33:B8:63:PRO:HD3	1.84	0.60
33:B8:48:PHE:O	33:B8:49:VAL:HG22	2.02	0.60
35:BA:491:G:H2'	35:BA:492:A:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1775:U:H2'	35:BA:1776:G:H5'	1.84	0.60
35:BA:2442:C:H2'	35:BA:2443:C:H6	1.67	0.60
37:BC:43:GLU:HG3	37:BC:216:THR:HG23	1.82	0.60
38:BD:267:SER:HA	38:BD:270:ILE:HD11	1.83	0.60
42:BH:65:HIS:CE1	42:BH:69:ARG:HH11	2.19	0.60
45:BN:133:GLN:CG	45:BN:134:ARG:H	2.15	0.60
46:BO:3:GLN:HB2	46:BO:4:PRO:HD2	1.84	0.60
48:BQ:21:THR:HG23	48:BQ:101:ARG:HB2	1.84	0.60
50:BS:36:TYR:O	50:BS:37:ALA:HB2	2.02	0.60
52:BU:95:LEU:HD13	53:BV:4:ILE:HG23	1.83	0.60
52:BU:104:GLN:HB3	53:BV:44:LYS:HZ3	1.67	0.60
54:BW:6:ILE:HG21	54:BW:8:ARG:NH1	2.16	0.60
1:AA:370:C:O2'	1:AA:371:G:H5'	2.02	0.60
1:AA:538:G:O2'	1:AA:539:A:H5'	2.01	0.60
1:AA:624:C:H4'	16:AP:10:GLY:C	2.27	0.60
1:AA:1005:A:H5'	1:AA:1006:C:OP2	2.02	0.60
1:AA:1344:C:O2'	1:AA:1345:U:H5'	2.02	0.60
1:AA:1347:G:O2'	1:AA:1348:U:OP2	2.19	0.60
3:AC:58:GLU:HB2	3:AC:65:ALA:HB2	1.84	0.60
3:AC:72:LYS:CA	3:AC:72:LYS:HE3	2.31	0.60
3:AC:73:PRO:O	3:AC:76:VAL:HG22	2.02	0.60
3:AC:119:ARG:O	3:AC:123:GLN:HG3	2.01	0.60
3:AC:149:ALA:HA	3:AC:201:TYR:O	2.02	0.60
4:AD:104:VAL:HG21	4:AD:140:VAL:HG21	1.83	0.60
5:AE:8:GLU:HA	5:AE:34:VAL:HA	1.82	0.60
17:AQ:22:LEU:HD13	17:AQ:41:LYS:HG2	1.83	0.60
24:AY:87:HIS:O	24:AY:88:VAL:C	2.44	0.60
24:AY:288:PRO:HG2	24:AY:300:GLU:OE1	2.02	0.60
24:AY:340:TYR:CE2	24:AY:351:ARG:HD3	2.37	0.60
24:AY:681:LYS:HA	24:AY:684:GLN:HB2	1.84	0.60
35:BA:568:U:H2'	35:BA:570:G:OP2	2.02	0.60
35:BA:653:A:H5'	35:BA:654:A:OP2	2.01	0.60
35:BA:1114:G:H2'	35:BA:1115:G:H5'	1.83	0.60
35:BA:1748:G:H5'	35:BA:1748:G:C8	2.34	0.60
35:BA:2312:U:H2'	35:BA:2313:C:C5'	2.28	0.60
35:BA:2373:G:H2'	35:BA:2374:C:C6	2.37	0.60
38:BD:39:LYS:NZ	38:BD:87:ASN:HB3	2.16	0.60
42:BH:46:GLU:OE1	42:BH:51:ARG:HB2	2.02	0.60
47:BP:127:ALA:HB3	47:BP:130:PHE:CE1	2.36	0.60
49:BR:12:ARG:CG	49:BR:12:ARG:NH1	2.61	0.60
51:BT:25:GLY:HA2	51:BT:92:GLY:CA	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BV:40:LEU:HD13	53:BV:46:VAL:H	1.66	0.60
56:BY:88:LYS:O	56:BY:90:LEU:HD23	2.02	0.60
1:AA:60:A:C5'	1:AA:331:G:H22	2.14	0.59
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.16	0.59
6:AF:51:PRO:HA	6:AF:55:ASP:O	2.01	0.59
13:AM:22:ILE:N	13:AM:22:ILE:CD1	2.64	0.59
22:AV:75:C:H2'	22:AV:76:A:H8	1.66	0.59
24:AY:123:ARG:HH11	24:AY:123:ARG:HG3	1.67	0.59
24:AY:225:GLU:O	24:AY:228:MET:HE2	2.02	0.59
24:AY:273:LEU:O	24:AY:276:VAL:HB	2.02	0.59
24:AY:316:ILE:HD12	24:AY:326:THR:HG22	1.84	0.59
24:AY:415:PRO:HB2	24:AY:421:GLN:HA	1.84	0.59
30:B5:48:GLU:O	30:B5:49:CYS:HB3	2.02	0.59
32:B7:35:ARG:HH11	32:B7:35:ARG:HG2	1.67	0.59
35:BA:611:C:H2'	35:BA:612:C:C6	2.37	0.59
35:BA:813:U:H2'	35:BA:814:C:H6	1.63	0.59
35:BA:1858:G:O2'	35:BA:1884:A:N6	2.34	0.59
35:BA:1909:C:O2'	35:BA:1910:G:H5'	2.02	0.59
38:BD:27:THR:HG23	38:BD:83:GLU:HG2	1.83	0.59
39:BE:81:ILE:O	39:BE:81:ILE:CG2	2.50	0.59
42:BH:30:LYS:HD2	42:BH:81:GLU:HG2	1.84	0.59
42:BH:54:ARG:HD2	42:BH:54:ARG:O	2.02	0.59
1:AA:46:G:O2'	1:AA:365:U:H1'	2.02	0.59
1:AA:174:C:H2'	1:AA:175:C:H6	1.66	0.59
1:AA:598:U:H2'	1:AA:599:C:C6	2.37	0.59
2:AB:54:THR:HG22	2:AB:58:ILE:HD11	1.82	0.59
10:AJ:29:ARG:CZ	10:AJ:29:ARG:HB3	2.30	0.59
10:AJ:33:GLN:HB2	10:AJ:75:ILE:HD13	1.83	0.59
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.45	0.59
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.17	0.59
12:AL:27:LEU:HB2	12:AL:62:SER:HB2	1.84	0.59
13:AM:22:ILE:HG22	13:AM:66:LEU:HD23	1.84	0.59
14:AN:12:ARG:HH11	14:AN:12:ARG:CB	2.15	0.59
24:AY:16:GLY:N	24:AY:101:LEU:HD13	2.17	0.59
24:AY:84:THR:N	24:AY:85:PRO:CD	2.63	0.59
24:AY:281:PRO:HB2	24:AY:286:ILE:HD11	1.84	0.59
24:AY:335:LEU:HD23	24:AY:355:LEU:HD11	1.84	0.59
24:AY:528:ALA:HB3	24:AY:567:LEU:O	2.01	0.59
31:B6:45:LYS:HD3	35:BA:2371:G:O3'	2.02	0.59
35:BA:484:C:H2'	35:BA:485:C:C6	2.38	0.59
35:BA:1138:G:H2'	35:BA:1139:G:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1142:U:O5'	35:BA:1142:U:H6	1.85	0.59
35:BA:1308:A:H2'	35:BA:1309:G:O4'	2.02	0.59
35:BA:1582:C:O2'	35:BA:1586:A:C8	2.53	0.59
35:BA:1818:U:C5'	38:BD:157:ARG:HB2	2.24	0.59
35:BA:2062:A:N3	35:BA:2062:A:O4'	2.33	0.59
36:BB:15:A:H1'	36:BB:110:G:C5	2.37	0.59
38:BD:43:ARG:NH1	38:BD:49:ILE:HG22	2.16	0.59
39:BE:25:VAL:HG12	39:BE:26:ILE:N	2.16	0.59
40:BF:110:LEU:HD11	40:BF:202:PHE:CE1	2.36	0.59
46:BO:34:THR:O	46:BO:35:VAL:C	2.45	0.59
4:AD:57:ARG:HG2	4:AD:57:ARG:HH11	1.67	0.59
7:AG:15:ASP:HB3	7:AG:20:ASP:H	1.67	0.59
18:AR:69:THR:O	18:AR:72:ARG:N	2.35	0.59
20:AT:29:LYS:O	20:AT:33:ILE:HG13	2.02	0.59
31:B6:47:THR:HG23	31:B6:48:VAL:H	1.66	0.59
35:BA:1220:A:H3'	35:BA:1221:C:C5'	2.33	0.59
35:BA:1525:G:H2'	35:BA:1526:G:C8	2.37	0.59
35:BA:1542:A:H5'	35:BA:1543:C:OP2	2.02	0.59
35:BA:2504:U:H6	35:BA:2504:U:O5'	1.85	0.59
35:BA:2893:G:H5'	35:BA:2894:G:H5'	1.84	0.59
40:BF:9:ILE:HG12	40:BF:15:SER:N	2.17	0.59
48:BQ:109:VAL:HG12	48:BQ:110:THR:N	2.16	0.59
50:BS:98:VAL:HG12	50:BS:100:ALA:N	2.17	0.59
52:BU:98:LEU:O	52:BU:106:PHE:HB2	2.01	0.59
55:BX:10:ALA:HB1	55:BX:11:PRO:HD2	1.84	0.59
56:BY:51:VAL:C	56:BY:53:PRO:HD2	2.28	0.59
57:BZ:14:LYS:HB2	57:BZ:17:ALA:HB3	1.83	0.59
57:BZ:167:PRO:O	57:BZ:168:GLU:CB	2.50	0.59
1:AA:608:A:O2'	1:AA:609:A:H5'	2.01	0.59
1:AA:853:G:O2'	1:AA:854:G:H5'	2.02	0.59
1:AA:1338:G:O2'	22:AV:42:G:C5'	2.50	0.59
6:AF:68:PRO:HG2	6:AF:71:ARG:HB2	1.85	0.59
8:AH:120:THR:O	8:AH:121:ASP:C	2.42	0.59
9:AI:5:TYR:HD2	9:AI:17:VAL:O	1.86	0.59
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.65	0.59
9:AI:70:LYS:O	9:AI:74:ILE:HG13	2.03	0.59
24:AY:230:LYS:HB2	24:AY:230:LYS:NZ	2.18	0.59
24:AY:496:LYS:CE	24:AY:498:ILE:HD11	2.21	0.59
24:AY:510:VAL:HG12	24:AY:511:LYS:N	2.17	0.59
26:B1:23:LYS:HD3	26:B1:28:GLY:HA3	1.84	0.59
29:B4:1:MET:CE	41:BG:66:GLN:OE1	2.46	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:208:C:H2'	35:BA:209:C:C6	2.36	0.59
35:BA:272(J):C:H3'	35:BA:274:G:C5'	2.21	0.59
35:BA:602:G:H4'	35:BA:604:G:H4'	1.84	0.59
35:BA:1542:A:H3'	35:BA:1542:A:C8	2.37	0.59
35:BA:2733:A:H2'	35:BA:2734:A:O4'	2.02	0.59
39:BE:101:ARG:CZ	39:BE:171:GLU:HB2	2.31	0.59
39:BE:103:ASP:CG	39:BE:201:THR:HA	2.27	0.59
40:BF:64:ILE:HG12	40:BF:65:TRP:CG	2.37	0.59
42:BH:146:ALA:O	42:BH:149:ARG:N	2.36	0.59
43:BK:17:ALA:HB3	43:BK:38:VAL:CG1	2.33	0.59
51:BT:29:ARG:HG3	51:BT:30:VAL:HG13	1.85	0.59
51:BT:99:LEU:HB2	51:BT:101:PHE:CE1	2.37	0.59
54:BW:66:GLU:HA	54:BW:69:LEU:CD1	2.32	0.59
1:AA:219:C:H2'	1:AA:220:G:O4'	2.03	0.59
1:AA:339:C:OP2	46:BO:97:ARG:NH1	2.35	0.59
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.02	0.59
5:AE:36:ASP:O	5:AE:37:ARG:HB2	2.01	0.59
7:AG:79:ARG:O	7:AG:80:VAL:HG13	2.03	0.59
9:AI:43:ALA:HA	9:AI:74:ILE:HD13	1.83	0.59
11:AK:103:LEU:N	11:AK:103:LEU:HD22	2.16	0.59
12:AL:37:CYS:HB3	12:AL:79:GLU:O	2.02	0.59
15:AO:18:PHE:CD1	15:AO:18:PHE:C	2.80	0.59
22:AV:14:A:H1'	22:AV:22:G:N2	2.17	0.59
29:B4:2:LYS:HB2	36:BB:40:U:O4	2.01	0.59
29:B4:10:VAL:N	29:B4:26:SER:O	2.35	0.59
29:B4:22:ILE:CG2	29:B4:23:GLU:N	2.65	0.59
34:B9:3:VAL:O	34:B9:4:ARG:HB3	2.00	0.59
35:BA:941:A:H4'	47:BP:35:HIS:HE1	1.65	0.59
35:BA:1028:A:H61	35:BA:1125:G:H2'	1.66	0.59
35:BA:1043:C:C3'	35:BA:1044:G:H5"	2.32	0.59
35:BA:1336:A:H2'	35:BA:1337:G:H8	1.67	0.59
38:BD:9:TYR:CD1	38:BD:10:THR:CG2	2.86	0.59
39:BE:188:VAL:HG23	39:BE:189:PRO:HD2	1.84	0.59
42:BH:31:GLY:O	42:BH:79:VAL:HG12	2.03	0.59
43:BK:100:THR:CA	43:BK:139:VAL:HB	2.30	0.59
50:BS:11:LYS:HD2	50:BS:11:LYS:N	2.16	0.59
51:BT:118:ARG:HA	51:BT:121:ILE:HD12	1.85	0.59
55:BX:53:LYS:HD2	55:BX:55:ASN:HD21	1.68	0.59
56:BY:13:VAL:HG22	56:BY:14:LEU:H	1.67	0.59
1:AA:187:C:OP1	20:AT:82:SER:HB2	2.02	0.59
1:AA:490:G:H2'	1:AA:491:G:C8	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:491:G:H2'	1:AA:492:G:C8	2.34	0.59
1:AA:1314:C:H2'	1:AA:1315:U:H6	1.67	0.59
1:AA:1430:C:C2	1:AA:1471:G:N2	2.71	0.59
1:AA:1489:G:C3'	1:AA:1490:C:H5"	2.32	0.59
4:AD:192:GLU:H	4:AD:192:GLU:CD	2.09	0.59
5:AE:10:MET:HG3	5:AE:32:VAL:HG22	1.85	0.59
6:AF:9:VAL:HB	6:AF:87:ARG:HB2	1.84	0.59
8:AH:6:ILE:CD1	8:AH:6:ILE:H	2.16	0.59
15:AO:82:ILE:HG12	15:AO:87:ILE:HG12	1.85	0.59
24:AY:402:ILE:HD12	24:AY:402:ILE:H	1.68	0.59
24:AY:468:ARG:HH11	24:AY:468:ARG:CG	2.15	0.59
26:B1:6:GLU:OE1	26:B1:60:PHE:HA	2.02	0.59
30:B5:7:PRO:HG2	35:BA:2016:U:O2	2.02	0.59
35:BA:118:A:OP2	35:BA:119:A:H2'	2.02	0.59
35:BA:158:U:H2'	35:BA:171:G:O4'	2.02	0.59
35:BA:278:A:C2	35:BA:279:C:C2	2.90	0.59
35:BA:336:C:H4'	56:BY:7:VAL:CG2	2.33	0.59
35:BA:1902:C:H4'	38:BD:244:ARG:CB	2.32	0.59
35:BA:2439:A:C8	35:BA:2586:C:H4'	2.37	0.59
35:BA:2604:U:H2'	35:BA:2605:U:H6	1.68	0.59
35:BA:2688:U:H1'	35:BA:2721:A:N6	2.17	0.59
36:BB:48:A:H2'	36:BB:49:C:C6	2.38	0.59
37:BC:150:ILE:HD12	37:BC:153:ILE:HB	1.83	0.59
37:BC:195:ARG:HH11	37:BC:195:ARG:HG3	1.67	0.59
38:BD:73:VAL:O	38:BD:75:ILE:HG12	2.02	0.59
38:BD:92:ILE:H	38:BD:92:ILE:HD13	1.68	0.59
38:BD:172:TYR:HD1	38:BD:186:HIS:HA	1.67	0.59
41:BG:135:LEU:CD1	41:BG:135:LEU:O	2.51	0.59
42:BH:72:ILE:O	42:BH:75:ALA:N	2.34	0.59
46:BO:104:ARG:C	46:BO:106:LEU:N	2.59	0.59
55:BX:18:TYR:C	55:BX:20:GLY:N	2.58	0.59
57:BZ:107:THR:HG23	57:BZ:111:VAL:HB	1.84	0.59
1:AA:1305:G:N2	1:AA:1331:G:O2'	2.27	0.59
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.03	0.59
3:AC:140:ARG:HH11	3:AC:140:ARG:HG3	1.68	0.59
24:AY:122:TRP:C	24:AY:124:GLN:N	2.58	0.59
24:AY:227:ILE:HG23	24:AY:237:PRO:HG2	1.85	0.59
24:AY:554:PRO:HG2	24:AY:555:LEU:HG	1.83	0.59
30:B5:3:LYS:HG2	35:BA:747:U:O4	2.03	0.59
32:B7:26:GLY:O	32:B7:30:VAL:HG23	2.03	0.59
33:B8:8:LYS:HE3	35:BA:245:G:O6	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:15:G:O2'	35:BA:16:G:H5'	2.02	0.59
35:BA:445:C:O2'	35:BA:446:G:H5'	2.02	0.59
35:BA:667:U:H2'	35:BA:668:G:O4'	2.01	0.59
35:BA:938:G:H2'	35:BA:939:G:H8	1.68	0.59
35:BA:1197:G:H2'	35:BA:1198:U:H6	1.66	0.59
35:BA:1791:A:C6	35:BA:1829:A:H5'	2.38	0.59
35:BA:2392:A:H8	47:BP:60:MET:HB3	1.68	0.59
51:BT:65:LYS:HA	51:BT:65:LYS:HZ1	1.67	0.59
1:AA:499:A:O2'	1:AA:500:G:C8	2.53	0.59
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.38	0.59
1:AA:1271:G:H2'	1:AA:1272:G:H8	1.68	0.59
3:AC:136:GLN:C	3:AC:138:VAL:N	2.57	0.59
4:AD:190:ASP:HB3	4:AD:193:ASP:OD2	2.03	0.59
7:AG:97:GLN:O	7:AG:98:SER:C	2.45	0.59
24:AY:180:VAL:CG2	24:AY:216:LEU:HD12	2.33	0.59
24:AY:457:LEU:O	24:AY:461:ILE:HG13	2.02	0.59
25:B0:26:TYR:HE2	35:BA:857:C:H1'	1.68	0.59
30:B5:3:LYS:CE	35:BA:2613:U:H2'	2.32	0.59
35:BA:212:G:C8	35:BA:212:G:C3'	2.84	0.59
35:BA:528:A:H2	35:BA:2043:C:H4'	1.66	0.59
35:BA:1654:A:P	49:BR:3:HIS:HB2	2.43	0.59
35:BA:1718:G:H8	35:BA:1718:G:C5'	2.15	0.59
35:BA:2870:C:O2'	35:BA:2871:C:H5'	2.03	0.59
37:BC:108:TRP:HE1	37:BC:110:ASP:HB2	1.66	0.59
38:BD:240:ALA:HB1	38:BD:241:PRO:HD2	1.84	0.59
43:BK:68:VAL:CG1	43:BK:70:LYS:NZ	2.57	0.59
48:BQ:59:ARG:O	48:BQ:60:ARG:HB2	2.01	0.59
50:BS:51:ALA:HB3	50:BS:73:LEU:HB2	1.85	0.59
52:BU:25:TRP:O	52:BU:28:ARG:HB2	2.03	0.59
1:AA:265:G:H5'	17:AQ:64:PRO:O	2.02	0.59
1:AA:296:U:O2'	1:AA:297:G:H5'	2.02	0.59
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.32	0.59
2:AB:233:SER:CB	2:AB:234:PRO:HD2	2.32	0.59
10:AJ:96:ILE:HD13	10:AJ:96:ILE:H	1.66	0.59
12:AL:7:ILE:O	12:AL:11:VAL:HG23	2.03	0.59
12:AL:126:LYS:HG3	12:AL:128:ALA:N	2.13	0.59
25:B0:20:ARG:CG	25:B0:20:ARG:NH1	2.62	0.59
35:BA:191:A:O2'	35:BA:192:C:H5'	2.03	0.59
35:BA:364:C:H2'	35:BA:365:C:H5'	1.84	0.59
35:BA:947:G:N3	35:BA:984:A:H2	2.00	0.59
35:BA:1102:C:H2'	35:BA:1103:A:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1147:C:H2'	35:BA:1148:A:H8	1.67	0.59
35:BA:2795:G:H2'	35:BA:2795:G:N3	2.18	0.59
41:BG:119:GLY:HA3	41:BG:181:ARG:H	1.67	0.59
47:BP:95:VAL:HG23	47:BP:125:VAL:HG23	1.85	0.59
48:BQ:19:GLY:HA3	57:BZ:79:ARG:HH12	1.67	0.59
50:BS:98:VAL:C	50:BS:100:ALA:N	2.60	0.59
53:BV:18:LEU:HD13	53:BV:19:LYS:H	1.66	0.59
53:BV:19:LYS:HG2	53:BV:94:LEU:HB2	1.84	0.59
1:AA:277:C:C2'	1:AA:278:G:H5'	2.33	0.59
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.60	0.59
4:AD:58:LEU:HD22	4:AD:59:ARG:NH1	2.18	0.59
7:AG:12:LEU:CD1	7:AG:25:ALA:HB2	2.33	0.59
15:AO:9:GLN:HB3	15:AO:13:GLN:NE2	2.18	0.59
19:AS:9:VAL:HG21	29:B4:53:GLU:HG3	1.85	0.59
24:AY:73:PHE:CE2	24:AY:78:ARG:HB2	2.38	0.59
24:AY:289:ILE:O	24:AY:301:ILE:HG12	2.03	0.59
24:AY:524:GLU:O	24:AY:565:VAL:N	2.28	0.59
24:AY:530:VAL:HG22	24:AY:531:GLY:H	1.68	0.59
31:B6:7:ILE:HG22	31:B6:7:ILE:O	2.02	0.59
31:B6:45:LYS:HG2	35:BA:2371:G:H5"	1.84	0.59
31:B6:54:ILE:HD13	35:BA:2420:C:C5'	2.32	0.59
35:BA:16:G:H2'	35:BA:17:G:H8	1.68	0.59
35:BA:363(E):U:O2'	35:BA:363(F):A:O4'	2.21	0.59
35:BA:877:U:O2'	35:BA:878:A:H5"	2.03	0.59
35:BA:2236:C:H2'	35:BA:2237:G:O4'	2.03	0.59
36:BB:20:C:C2'	36:BB:21:G:H5"	2.33	0.59
37:BC:92:ALA:HB3	37:BC:95:VAL:CG2	2.33	0.59
37:BC:139:PRO:HA	37:BC:145:THR:CB	2.33	0.59
39:BE:34:VAL:O	39:BE:35:GLN:HB2	2.02	0.59
40:BF:158:THR:HG21	40:BF:163:VAL:HB	1.85	0.59
41:BG:97:ASP:HB2	41:BG:98:ARG:HH12	1.67	0.59
42:BH:17:VAL:HB	42:BH:45:VAL:HG13	1.84	0.59
43:BK:55:VAL:HG13	43:BK:57:ILE:HD11	1.85	0.59
45:BN:26:LEU:HD12	45:BN:26:LEU:O	2.02	0.59
45:BN:41:ASP:OD1	45:BN:41:ASP:N	2.33	0.59
46:BO:26:LYS:HB3	46:BO:30:ALA:HB2	1.85	0.59
51:BT:83:ILE:HG13	51:BT:84:GLN:HG2	1.85	0.59
51:BT:132:LYS:H	51:BT:132:LYS:HD3	1.68	0.59
1:AA:356:A:H1'	1:AA:368:U:O2'	2.03	0.58
1:AA:1006:C:H2'	1:AA:1007:C:C5	2.38	0.58
1:AA:1112:C:O2	3:AC:179:ARG:HG3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1292:U:H2'	1:AA:1293:G:H8	1.68	0.58
2:AB:207:ALA:O	2:AB:211:ILE:HG13	2.03	0.58
6:AF:37:VAL:HG12	6:AF:38:GLU:O	2.03	0.58
13:AM:6:GLY:C	13:AM:8:GLU:N	2.52	0.58
15:AO:29:VAL:HG11	15:AO:67:LEU:HD21	1.85	0.58
16:AP:60:LEU:HA	16:AP:64:ALA:HB3	1.83	0.58
22:AV:4:G:O2'	22:AV:5:G:C8	2.56	0.58
24:AY:86:GLY:O	24:AY:88:VAL:HG22	2.02	0.58
24:AY:100:VAL:HG22	24:AY:101:LEU:N	2.16	0.58
24:AY:519:ARG:HH21	24:AY:677:GLN:HB2	1.67	0.58
26:B1:44:PRO:HB2	26:B1:46:LEU:HD12	1.85	0.58
29:B4:14:ILE:HG22	29:B4:15:ILE:N	2.17	0.58
31:B6:39:TYR:OH	35:BA:2347:C:OP1	2.20	0.58
35:BA:328:U:H4'	56:BY:68:HIS:NE2	2.17	0.58
35:BA:363(D):G:O2'	35:BA:363(E):U:H5'	2.03	0.58
35:BA:1079:C:C1'	43:BK:132:ARG:HH22	2.16	0.58
35:BA:2314:C:HO2'	35:BA:2315:G:H5'	1.67	0.58
35:BA:2712:U:H1'	35:BA:2712(A):A:C8	2.38	0.58
35:BA:2732:G:H5"	35:BA:2733:A:C8	2.38	0.58
35:BA:2839:G:H2'	35:BA:2840:C:C6	2.38	0.58
39:BE:134:ILE:HG22	39:BE:137:HIS:HB2	1.83	0.58
47:BP:47:ASP:HB3	47:BP:48:PRO:O	2.01	0.58
47:BP:133:SER:O	47:BP:136:GLU:HG2	2.03	0.58
52:BU:68:ALA:O	52:BU:71:GLN:HB3	2.03	0.58
52:BU:95:LEU:CD1	53:BV:11:GLN:HG3	2.32	0.58
53:BV:62:LEU:HD22	53:BV:62:LEU:H	1.66	0.58
57:BZ:53:ILE:CG2	57:BZ:71:VAL:HB	2.30	0.58
1:AA:72:C:H2'	1:AA:73:G:C8	2.38	0.58
1:AA:687:A:N6	1:AA:703:G:H1'	2.18	0.58
1:AA:738:C:OP1	6:AF:2:ARG:NH1	2.34	0.58
1:AA:946:A:H3'	1:AA:947:G:H8	1.67	0.58
1:AA:1129:C:H6	1:AA:1129:C:H5'	1.67	0.58
1:AA:1281:U:H5'	1:AA:1282:C:OP2	2.02	0.58
2:AB:215:LEU:O	2:AB:219:VAL:HG23	2.02	0.58
3:AC:112:SER:OG	3:AC:114:PRO:HD2	2.03	0.58
19:AS:42:PRO:C	19:AS:43:GLU:CG	2.75	0.58
19:AS:60:VAL:O	19:AS:60:VAL:HG13	2.03	0.58
24:AY:17:ILE:N	24:AY:17:ILE:CD1	2.66	0.58
24:AY:85:PRO:HA	24:AY:94:VAL:CG2	2.17	0.58
24:AY:428:LEU:CD1	24:AY:440:VAL:HG11	2.25	0.58
30:B5:43:HIS:HD2	35:BA:2815:C:O2'	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1241:A:H2'	35:BA:1242:A:O4'	2.02	0.58
35:BA:1290:C:H2'	35:BA:1291:C:H6	1.67	0.58
35:BA:2131:G:H5'	35:BA:2133:G:H1'	1.84	0.58
38:BD:239:ARG:HH11	38:BD:239:ARG:HG2	1.68	0.58
39:BE:108:SER:O	39:BE:162:ALA:HA	2.03	0.58
40:BF:9:ILE:HG12	40:BF:14:PRO:C	2.28	0.58
40:BF:163:VAL:O	40:BF:166:ALA:HB3	2.03	0.58
47:BP:7:ARG:O	47:BP:10:PRO:HD2	2.03	0.58
52:BU:83:LEU:HD12	52:BU:83:LEU:N	2.17	0.58
56:BY:86:ARG:CB	56:BY:88:LYS:HZ2	2.10	0.58
1:AA:323:U:H2'	1:AA:324:G:O4'	2.04	0.58
1:AA:1237:C:OP1	1:AA:1238:A:H1'	2.03	0.58
1:AA:1439:C:H5"	1:AA:1439:C:C6	2.37	0.58
2:AB:44:LEU:H	2:AB:44:LEU:CD1	2.10	0.58
4:AD:98:GLU:OE2	4:AD:103:ASN:ND2	2.30	0.58
7:AG:89:MET:HE1	7:AG:156:TRP:OXT	2.03	0.58
10:AJ:6:ILE:O	10:AJ:71:LEU:HD12	2.03	0.58
10:AJ:13:HIS:O	10:AJ:17:ASP:HB2	2.03	0.58
12:AL:8:ASN:O	12:AL:12:ARG:HG3	2.03	0.58
12:AL:58:VAL:O	12:AL:65:GLU:HA	2.03	0.58
22:AV:3:C:C2'	22:AV:4:G:H5'	2.34	0.58
24:AY:525:PHE:HA	24:AY:565:VAL:O	2.03	0.58
24:AY:606:MET:HE2	24:AY:671:MET:HE3	1.84	0.58
31:B6:30:THR:HG22	31:B6:32:ASN:ND2	2.18	0.58
35:BA:451:C:H41	35:BA:453:C:H3'	1.68	0.58
35:BA:2103:C:H2'	35:BA:2103:C:O2	2.02	0.58
35:BA:2470:G:P	48:BQ:56:ARG:HH12	2.26	0.58
35:BA:2537:U:H2'	35:BA:2538:C:C6	2.38	0.58
38:BD:232:PRO:HD2	38:BD:249:PRO:HA	1.85	0.58
41:BG:111:LEU:HD22	41:BG:120:LEU:HD21	1.86	0.58
42:BH:17:VAL:O	42:BH:45:VAL:HG22	2.03	0.58
46:BO:2:ILE:HD11	46:BO:82:ASN:ND2	2.17	0.58
48:BQ:2:LEU:HD12	48:BQ:3:MET:N	2.19	0.58
49:BR:37:THR:HA	49:BR:111:LEU:HA	1.85	0.58
50:BS:12:PHE:C	50:BS:12:PHE:HD1	2.12	0.58
55:BX:90:GLU:HA	55:BX:93:GLU:HG2	1.84	0.58
57:BZ:59:LEU:HD11	57:BZ:88:PHE:CD2	2.38	0.58
1:AA:78:G:H1	1:AA:91:C:H42	1.50	0.58
1:AA:1445:C:H2'	1:AA:1446:U:H5'	1.85	0.58
2:AB:223:ILE:HG23	2:AB:226:ARG:NH1	2.19	0.58
4:AD:14:ARG:C	4:AD:16:GLY:N	2.60	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:91:VAL:HG12	7:AG:92:SER:N	2.18	0.58
8:AH:6:ILE:N	8:AH:6:ILE:CD1	2.66	0.58
10:AJ:8:LEU:HD21	10:AJ:96:ILE:HG22	1.81	0.58
12:AL:34:ARG:HG3	12:AL:105:TYR:CE1	2.32	0.58
13:AM:88:ARG:HG2	13:AM:88:ARG:HH11	1.68	0.58
16:AP:39:TYR:CE1	16:AP:73:LEU:HD21	2.38	0.58
19:AS:6:LYS:HG2	19:AS:7:LYS:HE3	1.84	0.58
22:AV:30:G:N2	22:AV:31:G:H1'	2.19	0.58
30:B5:19:ARG:HA	35:BA:2046:G:H5'	1.86	0.58
35:BA:1666:G:O3'	46:BO:6:THR:HG23	2.02	0.58
35:BA:2155:G:O2'	35:BA:2156:G:H5'	2.04	0.58
35:BA:2521:C:N4	35:BA:2544:G:H1	2.01	0.58
41:BG:77:ILE:CG2	41:BG:80:PHE:HB2	2.33	0.58
41:BG:164:GLU:C	41:BG:165:THR:HG23	2.28	0.58
42:BH:37:VAL:HG12	42:BH:38:SER:N	2.18	0.58
42:BH:149:ARG:HA	42:BH:162:ILE:HD12	1.84	0.58
43:BK:71:THR:HB	43:BK:72:PRO:HD2	1.84	0.58
45:BN:47:ALA:N	45:BN:48:MET:HE2	2.14	0.58
46:BO:103:ALA:HB1	46:BO:105:GLU:OE1	2.03	0.58
49:BR:99:LYS:H	49:BR:99:LYS:CD	1.92	0.58
52:BU:112:ARG:CZ	53:BV:46:VAL:HG21	2.33	0.58
56:BY:31:LEU:HD22	56:BY:31:LEU:H	1.66	0.58
1:AA:675:A:O2'	1:AA:676:A:H5'	2.04	0.58
1:AA:748:C:OP2	1:AA:748:C:H6	1.85	0.58
1:AA:936:C:H2'	1:AA:937:A:O4'	2.03	0.58
1:AA:1270:C:H4'	1:AA:1313:U:O2'	2.04	0.58
2:AB:41:ILE:O	2:AB:41:ILE:HG22	2.04	0.58
5:AE:149:GLU:O	5:AE:153:LYS:HE2	2.03	0.58
15:AO:81:LEU:O	15:AO:85:LEU:HB2	2.03	0.58
22:AV:75:C:H2'	22:AV:76:A:C8	2.38	0.58
24:AY:146:LEU:HD22	24:AY:147:TRP:CE3	2.38	0.58
31:B6:6:ARG:H	31:B6:6:ARG:HD2	1.69	0.58
32:B7:46:VAL:HG12	32:B7:47:ARG:N	2.18	0.58
35:BA:665:C:H2'	35:BA:666:G:H8	1.68	0.58
35:BA:786:C:O2'	35:BA:787:U:H5'	2.04	0.58
35:BA:996:A:O3'	52:BU:92:ARG:HG2	2.04	0.58
35:BA:1164:G:H1	35:BA:1185:C:H42	1.50	0.58
35:BA:1942:C:H3'	35:BA:1943:U:H5"	1.84	0.58
35:BA:2188:C:H2'	35:BA:2189:U:C6	2.39	0.58
35:BA:2473:U:C3'	35:BA:2474:C:H5"	2.07	0.58
35:BA:2701:C:H2'	35:BA:2702:U:H2'	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2860:A:H2'	35:BA:2861:G:H5'	1.85	0.58
36:BB:7:G:H5'	50:BS:29:PHE:CE2	2.39	0.58
42:BH:85:LYS:C	42:BH:85:LYS:HD3	2.28	0.58
42:BH:89:ILE:HG23	42:BH:129:THR:O	2.04	0.58
43:BK:106:GLU:CA	43:BK:109:LYS:HD3	2.24	0.58
47:BP:105:LEU:HD12	47:BP:105:LEU:H	1.67	0.58
57:BZ:99:TYR:CE1	57:BZ:125:LEU:HD13	2.38	0.58
57:BZ:120:ILE:HB	57:BZ:171:ILE:O	2.03	0.58
1:AA:368:U:OP2	24:AY:353:ALA:CB	2.52	0.58
1:AA:625:G:H4'	16:AP:16:HIS:HD2	1.64	0.58
2:AB:238:LEU:O	2:AB:239:VAL:C	2.46	0.58
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.34	0.58
4:AD:16:GLY:HA2	4:AD:33:MET:CE	2.31	0.58
4:AD:33:MET:HG3	4:AD:37:PRO:HA	1.86	0.58
5:AE:7:GLU:HB3	5:AE:35:GLY:O	2.04	0.58
18:AR:58:LEU:HB3	18:AR:62:GLU:CB	2.28	0.58
24:AY:77:HIS:CD2	24:AY:277:VAL:HG21	2.39	0.58
24:AY:227:ILE:HG23	24:AY:237:PRO:CG	2.33	0.58
24:AY:343:ASN:C	24:AY:343:ASN:ND2	2.60	0.58
24:AY:519:ARG:HH12	24:AY:678:GLU:CB	2.16	0.58
25:B0:11:ARG:HB2	25:B0:11:ARG:NH1	2.18	0.58
26:B1:90:ILE:O	26:B1:94:LEU:HD12	2.03	0.58
35:BA:78:A:H2'	35:BA:79:G:H8	1.69	0.58
35:BA:1326:U:H5"	35:BA:2011:U:H1'	1.86	0.58
35:BA:1831:G:H2'	35:BA:1832:C:C6	2.39	0.58
35:BA:2450:A:O2'	35:BA:2451:A:H5'	2.02	0.58
39:BE:98:PRO:CG	39:BE:175:VAL:HG12	2.32	0.58
45:BN:104:LYS:CE	45:BN:117:PHE:CD2	2.85	0.58
46:BO:98:VAL:HG23	46:BO:118:ALA:HA	1.86	0.58
47:BP:112:LEU:N	47:BP:128:HIS:HD2	2.02	0.58
49:BR:79:LEU:HD22	49:BR:83:ILE:HB	1.85	0.58
53:BV:61:VAL:HA	53:BV:94:LEU:HD23	1.84	0.58
57:BZ:9:TYR:N	57:BZ:9:TYR:CD1	2.68	0.58
57:BZ:54:HIS:HA	57:BZ:98:MET:HE1	1.85	0.58
1:AA:255:G:O6	1:AA:266:G:O6	2.22	0.58
1:AA:345:C:C5'	1:AA:346:G:OP1	2.52	0.58
1:AA:624:C:O2'	1:AA:625:G:H5'	2.04	0.58
1:AA:633:G:H5'	1:AA:634:C:OP2	2.03	0.58
1:AA:963:G:H21	10:AJ:55:LYS:HD2	1.68	0.58
1:AA:977:A:H3'	1:AA:977:A:N3	2.18	0.58
1:AA:1226:C:H5"	13:AM:103:THR:CB	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1321:C:H3'	1:AA:1322:C:C5'	2.20	0.58
1:AA:1382:C:H2'	1:AA:1383:C:C6	2.34	0.58
2:AB:142:LEU:O	2:AB:142:LEU:HD23	2.03	0.58
5:AE:36:ASP:OD2	5:AE:40:ARG:HB2	2.02	0.58
7:AG:149:ARG:HD3	11:AK:59:TYR:CE1	2.39	0.58
10:AJ:4:ILE:HD13	10:AJ:74:ILE:HG13	1.85	0.58
24:AY:215:LYS:O	24:AY:219:VAL:HG23	2.04	0.58
24:AY:337:SER:HB2	24:AY:355:LEU:HD23	1.84	0.58
29:B4:12:ALA:CB	29:B4:29:PRO:HA	2.34	0.58
35:BA:675:A:H4'	40:BF:67:GLN:OE1	2.03	0.58
35:BA:2855:C:H2'	35:BA:2856:C:H6	1.69	0.58
41:BG:108:ASN:C	41:BG:109:VAL:HG23	2.28	0.58
43:BK:68:VAL:HG12	43:BK:70:LYS:HZ1	1.64	0.58
45:BN:43:THR:HG22	45:BN:45:ASN:HD22	1.69	0.58
45:BN:134:ARG:O	45:BN:136:GLU:N	2.37	0.58
50:BS:67:ARG:NH2	50:BS:100:ALA:HB3	2.18	0.58
51:BT:108:ARG:HG3	51:BT:109:GLU:N	2.17	0.58
54:BW:17:VAL:O	54:BW:20:VAL:HG22	2.03	0.58
56:BY:62:GLU:CG	56:BY:63:LYS:H	2.16	0.58
1:AA:247:G:H4'	1:AA:247:G:OP1	2.04	0.58
1:AA:270:A:H2'	1:AA:271:C:C6	2.39	0.58
1:AA:724:G:O2'	1:AA:725:G:H5'	2.03	0.58
1:AA:953:G:H5'	1:AA:965:A:H61	1.67	0.58
1:AA:1226:C:H5'	13:AM:96:LEU:CD1	2.34	0.58
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.38	0.58
6:AF:4:TYR:CE1	6:AF:92:LYS:HD2	2.39	0.58
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.04	0.58
20:AT:48:LYS:HB3	20:AT:51:GLU:CG	2.32	0.58
20:AT:73:HIS:O	20:AT:74:LYS:C	2.47	0.58
24:AY:277:VAL:CG1	24:AY:278:ASP:N	2.63	0.58
26:B1:76:ARG:CZ	26:B1:95:LEU:HD22	2.34	0.58
29:B4:1:MET:HG2	41:BG:98:ARG:NE	2.19	0.58
32:B7:48:LYS:HZ3	35:BA:125:G:N2	2.02	0.58
35:BA:192:C:C2'	35:BA:193:U:H5'	2.31	0.58
35:BA:769:G:H2'	35:BA:770:G:C8	2.39	0.58
35:BA:818:G:OP2	35:BA:1187:G:O6	2.21	0.58
35:BA:1040:C:C4	35:BA:1041:C:C4	2.92	0.58
35:BA:1068:G:N2	35:BA:1096:A:H5'	2.17	0.58
35:BA:1242:A:N1	47:BP:8:PRO:HG2	2.18	0.58
35:BA:2688:U:O2	35:BA:2688:U:H3'	2.04	0.58
35:BA:2762:G:H5'	35:BA:2762:G:H8	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:39:LYS:HB2	38:BD:62:TYR:HB2	1.85	0.58
40:BF:66:PRO:O	40:BF:68:LYS:N	2.36	0.58
43:BK:57:ILE:HD12	43:BK:57:ILE:N	2.17	0.58
47:BP:6:LEU:HB3	47:BP:9:ASN:ND2	2.18	0.58
49:BR:12:ARG:HD3	49:BR:16:HIS:CD2	2.39	0.58
50:BS:25:ARG:HG3	50:BS:26:LEU:H	1.68	0.58
55:BX:47:PHE:HD2	55:BX:89:ILE:HG21	1.67	0.58
56:BY:3:VAL:O	56:BY:3:VAL:HG12	2.04	0.58
1:AA:54:C:H2'	1:AA:352:C:N4	2.18	0.58
1:AA:319:G:O2'	1:AA:320:C:H5'	2.04	0.58
1:AA:628:G:O2'	1:AA:629:G:H5'	2.03	0.58
1:AA:830:G:H2'	1:AA:831:U:C6	2.38	0.58
1:AA:1375:A:OP1	7:AG:12:LEU:HD21	2.04	0.58
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.86	0.58
5:AE:150:ARG:HB2	5:AE:150:ARG:HH11	1.69	0.58
10:AJ:3:LYS:HG3	10:AJ:75:ILE:O	2.04	0.58
10:AJ:61:GLU:HG3	14:AN:58:LYS:NZ	2.18	0.58
13:AM:108:ARG:HA	13:AM:108:ARG:HH11	1.69	0.58
16:AP:21:VAL:HG11	16:AP:59:TRP:NE1	2.19	0.58
16:AP:74:LEU:HD23	16:AP:79:VAL:HG21	1.83	0.58
20:AT:34:LYS:O	20:AT:37:SER:HB2	2.04	0.58
22:AV:17:C:C5'	22:AV:17(A):U:H6	2.01	0.58
22:AV:75:C:O2'	26:B1:30:VAL:HG11	2.03	0.58
35:BA:47:C:O5'	35:BA:47:C:H6	1.87	0.58
35:BA:967:C:O2'	35:BA:968:G:H5'	2.03	0.58
35:BA:1166:C:H2'	35:BA:1167:U:C6	2.38	0.58
35:BA:1175:U:H4'	35:BA:1176:G:H5'	1.84	0.58
35:BA:1196:C:O2'	35:BA:1227:G:H4'	2.04	0.58
35:BA:1865:G:C2'	35:BA:1866:C:H5"	2.34	0.58
35:BA:2245:U:H5'	35:BA:2246:G:C5'	2.30	0.58
38:BD:28:GLU:H	38:BD:29:PRO:HD2	1.67	0.58
38:BD:145:VAL:CG1	38:BD:146:GLU:N	2.65	0.58
41:BG:82:LEU:HD23	41:BG:82:LEU:C	2.29	0.58
42:BH:156:ALA:O	42:BH:158:HIS:N	2.37	0.58
45:BN:91:LEU:HD23	45:BN:98:VAL:HG21	1.86	0.58
48:BQ:41:TRP:NE1	48:BQ:96:VAL:HG22	2.18	0.58
54:BW:1:MET:HB3	54:BW:64:MET:HE3	1.85	0.58
54:BW:33:ARG:O	54:BW:37:ARG:HB2	2.04	0.58
1:AA:1117:G:O3'	9:AI:104:ARG:HD2	2.03	0.58
1:AA:1435:G:H2'	1:AA:1436:U:C5	2.39	0.58
2:AB:121:LEU:CD2	2:AB:126:GLU:HB2	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.72	0.58
20:AT:57:ARG:NH1	20:AT:102:GLY:HA2	2.19	0.58
24:AY:623:ASP:HB2	24:AY:662:LYS:HE3	1.86	0.58
30:B5:51:TYR:HD1	30:B5:52:TYR:H	1.51	0.58
35:BA:322:A:P	40:BF:169:ASN:HD22	2.26	0.58
35:BA:1052:C:O2'	35:BA:1053:C:O5'	2.22	0.58
35:BA:1245:G:H5"	40:BF:34:TRP:HZ2	1.69	0.58
39:BE:101:ARG:HH11	39:BE:169:ASN:HD22	1.50	0.58
40:BF:18:ARG:HG2	40:BF:19:GLU:H	1.69	0.58
43:BK:77:LEU:HD12	43:BK:107:ILE:CG2	2.28	0.58
43:BK:103:GLN:C	43:BK:106:GLU:HG2	2.29	0.58
45:BN:49:GLY:HA3	45:BN:119:ARG:HH12	1.69	0.58
48:BQ:55:VAL:CG2	57:BZ:178:GLU:HG2	2.34	0.58
52:BU:49:HIS:C	52:BU:52:ARG:HB2	2.29	0.58
53:BV:32:THR:CG2	53:BV:33:VAL:N	2.66	0.58
1:AA:99:U:H2'	1:AA:100:C:C6	2.39	0.57
1:AA:363:A:H5'	12:AL:34:ARG:HB2	1.86	0.57
1:AA:998:G:H2'	1:AA:999:C:N1	2.19	0.57
3:AC:32:LEU:HD22	3:AC:59:ARG:HH12	1.69	0.57
3:AC:127:ARG:HG2	3:AC:127:ARG:HH11	1.69	0.57
12:AL:70:ILE:HG13	12:AL:70:ILE:O	2.04	0.57
15:AO:53:HIS:O	15:AO:56:LEU:HB3	2.03	0.57
16:AP:50:LYS:C	16:AP:51:VAL:HG23	2.28	0.57
20:AT:26:ASN:HB3	20:AT:71:THR:OG1	2.04	0.57
24:AY:259:PHE:CE2	24:AY:275:ALA:CB	2.86	0.57
24:AY:434:GLU:OE1	24:AY:465:ARG:NH2	2.36	0.57
35:BA:35:G:O2'	35:BA:36:G:H5'	2.03	0.57
35:BA:302:C:H2'	35:BA:303:U:C6	2.39	0.57
35:BA:709:U:H2'	35:BA:710:G:H8	1.69	0.57
35:BA:1204:A:H2	35:BA:1241:A:N1	2.02	0.57
35:BA:1281:G:H2'	35:BA:1282:U:H6	1.69	0.57
35:BA:1336:A:H2'	35:BA:1337:G:C8	2.38	0.57
35:BA:1386:C:H2'	35:BA:1387:C:C6	2.38	0.57
35:BA:1590:U:O2'	35:BA:1591:G:H5'	2.04	0.57
35:BA:1787:A:H5"	35:BA:1788:C:OP2	2.03	0.57
35:BA:2759:G:O2'	35:BA:2760:C:H5'	2.03	0.57
37:BC:79:ALA:HB1	37:BC:83:LYS:HB2	1.85	0.57
38:BD:3:VAL:CG1	38:BD:17:THR:HB	2.34	0.57
46:BO:61:VAL:HG21	46:BO:111:PHE:CE2	2.39	0.57
49:BR:11:ASN:OD1	49:BR:12:ARG:N	2.36	0.57
49:BR:44:LEU:C	49:BR:44:LEU:HD13	2.29	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BS:106:ARG:O	50:BS:107:GLU:CB	2.52	0.57
1:AA:738:C:H2'	1:AA:739:C:H6	1.68	0.57
1:AA:946:A:C2	1:AA:947:G:C5	2.92	0.57
1:AA:1030(D):A:C2'	1:AA:1031:G:H5'	2.34	0.57
1:AA:1226:C:H5"	13:AM:103:THR:OG1	2.04	0.57
1:AA:1231:G:O2'	1:AA:1232:U:H5'	2.04	0.57
2:AB:137:ARG:HH11	2:AB:137:ARG:HG2	1.70	0.57
4:AD:165:MET:HE3	4:AD:176:LEU:CD2	2.34	0.57
5:AE:15:ARG:HG3	5:AE:28:PHE:CE2	2.38	0.57
14:AN:12:ARG:C	14:AN:14:PRO:HD3	2.29	0.57
24:AY:230:LYS:HE2	24:AY:241:GLU:OE1	2.04	0.57
25:B0:28:GLY:O	35:BA:923:C:O2'	2.22	0.57
27:B2:47:ASN:HD22	35:BA:94(A):G:H21	1.49	0.57
31:B6:15:GLU:CD	31:B6:44:ARG:CZ	2.77	0.57
31:B6:26:ASN:O	31:B6:27:LYS:HB2	2.03	0.57
33:B8:56:GLU:HA	33:B8:59:LYS:HZ3	1.69	0.57
35:BA:363(A):A:H2'	35:BA:363(B):G:C8	2.40	0.57
35:BA:491:G:O6	54:BW:49:LYS:HD3	2.04	0.57
35:BA:729:G:OP2	38:BD:13:ARG:NH1	2.36	0.57
35:BA:753:C:O5'	35:BA:753:C:H6	1.86	0.57
35:BA:1171:G:H2'	35:BA:1173:G:H4'	1.85	0.57
35:BA:1998:G:O2'	35:BA:1999:C:H5'	2.04	0.57
35:BA:2329:G:H2'	35:BA:2330:G:C8	2.39	0.57
35:BA:2742:C:C2'	35:BA:2743:C:H5'	2.34	0.57
37:BC:111:PHE:CE1	37:BC:137:LEU:HD13	2.39	0.57
45:BN:17:ASP:OD2	45:BN:56:ASN:HB3	2.04	0.57
45:BN:41:ASP:C	52:BU:64:ARG:HH12	2.12	0.57
56:BY:27:VAL:HG12	56:BY:29:GLU:H	1.69	0.57
56:BY:105:ALA:C	56:BY:107:ASP:N	2.63	0.57
57:BZ:57:ILE:HD12	57:BZ:57:ILE:N	2.18	0.57
1:AA:830:G:H2'	1:AA:831:U:H6	1.69	0.57
1:AA:1056:U:H5'	3:AC:163:ALA:HB2	1.87	0.57
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.85	0.57
10:AJ:61:GLU:OE2	14:AN:45:ARG:NH1	2.36	0.57
12:AL:75:HIS:HD2	12:AL:77:LEU:CD1	2.16	0.57
18:AR:76:LEU:HB3	18:AR:78:LEU:HG	1.85	0.57
20:AT:43:LEU:O	20:AT:46:GLU:N	2.38	0.57
24:AY:605:ILE:HG23	24:AY:646:PHE:HB3	1.85	0.57
27:B2:64:LEU:HD13	27:B2:64:LEU:O	2.04	0.57
30:B5:2:ALA:O	30:B5:3:LYS:HB3	2.04	0.57
35:BA:654(P):C:C2'	35:BA:654(Q):C:H5'	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:848:G:C4	35:BA:933:A:H8	2.21	0.57
35:BA:950:G:H2'	35:BA:951:C:C6	2.40	0.57
35:BA:1786:A:C2	35:BA:2606:C:H1'	2.39	0.57
35:BA:1930:G:O2'	35:BA:1931:U:P	2.63	0.57
35:BA:2148:G:O2'	35:BA:2149:G:H5'	2.04	0.57
35:BA:2756:U:H1'	35:BA:2757:A:C8	2.39	0.57
36:BB:54:G:H2'	36:BB:55:U:H6	1.69	0.57
36:BB:86:G:H2'	36:BB:87:G:H8	1.69	0.57
38:BD:126:GLN:HG3	38:BD:126:GLN:O	2.04	0.57
39:BE:34:VAL:O	39:BE:35:GLN:CB	2.51	0.57
39:BE:103:ASP:OD2	39:BE:168:MET:HE2	2.03	0.57
45:BN:55:VAL:HG22	45:BN:56:ASN:N	2.18	0.57
45:BN:133:GLN:HG2	45:BN:134:ARG:H	1.68	0.57
46:BO:49:ARG:H	46:BO:49:ARG:HD3	1.69	0.57
46:BO:104:ARG:C	46:BO:106:LEU:H	2.12	0.57
46:BO:104:ARG:NH2	51:BT:33:LYS:HE3	2.16	0.57
47:BP:48:PRO:O	47:BP:50:ARG:N	2.38	0.57
48:BQ:3:MET:HB2	48:BQ:4:PRO:CD	2.31	0.57
50:BS:89:ARG:CG	50:BS:92:TYR:CB	2.83	0.57
56:BY:15:VAL:O	56:BY:22:GLY:N	2.35	0.57
1:AA:332:G:O2'	1:AA:333:G:H5'	2.03	0.57
1:AA:867:G:O2'	1:AA:868:C:H5'	2.04	0.57
1:AA:953:G:O6	1:AA:1228:C:N4	2.37	0.57
1:AA:1500:A:O2'	1:AA:1501:C:H5'	2.04	0.57
4:AD:155:LEU:O	4:AD:156:GLU:C	2.46	0.57
11:AK:21:ILE:HG13	11:AK:30:VAL:CG1	2.34	0.57
13:AM:36:LYS:HG3	13:AM:59:TYR:OH	2.03	0.57
13:AM:49:THR:O	13:AM:53:VAL:HG23	2.05	0.57
19:AS:20:LEU:HA	19:AS:23:ASN:HB2	1.85	0.57
24:AY:106:VAL:CG2	24:AY:132:ARG:HG3	2.34	0.57
24:AY:176:GLY:HA3	24:AY:187:THR:HA	1.85	0.57
24:AY:495:GLY:O	24:AY:509:HIS:HA	2.04	0.57
27:B2:64:LEU:O	27:B2:68:ARG:HB2	2.04	0.57
34:B9:17:ILE:HG22	34:B9:18:ARG:N	2.19	0.57
35:BA:242:G:N2	35:BA:254:G:H2'	2.19	0.57
35:BA:1416:G:H1'	35:BA:1417:C:C5	2.39	0.57
35:BA:2688:U:H1'	35:BA:2721:A:H61	1.69	0.57
38:BD:267:SER:CA	38:BD:270:ILE:HD11	2.34	0.57
42:BH:41:MET:SD	42:BH:53:GLU:C	2.88	0.57
45:BN:104:LYS:HB2	45:BN:117:PHE:CE1	2.39	0.57
54:BW:83:LYS:O	54:BW:84:ARG:HG2	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:8:A:C6	4:AD:209:ARG:HB2	2.39	0.57
1:AA:637:G:O2'	1:AA:638:G:H5'	2.04	0.57
1:AA:781:A:H4'	1:AA:1522:U:O2'	2.04	0.57
1:AA:973:G:H3'	1:AA:974:A:H5"	1.86	0.57
1:AA:1104:G:O2'	1:AA:1105:A:H5'	2.05	0.57
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.05	0.57
1:AA:1500:A:OP2	1:AA:1505:G:OP2	2.22	0.57
3:AC:72:LYS:HE3	3:AC:72:LYS:C	2.29	0.57
4:AD:36:ARG:HH11	4:AD:36:ARG:CG	2.17	0.57
7:AG:80:VAL:HG23	7:AG:81:GLY:H	1.67	0.57
9:AI:86:VAL:HB	9:AI:96:LEU:HD21	1.86	0.57
18:AR:30:ASP:C	18:AR:32:ARG:H	2.12	0.57
24:AY:137:ASN:HD21	24:AY:263:ALA:H	1.50	0.57
24:AY:228:MET:O	24:AY:232:LEU:HD23	2.04	0.57
24:AY:450:ILE:HG22	24:AY:451:ILE:N	2.17	0.57
26:B1:73:LEU:O	26:B1:73:LEU:HD23	2.05	0.57
28:B3:27:GLY:C	28:B3:28:LEU:HD23	2.29	0.57
35:BA:259:G:H21	35:BA:621:A:H8	1.53	0.57
35:BA:336:C:C4	35:BA:337:C:C5	2.93	0.57
35:BA:1027:A:C8	35:BA:1027:A:OP2	2.57	0.57
35:BA:1036:G:C6	35:BA:1120:G:C6	2.92	0.57
35:BA:1797:C:H4'	38:BD:257:LEU:O	2.04	0.57
35:BA:1846:G:H5'	35:BA:1846:G:C8	2.33	0.57
35:BA:2461:C:H42	35:BA:2489:G:H1	1.50	0.57
35:BA:2783:G:N2	35:BA:2784:C:C2	2.72	0.57
38:BD:99:ASP:C	38:BD:99:ASP:OD1	2.48	0.57
46:BO:17:ARG:HE	46:BO:47:ILE:HD11	1.68	0.57
55:BX:12:VAL:HG12	55:BX:27:THR:C	2.29	0.57
1:AA:961:U:O2'	1:AA:962:C:H5'	2.04	0.57
1:AA:1008:C:O5'	1:AA:1008:C:H6	1.88	0.57
1:AA:1198:G:H2'	1:AA:1199:U:O4'	2.05	0.57
2:AB:42:ILE:HD13	2:AB:203:GLY:HA2	1.86	0.57
2:AB:144:ARG:O	2:AB:145:LEU:C	2.47	0.57
3:AC:72:LYS:HE3	3:AC:72:LYS:HA	1.87	0.57
3:AC:151:VAL:CG1	3:AC:152:ILE:N	2.68	0.57
10:AJ:6:ILE:HG22	10:AJ:98:ILE:CD1	2.33	0.57
12:AL:60:LEU:HD22	12:AL:60:LEU:N	2.20	0.57
18:AR:36:ASN:O	18:AR:39:VAL:HG23	2.05	0.57
19:AS:5:LEU:HG	19:AS:10:PHE:CD1	2.39	0.57
27:B2:69:ARG:CG	27:B2:70:GLN:H	2.17	0.57
35:BA:272(D):G:H1	35:BA:364:C:H42	1.53	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:750:A:H3'	35:BA:751:A:H5"	1.85	0.57
35:BA:811:U:H3'	35:BA:812:C:C5'	2.34	0.57
35:BA:1022:G:N2	35:BA:1142(A):A:H2	2.01	0.57
35:BA:1461:G:H2'	35:BA:1462:C:C6	2.40	0.57
35:BA:2177:C:O2	37:BC:173:HIS:HE1	1.87	0.57
37:BC:76:LEU:HD21	37:BC:104:ILE:HD11	1.85	0.57
38:BD:14:ARG:HD3	38:BD:15:PHE:CE1	2.40	0.57
42:BH:29:PRO:HD2	42:BH:79:VAL:O	2.03	0.57
47:BP:97:PRO:HD3	47:BP:126:VAL:O	2.05	0.57
53:BV:39:LEU:HD12	53:BV:50:PRO:O	2.05	0.57
53:BV:61:VAL:HG22	53:BV:63:GLY:H	1.69	0.57
1:AA:102:G:N3	1:AA:151:A:H2	2.03	0.57
1:AA:624:C:H2'	1:AA:625:G:H8	1.69	0.57
1:AA:1014:A:H5"	19:AS:14:HIS:HB2	1.85	0.57
1:AA:1368:G:O2'	1:AA:1369:C:H5'	2.03	0.57
5:AE:11:ILE:HD12	5:AE:31:LEU:CD1	2.35	0.57
5:AE:33:VAL:HG12	5:AE:34:VAL:N	2.20	0.57
6:AF:35:ALA:O	6:AF:36:ARG:C	2.44	0.57
10:AJ:22:LYS:HZ3	10:AJ:88:LEU:HD23	1.69	0.57
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.20	0.57
17:AQ:66:SER:OG	17:AQ:69:LYS:HG3	2.04	0.57
22:AV:29:G:O2'	22:AV:30:G:H5'	2.05	0.57
22:AV:74:C:O2'	22:AV:75:C:H4'	2.03	0.57
24:AY:313:ALA:HA	24:AY:328:ILE:HG22	1.86	0.57
24:AY:314:PHE:CZ	24:AY:327:PHE:HB3	2.39	0.57
24:AY:385:THR:HG21	24:AY:436:PRO:HG3	1.86	0.57
24:AY:622:GLY:O	24:AY:625:ASN:N	2.36	0.57
29:B4:48:ARG:O	29:B4:49:PHE:CD1	2.53	0.57
35:BA:303:U:H2'	35:BA:304:G:C8	2.40	0.57
35:BA:816:C:O2'	35:BA:817:C:H5'	2.05	0.57
35:BA:884:C:N4	35:BA:886:C:H42	2.03	0.57
35:BA:1432:C:H2'	35:BA:1433:U:O4'	2.05	0.57
35:BA:2242:G:N2	35:BA:2434:A:H2	2.02	0.57
38:BD:22:SER:O	38:BD:25:THR:OG1	2.23	0.57
39:BE:117:MET:O	39:BE:117:MET:HG2	2.05	0.57
41:BG:130:ASN:OD1	41:BG:160:VAL:HA	2.04	0.57
45:BN:95:PRO:HA	45:BN:98:VAL:HG23	1.87	0.57
51:BT:10:VAL:O	51:BT:11:GLU:C	2.48	0.57
52:BU:92:ARG:O	52:BU:94:ASN:N	2.37	0.57
54:BW:12:ILE:HG13	54:BW:42:ARG:NH1	2.20	0.57
55:BX:41:ASN:HA	55:BX:44:GLU:HG2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:66:G:H4'	1:AA:173:U:C5	2.39	0.57
1:AA:861:G:O2'	1:AA:862:C:H5'	2.04	0.57
1:AA:1126:U:O4	10:AJ:7:LYS:HE2	2.05	0.57
1:AA:1253:G:C2	1:AA:1254:C:C2	2.92	0.57
1:AA:1318:A:O3'	19:AS:10:PHE:CD2	2.58	0.57
3:AC:154:SER:OG	3:AC:155:GLY:N	2.36	0.57
4:AD:134:ASP:OD2	4:AD:134:ASP:N	2.32	0.57
5:AE:43:LEU:CD2	5:AE:132:ALA:HB1	2.34	0.57
5:AE:150:ARG:HH11	5:AE:150:ARG:CB	2.18	0.57
9:AI:93:ARG:C	9:AI:95:LYS:H	2.13	0.57
24:AY:132:ARG:O	24:AY:256:THR:HG23	2.05	0.57
24:AY:180:VAL:HG23	24:AY:216:LEU:HD12	1.86	0.57
24:AY:487:ILE:HD13	24:AY:487:ILE:H	1.69	0.57
26:B1:3:LYS:HG3	26:B1:4:VAL:H	1.68	0.57
30:B5:40:LYS:HZ3	30:B5:46:CYS:H	1.53	0.57
31:B6:27:LYS:HD2	31:B6:30:THR:HB	1.86	0.57
33:B8:33:ASN:HD22	33:B8:33:ASN:N	1.95	0.57
35:BA:142(A):C:O2'	35:BA:1597:A:H5"	2.05	0.57
35:BA:389:G:O4'	35:BA:2413:G:H4'	2.05	0.57
35:BA:840:C:C2'	35:BA:841:A:H5"	2.34	0.57
35:BA:909:A:O2'	35:BA:910:A:H5'	2.04	0.57
35:BA:1664:A:OP1	35:BA:1665:A:OP2	2.23	0.57
35:BA:1827:C:C2'	35:BA:1828:G:H5'	2.35	0.57
35:BA:1971:A:C4	38:BD:241:PRO:HD3	2.40	0.57
35:BA:2171:A:H4'	35:BA:2172:U:OP1	2.04	0.57
37:BC:71:LYS:HG2	37:BC:72:GLN:H	1.70	0.57
39:BE:24:THR:CG2	39:BE:186:GLY:HA2	2.29	0.57
40:BF:66:PRO:C	40:BF:68:LYS:H	2.11	0.57
42:BH:68:THR:O	42:BH:72:ILE:HG12	2.05	0.57
42:BH:103:LEU:HB2	42:BH:123:PHE:HD2	1.69	0.57
45:BN:55:VAL:HG22	45:BN:56:ASN:H	1.70	0.57
46:BO:18:LYS:HB2	46:BO:45:GLU:HG2	1.87	0.57
50:BS:30:ARG:NH1	50:BS:97:ARG:HG2	2.19	0.57
57:BZ:141:VAL:HG13	57:BZ:144:LEU:HD23	1.86	0.57
1:AA:160:A:H1'	1:AA:344:A:N7	2.20	0.57
1:AA:444:C:H42	1:AA:490:G:H1	1.53	0.57
1:AA:1152:A:OP1	10:AJ:68:HIS:HD2	1.88	0.57
1:AA:1271:G:H2'	1:AA:1272:G:C8	2.39	0.57
6:AF:43:LEU:H	6:AF:43:LEU:HD12	1.69	0.57
9:AI:84:ALA:C	9:AI:86:VAL:H	2.12	0.57
13:AM:27:LYS:HE2	13:AM:31:LYS:HE3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:19:ILE:N	16:AP:37:GLY:O	2.35	0.57
24:AY:149:VAL:O	24:AY:152:THR:HG22	2.04	0.57
26:B1:45:ASN:CB	35:BA:2230:G:H1'	2.33	0.57
33:B8:51:ALA:HA	33:B8:54:GLU:CD	2.30	0.57
35:BA:11:G:H22	35:BA:2628:C:P	2.28	0.57
35:BA:94:C:H5'	35:BA:94(A):G:OP2	2.05	0.57
35:BA:302:C:OP2	56:BY:73:ARG:NH1	2.38	0.57
35:BA:608:A:H2'	35:BA:609:A:C8	2.40	0.57
35:BA:1038:C:C3'	35:BA:1039:G:H5"	2.33	0.57
35:BA:1516:C:H2'	35:BA:1517:G:H5'	1.86	0.57
35:BA:2531:A:H4'	42:BH:157:TYR:CD2	2.40	0.57
35:BA:2787:C:O2	39:BE:61:ARG:HD3	2.05	0.57
38:BD:147:LEU:HD13	38:BD:155:LEU:CD1	2.34	0.57
39:BE:201:THR:C	39:BE:202:LYS:HD2	2.29	0.57
40:BF:101:LEU:O	40:BF:106:ARG:NH1	2.38	0.57
42:BH:41:MET:CG	42:BH:43:VAL:CG1	2.76	0.57
47:BP:47:ASP:CB	47:BP:51:PHE:HB2	2.34	0.57
47:BP:101:VAL:HA	47:BP:107:LYS:H	1.70	0.57
48:BQ:27:VAL:O	48:BQ:28:ALA:HB3	2.03	0.57
50:BS:30:ARG:HH11	50:BS:97:ARG:HG2	1.70	0.57
50:BS:69:VAL:CG1	50:BS:99:LYS:HE2	2.35	0.57
51:BT:10:VAL:C	51:BT:12:SER:N	2.56	0.57
52:BU:39:LEU:O	52:BU:40:PHE:C	2.47	0.57
53:BV:18:LEU:CD1	53:BV:19:LYS:N	2.67	0.57
56:BY:29:GLU:HB2	56:BY:38:ILE:HG21	1.87	0.57
57:BZ:98:MET:HE2	57:BZ:99:TYR:O	2.05	0.57
57:BZ:155:LEU:HD23	57:BZ:155:LEU:N	2.20	0.57
1:AA:403:C:H2'	1:AA:404:U:H6	1.69	0.57
2:AB:223:ILE:HG12	2:AB:226:ARG:HH22	1.62	0.57
6:AF:62:TRP:CE2	18:AR:35:ARG:NH2	2.73	0.57
7:AG:43:PHE:O	7:AG:46:ALA:HB3	2.05	0.57
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.87	0.57
11:AK:122:LYS:O	11:AK:123:LYS:C	2.45	0.57
17:AQ:99:SER:C	17:AQ:100:LYS:HG3	2.30	0.57
22:AV:76:A:OP1	26:B1:33:LYS:NZ	2.38	0.57
24:AY:264:LEU:HD23	24:AY:264:LEU:C	2.29	0.57
24:AY:409:ILE:HD11	24:AY:654:GLY:CA	2.18	0.57
24:AY:413:ILE:HG23	24:AY:413:ILE:O	2.03	0.57
30:B5:13:LYS:NZ	35:BA:517:C:OP2	2.37	0.57
35:BA:680:G:O2'	35:BA:681:G:H5'	2.05	0.57
35:BA:946:G:H2'	35:BA:947:G:C8	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1151:G:H5”	52:BU:81:HIS:CE1	2.40	0.57
35:BA:1840:G:H1	35:BA:1902:C:H42	1.53	0.57
35:BA:1943:U:H4’	35:BA:1944:U:OP1	2.05	0.57
35:BA:2220:G:H2’	35:BA:2221:G:C8	2.37	0.57
35:BA:2229:C:O2’	35:BA:2230:G:H5’	2.05	0.57
35:BA:2888:C:H2’	35:BA:2889:C:H6	1.69	0.57
36:BB:81:G:H5’	36:BB:81:G:N3	2.20	0.57
37:BC:29:LEU:O	37:BC:30:VAL:C	2.47	0.57
37:BC:57:GLN:NE2	37:BC:205:ALA:HA	2.19	0.57
41:BG:59:GLU:O	41:BG:63:ILE:HG13	2.04	0.57
51:BT:75:ILE:N	51:BT:75:ILE:HD12	2.20	0.57
53:BV:38:LEU:HD23	53:BV:38:LEU:C	2.30	0.57
1:AA:192:U:H2’	1:AA:193:C:H6	1.68	0.56
1:AA:748:C:O2	1:AA:749:C:H5	1.88	0.56
1:AA:972:C:H4’	10:AJ:57:LYS:CB	2.35	0.56
1:AA:1258:G:H2’	1:AA:1259:C:C6	2.40	0.56
2:AB:131:PRO:HG2	2:AB:134:GLU:HG2	1.86	0.56
2:AB:142:LEU:CD2	2:AB:146:GLN:NE2	2.68	0.56
2:AB:176:GLU:O	2:AB:177:ALA:C	2.47	0.56
4:AD:154:ASN:CG	4:AD:154:ASN:O	2.47	0.56
7:AG:46:ALA:O	7:AG:49:ILE:N	2.38	0.56
10:AJ:61:GLU:OE2	14:AN:45:ARG:HD2	2.05	0.56
10:AJ:81:THR:OG1	10:AJ:82:ILE:HD13	2.04	0.56
13:AM:27:LYS:CE	13:AM:31:LYS:HE3	2.35	0.56
16:AP:5:ARG:HE	16:AP:22:THR:HG21	1.69	0.56
16:AP:74:LEU:HD22	16:AP:79:VAL:HG11	1.86	0.56
19:AS:48:THR:HG22	19:AS:61:TYR:HA	1.87	0.56
25:B0:46:LYS:O	25:B0:78:TYR:HA	2.04	0.56
31:B6:25:LYS:HE2	33:B8:34:TRP:HE1	1.69	0.56
33:B8:39:LYS:HE3	35:BA:2365:G:O6	2.04	0.56
35:BA:271(H):G:H1	35:BA:271(P):C:H42	1.53	0.56
35:BA:342:G:O2’	35:BA:343:C:H5’	2.05	0.56
35:BA:562:U:C4	35:BA:2036:C:H1’	2.40	0.56
35:BA:781:A:H2’	35:BA:1777:U:O2’	2.05	0.56
35:BA:986:C:O2’	35:BA:987:G:H5’	2.05	0.56
35:BA:1027:A:OP2	35:BA:1027:A:H8	1.86	0.56
35:BA:1118:C:H2’	35:BA:1119:C:C6	2.40	0.56
35:BA:1306:C:H2’	35:BA:1307:A:H8	1.69	0.56
35:BA:1851:U:H2’	35:BA:1852:C:O4’	2.04	0.56
35:BA:2040:C:H2’	35:BA:2041:U:C6	2.40	0.56
35:BA:2134:A:H2’	35:BA:2134:A:N3	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:20:C:C2’	36:BB:21:G:C5’	2.83	0.56
38:BD:158:ALA:HB3	38:BD:161:THR:CG2	2.34	0.56
40:BF:53:THR:CG2	40:BF:56:GLU:HG3	2.14	0.56
40:BF:110:LEU:HA	40:BF:183:VAL:CG1	2.35	0.56
40:BF:192:LEU:C	40:BF:192:LEU:CD2	2.74	0.56
45:BN:43:THR:HG22	45:BN:45:ASN:ND2	2.19	0.56
47:BP:95:VAL:O	47:BP:96:THR:CG2	2.53	0.56
49:BR:55:ALA:HA	49:BR:80:PHE:CE1	2.40	0.56
51:BT:23:ARG:HB2	51:BT:24:PRO:HD2	1.87	0.56
52:BU:53:ARG:HA	52:BU:56:ASP:OD2	2.04	0.56
53:BV:47:VAL:HB	53:BV:50:PRO:O	2.04	0.56
1:AA:942:G:N2	9:AI:124:GLN:NE2	2.52	0.56
1:AA:946:A:N6	1:AA:1236:A:N6	2.53	0.56
1:AA:1293:G:O2’	1:AA:1294:G:H5’	2.05	0.56
1:AA:1458:G:OP1	20:AT:35:THR:HG21	2.05	0.56
2:AB:7:VAL:O	2:AB:11:LEU:HG	2.05	0.56
2:AB:8:LYS:HZ2	2:AB:217:ARG:HH11	1.53	0.56
2:AB:19:HIS:HD2	2:AB:189:ASP:OD2	1.88	0.56
4:AD:140:VAL:HG12	4:AD:141:ARG:O	2.04	0.56
29:B4:5:ILE:HD13	29:B4:5:ILE:N	2.19	0.56
29:B4:56:VAL:O	29:B4:57:GLU:HB2	2.04	0.56
31:B6:6:ARG:O	31:B6:7:ILE:CB	2.49	0.56
34:B9:19:ARG:HB3	35:BA:2756:U:H5’	1.87	0.56
35:BA:946:G:H2’	35:BA:947:G:H8	1.69	0.56
35:BA:1173:G:H5’	35:BA:1174:A:O5’	2.05	0.56
35:BA:1326:U:O2’	35:BA:1327:C:H5’	2.05	0.56
35:BA:1711:C:O2’	35:BA:1712:C:H5’	2.05	0.56
35:BA:2604:U:H2’	35:BA:2605:U:C6	2.39	0.56
35:BA:2855:C:H2’	35:BA:2856:C:C6	2.40	0.56
46:BO:10:VAL:HG23	46:BO:10:VAL:O	2.04	0.56
46:BO:60:ALA:CA	46:BO:87:ILE:HD11	2.35	0.56
53:BV:19:LYS:HB3	53:BV:94:LEU:O	2.05	0.56
1:AA:680:C:O2’	1:AA:681:C:H5’	2.04	0.56
1:AA:719:C:O2’	18:AR:49:LYS:HB3	2.05	0.56
1:AA:722:A:H3’	1:AA:722:A:N3	2.21	0.56
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.20	0.56
1:AA:829:G:O2’	1:AA:830:G:H5’	2.05	0.56
1:AA:1117:G:H5’	1:AA:1117:G:C8	2.30	0.56
1:AA:1415:G:H2’	1:AA:1416:G:C8	2.40	0.56
2:AB:86:GLU:C	2:AB:88:ALA:N	2.63	0.56
4:AD:102:ASP:HB3	4:AD:136:PRO:HB3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:6:PHE:CZ	5:AE:66:MET:HE1	2.41	0.56
5:AE:29:GLY:HA2	5:AE:46:GLY:O	2.06	0.56
9:AI:47:LEU:N	9:AI:47:LEU:HD12	2.20	0.56
10:AJ:4:ILE:HB	10:AJ:74:ILE:CD1	2.35	0.56
11:AK:18:ARG:HH21	11:AK:37:GLY:N	2.03	0.56
12:AL:17:LYS:HD3	12:AL:18:VAL:CG2	2.35	0.56
19:AS:42:PRO:HB3	29:B4:50:VAL:HG21	1.86	0.56
19:AS:53:ASN:O	19:AS:55:LYS:N	2.39	0.56
24:AY:17:ILE:HG22	24:AY:25:LYS:HG2	1.87	0.56
24:AY:409:ILE:HG12	24:AY:656:ALA:HB2	1.85	0.56
24:AY:519:ARG:NH1	24:AY:678:GLU:CB	2.67	0.56
24:AY:613:PRO:C	24:AY:615:GLU:N	2.56	0.56
26:B1:64:ALA:C	26:B1:66:HIS:H	2.12	0.56
26:B1:66:HIS:C	26:B1:68:PRO:HD2	2.30	0.56
31:B6:41:PRO:HG2	31:B6:41:PRO:O	2.05	0.56
35:BA:904:C:H6	35:BA:904:C:C5'	2.18	0.56
35:BA:970:C:H2'	35:BA:971:C:C6	2.34	0.56
35:BA:1591:G:O2'	35:BA:1592:C:H5'	2.06	0.56
35:BA:1780:A:H5'	35:BA:1781:C:OP2	2.05	0.56
35:BA:1899:G:N2	35:BA:1902:C:C4	2.73	0.56
35:BA:2297:C:O2'	35:BA:2298:A:H5'	2.05	0.56
35:BA:2320:A:C2	35:BA:2333:A:C8	2.92	0.56
35:BA:2543:G:C2	35:BA:2765:A:H2'	2.40	0.56
35:BA:2647:U:H2'	35:BA:2648:C:C6	2.40	0.56
35:BA:2832:U:H1'	35:BA:2834:G:C2	2.41	0.56
37:BC:211:ARG:HG3	37:BC:211:ARG:NH1	2.20	0.56
38:BD:28:GLU:N	38:BD:28:GLU:CD	2.62	0.56
38:BD:176:ARG:HH11	38:BD:176:ARG:CG	2.19	0.56
38:BD:226:MET:HB3	38:BD:230:ASP:CB	2.34	0.56
39:BE:26:ILE:HG21	39:BE:196:VAL:HG21	1.87	0.56
39:BE:34:VAL:HG11	39:BE:78:LEU:HD22	1.87	0.56
39:BE:95:ILE:HD13	39:BE:95:ILE:H	1.67	0.56
40:BF:4:VAL:HA	40:BF:19:GLU:HB3	1.87	0.56
40:BF:99:TYR:CE2	40:BF:101:LEU:CD1	2.88	0.56
40:BF:132:VAL:CG2	40:BF:133:ASN:N	2.68	0.56
40:BF:185:ASP:OD1	40:BF:188:ARG:HD3	2.04	0.56
42:BH:33:LEU:HD21	42:BH:136:ILE:HG22	1.87	0.56
42:BH:140:LYS:O	42:BH:144:VAL:HG23	2.05	0.56
46:BO:24:VAL:HG23	46:BO:24:VAL:O	2.05	0.56
47:BP:71:VAL:CG1	47:BP:72:PRO:HD3	2.35	0.56
50:BS:14:VAL:CG1	50:BS:16:ASN:HD22	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:44:ILE:HG22	56:BY:45:VAL:N	2.14	0.56
56:BY:76:CYS:HB3	56:BY:96:ILE:CD1	2.34	0.56
56:BY:95:LYS:N	56:BY:102:CYS:HB2	2.20	0.56
57:BZ:115:GLY:O	57:BZ:116:VAL:HG22	2.05	0.56
1:AA:820:U:H4'	1:AA:821:G:OP2	2.05	0.56
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.05	0.56
2:AB:156:LYS:O	2:AB:157:ARG:HB3	2.05	0.56
3:AC:52:LEU:HD23	3:AC:52:LEU:N	2.13	0.56
13:AM:22:ILE:CG2	13:AM:66:LEU:HD23	2.35	0.56
58:AY:701:FUA:O1	58:AY:701:FUA:C1	2.52	0.56
29:B4:37:SER:OG	41:BG:108:ASN:HA	2.05	0.56
34:B9:1:MET:SD	35:BA:2478:A:OP2	2.63	0.56
35:BA:9:U:C5	35:BA:2629:A:N6	2.74	0.56
35:BA:360:G:H2'	35:BA:361:G:H8	1.71	0.56
35:BA:1019:U:H3	35:BA:1142(A):A:N6	2.03	0.56
35:BA:1146:C:O2	35:BA:1146:C:H2'	2.03	0.56
35:BA:1297:C:H2'	35:BA:1298:C:H6	1.71	0.56
35:BA:1824:G:OP1	38:BD:52:ARG:HD3	2.05	0.56
35:BA:1882:C:H2'	35:BA:1883:G:O4'	2.06	0.56
35:BA:2030:A:H5"	35:BA:2031:A:OP1	2.05	0.56
35:BA:2681:C:H5	35:BA:2725:A:N6	2.01	0.56
37:BC:104:ILE:HG12	37:BC:108:TRP:CE3	2.41	0.56
37:BC:156:GLU:OE2	37:BC:161:ARG:HD3	2.06	0.56
40:BF:50:SER:HB2	40:BF:94:PRO:HD3	1.87	0.56
40:BF:64:ILE:HD11	40:BF:65:TRP:CH2	2.41	0.56
40:BF:125:LEU:HD23	40:BF:125:LEU:N	2.19	0.56
40:BF:158:THR:HG23	40:BF:160:ASN:N	2.20	0.56
43:BK:2:LYS:HB2	43:BK:2:LYS:NZ	2.20	0.56
47:BP:7:ARG:HA	47:BP:7:ARG:CZ	2.34	0.56
47:BP:12:ALA:HB1	47:BP:16:ARG:HB3	1.87	0.56
50:BS:56:LEU:C	50:BS:58:LEU:H	2.14	0.56
50:BS:95:HIS:CD2	50:BS:96:GLY:H	2.24	0.56
52:BU:83:LEU:HA	52:BU:88:ILE:HD11	1.87	0.56
53:BV:47:VAL:HG12	53:BV:52:VAL:HB	1.87	0.56
53:BV:58:VAL:O	53:BV:97:LYS:HB2	2.05	0.56
57:BZ:130:PRO:O	57:BZ:133:ILE:CD1	2.54	0.56
1:AA:382:A:H2'	1:AA:383:A:H8	1.68	0.56
1:AA:715:A:H2'	1:AA:716:A:H8	1.69	0.56
1:AA:895:G:H5"	1:AA:896:C:OP2	2.04	0.56
1:AA:1494:G:H2'	1:AA:1494:G:N3	2.20	0.56
2:AB:82:ARG:HG2	2:AB:83:MET:HE2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:8:GLU:HB2	5:AE:34:VAL:HG23	1.86	0.56
5:AE:80:ILE:HG22	8:AH:104:ARG:NH2	2.19	0.56
6:AF:15:ASP:C	6:AF:17:SER:H	2.13	0.56
10:AJ:32:ALA:N	10:AJ:78:ASN:HD21	2.03	0.56
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.88	0.56
25:B0:14:ARG:HH11	25:B0:14:ARG:CB	2.15	0.56
25:B0:40:GLN:NE2	25:B0:43:THR:CA	2.68	0.56
27:B2:55:ARG:O	27:B2:58:ALA:HB3	2.05	0.56
35:BA:589:C:O2'	35:BA:590:A:H5'	2.06	0.56
35:BA:1504:C:C3'	35:BA:1505:C:H5"	2.36	0.56
35:BA:1799:G:H5'	35:BA:1819:A:N6	2.21	0.56
35:BA:2678:C:O2'	35:BA:2679:A:H5'	2.05	0.56
35:BA:2845:G:O2'	35:BA:2846:G:H5'	2.05	0.56
39:BE:107:THR:C	39:BE:190:GLY:HA2	2.30	0.56
40:BF:32:LEU:O	40:BF:36:VAL:HG23	2.06	0.56
53:BV:79:VAL:O	53:BV:79:VAL:HG12	2.05	0.56
1:AA:542:G:H5'	4:AD:41:GLY:CA	2.36	0.56
1:AA:1239:A:H62	1:AA:1299:A:N6	2.03	0.56
2:AB:220:ASP:O	2:AB:223:ILE:N	2.39	0.56
9:AI:104:ARG:O	9:AI:104:ARG:HG2	2.05	0.56
10:AJ:18:ALA:C	10:AJ:20:ALA:H	2.14	0.56
21:AU:18:TYR:CD2	21:AU:24:ARG:HA	2.41	0.56
24:AY:484:ARG:CD	24:AY:559:PRO:HB2	2.36	0.56
28:B3:8:LEU:O	28:B3:31:LEU:HD22	2.06	0.56
31:B6:5:VAL:CG1	31:B6:6:ARG:H	2.18	0.56
35:BA:28:A:H62	35:BA:512:G:H1'	1.70	0.56
35:BA:529:A:H4'	35:BA:530:G:O5'	2.06	0.56
36:BB:92:C:H2'	36:BB:93:G:C8	2.39	0.56
39:BE:105:THR:HG22	39:BE:106:GLY:N	2.21	0.56
40:BF:150:GLY:HA2	40:BF:172:TRP:CE3	2.41	0.56
41:BG:81:LYS:O	41:BG:83:ARG:HG3	2.05	0.56
42:BH:83:TYR:HB3	42:BH:135:GLY:N	2.21	0.56
42:BH:86:GLU:HG3	42:BH:130:ARG:HH11	1.69	0.56
42:BH:87:LEU:HD22	42:BH:163:TYR:O	2.05	0.56
51:BT:90:GLN:HG2	51:BT:120:ARG:NH2	2.20	0.56
57:BZ:14:LYS:O	57:BZ:18:LEU:HD13	2.05	0.56
57:BZ:23:LYS:HD2	57:BZ:38:TYR:HE2	1.69	0.56
57:BZ:155:LEU:O	57:BZ:157:LEU:HG	2.05	0.56
1:AA:395:C:H5'	24:AY:340:TYR:OH	2.06	0.56
1:AA:936:C:O2'	1:AA:937:A:H5'	2.05	0.56
1:AA:1248:A:C2'	1:AA:1249:C:H5'	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:31:TYR:O	2:AB:42:ILE:HG13	2.06	0.56
5:AE:12:LEU:HD13	5:AE:12:LEU:C	2.30	0.56
10:AJ:16:LEU:HD12	10:AJ:70:ARG:CD	2.35	0.56
14:AN:8:GLU:O	14:AN:11:LYS:HB2	2.05	0.56
14:AN:41:ARG:HH11	14:AN:41:ARG:CG	2.14	0.56
31:B6:15:GLU:OE2	31:B6:44:ARG:CZ	2.53	0.56
35:BA:26:G:H1'	35:BA:515:A:H61	1.71	0.56
35:BA:662:G:P	47:BP:18:ARG:HD2	2.46	0.56
35:BA:737:C:C2'	35:BA:738:G:H5'	2.36	0.56
35:BA:1142(A):A:C5	35:BA:1144:G:C5	2.94	0.56
35:BA:1310:G:C2'	35:BA:1311:G:H5'	2.36	0.56
35:BA:1812:A:H2'	35:BA:1813:G:C8	2.39	0.56
35:BA:2415:G:H4'	47:BP:67:MET:N	2.20	0.56
35:BA:2461:C:O2	35:BA:2461:C:H2'	2.06	0.56
35:BA:2512:C:H2'	35:BA:2513:G:O4'	2.05	0.56
39:BE:4:ILE:HD13	39:BE:28:ALA:HB1	1.87	0.56
39:BE:77:ILE:HG22	39:BE:78:LEU:HD12	1.87	0.56
39:BE:168:MET:HE1	39:BE:202:LYS:HE2	1.88	0.56
40:BF:2:LYS:HG3	40:BF:25:PRO:HG2	1.86	0.56
41:BG:90:LEU:HD12	41:BG:91:ARG:N	2.20	0.56
42:BH:46:GLU:CD	42:BH:51:ARG:HB2	2.30	0.56
43:BK:70:LYS:HA	43:BK:70:LYS:HE3	1.87	0.56
43:BK:81:ALA:CB	43:BK:99:ILE:HD11	2.33	0.56
47:BP:127:ALA:HB3	47:BP:130:PHE:CZ	2.40	0.56
49:BR:92:GLY:HA2	49:BR:94:TYR:CZ	2.41	0.56
52:BU:83:LEU:HD12	52:BU:83:LEU:H	1.71	0.56
53:BV:18:LEU:CD1	53:BV:19:LYS:H	2.18	0.56
57:BZ:11:GLU:H	57:BZ:11:GLU:CD	2.14	0.56
1:AA:955:U:O2'	1:AA:956:U:H5'	2.06	0.56
1:AA:973:G:H1'	10:AJ:55:LYS:HZ3	1.70	0.56
1:AA:1132:C:N4	1:AA:1133:G:C6	2.74	0.56
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.40	0.56
1:AA:1423:G:C5'	46:BO:49:ARG:NH2	2.68	0.56
2:AB:239:VAL:O	2:AB:239:VAL:HG12	2.04	0.56
5:AE:10:MET:CG	5:AE:32:VAL:HG22	2.36	0.56
5:AE:76:ILE:HG13	5:AE:77:PRO:HD2	1.88	0.56
9:AI:97:LYS:O	9:AI:98:PRO:C	2.44	0.56
9:AI:126:SER:O	9:AI:128:ARG:HD2	2.06	0.56
10:AJ:47:PHE:O	10:AJ:62:HIS:HB2	2.05	0.56
18:AR:58:LEU:N	18:AR:58:LEU:HD12	2.21	0.56
24:AY:157:LEU:H	24:AY:157:LEU:CD2	2.12	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:526:VAL:HB	24:AY:566:THR:HG23	1.88	0.56
30:B5:3:LYS:HD2	30:B5:5:PRO:CD	2.33	0.56
35:BA:205:G:O2'	35:BA:206:U:OP2	2.21	0.56
35:BA:813:U:H2'	35:BA:814:C:C5	2.39	0.56
35:BA:1374:G:H2'	35:BA:1375:C:C6	2.41	0.56
35:BA:2000:G:OP2	49:BR:3:HIS:HE1	1.89	0.56
35:BA:2021:C:H4'	35:BA:2022:U:OP2	2.06	0.56
35:BA:2419:U:O2'	35:BA:2420:C:H5'	2.06	0.56
41:BG:86:MET:N	41:BG:87:PRO:CD	2.69	0.56
42:BH:124:GLU:CB	42:BH:132:ARG:HG3	2.35	0.56
42:BH:175:LYS:O	42:BH:176:ALA:HB3	2.05	0.56
49:BR:76:VAL:O	49:BR:79:LEU:HB3	2.06	0.56
52:BU:66:ASN:HD21	52:BU:76:TYR:H	1.53	0.56
54:BW:6:ILE:HA	54:BW:103:ILE:O	2.05	0.56
57:BZ:120:ILE:O	57:BZ:120:ILE:CG2	2.54	0.56
1:AA:22:G:O2'	1:AA:23:C:H5'	2.06	0.56
1:AA:100:C:H2'	1:AA:101:A:C8	2.41	0.56
1:AA:1490:C:C5'	1:AA:1490:C:C6	2.89	0.56
3:AC:25:GLY:C	3:AC:27:LYS:H	2.13	0.56
3:AC:35:GLU:O	3:AC:36:ASP:C	2.49	0.56
3:AC:58:GLU:O	3:AC:59:ARG:HG3	2.06	0.56
4:AD:61:LYS:HD3	4:AD:206:PHE:CE2	2.41	0.56
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.69	0.56
4:AD:187:ARG:NH2	4:AD:193:ASP:OD2	2.39	0.56
8:AH:6:ILE:HG21	8:AH:85:ARG:NH1	2.20	0.56
9:AI:36:TYR:CD2	9:AI:37:PHE:CE2	2.94	0.56
10:AJ:32:ALA:HB1	10:AJ:76:ASN:HB3	1.87	0.56
10:AJ:47:PHE:CZ	14:AN:37:PHE:CE2	2.94	0.56
17:AQ:3:LYS:HB3	17:AQ:61:GLU:HB3	1.88	0.56
18:AR:42:ARG:O	18:AR:42:ARG:HG2	2.05	0.56
24:AY:9:LEU:CD2	24:AY:9:LEU:C	2.76	0.56
26:B1:80:LEU:HD23	26:B1:81:LYS:H	1.69	0.56
31:B6:41:PRO:O	31:B6:42:TRP:C	2.49	0.56
35:BA:295:G:O2'	35:BA:296:C:H5'	2.06	0.56
35:BA:322:A:H3'	40:BF:169:ASN:ND2	2.20	0.56
35:BA:385:C:O2	47:BP:71:VAL:HG21	2.06	0.56
35:BA:619:G:H3'	35:BA:620:G:N2	2.20	0.56
35:BA:644:A:C2	35:BA:2369:A:H1'	2.41	0.56
35:BA:1305:C:O2'	35:BA:1306:C:H5'	2.06	0.56
35:BA:1344:G:H5'	35:BA:1384:A:C6	2.40	0.56
35:BA:1814:G:H5'	38:BD:51:VAL:HG21	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2118:U:OP1	35:BA:2148:G:H4'	2.06	0.56
35:BA:2175:C:H1'	37:BC:218:THR:O	2.06	0.56
35:BA:2443:C:O2	35:BA:2443:C:H2'	2.06	0.56
36:BB:91:C:O2'	36:BB:92:C:H5'	2.06	0.56
38:BD:267:SER:C	38:BD:269:PHE:H	2.14	0.56
39:BE:9:VAL:HG23	39:BE:10:GLY:N	2.21	0.56
39:BE:195:LEU:HD12	39:BE:196:VAL:N	2.21	0.56
40:BF:107:LYS:O	40:BF:108:LYS:C	2.49	0.56
42:BH:85:LYS:HE3	42:BH:145:ALA:CB	2.35	0.56
47:BP:31:ALA:C	47:BP:33:ARG:N	2.60	0.56
47:BP:33:ARG:O	47:BP:34:GLY:C	2.48	0.56
47:BP:34:GLY:O	47:BP:35:HIS:CB	2.53	0.56
54:BW:9:TYR:H	54:BW:102:HIS:CD2	2.24	0.56
1:AA:519:C:H2'	1:AA:520:A:O4'	2.06	0.56
1:AA:677:U:H6	1:AA:677:U:O5'	1.89	0.56
1:AA:1226:C:H5'	13:AM:96:LEU:HD11	1.88	0.56
1:AA:1284:C:H3'	1:AA:1285:A:C5'	2.35	0.56
1:AA:1456:G:C2'	1:AA:1457:G:H5'	2.36	0.56
2:AB:204:ASN:HD22	2:AB:204:ASN:C	2.14	0.56
4:AD:129:ASN:HD21	4:AD:145:GLU:N	1.97	0.56
4:AD:163:GLU:C	4:AD:165:MET:N	2.64	0.56
5:AE:42:GLY:HA3	5:AE:66:MET:HG2	1.87	0.56
12:AL:20:LYS:HD3	12:AL:20:LYS:N	2.05	0.56
13:AM:54:VAL:HG12	13:AM:58:GLU:CG	2.35	0.56
24:AY:162:VAL:CG2	24:AY:255:ILE:HD11	2.36	0.56
24:AY:499:ARG:O	24:AY:505:GLY:O	2.24	0.56
27:B2:6:VAL:HG13	27:B2:59:ARG:NH1	2.20	0.56
35:BA:144:C:H2'	35:BA:145:G:C8	2.41	0.56
35:BA:690:G:H2'	35:BA:691:C:C6	2.41	0.56
35:BA:803:U:C2'	35:BA:804:A:H5'	2.36	0.56
35:BA:1532:C:O5'	35:BA:1532:C:H6	1.87	0.56
35:BA:1858:G:HO2'	35:BA:1859:A:H8	1.53	0.56
35:BA:1930:G:C2'	35:BA:1931:U:OP2	2.54	0.56
37:BC:149:ASN:CG	37:BC:149:ASN:O	2.46	0.56
38:BD:172:TYR:CD1	38:BD:186:HIS:HA	2.40	0.56
45:BN:56:ASN:HA	45:BN:125:GLY:N	2.21	0.56
54:BW:88:ARG:HD3	54:BW:94:ASP:OD2	2.06	0.56
54:BW:88:ARG:HB3	54:BW:92:ARG:HB3	1.88	0.56
1:AA:15:G:H4'	5:AE:24:ARG:NH1	2.21	0.55
1:AA:283:C:O5'	1:AA:283:C:H6	1.87	0.55
1:AA:1347:G:H2'	1:AA:1373:G:O6	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:36:ASP:O	5:AE:37:ARG:CB	2.55	0.55
6:AF:44:GLY:HA2	6:AF:59:TYR:CE1	2.41	0.55
10:AJ:27:ALA:HA	10:AJ:30:SER:OG	2.06	0.55
14:AN:29:ARG:HH11	14:AN:29:ARG:CG	2.17	0.55
20:AT:104:LEU:HD23	20:AT:104:LEU:C	2.31	0.55
22:AV:47:U:H3'	22:AV:48:C:C5'	2.36	0.55
24:AY:341:VAL:HG13	24:AY:352:VAL:HG12	1.87	0.55
24:AY:367:GLU:O	24:AY:367:GLU:HG2	2.05	0.55
24:AY:608:VAL:HG13	24:AY:670:VAL:O	2.05	0.55
28:B3:29:ARG:HB2	28:B3:29:ARG:NH1	2.08	0.55
29:B4:1:MET:SD	41:BG:98:ARG:CG	2.94	0.55
29:B4:31:ILE:CG2	29:B4:33:VAL:HG23	2.35	0.55
31:B6:5:VAL:HB	35:BA:2284:C:P	2.46	0.55
31:B6:37:ARG:NH2	35:BA:2286:A:H62	2.04	0.55
33:B8:49:VAL:O	33:B8:53:PRO:HG3	2.07	0.55
35:BA:110:G:O2'	35:BA:111:A:H5'	2.06	0.55
35:BA:201:C:C5	35:BA:202:U:C5	2.93	0.55
35:BA:492:A:H2'	35:BA:493:G:H5'	1.87	0.55
35:BA:1669:A:H2'	35:BA:1670:C:H5'	1.87	0.55
35:BA:2097:C:H2'	35:BA:2098:U:H6	1.72	0.55
35:BA:2099:U:OP2	35:BA:2099:U:H6	1.90	0.55
35:BA:2309:A:C2'	35:BA:2310:A:H5"	2.35	0.55
35:BA:2836:U:H2'	35:BA:2837:G:C8	2.41	0.55
41:BG:100:TRP:CD1	41:BG:100:TRP:H	2.22	0.55
42:BH:98:LEU:HD22	42:BH:125:VAL:HG23	1.88	0.55
45:BN:21:LYS:HD2	45:BN:26:LEU:HB3	1.86	0.55
45:BN:128:HIS:CG	45:BN:128:HIS:O	2.58	0.55
50:BS:42:ASP:C	50:BS:44:LYS:H	2.13	0.55
1:AA:188:C:H2'	1:AA:189:G:C8	2.40	0.55
1:AA:192:U:C4'	20:AT:103:GLY:HA2	2.36	0.55
1:AA:301:G:O2'	1:AA:302:G:H5'	2.07	0.55
1:AA:1056:U:H5'	3:AC:163:ALA:CB	2.36	0.55
2:AB:168:THR:CG2	2:AB:192:SER:HB3	2.25	0.55
8:AH:1:MET:HE2	8:AH:1:MET:H3	1.68	0.55
12:AL:23:LYS:HE3	12:AL:89:ARG:HE	1.71	0.55
24:AY:388:THR:HG23	24:AY:399:LEU:HD22	1.87	0.55
30:B5:27:PRO:CG	54:BW:23:LEU:HD11	2.35	0.55
34:B9:22:ARG:NH2	35:BA:2741:A:OP1	2.39	0.55
35:BA:68:G:H2'	35:BA:69:C:C6	2.41	0.55
35:BA:841:A:H5'	35:BA:841:A:H8	1.70	0.55
35:BA:1821:A:H2'	35:BA:1822:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2115:G:N3	35:BA:2117:A:N7	2.54	0.55
35:BA:2469:A:H2	35:BA:2481:G:H21	1.54	0.55
35:BA:2869:G:O2'	35:BA:2870:C:H5'	2.06	0.55
38:BD:136:ILE:O	38:BD:136:ILE:HG22	2.00	0.55
38:BD:200:ASP:O	38:BD:201:HIS:C	2.49	0.55
40:BF:63:LYS:HA	40:BF:76:GLY:O	2.06	0.55
41:BG:54:GLU:C	41:BG:57:ALA:HB3	2.31	0.55
42:BH:154:PRO:O	42:BH:156:ALA:N	2.39	0.55
45:BN:128:HIS:HE1	45:BN:134:ARG:HH11	1.52	0.55
47:BP:115:LEU:N	47:BP:115:LEU:HD23	2.21	0.55
47:BP:122:PRO:HB3	47:BP:141:ALA:CB	2.37	0.55
48:BQ:27:VAL:H	48:BQ:137:TYR:HD2	1.55	0.55
56:BY:88:LYS:N	56:BY:88:LYS:HD2	2.22	0.55
1:AA:160:A:H1'	1:AA:344:A:C8	2.42	0.55
1:AA:1510:U:O2	1:AA:1526:G:C2	2.60	0.55
6:AF:16:GLN:CD	6:AF:16:GLN:H	2.15	0.55
8:AH:20:TYR:CE1	8:AH:76:PRO:HG2	2.41	0.55
9:AI:19:LEU:HD23	9:AI:61:ALA:HB2	1.87	0.55
12:AL:89:ARG:HB2	12:AL:89:ARG:HH11	1.71	0.55
14:AN:37:PHE:CE1	14:AN:53:LEU:HD22	2.41	0.55
15:AO:36:ILE:O	15:AO:37:ASN:C	2.49	0.55
17:AQ:7:THR:O	17:AQ:23:VAL:HG13	2.05	0.55
24:AY:69:VAL:HG23	24:AY:82:ILE:HG12	1.89	0.55
24:AY:91:THR:O	24:AY:93:GLU:N	2.40	0.55
24:AY:357:ARG:HH11	24:AY:373:ASP:CG	2.15	0.55
31:B6:15:GLU:CD	31:B6:44:ARG:HH12	2.12	0.55
35:BA:212:G:C8	35:BA:212:G:C4'	2.88	0.55
35:BA:448:U:O4	35:BA:583:G:H1'	2.07	0.55
35:BA:1484:G:H2'	35:BA:1485:G:H5"	1.88	0.55
35:BA:2020:A:H2'	35:BA:2021:C:H5"	1.86	0.55
35:BA:2078:C:H1'	35:BA:2434:A:H1'	1.86	0.55
35:BA:2117:A:H2	35:BA:2172:U:H3	1.55	0.55
35:BA:2286:A:H4'	35:BA:2287:A:C5'	2.37	0.55
39:BE:113:PHE:CE1	39:BE:158:GLY:HA2	2.41	0.55
40:BF:78:ILE:HG22	40:BF:83:PHE:CZ	2.41	0.55
40:BF:168:ARG:C	40:BF:170:LEU:H	2.15	0.55
41:BG:119:GLY:HA3	41:BG:181:ARG:N	2.20	0.55
44:BL:90:ALA:HA	44:BL:91:PRO:C	2.31	0.55
47:BP:84:ASN:C	47:BP:86:LYS:H	2.13	0.55
47:BP:95:VAL:CG2	47:BP:125:VAL:HG23	2.36	0.55
51:BT:102:ILE:CG2	51:BT:110:ILE:HD12	2.34	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:120:ARG:O	51:BT:124:ASP:OD1	2.24	0.55
53:BV:64:HIS:HA	53:BV:92:THR:HA	1.86	0.55
55:BX:53:LYS:HD2	55:BX:55:ASN:ND2	2.21	0.55
56:BY:13:VAL:HG23	56:BY:73:ARG:C	2.32	0.55
57:BZ:29:TYR:CB	57:BZ:34:ASN:HB2	2.37	0.55
1:AA:522:C:H5	12:AL:53:ARG:NH2	2.05	0.55
1:AA:841:U:H3'	1:AA:848:C:H5'	1.87	0.55
1:AA:1074:G:O2'	1:AA:1075:C:H5'	2.05	0.55
1:AA:1529:G:H4'	1:AA:1530:G:OP2	2.06	0.55
5:AE:139:LEU:C	5:AE:141:GLN:H	2.13	0.55
12:AL:47:LYS:CD	12:AL:48:PRO:HD3	2.34	0.55
13:AM:68:GLY:H	13:AM:71:ARG:CB	2.17	0.55
19:AS:40:ILE:HG21	19:AS:66:MET:O	2.07	0.55
19:AS:40:ILE:CD1	19:AS:74:PHE:HE2	2.19	0.55
20:AT:57:ARG:NH1	20:AT:57:ARG:HB2	2.21	0.55
24:AY:304:ASP:C	24:AY:306:ASN:H	2.14	0.55
24:AY:646:PHE:O	24:AY:647:VAL:HG13	2.06	0.55
24:AY:655:TYR:CZ	24:AY:659:LEU:HD23	2.41	0.55
28:B3:44:ARG:O	28:B3:45:GLY:C	2.49	0.55
32:B7:28:ARG:HH11	32:B7:28:ARG:HG3	1.71	0.55
35:BA:572:A:H2'	35:BA:573:G:O4'	2.07	0.55
35:BA:654(S):G:H3'	35:BA:654(T):C:C4'	2.36	0.55
35:BA:911:A:H2'	48:BQ:9:TYR:OH	2.07	0.55
35:BA:1005:C:OP2	35:BA:1011:G:H2'	2.07	0.55
35:BA:1223:G:H5'	35:BA:1224:C:OP2	2.07	0.55
35:BA:1891:G:O5'	35:BA:1891:G:H8	1.89	0.55
35:BA:2040:C:H2'	35:BA:2041:U:H6	1.70	0.55
35:BA:2653:U:O2'	42:BH:110:SER:HB3	2.07	0.55
35:BA:2807:G:C2'	35:BA:2808:U:H5"	2.36	0.55
36:BB:104:U:O3'	57:BZ:72:ARG:NH1	2.40	0.55
39:BE:59:VAL:HG21	39:BE:63:LEU:HA	1.88	0.55
48:BQ:109:VAL:CG1	48:BQ:110:THR:N	2.70	0.55
51:BT:27:THR:O	51:BT:28:VAL:CG2	2.50	0.55
51:BT:30:VAL:HG21	51:BT:83:ILE:HG12	1.89	0.55
52:BU:57:PHE:O	52:BU:58:ARG:C	2.49	0.55
55:BX:8:ILE:H	55:BX:8:ILE:CD1	2.13	0.55
56:BY:44:ILE:O	56:BY:62:GLU:HB3	2.06	0.55
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.13	0.55
1:AA:1216:G:OP1	14:AN:2:ALA:HA	2.06	0.55
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.07	0.55
1:AA:1308:U:H5"	13:AM:98:VAL:CG2	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:51:GLN:OE1	7:AG:51:GLN:HA	2.07	0.55
9:AI:56:LEU:HD23	9:AI:56:LEU:C	2.31	0.55
13:AM:37:THR:O	13:AM:39:ILE:HG13	2.07	0.55
13:AM:52:GLU:HA	13:AM:55:ARG:HD3	1.88	0.55
13:AM:54:VAL:HG12	13:AM:58:GLU:HG2	1.88	0.55
24:AY:135:PHE:CD1	24:AY:272:LEU:HD22	2.41	0.55
26:B1:58:ILE:HD11	26:B1:91:LYS:CA	2.37	0.55
31:B6:11:LEU:HD22	31:B6:11:LEU:C	2.32	0.55
35:BA:344:G:H2'	35:BA:345:A:H8	1.72	0.55
35:BA:648:G:H2'	35:BA:649:G:C8	2.41	0.55
35:BA:1493:C:C4	35:BA:2206:G:O2'	2.60	0.55
35:BA:2690:C:OP2	35:BA:2690:C:C6	2.59	0.55
38:BD:161:THR:O	38:BD:162:SER:HB3	2.05	0.55
40:BF:99:TYR:HE2	40:BF:101:LEU:HD13	1.70	0.55
41:BG:64:THR:HG23	41:BG:66:GLN:N	2.10	0.55
41:BG:71:THR:HG23	41:BG:90:LEU:N	2.22	0.55
50:BS:83:LYS:HG2	50:BS:105:ALA:HB3	1.88	0.55
53:BV:35:LEU:O	53:BV:37:VAL:N	2.39	0.55
55:BX:12:VAL:CG1	55:BX:27:THR:HG23	2.37	0.55
56:BY:74:PRO:HG3	56:BY:83:THR:CG2	2.36	0.55
56:BY:90:LEU:HD23	56:BY:90:LEU:N	2.21	0.55
1:AA:603:U:H2'	1:AA:604:G:C8	2.41	0.55
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.71	0.55
1:AA:1342:C:H1'	9:AI:124:GLN:HG3	1.89	0.55
1:AA:1505:G:H5"	1:AA:1505:G:C8	2.41	0.55
3:AC:60:ALA:O	3:AC:61:ALA:HB2	2.07	0.55
3:AC:137:ALA:HA	3:AC:140:ARG:NH2	2.21	0.55
4:AD:194:LEU:HB3	4:AD:196:LEU:HD13	1.88	0.55
8:AH:109:ILE:HD11	8:AH:120:THR:CG2	2.36	0.55
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.05	0.55
24:AY:137:ASN:HD21	24:AY:263:ALA:CB	2.19	0.55
24:AY:498:ILE:HG13	24:AY:498:ILE:O	2.06	0.55
29:B4:31:ILE:HG22	29:B4:31:ILE:O	2.06	0.55
33:B8:51:ALA:C	33:B8:53:PRO:HD2	2.32	0.55
35:BA:271(D):G:H1	35:BA:271(T):C:H42	1.54	0.55
35:BA:1232:G:H2'	35:BA:1233:C:C6	2.42	0.55
35:BA:1336:A:OP2	55:BX:64:LYS:HE3	2.07	0.55
35:BA:1336:A:P	55:BX:64:LYS:HE3	2.47	0.55
35:BA:1461:G:H2'	35:BA:1462:C:H6	1.71	0.55
35:BA:1516:C:H2'	35:BA:1517:G:H5"	1.85	0.55
35:BA:2507:C:H2'	35:BA:2508:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2687:U:C4	35:BA:2688:U:C5	2.95	0.55
35:BA:2840:C:H5"	49:BR:53:HIS:HD2	1.69	0.55
36:BB:49:C:OP1	50:BS:96:GLY:HA3	2.07	0.55
36:BB:114:C:O2'	50:BS:46:VAL:HG13	2.06	0.55
39:BE:101:ARG:CB	39:BE:201:THR:HG21	2.37	0.55
40:BF:26:ALA:O	40:BF:27:GLU:CG	2.55	0.55
40:BF:157:VAL:HG22	40:BF:194:MET:HA	1.89	0.55
41:BG:15:VAL:HG22	41:BG:175:LEU:O	2.06	0.55
42:BH:37:VAL:HG12	42:BH:38:SER:H	1.71	0.55
45:BN:23:LEU:CB	45:BN:60:ILE:HG21	2.36	0.55
46:BO:26:LYS:HB3	46:BO:30:ALA:CB	2.37	0.55
46:BO:87:ILE:HG22	46:BO:92:GLU:C	2.31	0.55
47:BP:84:ASN:N	47:BP:84:ASN:HD22	2.05	0.55
53:BV:13:ARG:CG	53:BV:13:ARG:NH1	2.58	0.55
1:AA:278:G:O4'	1:AA:282:A:H1'	2.06	0.55
1:AA:1109:C:C2'	1:AA:1110:A:H5'	2.37	0.55
1:AA:1318:A:C1'	19:AS:37:ARG:HH21	2.19	0.55
1:AA:1325:C:C2	1:AA:1326:C:C5	2.95	0.55
1:AA:1423:G:OP1	46:BO:49:ARG:NH2	2.39	0.55
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.05	0.55
24:AY:438:PHE:HB2	24:AY:452:SER:O	2.06	0.55
24:AY:620:VAL:O	24:AY:624:LEU:HD13	2.05	0.55
25:B0:20:ARG:H	25:B0:20:ARG:CD	2.15	0.55
30:B5:25:LEU:HD12	54:BW:19:LEU:C	2.32	0.55
35:BA:246:C:H2'	35:BA:247:G:H5'	1.89	0.55
35:BA:285:C:H2'	35:BA:286:C:H5'	1.88	0.55
35:BA:322:A:C3'	40:BF:169:ASN:HD21	2.20	0.55
35:BA:769:G:H5'	35:BA:1379:A:N6	2.21	0.55
35:BA:941:A:H4'	47:BP:35:HIS:CE1	2.41	0.55
35:BA:1389:G:H2'	35:BA:1390:U:C6	2.41	0.55
35:BA:2454:G:H2'	35:BA:2455:G:C5'	2.36	0.55
35:BA:2652:C:O2	35:BA:2652:C:H2'	2.06	0.55
38:BD:11:PRO:C	38:BD:13:ARG:H	2.14	0.55
38:BD:129:ASN:O	38:BD:193:VAL:HG12	2.07	0.55
39:BE:119:ARG:HG2	39:BE:160:TYR:HB2	1.89	0.55
40:BF:132:VAL:HG22	40:BF:133:ASN:H	1.72	0.55
41:BG:44:GLY:C	41:BG:46:ALA:H	2.15	0.55
41:BG:131:TYR:CE2	41:BG:133:LEU:HB3	2.42	0.55
45:BN:22:THR:O	45:BN:25:ARG:HB2	2.07	0.55
45:BN:91:LEU:CD2	45:BN:98:VAL:HG21	2.37	0.55
46:BO:86:ILE:N	46:BO:86:ILE:HD12	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:71:VAL:N	47:BP:72:PRO:CD	2.70	0.55
47:BP:95:VAL:HA	47:BP:99:LEU:HD23	1.89	0.55
52:BU:74:LEU:C	52:BU:74:LEU:HD13	2.31	0.55
55:BX:57:LEU:N	55:BX:57:LEU:CD1	2.69	0.55
56:BY:2:ARG:N	56:BY:4:LYS:HG2	2.21	0.55
56:BY:95:LYS:HD3	56:BY:101:LYS:H	1.70	0.55
1:AA:129(A):G:O2'	1:AA:189(F):U:C2'	2.51	0.55
1:AA:311:C:O2'	1:AA:312:C:H5'	2.06	0.55
1:AA:489:C:H2'	1:AA:490:G:H8	1.71	0.55
1:AA:1334:G:H5'	1:AA:1335:C:OP2	2.06	0.55
3:AC:5:ILE:N	3:AC:5:ILE:CD1	2.69	0.55
4:AD:92:VAL:O	4:AD:96:LEU:HD22	2.07	0.55
5:AE:11:ILE:HG22	5:AE:12:LEU:N	2.21	0.55
9:AI:95:LYS:HD3	9:AI:95:LYS:C	2.31	0.55
21:AU:6:ARG:HH21	21:AU:15:ARG:NH2	2.05	0.55
24:AY:121:VAL:HA	24:AY:124:GLN:HE22	1.72	0.55
24:AY:171:GLU:HG3	24:AY:172:ASP:H	1.71	0.55
24:AY:603:GLU:HB2	24:AY:604:PRO:HD2	1.88	0.55
24:AY:606:MET:HE3	24:AY:671:MET:HE3	1.89	0.55
25:B0:49:LYS:HG3	25:B0:80:HIS:ND1	2.21	0.55
33:B8:10:ALA:O	33:B8:14:VAL:HG12	2.06	0.55
33:B8:61:LEU:C	33:B8:63:PRO:HD2	2.32	0.55
35:BA:848:G:C2	35:BA:933:A:H1'	2.42	0.55
35:BA:1499:C:C2'	35:BA:1500:G:H5'	2.37	0.55
35:BA:2346:A:H1'	35:BA:2383:G:N9	2.22	0.55
35:BA:2787:C:C2	39:BE:61:ARG:HD3	2.42	0.55
35:BA:2811:G:O2'	35:BA:2812:G:H5'	2.06	0.55
35:BA:2861:G:C4	35:BA:2862:G:C8	2.95	0.55
37:BC:4:HIS:ND1	37:BC:8:TYR:HE2	2.02	0.55
37:BC:15:VAL:O	37:BC:15:VAL:HG23	2.06	0.55
39:BE:177:PRO:HG2	39:BE:178:GLU:H	1.72	0.55
41:BG:125:PHE:HB3	41:BG:166:ASP:HB3	1.88	0.55
41:BG:125:PHE:O	41:BG:126:ASP:C	2.50	0.55
45:BN:65:LYS:HZ3	45:BN:65:LYS:HA	1.72	0.55
47:BP:59:LEU:HA	47:BP:61:ARG:CD	2.37	0.55
47:BP:97:PRO:O	47:BP:98:GLU:CB	2.55	0.55
47:BP:100:LEU:HA	47:BP:103:ALA:HB3	1.88	0.55
48:BQ:63:LYS:NZ	57:BZ:175:VAL:HG21	2.21	0.55
51:BT:11:GLU:C	51:BT:13:ARG:N	2.65	0.55
56:BY:56:PRO:O	56:BY:57:GLN:HB2	2.05	0.55
1:AA:57:G:H2'	1:AA:58:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:106:C:C2'	1:AA:107:G:H5'	2.37	0.55
1:AA:191:G:C4	20:AT:105:SER:HB3	2.41	0.55
1:AA:191:G:N3	20:AT:105:SER:HB3	2.21	0.55
1:AA:684:A:H2'	1:AA:685:G:C8	2.42	0.55
1:AA:1347:G:H3'	9:AI:108:VAL:O	2.07	0.55
2:AB:231:GLU:HG3	2:AB:232:PRO:O	2.07	0.55
2:AB:236:TYR:CD2	2:AB:239:VAL:HG21	2.42	0.55
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.07	0.55
7:AG:64:GLN:HG2	7:AG:128:ALA:HB1	1.88	0.55
7:AG:78:ARG:HH12	7:AG:79:ARG:NE	1.98	0.55
10:AJ:63:PHE:CD2	10:AJ:63:PHE:N	2.73	0.55
13:AM:72:ALA:O	13:AM:73:GLU:C	2.46	0.55
19:AS:5:LEU:HG	19:AS:10:PHE:HD1	1.72	0.55
20:AT:50:GLU:HB3	20:AT:99:LEU:CB	2.37	0.55
24:AY:87:HIS:NE2	24:AY:120:THR:OG1	2.40	0.55
24:AY:334:THR:HG23	24:AY:370:LYS:HA	1.89	0.55
26:B1:58:ILE:HD11	26:B1:91:LYS:HA	1.87	0.55
29:B4:9:LEU:HD13	29:B4:26:SER:O	2.07	0.55
30:B5:45:VAL:HG22	30:B5:51:TYR:CE2	2.42	0.55
30:B5:55:ARG:NH2	49:BR:33:ARG:CD	2.66	0.55
31:B6:10:LEU:HB3	33:B8:34:TRP:CD1	2.42	0.55
35:BA:214:G:H1'	35:BA:216:A:HO2'	1.71	0.55
35:BA:680:G:H2'	35:BA:681:G:C8	2.41	0.55
35:BA:1314:C:OP1	35:BA:1315:C:OP2	2.25	0.55
35:BA:1771:C:HO2'	35:BA:1786:A:H8	1.54	0.55
35:BA:2000:G:O2'	35:BA:2001:A:H5'	2.07	0.55
35:BA:2298:A:H62	35:BA:2318:G:H8	1.55	0.55
35:BA:2556:C:H2'	35:BA:2557:G:O4'	2.06	0.55
35:BA:2895:U:H3'	35:BA:2895:U:H6	1.71	0.55
36:BB:104:U:H6	36:BB:104:U:C5'	2.18	0.55
40:BF:43:LYS:HA	40:BF:98:SER:CB	2.37	0.55
40:BF:46:ARG:HH11	40:BF:46:ARG:HG3	1.71	0.55
40:BF:198:ALA:O	40:BF:201:VAL:HG12	2.06	0.55
40:BF:204:ASN:C	40:BF:206:ILE:N	2.64	0.55
40:BF:205:ARG:C	40:BF:206:ILE:HG12	2.31	0.55
42:BH:175:LYS:O	42:BH:176:ALA:CB	2.54	0.55
43:BK:10:LEU:HD12	43:BK:57:ILE:CD1	2.37	0.55
47:BP:47:ASP:HB3	47:BP:48:PRO:CA	2.37	0.55
48:BQ:1:MET:HE3	48:BQ:44:ALA:HB3	1.88	0.55
51:BT:117:ASP:OD2	51:BT:120:ARG:HG3	2.06	0.55
53:BV:82:ARG:O	53:BV:83:ARG:HD3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:120:ILE:O	57:BZ:121:HIS:HB2	2.06	0.55
1:AA:415:A:H2'	1:AA:416:G:C8	2.42	0.55
1:AA:1190:G:OP1	3:AC:5:ILE:HD12	2.07	0.55
1:AA:1299:A:C2	1:AA:1301:U:N3	2.75	0.55
2:AB:62:ALA:C	2:AB:64:ARG:H	2.14	0.55
5:AE:11:ILE:HD12	5:AE:31:LEU:HD13	1.88	0.55
6:AF:91:VAL:CG1	6:AF:92:LYS:N	2.70	0.55
12:AL:110:VAL:CG2	12:AL:120:TYR:HB3	2.37	0.55
17:AQ:13:ASP:CB	17:AQ:19:VAL:HG12	2.37	0.55
19:AS:65:ASN:HA	29:B4:48:ARG:NH1	2.22	0.55
24:AY:606:MET:HE2	24:AY:649:LEU:HD21	1.89	0.55
31:B6:7:ILE:O	31:B6:27:LYS:HD3	2.07	0.55
31:B6:9:LEU:CD2	31:B6:26:ASN:HD22	2.19	0.55
34:B9:29:ASN:HD22	34:B9:29:ASN:N	1.97	0.55
35:BA:83:G:O2'	35:BA:84:A:OP2	2.25	0.55
35:BA:136:G:H2'	35:BA:137:C:H6	1.71	0.55
35:BA:1285:G:C2'	35:BA:1286:A:H5'	2.35	0.55
35:BA:1485:G:H1'	35:BA:1505:C:N4	2.16	0.55
35:BA:1502:C:H2'	35:BA:1503:U:C6	2.42	0.55
35:BA:1819:A:H1'	35:BA:1821:A:C6	2.42	0.55
35:BA:2239:G:H5'	38:BD:251:GLY:HA3	1.87	0.55
39:BE:202:LYS:CD	39:BE:202:LYS:N	2.69	0.55
40:BF:132:VAL:O	40:BF:138:GLU:OE1	2.25	0.55
43:BK:29:GLN:O	43:BK:59:ILE:HD12	2.06	0.55
43:BK:136:VAL:O	43:BK:136:VAL:HG13	2.07	0.55
47:BP:108:LYS:C	47:BP:110:TYR:N	2.64	0.55
47:BP:146:VAL:O	47:BP:148:LEU:N	2.40	0.55
49:BR:55:ALA:CB	49:BR:79:LEU:HD11	2.36	0.55
56:BY:13:VAL:O	56:BY:24:VAL:HA	2.07	0.55
56:BY:54:LYS:HE2	56:BY:55:TYR:HE1	1.71	0.55
57:BZ:20:ARG:CB	57:BZ:20:ARG:HH11	2.19	0.55
57:BZ:144:LEU:HD11	57:BZ:150:LEU:HD22	1.88	0.55
1:AA:268:C:O2	1:AA:268:C:H2'	2.05	0.54
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.89	0.54
1:AA:1202:G:C2	14:AN:42:ILE:HG21	2.42	0.54
3:AC:130:VAL:O	3:AC:134:ILE:HG13	2.07	0.54
4:AD:127:THR:HA	4:AD:132:ARG:HA	1.89	0.54
4:AD:163:GLU:C	4:AD:165:MET:H	2.15	0.54
6:AF:19:LEU:HD23	6:AF:19:LEU:C	2.32	0.54
13:AM:37:THR:HG21	13:AM:56:LEU:HA	1.89	0.54
19:AS:22:LEU:HD13	19:AS:27:GLU:CD	2.32	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:103:GLY:O	20:AT:104:LEU:C	2.50	0.54
24:AY:25:LYS:NZ	24:AY:86:GLY:HA2	2.21	0.54
24:AY:204:GLU:O	24:AY:205:TYR:C	2.50	0.54
24:AY:505:GLY:HA3	24:AY:576:ASP:OD1	2.07	0.54
26:B1:76:ARG:HH22	26:B1:95:LEU:CD1	2.20	0.54
27:B2:17:SER:HB2	27:B2:18:PRO:HD2	1.89	0.54
31:B6:13:CYS:HB3	31:B6:49:HIS:HB3	1.89	0.54
31:B6:42:TRP:CE3	31:B6:42:TRP:HA	2.43	0.54
35:BA:260:G:H1'	35:BA:621:A:H1'	1.88	0.54
35:BA:709:U:H2'	35:BA:710:G:C8	2.41	0.54
35:BA:803:U:O2'	35:BA:804:A:H5'	2.06	0.54
35:BA:848:G:H3'	35:BA:849:A:C8	2.42	0.54
35:BA:965:C:C4'	35:BA:2273:A:H1'	2.36	0.54
35:BA:1865:G:C3'	35:BA:1866:C:H5"	2.37	0.54
37:BC:132:LEU:HB3	37:BC:138:LEU:N	2.21	0.54
39:BE:51:PHE:N	39:BE:74:PRO:HG3	2.22	0.54
46:BO:63:VAL:HG23	46:BO:64:ARG:HG3	1.89	0.54
48:BQ:35:VAL:HG22	48:BQ:36:ALA:N	2.22	0.54
51:BT:5:ALA:O	51:BT:7:ILE:N	2.40	0.54
54:BW:107:LEU:N	54:BW:107:LEU:CD1	2.66	0.54
1:AA:288:A:H2'	1:AA:289:G:H4'	1.88	0.54
1:AA:745:C:H2'	1:AA:746:A:C8	2.43	0.54
1:AA:1017:G:H2'	1:AA:1018:C:C6	2.41	0.54
1:AA:1038:C:H2'	1:AA:1039:C:C6	2.42	0.54
1:AA:1128:C:C3'	1:AA:1129:C:H5"	2.36	0.54
3:AC:77:ILE:HG22	3:AC:77:ILE:O	2.06	0.54
7:AG:29:LYS:CB	7:AG:105:VAL:HG21	2.37	0.54
11:AK:124:LYS:HB3	11:AK:125:PHE:HD1	1.72	0.54
23:AX:17:U:O2'	23:AX:18:G:H5'	2.08	0.54
24:AY:435:ASP:OD1	58:AY:701:FUA:H192	2.07	0.54
25:B0:21:LEU:HD22	25:B0:39:ARG:O	2.07	0.54
31:B6:5:VAL:CG2	35:BA:2283:C:OP1	2.55	0.54
35:BA:338:G:O2'	35:BA:339:U:H5'	2.07	0.54
35:BA:676:A:H1'	35:BA:2443:C:H1'	1.88	0.54
35:BA:769:G:O2'	35:BA:770:G:H5'	2.06	0.54
35:BA:2030:A:H4'	35:BA:2031:A:H8	1.72	0.54
35:BA:2170:A:H5"	37:BC:135:ARG:NH2	2.22	0.54
35:BA:2695:C:H2'	35:BA:2696:U:C6	2.42	0.54
38:BD:94:LEU:HD23	38:BD:94:LEU:C	2.32	0.54
45:BN:1:MET:HE1	45:BN:3:THR:HG1	1.69	0.54
48:BQ:58:PHE:O	48:BQ:59:ARG:C	2.49	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:117:VAL:CG1	49:BR:118:GLU:N	2.69	0.54
51:BT:50:ILE:HA	51:BT:99:LEU:HD11	1.89	0.54
51:BT:50:ILE:CG1	51:BT:102:ILE:HD11	2.37	0.54
54:BW:86:LEU:C	54:BW:86:LEU:HD12	2.32	0.54
56:BY:86:ARG:HB3	56:BY:88:LYS:NZ	2.16	0.54
1:AA:141:A:H1'	1:AA:182:U:C2	2.43	0.54
1:AA:826:C:H2'	1:AA:827:U:H6	1.71	0.54
1:AA:1294:G:C2'	1:AA:1295:G:H5'	2.36	0.54
1:AA:1378:C:C5	1:AA:1379:G:C8	2.95	0.54
3:AC:16:ARG:HD3	3:AC:17:ASP:N	2.21	0.54
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.21	0.54
5:AE:145:LYS:O	5:AE:149:GLU:HG2	2.07	0.54
9:AI:81:ILE:O	9:AI:85:LEU:HG	2.07	0.54
11:AK:59:TYR:CE2	11:AK:63:LEU:HD11	2.41	0.54
24:AY:485:GLU:HB2	24:AY:560:VAL:HA	1.90	0.54
24:AY:659:LEU:HD13	24:AY:659:LEU:C	2.32	0.54
25:B0:25:ARG:HD2	25:B0:29:GLN:NE2	2.22	0.54
26:B1:44:PRO:HB2	26:B1:46:LEU:CD1	2.36	0.54
27:B2:48:HIS:ND1	35:BA:95:G:O2'	2.39	0.54
32:B7:48:LYS:NZ	35:BA:125:G:H21	2.06	0.54
35:BA:85:G:H2'	35:BA:86:C:H5'	1.90	0.54
35:BA:1155:A:O3'	52:BU:55:ARG:NH1	2.41	0.54
35:BA:1310:G:H2'	35:BA:1311:G:H5'	1.90	0.54
35:BA:1902:C:H2'	35:BA:1903:G:O4'	2.07	0.54
35:BA:1947:C:H2'	35:BA:1948:G:C5'	2.36	0.54
35:BA:2116:G:N7	35:BA:2117:A:C5	2.75	0.54
35:BA:2344:U:O2'	35:BA:2345:G:H5"	2.07	0.54
35:BA:2713:A:C3'	35:BA:2714:G:H5'	2.37	0.54
35:BA:2791:C:H5	35:BA:2801(A):A:H62	1.54	0.54
39:BE:1:MET:HB2	39:BE:83:ASP:O	2.07	0.54
42:BH:105:LEU:CD2	42:BH:105:LEU:N	2.70	0.54
42:BH:169:VAL:HG13	42:BH:170:ARG:H	1.72	0.54
45:BN:45:ASN:HD22	45:BN:45:ASN:N	1.91	0.54
47:BP:112:LEU:H	47:BP:128:HIS:HD2	1.54	0.54
47:BP:127:ALA:O	47:BP:148:LEU:HD11	2.07	0.54
49:BR:51:LEU:H	49:BR:51:LEU:HD12	1.72	0.54
51:BT:33:LYS:HE2	51:BT:43:GLN:OE1	2.08	0.54
1:AA:778:G:H1'	11:AK:119:CYS:HB3	1.90	0.54
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.43	0.54
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.42	0.54
2:AB:152:PHE:CD1	2:AB:152:PHE:C	2.85	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:160:ASP:O	2:AB:161:ALA:HB2	2.06	0.54
3:AC:59:ARG:HG3	3:AC:64:VAL:HA	1.90	0.54
8:AH:64:LYS:HD2	8:AH:79:VAL:HG21	1.88	0.54
13:AM:35:GLU:CG	13:AM:36:LYS:N	2.70	0.54
15:AO:24:SER:O	15:AO:25:THR:C	2.49	0.54
23:AX:13:A:H2'	23:AX:14:A:H5"	1.88	0.54
24:AY:218:GLU:O	24:AY:221:ALA:HB3	2.07	0.54
25:B0:38:VAL:HG12	25:B0:39:ARG:N	2.22	0.54
26:B1:45:ASN:C	26:B1:45:ASN:ND2	2.57	0.54
32:B7:34:ARG:HH12	32:B7:39:ARG:CD	2.20	0.54
35:BA:194:G:H2'	35:BA:195:A:O4'	2.08	0.54
35:BA:545:C:H2'	35:BA:547:A:C5'	2.36	0.54
35:BA:2328:A:H8	35:BA:2328:A:O5'	1.89	0.54
35:BA:2807:G:H3'	35:BA:2808:U:C5'	2.34	0.54
39:BE:30:PRO:O	39:BE:32:PRO:HD3	2.07	0.54
42:BH:42:ARG:HG3	42:BH:42:ARG:HH11	1.72	0.54
42:BH:105:LEU:HD23	42:BH:105:LEU:N	2.22	0.54
42:BH:169:VAL:HG22	42:BH:170:ARG:N	2.20	0.54
43:BK:105:LEU:CD2	43:BK:120:LEU:HD13	2.38	0.54
43:BK:120:LEU:HA	43:BK:123:ALA:HB3	1.87	0.54
46:BO:17:ARG:HB2	46:BO:45:GLU:HG3	1.90	0.54
48:BQ:8:LYS:HB2	48:BQ:9:TYR:CD1	2.42	0.54
50:BS:17:ARG:O	50:BS:20:ARG:HG2	2.07	0.54
51:BT:99:LEU:HB3	51:BT:101:PHE:HE1	1.72	0.54
56:BY:17:SER:HB3	56:BY:71:LYS:HD2	1.88	0.54
57:BZ:115:GLY:C	57:BZ:116:VAL:CG2	2.80	0.54
1:AA:98:G:C2'	1:AA:99:U:H5'	2.37	0.54
1:AA:395:C:C4'	24:AY:340:TYR:OH	2.55	0.54
1:AA:703:G:C2'	1:AA:704:A:OP2	2.55	0.54
1:AA:1248:A:H2'	1:AA:1249:C:H5'	1.90	0.54
1:AA:1321:C:C5'	1:AA:1322:C:H5"	2.37	0.54
2:AB:19:HIS:O	2:AB:20:GLU:O	2.26	0.54
4:AD:14:ARG:C	4:AD:16:GLY:H	2.15	0.54
13:AM:54:VAL:C	13:AM:56:LEU:N	2.63	0.54
16:AP:60:LEU:HD21	16:AP:66:PRO:HD3	1.89	0.54
20:AT:75:ASN:HD22	20:AT:75:ASN:H	1.56	0.54
24:AY:34:TYR:HD2	24:AY:35:TYR:CE2	2.25	0.54
24:AY:415:PRO:HG3	24:AY:421:GLN:HG2	1.90	0.54
24:AY:428:LEU:HD13	24:AY:440:VAL:CG1	2.24	0.54
27:B2:29:LYS:O	27:B2:30:ARG:C	2.50	0.54
30:B5:7:PRO:HA	35:BA:2615:U:C2	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B5:27:PRO:CD	54:BW:23:LEU:HD11	2.38	0.54
31:B6:15:GLU:OE2	31:B6:20:ASN:ND2	2.41	0.54
31:B6:54:ILE:HD13	35:BA:2420:C:H4'	1.90	0.54
35:BA:438:G:H2'	35:BA:440:G:H8	1.73	0.54
35:BA:622:G:HO2'	35:BA:623:G:H5'	1.72	0.54
35:BA:943:U:OP2	47:BP:38:GLN:OE1	2.25	0.54
35:BA:1274:A:N3	35:BA:1297:C:H1'	2.22	0.54
35:BA:1759:A:C5'	35:BA:2715:C:H1'	2.36	0.54
35:BA:1774:C:O5'	35:BA:1774:C:H6	1.89	0.54
35:BA:1853:A:H2'	35:BA:1854:A:C8	2.42	0.54
35:BA:1967:C:C2'	35:BA:1968:G:H5'	2.38	0.54
35:BA:2131:G:N7	35:BA:2133:G:N2	2.56	0.54
35:BA:2259:G:O2'	35:BA:2260:C:H5'	2.07	0.54
35:BA:2531:A:OP1	42:BH:177:GLY:C	2.51	0.54
36:BB:68:C:O2'	36:BB:69:G:H5'	2.08	0.54
37:BC:30:VAL:O	37:BC:33:LEU:N	2.40	0.54
37:BC:48:LEU:HD12	37:BC:48:LEU:H	1.72	0.54
38:BD:23:GLU:OE1	38:BD:23:GLU:HA	2.08	0.54
39:BE:64:LYS:C	39:BE:66:HIS:H	2.15	0.54
40:BF:187:VAL:CG1	47:BP:7:ARG:HH22	2.18	0.54
41:BG:82:LEU:CD1	41:BG:87:PRO:CB	2.85	0.54
43:BK:17:ALA:HB3	43:BK:38:VAL:CG2	2.38	0.54
45:BN:120:LEU:HD13	45:BN:121:LYS:N	2.23	0.54
47:BP:83:VAL:H	47:BP:115:LEU:CD2	2.21	0.54
49:BR:7:GLY:O	49:BR:8:ARG:CB	2.52	0.54
50:BS:14:VAL:O	50:BS:15:ARG:C	2.50	0.54
54:BW:36:LEU:HD23	54:BW:36:LEU:H	1.66	0.54
1:AA:418:C:H2'	1:AA:419:C:C6	2.42	0.54
1:AA:1058:G:H2'	1:AA:1059:C:C6	2.43	0.54
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.18	0.54
5:AE:91:LEU:HD13	5:AE:120:THR:CG2	2.37	0.54
8:AH:1:MET:O	8:AH:2:LEU:O	2.24	0.54
20:AT:48:LYS:O	20:AT:49:ALA:C	2.51	0.54
24:AY:180:VAL:HG23	24:AY:181:LEU:N	2.19	0.54
31:B6:11:LEU:HG	31:B6:26:ASN:HD21	1.73	0.54
31:B6:27:LYS:HB3	31:B6:30:THR:CG2	2.36	0.54
35:BA:308:G:O2'	56:BY:19:LYS:HE3	2.08	0.54
35:BA:344:G:H2'	35:BA:345:A:C8	2.43	0.54
35:BA:414:C:O2	35:BA:1864:U:O2'	2.23	0.54
35:BA:782:A:C2	38:BD:226:MET:HG2	2.42	0.54
35:BA:1678:G:H22	35:BA:1989:G:H22	1.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2039:C:O2'	35:BA:2040:C:H5'	2.07	0.54
35:BA:2122:U:H4'	37:BC:167:ASP:HB3	1.89	0.54
35:BA:2307:G:C2	35:BA:2308:G:H5"	2.43	0.54
35:BA:2747:G:H21	35:BA:2757:A:H62	1.54	0.54
38:BD:16:MET:HE1	38:BD:208:LYS:HE2	1.89	0.54
38:BD:165:ILE:HD13	38:BD:175:LEU:CD2	2.36	0.54
45:BN:62:VAL:O	45:BN:63:THR:C	2.49	0.54
48:BQ:42:ILE:HD12	48:BQ:42:ILE:N	2.23	0.54
50:BS:27:SER:HA	50:BS:88:ASP:HB3	1.89	0.54
1:AA:489:C:H2'	1:AA:490:G:C8	2.42	0.54
1:AA:509:A:H2	1:AA:543:C:H1'	1.73	0.54
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.20	0.54
1:AA:1134:G:N2	1:AA:1141:C:C2	2.75	0.54
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.43	0.54
3:AC:134:ILE:HD11	3:AC:153:VAL:HG23	1.89	0.54
4:AD:204:ILE:C	4:AD:206:PHE:N	2.66	0.54
11:AK:122:LYS:O	11:AK:124:LYS:N	2.40	0.54
11:AK:125:PHE:N	11:AK:125:PHE:CD1	2.74	0.54
15:AO:76:GLU:C	15:AO:78:TYR:N	2.64	0.54
16:AP:59:TRP:O	16:AP:62:VAL:HG22	2.07	0.54
20:AT:69:GLY:O	20:AT:73:HIS:NE2	2.40	0.54
22:AV:23:C:O2'	22:AV:24:U:H5'	2.07	0.54
24:AY:20:HIS:CD2	24:AY:117:GLN:HB3	2.42	0.54
24:AY:225:GLU:O	24:AY:228:MET:HB3	2.08	0.54
24:AY:431:LEU:HD22	24:AY:466:LEU:CD1	2.34	0.54
24:AY:463:VAL:O	24:AY:467:LYS:HB3	2.07	0.54
24:AY:573:HIS:HD2	24:AY:576:ASP:H	1.56	0.54
28:B3:43:ILE:O	28:B3:47:VAL:HG23	2.08	0.54
35:BA:250:G:H2'	35:BA:251:A:C8	2.43	0.54
35:BA:654(L):G:C2'	35:BA:654(M):C:H4'	2.37	0.54
35:BA:1036:G:OP2	42:BH:59:ARG:NH1	2.40	0.54
35:BA:1682:G:O2'	35:BA:1683:C:H5'	2.08	0.54
35:BA:1820:U:C2	38:BD:202:LYS:HG2	2.43	0.54
35:BA:2845:G:O5'	35:BA:2845:G:H8	1.91	0.54
35:BA:2870:C:H2'	35:BA:2871:C:H6	1.73	0.54
38:BD:35:LYS:HD2	38:BD:35:LYS:C	2.31	0.54
38:BD:229:VAL:HG23	38:BD:230:ASP:N	2.21	0.54
39:BE:59:VAL:CG1	39:BE:60:ASN:N	2.71	0.54
41:BG:163:ALA:HB1	41:BG:168:GLU:HB2	1.90	0.54
42:BH:41:MET:HE3	42:BH:42:ARG:C	2.32	0.54
42:BH:52:VAL:O	42:BH:52:VAL:CG1	2.52	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:17:ASP:CG	45:BN:56:ASN:HB3	2.33	0.54
46:BO:49:ARG:HD3	46:BO:49:ARG:N	2.23	0.54
48:BQ:108:GLY:O	48:BQ:109:VAL:HG23	2.08	0.54
51:BT:99:LEU:HB2	51:BT:101:PHE:HE1	1.72	0.54
52:BU:79:PHE:CE1	52:BU:83:LEU:HD11	2.43	0.54
55:BX:59:VAL:HG12	55:BX:59:VAL:O	2.07	0.54
57:BZ:17:ALA:O	57:BZ:21:ALA:HB2	2.07	0.54
57:BZ:119:GLU:HG3	57:BZ:119:GLU:O	2.07	0.54
1:AA:178:C:C2'	1:AA:179:A:H5'	2.37	0.54
1:AA:748:C:O2'	1:AA:749:C:H6	1.91	0.54
1:AA:1381:U:C5	1:AA:1382:C:C5	2.96	0.54
3:AC:13:GLY:HA3	14:AN:57:ARG:NH2	2.23	0.54
3:AC:50:ALA:O	3:AC:70:VAL:CG1	2.55	0.54
3:AC:140:ARG:HG3	3:AC:140:ARG:NH1	2.22	0.54
24:AY:20:HIS:N	24:AY:121:VAL:HG11	2.23	0.54
24:AY:247:ARG:HG2	24:AY:251:ILE:HD11	1.90	0.54
24:AY:259:PHE:CE2	24:AY:275:ALA:HB2	2.43	0.54
24:AY:546:ILE:HG12	24:AY:590:ILE:HG12	1.90	0.54
24:AY:617:MET:HE1	24:AY:641:GLN:CD	2.33	0.54
35:BA:274:G:O2'	35:BA:275:G:H5"	2.07	0.54
35:BA:606:U:H5'	35:BA:607:U:OP2	2.08	0.54
35:BA:693:C:H2'	35:BA:694:U:C6	2.43	0.54
35:BA:1786:A:H2	35:BA:2606:C:H1'	1.73	0.54
35:BA:2103:C:N4	35:BA:2186:G:H1	2.06	0.54
35:BA:2223:G:H2'	35:BA:2224:G:C5'	2.36	0.54
35:BA:2329:G:H2'	35:BA:2330:G:H8	1.73	0.54
40:BF:152:GLU:OE1	40:BF:191:ARG:HD2	2.08	0.54
41:BG:62:LEU:N	41:BG:62:LEU:HD12	2.22	0.54
42:BH:89:ILE:HD13	42:BH:94:TYR:HB3	1.90	0.54
49:BR:92:GLY:HA2	49:BR:94:TYR:CE1	2.43	0.54
50:BS:66:ALA:HB1	50:BS:97:ARG:O	2.08	0.54
55:BX:47:PHE:O	55:BX:49:VAL:HG13	2.08	0.54
1:AA:521:G:O2'	1:AA:522:C:H5'	2.08	0.54
1:AA:812:C:HO2'	1:AA:813:U:P	2.29	0.54
1:AA:1004:A:H61	1:AA:1034:G:C2'	2.14	0.54
1:AA:1250:A:H5'	9:AI:67:GLY:HA2	1.89	0.54
1:AA:1277:C:H3'	1:AA:1277:C:C6	2.43	0.54
1:AA:1277:C:C3'	1:AA:1277:C:C6	2.91	0.54
1:AA:1351:U:O4'	7:AG:33:ASP:HB3	2.08	0.54
11:AK:58:PRO:HA	11:AK:90:GLY:CA	2.36	0.54
14:AN:47:LEU:O	14:AN:50:LYS:N	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:46:ASP:OD1	17:AQ:51:TYR:HD1	1.91	0.54
24:AY:379:GLY:O	24:AY:380:LEU:HB2	2.07	0.54
24:AY:415:PRO:O	24:AY:420:ASP:HB2	2.08	0.54
27:B2:18:PRO:HG2	27:B2:19:VAL:HG23	1.90	0.54
29:B4:8:LYS:O	29:B4:9:LEU:CB	2.56	0.54
31:B6:16:CYS:SG	31:B6:48:VAL:HG21	2.48	0.54
34:B9:17:ILE:HG21	34:B9:19:ARG:HE	1.73	0.54
35:BA:15:G:H2'	35:BA:16:G:H8	1.71	0.54
35:BA:223:A:C4	35:BA:422:A:C8	2.96	0.54
35:BA:364:C:C2'	35:BA:365:C:H5"	2.38	0.54
35:BA:600:G:H2'	35:BA:601:C:C6	2.43	0.54
35:BA:1080:C:O2'	35:BA:1081:U:H5'	2.08	0.54
35:BA:1276:A:H8	35:BA:1276:A:H5"	1.72	0.54
35:BA:1578:U:O2	35:BA:1578:U:C2'	2.56	0.54
35:BA:1847:A:H5'	35:BA:1848:A:C8	2.43	0.54
35:BA:2347:C:H2'	35:BA:2348:U:C6	2.43	0.54
36:BB:49:C:H2'	36:BB:50:G:C8	2.43	0.54
39:BE:38:THR:CB	39:BE:41:LYS:HG2	2.34	0.54
39:BE:76:ARG:O	39:BE:77:ILE:C	2.51	0.54
40:BF:6:VAL:H	40:BF:125:LEU:HD21	1.73	0.54
47:BP:95:VAL:O	47:BP:96:THR:HG23	2.08	0.54
48:BQ:36:ALA:HA	48:BQ:129:THR:HG22	1.90	0.54
48:BQ:50:ALA:O	48:BQ:51:ARG:C	2.51	0.54
50:BS:103:GLU:O	50:BS:104:GLY:C	2.51	0.54
51:BT:53:ARG:O	51:BT:59:THR:HB	2.08	0.54
52:BU:47:TYR:HE2	53:BV:74:LYS:HZ2	1.54	0.54
56:BY:59:GLY:O	56:BY:60:PHE:HB2	2.08	0.54
57:BZ:71:VAL:HG13	57:BZ:86:VAL:CG1	2.38	0.54
57:BZ:82:ARG:O	57:BZ:83:PRO:C	2.50	0.54
1:AA:811:C:H4'	1:AA:900:A:N6	2.22	0.54
1:AA:893:C:H2'	1:AA:894:G:H8	1.72	0.54
1:AA:1347:G:H2'	1:AA:1373:G:C6	2.43	0.54
2:AB:207:ALA:O	2:AB:208:ILE:C	2.50	0.54
7:AG:80:VAL:HG11	7:AG:85:TYR:HD1	1.73	0.54
9:AI:9:ARG:HG2	9:AI:14:VAL:HA	1.90	0.54
10:AJ:23:ILE:HG22	10:AJ:23:ILE:O	2.08	0.54
12:AL:38:THR:C	12:AL:39:VAL:CG2	2.80	0.54
12:AL:47:LYS:CB	12:AL:48:PRO:CD	2.81	0.54
13:AM:15:VAL:HA	13:AM:18:ALA:HB3	1.89	0.54
16:AP:50:LYS:O	16:AP:51:VAL:CG2	2.56	0.54
18:AR:74:ARG:HD3	18:AR:81:PHE:HD2	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:73:HIS:H	20:AT:76:ALA:CB	2.21	0.54
25:B0:43:THR:HG22	35:BA:2331:G:O2'	2.08	0.54
26:B1:64:ALA:HA	26:B1:67:ILE:CG1	2.37	0.54
33:B8:13:ARG:HH12	47:BP:59:LEU:HG	1.71	0.54
35:BA:492:A:H2'	35:BA:493:G:C5'	2.37	0.54
35:BA:2224:G:H4'	35:BA:2226:C:C2	2.43	0.54
35:BA:2255:G:H2'	35:BA:2256:G:O4'	2.08	0.54
35:BA:2453:A:OP1	35:BA:2573:C:H5	1.91	0.54
36:BB:52:A:O2'	36:BB:53:A:C8	2.55	0.54
48:BQ:41:TRP:C	48:BQ:42:ILE:HD12	2.33	0.54
48:BQ:55:VAL:CG1	48:BQ:56:ARG:N	2.70	0.54
49:BR:18:LEU:HD21	49:BR:22:ARG:CZ	2.38	0.54
49:BR:63:ARG:HA	49:BR:80:PHE:CZ	2.42	0.54
51:BT:50:ILE:N	51:BT:50:ILE:HD12	2.23	0.54
51:BT:106:SER:O	51:BT:107:ASP:HB3	2.08	0.54
56:BY:28:LYS:CB	56:BY:37:VAL:HB	2.17	0.54
56:BY:76:CYS:O	56:BY:99:CYS:SG	2.66	0.54
57:BZ:81:ARG:HG3	57:BZ:81:ARG:O	2.08	0.54
1:AA:1089:G:O2'	1:AA:1090:U:H5'	2.07	0.53
2:AB:44:LEU:HA	2:AB:47:THR:OG1	2.07	0.53
2:AB:142:LEU:HD23	2:AB:142:LEU:C	2.33	0.53
3:AC:90:GLU:CA	3:AC:93:LYS:HB3	2.37	0.53
14:AN:41:ARG:NH1	14:AN:41:ARG:CG	2.70	0.53
24:AY:16:GLY:HA3	24:AY:101:LEU:CD1	2.39	0.53
24:AY:250:THR:O	24:AY:253:LEU:N	2.34	0.53
24:AY:257:PRO:HB2	24:AY:259:PHE:HE1	1.72	0.53
24:AY:688:ILE:N	24:AY:688:ILE:CD1	2.71	0.53
28:B3:46:ASN:O	28:B3:47:VAL:C	2.46	0.53
29:B4:2:LYS:CB	36:BB:40:U:O4	2.57	0.53
29:B4:2:LYS:CG	36:BB:44:G:OP2	2.57	0.53
31:B6:22:ALA:C	31:B6:23:THR:HG23	2.31	0.53
35:BA:123:G:H2'	35:BA:124:G:O4'	2.08	0.53
35:BA:182:A:O2'	35:BA:183:C:H5'	2.08	0.53
35:BA:464:U:H2'	35:BA:465:G:O4'	2.08	0.53
35:BA:732:C:O2'	35:BA:733:G:H5'	2.08	0.53
35:BA:1142(A):A:O2'	35:BA:1143:A:H2'	2.09	0.53
35:BA:1198:U:O2	35:BA:1198:U:H2'	2.09	0.53
35:BA:2328:A:H2'	35:BA:2329:G:C8	2.43	0.53
35:BA:2872:G:C2	35:BA:2873:A:N6	2.76	0.53
38:BD:206:LEU:HD23	38:BD:211:ARG:CG	2.39	0.53
40:BF:6:VAL:O	40:BF:6:VAL:HG12	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:153:ARG:HB3	41:BG:153:ARG:NH1	2.22	0.53
52:BU:57:PHE:C	52:BU:59:ARG:N	2.65	0.53
56:BY:74:PRO:HG3	56:BY:83:THR:HG22	1.89	0.53
56:BY:94:LYS:HG3	56:BY:102:CYS:SG	2.47	0.53
57:BZ:115:GLY:HA2	57:BZ:177:PRO:CD	2.33	0.53
1:AA:830:G:O2'	1:AA:831:U:H5'	2.08	0.53
1:AA:960:U:C5	1:AA:1225:A:C8	2.96	0.53
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	2.08	0.53
4:AD:162:LEU:HD11	4:AD:181:MET:CG	2.36	0.53
8:AH:41:ARG:HG2	8:AH:41:ARG:O	2.06	0.53
8:AH:114:THR:C	8:AH:116:LYS:H	2.15	0.53
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB3	2.38	0.53
20:AT:82:SER:O	20:AT:86:ARG:HB2	2.07	0.53
24:AY:401:SER:O	24:AY:403:GLU:HG3	2.07	0.53
24:AY:434:GLU:O	24:AY:435:ASP:HB2	2.08	0.53
30:B5:10:LYS:HB2	35:BA:2017:U:O2	2.08	0.53
31:B6:31:PRO:O	31:B6:32:ASN:CG	2.52	0.53
35:BA:180:G:N2	35:BA:214:G:O6	2.41	0.53
35:BA:409:C:O2'	35:BA:410:G:H5'	2.08	0.53
35:BA:611:C:H2'	35:BA:612:C:H6	1.73	0.53
35:BA:688:U:H2'	35:BA:689:A:H8	1.73	0.53
35:BA:1047:G:O2'	35:BA:1110:G:N2	2.37	0.53
35:BA:1221:C:O2'	35:BA:1221(A):C:H5'	2.08	0.53
35:BA:1773:A:H2'	35:BA:1774:C:H5'	1.91	0.53
37:BC:115:VAL:HG12	37:BC:145:THR:HG23	1.90	0.53
38:BD:153:ALA:C	38:BD:154:LYS:CG	2.82	0.53
39:BE:82:ARG:HG3	39:BE:83:ASP:N	2.18	0.53
40:BF:81:PRO:C	40:BF:83:PHE:H	2.16	0.53
41:BG:125:PHE:HZ	41:BG:173:LEU:HD12	1.73	0.53
42:BH:67:LEU:O	42:BH:71:LEU:HD12	2.08	0.53
45:BN:35:ARG:O	45:BN:36:GLY:C	2.51	0.53
45:BN:78:TYR:N	45:BN:78:TYR:CD1	2.76	0.53
47:BP:97:PRO:O	47:BP:98:GLU:HB3	2.08	0.53
48:BQ:56:ARG:HA	48:BQ:56:ARG:HE	1.72	0.53
57:BZ:153:SER:HB2	57:BZ:167:PRO:HB3	1.90	0.53
1:AA:697:U:H2'	1:AA:698:G:C5'	2.16	0.53
1:AA:946:A:H3'	1:AA:947:G:C8	2.43	0.53
1:AA:987:G:O2'	1:AA:988:G:H5'	2.08	0.53
1:AA:1165:C:C4	1:AA:1166:G:N7	2.76	0.53
2:AB:82:ARG:NH1	2:AB:82:ARG:HG3	2.22	0.53
3:AC:94:LEU:O	3:AC:94:LEU:HD12	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:76:ARG:HG2	4:AD:76:ARG:HH11	1.73	0.53
7:AG:46:ALA:O	7:AG:47:CYS:C	2.51	0.53
13:AM:77:ASN:O	13:AM:80:ARG:N	2.36	0.53
19:AS:13:ASP:O	19:AS:15:LEU:N	2.42	0.53
24:AY:230:LYS:NZ	24:AY:230:LYS:CB	2.72	0.53
24:AY:607:ARG:O	24:AY:671:MET:HA	2.08	0.53
25:B0:40:GLN:HE22	25:B0:43:THR:CA	2.21	0.53
27:B2:8:LYS:O	27:B2:9:GLN:C	2.51	0.53
29:B4:25:TYR:O	29:B4:26:SER:HB3	2.09	0.53
35:BA:588:U:H2'	35:BA:589:C:C6	2.44	0.53
35:BA:1145:C:H2'	35:BA:1146:C:H6	1.70	0.53
35:BA:1565:C:H2'	38:BD:21:PHE:CE2	2.43	0.53
37:BC:4:HIS:ND1	37:BC:8:TYR:CE2	2.77	0.53
38:BD:4:LYS:NZ	38:BD:20:ASP:HA	2.24	0.53
38:BD:61:LEU:HB3	38:BD:63:ARG:HH12	1.73	0.53
38:BD:155:LEU:HD23	38:BD:177:LEU:CD2	2.39	0.53
39:BE:26:ILE:HD12	39:BE:198:VAL:HG21	1.90	0.53
48:BQ:59:ARG:CA	57:BZ:180:VAL:HG23	2.34	0.53
48:BQ:130:LYS:NZ	57:BZ:80:ARG:HH11	2.06	0.53
52:BU:83:LEU:CD1	52:BU:83:LEU:N	2.70	0.53
52:BU:95:LEU:O	52:BU:98:LEU:HG	2.07	0.53
56:BY:7:VAL:HG11	56:BY:8:LYS:HE3	1.91	0.53
57:BZ:42:VAL:CG1	57:BZ:43:GLU:H	2.18	0.53
57:BZ:56:VAL:CG1	57:BZ:57:ILE:N	2.72	0.53
57:BZ:77:ASP:O	57:BZ:77:ASP:CG	2.51	0.53
1:AA:636:U:H2'	1:AA:637:G:C8	2.44	0.53
1:AA:823:G:H2'	1:AA:824:C:C6	2.44	0.53
4:AD:98:GLU:HG3	4:AD:189:PRO:HG3	1.89	0.53
6:AF:1:MET:HE1	6:AF:68:PRO:CD	2.37	0.53
6:AF:36:ARG:NH1	6:AF:36:ARG:CB	2.67	0.53
9:AI:73:GLN:O	9:AI:76:ALA:N	2.39	0.53
12:AL:110:VAL:HG23	12:AL:120:TYR:HB3	1.91	0.53
22:AV:49:G:H1	22:AV:65:C:H42	1.55	0.53
22:AV:62:C:H2'	22:AV:63:G:O4'	2.07	0.53
24:AY:252:ASP:OD2	24:AY:252:ASP:N	2.41	0.53
24:AY:407:PRO:HB3	24:AY:452:SER:OG	2.08	0.53
24:AY:485:GLU:CB	24:AY:560:VAL:HG22	2.38	0.53
29:B4:39:CYS:O	29:B4:40:HIS:CB	2.57	0.53
33:B8:51:ALA:N	33:B8:53:PRO:HD2	2.23	0.53
35:BA:226:G:C4'	35:BA:227:A:OP1	2.54	0.53
35:BA:301:G:C4	35:BA:302:C:C5	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:391:G:O2'	35:BA:392:C:H5'	2.08	0.53
35:BA:655:A:H1'	35:BA:656:G:C1'	2.38	0.53
35:BA:693:C:H2'	35:BA:694:U:H6	1.74	0.53
35:BA:695:G:N2	35:BA:696:G:H1'	2.23	0.53
35:BA:1169:G:H1	35:BA:1180:C:H42	1.56	0.53
35:BA:1322:A:OP1	54:BW:11:ARG:HG3	2.07	0.53
35:BA:1334:G:O2'	35:BA:1335:U:H5'	2.08	0.53
35:BA:2317:C:O2'	35:BA:2318:G:H5'	2.09	0.53
35:BA:2794:C:H42	35:BA:2801(A):A:H61	1.55	0.53
37:BC:65:LEU:HD13	37:BC:189:ASN:ND2	2.23	0.53
38:BD:17:THR:O	38:BD:211:ARG:NH2	2.41	0.53
38:BD:26:LYS:O	38:BD:27:THR:CG2	2.56	0.53
38:BD:206:LEU:CD2	38:BD:211:ARG:HG2	2.38	0.53
39:BE:200:GLU:OE1	39:BE:200:GLU:N	2.41	0.53
40:BF:81:PRO:O	40:BF:83:PHE:N	2.42	0.53
49:BR:87:TYR:O	49:BR:89:ASP:N	2.39	0.53
50:BS:51:ALA:CB	50:BS:73:LEU:HB2	2.38	0.53
51:BT:65:LYS:HA	51:BT:65:LYS:CE	2.38	0.53
57:BZ:54:HIS:HE1	57:BZ:123:ASP:OD2	1.90	0.53
57:BZ:153:SER:O	57:BZ:155:LEU:HD23	2.08	0.53
1:AA:55:A:O2'	24:AY:321:TYR:HD1	1.91	0.53
1:AA:1284:C:O5'	1:AA:1284:C:H6	1.91	0.53
1:AA:1378:C:OP1	7:AG:7:ALA:HB3	2.08	0.53
1:AA:1479:C:H2'	1:AA:1480:G:C8	2.40	0.53
2:AB:114:ARG:NH1	2:AB:118:LEU:HD21	2.22	0.53
3:AC:10:PHE:CZ	3:AC:178:LEU:HD11	2.43	0.53
3:AC:101:LEU:HD23	3:AC:102:ASN:N	2.23	0.53
4:AD:17:VAL:O	4:AD:17:VAL:HG12	2.08	0.53
4:AD:79:PHE:C	4:AD:81:GLU:H	2.17	0.53
10:AJ:47:PHE:CD2	14:AN:44:LEU:HD21	2.42	0.53
23:AX:16:A:H2'	23:AX:17:U:H6	1.74	0.53
24:AY:101:LEU:HD12	24:AY:103:GLY:O	2.07	0.53
35:BA:429:A:C2	35:BA:430:G:C2	2.96	0.53
35:BA:564:C:O2'	35:BA:565:C:H5'	2.09	0.53
35:BA:817:C:H2'	35:BA:818:G:O4'	2.08	0.53
35:BA:953:A:H2'	35:BA:954:G:C8	2.44	0.53
35:BA:1141:U:H5"	45:BN:63:THR:CG2	2.38	0.53
35:BA:2107:C:H42	35:BA:2182:G:H1	1.56	0.53
35:BA:2147:G:H2'	35:BA:2148:G:C4'	2.39	0.53
35:BA:2810:A:H2'	39:BE:61:ARG:HH21	1.73	0.53
36:BB:48:A:H2'	36:BB:49:C:H6	1.70	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:29:LYS:HB3	47:BP:34:GLY:H	1.74	0.53
47:BP:32:THR:HG22	47:BP:37:GLY:HA2	1.88	0.53
50:BS:12:PHE:O	50:BS:14:VAL:N	2.40	0.53
52:BU:62:ILE:HG23	52:BU:76:TYR:CE2	2.44	0.53
55:BX:7:VAL:CG1	55:BX:8:ILE:HD12	2.37	0.53
57:BZ:107:THR:HG23	57:BZ:111:VAL:CB	2.38	0.53
1:AA:164:U:H2'	1:AA:165:C:C6	2.43	0.53
1:AA:345:C:O2'	1:AA:346:G:N2	2.42	0.53
1:AA:1237:C:H2'	1:AA:1336:C:C5	2.43	0.53
1:AA:1424:C:O5'	1:AA:1424:C:H6	1.91	0.53
5:AE:122:GLU:C	5:AE:123:LEU:HD23	2.34	0.53
7:AG:116:ALA:O	7:AG:120:ILE:HG12	2.07	0.53
9:AI:3:GLN:NE2	9:AI:20:ARG:NH2	2.57	0.53
12:AL:117:ARG:HH22	12:AL:124:LYS:HB2	1.72	0.53
16:AP:7:ALA:O	16:AP:17:TYR:HA	2.09	0.53
16:AP:8:ARG:CB	16:AP:28:ARG:HH12	2.21	0.53
16:AP:9:PHE:CE2	16:AP:18:ARG:NE	2.77	0.53
19:AS:49:ILE:O	19:AS:60:VAL:HG12	2.08	0.53
20:AT:54:LYS:HA	20:AT:57:ARG:HH22	1.72	0.53
24:AY:89:ASP:OD2	24:AY:89:ASP:N	2.42	0.53
24:AY:227:ILE:HD11	24:AY:241:GLU:C	2.33	0.53
24:AY:487:ILE:HB	24:AY:597:GLY:O	2.08	0.53
24:AY:655:TYR:HD2	24:AY:669:PHE:CE2	2.26	0.53
27:B2:38:GLN:NE2	27:B2:44:LEU:HB2	2.23	0.53
30:B5:44:THR:HG23	49:BR:101:ALA:N	2.24	0.53
30:B5:48:GLU:O	30:B5:49:CYS:SG	2.66	0.53
35:BA:723:G:H2'	35:BA:724:U:H6	1.72	0.53
35:BA:1024:G:H8	35:BA:1024:G:O5'	1.92	0.53
35:BA:1810:A:H2'	35:BA:1811:G:O4'	2.09	0.53
35:BA:2105:C:N4	35:BA:2184:G:H1	2.06	0.53
35:BA:2200:C:H42	35:BA:2223:G:H1	1.55	0.53
38:BD:44:ASN:HB2	38:BD:49:ILE:HA	1.87	0.53
39:BE:152:LYS:HG3	39:BE:153:GLY:H	1.74	0.53
40:BF:66:PRO:O	40:BF:67:GLN:HB3	2.09	0.53
41:BG:68:PRO:CA	41:BG:92:VAL:CG1	2.83	0.53
47:BP:75:ILE:HD12	47:BP:75:ILE:N	2.23	0.53
49:BR:18:LEU:HD21	49:BR:22:ARG:NE	2.23	0.53
50:BS:70:GLY:C	50:BS:72:ALA:H	2.16	0.53
51:BT:102:ILE:HG13	51:BT:103:ARG:N	2.24	0.53
53:BV:35:LEU:C	53:BV:37:VAL:N	2.66	0.53
55:BX:47:PHE:CD2	55:BX:89:ILE:HG21	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:14:LEU:HD12	56:BY:15:VAL:H	1.73	0.53
56:BY:54:LYS:HZ3	56:BY:55:TYR:HE1	1.56	0.53
57:BZ:115:GLY:CA	57:BZ:177:PRO:HD3	2.35	0.53
1:AA:439:A:H2'	1:AA:441:A:H5'	1.90	0.53
1:AA:902:G:H2'	1:AA:903:G:H8	1.74	0.53
1:AA:961:U:O2	1:AA:983:A:H2'	2.08	0.53
2:AB:31:TYR:HE1	2:AB:200:ILE:HD12	1.74	0.53
5:AE:12:LEU:HD12	5:AE:31:LEU:HB3	1.90	0.53
6:AF:69:GLU:CD	6:AF:69:GLU:N	2.66	0.53
8:AH:50:ARG:NH1	8:AH:50:ARG:HG2	2.24	0.53
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.09	0.53
24:AY:210:ARG:O	24:AY:214:GLU:HG2	2.09	0.53
35:BA:523:C:H3'	35:BA:523:C:H6	1.74	0.53
35:BA:614(A):U:H4'	35:BA:614(B):G:C5'	2.38	0.53
35:BA:654(P):C:H2'	35:BA:654(Q):C:H5'	1.91	0.53
35:BA:848:G:H5"	35:BA:928:G:H22	1.74	0.53
35:BA:852:G:H2'	35:BA:853:G:H8	1.74	0.53
35:BA:910:A:H62	48:BQ:12:GLN:HA	1.74	0.53
35:BA:1252:G:N3	52:BU:33:ARG:HD2	2.23	0.53
35:BA:1314:C:H2'	35:BA:1315:C:H6	1.74	0.53
35:BA:1398:C:H2'	35:BA:1399:C:H6	1.72	0.53
35:BA:1515:G:H2'	35:BA:1516:C:C6	2.43	0.53
35:BA:1748:G:H2'	35:BA:1749:A:O4'	2.08	0.53
35:BA:1788:C:H2'	35:BA:1789:A:H8	1.72	0.53
35:BA:1799:G:H5'	35:BA:1819:A:H61	1.73	0.53
35:BA:1844:C:O2'	35:BA:1845:G:H5'	2.08	0.53
35:BA:2219:G:O2'	35:BA:2220:G:H5'	2.08	0.53
35:BA:2408:U:O5'	35:BA:2408:U:H6	1.90	0.53
35:BA:2783:G:C2	35:BA:2784:C:C2	2.97	0.53
35:BA:2820:A:O4'	49:BR:5:LYS:HG3	2.09	0.53
38:BD:79:VAL:O	38:BD:113:VAL:HG13	2.08	0.53
40:BF:18:ARG:HG2	40:BF:19:GLU:N	2.24	0.53
41:BG:44:GLY:O	41:BG:47:LYS:HD2	2.08	0.53
50:BS:28:VAL:HG12	50:BS:29:PHE:N	2.20	0.53
50:BS:70:GLY:C	50:BS:72:ALA:N	2.65	0.53
51:BT:80:SER:CB	51:BT:81:PRO:HD3	2.35	0.53
51:BT:102:ILE:O	51:BT:103:ARG:C	2.52	0.53
53:BV:82:ARG:N	53:BV:82:ARG:HD2	2.24	0.53
54:BW:86:LEU:HD12	54:BW:87:PRO:N	2.24	0.53
57:BZ:27:VAL:O	57:BZ:27:VAL:HG13	2.08	0.53
1:AA:38:G:C2	1:AA:397:A:C2	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:421:U:O2	1:AA:421:U:H2'	2.08	0.53
2:AB:114:ARG:HH11	2:AB:118:LEU:CD2	2.22	0.53
3:AC:134:ILE:O	3:AC:135:LYS:C	2.52	0.53
8:AH:6:ILE:O	8:AH:9:MET:N	2.42	0.53
13:AM:4:ILE:HG22	13:AM:5:ALA:N	2.24	0.53
17:AQ:59:ILE:HG23	17:AQ:71:PHE:HB3	1.91	0.53
24:AY:368:GLU:C	24:AY:369:LEU:HD12	2.32	0.53
24:AY:512:ILE:HD12	24:AY:589:ALA:HB1	1.90	0.53
24:AY:546:ILE:O	24:AY:547:GLU:C	2.52	0.53
30:B5:44:THR:HG22	30:B5:45:VAL:N	2.19	0.53
31:B6:18:ARG:O	31:B6:20:ASN:ND2	2.42	0.53
32:B7:6:GLN:O	35:BA:686:G:H1'	2.08	0.53
35:BA:214:G:H2'	35:BA:215:G:O4'	2.08	0.53
35:BA:271(C):C:H2'	35:BA:271(D):G:C8	2.44	0.53
35:BA:733:G:O5'	35:BA:733:G:C8	2.50	0.53
35:BA:963:U:H2'	35:BA:964:C:C6	2.44	0.53
35:BA:1079:C:O2	43:BK:129:GLY:HA3	2.09	0.53
35:BA:1635:G:H2'	35:BA:1636:C:C6	2.44	0.53
35:BA:2174:C:H1'	37:BC:219:MET:HE1	1.91	0.53
35:BA:2466:C:O2'	35:BA:2467:C:H5'	2.09	0.53
35:BA:2656:U:N3	35:BA:2665:A:H2	2.07	0.53
35:BA:2723:C:H5"	49:BR:2:ARG:NH1	2.23	0.53
36:BB:64:C:O2'	36:BB:65:C:H5'	2.09	0.53
37:BC:139:PRO:HA	37:BC:145:THR:CG2	2.39	0.53
41:BG:116:ASP:O	41:BG:117:PHE:HB3	2.09	0.53
46:BO:19:ILE:HD12	46:BO:41:ALA:HB3	1.90	0.53
49:BR:50:HIS:CE1	49:BR:54:LEU:HD13	2.44	0.53
51:BT:64:ARG:HG2	51:BT:64:ARG:HH11	1.74	0.53
52:BU:29:SER:OG	52:BU:30:LYS:HE2	2.08	0.53
56:BY:15:VAL:HG12	56:BY:17:SER:H	1.74	0.53
1:AA:417:C:H2'	1:AA:418:C:C6	2.43	0.53
1:AA:1250:A:C2	1:AA:1251:A:C4	2.97	0.53
1:AA:1365:G:O2'	1:AA:1366:C:H5'	2.09	0.53
1:AA:1472:U:H2'	1:AA:1473:A:C8	2.44	0.53
3:AC:139:GLN:O	3:AC:140:ARG:C	2.52	0.53
5:AE:6:PHE:N	5:AE:6:PHE:CD1	2.74	0.53
5:AE:101:ILE:CD1	5:AE:119:LEU:HA	2.36	0.53
12:AL:53:ARG:NH1	12:AL:92:ASP:OD2	2.41	0.53
19:AS:40:ILE:HD11	19:AS:74:PHE:HE2	1.74	0.53
23:AX:19:U:H2'	23:AX:20:U:C6	2.44	0.53
24:AY:363:ARG:HH11	24:AY:363:ARG:HG3	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:600:VAL:O	24:AY:600:VAL:HG13	2.08	0.53
25:B0:40:GLN:NE2	25:B0:44:ARG:N	2.57	0.53
28:B3:46:ASN:O	28:B3:49:LYS:N	2.41	0.53
29:B4:2:LYS:HB2	36:BB:40:U:C4	2.44	0.53
34:B9:4:ARG:NH1	35:BA:2477:C:N4	2.56	0.53
35:BA:252:G:O2'	35:BA:253:C:H5'	2.09	0.53
35:BA:307:G:O5'	35:BA:307:G:H8	1.91	0.53
35:BA:796:C:H2'	35:BA:797:C:C6	2.43	0.53
35:BA:850:C:O2'	35:BA:851:U:H5'	2.09	0.53
35:BA:925:C:C3'	35:BA:926:A:H5"	2.39	0.53
35:BA:1658:C:OP1	39:BE:132:HIS:O	2.27	0.53
35:BA:1839:G:H2'	35:BA:1839:G:N3	2.24	0.53
35:BA:1947:C:H2'	35:BA:1948:G:H8	1.74	0.53
35:BA:2200:C:O2	35:BA:2200:C:H2'	2.07	0.53
35:BA:2392:A:C8	47:BP:60:MET:HB3	2.43	0.53
36:BB:40:U:H5"	36:BB:41:U:OP2	2.09	0.53
38:BD:35:LYS:HG3	38:BD:63:ARG:CG	2.38	0.53
40:BF:10:PRO:HD2	40:BF:13:SER:O	2.09	0.53
40:BF:121:GLY:C	40:BF:123:LEU:H	2.15	0.53
42:BH:68:THR:O	42:BH:70:THR:N	2.42	0.53
42:BH:84:SER:OG	42:BH:85:LYS:N	2.42	0.53
45:BN:15:LEU:O	45:BN:136:GLU:HA	2.09	0.53
45:BN:128:HIS:CE1	45:BN:134:ARG:HH11	2.27	0.53
47:BP:33:ARG:O	47:BP:34:GLY:O	2.27	0.53
48:BQ:46:GLN:HG2	48:BQ:126:PRO:HD3	1.91	0.53
49:BR:118:GLU:OE1	49:BR:118:GLU:HA	2.08	0.53
50:BS:17:ARG:C	50:BS:19:LYS:H	2.16	0.53
56:BY:88:LYS:NZ	56:BY:93:GLY:O	2.42	0.53
57:BZ:26:GLY:O	57:BZ:27:VAL:HB	2.08	0.53
57:BZ:137:ILE:O	57:BZ:137:ILE:HG22	2.07	0.53
1:AA:539:A:H2'	1:AA:540:G:C8	2.44	0.53
1:AA:1004:A:H5'	1:AA:1025:U:N3	2.24	0.53
1:AA:1026:G:C3'	1:AA:1027:C:H5'	2.39	0.53
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.74	0.53
4:AD:11:LEU:O	4:AD:12:CYS:C	2.52	0.53
4:AD:17:VAL:O	4:AD:18:LYS:O	2.27	0.53
5:AE:76:ILE:CG1	5:AE:77:PRO:HD2	2.39	0.53
12:AL:50:SER:O	12:AL:51:ALA:HB2	2.08	0.53
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.15	0.53
14:AN:47:LEU:O	14:AN:48:ALA:C	2.51	0.53
15:AO:65:ARG:H	15:AO:65:ARG:HD2	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:46:GLU:HA	18:AR:46:GLU:OE2	2.09	0.53
24:AY:221:ALA:HB3	44:BL:80:LEU:CD2	2.39	0.53
24:AY:468:ARG:HB3	24:AY:469:GLU:OE2	2.09	0.53
24:AY:606:MET:O	24:AY:646:PHE:HA	2.09	0.53
26:B1:5:CYS:O	26:B1:9:GLY:HA2	2.09	0.53
31:B6:51:GLU:HG2	31:B6:52:VAL:H	1.74	0.53
33:B8:50:LEU:HG	33:B8:51:ALA:N	2.24	0.53
35:BA:635:C:O2'	35:BA:639:U:OP1	2.26	0.53
35:BA:742:G:O2'	35:BA:743:G:H5'	2.09	0.53
35:BA:852:G:H2'	35:BA:853:G:C8	2.44	0.53
35:BA:1683:C:O2'	35:BA:1684:C:H5'	2.09	0.53
35:BA:2051:A:H2'	35:BA:2578:G:O5'	2.09	0.53
35:BA:2348:U:C2'	35:BA:2349:G:C5'	2.87	0.53
35:BA:2663:G:O2'	35:BA:2664:G:H5'	2.09	0.53
35:BA:2712:U:H2'	35:BA:2713:A:H5'	1.90	0.53
35:BA:2736:G:O2'	35:BA:2737:G:H5'	2.09	0.53
37:BC:28:ARG:HG2	37:BC:183:PRO:CB	2.39	0.53
38:BD:155:LEU:O	38:BD:156:ALA:HB3	2.09	0.53
39:BE:47:VAL:HG12	39:BE:48:GLN:H	1.73	0.53
45:BN:57:ALA:N	45:BN:124:ALA:HA	2.24	0.53
47:BP:13:ASN:O	47:BP:14:LYS:CB	2.56	0.53
47:BP:41:ARG:HH11	47:BP:41:ARG:HB3	1.70	0.53
50:BS:36:TYR:N	50:BS:36:TYR:CD1	2.77	0.53
50:BS:93:LYS:O	50:BS:94:TYR:C	2.52	0.53
51:BT:10:VAL:O	51:BT:12:SER:N	2.43	0.53
51:BT:29:ARG:HE	51:BT:84:GLN:HG3	1.74	0.53
52:BU:8:VAL:CG2	52:BU:12:ARG:HE	2.21	0.53
52:BU:92:ARG:NH2	53:BV:11:GLN:H	2.07	0.53
53:BV:67:GLY:O	53:BV:88:ARG:HD2	2.08	0.53
54:BW:6:ILE:CG1	54:BW:104:THR:HG23	2.38	0.53
54:BW:106:ILE:C	54:BW:107:LEU:HD13	2.33	0.53
1:AA:409:G:H1	1:AA:433:C:H42	1.57	0.52
1:AA:526:C:C5	1:AA:527:G:H1'	2.44	0.52
1:AA:703:G:O2'	1:AA:704:A:OP2	2.27	0.52
1:AA:1047:G:H5"	14:AN:4:LYS:HD3	1.90	0.52
1:AA:1211:U:H5'	1:AA:1212:U:OP1	2.09	0.52
1:AA:1478:C:H2'	1:AA:1479:C:C6	2.44	0.52
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.44	0.52
2:AB:165:VAL:CG2	2:AB:166:ASP:N	2.63	0.52
7:AG:44:TYR:HA	7:AG:47:CYS:SG	2.50	0.52
10:AJ:78:ASN:HB2	10:AJ:81:THR:HG23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:121:LYS:HD3	13:AM:121:LYS:N	2.24	0.52
14:AN:23:ARG:CD	14:AN:28:GLY:O	2.52	0.52
22:AV:35:A:O2'	22:AV:36:U:H5'	2.09	0.52
24:AY:337:SER:HA	24:AY:355:LEU:CD2	2.39	0.52
26:B1:30:VAL:H	35:BA:2396:G:H4'	1.72	0.52
26:B1:44:PRO:O	26:B1:46:LEU:HD13	2.09	0.52
29:B4:10:VAL:HG23	29:B4:11:PRO:CD	2.38	0.52
31:B6:15:GLU:HG2	31:B6:16:CYS:N	2.23	0.52
31:B6:48:VAL:CG2	31:B6:49:HIS:H	2.17	0.52
32:B7:8:ASN:HD22	32:B7:9:ARG:H	1.56	0.52
33:B8:23:VAL:HG12	33:B8:46:ARG:HH11	1.74	0.52
35:BA:586:A:C2	35:BA:1254:A:C2	2.97	0.52
35:BA:665:C:O2'	35:BA:666:G:H5'	2.09	0.52
35:BA:833:U:OP1	47:BP:45:LEU:HD21	2.10	0.52
35:BA:877:U:C2'	35:BA:878:A:H5"	2.39	0.52
35:BA:954:G:H4'	48:BQ:13:GLN:HE22	1.74	0.52
35:BA:1328:G:O5'	35:BA:1328:G:C8	2.60	0.52
35:BA:1400:G:H2'	35:BA:1401:G:H8	1.71	0.52
35:BA:2394:C:C4	35:BA:2395:C:C5	2.97	0.52
35:BA:2552:U:C2	35:BA:2554:U:C5'	2.92	0.52
35:BA:2628:C:H5"	35:BA:2629:A:H5"	1.90	0.52
38:BD:39:LYS:HZ3	38:BD:87:ASN:HB3	1.73	0.52
38:BD:146:GLU:HB2	38:BD:189:CYS:HB3	1.90	0.52
39:BE:8:LYS:O	39:BE:193:GLY:N	2.33	0.52
42:BH:66:GLY:O	42:BH:67:LEU:C	2.52	0.52
45:BN:87:LEU:O	45:BN:88:GLU:C	2.52	0.52
47:BP:84:ASN:C	47:BP:86:LYS:N	2.65	0.52
50:BS:49:VAL:CG1	50:BS:50:SER:H	2.12	0.52
52:BU:8:VAL:HG22	52:BU:12:ARG:HG3	1.91	0.52
52:BU:84:LYS:C	52:BU:86:ALA:H	2.17	0.52
56:BY:14:LEU:HD12	56:BY:15:VAL:N	2.24	0.52
56:BY:97:ARG:HG3	56:BY:97:ARG:NH1	2.19	0.52
57:BZ:109:ALA:C	57:BZ:111:VAL:N	2.67	0.52
1:AA:518:C:H4'	1:AA:519:C:H5"	1.90	0.52
1:AA:630:G:C2'	1:AA:631:G:C5'	2.87	0.52
1:AA:1348:U:H2'	1:AA:1349:A:C8	2.44	0.52
2:AB:60:ASP:O	2:AB:64:ARG:NH2	2.43	0.52
2:AB:223:ILE:O	2:AB:226:ARG:HB3	2.09	0.52
3:AC:193:TYR:O	3:AC:193:TYR:CD1	2.62	0.52
4:AD:200:GLU:CD	4:AD:200:GLU:H	2.15	0.52
7:AG:144:MET:O	7:AG:147:ALA:HB3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:79:LEU:HD13	9:AI:79:LEU:C	2.33	0.52
20:AT:88:VAL:O	20:AT:92:LEU:HG	2.10	0.52
24:AY:86:GLY:C	24:AY:88:VAL:HG22	2.34	0.52
24:AY:106:VAL:HG23	24:AY:132:ARG:HG3	1.91	0.52
24:AY:162:VAL:HG21	24:AY:255:ILE:CD1	2.39	0.52
28:B3:7:LYS:HE3	28:B3:32:GLN:O	2.10	0.52
28:B3:31:LEU:O	28:B3:32:GLN:HB2	2.10	0.52
29:B4:9:LEU:CD1	29:B4:10:VAL:H	2.22	0.52
35:BA:64:A:H2'	35:BA:65:C:H6	1.73	0.52
35:BA:139(A):G:H22	55:BX:44:GLU:CD	2.17	0.52
35:BA:302:C:H2'	35:BA:303:U:H6	1.73	0.52
35:BA:729:G:N7	38:BD:208:LYS:HB2	2.24	0.52
35:BA:739:G:HO2'	35:BA:740:U:H6	1.56	0.52
35:BA:745:G:H21	35:BA:750:A:N6	2.07	0.52
35:BA:834:C:O2'	35:BA:835:A:H5'	2.09	0.52
35:BA:943:U:OP2	47:BP:38:GLN:CD	2.52	0.52
35:BA:1199:U:H2'	35:BA:1200:C:C6	2.44	0.52
35:BA:1499:C:O2'	35:BA:1500:G:H5'	2.09	0.52
35:BA:1547:C:O2'	35:BA:1548:C:H5'	2.09	0.52
35:BA:2555:U:C2'	35:BA:2556:C:H5'	2.35	0.52
35:BA:2836:U:C4	35:BA:2883:A:N6	2.77	0.52
36:BB:67:G:O2'	36:BB:68:C:H5'	2.09	0.52
37:BC:79:ALA:C	37:BC:120:VAL:HG11	2.34	0.52
37:BC:101:ILE:H	37:BC:101:ILE:HD12	1.73	0.52
38:BD:26:LYS:HE2	38:BD:26:LYS:CA	2.39	0.52
39:BE:69:LYS:HD3	39:BE:89:ASP:HA	1.90	0.52
40:BF:41:LEU:HD23	40:BF:44:ARG:HE	1.74	0.52
41:BG:27:ASN:O	41:BG:28:VAL:C	2.50	0.52
41:BG:138:GLN:NE2	41:BG:149:VAL:HG23	2.24	0.52
42:BH:89:ILE:O	42:BH:89:ILE:CG1	2.56	0.52
42:BH:103:LEU:HB2	42:BH:123:PHE:CD2	2.45	0.52
43:BK:8:VAL:CG1	43:BK:10:LEU:HG	2.39	0.52
43:BK:103:GLN:HA	43:BK:106:GLU:HG2	1.91	0.52
48:BQ:34:LEU:HD11	48:BQ:129:THR:HB	1.90	0.52
50:BS:66:ALA:O	50:BS:99:LYS:HD3	2.09	0.52
51:BT:82:LEU:N	51:BT:82:LEU:HD12	2.24	0.52
54:BW:79:GLY:C	54:BW:100:THR:CG2	2.82	0.52
55:BX:12:VAL:CG1	55:BX:27:THR:O	2.53	0.52
56:BY:30:VAL:HG12	56:BY:31:LEU:N	2.23	0.52
1:AA:17:U:H2'	1:AA:18:C:C6	2.43	0.52
1:AA:203:U:H5'	1:AA:216:G:N2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:275:G:H2'	1:AA:276:G:H8	1.73	0.52
1:AA:312:C:H2'	1:AA:313:A:H8	1.74	0.52
1:AA:407:G:H2'	1:AA:408:A:H8	1.73	0.52
1:AA:979:C:C3'	1:AA:980:C:C5'	2.73	0.52
1:AA:1065:U:O2'	1:AA:1066:C:P	2.66	0.52
2:AB:62:ALA:C	2:AB:64:ARG:N	2.67	0.52
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	1.92	0.52
5:AE:79:GLU:HB3	5:AE:93:PRO:CD	2.37	0.52
6:AF:45:LEU:O	6:AF:46:ARG:HG3	2.09	0.52
12:AL:70:ILE:CG2	12:AL:100:ILE:HD12	2.39	0.52
13:AM:56:LEU:O	13:AM:59:TYR:HB3	2.10	0.52
15:AO:65:ARG:HG2	15:AO:65:ARG:HH11	1.75	0.52
17:AQ:94:ASN:O	17:AQ:95:TYR:C	2.53	0.52
18:AR:53:ARG:C	18:AR:55:ARG:N	2.65	0.52
24:AY:238:THR:CG2	24:AY:241:GLU:H	2.22	0.52
24:AY:510:VAL:HG22	24:AY:534:ILE:HD13	1.92	0.52
24:AY:512:ILE:HD13	24:AY:512:ILE:N	2.10	0.52
24:AY:534:ILE:HD11	24:AY:570:GLY:HA3	1.92	0.52
27:B2:69:ARG:CG	27:B2:70:GLN:N	2.71	0.52
31:B6:42:TRP:HA	31:B6:42:TRP:HE3	1.74	0.52
33:B8:30:ARG:O	33:B8:31:HIS:HB3	2.08	0.52
35:BA:637:A:OP1	47:BP:133:SER:HB3	2.10	0.52
35:BA:654(S):G:H3'	35:BA:654(T):C:H4'	1.91	0.52
35:BA:752:A:O2'	35:BA:753:C:OP2	2.21	0.52
35:BA:2168:G:N2	35:BA:2170:A:H3'	2.25	0.52
35:BA:2306:C:C5	35:BA:2307:G:O2'	2.61	0.52
35:BA:2393:A:H5'	47:BP:60:MET:O	2.09	0.52
35:BA:2524:G:H8	35:BA:2524:G:C5'	2.13	0.52
36:BB:22:U:H2'	36:BB:23:G:C8	2.45	0.52
36:BB:95:C:O2'	36:BB:96:U:H5'	2.09	0.52
38:BD:55:GLY:O	38:BD:216:GLY:HA2	2.08	0.52
39:BE:31:CYS:C	39:BE:90:THR:HG23	2.34	0.52
39:BE:51:PHE:HD2	39:BE:52:LEU:CD1	2.22	0.52
45:BN:4:TYR:O	45:BN:5:VAL:C	2.52	0.52
45:BN:55:VAL:HG21	45:BN:127:ASP:N	2.23	0.52
46:BO:9:GLU:OE1	46:BO:9:GLU:HA	2.09	0.52
46:BO:107:ARG:HA	46:BO:112:MET:HE1	1.91	0.52
47:BP:41:ARG:CB	47:BP:41:ARG:NH1	2.69	0.52
50:BS:49:VAL:HG21	50:BS:77:ALA:HB2	1.91	0.52
51:BT:91:ARG:O	51:BT:117:ASP:CB	2.57	0.52
56:BY:4:LYS:O	56:BY:6:HIS:HD2	1.93	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:9:LYS:O	56:BY:28:LYS:HE2	2.09	0.52
1:AA:190:U:O2	20:AT:105:SER:HB2	2.09	0.52
1:AA:956:U:O2'	1:AA:957:U:H5'	2.10	0.52
1:AA:1015:A:C5	1:AA:1016:A:C5	2.97	0.52
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.44	0.52
1:AA:1459:C:H2'	1:AA:1460:A:C8	2.45	0.52
3:AC:52:LEU:H	3:AC:52:LEU:CD2	2.14	0.52
4:AD:159:ARG:O	4:AD:163:GLU:N	2.43	0.52
10:AJ:42:THR:HG23	10:AJ:68:HIS:HA	1.92	0.52
19:AS:29:ARG:O	19:AS:31:ILE:N	2.41	0.52
24:AY:15:ILE:HD12	24:AY:15:ILE:O	2.09	0.52
24:AY:16:GLY:HA3	24:AY:101:LEU:HD11	1.91	0.52
24:AY:507:TYR:O	24:AY:507:TYR:HD1	1.91	0.52
24:AY:519:ARG:HD3	24:AY:677:GLN:HA	1.92	0.52
24:AY:556:ILE:HD11	24:AY:558:PHE:CD1	2.45	0.52
27:B2:9:GLN:O	27:B2:13:ALA:N	2.42	0.52
27:B2:59:ARG:O	27:B2:60:LEU:C	2.51	0.52
35:BA:311:A:H5'	35:BA:332:A:N3	2.25	0.52
35:BA:365:C:H5'	35:BA:365:C:H6	1.74	0.52
35:BA:526:A:N6	35:BA:2626:C:H4'	2.24	0.52
35:BA:588:U:H1'	40:BF:90:PHE:CG	2.44	0.52
35:BA:654(S):G:C5	35:BA:654(T):C:H1'	2.45	0.52
35:BA:737:C:H2'	35:BA:738:G:H5'	1.92	0.52
35:BA:802:A:H2'	35:BA:803:U:C6	2.45	0.52
35:BA:849:A:H61	35:BA:928:G:H1'	1.75	0.52
35:BA:1644:C:O2	35:BA:1644:C:H2'	2.10	0.52
37:BC:225:ILE:HD12	37:BC:225:ILE:C	2.35	0.52
38:BD:118:VAL:HG22	38:BD:119:ALA:N	2.24	0.52
40:BF:205:ARG:O	40:BF:206:ILE:HD13	2.09	0.52
41:BG:91:ARG:CD	41:BG:92:VAL:N	2.72	0.52
43:BK:81:ALA:O	43:BK:99:ILE:HD11	2.08	0.52
46:BO:60:ALA:HA	46:BO:87:ILE:HD13	1.89	0.52
46:BO:86:ILE:C	46:BO:87:ILE:HD13	2.35	0.52
48:BQ:41:TRP:HE1	48:BQ:96:VAL:HG22	1.74	0.52
51:BT:82:LEU:CD2	51:BT:85:LYS:HD2	2.39	0.52
52:BU:83:LEU:CD1	52:BU:113:ALA:HB2	2.37	0.52
53:BV:51:VAL:HG12	53:BV:52:VAL:H	1.74	0.52
54:BW:36:LEU:HD12	54:BW:48:ALA:HB2	1.92	0.52
56:BY:14:LEU:CD1	56:BY:22:GLY:HA2	2.39	0.52
56:BY:96:ILE:CG2	56:BY:99:CYS:HB3	2.39	0.52
57:BZ:58:VAL:HA	57:BZ:67:LEU:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:151:A:C2'	1:AA:152:A:H5'	2.39	0.52
1:AA:376:G:H2'	1:AA:377:G:H8	1.75	0.52
1:AA:631:G:H2'	1:AA:632:A:N7	2.24	0.52
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.09	0.52
1:AA:1327:C:H5"	21:AU:20:LYS:HB3	1.92	0.52
2:AB:169:LYS:O	2:AB:169:LYS:HD3	2.10	0.52
4:AD:8:VAL:C	4:AD:10:ARG:N	2.66	0.52
4:AD:26:CYS:HA	4:AD:31:CYS:HA	1.92	0.52
4:AD:162:LEU:CD1	4:AD:181:MET:HG2	2.37	0.52
17:AQ:12:SER:HB3	17:AQ:20:THR:OG1	2.10	0.52
19:AS:53:ASN:C	19:AS:55:LYS:H	2.17	0.52
21:AU:8:THR:O	21:AU:9:ARG:C	2.48	0.52
24:AY:12:LEU:C	24:AY:13:ARG:HD2	2.34	0.52
24:AY:165:GLN:HB2	24:AY:260:LEU:CD1	2.39	0.52
24:AY:252:ASP:HB2	24:AY:254:LYS:CE	2.39	0.52
24:AY:432:ALA:HA	24:AY:438:PHE:CE2	2.44	0.52
30:B5:2:ALA:HB2	35:BA:2015:A:O4'	2.09	0.52
30:B5:39:MET:HG3	54:BW:34:ASN:ND2	2.24	0.52
35:BA:207:A:H2'	35:BA:208:C:O4'	2.09	0.52
35:BA:583:G:H2'	35:BA:584:C:H6	1.73	0.52
35:BA:1020:A:H1'	35:BA:1021:A:N1	2.24	0.52
35:BA:1118:C:C6	35:BA:1118:C:H3'	2.45	0.52
35:BA:1265:A:N1	35:BA:2013:A:H5"	2.25	0.52
35:BA:1420:U:H2'	35:BA:1421:G:H5'	1.92	0.52
35:BA:2573:C:O2	35:BA:2573:C:H2'	2.10	0.52
35:BA:2849:U:H4'	35:BA:2868:A:C2	2.44	0.52
36:BB:87:G:H1	36:BB:91:C:H42	1.57	0.52
37:BC:75:VAL:HA	37:BC:113:ALA:HB3	1.90	0.52
40:BF:24:LEU:HD22	40:BF:24:LEU:N	2.25	0.52
40:BF:38:ARG:O	40:BF:42:ALA:CB	2.56	0.52
40:BF:181:LEU:HB3	40:BF:205:ARG:HH11	1.75	0.52
42:BH:19:VAL:O	42:BH:20:ALA:CB	2.54	0.52
42:BH:45:VAL:HA	42:BH:50:VAL:HG22	1.91	0.52
43:BK:95:LYS:HG2	43:BK:137:GLU:OE1	2.08	0.52
45:BN:18:ALA:HB1	45:BN:21:LYS:HB2	1.90	0.52
48:BQ:109:VAL:HG13	48:BQ:113:GLN:OE1	2.08	0.52
50:BS:70:GLY:C	50:BS:101:LEU:HD23	2.35	0.52
51:BT:102:ILE:HG22	51:BT:110:ILE:CD1	2.39	0.52
57:BZ:3:TYR:CE2	57:BZ:51:ALA:HB2	2.45	0.52
57:BZ:108:PRO:HB3	57:BZ:141:VAL:HG12	1.90	0.52
57:BZ:134:PRO:O	57:BZ:135:GLU:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:144:LEU:HD22	57:BZ:144:LEU:N	2.24	0.52
1:AA:936:C:H2'	1:AA:937:A:C5'	2.40	0.52
1:AA:1073:U:O2'	1:AA:1074:G:H5'	2.09	0.52
2:AB:17:PHE:O	2:AB:204:ASN:HB2	2.10	0.52
2:AB:95:GLN:C	2:AB:96:ARG:HD2	2.34	0.52
2:AB:230:VAL:HG23	2:AB:231:GLU:O	2.10	0.52
4:AD:160:GLN:O	4:AD:163:GLU:HB3	2.10	0.52
6:AF:62:TRP:CD1	18:AR:35:ARG:NH1	2.77	0.52
6:AF:67:MET:HE1	6:AF:75:LEU:HD22	1.91	0.52
10:AJ:56:HIS:O	10:AJ:58:ASP:N	2.42	0.52
11:AK:108:ILE:N	11:AK:108:ILE:CD1	2.73	0.52
12:AL:54:LYS:HB3	12:AL:70:ILE:CD1	2.38	0.52
19:AS:51:VAL:CG2	19:AS:71:LEU:HD13	2.39	0.52
20:AT:61:SER:O	20:AT:63:ILE:N	2.43	0.52
24:AY:67:ALA:O	24:AY:68:ALA:C	2.52	0.52
24:AY:485:GLU:HG3	24:AY:558:PHE:O	2.09	0.52
30:B5:19:ARG:HA	35:BA:2046:G:C5'	2.40	0.52
31:B6:42:TRP:CH2	35:BA:643:A:N7	2.78	0.52
35:BA:74:A:O2'	35:BA:75:G:OP2	2.26	0.52
35:BA:271(E):U:H2'	35:BA:271(F):C:C6	2.45	0.52
35:BA:325:G:H2'	35:BA:326:G:H8	1.74	0.52
35:BA:648:G:H2'	35:BA:649:G:H8	1.73	0.52
35:BA:733:G:C6	35:BA:761:A:N7	2.77	0.52
35:BA:809:G:H2'	35:BA:810:U:O4'	2.10	0.52
35:BA:848:G:N9	35:BA:933:A:H8	2.07	0.52
35:BA:1052:C:C3'	35:BA:1052:C:C6	2.93	0.52
35:BA:1436:G:H1'	35:BA:1477:A:O2'	2.08	0.52
35:BA:1477:A:H5'	35:BA:1478:G:OP2	2.09	0.52
35:BA:1528:A:C2	35:BA:1542:A:H2	2.28	0.52
35:BA:1582:C:H2'	35:BA:1583:A:C8	2.42	0.52
35:BA:1794:U:O2'	35:BA:1795:C:H5'	2.09	0.52
35:BA:1808:U:H2'	35:BA:1809:A:O4'	2.10	0.52
35:BA:1820:U:H1'	38:BD:202:LYS:HB3	1.90	0.52
35:BA:1917:U:H2'	35:BA:1918:A:H5'	1.89	0.52
35:BA:2543:G:C6	35:BA:2544:G:C6	2.97	0.52
35:BA:2550:G:C6	35:BA:2551:C:N4	2.78	0.52
35:BA:2657:A:H2'	35:BA:2658:C:C5'	2.39	0.52
35:BA:2657:A:O2'	42:BH:160:LYS:HE3	2.10	0.52
35:BA:2722:G:H2'	35:BA:2723:C:C6	2.45	0.52
38:BD:35:LYS:O	38:BD:36:PRO:C	2.51	0.52
40:BF:110:LEU:CD1	40:BF:206:ILE:HD11	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BK:75:SER:C	43:BK:78:ILE:HG22	2.35	0.52
45:BN:65:LYS:HB3	45:BN:65:LYS:HZ2	1.74	0.52
48:BQ:8:LYS:HB2	48:BQ:9:TYR:CE1	2.45	0.52
48:BQ:97:VAL:CG1	48:BQ:103:MET:HE3	2.34	0.52
52:BU:8:VAL:HG21	52:BU:12:ARG:HE	1.75	0.52
54:BW:8:ARG:HH11	54:BW:8:ARG:CG	2.17	0.52
1:AA:59:A:H5"	1:AA:60:A:H5'	1.92	0.52
1:AA:261:U:H2'	1:AA:263:A:OP2	2.10	0.52
1:AA:547:A:OP2	4:AD:2:GLY:N	2.43	0.52
1:AA:1002:G:N2	1:AA:1039:C:H2'	2.25	0.52
1:AA:1300:G:O2'	1:AA:1301:U:P	2.67	0.52
2:AB:215:LEU:O	2:AB:218:ALA:HB3	2.09	0.52
3:AC:52:LEU:HD12	3:AC:55:VAL:HG22	1.91	0.52
4:AD:29:PRO:C	4:AD:30:LYS:HG2	2.33	0.52
5:AE:28:PHE:O	5:AE:47:LYS:HA	2.09	0.52
6:AF:7:ASN:OD1	6:AF:62:TRP:HD1	1.93	0.52
6:AF:20:ALA:O	6:AF:21:LEU:C	2.51	0.52
8:AH:119:LEU:HB3	8:AH:123:GLU:HB3	1.91	0.52
9:AI:114:TYR:HE1	10:AJ:60:ARG:N	2.06	0.52
10:AJ:4:ILE:HB	10:AJ:74:ILE:HG13	1.90	0.52
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	2.10	0.52
12:AL:75:HIS:HE2	12:AL:77:LEU:HB2	1.72	0.52
22:AV:73:A:H8	22:AV:73:A:O5'	1.93	0.52
24:AY:304:ASP:O	24:AY:306:ASN:N	2.40	0.52
24:AY:529:ILE:HD11	24:AY:567:LEU:HD11	1.91	0.52
32:B7:24:THR:HG23	32:B7:27:GLY:N	2.25	0.52
33:B8:33:ASN:N	33:B8:36:LYS:HD2	2.25	0.52
33:B8:52:LYS:N	33:B8:53:PRO:CD	2.72	0.52
35:BA:1168:G:H2'	35:BA:1169:G:O4'	2.10	0.52
35:BA:2562:U:H1'	46:BO:23:ARG:NH1	2.22	0.52
38:BD:26:LYS:O	38:BD:27:THR:CB	2.58	0.52
39:BE:77:ILE:HG22	39:BE:78:LEU:CD1	2.39	0.52
45:BN:67:LEU:HB3	45:BN:88:GLU:CG	2.40	0.52
53:BV:22:VAL:O	53:BV:23:GLU:HB2	2.09	0.52
54:BW:12:ILE:HG13	54:BW:42:ARG:HH11	1.75	0.52
56:BY:46:LYS:N	56:BY:62:GLU:HB2	2.15	0.52
57:BZ:111:VAL:O	57:BZ:111:VAL:HG12	2.08	0.52
1:AA:352:C:H4'	1:AA:354:G:OP1	2.10	0.52
1:AA:796:C:O2	1:AA:796:C:H2'	2.09	0.52
1:AA:797:C:OP1	11:AK:124:LYS:HE3	2.08	0.52
1:AA:1124:G:H5'	10:AJ:35:SER:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1461:G:O5'	1:AA:1461:G:H8	1.91	0.52
9:AI:77:ILE:C	9:AI:79:LEU:N	2.67	0.52
16:AP:9:PHE:HE2	16:AP:18:ARG:NE	2.08	0.52
18:AR:56:THR:HB	18:AR:58:LEU:HD13	1.92	0.52
19:AS:9:VAL:O	19:AS:9:VAL:CG1	2.57	0.52
21:AU:9:ARG:O	21:AU:10:ARG:C	2.52	0.52
22:AV:39:C:H2'	22:AV:40:C:H6	1.73	0.52
22:AV:76:A:H61	35:BA:2422:A:H5"	1.74	0.52
24:AY:220:ALA:HB1	24:AY:245:ALA:CB	2.40	0.52
31:B6:43:CYS:O	31:B6:44:ARG:NE	2.43	0.52
31:B6:54:ILE:CD1	35:BA:2420:C:C5'	2.87	0.52
33:B8:62:LEU:HD13	35:BA:242:G:H5"	1.90	0.52
35:BA:624:C:H41	47:BP:107:LYS:NZ	2.08	0.52
35:BA:627:A:OP1	35:BA:627:A:H2'	2.10	0.52
35:BA:637:A:N6	35:BA:652:C:H4'	2.24	0.52
35:BA:1404:C:O2'	35:BA:1405:U:H5'	2.09	0.52
35:BA:1516:C:C2'	35:BA:1517:G:C5'	2.87	0.52
35:BA:1526:G:O2'	35:BA:1527:G:H5'	2.10	0.52
35:BA:2206:G:N2	35:BA:2207:G:H4'	2.25	0.52
35:BA:2543:G:N3	35:BA:2765:A:H2'	2.25	0.52
35:BA:2664:G:C2'	35:BA:2665:A:O5'	2.58	0.52
36:BB:70:C:O2'	36:BB:71:C:H5'	2.10	0.52
36:BB:77:U:OP1	57:BZ:19:ARG:NH2	2.41	0.52
37:BC:134:PRO:C	37:BC:135:ARG:HD2	2.35	0.52
39:BE:69:LYS:O	39:BE:70:ALA:C	2.50	0.52
47:BP:84:ASN:HB3	47:BP:86:LYS:HB3	1.92	0.52
47:BP:107:LYS:O	47:BP:107:LYS:CG	2.58	0.52
52:BU:55:ARG:HA	52:BU:58:ARG:CD	2.40	0.52
54:BW:18:ARG:HH11	54:BW:18:ARG:HG2	1.74	0.52
55:BX:58:HIS:O	55:BX:59:VAL:HG23	2.10	0.52
56:BY:18:GLY:O	56:BY:21:LYS:HB2	2.10	0.52
57:BZ:14:LYS:O	57:BZ:17:ALA:N	2.42	0.52
57:BZ:24:LEU:HD23	57:BZ:24:LEU:C	2.35	0.52
1:AA:64:G:N2	1:AA:67:C:C4	2.78	0.52
1:AA:124:G:H2'	1:AA:125:U:O4'	2.09	0.52
1:AA:630:G:O2'	1:AA:631:G:H5"	2.09	0.52
1:AA:1353:G:H2'	1:AA:1354:C:H6	1.74	0.52
2:AB:79:ASP:O	2:AB:82:ARG:HB3	2.10	0.52
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.10	0.52
7:AG:65:ALA:HA	7:AG:128:ALA:HA	1.92	0.52
8:AH:104:ARG:O	8:AH:106:GLY:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:86:ARG:NH2	12:AL:99:HIS:CG	2.78	0.52
15:AO:83:GLU:C	15:AO:85:LEU:N	2.62	0.52
19:AS:58:VAL:HG23	19:AS:58:VAL:O	2.10	0.52
24:AY:125:ALA:C	24:AY:127:LYS:H	2.17	0.52
24:AY:341:VAL:CG2	24:AY:350:GLU:HB2	2.40	0.52
26:B1:35:THR:HG21	35:BA:2080:G:OP1	2.10	0.52
30:B5:20:ARG:HG2	30:B5:23:HIS:CD2	2.45	0.52
30:B5:35:GLU:O	30:B5:36:CYS:CB	2.57	0.52
35:BA:134:C:H2'	35:BA:135:G:H8	1.75	0.52
35:BA:238:C:H2'	35:BA:239:U:O4'	2.10	0.52
35:BA:271(H):G:H2'	35:BA:271(I):G:H8	1.74	0.52
35:BA:1539:G:H2'	35:BA:1540:U:O4'	2.09	0.52
35:BA:1842:G:H2'	35:BA:1843:C:C6	2.45	0.52
35:BA:2078:C:C4	35:BA:2079:U:C4	2.98	0.52
36:BB:2:C:O5'	36:BB:2:C:H6	1.93	0.52
38:BD:53:PHE:CA	38:BD:218:ARG:HB2	2.40	0.52
39:BE:195:LEU:HD12	39:BE:195:LEU:C	2.35	0.52
40:BF:32:LEU:HD22	40:BF:33:LEU:HD12	1.91	0.52
41:BG:56:ALA:CB	41:BG:153:ARG:CZ	2.86	0.52
43:BK:68:VAL:CG1	43:BK:70:LYS:HZ1	2.21	0.52
46:BO:61:VAL:N	46:BO:87:ILE:HD11	2.25	0.52
48:BQ:138:ASP:O	48:BQ:139:GLU:HB2	2.09	0.52
49:BR:12:ARG:HG3	49:BR:12:ARG:NH1	2.19	0.52
55:BX:35:THR:HG22	55:BX:36:LYS:N	2.23	0.52
56:BY:25:GLY:HA3	56:BY:39:VAL:CG1	2.40	0.52
1:AA:91:C:C5	1:AA:92:C:C4	2.97	0.52
1:AA:142:G:N3	1:AA:196:A:H2	2.08	0.52
1:AA:234:C:H2'	1:AA:235:C:C6	2.44	0.52
1:AA:276:G:O2'	1:AA:277:C:H5'	2.10	0.52
1:AA:627:G:C2'	1:AA:628:G:H5'	2.40	0.52
1:AA:699:C:C6	1:AA:699:C:H5"	2.45	0.52
1:AA:719:C:C2	18:AR:50:ILE:HG12	2.45	0.52
1:AA:953:G:N7	13:AM:104:ARG:NH2	2.58	0.52
1:AA:967:C:H2'	1:AA:968:A:C8	2.44	0.52
1:AA:1122:U:C2'	1:AA:1123:A:H5'	2.40	0.52
1:AA:1271:G:H5'	1:AA:1314:C:H5"	1.91	0.52
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.25	0.52
1:AA:1405:G:H21	1:AA:1518:A:H1'	1.74	0.52
7:AG:54:THR:OG1	7:AG:56:GLN:HG2	2.10	0.52
7:AG:152:ALA:C	7:AG:154:TYR:H	2.17	0.52
8:AH:104:ARG:O	8:AH:107:LEU:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:53:VAL:C	9:AI:55:ALA:N	2.59	0.52
13:AM:73:GLU:O	13:AM:74:VAL:C	2.52	0.52
24:AY:212:TYR:HA	24:AY:215:LYS:HD2	1.92	0.52
24:AY:265:LYS:HB3	24:AY:267:LYS:CE	2.37	0.52
24:AY:309:LEU:HD12	24:AY:310:ALA:N	2.25	0.52
29:B4:30:GLU:O	29:B4:31:ILE:HD12	2.10	0.52
32:B7:34:ARG:NH1	32:B7:34:ARG:HG2	2.25	0.52
35:BA:271(U):G:O2'	35:BA:271(V):G:H5'	2.10	0.52
35:BA:753:C:H2'	35:BA:754:C:H6	1.75	0.52
35:BA:755:C:H2'	35:BA:756:C:C6	2.45	0.52
35:BA:863:A:O2'	36:BB:101:G:H1'	2.10	0.52
35:BA:1338:G:N7	55:BX:62:LYS:NZ	2.53	0.52
35:BA:1862:G:N2	35:BA:1881:C:H1'	2.25	0.52
35:BA:2206:G:H21	35:BA:2207:G:H4'	1.75	0.52
35:BA:2233:U:H2'	35:BA:2234:G:C8	2.45	0.52
35:BA:2327:A:H2'	35:BA:2328:A:C8	2.45	0.52
35:BA:2359:C:H2'	35:BA:2360:A:O4'	2.10	0.52
35:BA:2713:A:C3'	35:BA:2714:G:C5'	2.87	0.52
39:BE:10:GLY:HA2	39:BE:192:ASN:ND2	2.25	0.52
39:BE:48:GLN:C	39:BE:49:LEU:HD22	2.35	0.52
39:BE:51:PHE:O	39:BE:74:PRO:HB3	2.10	0.52
39:BE:93:VAL:HG12	39:BE:175:VAL:HG21	1.91	0.52
40:BF:179:GLU:O	40:BF:181:LEU:N	2.43	0.52
41:BG:91:ARG:HG2	41:BG:92:VAL:H	1.75	0.52
42:BH:171:LEU:HD23	42:BH:172:LYS:O	2.08	0.52
45:BN:26:LEU:C	45:BN:28:THR:H	2.16	0.52
45:BN:125:GLY:HA3	45:BN:126:PRO:C	2.35	0.52
51:BT:102:ILE:O	51:BT:106:SER:HB3	2.10	0.52
54:BW:1:MET:CE	54:BW:62:HIS:HD2	2.23	0.52
55:BX:34:ALA:HA	55:BX:38:GLU:OE1	2.09	0.52
1:AA:540:G:H2'	1:AA:541:G:O4'	2.10	0.51
1:AA:1130:A:H5'	9:AI:18:PHE:HE1	1.74	0.51
1:AA:1279:A:H5'	1:AA:1280:A:OP1	2.10	0.51
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.45	0.51
4:AD:30:LYS:O	4:AD:32:ALA:N	2.43	0.51
10:AJ:51:ARG:CG	10:AJ:60:ARG:O	2.59	0.51
16:AP:9:PHE:HE2	16:AP:18:ARG:HD2	1.75	0.51
16:AP:71:ARG:O	16:AP:72:ARG:C	2.54	0.51
17:AQ:52:LYS:H	17:AQ:52:LYS:CD	2.21	0.51
18:AR:70:ILE:O	18:AR:70:ILE:HG22	2.10	0.51
20:AT:57:ARG:NH1	20:AT:102:GLY:CA	2.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:64:THR:HG23	24:AY:64:THR:O	2.08	0.51
24:AY:466:LEU:O	24:AY:470:PHE:HB2	2.10	0.51
25:B0:60:PHE:HE2	35:BA:2365:G:H4'	1.72	0.51
31:B6:11:LEU:C	31:B6:12:GLU:HG3	2.32	0.51
31:B6:46:HIS:HD2	35:BA:2372:G:O4'	1.93	0.51
35:BA:8:A:H2'	35:BA:9:U:C5	2.45	0.51
35:BA:445:C:O2	35:BA:449:A:H2	1.92	0.51
35:BA:556:G:H8	35:BA:556:G:O5'	1.93	0.51
35:BA:847:U:OP2	35:BA:928:G:O6	2.28	0.51
35:BA:884:C:C5	35:BA:885:C:O2	2.63	0.51
35:BA:1448:G:N3	35:BA:1528(A):A:H2	2.08	0.51
35:BA:1453:U:H2'	35:BA:1455:G:N7	2.25	0.51
35:BA:1654:A:H2	39:BE:113:PHE:CD2	2.28	0.51
35:BA:1935:G:H1'	35:BA:1964:G:N2	2.25	0.51
35:BA:2341:G:H2'	35:BA:2342:C:C6	2.46	0.51
35:BA:2483:C:H5'	35:BA:2484:G:OP2	2.10	0.51
35:BA:2849:U:O4	51:BT:23:ARG:NH2	2.44	0.51
41:BG:55:LYS:C	41:BG:57:ALA:N	2.67	0.51
41:BG:63:ILE:HG22	41:BG:143:GLU:HG2	1.91	0.51
41:BG:117:PHE:CE1	41:BG:119:GLY:CA	2.92	0.51
49:BR:30:THR:OG1	49:BR:75:LEU:HD21	2.10	0.51
50:BS:65:VAL:C	50:BS:67:ARG:H	2.17	0.51
53:BV:25:LEU:O	53:BV:27:ALA:N	2.43	0.51
54:BW:25:ARG:CB	54:BW:25:ARG:HH11	2.23	0.51
54:BW:66:GLU:HG3	54:BW:69:LEU:HD12	1.92	0.51
56:BY:87:LYS:O	56:BY:88:LYS:HB2	2.10	0.51
57:BZ:111:VAL:O	57:BZ:112:ARG:HB2	2.10	0.51
1:AA:538:G:OP2	12:AL:115:LYS:HG3	2.10	0.51
1:AA:688:G:H2'	1:AA:689:C:C6	2.46	0.51
1:AA:699:C:H5"	1:AA:699:C:H6	1.75	0.51
1:AA:851:G:H2'	1:AA:852:G:H8	1.75	0.51
1:AA:1014:A:H4'	19:AS:14:HIS:CG	2.46	0.51
1:AA:1148:U:O3'	9:AI:14:VAL:HG11	2.10	0.51
1:AA:1198:G:C6	1:AA:1199:U:N3	2.77	0.51
2:AB:223:ILE:HG23	2:AB:226:ARG:HD2	1.92	0.51
3:AC:136:GLN:O	3:AC:137:ALA:C	2.46	0.51
5:AE:75:THR:HG23	5:AE:76:ILE:O	2.11	0.51
7:AG:11:GLN:OE1	7:AG:11:GLN:HA	2.07	0.51
7:AG:111:ARG:HD2	7:AG:123:GLU:HB2	1.92	0.51
9:AI:20:ARG:O	9:AI:59:PHE:HA	2.10	0.51
12:AL:81:SER:O	12:AL:83:VAL:HG23	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.92	0.51
19:AS:9:VAL:O	19:AS:10:PHE:C	2.53	0.51
20:AT:26:ASN:N	20:AT:26:ASN:ND2	2.58	0.51
24:AY:348:ARG:NH1	24:AY:382:GLU:CG	2.71	0.51
26:B1:76:ARG:HH22	26:B1:95:LEU:CD2	2.22	0.51
31:B6:6:ARG:C	31:B6:8:LYS:H	2.16	0.51
31:B6:39:TYR:HB3	31:B6:49:HIS:CE1	2.46	0.51
35:BA:29:U:O2'	35:BA:30:G:H5'	2.10	0.51
35:BA:184:C:H2'	35:BA:185:U:H6	1.71	0.51
35:BA:272(H):C:H6	35:BA:272(H):C:C5'	2.16	0.51
35:BA:438:G:O2'	35:BA:440:G:H5'	2.10	0.51
35:BA:518:G:H4'	54:BW:18:ARG:HH12	1.76	0.51
35:BA:650:C:H3'	35:BA:651:G:H5"	1.92	0.51
35:BA:990:A:C6	35:BA:1186:G:H1'	2.45	0.51
35:BA:1062:G:H2'	35:BA:1063:G:C8	2.44	0.51
35:BA:1488:G:H5'	35:BA:1489:U:OP2	2.10	0.51
35:BA:1560:G:OP1	35:BA:1561:G:OP2	2.28	0.51
35:BA:2143:C:C2'	35:BA:2144:U:H5'	2.41	0.51
35:BA:2740:A:C6	35:BA:2741:A:C6	2.99	0.51
35:BA:2873:A:C4'	49:BR:8:ARG:NH2	2.73	0.51
38:BD:177:LEU:O	38:BD:179:SER:N	2.43	0.51
39:BE:183:LEU:N	39:BE:183:LEU:HD12	2.25	0.51
41:BG:55:LYS:HE2	41:BG:58:GLN:HE21	1.76	0.51
41:BG:97:ASP:N	41:BG:100:TRP:HD1	1.95	0.51
42:BH:28:GLY:HA3	42:BH:79:VAL:HB	1.92	0.51
45:BN:32:THR:CG2	45:BN:37:LYS:HB3	2.38	0.51
46:BO:63:VAL:O	46:BO:64:ARG:HG2	2.11	0.51
56:BY:95:LYS:HD3	56:BY:100:ALA:CB	2.40	0.51
57:BZ:29:TYR:HA	57:BZ:33:LEU:O	2.10	0.51
1:AA:55:A:HO2'	24:AY:321:TYR:HD1	1.56	0.51
1:AA:336:C:O2'	1:AA:337:C:H5'	2.10	0.51
1:AA:841:U:H3'	1:AA:848:C:C5'	2.40	0.51
1:AA:936:C:C2'	1:AA:937:A:H5'	2.39	0.51
1:AA:1352:C:H2'	1:AA:1353:G:H8	1.73	0.51
1:AA:1422:G:H2'	1:AA:1423:G:H8	1.76	0.51
1:AA:1522:U:H2'	1:AA:1523:G:H8	1.75	0.51
2:AB:101:MET:HG2	2:AB:152:PHE:CE2	2.45	0.51
10:AJ:32:ALA:HB1	10:AJ:75:ILE:HG13	1.92	0.51
13:AM:15:VAL:HG12	13:AM:45:VAL:HG23	1.88	0.51
13:AM:102:ARG:HD3	13:AM:105:THR:OG1	2.09	0.51
15:AO:76:GLU:C	15:AO:78:TYR:H	2.18	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:120:THR:O	24:AY:124:GLN:CD	2.54	0.51
24:AY:539:ILE:N	24:AY:540:PRO:CD	2.73	0.51
24:AY:680:PRO:O	24:AY:682:GLN:N	2.40	0.51
25:B0:7:LEU:HD13	48:BQ:85:LYS:HG3	1.93	0.51
26:B1:68:PRO:C	26:B1:70:VAL:N	2.68	0.51
26:B1:86:SER:C	26:B1:90:ILE:HG12	2.34	0.51
27:B2:16:LEU:O	27:B2:20:GLU:HB3	2.10	0.51
27:B2:20:GLU:O	27:B2:21:LEU:C	2.53	0.51
35:BA:83:G:HO2'	35:BA:84:A:H8	1.58	0.51
35:BA:143:G:C6	35:BA:143(A):C:C4	2.98	0.51
35:BA:570:G:H2'	35:BA:2030:A:C5	2.44	0.51
35:BA:580:C:O2'	35:BA:581:C:H5'	2.10	0.51
35:BA:1464:C:O2'	35:BA:1528:A:C8	2.63	0.51
35:BA:1630:G:C2	35:BA:1637:A:C2	2.99	0.51
35:BA:2143:C:H2'	35:BA:2144:U:H5'	1.91	0.51
35:BA:2307:G:H3'	35:BA:2307:G:N3	2.25	0.51
35:BA:2495:G:H5"	48:BQ:82:ARG:HG2	1.92	0.51
35:BA:2762:G:H8	35:BA:2762:G:C5'	2.23	0.51
35:BA:2880:C:N4	35:BA:2881:C:H41	2.09	0.51
35:BA:2889:C:H2'	35:BA:2891:G:C8	2.45	0.51
37:BC:149:ASN:C	37:BC:149:ASN:ND2	2.63	0.51
39:BE:82:ARG:HG3	39:BE:82:ARG:HH11	1.75	0.51
41:BG:56:ALA:CA	41:BG:59:GLU:OE1	2.56	0.51
42:BH:173:PRO:HG2	42:BH:174:GLY:H	1.76	0.51
49:BR:50:HIS:O	49:BR:51:LEU:C	2.48	0.51
49:BR:104:ARG:HG3	49:BR:111:LEU:HD21	1.91	0.51
50:BS:69:VAL:HG11	50:BS:99:LYS:HE2	1.91	0.51
51:BT:42:ILE:CD1	51:BT:83:ILE:HD11	2.39	0.51
57:BZ:82:ARG:HG2	57:BZ:82:ARG:HH11	1.74	0.51
57:BZ:86:VAL:HG12	57:BZ:87:ASP:N	2.23	0.51
1:AA:311:C:H2'	1:AA:312:C:H6	1.75	0.51
1:AA:344:A:H5"	1:AA:345:C:OP2	2.10	0.51
1:AA:450:G:H1	1:AA:483:C:H42	1.57	0.51
1:AA:487:A:H2'	1:AA:488:C:O4'	2.10	0.51
1:AA:509:A:H5'	1:AA:510:A:P	2.43	0.51
1:AA:624:C:O3'	16:AP:10:GLY:HA2	2.10	0.51
1:AA:949:A:H1'	1:AA:1364:U:H3	1.75	0.51
1:AA:999:C:H2'	1:AA:1000:U:C5	2.44	0.51
1:AA:1133:G:C4	1:AA:1142:G:N2	2.79	0.51
1:AA:1321:C:C5'	1:AA:1322:C:C5'	2.88	0.51
1:AA:1410:G:H2'	1:AA:1411:C:H6	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:27:LYS:HD3	2:AB:195:ASP:OD1	2.10	0.51
4:AD:68:TYR:N	4:AD:68:TYR:CD1	2.77	0.51
4:AD:105:VAL:HG12	4:AD:106:TYR:N	2.23	0.51
4:AD:107:ARG:HH21	4:AD:194:LEU:CD1	2.21	0.51
4:AD:156:GLU:O	4:AD:159:ARG:HB2	2.09	0.51
5:AE:68:GLU:HG3	5:AE:68:GLU:O	2.09	0.51
5:AE:118:ILE:O	5:AE:118:ILE:HG23	2.09	0.51
8:AH:112:LEU:HA	8:AH:134:ILE:HG12	1.93	0.51
9:AI:42:ARG:O	9:AI:43:ALA:C	2.54	0.51
10:AJ:80:LYS:HB3	10:AJ:80:LYS:HZ3	1.75	0.51
11:AK:31:THR:O	11:AK:31:THR:CG2	2.58	0.51
15:AO:3:ILE:O	15:AO:3:ILE:HG13	2.10	0.51
15:AO:57:LEU:CD2	15:AO:57:LEU:N	2.73	0.51
17:AQ:94:ASN:O	17:AQ:96:GLU:N	2.43	0.51
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.43	0.51
22:AV:76:A:H61	35:BA:2422:A:C5'	2.24	0.51
24:AY:343:ASN:HD22	24:AY:345:THR:H	1.56	0.51
24:AY:507:TYR:C	24:AY:507:TYR:HD1	2.18	0.51
26:B1:59:THR:O	26:B1:91:LYS:NZ	2.38	0.51
27:B2:66:GLU:HA	27:B2:69:ARG:NE	2.26	0.51
29:B4:23:GLU:C	29:B4:24:THR:HG23	2.34	0.51
29:B4:50:VAL:O	29:B4:51:ASP:CB	2.58	0.51
31:B6:8:LYS:NZ	35:BA:2285:C:C5	2.58	0.51
35:BA:677:A:O2'	35:BA:678:C:H5'	2.11	0.51
35:BA:1147:C:H2'	35:BA:1148:A:C8	2.44	0.51
35:BA:1220:A:H3'	35:BA:1221:C:H5'	1.91	0.51
35:BA:1494:A:H2'	35:BA:1495:A:C5'	2.35	0.51
35:BA:2103:C:C2'	35:BA:2103:C:O2	2.58	0.51
35:BA:2260:C:H2'	35:BA:2261:C:C6	2.45	0.51
35:BA:2534:A:C2'	35:BA:2535:G:O5'	2.59	0.51
35:BA:2852:G:H1	35:BA:2865:U:H3	1.57	0.51
38:BD:227:ASN:O	38:BD:230:ASP:N	2.44	0.51
43:BK:37:PHE:C	43:BK:39:LYS:N	2.68	0.51
43:BK:55:VAL:HG23	43:BK:69:THR:HG22	1.92	0.51
45:BN:94:HIS:N	45:BN:95:PRO:CD	2.73	0.51
46:BO:104:ARG:HH21	51:BT:33:LYS:CE	2.22	0.51
52:BU:8:VAL:HG23	52:BU:11:ARG:HH21	1.75	0.51
57:BZ:67:LEU:HD23	57:BZ:90:VAL:HG11	1.93	0.51
1:AA:315:A:O2'	1:AA:316:G:P	2.69	0.51
1:AA:1088:G:H8	1:AA:1088:G:O5'	1.93	0.51
1:AA:1346:A:N6	1:AA:1374:A:H3'	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1368:G:C2'	1:AA:1369:C:H5'	2.40	0.51
1:AA:1445:C:C2'	1:AA:1446:U:H5'	2.41	0.51
1:AA:1501:C:OP2	1:AA:1504:G:H2'	2.11	0.51
2:AB:114:ARG:HD2	2:AB:118:LEU:HG	1.93	0.51
5:AE:100:VAL:O	5:AE:100:VAL:CG2	2.58	0.51
5:AE:121:LYS:HG2	5:AE:123:LEU:HD21	1.92	0.51
9:AI:33:PHE:CZ	9:AI:47:LEU:HD11	2.45	0.51
10:AJ:3:LYS:HD2	10:AJ:77:PRO:HD3	1.93	0.51
10:AJ:16:LEU:HD13	10:AJ:16:LEU:C	2.36	0.51
15:AO:17:ARG:HD3	15:AO:26:GLU:HG3	1.90	0.51
17:AQ:60:ILE:HG22	17:AQ:72:ARG:O	2.11	0.51
18:AR:34:TYR:CD2	18:AR:34:TYR:N	2.68	0.51
19:AS:64:GLU:C	29:B4:48:ARG:HH22	2.19	0.51
20:AT:43:LEU:O	20:AT:44:ALA:C	2.53	0.51
24:AY:26:THR:O	24:AY:27:THR:C	2.53	0.51
24:AY:65:ILE:CD1	24:AY:65:ILE:N	2.71	0.51
27:B2:63:VAL:O	27:B2:67:LYS:HG2	2.10	0.51
34:B9:29:ASN:H	34:B9:29:ASN:ND2	2.04	0.51
35:BA:198:C:N4	35:BA:248:G:H1	2.07	0.51
35:BA:848:G:O6	35:BA:928:G:H2'	2.09	0.51
35:BA:1358:G:O2'	35:BA:1359:A:H5"	2.11	0.51
35:BA:1800:C:OP1	38:BD:266:SER:OG	2.26	0.51
35:BA:1850:G:H2'	35:BA:1850:G:N3	2.25	0.51
35:BA:2105:C:H2'	35:BA:2106:G:H5'	1.91	0.51
35:BA:2704:C:C2'	35:BA:2705:A:H5'	2.41	0.51
35:BA:2771:C:H2'	35:BA:2772:C:C6	2.46	0.51
35:BA:2808:U:O2'	35:BA:2809:A:H5'	2.11	0.51
35:BA:2853:C:H2'	35:BA:2854:G:C8	2.45	0.51
36:BB:87:G:C2'	36:BB:88:C:H5"	2.41	0.51
37:BC:154:ILE:HA	37:BC:157:ILE:HD12	1.92	0.51
40:BF:5:ALA:HB3	40:BF:18:ARG:O	2.11	0.51
41:BG:20:ILE:O	41:BG:21:ARG:C	2.53	0.51
41:BG:91:ARG:CG	41:BG:92:VAL:N	2.72	0.51
41:BG:138:GLN:O	41:BG:144:ILE:HD13	2.11	0.51
45:BN:14:VAL:HG12	45:BN:15:LEU:N	2.26	0.51
46:BO:4:PRO:HA	46:BO:21:CYS:SG	2.51	0.51
46:BO:17:ARG:NE	46:BO:47:ILE:HD11	2.25	0.51
50:BS:42:ASP:O	50:BS:43:GLU:HB2	2.11	0.51
56:BY:81:LYS:HD2	56:BY:96:ILE:CG2	2.41	0.51
57:BZ:20:ARG:NH1	57:BZ:20:ARG:CB	2.73	0.51
57:BZ:40:ASP:OD1	57:BZ:42:VAL:HG12	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:109:ALA:HB1	57:BZ:145:GLU:OE2	2.11	0.51
57:BZ:141:VAL:HG12	57:BZ:142:SER:N	2.24	0.51
1:AA:714:G:H2'	1:AA:715:A:C8	2.46	0.51
1:AA:925:G:H5'	1:AA:926:G:OP1	2.11	0.51
1:AA:1237:C:H5"	1:AA:1238:A:C8	2.45	0.51
1:AA:1262:C:H42	1:AA:1273:G:H1	1.59	0.51
1:AA:1474:G:H4'	35:BA:1701:A:C2	2.46	0.51
2:AB:172:ILE:H	2:AB:172:ILE:CD1	1.95	0.51
3:AC:108:ASN:C	3:AC:110:ASN:H	2.14	0.51
3:AC:142:MET:HE1	3:AC:171:GLY:HA3	1.93	0.51
7:AG:29:LYS:HB2	7:AG:105:VAL:HG21	1.93	0.51
12:AL:20:LYS:CD	12:AL:20:LYS:N	2.72	0.51
12:AL:57:LYS:CG	12:AL:67:THR:HG22	2.41	0.51
14:AN:48:ALA:HB2	14:AN:53:LEU:HD12	1.92	0.51
16:AP:40:ASP:C	16:AP:40:ASP:OD2	2.52	0.51
24:AY:181:LEU:HD22	24:AY:279:TYR:OH	2.11	0.51
24:AY:251:ILE:O	24:AY:251:ILE:HG22	2.10	0.51
24:AY:409:ILE:HG12	24:AY:656:ALA:HB3	1.91	0.51
24:AY:523:PHE:CE1	24:AY:550:MET:SD	3.03	0.51
24:AY:604:PRO:C	24:AY:605:ILE:HD12	2.36	0.51
32:B7:4:THR:HB	35:BA:788:A:O2'	2.11	0.51
32:B7:41:ARG:NH2	35:BA:460:A:OP1	2.44	0.51
35:BA:135:G:O2'	35:BA:136:G:H5'	2.10	0.51
35:BA:271(R):G:O2'	35:BA:271(S):G:H5'	2.10	0.51
35:BA:962:G:H2'	35:BA:963:U:O4'	2.11	0.51
35:BA:1044:G:O2'	35:BA:1045:A:H5"	2.11	0.51
35:BA:1156:A:O2'	35:BA:1157:G:P	2.69	0.51
35:BA:1209:G:H21	35:BA:1210:A:H62	1.58	0.51
35:BA:1276:A:H5"	35:BA:1276:A:C8	2.46	0.51
35:BA:2202:C:H2'	38:BD:151:LYS:HZ1	1.74	0.51
35:BA:2378:A:N1	50:BS:19:LYS:HE3	2.26	0.51
35:BA:2428:G:C5'	35:BA:2429:G:OP1	2.58	0.51
35:BA:2514:U:H2'	35:BA:2515:C:C6	2.36	0.51
35:BA:2732:G:H5"	35:BA:2733:A:H8	1.74	0.51
35:BA:2809:A:H2'	35:BA:2810:A:C8	2.45	0.51
35:BA:2822:G:OP2	39:BE:110:GLY:O	2.28	0.51
35:BA:2849:U:H1'	35:BA:2866:U:H6	1.75	0.51
35:BA:2875:C:O2'	51:BT:5:ALA:HB3	2.11	0.51
35:BA:2876:G:OP1	51:BT:2:ASN:O	2.29	0.51
36:BB:74:U:H2'	36:BB:75:G:H5'	1.93	0.51
38:BD:108:PRO:HG2	38:BD:111:LEU:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:80:ALA:O	40:BF:83:PHE:HB2	2.10	0.51
41:BG:41:GLN:CB	41:BG:43:LEU:CD2	2.86	0.51
41:BG:46:ALA:HA	41:BG:51:ARG:CG	2.40	0.51
42:BH:26:VAL:HG11	42:BH:75:ALA:O	2.11	0.51
42:BH:89:ILE:CD1	42:BH:94:TYR:HB3	2.40	0.51
46:BO:105:GLU:O	46:BO:109:LYS:CG	2.58	0.51
50:BS:95:HIS:CD2	50:BS:96:GLY:N	2.79	0.51
51:BT:28:VAL:O	51:BT:28:VAL:HG12	2.11	0.51
51:BT:89:VAL:C	51:BT:91:ARG:H	2.19	0.51
52:BU:111:GLU:HA	52:BU:114:LYS:HG2	1.93	0.51
1:AA:25:C:H5'	1:AA:524:G:H1'	1.91	0.51
1:AA:346:G:H2'	1:AA:347:G:O4'	2.10	0.51
1:AA:417:C:H2'	1:AA:418:C:H6	1.76	0.51
1:AA:771:G:H2'	1:AA:772:U:H6	1.76	0.51
1:AA:1082:G:C2'	1:AA:1083:U:H5'	2.41	0.51
1:AA:1372:U:OP1	9:AI:71:SER:HB3	2.10	0.51
1:AA:1442(B):A:H2'	1:AA:1442(B):A:N3	2.26	0.51
1:AA:1511:G:O2'	1:AA:1512:U:H5'	2.11	0.51
5:AE:145:LYS:HA	8:AH:107:LEU:CD2	2.39	0.51
8:AH:124:ALA:HB1	8:AH:129:VAL:HG22	1.92	0.51
11:AK:125:PHE:HD1	11:AK:125:PHE:N	2.08	0.51
15:AO:34:LEU:C	15:AO:34:LEU:HD12	2.34	0.51
16:AP:75:ARG:O	16:AP:78:GLY:N	2.41	0.51
18:AR:29:PHE:HD2	18:AR:29:PHE:N	1.85	0.51
20:AT:49:ALA:HB1	20:AT:99:LEU:HG	1.91	0.51
22:AV:70:G:H2'	22:AV:71:C:H6	1.75	0.51
24:AY:174:PHE:CD2	24:AY:267:LYS:HD3	2.46	0.51
25:B0:7:LEU:HB3	48:BQ:85:LYS:HG3	1.92	0.51
35:BA:48:G:N2	35:BA:177:G:N2	2.59	0.51
35:BA:154(A):C:H42	35:BA:172:C:N4	2.07	0.51
35:BA:812:C:H1'	35:BA:1250:G:N2	2.26	0.51
35:BA:821:A:H5"	35:BA:822:U:C6	2.46	0.51
35:BA:953:A:H2'	35:BA:954:G:H8	1.74	0.51
35:BA:1064:C:H5'	43:BK:87:GLY:H	1.76	0.51
35:BA:1558:A:O2'	35:BA:1559:G:OP2	2.25	0.51
35:BA:1588:C:O2	35:BA:1588:C:H2'	2.11	0.51
35:BA:1600:C:O2	35:BA:1600:C:H2'	2.11	0.51
35:BA:2156:G:H2'	35:BA:2157:G:O4'	2.11	0.51
35:BA:2628:C:O2'	35:BA:2781:A:H2'	2.10	0.51
35:BA:2749:A:C5	35:BA:2750:A:N7	2.79	0.51
35:BA:2853:C:H2'	35:BA:2854:G:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:134:ARG:HD3	38:BD:135:PHE:CE1	2.45	0.51
39:BE:9:VAL:CG1	39:BE:25:VAL:HG12	2.41	0.51
39:BE:101:ARG:HD3	39:BE:171:GLU:HA	1.91	0.51
39:BE:116:VAL:HG22	39:BE:122:PHE:CG	2.46	0.51
40:BF:132:VAL:CG2	40:BF:133:ASN:H	2.24	0.51
46:BO:91:LEU:HD22	46:BO:91:LEU:H	1.70	0.51
48:BQ:21:THR:HG22	48:BQ:23:GLY:O	2.11	0.51
49:BR:79:LEU:C	49:BR:79:LEU:CD1	2.83	0.51
55:BX:70:LEU:HD23	55:BX:70:LEU:C	2.34	0.51
56:BY:77:PRO:O	56:BY:99:CYS:SG	2.58	0.51
1:AA:261:U:N3	1:AA:264:U:OP2	2.44	0.51
1:AA:354:G:C2	1:AA:355:C:C6	2.98	0.51
1:AA:368:U:C4	24:AY:354:ARG:NH2	2.79	0.51
1:AA:737:A:H2'	1:AA:738:C:H6	1.75	0.51
1:AA:865:A:H5'	1:AA:1078:U:O4	2.10	0.51
1:AA:1152:A:OP1	10:AJ:68:HIS:CD2	2.63	0.51
2:AB:12:GLU:HA	2:AB:16:HIS:CG	2.46	0.51
2:AB:60:ASP:O	2:AB:64:ARG:CZ	2.59	0.51
2:AB:164:VAL:HG12	2:AB:165:VAL:N	2.25	0.51
3:AC:108:ASN:C	3:AC:110:ASN:N	2.66	0.51
8:AH:53:VAL:O	8:AH:54:ASP:HB2	2.11	0.51
10:AJ:47:PHE:CE2	14:AN:37:PHE:CE2	2.99	0.51
13:AM:83:ASP:CG	13:AM:84:ILE:N	2.68	0.51
17:AQ:83:ASP:OD1	17:AQ:83:ASP:N	2.44	0.51
20:AT:84:LEU:C	20:AT:86:ARG:N	2.69	0.51
24:AY:65:ILE:O	24:AY:66:THR:C	2.54	0.51
24:AY:139:MET:HE1	24:AY:146:LEU:HB2	1.93	0.51
24:AY:160:ARG:HB3	24:AY:254:LYS:O	2.11	0.51
24:AY:280:LEU:HD12	24:AY:281:PRO:HD2	1.93	0.51
24:AY:545:GLY:CA	24:AY:583:LYS:HG2	2.40	0.51
33:B8:4:MET:HE1	33:B8:61:LEU:HD22	1.93	0.51
33:B8:28:GLY:HA2	33:B8:32:LEU:HD21	1.91	0.51
35:BA:11:G:N2	35:BA:2628:C:OP1	2.44	0.51
35:BA:271(N):U:H6	35:BA:271(N):U:O5'	1.93	0.51
35:BA:461:C:N4	35:BA:469:G:N2	2.59	0.51
35:BA:519:U:O2'	35:BA:520:G:H5'	2.11	0.51
35:BA:1301:A:O2'	35:BA:1302:A:O5'	2.27	0.51
35:BA:1445(A):C:H5'	35:BA:1446:C:OP2	2.11	0.51
35:BA:1467:C:C5	35:BA:1546:C:H2'	2.46	0.51
35:BA:1614:A:H2'	35:BA:1615:C:H5'	1.93	0.51
35:BA:2290:G:H4'	35:BA:2381:C:O2'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2378:A:O5'	35:BA:2378:A:H8	1.93	0.51
35:BA:2632:A:N3	39:BE:61:ARG:NH1	2.59	0.51
35:BA:2748:A:H2	42:BH:63:SER:OG	1.94	0.51
35:BA:2839:G:H1	35:BA:2878:U:H3	1.57	0.51
36:BB:40:U:H3'	36:BB:41:U:H5"	1.92	0.51
37:BC:138:LEU:HD13	37:BC:139:PRO:O	2.10	0.51
38:BD:106:ILE:HD11	38:BD:196:VAL:CG1	2.41	0.51
39:BE:31:CYS:O	39:BE:91:VAL:N	2.42	0.51
39:BE:161:GLY:O	39:BE:162:ALA:C	2.54	0.51
40:BF:61:GLY:O	40:BF:62:ARG:C	2.53	0.51
40:BF:139:PHE:HB2	40:BF:166:ALA:HB1	1.93	0.51
40:BF:187:VAL:HG13	47:BP:5:ASP:O	2.11	0.51
45:BN:60:ILE:CG2	45:BN:61:ARG:N	2.74	0.51
46:BO:21:CYS:SG	46:BO:22:ILE:N	2.84	0.51
46:BO:49:ARG:H	46:BO:49:ARG:CD	2.22	0.51
53:BV:39:LEU:HD12	53:BV:47:VAL:HG11	1.93	0.51
1:AA:658:G:O4'	15:AO:22:THR:HB	2.11	0.51
1:AA:1507:A:C8	1:AA:1530:G:N2	2.79	0.51
2:AB:153:ARG:C	2:AB:155:LEU:H	2.18	0.51
2:AB:168:THR:O	2:AB:169:LYS:C	2.53	0.51
3:AC:165:THR:HG23	3:AC:165:THR:O	2.11	0.51
4:AD:13:ARG:O	4:AD:15:GLU:N	2.44	0.51
5:AE:57:LYS:HB3	5:AE:61:TYR:HE2	1.75	0.51
8:AH:30:ARG:CB	8:AH:30:ARG:HH11	2.24	0.51
9:AI:11:LYS:C	9:AI:13:ALA:H	2.19	0.51
24:AY:108:PHE:CE1	24:AY:118:SER:HB2	2.45	0.51
24:AY:165:GLN:NE2	24:AY:260:LEU:HD22	2.25	0.51
24:AY:348:ARG:CZ	24:AY:382:GLU:HG3	2.41	0.51
32:B7:17:GLY:O	32:B7:20:ALA:HB3	2.10	0.51
32:B7:48:LYS:NZ	35:BA:125:G:N2	2.59	0.51
35:BA:216:A:H2'	35:BA:217:G:C8	2.45	0.51
35:BA:497:A:H8	35:BA:497:A:O5'	1.94	0.51
35:BA:594:U:H2'	35:BA:595:C:C6	2.46	0.51
35:BA:962:G:O2'	35:BA:963:U:H5'	2.11	0.51
35:BA:964:C:O2'	35:BA:2273:A:N3	2.40	0.51
35:BA:1218:C:H2'	35:BA:1219:G:H8	1.76	0.51
35:BA:1676:A:H2'	35:BA:1677:A:O4'	2.10	0.51
35:BA:2556:C:C2'	35:BA:2557:G:O5'	2.59	0.51
35:BA:2572:A:H2'	39:BE:144:ARG:HE	1.76	0.51
35:BA:2617:C:O2'	35:BA:2618:G:H5'	2.11	0.51
35:BA:2772:C:H2'	35:BA:2773:C:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:90:ALA:HA	37:BC:155:ARG:HH12	1.73	0.51
38:BD:35:LYS:HD2	38:BD:36:PRO:HA	1.93	0.51
38:BD:136:ILE:HG23	38:BD:140:THR:OG1	2.11	0.51
38:BD:153:ALA:O	38:BD:154:LYS:CG	2.59	0.51
39:BE:3:GLY:HA3	39:BE:81:ILE:HD12	1.93	0.51
39:BE:111:ARG:CZ	49:BR:2:ARG:NH2	2.70	0.51
40:BF:24:LEU:N	40:BF:24:LEU:CD2	2.74	0.51
40:BF:127:GLU:OE1	40:BF:196:LEU:HD12	2.11	0.51
41:BG:117:PHE:CE1	41:BG:119:GLY:HA2	2.46	0.51
43:BK:96:VAL:HG12	43:BK:96:VAL:O	2.11	0.51
47:BP:50:ARG:HG2	47:BP:50:ARG:HH11	1.75	0.51
47:BP:122:PRO:O	47:BP:123:LEU:HD23	2.11	0.51
51:BT:121:ILE:O	51:BT:122:ASP:C	2.50	0.51
56:BY:77:PRO:O	56:BY:78:ALA:HB2	2.11	0.51
57:BZ:13:GLU:HB3	57:BZ:14:LYS:NZ	2.26	0.51
57:BZ:179:ASP:O	57:BZ:180:VAL:C	2.54	0.51
1:AA:174:C:O2'	1:AA:175:C:H5'	2.10	0.51
1:AA:363:A:OP1	12:AL:33:ARG:HD3	2.10	0.51
1:AA:375:U:C2	1:AA:376:G:C8	2.99	0.51
1:AA:393:A:O2'	1:AA:394:G:H5'	2.10	0.51
1:AA:866:C:O5'	1:AA:866:C:H6	1.94	0.51
2:AB:35:GLU:O	2:AB:35:GLU:HG2	2.10	0.51
3:AC:84:ILE:O	3:AC:84:ILE:CG1	2.58	0.51
3:AC:110:ASN:OD1	3:AC:140:ARG:HD2	2.10	0.51
3:AC:133:ALA:O	3:AC:137:ALA:HB2	2.10	0.51
3:AC:151:VAL:HG12	3:AC:152:ILE:N	2.25	0.51
4:AD:162:LEU:HD22	4:AD:178:VAL:HG13	1.93	0.51
5:AE:139:LEU:C	5:AE:141:GLN:N	2.69	0.51
5:AE:143:ARG:NH1	8:AH:77:GLU:OE2	2.44	0.51
6:AF:55:ASP:OD1	6:AF:56:PRO:CD	2.57	0.51
7:AG:18:TYR:N	7:AG:18:TYR:CD1	2.78	0.51
15:AO:25:THR:O	15:AO:26:GLU:C	2.54	0.51
15:AO:50:HIS:O	15:AO:53:HIS:HB3	2.11	0.51
17:AQ:40:LYS:HE2	17:AQ:42:TYR:CZ	2.46	0.51
24:AY:339:SER:O	24:AY:351:ARG:HD2	2.11	0.51
24:AY:404:VAL:O	24:AY:404:VAL:HG12	2.11	0.51
35:BA:945:A:O2'	35:BA:946:G:H4'	2.11	0.51
35:BA:1052:C:H3'	35:BA:1052:C:C6	2.44	0.51
35:BA:1556:C:H2'	35:BA:1557:C:C6	2.45	0.51
35:BA:1944:U:O4'	35:BA:1955:U:H1'	2.11	0.51
35:BA:2349:G:H5'	35:BA:2349:G:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2712:U:C2'	35:BA:2712(A):A:O5'	2.58	0.51
35:BA:2809:A:OP2	35:BA:2891:G:N1	2.44	0.51
36:BB:103:G:H5'	36:BB:104:U:P	2.51	0.51
38:BD:206:LEU:CD2	38:BD:211:ARG:CG	2.89	0.51
39:BE:145:LYS:O	39:BE:146:THR:C	2.53	0.51
40:BF:31:HIS:O	40:BF:34:TRP:HB3	2.10	0.51
41:BG:19:LEU:HG	41:BG:175:LEU:HD12	1.93	0.51
41:BG:71:THR:HG23	41:BG:90:LEU:CA	2.40	0.51
42:BH:85:LYS:HD3	42:BH:85:LYS:O	2.11	0.51
43:BK:41:PHE:CE1	43:BK:45:THR:HG21	2.46	0.51
48:BQ:56:ARG:HA	48:BQ:56:ARG:NE	2.26	0.51
51:BT:6:LEU:HD22	51:BT:7:ILE:N	2.26	0.51
51:BT:64:ARG:HG2	51:BT:64:ARG:NH1	2.26	0.51
52:BU:76:TYR:CD1	52:BU:76:TYR:C	2.89	0.51
52:BU:113:ALA:C	52:BU:115:ALA:N	2.66	0.51
55:BX:39:ILE:O	55:BX:40:LYS:C	2.51	0.51
56:BY:49:VAL:O	56:BY:51:VAL:HG23	2.11	0.51
57:BZ:9:TYR:HB3	57:BZ:35:ARG:NH2	2.26	0.51
57:BZ:42:VAL:CG1	57:BZ:43:GLU:N	2.71	0.51
57:BZ:109:ALA:HB3	57:BZ:144:LEU:O	2.10	0.51
1:AA:736:C:H2'	1:AA:737:A:H8	1.72	0.50
1:AA:1440:C:C2	1:AA:1462:G:N2	2.79	0.50
3:AC:167:TRP:O	3:AC:168:ALA:HB3	2.11	0.50
4:AD:158:ILE:HG22	4:AD:162:LEU:HD12	1.93	0.50
6:AF:22:GLU:OE2	6:AF:22:GLU:HA	2.11	0.50
6:AF:89:MET:HE1	18:AR:76:LEU:HD22	1.94	0.50
10:AJ:47:PHE:N	10:AJ:47:PHE:CD1	2.78	0.50
12:AL:27:LEU:O	12:AL:29:GLY:N	2.44	0.50
13:AM:9:ILE:N	13:AM:9:ILE:HD12	2.26	0.50
18:AR:60:ALA:O	18:AR:61:LYS:C	2.54	0.50
24:AY:38:ARG:O	24:AY:39:ILE:C	2.54	0.50
26:B1:76:ARG:HH22	26:B1:95:LEU:CG	2.24	0.50
32:B7:25:PRO:CA	32:B7:28:ARG:NH2	2.74	0.50
35:BA:1450(A):C:H2'	35:BA:1451:C:C6	2.47	0.50
35:BA:1680:U:H2'	35:BA:1681:G:O4'	2.11	0.50
35:BA:1695:G:H3'	35:BA:1695:G:N3	2.26	0.50
35:BA:2314:C:C2'	35:BA:2315:G:H5'	2.40	0.50
35:BA:2706:G:H2'	35:BA:2706:G:N3	2.26	0.50
38:BD:145:VAL:HG12	38:BD:146:GLU:O	2.10	0.50
39:BE:48:GLN:NE2	39:BE:78:LEU:HD13	2.25	0.50
39:BE:101:ARG:NH1	39:BE:169:ASN:ND2	2.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:43:LYS:HA	40:BF:98:SER:HB3	1.93	0.50
40:BF:121:GLY:O	40:BF:123:LEU:N	2.44	0.50
41:BG:97:ASP:CB	41:BG:98:ARG:NH1	2.74	0.50
41:BG:110:ALA:O	41:BG:111:LEU:C	2.51	0.50
41:BG:120:LEU:HD22	41:BG:133:LEU:HD22	1.93	0.50
42:BH:94:TYR:C	42:BH:95:ARG:HG2	2.36	0.50
46:BO:107:ARG:HG3	46:BO:107:ARG:NH1	2.24	0.50
51:BT:78:LEU:HB3	51:BT:79:HIS:ND1	2.27	0.50
52:BU:25:TRP:CD1	52:BU:25:TRP:C	2.89	0.50
52:BU:82:GLY:C	52:BU:84:LYS:N	2.65	0.50
57:BZ:14:LYS:HB2	57:BZ:17:ALA:CB	2.41	0.50
1:AA:523:A:H61	12:AL:53:ARG:HH12	1.59	0.50
1:AA:688:G:H5'	11:AK:47:VAL:HA	1.94	0.50
1:AA:741:G:H2'	1:AA:742:G:O4'	2.11	0.50
1:AA:1113:C:H6	1:AA:1113:C:O5'	1.93	0.50
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.46	0.50
2:AB:208:ILE:O	2:AB:212:GLN:HB2	2.11	0.50
8:AH:26:VAL:HG23	8:AH:27:PRO:HD2	1.94	0.50
12:AL:27:LEU:C	12:AL:29:GLY:H	2.19	0.50
18:AR:38:GLU:HA	18:AR:41:LYS:HB3	1.93	0.50
18:AR:68:LYS:O	18:AR:69:THR:C	2.53	0.50
24:AY:684:GLN:O	24:AY:688:ILE:HD13	2.12	0.50
27:B2:53:LEU:O	27:B2:53:LEU:HD23	2.11	0.50
29:B4:17:GLY:HA3	29:B4:34:GLU:O	2.10	0.50
30:B5:33:CYS:HG	30:B5:49:CYS:HG	1.52	0.50
35:BA:134:C:H2'	35:BA:135:G:C8	2.47	0.50
35:BA:252:G:OP2	47:BP:50:ARG:NH2	2.43	0.50
35:BA:389:G:C6	47:BP:70:GLN:HG3	2.46	0.50
35:BA:585:G:H2'	35:BA:1251:C:H42	1.76	0.50
35:BA:588:U:H2'	35:BA:589:C:H6	1.77	0.50
35:BA:825:C:C2'	35:BA:826:U:H5'	2.41	0.50
35:BA:918:A:H1'	36:BB:80:U:O2'	2.10	0.50
35:BA:1430:C:H42	35:BA:1563:G:H1	1.57	0.50
35:BA:1607:C:H5'	35:BA:1608:A:C8	2.46	0.50
35:BA:1640:C:H2'	35:BA:1641:A:O4'	2.11	0.50
35:BA:2192:G:C3'	35:BA:2193:G:H5"	2.41	0.50
35:BA:2470:G:C6	35:BA:2471:C:C5	3.00	0.50
37:BC:73:VAL:CG1	37:BC:158:LYS:HA	2.35	0.50
38:BD:28:GLU:HB2	38:BD:29:PRO:CD	2.41	0.50
40:BF:118:ALA:O	40:BF:121:GLY:N	2.45	0.50
41:BG:44:GLY:O	41:BG:47:LYS:CD	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:46:ALA:HB2	41:BG:88:ILE:HG12	1.93	0.50
42:BH:41:MET:HG2	42:BH:43:VAL:CG1	2.36	0.50
52:BU:70:ARG:NH2	52:BU:75:ASN:CB	2.75	0.50
54:BW:44:ALA:O	54:BW:45:TYR:C	2.54	0.50
57:BZ:145:GLU:OE1	57:BZ:146:ILE:HD13	2.11	0.50
1:AA:376:G:OP2	16:AP:67:THR:HG21	2.09	0.50
1:AA:425:G:O2'	1:AA:426:G:H5'	2.11	0.50
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.93	0.50
1:AA:942:G:H2'	1:AA:943:U:H6	1.75	0.50
2:AB:34:ALA:CB	2:AB:36:ARG:HD2	2.41	0.50
2:AB:91:PRO:CG	2:AB:155:LEU:HB2	2.41	0.50
3:AC:101:LEU:C	3:AC:101:LEU:CD2	2.83	0.50
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.10	0.50
4:AD:173:TRP:CE2	4:AD:189:PRO:HB3	2.46	0.50
5:AE:101:ILE:CD1	5:AE:119:LEU:CD2	2.84	0.50
6:AF:89:MET:CE	18:AR:76:LEU:HD22	2.42	0.50
8:AH:30:ARG:CB	8:AH:30:ARG:NH1	2.75	0.50
13:AM:3:ARG:HG2	13:AM:9:ILE:HD11	1.93	0.50
22:AV:7:G:H5"	22:AV:7:G:C8	2.46	0.50
24:AY:282:SER:O	24:AY:284:LEU:N	2.44	0.50
24:AY:465:ARG:O	24:AY:470:PHE:HD2	1.94	0.50
24:AY:524:GLU:O	24:AY:564:LYS:HA	2.12	0.50
26:B1:45:ASN:HD21	26:B1:47:GLN:HE21	1.58	0.50
27:B2:69:ARG:HG3	27:B2:70:GLN:N	2.27	0.50
30:B5:27:PRO:HG3	54:BW:23:LEU:CD1	2.42	0.50
31:B6:5:VAL:CG1	31:B6:6:ARG:N	2.74	0.50
31:B6:54:ILE:HD13	35:BA:2420:C:H5'	1.91	0.50
35:BA:443:A:H3'	40:BF:45:ARG:HH21	1.76	0.50
35:BA:851:U:H2'	35:BA:852:G:H8	1.76	0.50
35:BA:1210:A:O2'	35:BA:1211:U:OP2	2.29	0.50
35:BA:2011:U:C2'	35:BA:2012:G:H5'	2.39	0.50
35:BA:2078:C:C1'	35:BA:2434:A:H1'	2.41	0.50
35:BA:2309:A:H2'	35:BA:2310:A:C5'	2.41	0.50
35:BA:2762:G:C8	35:BA:2762:G:C5'	2.94	0.50
35:BA:2801(A):A:H4'	35:BA:2802:G:H8	1.71	0.50
38:BD:124:PRO:O	38:BD:129:ASN:ND2	2.45	0.50
38:BD:177:LEU:C	38:BD:179:SER:H	2.19	0.50
39:BE:34:VAL:HG11	39:BE:78:LEU:CD2	2.42	0.50
40:BF:161:GLU:O	40:BF:165:ARG:HG3	2.11	0.50
40:BF:181:LEU:HB3	40:BF:205:ARG:HH12	1.76	0.50
41:BG:9:ARG:HG2	41:BG:13:GLU:HG2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:42:GLY:N	41:BG:43:LEU:HD22	2.26	0.50
41:BG:103:LEU:O	41:BG:104:GLU:C	2.55	0.50
42:BH:13:LYS:HA	42:BH:13:LYS:CE	2.34	0.50
42:BH:86:GLU:HA	42:BH:132:ARG:HA	1.93	0.50
45:BN:27:ALA:HB1	45:BN:103:VAL:HG22	1.92	0.50
46:BO:64:ARG:O	46:BO:82:ASN:HA	2.12	0.50
47:BP:95:VAL:C	47:BP:96:THR:CG2	2.84	0.50
50:BS:26:LEU:HD13	50:BS:87:PHE:HD1	1.75	0.50
51:BT:89:VAL:HG12	51:BT:91:ARG:HG3	1.93	0.50
1:AA:368:U:OP2	24:AY:353:ALA:HB2	2.12	0.50
1:AA:687:A:H62	1:AA:703:G:H1'	1.76	0.50
1:AA:1442:G:C5	1:AA:1442(B):A:H2	2.29	0.50
1:AA:1522:U:H6	1:AA:1522:U:O5'	1.94	0.50
3:AC:126:ARG:HB2	3:AC:128:PHE:CE2	2.46	0.50
4:AD:101:LEU:HB2	4:AD:138:TYR:HB3	1.94	0.50
10:AJ:40:LEU:CB	10:AJ:41:PRO:HD2	2.41	0.50
13:AM:21:TYR:C	13:AM:22:ILE:HD12	2.36	0.50
21:AU:10:ARG:O	21:AU:13:ILE:N	2.44	0.50
22:AV:39:C:O5'	22:AV:39:C:H6	1.94	0.50
24:AY:289:ILE:HD11	24:AY:331:TYR:CZ	2.46	0.50
24:AY:512:ILE:CD1	24:AY:589:ALA:HB1	2.41	0.50
24:AY:625:ASN:C	24:AY:627:ARG:H	2.19	0.50
26:B1:4:VAL:HG23	26:B1:11:ARG:HB3	1.92	0.50
28:B3:54:VAL:HG12	28:B3:55:ARG:N	2.27	0.50
35:BA:177:G:H3'	35:BA:178:G:H8	1.77	0.50
35:BA:1127:A:H2'	35:BA:1128:A:H5"	1.94	0.50
35:BA:1164:G:H1	35:BA:1185:C:N4	2.10	0.50
35:BA:1245:G:H5'	40:BF:34:TRP:HZ2	1.75	0.50
35:BA:1396:U:O2	35:BA:1396:U:C2'	2.58	0.50
35:BA:1943:U:OP1	35:BA:1943:U:H6	1.94	0.50
35:BA:1971:A:N3	38:BD:240:ALA:HA	2.26	0.50
35:BA:2089:U:O2'	35:BA:2090:G:H5'	2.12	0.50
35:BA:2126:A:N1	35:BA:2162:G:O2'	2.44	0.50
35:BA:2131:G:C8	35:BA:2133:G:C2	2.98	0.50
35:BA:2137:C:H2'	35:BA:2138:C:C6	2.47	0.50
35:BA:2680:C:O2	35:BA:2680:C:H2'	2.10	0.50
35:BA:2749:A:C6	35:BA:2750:A:N6	2.79	0.50
38:BD:239:ARG:HG2	38:BD:239:ARG:NH1	2.26	0.50
41:BG:90:LEU:HD12	41:BG:91:ARG:H	1.77	0.50
42:BH:44:VAL:O	42:BH:50:VAL:HG13	2.11	0.50
43:BK:98:ARG:HD2	43:BK:139:VAL:HG22	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:71:VAL:HG12	47:BP:72:PRO:HD3	1.93	0.50
49:BR:100:LEU:N	49:BR:100:LEU:HD13	2.27	0.50
51:BT:100:TYR:HD1	51:BT:100:TYR:H	1.60	0.50
55:BX:30:VAL:HG22	55:BX:77:LYS:O	2.10	0.50
1:AA:311:C:HO2'	1:AA:312:C:H5'	1.75	0.50
1:AA:337:C:H2'	1:AA:338:A:H8	1.77	0.50
1:AA:375:U:H4'	16:AP:17:TYR:CE2	2.47	0.50
1:AA:394:G:H2'	1:AA:395:C:C6	2.46	0.50
1:AA:630:G:C2'	1:AA:631:G:H5"	2.42	0.50
1:AA:993:G:N2	1:AA:996:A:N6	2.60	0.50
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.92	0.50
3:AC:36:ASP:O	3:AC:39:ILE:HB	2.10	0.50
4:AD:96:LEU:O	4:AD:97:LEU:C	2.51	0.50
9:AI:45:ALA:O	9:AI:48:GLU:HB2	2.12	0.50
11:AK:89:ALA:O	11:AK:91:ARG:N	2.39	0.50
16:AP:8:ARG:O	16:AP:9:PHE:CD1	2.64	0.50
20:AT:50:GLU:HG3	20:AT:51:GLU:H	1.77	0.50
21:AU:18:TYR:HD2	21:AU:24:ARG:HA	1.77	0.50
24:AY:9:LEU:C	24:AY:11:ARG:H	2.17	0.50
24:AY:19:ALA:HA	24:AY:121:VAL:HG11	1.93	0.50
24:AY:147:TRP:O	24:AY:148:LEU:C	2.53	0.50
24:AY:252:ASP:O	24:AY:254:LYS:HE3	2.12	0.50
24:AY:409:ILE:CG1	24:AY:656:ALA:HB3	2.42	0.50
24:AY:644:ARG:O	24:AY:645:ALA:HB2	2.11	0.50
25:B0:49:LYS:O	25:B0:51:VAL:HG23	2.11	0.50
26:B1:50:ARG:HD2	35:BA:2200:C:OP1	2.12	0.50
33:B8:56:GLU:C	33:B8:58:ILE:N	2.67	0.50
35:BA:85:G:C2'	35:BA:86:C:H5'	2.41	0.50
35:BA:108:U:C2	35:BA:109:G:N7	2.80	0.50
35:BA:231:C:H2'	35:BA:232:G:O4'	2.10	0.50
35:BA:267:C:H2'	35:BA:268:C:H6	1.76	0.50
35:BA:724:U:C2'	35:BA:725:G:H5'	2.42	0.50
35:BA:849:A:N6	35:BA:928:G:H1'	2.26	0.50
35:BA:883:G:H2'	35:BA:884:C:O4'	2.12	0.50
35:BA:1081:U:H5"	43:BK:122:ALA:HB1	1.94	0.50
35:BA:1344:G:H1	35:BA:1403:C:H42	1.59	0.50
35:BA:1349:A:N6	35:BA:1598:C:N4	2.59	0.50
35:BA:1353:A:H2'	35:BA:1354:A:C8	2.46	0.50
35:BA:1378:A:H2'	35:BA:1380:G:N7	2.26	0.50
35:BA:1884:A:C2'	35:BA:1885:A:C5'	2.78	0.50
36:BB:117:G:O2'	36:BB:118:G:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:76:PRO:O	38:BD:98:VAL:HG23	2.10	0.50
38:BD:77:ALA:HB2	38:BD:97:TYR:CD2	2.46	0.50
39:BE:36:ARG:CG	39:BE:36:ARG:NH1	2.44	0.50
39:BE:52:LEU:O	39:BE:74:PRO:CA	2.58	0.50
39:BE:145:LYS:O	39:BE:148:GLY:N	2.44	0.50
40:BF:7:TYR:HD2	40:BF:16:GLY:HA3	1.75	0.50
43:BK:60:TYR:OH	43:BK:66:THR:HG21	2.11	0.50
45:BN:45:ASN:H	45:BN:45:ASN:ND2	2.05	0.50
48:BQ:21:THR:O	48:BQ:22:LYS:HB3	2.11	0.50
48:BQ:134:ARG:NH2	57:BZ:122:ARG:NE	2.60	0.50
50:BS:89:ARG:HG2	50:BS:89:ARG:NH1	2.17	0.50
53:BV:19:LYS:NZ	53:BV:22:VAL:HG13	2.26	0.50
53:BV:21:ARG:HB3	53:BV:91:TYR:HD2	1.71	0.50
54:BW:79:GLY:C	54:BW:100:THR:HG23	2.36	0.50
56:BY:88:LYS:HE2	56:BY:93:GLY:CA	2.40	0.50
1:AA:134:A:C2’	1:AA:135:C:H5’	2.42	0.50
1:AA:260:G:H2’	1:AA:261:U:H6	1.77	0.50
1:AA:651:C:H2’	1:AA:652:U:C6	2.47	0.50
1:AA:1115:C:H1’	14:AN:61:TRP:O	2.12	0.50
1:AA:1130:A:H4’	9:AI:18:PHE:CE1	2.47	0.50
9:AI:83:ARG:O	9:AI:86:VAL:HG12	2.11	0.50
12:AL:109:GLY:HA3	12:AL:121:GLY:O	2.12	0.50
16:AP:9:PHE:HE2	16:AP:18:ARG:CZ	2.25	0.50
24:AY:259:PHE:CE2	24:AY:275:ALA:HB1	2.45	0.50
31:B6:43:CYS:CB	31:B6:44:ARG:NH2	2.60	0.50
31:B6:52:VAL:HG13	31:B6:53:LYS:N	2.24	0.50
31:B6:54:ILE:HD13	35:BA:2420:C:C4’	2.41	0.50
32:B7:16:HIS:O	32:B7:43:THR:HG23	2.11	0.50
32:B7:18:PHE:CE2	32:B7:22:MET:HG3	2.47	0.50
33:B8:43:GLN:O	33:B8:44:LYS:HD2	2.11	0.50
35:BA:211:A:O2’	35:BA:212:G:H5”	2.11	0.50
35:BA:657:U:H2’	35:BA:658:C:C6	2.46	0.50
35:BA:729:G:H2’	35:BA:1775:U:O2	2.11	0.50
35:BA:1169:G:N2	35:BA:1181:C:N3	2.58	0.50
35:BA:1196:C:O2’	35:BA:1197:G:H5’	2.12	0.50
35:BA:1567:A:C5’	38:BD:58:HIS:CD2	2.94	0.50
35:BA:1682:G:H2’	35:BA:1683:C:H6	1.71	0.50
35:BA:2135:A:H2’	35:BA:2136:C:O4’	2.12	0.50
35:BA:2310:A:C8	41:BG:75:LYS:NZ	2.75	0.50
35:BA:2352:A:H2’	35:BA:2353:G:H5’	1.93	0.50
35:BA:2577:A:H5’	35:BA:2578:G:C5’	2.38	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2884:U:H2'	35:BA:2885:C:C5'	2.42	0.50
38:BD:177:LEU:C	38:BD:179:SER:N	2.69	0.50
40:BF:63:LYS:NZ	40:BF:75:HIS:O	2.39	0.50
41:BG:111:LEU:CD2	41:BG:120:LEU:HD21	2.41	0.50
42:BH:83:TYR:CB	42:BH:134:SER:HA	2.37	0.50
46:BO:115:VAL:CG1	46:BO:121:VAL:HG21	2.40	0.50
47:BP:25:SER:O	47:BP:30:THR:OG1	2.24	0.50
52:BU:55:ARG:HA	52:BU:58:ARG:HG3	1.93	0.50
53:BV:32:THR:CG2	53:BV:33:VAL:H	2.24	0.50
1:AA:202:U:H5'	1:AA:203:U:H5	1.77	0.50
1:AA:562:C:H1'	12:AL:15:ARG:HD2	1.93	0.50
1:AA:973:G:C1'	10:AJ:55:LYS:CE	2.86	0.50
1:AA:1225:A:H3'	1:AA:1226:C:C6	2.47	0.50
2:AB:86:GLU:O	2:AB:88:ALA:N	2.44	0.50
3:AC:35:GLU:O	3:AC:38:ARG:HG2	2.11	0.50
4:AD:78:LEU:HD13	4:AD:97:LEU:HD23	1.93	0.50
8:AH:29:SER:OG	8:AH:32:LYS:HG3	2.11	0.50
8:AH:104:ARG:HB3	8:AH:108:GLY:H	1.76	0.50
9:AI:8:GLY:HA2	9:AI:79:LEU:HD12	1.94	0.50
9:AI:79:LEU:CD1	9:AI:83:ARG:HB2	2.39	0.50
10:AJ:80:LYS:HZ3	10:AJ:80:LYS:CB	2.25	0.50
13:AM:91:ARG:CD	13:AM:97:PRO:O	2.60	0.50
14:AN:37:PHE:CD1	14:AN:39:LEU:HD12	2.47	0.50
26:B1:80:LEU:CD2	26:B1:81:LYS:H	2.25	0.50
27:B2:41:ILE:HD11	27:B2:44:LEU:CD1	2.40	0.50
33:B8:53:PRO:HA	33:B8:56:GLU:HB2	1.93	0.50
35:BA:9:U:O4	35:BA:2629:A:N7	2.44	0.50
35:BA:240:G:C3'	35:BA:241:A:H5"	2.37	0.50
35:BA:259:G:H1'	35:BA:621:A:O2'	2.12	0.50
35:BA:338:G:H2'	35:BA:339:U:C6	2.47	0.50
35:BA:636:G:OP1	47:BP:132:LYS:HG3	2.11	0.50
35:BA:654(A):G:H2'	35:BA:654(B):C:O4'	2.12	0.50
35:BA:685:A:C5	35:BA:774:A:C2	3.00	0.50
35:BA:1221(A):C:C2	35:BA:1229:G:N2	2.80	0.50
35:BA:1409:C:O2'	35:BA:1410:G:H5'	2.11	0.50
35:BA:1756:G:H4'	35:BA:1758:G:O4'	2.12	0.50
35:BA:2121:G:O2'	37:BC:168:LYS:HG2	2.11	0.50
35:BA:2206:G:C2	35:BA:2207:G:H5'	2.46	0.50
35:BA:2820:A:C8	39:BE:191:PRO:HB2	2.46	0.50
35:BA:2838:G:H1'	49:BR:45:ARG:HH11	1.77	0.50
35:BA:2861:G:H2'	35:BA:2862:G:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:103:LEU:CB	42:BH:123:PHE:HD2	2.25	0.50
42:BH:149:ARG:HA	42:BH:162:ILE:HG13	1.93	0.50
43:BK:10:LEU:CD1	43:BK:57:ILE:HD13	2.42	0.50
47:BP:89:ALA:HA	47:BP:121:LYS:HD3	1.94	0.50
49:BR:18:LEU:HD23	49:BR:19:ALA:N	2.27	0.50
52:BU:33:ARG:C	52:BU:35:ALA:N	2.68	0.50
52:BU:53:ARG:O	52:BU:56:ASP:N	2.29	0.50
56:BY:13:VAL:CG2	56:BY:73:ARG:O	2.60	0.50
57:BZ:179:ASP:HB3	57:BZ:182:LYS:CD	2.40	0.50
1:AA:678:U:H2'	1:AA:679:C:H6	1.75	0.50
1:AA:707:C:H4'	11:AK:20:TYR:CD1	2.47	0.50
1:AA:1299:A:C2	1:AA:1301:U:C2	3.00	0.50
1:AA:1399:C:C2	1:AA:1401:G:C5	3.00	0.50
2:AB:223:ILE:HG23	2:AB:226:ARG:CZ	2.42	0.50
9:AI:82:ALA:HA	9:AI:85:LEU:HD11	1.94	0.50
10:AJ:4:ILE:N	10:AJ:4:ILE:CD1	2.74	0.50
11:AK:106:LYS:O	11:AK:107:SER:HB3	2.12	0.50
20:AT:97:ALA:O	20:AT:99:LEU:HD23	2.11	0.50
24:AY:147:TRP:O	24:AY:150:ILE:N	2.45	0.50
24:AY:252:ASP:CB	24:AY:254:LYS:CE	2.83	0.50
58:AY:701:FUA:H241	58:AY:701:FUA:O5	2.11	0.50
27:B2:38:GLN:HA	27:B2:41:ILE:HG23	1.93	0.50
27:B2:66:GLU:O	27:B2:69:ARG:HG2	2.11	0.50
31:B6:29:ASN:CG	31:B6:30:THR:N	2.70	0.50
35:BA:302:C:O2'	35:BA:303:U:H5'	2.11	0.50
35:BA:559:G:N2	52:BU:49:HIS:CD2	2.79	0.50
35:BA:724:U:O2'	35:BA:725:G:H5'	2.11	0.50
35:BA:1097:U:H2'	35:BA:1098:A:C5'	2.40	0.50
35:BA:1517:G:H8	35:BA:1517:G:C5'	2.15	0.50
35:BA:2457:U:C2'	35:BA:2458:G:H5'	2.41	0.50
35:BA:2469:A:O3'	48:BQ:56:ARG:NH1	2.44	0.50
35:BA:2807:G:H2'	35:BA:2808:U:H5"	1.91	0.50
39:BE:47:VAL:CG2	39:BE:84:PHE:O	2.60	0.50
41:BG:62:LEU:CD1	41:BG:62:LEU:H	2.24	0.50
41:BG:106:LEU:O	41:BG:111:LEU:HD12	2.11	0.50
47:BP:16:ARG:HD3	47:BP:16:ARG:C	2.37	0.50
48:BQ:12:GLN:HE21	48:BQ:72:LYS:HA	1.76	0.50
48:BQ:130:LYS:HZ2	57:BZ:80:ARG:NH1	2.10	0.50
48:BQ:135:ASP:O	48:BQ:138:ASP:OD2	2.29	0.50
51:BT:6:LEU:O	51:BT:9:LEU:N	2.45	0.50
56:BY:29:GLU:HB2	56:BY:38:ILE:CG2	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:930:C:O2'	1:AA:931:C:H5'	2.11	0.50
1:AA:961:U:C2'	1:AA:962:C:H5'	2.41	0.50
2:AB:8:LYS:O	2:AB:9:GLU:C	2.54	0.50
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.47	0.50
3:AC:100:ALA:O	3:AC:101:LEU:C	2.53	0.50
3:AC:136:GLN:O	3:AC:138:VAL:N	2.45	0.50
6:AF:33:TYR:HB2	6:AF:75:LEU:CD1	2.42	0.50
6:AF:80:ARG:NH1	6:AF:88:VAL:HB	2.25	0.50
7:AG:28:ASN:OD1	7:AG:36:LYS:NZ	2.44	0.50
8:AH:44:PHE:O	8:AH:80:ILE:HD11	2.11	0.50
8:AH:123:GLU:O	8:AH:126:LYS:HB3	2.12	0.50
9:AI:24:GLY:HA2	9:AI:59:PHE:O	2.11	0.50
11:AK:82:VAL:HB	11:AK:108:ILE:HA	1.93	0.50
13:AM:120:LYS:C	13:AM:121:LYS:HZ2	2.20	0.50
19:AS:41:VAL:C	19:AS:43:GLU:H	2.19	0.50
24:AY:114:VAL:O	24:AY:114:VAL:HG22	2.11	0.50
24:AY:207:ASP:C	24:AY:207:ASP:OD1	2.54	0.50
24:AY:252:ASP:HB3	24:AY:254:LYS:CE	2.42	0.50
24:AY:337:SER:CA	24:AY:355:LEU:HD23	2.42	0.50
24:AY:498:ILE:HG22	24:AY:507:TYR:CG	2.47	0.50
24:AY:572:TYR:N	24:AY:572:TYR:CD1	2.80	0.50
27:B2:29:LYS:O	27:B2:31:GLU:N	2.44	0.50
33:B8:53:PRO:HG2	33:B8:54:GLU:H	1.76	0.50
34:B9:3:VAL:HG22	34:B9:35:ARG:NH2	2.27	0.50
35:BA:41:C:H2'	35:BA:42:G:C1'	2.41	0.50
35:BA:220:G:H1	35:BA:427:U:H2'	1.77	0.50
35:BA:247:G:H4'	35:BA:386:G:C5	2.47	0.50
35:BA:975(A):G:HO2'	35:BA:976:C:H5'	1.75	0.50
35:BA:1052:C:O2'	35:BA:1053:C:O4'	2.26	0.50
35:BA:1329:U:H5'	35:BA:1330:C:H5	1.77	0.50
35:BA:1531:C:H2'	35:BA:1532:C:C6	2.47	0.50
35:BA:1668:A:N6	35:BA:1676:A:H61	2.10	0.50
35:BA:2131:G:H5'	35:BA:2133:G:C1'	2.42	0.50
35:BA:2308:G:N7	35:BA:2310:A:C5'	2.65	0.50
35:BA:2694:G:O2'	35:BA:2695:C:H5'	2.11	0.50
35:BA:2850:A:OP2	35:BA:2866:U:H5	1.94	0.50
36:BB:51:G:H5'	36:BB:52:A:OP2	2.12	0.50
36:BB:68:C:H2'	36:BB:69:G:C8	2.44	0.50
36:BB:99:G:H8	36:BB:99:G:O5'	1.95	0.50
37:BC:97:GLY:O	37:BC:100:ILE:HG12	2.12	0.50
39:BE:25:VAL:HG22	39:BE:183:LEU:HG	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:103:ASP:OD2	39:BE:201:THR:HA	2.12	0.50
41:BG:168:GLU:O	41:BG:169:ALA:C	2.53	0.50
41:BG:169:ALA:O	41:BG:170:ARG:C	2.54	0.50
43:BK:114:ASP:O	43:BK:115:LEU:O	2.30	0.50
47:BP:144:GLU:N	47:BP:145:PRO:HD3	2.26	0.50
49:BR:79:LEU:HD13	49:BR:79:LEU:O	2.10	0.50
56:BY:13:VAL:HG23	56:BY:74:PRO:HA	1.94	0.50
56:BY:20:TYR:N	56:BY:20:TYR:CD1	2.79	0.50
56:BY:75:ILE:HG23	56:BY:75:ILE:O	2.12	0.50
57:BZ:48:PHE:CE1	57:BZ:71:VAL:HG21	2.47	0.50
57:BZ:99:TYR:HA	57:BZ:124:ILE:O	2.12	0.50
1:AA:106:C:H2'	1:AA:107:G:H5'	1.94	0.49
1:AA:117:G:H8	1:AA:117:G:O5'	1.95	0.49
1:AA:439:A:H2'	1:AA:441:A:C5'	2.42	0.49
1:AA:472:A:H1'	16:AP:82:GLN:OE1	2.12	0.49
1:AA:499:A:C4'	1:AA:500:G:OP1	2.60	0.49
1:AA:883:C:O2'	1:AA:884:U:H5'	2.12	0.49
1:AA:1320:C:N4	19:AS:36:ARG:HG3	2.26	0.49
1:AA:1361:G:C5'	1:AA:1362:C:OP2	2.60	0.49
2:AB:32:ILE:HD11	2:AB:40:HIS:HB3	1.94	0.49
3:AC:93:LYS:HG2	3:AC:93:LYS:O	2.12	0.49
7:AG:113:GLU:HG2	7:AG:119:ARG:HG2	1.92	0.49
9:AI:59:PHE:N	9:AI:59:PHE:CD1	2.79	0.49
9:AI:79:LEU:O	9:AI:80:GLY:C	2.53	0.49
19:AS:48:THR:HG22	19:AS:61:TYR:HD1	1.77	0.49
21:AU:10:ARG:O	21:AU:13:ILE:HB	2.12	0.49
22:AV:7:G:H5"	22:AV:7:G:H8	1.74	0.49
24:AY:34:TYR:HD2	24:AY:35:TYR:CD2	2.30	0.49
24:AY:112:GLN:O	24:AY:115:GLU:HB3	2.12	0.49
24:AY:124:GLN:CA	24:AY:127:LYS:HD2	2.42	0.49
24:AY:218:GLU:HG2	44:BL:80:LEU:HB3	1.94	0.49
26:B1:25:LYS:HB2	26:B1:31:GLY:HA2	1.94	0.49
27:B2:58:ALA:O	27:B2:61:LEU:HB2	2.12	0.49
30:B5:2:ALA:N	35:BA:2015:A:N3	2.59	0.49
31:B6:38:LYS:HG3	31:B6:47:THR:O	2.12	0.49
35:BA:154(A):C:H3'	35:BA:155:U:H5"	1.92	0.49
35:BA:291:C:N3	35:BA:350:U:O2	2.45	0.49
35:BA:324:A:OP2	35:BA:1205:U:N3	2.42	0.49
35:BA:532:A:H4'	35:BA:533:G:C8	2.46	0.49
35:BA:848:G:H5'	35:BA:849:A:P	2.52	0.49
35:BA:1141:U:H5"	45:BN:63:THR:HG23	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1164:G:H2'	35:BA:1165:U:C6	2.46	0.49
35:BA:1899:G:O2'	35:BA:1900:A:H5"	2.12	0.49
35:BA:2305:A:H2'	35:BA:2306:C:O4'	2.12	0.49
35:BA:2749:A:H4'	42:BH:62:LYS:HB3	1.94	0.49
35:BA:2872:G:O2'	35:BA:2873:A:H5'	2.12	0.49
38:BD:117:VAL:CG2	38:BD:118:VAL:N	2.74	0.49
41:BG:29:TRP:C	41:BG:31:VAL:H	2.20	0.49
41:BG:44:GLY:C	41:BG:46:ALA:N	2.69	0.49
42:BH:31:GLY:O	42:BH:79:VAL:CG1	2.60	0.49
45:BN:78:TYR:HD1	45:BN:78:TYR:H	1.60	0.49
48:BQ:134:ARG:HH11	48:BQ:134:ARG:HG3	1.77	0.49
52:BU:61:TRP:HB3	52:BU:93:LYS:HB3	1.93	0.49
57:BZ:115:GLY:O	57:BZ:116:VAL:CG2	2.60	0.49
1:AA:473:G:H2'	1:AA:474:G:C8	2.42	0.49
1:AA:785:G:C2'	1:AA:786:G:H5'	2.42	0.49
1:AA:949:A:H2'	1:AA:950:U:O4'	2.12	0.49
1:AA:955:U:H2'	1:AA:956:U:C6	2.48	0.49
1:AA:1129:C:H5'	1:AA:1129:C:C6	2.45	0.49
1:AA:1203:C:OP1	14:AN:3:ARG:HD3	2.11	0.49
2:AB:44:LEU:O	2:AB:47:THR:HB	2.12	0.49
3:AC:14:ILE:O	3:AC:15:THR:HB	2.12	0.49
3:AC:120:VAL:HG12	3:AC:121:ALA:N	2.27	0.49
4:AD:9:CYS:SG	4:AD:22:LYS:HD2	2.53	0.49
4:AD:129:ASN:N	4:AD:129:ASN:HD22	2.11	0.49
6:AF:3:ARG:HG3	6:AF:3:ARG:HH11	1.76	0.49
24:AY:90:PHE:HB2	24:AY:454:MET:HE3	1.94	0.49
24:AY:154:GLN:HA	24:AY:158:GLY:HA2	1.93	0.49
24:AY:492:ASP:OD2	24:AY:513:LYS:HD2	2.11	0.49
27:B2:25:VAL:O	27:B2:27:GLU:N	2.45	0.49
35:BA:464:U:C2	35:BA:788:A:N6	2.80	0.49
35:BA:688:U:H2'	35:BA:689:A:C8	2.47	0.49
35:BA:917:A:H2'	35:BA:918:A:O4'	2.12	0.49
35:BA:948:G:H1	35:BA:969:U:H3	1.60	0.49
35:BA:1667:G:C2'	35:BA:1667:G:O5'	2.61	0.49
35:BA:1798:U:C4	35:BA:1819:A:C2	3.00	0.49
35:BA:1840:G:H1	35:BA:1902:C:N4	2.10	0.49
35:BA:2330:G:H2'	35:BA:2331:G:O4'	2.12	0.49
35:BA:2556:C:H2'	35:BA:2557:G:O5'	2.11	0.49
36:BB:16:G:N2	36:BB:69:G:H1'	2.26	0.49
36:BB:30:C:OP2	50:BS:32:LEU:HD21	2.12	0.49
36:BB:68:C:H2'	36:BB:69:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:9:TYR:CE1	38:BD:13:ARG:HD3	2.47	0.49
38:BD:23:GLU:O	38:BD:24:ILE:C	2.55	0.49
38:BD:35:LYS:CG	38:BD:63:ARG:HA	2.33	0.49
41:BG:135:LEU:O	41:BG:135:LEU:HD13	2.12	0.49
42:BH:72:ILE:O	42:BH:73:ALA:C	2.54	0.49
51:BT:24:PRO:HA	51:BT:49:VAL:HG22	1.93	0.49
53:BV:8:GLY:O	53:BV:10:LYS:HE3	2.12	0.49
56:BY:13:VAL:CG2	56:BY:73:ARG:C	2.86	0.49
56:BY:49:VAL:HG12	56:BY:50:ARG:N	2.26	0.49
57:BZ:115:GLY:C	57:BZ:116:VAL:HG23	2.37	0.49
57:BZ:145:GLU:O	57:BZ:146:ILE:C	2.55	0.49
1:AA:61:G:H2'	1:AA:62:U:O4'	2.11	0.49
1:AA:184:G:O2'	1:AA:185:A:H5'	2.12	0.49
1:AA:388:G:H4'	1:AA:390:C:N4	2.25	0.49
1:AA:1318:A:H4'	19:AS:10:PHE:CD2	2.46	0.49
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.12	0.49
3:AC:32:LEU:HB3	3:AC:59:ARG:NH2	2.23	0.49
4:AD:173:TRP:HB3	4:AD:187:ARG:HH12	1.76	0.49
13:AM:70:LEU:HD23	13:AM:71:ARG:N	2.28	0.49
20:AT:43:LEU:HB2	20:AT:52:ALA:HB2	1.94	0.49
24:AY:5:VAL:CG1	24:AY:6:GLU:N	2.75	0.49
24:AY:65:ILE:N	24:AY:65:ILE:HD13	2.26	0.49
24:AY:236:GLU:HG3	24:AY:236:GLU:O	2.12	0.49
24:AY:465:ARG:O	24:AY:470:PHE:CD2	2.66	0.49
58:AY:701:FUA:O2	58:AY:701:FUA:C21	2.54	0.49
33:B8:48:PHE:O	33:B8:49:VAL:CG1	2.53	0.49
33:B8:60:LEU:C	33:B8:63:PRO:HD2	2.37	0.49
33:B8:62:LEU:N	33:B8:63:PRO:CD	2.76	0.49
34:B9:1:MET:SD	34:B9:1:MET:N	2.72	0.49
35:BA:426:C:O2'	35:BA:427:U:H5'	2.12	0.49
35:BA:528:A:N1	35:BA:2042:A:H2'	2.28	0.49
35:BA:552:G:O2'	35:BA:553:G:H5'	2.11	0.49
35:BA:654(P):C:H2'	35:BA:654(Q):C:C5'	2.43	0.49
35:BA:654(R):C:HO2'	35:BA:654(S):G:H8	1.57	0.49
35:BA:947:G:H2'	35:BA:948:G:C8	2.44	0.49
35:BA:1208:C:O2	35:BA:1208:C:H2'	2.12	0.49
35:BA:1773:A:C2'	35:BA:1774:C:H5'	2.42	0.49
35:BA:1941:C:C4	35:BA:1942:C:N4	2.80	0.49
35:BA:2394:C:C6	35:BA:2395:C:H5	2.29	0.49
35:BA:2653:U:O2'	42:BH:110:SER:CB	2.60	0.49
39:BE:101:ARG:HH11	39:BE:169:ASN:ND2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:103:LYS:C	40:BF:105:VAL:H	2.19	0.49
41:BG:125:PHE:CZ	41:BG:173:LEU:HD12	2.48	0.49
42:BH:86:GLU:HG3	42:BH:130:ARG:NH1	2.26	0.49
43:BK:62:ASP:O	43:BK:63:ARG:HB2	2.12	0.49
45:BN:49:GLY:CA	45:BN:119:ARG:HH12	2.25	0.49
45:BN:82:LEU:HD23	45:BN:82:LEU:C	2.38	0.49
47:BP:47:ASP:OD2	47:BP:50:ARG:NH1	2.45	0.49
49:BR:96:ARG:O	49:BR:114:VAL:HA	2.13	0.49
51:BT:100:TYR:N	51:BT:100:TYR:CD1	2.79	0.49
53:BV:61:VAL:HA	53:BV:94:LEU:CD2	2.41	0.49
56:BY:8:LYS:HB2	56:BY:28:LYS:HZ3	1.75	0.49
56:BY:47:LYS:O	56:BY:48:ALA:C	2.55	0.49
1:AA:56:U:H2'	1:AA:57:G:C8	2.47	0.49
1:AA:149:A:N3	1:AA:149:A:H2'	2.27	0.49
1:AA:165:C:O2'	1:AA:166:G:H5'	2.13	0.49
1:AA:312:C:H2'	1:AA:313:A:C8	2.48	0.49
1:AA:1190:G:H3'	3:AC:3:ASN:HD22	1.77	0.49
3:AC:59:ARG:CG	3:AC:64:VAL:HA	2.42	0.49
3:AC:142:MET:HE2	3:AC:171:GLY:HA3	1.95	0.49
3:AC:153:VAL:HG12	3:AC:154:SER:N	2.27	0.49
3:AC:167:TRP:CE3	3:AC:168:ALA:N	2.76	0.49
4:AD:62:GLN:O	4:AD:66:ARG:HD2	2.13	0.49
6:AF:11:ASN:HB3	6:AF:14:LEU:HG	1.94	0.49
7:AG:4:ARG:HB3	7:AG:5:ARG:HH11	1.77	0.49
7:AG:21:VAL:HG23	7:AG:22:LEU:N	2.27	0.49
8:AH:30:ARG:NH1	8:AH:30:ARG:HB3	2.27	0.49
10:AJ:50:ILE:HD11	14:AN:41:ARG:HH11	1.77	0.49
13:AM:35:GLU:HG3	13:AM:36:LYS:N	2.26	0.49
13:AM:66:LEU:O	13:AM:70:LEU:HB3	2.13	0.49
15:AO:39:LEU:CD1	15:AO:56:LEU:HB2	2.43	0.49
17:AQ:17:LYS:HA	17:AQ:46:ASP:O	2.12	0.49
24:AY:206:LEU:O	24:AY:209:ALA:HB3	2.13	0.49
24:AY:415:PRO:HB2	24:AY:421:GLN:CA	2.42	0.49
24:AY:423:LYS:CB	24:AY:472:VAL:HG22	2.33	0.49
30:B5:2:ALA:N	35:BA:2015:A:H1'	2.27	0.49
31:B6:16:CYS:O	31:B6:17:LYS:C	2.55	0.49
35:BA:68:G:H2'	35:BA:69:C:H6	1.76	0.49
35:BA:82:G:C5'	35:BA:296:C:H5'	2.40	0.49
35:BA:92:A:H2'	35:BA:93:G:C8	2.47	0.49
35:BA:152:G:H1	35:BA:174:C:H42	1.60	0.49
35:BA:229:A:OP1	35:BA:229:A:C8	2.63	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1116:C:O5'	35:BA:1116:C:H6	1.95	0.49
35:BA:1484:G:H2'	35:BA:1485:G:C5'	2.42	0.49
35:BA:1516:C:O2'	35:BA:1517:G:H5"	2.11	0.49
35:BA:1697:G:C3'	35:BA:1698:A:H5"	2.36	0.49
35:BA:1967:C:H2'	35:BA:1968:G:C5'	2.41	0.49
35:BA:2014:A:H4'	54:BW:92:ARG:HH12	1.78	0.49
35:BA:2019:A:O4'	52:BU:34:LYS:HD2	2.12	0.49
35:BA:2199:A:H3'	35:BA:2200:C:C6	2.45	0.49
35:BA:2454:G:C2'	35:BA:2455:G:C5'	2.87	0.49
38:BD:145:VAL:HG13	38:BD:191:ALA:HB2	1.94	0.49
39:BE:101:ARG:NE	39:BE:171:GLU:CB	2.73	0.49
41:BG:106:LEU:O	41:BG:106:LEU:HG	2.11	0.49
45:BN:67:LEU:C	45:BN:69:GLN:H	2.20	0.49
53:BV:5:VAL:HG23	53:BV:37:VAL:HG23	1.95	0.49
1:AA:59:A:H3'	1:AA:331:G:H22	1.77	0.49
1:AA:182:U:H3'	1:AA:183:G:C5'	2.42	0.49
1:AA:260:G:H2'	1:AA:261:U:C6	2.46	0.49
1:AA:659:U:O2'	1:AA:660:G:H5'	2.11	0.49
1:AA:1277:C:H6	1:AA:1277:C:C3'	2.23	0.49
3:AC:22:TRP:CZ2	14:AN:54:PRO:HG2	2.47	0.49
4:AD:12:CYS:HG	4:AD:31:CYS:HG	1.54	0.49
4:AD:18:LYS:C	4:AD:19:LEU:HD12	2.37	0.49
13:AM:96:LEU:C	13:AM:110:ARG:HE	2.20	0.49
15:AO:11:VAL:O	15:AO:14:GLU:HB3	2.13	0.49
18:AR:53:ARG:C	18:AR:55:ARG:H	2.20	0.49
24:AY:113:GLY:C	24:AY:115:GLU:N	2.58	0.49
24:AY:140:ASP:OD2	24:AY:265:LYS:HE2	2.13	0.49
24:AY:177:ILE:CG2	24:AY:178:ILE:N	2.75	0.49
27:B2:18:PRO:HG2	27:B2:19:VAL:H	1.77	0.49
32:B7:19:ARG:HA	32:B7:22:MET:HB2	1.95	0.49
35:BA:104:U:OP2	35:BA:105:C:H5	1.95	0.49
35:BA:406:G:O2'	35:BA:407:G:P	2.71	0.49
35:BA:680:G:H2'	35:BA:681:G:H8	1.78	0.49
35:BA:986:C:C2'	35:BA:987:G:H5'	2.43	0.49
35:BA:1095:A:H2'	35:BA:1096:A:C8	2.48	0.49
35:BA:1115:G:H2'	35:BA:1116:C:C6	2.46	0.49
35:BA:1166:C:H2'	35:BA:1167:U:H6	1.78	0.49
35:BA:1173:G:H4'	35:BA:1174:A:OP2	2.12	0.49
35:BA:2075:U:C2'	35:BA:2076:U:H5"	2.43	0.49
37:BC:117:THR:O	37:BC:120:VAL:HG22	2.13	0.49
40:BF:41:LEU:HD23	40:BF:44:ARG:NE	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:41:TRP:CD1	48:BQ:96:VAL:HG22	2.48	0.49
48:BQ:135:ASP:CG	57:BZ:49:ARG:NH1	2.70	0.49
49:BR:30:THR:HA	49:BR:78:LYS:HZ3	1.77	0.49
50:BS:31:SER:O	50:BS:32:LEU:C	2.51	0.49
52:BU:97:ASP:C	52:BU:99:ALA:H	2.20	0.49
54:BW:50:VAL:HG13	54:BW:51:LEU:N	2.26	0.49
55:BX:36:LYS:HA	55:BX:39:ILE:HB	1.94	0.49
57:BZ:9:TYR:N	57:BZ:9:TYR:HD1	2.08	0.49
1:AA:123:C:OP1	1:AA:311:C:O2'	2.30	0.49
1:AA:452:A:H5'	16:AP:72:ARG:NH2	2.27	0.49
1:AA:505:G:H2'	1:AA:506:G:C8	2.47	0.49
1:AA:608:A:H2'	1:AA:609:A:H5'	1.94	0.49
1:AA:920:U:H2'	1:AA:921:U:C6	2.47	0.49
1:AA:1009:G:H2'	1:AA:1009:G:N3	2.27	0.49
1:AA:1116:C:H1'	1:AA:1185:G:N2	2.28	0.49
3:AC:43:LEU:C	3:AC:45:LYS:H	2.20	0.49
5:AE:51:VAL:O	5:AE:52:PRO:C	2.53	0.49
7:AG:52:GLU:O	7:AG:53:LYS:C	2.53	0.49
9:AI:77:ILE:O	9:AI:78:LYS:C	2.55	0.49
10:AJ:40:LEU:HD21	10:AJ:71:LEU:HB3	1.93	0.49
13:AM:113:PRO:O	13:AM:114:ARG:C	2.56	0.49
15:AO:86:GLY:C	15:AO:87:ILE:HG23	2.37	0.49
17:AQ:99:SER:O	17:AQ:100:LYS:HG3	2.13	0.49
20:AT:13:LEU:O	20:AT:16:HIS:N	2.45	0.49
22:AV:76:A:OP1	22:AV:76:A:H4'	2.11	0.49
24:AY:82:ILE:HD12	24:AY:101:LEU:CD2	2.42	0.49
24:AY:227:ILE:HD13	24:AY:242:LEU:HA	1.95	0.49
24:AY:406:GLU:CB	24:AY:407:PRO:CD	2.91	0.49
25:B0:77:ARG:HH22	35:BA:857:C:H5'	1.78	0.49
35:BA:748:G:O6	35:BA:751:A:H4'	2.12	0.49
35:BA:898:C:H2'	35:BA:899:A:O4'	2.12	0.49
35:BA:1048:A:H5'	35:BA:1049:C:OP2	2.12	0.49
35:BA:1050:A:C5	35:BA:1051:G:H1'	2.48	0.49
35:BA:1092:C:H2'	35:BA:1093:G:H8	1.77	0.49
35:BA:1118:C:H6	35:BA:1118:C:O5'	1.96	0.49
35:BA:1141:U:H6	45:BN:63:THR:HG21	1.78	0.49
35:BA:1671:U:O5'	35:BA:1671:U:H6	1.95	0.49
35:BA:2070:G:H2'	35:BA:2071:A:C8	2.48	0.49
35:BA:2882:A:H5'	49:BR:96:ARG:HG3	1.93	0.49
36:BB:91:C:H5'	48:BQ:18:LYS:HE3	1.94	0.49
37:BC:57:GLN:HE21	37:BC:205:ALA:HA	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:76:LEU:HB3	37:BC:114:VAL:HA	1.93	0.49
37:BC:149:ASN:C	37:BC:149:ASN:HD22	2.18	0.49
42:BH:18:GLU:CB	42:BH:25:LYS:HB2	2.41	0.49
42:BH:127:GLU:HB3	42:BH:128:PRO:HD2	1.94	0.49
43:BK:81:ALA:O	43:BK:82:ALA:HB2	2.12	0.49
45:BN:4:TYR:N	45:BN:4:TYR:CD1	2.79	0.49
47:BP:6:LEU:HG	47:BP:7:ARG:H	1.78	0.49
50:BS:14:VAL:CG1	50:BS:16:ASN:ND2	2.75	0.49
51:BT:1:MET:H2	51:BT:7:ILE:HD11	1.77	0.49
51:BT:11:GLU:O	51:BT:13:ARG:N	2.41	0.49
57:BZ:28:MET:HA	57:BZ:88:PHE:O	2.13	0.49
57:BZ:137:ILE:CG2	57:BZ:155:LEU:HD12	2.39	0.49
1:AA:620:C:H2'	1:AA:621:A:O4'	2.13	0.49
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.12	0.49
1:AA:1166:G:H5'	1:AA:1168:A:OP2	2.13	0.49
2:AB:11:LEU:HD11	2:AB:217:ARG:NH2	2.26	0.49
4:AD:76:ARG:HG2	4:AD:76:ARG:NH1	2.27	0.49
4:AD:176:LEU:HD12	4:AD:182:LYS:O	2.12	0.49
5:AE:7:GLU:N	5:AE:35:GLY:O	2.45	0.49
9:AI:40:LEU:C	9:AI:42:ARG:H	2.21	0.49
11:AK:91:ARG:O	11:AK:91:ARG:HG2	2.13	0.49
12:AL:105:TYR:N	12:AL:105:TYR:CD2	2.79	0.49
13:AM:92:HIS:O	13:AM:95:GLY:N	2.45	0.49
17:AQ:40:LYS:HE2	17:AQ:42:TYR:CE2	2.48	0.49
24:AY:138:LYS:C	24:AY:140:ASP:H	2.20	0.49
24:AY:259:PHE:N	24:AY:259:PHE:CD1	2.80	0.49
24:AY:410:ASP:HB3	24:AY:450:ILE:CG2	2.43	0.49
24:AY:447:GLY:O	24:AY:448:GLN:C	2.55	0.49
24:AY:526:VAL:HG11	24:AY:566:THR:HG23	1.94	0.49
24:AY:526:VAL:CG1	24:AY:566:THR:HG23	2.42	0.49
27:B2:7:ARG:HH11	27:B2:7:ARG:CG	2.13	0.49
35:BA:88:G:OP1	35:BA:90:U:C5	2.59	0.49
35:BA:512:G:O2'	35:BA:513:A:H8	1.95	0.49
35:BA:1023:U:H2'	35:BA:1024:G:H5'	1.93	0.49
35:BA:1260:G:H2'	35:BA:1261:C:O4'	2.12	0.49
35:BA:1567:A:H2'	38:BD:84:TYR:HE2	1.77	0.49
35:BA:1862:G:H22	35:BA:1881:C:H1'	1.78	0.49
35:BA:1941:C:C4	35:BA:1942:C:C4	3.00	0.49
35:BA:1947:C:O2'	35:BA:1948:G:H5"	2.13	0.49
39:BE:4:ILE:HD12	39:BE:92:THR:O	2.12	0.49
40:BF:28:ILE:HD13	40:BF:28:ILE:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:162:LEU:O	40:BF:166:ALA:N	2.44	0.49
41:BG:91:ARG:HG2	41:BG:92:VAL:N	2.27	0.49
42:BH:83:TYR:HB3	42:BH:134:SER:CA	2.37	0.49
43:BK:105:LEU:HD23	43:BK:120:LEU:HD13	1.94	0.49
47:BP:23:PRO:CB	47:BP:33:ARG:HG3	2.41	0.49
47:BP:47:ASP:HB3	47:BP:48:PRO:HA	1.93	0.49
49:BR:83:ILE:HD13	49:BR:83:ILE:N	2.27	0.49
49:BR:100:LEU:HD11	49:BR:113:LEU:HB2	1.93	0.49
50:BS:70:GLY:O	50:BS:72:ALA:N	2.46	0.49
53:BV:18:LEU:CG	53:BV:19:LYS:N	2.75	0.49
1:AA:25:C:H2'	1:AA:26:A:C8	2.47	0.49
1:AA:703:G:O2'	1:AA:704:A:P	2.70	0.49
3:AC:5:ILE:CD1	3:AC:5:ILE:H	2.25	0.49
3:AC:58:GLU:N	3:AC:65:ALA:HB3	2.27	0.49
7:AG:41:ARG:CG	7:AG:41:ARG:NH1	2.56	0.49
9:AI:5:TYR:CD2	9:AI:6:GLY:N	2.79	0.49
12:AL:39:VAL:CG2	12:AL:57:LYS:HB2	2.42	0.49
14:AN:15:LYS:O	14:AN:16:PHE:C	2.56	0.49
15:AO:7:GLU:O	15:AO:11:VAL:HG23	2.13	0.49
16:AP:13:HIS:C	16:AP:15:PRO:HD3	2.37	0.49
16:AP:28:ARG:HH11	16:AP:28:ARG:CG	2.21	0.49
24:AY:30:GLU:HG3	24:AY:31:ARG:N	2.27	0.49
24:AY:74:TRP:CD1	24:AY:273:LEU:HB3	2.47	0.49
24:AY:176:GLY:CA	24:AY:187:THR:HA	2.43	0.49
24:AY:406:GLU:CB	24:AY:407:PRO:HD2	2.41	0.49
24:AY:460:GLU:O	24:AY:463:VAL:HB	2.13	0.49
25:B0:5:LYS:NZ	25:B0:5:LYS:HB3	2.28	0.49
26:B1:6:GLU:HG3	26:B1:61:ARG:HB2	1.94	0.49
32:B7:3:ARG:NH1	35:BA:789:A:C2	2.80	0.49
35:BA:10:G:C6	35:BA:2629:A:C8	3.00	0.49
35:BA:25:U:H2'	35:BA:26:G:O4'	2.13	0.49
35:BA:42:G:H2'	35:BA:42:G:N3	2.26	0.49
35:BA:300:A:P	56:BY:97:ARG:HE	2.35	0.49
35:BA:324:A:N6	35:BA:338:G:O2'	2.46	0.49
35:BA:860:U:H5	35:BA:917:A:N7	2.10	0.49
35:BA:1131:G:C2	35:BA:1132:A:C5	3.01	0.49
35:BA:1567:A:H5'	38:BD:58:HIS:CD2	2.47	0.49
35:BA:1577:C:H2'	35:BA:1578:U:O4'	2.11	0.49
35:BA:1943:U:OP1	35:BA:1943:U:C6	2.66	0.49
35:BA:2052:G:H4'	39:BE:143:ASN:O	2.13	0.49
35:BA:2088:G:C6	35:BA:2089:U:C4	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2184:G:H2'	35:BA:2185:C:C6	2.48	0.49
37:BC:36:ALA:HB1	37:BC:38:PHE:CE1	2.48	0.49
37:BC:98:GLU:O	37:BC:101:ILE:HD13	2.12	0.49
37:BC:179:ALA:O	37:BC:180:SER:C	2.54	0.49
38:BD:28:GLU:OE1	38:BD:29:PRO:HD2	2.13	0.49
39:BE:47:VAL:HG23	39:BE:84:PHE:O	2.12	0.49
39:BE:179:GLU:HB3	39:BE:181:LEU:HD23	1.94	0.49
41:BG:31:VAL:O	41:BG:33:ARG:CD	2.61	0.49
41:BG:46:ALA:HA	41:BG:51:ARG:HG3	1.94	0.49
41:BG:75:LYS:C	41:BG:76:SER:HG	2.18	0.49
42:BH:13:LYS:C	42:BH:15:VAL:H	2.21	0.49
45:BN:18:ALA:O	45:BN:21:LYS:HB2	2.12	0.49
48:BQ:27:VAL:HG12	48:BQ:28:ALA:H	1.76	0.49
48:BQ:70:PRO:HA	48:BQ:95:ALA:HB2	1.94	0.49
49:BR:4:LEU:O	49:BR:4:LEU:HD13	2.12	0.49
49:BR:10:LEU:HD22	49:BR:17:ARG:HD2	1.94	0.49
52:BU:16:LYS:O	52:BU:20:LEU:CD2	2.61	0.49
52:BU:47:TYR:HE2	53:BV:74:LYS:NZ	2.10	0.49
54:BW:14:PRO:CG	54:BW:78:GLU:HB2	2.43	0.49
1:AA:22:G:H2'	1:AA:23:C:O4'	2.12	0.49
1:AA:277:C:H2'	1:AA:278:G:H5'	1.95	0.49
1:AA:390:C:H2'	1:AA:391:G:H8	1.74	0.49
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.12	0.49
1:AA:821:G:O2'	1:AA:822:C:H5'	2.13	0.49
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.12	0.49
1:AA:1040:U:H2'	1:AA:1040:U:O2	2.12	0.49
3:AC:142:MET:HE1	3:AC:148:GLY:HA2	1.93	0.49
4:AD:8:VAL:HB	4:AD:21:LEU:CD1	2.42	0.49
5:AE:60:TYR:HE1	5:AE:64:ARG:NH2	2.08	0.49
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.94	0.49
8:AH:1:MET:H3	8:AH:1:MET:CE	2.25	0.49
9:AI:4:TYR:HA	9:AI:88:TYR:CE1	2.48	0.49
9:AI:55:ALA:HA	9:AI:58:HIS:HD2	1.76	0.49
12:AL:27:LEU:C	12:AL:29:GLY:N	2.69	0.49
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	1.95	0.49
22:AV:30:G:H21	22:AV:31:G:H1'	1.78	0.49
22:AV:38:A:O2'	22:AV:39:C:H5'	2.13	0.49
24:AY:92:ILE:HG23	24:AY:93:GLU:N	2.28	0.49
24:AY:576:ASP:O	24:AY:577:SER:C	2.55	0.49
25:B0:27:GLU:CD	25:B0:27:GLU:N	2.60	0.49
26:B1:90:ILE:HG22	26:B1:94:LEU:HD13	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B3:6:VAL:HG12	28:B3:56:VAL:HG13	1.95	0.49
30:B5:2:ALA:HB2	35:BA:2015:A:C4'	2.43	0.49
35:BA:730:C:O2'	35:BA:731:C:H5'	2.13	0.49
35:BA:803:U:H2'	35:BA:804:A:H5'	1.95	0.49
35:BA:1011:G:O2'	35:BA:1013:C:H5"	2.13	0.49
35:BA:2086:U:H2'	35:BA:2087:G:C8	2.47	0.49
35:BA:2131:G:C8	35:BA:2133:G:N3	2.80	0.49
35:BA:2543:G:O2'	35:BA:2544:G:H5'	2.13	0.49
35:BA:2720:U:C2	35:BA:2721:A:C8	3.00	0.49
35:BA:2839:G:H5'	49:BR:46:GLY:HA2	1.95	0.49
37:BC:150:ILE:HG13	37:BC:154:ILE:HG13	1.95	0.49
38:BD:241:PRO:C	38:BD:242:ARG:HG3	2.37	0.49
39:BE:168:MET:CE	39:BE:202:LYS:HE2	2.42	0.49
39:BE:170:LEU:H	39:BE:170:LEU:CD1	2.25	0.49
40:BF:127:GLU:O	40:BF:127:GLU:CD	2.56	0.49
42:BH:108:GLY:O	42:BH:109:PHE:C	2.55	0.49
43:BK:108:ALA:O	43:BK:112:MET:HB3	2.13	0.49
45:BN:126:PRO:O	45:BN:127:ASP:CB	2.58	0.49
47:BP:32:THR:CG2	47:BP:37:GLY:HA2	2.42	0.49
49:BR:18:LEU:HD23	49:BR:18:LEU:C	2.38	0.49
1:AA:404:U:H2'	1:AA:405:U:C6	2.48	0.49
1:AA:578:C:O2'	1:AA:579:G:H5'	2.13	0.49
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.13	0.49
1:AA:1472:U:O2'	1:AA:1473:A:H5'	2.13	0.49
2:AB:82:ARG:HG3	2:AB:82:ARG:HH11	1.76	0.49
2:AB:230:VAL:CG2	2:AB:231:GLU:N	2.65	0.49
5:AE:125:SER:O	5:AE:131:ILE:HD11	2.12	0.49
8:AH:21:LYS:O	8:AH:65:TYR:OH	2.29	0.49
9:AI:5:TYR:CG	9:AI:6:GLY:N	2.81	0.49
10:AJ:32:ALA:H	10:AJ:78:ASN:CG	2.21	0.49
11:AK:67:ASP:O	11:AK:71:LYS:HG3	2.13	0.49
18:AR:44:LEU:O	18:AR:45:SER:C	2.55	0.49
18:AR:72:ARG:O	18:AR:73:ALA:C	2.56	0.49
24:AY:25:LYS:HZ2	24:AY:86:GLY:CA	2.22	0.49
24:AY:38:ARG:O	24:AY:40:HIS:HB2	2.13	0.49
24:AY:221:ALA:CB	44:BL:80:LEU:CD2	2.90	0.49
24:AY:334:THR:HG23	24:AY:369:LEU:C	2.38	0.49
24:AY:498:ILE:HA	24:AY:506:GLN:O	2.13	0.49
24:AY:616:TYR:O	24:AY:617:MET:C	2.55	0.49
24:AY:681:LYS:HD2	24:AY:682:GLN:N	2.28	0.49
29:B4:50:VAL:O	29:B4:51:ASP:HB3	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:143:G:O4'	55:BX:37:THR:HG21	2.13	0.49
35:BA:884:C:H5	35:BA:885:C:O2	1.96	0.49
35:BA:892:G:H2'	35:BA:893:C:H6	1.75	0.49
35:BA:1528:A:H2'	35:BA:1528:A:N3	2.28	0.49
35:BA:2292:C:H2'	35:BA:2293:C:H6	1.78	0.49
35:BA:2312:U:H4'	41:BG:71:THR:OG1	2.12	0.49
35:BA:2380:C:C5	35:BA:2381:C:H5	2.31	0.49
35:BA:2395:C:C2	35:BA:2396:G:C8	3.01	0.49
36:BB:59:A:C2'	36:BB:60:C:H5'	2.43	0.49
37:BC:29:LEU:HD23	37:BC:29:LEU:C	2.37	0.49
37:BC:223:VAL:HG12	37:BC:225:ILE:HG23	1.95	0.49
38:BD:132:PRO:HA	38:BD:189:CYS:O	2.13	0.49
40:BF:7:TYR:HD2	40:BF:16:GLY:CA	2.25	0.49
41:BG:97:ASP:HB3	41:BG:98:ARG:NH1	2.27	0.49
41:BG:135:LEU:HD12	41:BG:135:LEU:O	2.13	0.49
41:BG:138:GLN:CD	41:BG:153:ARG:HG2	2.38	0.49
45:BN:14:VAL:HG21	45:BN:137:LYS:NZ	2.28	0.49
53:BV:2:PHE:HB3	53:BV:41:GLY:C	2.38	0.49
55:BX:44:GLU:HA	55:BX:49:VAL:O	2.13	0.49
56:BY:45:VAL:HG13	56:BY:61:ILE:HA	1.95	0.49
1:AA:16:A:N1	1:AA:919:A:H2	2.11	0.48
1:AA:424:G:H2'	1:AA:425:G:H8	1.77	0.48
1:AA:881:G:P	12:AL:12:ARG:HH22	2.36	0.48
1:AA:981:U:H2'	1:AA:982:U:C5	2.47	0.48
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.95	0.48
8:AH:114:THR:HG21	8:AH:129:VAL:HG23	1.95	0.48
8:AH:134:ILE:O	8:AH:135:CYS:HB3	2.12	0.48
10:AJ:22:LYS:NZ	10:AJ:88:LEU:HD23	2.28	0.48
11:AK:79:SER:OG	11:AK:106:LYS:HD2	2.12	0.48
11:AK:106:LYS:HB3	11:AK:106:LYS:NZ	2.28	0.48
19:AS:11:VAL:CG2	19:AS:16:LEU:HD11	2.43	0.48
20:AT:45:GLN:NE2	20:AT:45:GLN:C	2.71	0.48
20:AT:80:ARG:HH11	20:AT:80:ARG:HG2	1.77	0.48
24:AY:71:THR:HA	24:AY:79:ILE:O	2.13	0.48
24:AY:285:ASP:OD2	24:AY:285:ASP:N	2.46	0.48
24:AY:492:ASP:OD2	24:AY:513:LYS:CD	2.61	0.48
31:B6:15:GLU:HB2	31:B6:49:HIS:CE1	2.48	0.48
31:B6:37:ARG:O	31:B6:48:VAL:O	2.30	0.48
32:B7:35:ARG:HH11	32:B7:35:ARG:CG	2.26	0.48
33:B8:4:MET:HE3	33:B8:61:LEU:HD13	1.95	0.48
33:B8:14:VAL:HG21	33:B8:22:VAL:HG13	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:56:GLU:C	33:B8:58:ILE:H	2.20	0.48
35:BA:345:A:H2'	35:BA:345:A:N3	2.28	0.48
35:BA:777:A:H2'	35:BA:778:G:C8	2.48	0.48
35:BA:904:C:O2'	57:BZ:169:GLU:OE2	2.31	0.48
35:BA:1029:A:H5"	48:BQ:128:LYS:HE3	1.94	0.48
35:BA:1218:C:H2'	35:BA:1219:G:C8	2.47	0.48
35:BA:1507:A:H2'	35:BA:1508:A:O4'	2.13	0.48
35:BA:1782:C:H1'	35:BA:2609:U:C5'	2.32	0.48
35:BA:2163:C:H2'	35:BA:2164:C:H5'	1.95	0.48
35:BA:2389:G:H5"	35:BA:2390:U:C5'	2.40	0.48
35:BA:2693:A:H2'	35:BA:2694:G:H8	1.77	0.48
39:BE:59:VAL:HG13	39:BE:60:ASN:N	2.28	0.48
41:BG:117:PHE:HE1	41:BG:120:LEU:N	2.11	0.48
42:BH:106:THR:C	42:BH:107:VAL:HG13	2.37	0.48
45:BN:58:ASP:C	45:BN:60:ILE:H	2.19	0.48
45:BN:99:LEU:O	45:BN:102:ALA:HB3	2.12	0.48
45:BN:104:LYS:HE3	45:BN:117:PHE:CG	2.48	0.48
48:BQ:134:ARG:HH21	57:BZ:122:ARG:NE	2.11	0.48
49:BR:56:LYS:HE2	49:BR:88:ARG:HA	1.94	0.48
50:BS:46:VAL:CG1	50:BS:47:THR:N	2.75	0.48
51:BT:108:ARG:HA	51:BT:111:ARG:HH11	1.78	0.48
53:BV:18:LEU:HD22	53:BV:19:LYS:N	2.21	0.48
1:AA:130:A:N1	1:AA:233:C:O2'	2.41	0.48
1:AA:275:G:O5'	17:AQ:14:LYS:HD3	2.13	0.48
1:AA:316:G:C6	1:AA:338:A:C6	3.01	0.48
1:AA:505:G:H2'	1:AA:506:G:H8	1.77	0.48
1:AA:738:C:H6	1:AA:738:C:O5'	1.96	0.48
1:AA:994:A:C2	1:AA:995:C:C5	3.02	0.48
1:AA:1054:C:OP2	1:AA:1197:G:OP2	2.31	0.48
1:AA:1144:G:N2	1:AA:1145:C:C2	2.81	0.48
1:AA:1442:G:H1	1:AA:1461:G:H21	1.59	0.48
1:AA:1530:G:H5'	1:AA:1530:G:H8	1.78	0.48
2:AB:236:TYR:O	2:AB:238:LEU:N	2.46	0.48
3:AC:86:VAL:HG23	3:AC:87:LEU:CD2	2.38	0.48
7:AG:113:GLU:CG	7:AG:119:ARG:HG2	2.43	0.48
10:AJ:27:ALA:HB2	10:AJ:85:LEU:HD11	1.95	0.48
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.37	0.48
20:AT:44:ALA:HA	20:AT:92:LEU:HD21	1.95	0.48
20:AT:63:ILE:O	20:AT:64:ASP:C	2.51	0.48
24:AY:113:GLY:O	24:AY:115:GLU:N	2.45	0.48
24:AY:165:GLN:C	24:AY:166:LEU:HD12	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:373:ASP:C	24:AY:374:LEU:HD12	2.38	0.48
24:AY:603:GLU:O	24:AY:676:TYR:HA	2.13	0.48
25:B0:51:VAL:HG22	25:B0:81:VAL:CG2	2.41	0.48
31:B6:10:LEU:HB3	33:B8:34:TRP:HD1	1.78	0.48
35:BA:269:U:H2'	35:BA:270:A:H8	1.77	0.48
35:BA:527:C:N4	35:BA:2779:U:OP1	2.45	0.48
35:BA:541:C:H42	35:BA:552:G:H1	1.61	0.48
35:BA:1118:C:H2'	35:BA:1119:C:H6	1.78	0.48
35:BA:1197:G:C4	35:BA:1198:U:C5	3.01	0.48
35:BA:1446:C:H42	35:BA:1465:G:H1	1.61	0.48
35:BA:1494:A:O2'	35:BA:1495:A:OP1	2.31	0.48
35:BA:1539:G:N1	35:BA:1540:U:O2	2.45	0.48
35:BA:2352:A:C2'	35:BA:2353:G:H5'	2.43	0.48
36:BB:85:G:O2'	36:BB:86:G:H5'	2.13	0.48
38:BD:142:VAL:CG2	38:BD:192:THR:O	2.61	0.48
43:BK:2:LYS:HB2	43:BK:2:LYS:HZ2	1.77	0.48
45:BN:115:ARG:CG	45:BN:115:ARG:NH1	2.67	0.48
47:BP:24:GLY:CA	47:BP:33:ARG:HH12	2.26	0.48
47:BP:30:THR:O	47:BP:33:ARG:N	2.34	0.48
47:BP:47:ASP:HB3	47:BP:48:PRO:C	2.38	0.48
48:BQ:25:ASP:HA	48:BQ:100:GLY:O	2.13	0.48
48:BQ:26:TYR:CD2	48:BQ:140:ALA:HB3	2.48	0.48
49:BR:65:LEU:HD12	49:BR:65:LEU:O	2.13	0.48
50:BS:84:GLN:O	50:BS:84:GLN:HG3	2.13	0.48
51:BT:113:LYS:O	51:BT:114:LEU:HD23	2.14	0.48
55:BX:10:ALA:HB1	55:BX:11:PRO:CD	2.43	0.48
57:BZ:88:PHE:N	57:BZ:88:PHE:CD1	2.81	0.48
1:AA:255:G:O3'	17:AQ:17:LYS:HD2	2.13	0.48
1:AA:277:C:O2'	1:AA:278:G:H5'	2.13	0.48
1:AA:932:C:H5"	7:AG:3:ARG:HD2	1.95	0.48
1:AA:983:A:H5'	1:AA:984:C:OP2	2.14	0.48
2:AB:204:ASN:OD1	2:AB:207:ALA:HB2	2.13	0.48
7:AG:92:SER:O	7:AG:93:PRO:C	2.56	0.48
10:AJ:88:LEU:HG	10:AJ:88:LEU:O	2.13	0.48
11:AK:24:SER:O	11:AK:88:GLY:HA2	2.13	0.48
13:AM:19:LEU:O	13:AM:22:ILE:HD13	2.13	0.48
16:AP:74:LEU:CD2	16:AP:79:VAL:HG21	2.43	0.48
21:AU:13:ILE:C	21:AU:15:ARG:N	2.70	0.48
21:AU:18:TYR:CD2	21:AU:24:ARG:HG3	2.48	0.48
24:AY:141:LYS:O	24:AY:144:ALA:CB	2.58	0.48
24:AY:228:MET:O	24:AY:231:TYR:HB3	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:495:GLY:O	24:AY:510:VAL:N	2.37	0.48
26:B1:92:LYS:HE2	35:BA:153:C:OP1	2.13	0.48
28:B3:36:VAL:O	28:B3:36:VAL:HG23	2.12	0.48
30:B5:3:LYS:HE2	35:BA:2613:U:H2'	1.95	0.48
31:B6:15:GLU:HG3	31:B6:41:PRO:HG3	1.95	0.48
31:B6:27:LYS:O	31:B6:27:LYS:CD	2.59	0.48
32:B7:19:ARG:HD3	35:BA:125:G:H5'	1.95	0.48
35:BA:26:G:H1'	35:BA:515:A:N6	2.28	0.48
35:BA:79:G:O2'	35:BA:80:G:H5'	2.13	0.48
35:BA:483:A:H3'	35:BA:484:C:C6	2.48	0.48
35:BA:511:U:H5	35:BA:512:G:C5	2.31	0.48
35:BA:954:G:O2'	35:BA:955:C:H5'	2.11	0.48
35:BA:978:G:N2	35:BA:979:G:H1'	2.28	0.48
35:BA:1061:U:H4'	35:BA:1070:A:C1'	2.39	0.48
35:BA:1144:G:O2'	35:BA:1145:C:H5'	2.13	0.48
35:BA:1149:G:H2'	35:BA:1150:C:C6	2.49	0.48
35:BA:1528:A:O2'	35:BA:1528(A):A:O5'	2.32	0.48
35:BA:1718:G:O2'	35:BA:1719:G:H5'	2.13	0.48
35:BA:1917:U:H2'	35:BA:1918:A:C5'	2.43	0.48
35:BA:2116:G:N7	35:BA:2117:A:C4	2.81	0.48
35:BA:2282:G:O2'	35:BA:2283:C:OP2	2.31	0.48
35:BA:2513:G:C5	35:BA:2514:U:C4	3.01	0.48
35:BA:2809:A:C2	35:BA:2892:A:N3	2.81	0.48
36:BB:60:C:H2'	36:BB:61:G:C8	2.36	0.48
41:BG:61:ALA:O	41:BG:65:GLY:N	2.42	0.48
42:BH:68:THR:C	42:BH:70:THR:H	2.21	0.48
46:BO:17:ARG:HH21	46:BO:47:ILE:HD11	1.78	0.48
46:BO:52:VAL:C	46:BO:53:LYS:HG3	2.38	0.48
46:BO:59:LYS:O	46:BO:86:ILE:HG23	2.13	0.48
46:BO:112:MET:O	46:BO:113:LYS:C	2.56	0.48
51:BT:10:VAL:C	51:BT:12:SER:H	2.21	0.48
51:BT:88:ILE:HG22	51:BT:89:VAL:HG23	1.95	0.48
53:BV:31:ALA:C	53:BV:61:VAL:HG12	2.38	0.48
53:BV:66:ARG:NH1	53:BV:88:ARG:HE	2.11	0.48
1:AA:101:A:O2'	1:AA:102:G:H5'	2.13	0.48
1:AA:275:G:H5"	17:AQ:14:LYS:HB3	1.94	0.48
1:AA:791:G:C5	1:AA:792:A:N7	2.81	0.48
1:AA:824:C:H2'	1:AA:825:G:H8	1.77	0.48
1:AA:961:U:OP2	1:AA:1223:C:C4'	2.61	0.48
1:AA:1237:C:H6	1:AA:1237:C:O5'	1.96	0.48
1:AA:1305:G:H5"	21:AU:4:GLY:C	2.39	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1305:G:H3'	21:AU:4:GLY:O	2.12	0.48
1:AA:1316:G:H4'	14:AN:18:VAL:HG12	1.95	0.48
2:AB:53:ARG:O	2:AB:53:ARG:HG2	2.11	0.48
4:AD:78:LEU:CD1	4:AD:97:LEU:HD23	2.44	0.48
4:AD:158:ILE:CG2	4:AD:162:LEU:HD12	2.43	0.48
6:AF:16:GLN:CD	6:AF:16:GLN:N	2.71	0.48
6:AF:33:TYR:HA	6:AF:71:ARG:HH21	1.77	0.48
10:AJ:70:ARG:NH1	10:AJ:70:ARG:HG2	2.27	0.48
16:AP:59:TRP:O	16:AP:62:VAL:CG2	2.62	0.48
19:AS:15:LEU:O	19:AS:19:VAL:HB	2.13	0.48
24:AY:456:GLU:O	24:AY:457:LEU:C	2.56	0.48
24:AY:614:GLU:HA	24:AY:617:MET:CB	2.44	0.48
26:B1:86:SER:O	26:B1:90:ILE:N	2.47	0.48
35:BA:139:G:H2'	35:BA:140:G:N7	2.29	0.48
35:BA:177:G:H3'	35:BA:178:G:C8	2.48	0.48
35:BA:552:G:H5'	35:BA:552:G:H8	1.77	0.48
35:BA:645:C:O2	35:BA:645:C:H5"	2.13	0.48
35:BA:970:C:C5	35:BA:971:C:H5	2.31	0.48
35:BA:1551:C:H2'	35:BA:1552:G:O4'	2.13	0.48
35:BA:1721:G:H5'	35:BA:1722:A:OP2	2.14	0.48
35:BA:1910:G:C2'	35:BA:1911:U:H5'	2.43	0.48
35:BA:2381:C:H2'	35:BA:2381:C:O2	2.14	0.48
35:BA:2777:G:H5"	35:BA:2778:A:H5"	1.95	0.48
40:BF:139:PHE:O	40:BF:140:LEU:C	2.56	0.48
43:BK:30:HIS:HA	43:BK:59:ILE:CD1	2.38	0.48
43:BK:57:ILE:HG23	43:BK:67:PHE:HB3	1.94	0.48
44:BL:76:THR:OG1	44:BL:77:GLY:N	2.47	0.48
45:BN:57:ALA:HB3	45:BN:124:ALA:CA	2.43	0.48
45:BN:113:GLY:HA2	45:BN:116:LEU:HB2	1.95	0.48
48:BQ:92:GLY:C	48:BQ:93:TYR:CD1	2.91	0.48
50:BS:90:GLY:C	50:BS:92:TYR:H	2.21	0.48
51:BT:91:ARG:HB3	51:BT:116:ALA:HA	1.96	0.48
52:BU:47:TYR:N	52:BU:50:ARG:NH1	2.61	0.48
53:BV:49:THR:O	53:BV:50:PRO:O	2.31	0.48
56:BY:96:ILE:HG21	56:BY:99:CYS:HB3	1.95	0.48
1:AA:395:C:C5'	24:AY:340:TYR:OH	2.61	0.48
1:AA:407:G:H2'	1:AA:408:A:C8	2.48	0.48
1:AA:483:C:C3'	1:AA:484:G:H5"	2.33	0.48
1:AA:582:U:OP1	15:AO:68:ARG:NH2	2.47	0.48
1:AA:602:A:H2'	1:AA:603:U:C6	2.48	0.48
1:AA:629:G:O2'	1:AA:630:G:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1413:A:H2'	1:AA:1414:U:O4'	2.14	0.48
2:AB:178:ARG:HH11	2:AB:178:ARG:HB2	1.77	0.48
3:AC:10:PHE:CZ	3:AC:178:LEU:CD1	2.96	0.48
3:AC:40:ARG:HG2	3:AC:55:VAL:HG11	1.94	0.48
4:AD:8:VAL:O	4:AD:10:ARG:N	2.36	0.48
4:AD:121:VAL:CA	4:AD:126:ILE:HD13	2.42	0.48
9:AI:9:ARG:HG2	9:AI:14:VAL:HG22	1.95	0.48
9:AI:16:ARG:HB2	9:AI:64:THR:HB	1.94	0.48
13:AM:116:THR:CG2	13:AM:117:VAL:H	2.27	0.48
24:AY:115:GLU:OE1	24:AY:118:SER:HB3	2.14	0.48
24:AY:289:ILE:CD1	24:AY:331:TYR:CZ	2.96	0.48
32:B7:8:ASN:ND2	32:B7:9:ARG:N	2.59	0.48
32:B7:25:PRO:HA	32:B7:28:ARG:NH2	2.28	0.48
35:BA:716:A:H2'	35:BA:717:G:O5'	2.14	0.48
35:BA:750:A:C3'	35:BA:751:A:H5"	2.44	0.48
35:BA:807:U:OP2	47:BP:39:LYS:HG3	2.12	0.48
35:BA:826:U:H5"	35:BA:2428:G:O3'	2.13	0.48
35:BA:834:C:O5'	35:BA:834:C:H6	1.96	0.48
35:BA:945:A:C2	35:BA:2448:A:N1	2.82	0.48
35:BA:999:U:C5	35:BA:1154:G:C5	3.02	0.48
35:BA:1131:G:N3	35:BA:1132:A:C8	2.82	0.48
35:BA:1275:A:N1	35:BA:1295:C:O2'	2.43	0.48
35:BA:1344:G:H5'	35:BA:1384:A:N1	2.29	0.48
35:BA:1353:A:H4'	38:BD:38:LYS:HE3	1.95	0.48
35:BA:1494:A:O2'	35:BA:1495:A:C5'	2.54	0.48
35:BA:1632:A:C6	35:BA:1633:G:C6	3.02	0.48
35:BA:2553:G:H2'	35:BA:2554:U:O4'	2.14	0.48
37:BC:108:TRP:NE1	37:BC:110:ASP:HB2	2.29	0.48
38:BD:229:VAL:CG2	38:BD:230:ASP:N	2.77	0.48
42:BH:41:MET:SD	42:BH:53:GLU:N	2.87	0.48
43:BK:12:LEU:HD21	43:BK:23:VAL:CG2	2.43	0.48
45:BN:14:VAL:CG1	45:BN:137:LYS:HD2	2.39	0.48
45:BN:45:ASN:ND2	45:BN:45:ASN:O	2.47	0.48
49:BR:33:ARG:HG3	49:BR:115:GLU:HG3	1.95	0.48
49:BR:117:VAL:CG1	49:BR:118:GLU:H	2.26	0.48
52:BU:8:VAL:O	52:BU:9:VAL:C	2.55	0.48
53:BV:15:GLU:O	53:BV:96:ILE:HG21	2.14	0.48
56:BY:7:VAL:HB	56:BY:8:LYS:NZ	2.28	0.48
1:AA:235:C:C5'	17:AQ:70:ARG:HG2	2.43	0.48
1:AA:322:C:H6	1:AA:322:C:O5'	1.97	0.48
1:AA:590:C:H2'	1:AA:591:U:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:665:A:H2'	1:AA:732:C:O2	2.13	0.48
1:AA:666:G:H5'	1:AA:726:C:H1'	1.95	0.48
1:AA:943:U:O2'	1:AA:944:G:H5'	2.14	0.48
1:AA:1442(B):A:N3	1:AA:1442(B):A:C2'	2.77	0.48
2:AB:194:PRO:O	2:AB:197:VAL:HG23	2.13	0.48
3:AC:136:GLN:C	3:AC:138:VAL:H	2.20	0.48
4:AD:61:LYS:HE2	4:AD:62:GLN:HE21	1.79	0.48
7:AG:18:TYR:N	7:AG:18:TYR:HD1	2.12	0.48
8:AH:26:VAL:O	8:AH:27:PRO:C	2.57	0.48
8:AH:137:VAL:HG12	8:AH:138:TRP:N	2.27	0.48
11:AK:58:PRO:O	11:AK:59:TYR:C	2.56	0.48
13:AM:90:LEU:O	13:AM:92:HIS:N	2.46	0.48
24:AY:92:ILE:CG2	24:AY:93:GLU:N	2.77	0.48
24:AY:252:ASP:O	24:AY:253:LEU:HB2	2.12	0.48
24:AY:301:ILE:HG22	24:AY:332:SER:HB2	1.94	0.48
33:B8:4:MET:CE	33:B8:61:LEU:HD22	2.43	0.48
33:B8:50:LEU:HA	33:B8:53:PRO:HG3	1.95	0.48
35:BA:18:C:OP2	35:BA:18:C:H6	1.97	0.48
35:BA:332:A:C6	35:BA:335:C:C2	3.02	0.48
35:BA:618:C:H2'	35:BA:619:G:O4'	2.14	0.48
35:BA:805:G:H5'	35:BA:806:C:C5	2.49	0.48
35:BA:1324:G:O2'	35:BA:1325:G:H5'	2.13	0.48
35:BA:1362:C:O2'	35:BA:1363:C:H5'	2.13	0.48
35:BA:1580:A:H2'	35:BA:1581:G:O4'	2.13	0.48
35:BA:1805:U:H2'	35:BA:1806:C:H6	1.78	0.48
35:BA:1963:U:O2	35:BA:1963:U:H2'	2.13	0.48
35:BA:2050:C:H1'	39:BE:156:MET:HE1	1.96	0.48
35:BA:2292:C:H2'	35:BA:2293:C:C6	2.48	0.48
35:BA:2345:G:C4'	35:BA:2346:A:H5'	2.43	0.48
35:BA:2397:G:H2'	35:BA:2398:U:C6	2.49	0.48
37:BC:30:VAL:O	37:BC:31:LYS:C	2.55	0.48
37:BC:115:VAL:HA	37:BC:145:THR:CG2	2.44	0.48
38:BD:153:ALA:O	38:BD:154:LYS:HG3	2.14	0.48
39:BE:70:ALA:O	39:BE:71:GLY:C	2.56	0.48
39:BE:152:LYS:O	39:BE:153:GLY:C	2.54	0.48
40:BF:199:TRP:O	40:BF:202:PHE:HB3	2.13	0.48
41:BG:7:LEU:O	41:BG:8:LYS:C	2.56	0.48
42:BH:38:SER:C	42:BH:40:GLU:H	2.21	0.48
48:BQ:12:GLN:HE21	48:BQ:73:PRO:CD	2.25	0.48
49:BR:97:VAL:HG13	49:BR:114:VAL:HG22	1.95	0.48
51:BT:28:VAL:HG22	51:BT:46:GLU:C	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:62:THR:HA	51:BT:74:ARG:O	2.13	0.48
52:BU:79:PHE:O	52:BU:83:LEU:HD13	2.12	0.48
53:BV:25:LEU:H	53:BV:92:THR:CG2	2.25	0.48
56:BY:14:LEU:HB2	56:BY:24:VAL:HG22	1.95	0.48
1:AA:318:G:O2'	1:AA:319:G:H5'	2.14	0.48
1:AA:355:C:C4	1:AA:356:A:N7	2.82	0.48
1:AA:977:A:H2'	1:AA:978:A:H5'	1.95	0.48
1:AA:1251:A:H4'	9:AI:12:GLU:OE1	2.13	0.48
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.43	0.48
1:AA:1402:C:O2	1:AA:1500:A:N1	2.46	0.48
2:AB:126:GLU:O	2:AB:127:ILE:C	2.55	0.48
2:AB:187:LEU:HD22	2:AB:201:ILE:O	2.13	0.48
2:AB:207:ALA:C	2:AB:209:ARG:N	2.65	0.48
3:AC:69:HIS:HA	3:AC:104:GLN:HB2	1.95	0.48
3:AC:191:THR:HG21	3:AC:193:TYR:CZ	2.48	0.48
6:AF:53:ALA:O	6:AF:54:LYS:CB	2.62	0.48
9:AI:63:ILE:CG2	9:AI:64:THR:N	2.77	0.48
15:AO:14:GLU:HB3	15:AO:15:PHE:H	1.52	0.48
17:AQ:51:TYR:CZ	17:AQ:73:VAL:HG11	2.49	0.48
20:AT:13:LEU:H	20:AT:13:LEU:CD1	2.15	0.48
20:AT:47:GLY:O	20:AT:49:ALA:N	2.40	0.48
24:AY:108:PHE:HE1	24:AY:118:SER:HB2	1.79	0.48
24:AY:162:VAL:HG21	24:AY:219:VAL:HG11	1.96	0.48
24:AY:573:HIS:CD2	24:AY:575:VAL:H	2.31	0.48
29:B4:1:MET:HE2	41:BG:98:ARG:HG3	1.94	0.48
30:B5:3:LYS:CD	30:B5:5:PRO:HD2	2.39	0.48
31:B6:7:ILE:O	31:B6:7:ILE:CG2	2.62	0.48
33:B8:58:ILE:CG2	47:BP:49:ARG:HD3	2.43	0.48
35:BA:52:A:O2'	35:BA:53:A:H5'	2.13	0.48
35:BA:186:G:C2	35:BA:211:A:C2	3.01	0.48
35:BA:340:A:H2'	35:BA:341:G:O4'	2.14	0.48
35:BA:428:A:H3'	35:BA:429:A:H8	1.79	0.48
35:BA:548:A:C3'	35:BA:549:G:H5'	2.44	0.48
35:BA:624:C:N4	47:BP:107:LYS:NZ	2.61	0.48
35:BA:1022:G:O2'	35:BA:1023:U:P	2.71	0.48
35:BA:1827:C:H2'	35:BA:1828:G:O4'	2.13	0.48
35:BA:1856:G:H1	35:BA:1886:C:H42	1.60	0.48
35:BA:1858:G:H2'	35:BA:1883:G:H22	1.78	0.48
35:BA:2573:C:OP1	35:BA:2575:C:OP2	2.31	0.48
35:BA:2590:A:OP2	38:BD:238:GLY:HA2	2.14	0.48
37:BC:120:VAL:O	37:BC:124:VAL:HG23	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:213:VAL:HG12	37:BC:225:ILE:HD11	1.95	0.48
42:BH:30:LYS:CD	42:BH:81:GLU:HG2	2.44	0.48
42:BH:46:GLU:O	42:BH:47:GLU:HB2	2.13	0.48
42:BH:171:LEU:CD2	42:BH:171:LEU:O	2.62	0.48
43:BK:14:ALA:HA	43:BK:41:PHE:CZ	2.49	0.48
46:BO:47:ILE:CG2	46:BO:48:PRO:HD2	2.43	0.48
46:BO:119:PRO:O	46:BO:120:GLU:CB	2.59	0.48
48:BQ:70:PRO:CA	48:BQ:95:ALA:HB2	2.44	0.48
50:BS:15:ARG:CB	50:BS:18:ILE:HD11	2.33	0.48
52:BU:19:LYS:HB3	52:BU:20:LEU:HD22	1.94	0.48
53:BV:39:LEU:O	53:BV:40:LEU:HB2	2.14	0.48
56:BY:85:VAL:HG12	56:BY:86:ARG:N	2.29	0.48
57:BZ:171:ILE:HG13	57:BZ:172:ALA:H	1.69	0.48
1:AA:157:G:H2'	1:AA:158:G:H8	1.78	0.48
1:AA:399:G:H2'	1:AA:400:C:C6	2.49	0.48
1:AA:430:A:OP2	4:AD:8:VAL:HG22	2.14	0.48
1:AA:923:A:O2'	1:AA:924:C:H5'	2.14	0.48
1:AA:954:G:H2'	1:AA:955:U:O4'	2.14	0.48
1:AA:1134:G:O2'	1:AA:1135:U:H5'	2.12	0.48
2:AB:44:LEU:HD12	2:AB:44:LEU:N	2.16	0.48
6:AF:9:VAL:O	6:AF:9:VAL:HG12	2.12	0.48
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.39	0.48
10:AJ:65:LEU:HD12	14:AN:55:GLY:C	2.39	0.48
11:AK:114:VAL:O	11:AK:114:VAL:HG13	2.13	0.48
15:AO:64:ARG:CZ	15:AO:64:ARG:HB2	2.44	0.48
15:AO:74:ASP:C	15:AO:76:GLU:N	2.70	0.48
16:AP:9:PHE:HE2	16:AP:18:ARG:CD	2.27	0.48
16:AP:33:ILE:O	16:AP:33:ILE:HG22	2.12	0.48
22:AV:32:C:C4	22:AV:33:U:C5	3.01	0.48
24:AY:22:ASP:O	59:AY:702:GDP:H5'	2.14	0.48
24:AY:65:ILE:H	24:AY:65:ILE:HD13	1.77	0.48
24:AY:92:ILE:HG12	24:AY:405:PRO:CG	2.43	0.48
24:AY:117:GLN:OE1	24:AY:120:THR:OG1	2.29	0.48
24:AY:150:ILE:O	24:AY:154:GLN:HG2	2.13	0.48
24:AY:486:THR:CG2	24:AY:602:LEU:HD11	2.42	0.48
24:AY:494:GLU:HG3	24:AY:511:LYS:HE2	1.95	0.48
24:AY:498:ILE:HG22	24:AY:507:TYR:CD2	2.49	0.48
28:B3:9:VAL:HG23	28:B3:10:LYS:H	1.79	0.48
30:B5:22:HIS:CE1	35:BA:2624:G:H1'	2.48	0.48
30:B5:27:PRO:HD3	54:BW:23:LEU:HD11	1.96	0.48
30:B5:55:ARG:O	30:B5:56:LYS:CB	2.50	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:271(Q):G:H2'	35:BA:271(R):G:C8	2.49	0.48
35:BA:364:C:H2'	35:BA:365:C:H5"	1.93	0.48
35:BA:560:C:H2'	35:BA:561:G:O4'	2.13	0.48
35:BA:567:A:N1	35:BA:571:A:C8	2.79	0.48
35:BA:803:U:H2'	35:BA:804:A:C5'	2.43	0.48
35:BA:977:G:H2'	35:BA:978:G:H8	1.79	0.48
35:BA:1142(A):A:C6	35:BA:1144:G:C5	3.02	0.48
35:BA:2481:G:O2'	35:BA:2482:G:P	2.71	0.48
36:BB:9:G:C6	36:BB:113:G:C6	3.02	0.48
39:BE:48:GLN:O	39:BE:48:GLN:HG2	2.12	0.48
39:BE:110:GLY:O	49:BR:2:ARG:HD3	2.14	0.48
41:BG:15:VAL:HG13	41:BG:175:LEU:HB2	1.95	0.48
41:BG:126:ASP:OD2	41:BG:130:ASN:HB2	2.14	0.48
41:BG:180:PHE:O	41:BG:181:ARG:C	2.56	0.48
42:BH:35:VAL:O	42:BH:35:VAL:HG12	2.12	0.48
42:BH:100:GLY:C	42:BH:102:ALA:H	2.17	0.48
43:BK:99:ILE:O	43:BK:139:VAL:N	2.46	0.48
43:BK:102:GLU:HG3	43:BK:103:GLN:N	2.29	0.48
46:BO:86:ILE:HG22	46:BO:87:ILE:N	2.29	0.48
50:BS:62:LYS:O	50:BS:65:VAL:HB	2.14	0.48
51:BT:6:LEU:HD23	51:BT:10:VAL:HG23	1.96	0.48
51:BT:89:VAL:CG1	51:BT:91:ARG:CG	2.90	0.48
51:BT:90:GLN:O	51:BT:91:ARG:C	2.56	0.48
57:BZ:67:LEU:H	57:BZ:67:LEU:HD12	1.79	0.48
57:BZ:151:HIS:CA	57:BZ:171:ILE:HG23	2.24	0.48
1:AA:36:C:H4'	12:AL:122:THR:O	2.13	0.48
1:AA:55:A:C2	24:AY:321:TYR:O	2.67	0.48
1:AA:178:C:C2	1:AA:179:A:C8	3.01	0.48
1:AA:313:A:O2'	1:AA:314:C:H5'	2.13	0.48
1:AA:414:A:C2	1:AA:415:A:H1'	2.49	0.48
1:AA:452:A:O2'	1:AA:453:A:H8	1.97	0.48
1:AA:658:G:C6	1:AA:749:C:N4	2.81	0.48
1:AA:745:C:H2'	1:AA:746:A:H8	1.78	0.48
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.14	0.48
2:AB:39:ILE:HG22	2:AB:41:ILE:HD12	1.94	0.48
2:AB:142:LEU:O	2:AB:146:GLN:HB2	2.14	0.48
3:AC:59:ARG:O	10:AJ:92:THR:O	2.31	0.48
3:AC:95:THR:O	3:AC:97:LYS:N	2.47	0.48
5:AE:82:VAL:HG21	5:AE:138:ALA:CA	2.41	0.48
6:AF:24:GLU:OE2	6:AF:28:ARG:NH1	2.46	0.48
8:AH:54:ASP:C	8:AH:56:LYS:H	2.21	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:128:ARG:OXT	9:AI:128:ARG:HG2	2.13	0.48
12:AL:47:LYS:HZ2	12:AL:47:LYS:CB	2.19	0.48
13:AM:54:VAL:C	13:AM:56:LEU:H	2.20	0.48
13:AM:112:GLY:O	13:AM:113:PRO:C	2.57	0.48
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.95	0.48
16:AP:3:LYS:HG2	16:AP:65:GLN:O	2.14	0.48
19:AS:39:THR:HG22	19:AS:40:ILE:N	2.28	0.48
20:AT:22:ARG:O	20:AT:23:ARG:C	2.56	0.48
24:AY:262:SER:OG	24:AY:265:LYS:HG3	2.13	0.48
31:B6:18:ARG:CG	31:B6:19:ARG:H	2.26	0.48
32:B7:33:ARG:HB2	32:B7:33:ARG:HH11	1.78	0.48
32:B7:40:TRP:CG	35:BA:459:U:H5'	2.49	0.48
33:B8:42:ARG:HH11	35:BA:2350:C:H5	1.62	0.48
34:B9:29:ASN:ND2	34:B9:29:ASN:O	2.47	0.48
35:BA:262:A:H2'	35:BA:263:C:O4'	2.14	0.48
35:BA:996:A:C4'	52:BU:92:ARG:HE	1.96	0.48
35:BA:1226:A:H2'	35:BA:1227:G:H5'	1.94	0.48
35:BA:1328:G:H2'	35:BA:1330:C:C5	2.48	0.48
35:BA:1826:G:H4'	38:BD:242:ARG:NH2	2.14	0.48
35:BA:1847:A:H5'	35:BA:1848:A:H8	1.76	0.48
35:BA:2170:A:H5"	37:BC:135:ARG:HE	1.78	0.48
35:BA:2282:G:H5"	35:BA:2283:C:O4'	2.14	0.48
35:BA:2298:A:N6	35:BA:2318:G:H8	2.12	0.48
35:BA:2343:C:H2'	35:BA:2344:U:C6	2.49	0.48
35:BA:2447:G:C5	35:BA:2501:C:C2	3.01	0.48
35:BA:2464:C:O2'	35:BA:2465:C:O5'	2.32	0.48
35:BA:2511:U:O3'	39:BE:123:ALA:HB3	2.14	0.48
35:BA:2623:G:H4'	35:BA:2825:C:O2	2.14	0.48
38:BD:43:ARG:HH11	38:BD:44:ASN:CG	2.22	0.48
39:BE:92:THR:OG1	39:BE:95:ILE:HD11	2.13	0.48
39:BE:111:ARG:NH2	49:BR:2:ARG:HH21	2.11	0.48
41:BG:56:ALA:CB	41:BG:153:ARG:NH2	2.77	0.48
42:BH:149:ARG:HA	42:BH:162:ILE:CG1	2.43	0.48
46:BO:96:THR:C	46:BO:97:ARG:HG2	2.38	0.48
47:BP:24:GLY:HA3	47:BP:33:ARG:HH12	1.79	0.48
50:BS:14:VAL:HG13	50:BS:16:ASN:HD22	1.77	0.48
50:BS:67:ARG:HD3	50:BS:71:ARG:HH22	1.78	0.48
50:BS:85:VAL:O	50:BS:106:ARG:HG2	2.13	0.48
51:BT:38:ASN:C	51:BT:38:ASN:ND2	2.44	0.48
51:BT:108:ARG:HB2	51:BT:108:ARG:HH11	1.78	0.48
54:BW:47:VAL:O	54:BW:47:VAL:HG12	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BW:68:ARG:HA	54:BW:110:LYS:HG2	1.95	0.48
1:AA:122:G:O2'	1:AA:123:C:H5'	2.13	0.48
1:AA:402:G:C6	1:AA:403:C:C4	3.02	0.48
1:AA:514:C:H2'	1:AA:515:G:H8	1.79	0.48
1:AA:559:A:P	5:AE:126:ARG:HH22	2.37	0.48
2:AB:34:ALA:HB1	2:AB:36:ARG:NE	2.28	0.48
2:AB:102:LEU:O	2:AB:103:THR:C	2.57	0.48
2:AB:182:ILE:HA	2:AB:183:PRO:HD3	1.64	0.48
3:AC:36:ASP:HA	3:AC:39:ILE:HD12	1.95	0.48
3:AC:48:TYR:CD1	3:AC:48:TYR:O	2.66	0.48
6:AF:37:VAL:O	6:AF:38:GLU:HG3	2.14	0.48
7:AG:84:ASN:HD22	7:AG:84:ASN:N	2.12	0.48
9:AI:95:LYS:C	9:AI:98:PRO:HD2	2.39	0.48
24:AY:186:TYR:HA	24:AY:198:GLU:HA	1.94	0.48
27:B2:13:ALA:HA	27:B2:16:LEU:HD12	1.95	0.48
31:B6:11:LEU:HD12	31:B6:25:LYS:HA	1.95	0.48
34:B9:2:LYS:HD3	35:BA:2526:G:N3	2.29	0.48
35:BA:193:U:H2'	35:BA:194:G:H8	1.79	0.48
35:BA:361:G:N2	35:BA:362:U:O2	2.47	0.48
35:BA:453:C:H4'	35:BA:472:A:N6	2.29	0.48
35:BA:467:G:O2'	35:BA:468:G:H5'	2.14	0.48
35:BA:1416:G:H1'	35:BA:1417:C:C6	2.49	0.48
35:BA:1667:G:O5'	35:BA:1667:G:H2'	2.13	0.48
35:BA:2317:C:H2'	35:BA:2318:G:C5'	2.43	0.48
35:BA:2469:A:H2	35:BA:2481:G:N2	2.12	0.48
35:BA:2604:U:O2'	35:BA:2605:U:H5'	2.14	0.48
35:BA:2696:U:H2'	35:BA:2697:G:H8	1.78	0.48
35:BA:2831:G:O2'	35:BA:2883:A:H2'	2.14	0.48
37:BC:29:LEU:C	37:BC:29:LEU:CD2	2.86	0.48
37:BC:48:LEU:N	37:BC:48:LEU:CD1	2.74	0.48
37:BC:134:PRO:HB2	37:BC:135:ARG:HD2	1.96	0.48
37:BC:213:VAL:CG1	37:BC:225:ILE:HD11	2.43	0.48
38:BD:43:ARG:CB	38:BD:54:ARG:HB2	2.39	0.48
38:BD:257:LEU:HD23	38:BD:257:LEU:HA	1.67	0.48
40:BF:88:VAL:HG22	40:BF:89:VAL:H	1.79	0.48
40:BF:110:LEU:HD11	40:BF:202:PHE:HE1	1.79	0.48
47:BP:112:LEU:N	47:BP:128:HIS:CD2	2.81	0.48
48:BQ:87:LYS:HG2	48:BQ:88:GLY:N	2.20	0.48
48:BQ:116:GLU:O	48:BQ:120:ILE:HG12	2.13	0.48
50:BS:33:LYS:HG2	50:BS:34:HIS:CD2	2.49	0.48
52:BU:12:ARG:O	52:BU:13:LYS:C	2.57	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BV:2:PHE:O	53:BV:14:VAL:O	2.32	0.48
56:BY:54:LYS:HE2	56:BY:55:TYR:CE1	2.49	0.48
1:AA:297:G:H4'	1:AA:557:G:H4'	1.95	0.47
1:AA:322:C:H41	1:AA:328:C:H6	1.61	0.47
1:AA:363:A:C5'	12:AL:34:ARG:HB2	2.44	0.47
1:AA:771:G:H2'	1:AA:772:U:C6	2.49	0.47
1:AA:778:G:C6	1:AA:779:C:C4	3.02	0.47
1:AA:1109:C:H2'	1:AA:1110:A:H5'	1.96	0.47
1:AA:1122:U:O2'	1:AA:1123:A:H5'	2.14	0.47
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.49	0.47
1:AA:1415:G:C2	1:AA:1486:G:C4	3.02	0.47
5:AE:142:LEU:O	5:AE:143:ARG:HD3	2.13	0.47
7:AG:80:VAL:CG2	7:AG:81:GLY:N	2.77	0.47
8:AH:36:LEU:O	8:AH:37:ARG:C	2.56	0.47
12:AL:39:VAL:HB	12:AL:57:LYS:HB2	1.95	0.47
16:AP:50:LYS:C	16:AP:51:VAL:CG2	2.86	0.47
24:AY:259:PHE:C	24:AY:260:LEU:HD13	2.38	0.47
24:AY:539:ILE:CA	24:AY:542:VAL:HG12	2.44	0.47
25:B0:65:GLY:HA2	25:B0:84:LEU:HG	1.95	0.47
27:B2:55:ARG:HH21	35:BA:75:G:H4'	1.78	0.47
29:B4:7:PRO:O	29:B4:8:LYS:HB3	2.13	0.47
29:B4:50:VAL:HG12	29:B4:51:ASP:N	2.29	0.47
31:B6:11:LEU:HD23	31:B6:51:GLU:HG3	1.96	0.47
32:B7:24:THR:HG23	32:B7:27:GLY:HA3	1.95	0.47
35:BA:205:G:O2'	35:BA:206:U:P	2.71	0.47
35:BA:408:G:O2'	35:BA:409:C:H5'	2.14	0.47
35:BA:602:G:N1	35:BA:654(U):A:N7	2.61	0.47
35:BA:1263:U:H2'	35:BA:1264:G:C8	2.49	0.47
35:BA:1399:C:O2	35:BA:1399:C:H2'	2.13	0.47
35:BA:1475:G:N2	35:BA:1517:G:C4	2.82	0.47
35:BA:1577:C:H2'	35:BA:1578:U:C6	2.48	0.47
35:BA:1751:C:O5'	35:BA:1751:C:H6	1.97	0.47
35:BA:2056:G:N2	35:BA:2057:A:N9	2.62	0.47
35:BA:2443:C:H5'	40:BF:68:LYS:HD3	1.96	0.47
35:BA:2631:G:H2'	35:BA:2632:A:O4'	2.14	0.47
35:BA:2649:U:O2'	35:BA:2650:U:H5'	2.13	0.47
35:BA:2692:C:C2'	35:BA:2693:A:H5'	2.44	0.47
37:BC:132:LEU:O	37:BC:138:LEU:N	2.45	0.47
40:BF:22:ALA:C	40:BF:24:LEU:N	2.70	0.47
40:BF:105:VAL:HA	40:BF:108:LYS:HB2	1.95	0.47
41:BG:71:THR:HG23	41:BG:90:LEU:HA	1.94	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:98:ARG:N	41:BG:98:ARG:NH1	2.59	0.47
42:BH:54:ARG:HB3	42:BH:65:HIS:HB2	1.96	0.47
42:BH:94:TYR:CD1	42:BH:94:TYR:N	2.81	0.47
42:BH:168:PRO:HG2	42:BH:168:PRO:O	2.13	0.47
43:BK:21:PRO:HG3	43:BK:25:PRO:HD3	1.94	0.47
51:BT:129:ARG:O	51:BT:131:ALA:N	2.41	0.47
53:BV:32:THR:HG23	53:BV:60:GLU:HA	1.96	0.47
53:BV:52:VAL:O	53:BV:52:VAL:HG13	2.14	0.47
54:BW:20:VAL:O	54:BW:23:LEU:N	2.43	0.47
56:BY:55:TYR:N	56:BY:55:TYR:CD1	2.81	0.47
57:BZ:143:GLY:C	57:BZ:144:LEU:HD22	2.39	0.47
1:AA:429:U:H4'	1:AA:430:A:O5'	2.13	0.47
1:AA:800:G:H8	1:AA:800:G:O5'	1.97	0.47
1:AA:956:U:H2'	1:AA:957:U:H6	1.79	0.47
1:AA:1225:A:N3	1:AA:1225:A:C2'	2.76	0.47
1:AA:1301:U:H3'	1:AA:1302:U:H5"	1.96	0.47
1:AA:1490:C:C6	1:AA:1490:C:H5'	2.49	0.47
2:AB:35:GLU:O	2:AB:36:ARG:NH2	2.47	0.47
2:AB:51:LEU:HD23	2:AB:201:ILE:HG23	1.94	0.47
2:AB:114:ARG:O	2:AB:115:LEU:C	2.56	0.47
2:AB:178:ARG:HH11	2:AB:178:ARG:CB	2.27	0.47
7:AG:26:PHE:O	7:AG:30:ILE:HG12	2.15	0.47
8:AH:93:VAL:O	8:AH:132:GLU:HA	2.13	0.47
10:AJ:32:ALA:CB	10:AJ:78:ASN:HD21	2.26	0.47
12:AL:82:VAL:HG12	12:AL:105:TYR:CD1	2.47	0.47
12:AL:84:LEU:HD23	12:AL:101:VAL:HG21	1.97	0.47
13:AM:79:LYS:HA	13:AM:82:MET:HG3	1.95	0.47
18:AR:53:ARG:HA	18:AR:56:THR:OG1	2.14	0.47
24:AY:314:PHE:CE1	24:AY:327:PHE:HB3	2.49	0.47
24:AY:603:GLU:O	24:AY:676:TYR:HD1	1.97	0.47
30:B5:25:LEU:HD12	54:BW:19:LEU:O	2.14	0.47
34:B9:16:VAL:O	35:BA:1033:U:H5	1.97	0.47
35:BA:300:A:C2	35:BA:333:G:H2'	2.49	0.47
35:BA:418:G:H2'	35:BA:419:C:C6	2.49	0.47
35:BA:1030:G:O5'	35:BA:1030:G:H8	1.97	0.47
35:BA:1528(A):A:C8	35:BA:1529:G:C8	3.02	0.47
35:BA:1754:C:OP1	51:BT:96:ARG:NH1	2.47	0.47
35:BA:1858:G:H2'	35:BA:1883:G:N2	2.29	0.47
35:BA:2043:C:C2	35:BA:2044:C:C5	3.02	0.47
35:BA:2310:A:O2'	35:BA:2311:A:C5'	2.48	0.47
35:BA:2380:C:H2'	35:BA:2381:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2416:C:H2'	35:BA:2417:C:C6	2.49	0.47
35:BA:2431:U:OP2	35:BA:2432:A:OP2	2.31	0.47
35:BA:2577:A:C5'	35:BA:2578:G:C5'	2.92	0.47
38:BD:94:LEU:C	38:BD:94:LEU:CD2	2.86	0.47
38:BD:158:ALA:O	38:BD:196:VAL:HG11	2.13	0.47
40:BF:167:ALA:C	40:BF:170:LEU:HD23	2.39	0.47
41:BG:16:ARG:NE	41:BG:31:VAL:HG11	2.29	0.47
42:BH:59:ARG:O	42:BH:60:ARG:C	2.57	0.47
45:BN:46:VAL:CG1	45:BN:48:MET:CE	2.84	0.47
46:BO:61:VAL:O	46:BO:84:ALA:HA	2.14	0.47
50:BS:74:ALA:HB1	50:BS:103:GLU:HB2	1.96	0.47
52:BU:52:ARG:O	52:BU:55:ARG:HG2	2.15	0.47
52:BU:66:ASN:ND2	52:BU:76:TYR:H	2.11	0.47
53:BV:5:VAL:HG23	53:BV:37:VAL:O	2.13	0.47
53:BV:17:GLY:O	53:BV:18:LEU:HB3	2.14	0.47
57:BZ:4:ARG:HA	57:BZ:58:VAL:O	2.15	0.47
1:AA:554:C:H2'	1:AA:555:C:C6	2.50	0.47
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.96	0.47
1:AA:1029:C:O5'	1:AA:1029:C:H6	1.97	0.47
1:AA:1089:G:C2'	1:AA:1090:U:H5'	2.43	0.47
1:AA:1402:C:C5	1:AA:1403:C:C5	3.02	0.47
2:AB:21:ARG:O	2:AB:22:LYS:HB2	2.14	0.47
4:AD:57:ARG:HD2	4:AD:57:ARG:N	2.26	0.47
4:AD:133:VAL:HG12	4:AD:134:ASP:N	2.29	0.47
4:AD:200:GLU:O	4:AD:201:GLN:C	2.56	0.47
6:AF:91:VAL:HG13	18:AR:72:ARG:NH2	2.28	0.47
7:AG:50:ILE:HA	7:AG:50:ILE:HD13	1.59	0.47
11:AK:87:THR:O	11:AK:88:GLY:C	2.56	0.47
15:AO:75:PRO:O	15:AO:79:ARG:HG3	2.13	0.47
17:AQ:24:GLU:O	17:AQ:25:ARG:HB3	2.15	0.47
24:AY:123:ARG:HH11	24:AY:123:ARG:CG	2.25	0.47
24:AY:149:VAL:O	24:AY:152:THR:N	2.41	0.47
24:AY:324:ARG:HD3	24:AY:381:LYS:HE2	1.96	0.47
24:AY:348:ARG:HG2	24:AY:382:GLU:HG3	1.97	0.47
24:AY:518:PRO:O	24:AY:520:GLY:N	2.47	0.47
24:AY:549:ALA:C	24:AY:551:GLN:H	2.22	0.47
25:B0:45:PHE:O	25:B0:59:LEU:HD11	2.14	0.47
30:B5:44:THR:CG2	49:BR:101:ALA:HB2	2.30	0.47
31:B6:24:GLU:HG3	31:B6:37:ARG:HH21	1.79	0.47
33:B8:15:LYS:HB2	47:BP:65:ARG:HH12	1.78	0.47
34:B9:17:ILE:CG2	34:B9:18:ARG:N	2.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B9:18:ARG:CG	34:B9:18:ARG:HH11	2.28	0.47
35:BA:60:G:N7	35:BA:63:U:H2'	2.30	0.47
35:BA:83:G:C2'	35:BA:84:A:OP2	2.62	0.47
35:BA:212:G:O2'	35:BA:213:A:H5'	2.15	0.47
35:BA:260:G:H2'	35:BA:260:G:N3	2.29	0.47
35:BA:266:G:O6	35:BA:267:C:C4	2.67	0.47
35:BA:519:U:H5"	54:BW:25:ARG:HH21	1.77	0.47
35:BA:568:U:O2'	35:BA:570:G:N7	2.42	0.47
35:BA:760:G:C2'	35:BA:761:A:H5'	2.43	0.47
35:BA:990:A:C5	35:BA:1186:G:H1'	2.49	0.47
35:BA:1196:C:O4'	35:BA:1226:A:C2	2.67	0.47
35:BA:1248:G:N3	52:BU:3:ARG:HD2	2.30	0.47
35:BA:1442:G:C2	35:BA:1550:C:O2	2.67	0.47
35:BA:1771:C:O2'	35:BA:1786:A:H8	1.97	0.47
35:BA:1925:C:O2'	35:BA:1926:U:H5'	2.15	0.47
35:BA:2163:C:C2'	35:BA:2164:C:H5'	2.45	0.47
35:BA:2272:U:H5"	35:BA:2273:A:OP1	2.14	0.47
36:BB:25:A:H2'	36:BB:25:A:N3	2.30	0.47
37:BC:6:LYS:O	37:BC:7:ARG:C	2.55	0.47
37:BC:51:ASP:OD1	37:BC:52:PRO:HD2	2.14	0.47
38:BD:26:LYS:HE2	38:BD:26:LYS:HA	1.95	0.47
40:BF:108:LYS:O	40:BF:112:MET:HE3	2.14	0.47
41:BG:42:GLY:C	41:BG:43:LEU:HD22	2.39	0.47
41:BG:117:PHE:HE1	41:BG:119:GLY:CA	2.27	0.47
42:BH:41:MET:HG3	42:BH:42:ARG:N	2.29	0.47
42:BH:68:THR:C	42:BH:70:THR:N	2.73	0.47
47:BP:7:ARG:HA	47:BP:7:ARG:NH1	2.29	0.47
48:BQ:26:TYR:O	48:BQ:102:VAL:HG21	2.15	0.47
51:BT:29:ARG:CD	51:BT:86:ILE:HG22	2.43	0.47
52:BU:106:PHE:O	52:BU:109:LEU:HB2	2.15	0.47
56:BY:62:GLU:CG	56:BY:63:LYS:N	2.77	0.47
57:BZ:41:LEU:O	57:BZ:42:VAL:C	2.57	0.47
57:BZ:50:GLN:O	57:BZ:51:ALA:C	2.58	0.47
57:BZ:142:SER:H	57:BZ:144:LEU:CD2	2.27	0.47
1:AA:434:U:H2'	1:AA:435:C:C6	2.50	0.47
1:AA:448:A:P	1:AA:485:G:H22	2.37	0.47
1:AA:1343:G:C6	1:AA:1344:C:N4	2.83	0.47
1:AA:1343:G:H1'	9:AI:121:ARG:NH1	2.29	0.47
3:AC:83:ARG:C	3:AC:85:ARG:H	2.23	0.47
4:AD:105:VAL:HG12	4:AD:117:ALA:HB1	1.96	0.47
10:AJ:4:ILE:HD12	10:AJ:4:ILE:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:51:ARG:HG2	10:AJ:60:ARG:O	2.14	0.47
10:AJ:82:ILE:O	10:AJ:86:MET:CB	2.61	0.47
12:AL:18:VAL:O	12:AL:19:ARG:HB3	2.14	0.47
13:AM:96:LEU:O	13:AM:110:ARG:NE	2.44	0.47
22:AV:71:C:N4	22:AV:72:A:C6	2.83	0.47
24:AY:250:THR:O	24:AY:252:ASP:N	2.47	0.47
24:AY:468:ARG:HG3	24:AY:468:ARG:NH1	2.24	0.47
24:AY:542:VAL:O	24:AY:542:VAL:CG2	2.61	0.47
24:AY:555:LEU:CD1	24:AY:599:PRO:HB2	2.35	0.47
24:AY:656:ALA:C	24:AY:658:ASP:H	2.23	0.47
26:B1:44:PRO:C	26:B1:46:LEU:HD13	2.40	0.47
27:B2:67:LYS:C	27:B2:69:ARG:H	2.22	0.47
33:B8:33:ASN:OD1	33:B8:41:ILE:HG21	2.14	0.47
35:BA:451:C:N4	35:BA:454:A:H5’	2.30	0.47
35:BA:1049:C:H2’	35:BA:1050:A:H8	1.79	0.47
35:BA:1326:U:H4’	35:BA:2011:U:O4’	2.14	0.47
35:BA:1593:G:H2’	35:BA:1594:G:C8	2.49	0.47
35:BA:2020:A:C6	35:BA:2022:U:N3	2.82	0.47
35:BA:2496:C:OP1	48:BQ:83:MET:HG2	2.13	0.47
38:BD:78:LYS:HG2	38:BD:79:VAL:N	2.30	0.47
39:BE:195:LEU:HG	39:BE:195:LEU:O	2.14	0.47
41:BG:59:GLU:C	41:BG:61:ALA:N	2.65	0.47
47:BP:105:LEU:HB2	47:BP:106:LEU:HD12	1.95	0.47
49:BR:63:ARG:O	49:BR:67:LEU:HD23	2.14	0.47
51:BT:80:SER:CB	51:BT:81:PRO:CD	2.91	0.47
51:BT:126:ALA:C	51:BT:128:GLU:N	2.70	0.47
52:BU:50:ARG:C	52:BU:52:ARG:N	2.72	0.47
55:BX:10:ALA:O	55:BX:28:PHE:CB	2.61	0.47
1:AA:44:G:C2	1:AA:45:U:H1’	2.50	0.47
1:AA:264:U:H4’	17:AQ:63:ARG:HD3	1.96	0.47
1:AA:505:G:H5’	1:AA:534:U:H2’	1.96	0.47
1:AA:509:A:H3’	1:AA:510:A:C8	2.50	0.47
1:AA:1060:C:C4	3:AC:2:GLY:HA3	2.50	0.47
1:AA:1499:A:H1’	1:AA:1520:G:H5’	1.95	0.47
3:AC:134:ILE:O	3:AC:137:ALA:N	2.47	0.47
9:AI:77:ILE:O	9:AI:79:LEU:N	2.48	0.47
12:AL:38:THR:HG23	12:AL:57:LYS:HB3	1.96	0.47
13:AM:79:LYS:HA	13:AM:82:MET:CG	2.45	0.47
18:AR:37:VAL:C	18:AR:39:VAL:H	2.22	0.47
22:AV:61:C:H2’	22:AV:62:C:H6	1.78	0.47
24:AY:93:GLU:O	24:AY:94:VAL:C	2.55	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:121:VAL:CA	24:AY:124:GLN:HE22	2.28	0.47
24:AY:572:TYR:N	24:AY:572:TYR:HD1	2.12	0.47
26:B1:82:LEU:C	26:B1:83:GLU:HG3	2.39	0.47
33:B8:21:LYS:HD3	33:B8:48:PHE:CE1	2.49	0.47
34:B9:1:MET:HE1	34:B9:31:LYS:HB3	1.97	0.47
35:BA:271(H):G:H2'	35:BA:271(I):G:C8	2.50	0.47
35:BA:322:A:H5'	35:BA:340:A:H1'	1.96	0.47
35:BA:777:A:H2'	35:BA:778:G:H8	1.79	0.47
35:BA:811:U:C2'	35:BA:812:C:H5"	2.44	0.47
35:BA:894:C:H2'	35:BA:895:U:H5'	1.95	0.47
35:BA:1066:U:H2'	35:BA:1067:A:H3'	1.95	0.47
35:BA:1210:A:H5"	35:BA:1212:G:O4'	2.13	0.47
35:BA:1292:U:H2'	35:BA:1293:C:C6	2.50	0.47
35:BA:1593:G:H3'	35:BA:1594:G:H8	1.79	0.47
35:BA:1633:G:H2'	35:BA:1634:A:H5"	1.97	0.47
35:BA:2061:G:H5'	35:BA:2503:A:N1	2.30	0.47
35:BA:2136:C:H42	35:BA:2156:G:N2	2.13	0.47
35:BA:2286:A:N6	35:BA:2346:A:H62	2.11	0.47
35:BA:2295:C:H2'	35:BA:2296:U:C6	2.50	0.47
35:BA:2617:C:H2'	35:BA:2618:G:C5'	2.44	0.47
35:BA:2627:G:H2'	35:BA:2628:C:C6	2.50	0.47
37:BC:74:ARG:H	37:BC:112:ASP:CB	2.25	0.47
37:BC:185:LYS:N	37:BC:185:LYS:HD2	2.29	0.47
38:BD:34:VAL:C	38:BD:36:PRO:HD2	2.39	0.47
40:BF:57:VAL:HG12	40:BF:58:ALA:N	2.29	0.47
40:BF:184:TYR:O	40:BF:188:ARG:HG2	2.15	0.47
40:BF:185:ASP:HA	40:BF:188:ARG:CD	2.44	0.47
41:BG:12:TYR:O	41:BG:16:ARG:HB2	2.14	0.47
41:BG:40:ASN:ND2	41:BG:41:GLN:H	2.12	0.47
45:BN:65:LYS:HA	45:BN:65:LYS:NZ	2.29	0.47
48:BQ:60:ARG:HB2	48:BQ:60:ARG:NH1	2.30	0.47
50:BS:30:ARG:HH22	50:BS:62:LYS:HD2	1.79	0.47
50:BS:65:VAL:C	50:BS:67:ARG:N	2.71	0.47
51:BT:51:ARG:HG3	51:BT:98:LYS:HE3	1.97	0.47
52:BU:79:PHE:CD1	52:BU:79:PHE:C	2.91	0.47
52:BU:106:PHE:O	52:BU:109:LEU:N	2.46	0.47
54:BW:43:GLY:O	54:BW:44:ALA:C	2.58	0.47
56:BY:13:VAL:HG22	56:BY:14:LEU:N	2.27	0.47
1:AA:759:A:H2'	1:AA:760:G:H5'	1.95	0.47
1:AA:895:G:N3	1:AA:895:G:H2'	2.30	0.47
1:AA:999:C:C2	1:AA:1000:U:N3	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1005:A:H3'	1:AA:1006:C:O4'	2.14	0.47
1:AA:1132:C:O2'	1:AA:1133:G:H5'	2.14	0.47
1:AA:1288:A:H2'	1:AA:1289:A:C8	2.50	0.47
1:AA:1404:C:C1'	1:AA:1499:A:N1	2.77	0.47
1:AA:1502:A:C2	1:AA:1505:G:N1	2.62	0.47
2:AB:126:GLU:HA	2:AB:129:GLU:CD	2.39	0.47
2:AB:223:ILE:HG12	2:AB:226:ARG:NH1	2.29	0.47
3:AC:110:ASN:O	3:AC:111:LEU:HD23	2.15	0.47
5:AE:135:THR:O	5:AE:136:MET:C	2.57	0.47
5:AE:145:LYS:CA	8:AH:107:LEU:HD21	2.42	0.47
7:AG:80:VAL:HG11	7:AG:85:TYR:CD1	2.50	0.47
7:AG:95:ARG:O	7:AG:96:GLN:C	2.55	0.47
10:AJ:78:ASN:HD22	10:AJ:81:THR:HG21	1.79	0.47
15:AO:9:GLN:O	15:AO:10:LYS:C	2.56	0.47
17:AQ:51:TYR:CE1	17:AQ:73:VAL:HG11	2.50	0.47
20:AT:75:ASN:N	20:AT:75:ASN:ND2	2.62	0.47
24:AY:102:ASP:HB3	24:AY:286:ILE:HG12	1.97	0.47
24:AY:238:THR:HG23	24:AY:241:GLU:H	1.79	0.47
24:AY:415:PRO:CG	24:AY:421:GLN:HA	2.44	0.47
27:B2:3:LEU:CD2	27:B2:7:ARG:HH22	2.28	0.47
27:B2:47:ASN:HB2	35:BA:95:G:H1'	1.97	0.47
33:B8:50:LEU:HG	33:B8:51:ALA:H	1.79	0.47
33:B8:62:LEU:N	33:B8:63:PRO:HD2	2.30	0.47
35:BA:310:A:OP2	56:BY:18:GLY:HA2	2.15	0.47
35:BA:612:C:C3'	35:BA:613:G:H5"	2.43	0.47
35:BA:725:G:C6	35:BA:726:G:N1	2.83	0.47
35:BA:811:U:O2'	35:BA:1250:G:H2'	2.14	0.47
35:BA:1042:G:C2	35:BA:1043:C:C2	3.03	0.47
35:BA:1064:C:H1'	43:BK:89:HIS:HA	1.97	0.47
35:BA:1082:U:H4'	43:BK:116:ASN:OD1	2.15	0.47
35:BA:1248:G:OP1	40:BF:92:PRO:HG3	2.14	0.47
35:BA:1563:G:H8	35:BA:1563:G:O5'	1.97	0.47
35:BA:2113:U:O2'	35:BA:2114:A:H5'	2.14	0.47
35:BA:2464:C:HO2'	35:BA:2465:C:H6	1.61	0.47
35:BA:2579:C:H4'	39:BE:134:ILE:CG1	2.40	0.47
35:BA:2645:G:C4'	35:BA:2732:G:O2'	2.48	0.47
35:BA:2862:G:H2'	35:BA:2862:G:N3	2.29	0.47
36:BB:59:A:H2'	36:BB:60:C:H5'	1.97	0.47
37:BC:84:ILE:HG12	37:BC:96:GLY:O	2.15	0.47
38:BD:3:VAL:HG12	38:BD:17:THR:HB	1.97	0.47
38:BD:11:PRO:O	38:BD:13:ARG:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:94:GLU:OE1	39:BE:177:PRO:HB2	2.14	0.47
39:BE:133:LYS:C	39:BE:134:ILE:HG13	2.39	0.47
40:BF:157:VAL:HG21	40:BF:194:MET:CG	2.33	0.47
41:BG:15:VAL:O	41:BG:18:GLU:HB3	2.14	0.47
42:BH:121:ILE:HG23	42:BH:133:VAL:HG13	1.96	0.47
43:BK:58:THR:HB	43:BK:66:THR:CG2	2.44	0.47
43:BK:78:ILE:HD13	43:BK:134:MET:SD	2.54	0.47
45:BN:89:LYS:O	45:BN:93:THR:CG2	2.61	0.47
47:BP:31:ALA:C	47:BP:33:ARG:H	2.20	0.47
52:BU:76:TYR:O	52:BU:79:PHE:HB3	2.14	0.47
1:AA:193:C:C2	1:AA:194:C:C5	3.03	0.47
1:AA:282:A:H3'	1:AA:283:C:C5	2.50	0.47
1:AA:284:G:C2	1:AA:285:G:C8	3.02	0.47
1:AA:318:G:C2	1:AA:336:C:N3	2.83	0.47
1:AA:424:G:O2'	1:AA:425:G:H5'	2.14	0.47
1:AA:506:G:C6	1:AA:507:C:N4	2.83	0.47
1:AA:526:C:C4	1:AA:527:G:H1'	2.49	0.47
1:AA:748:C:O2	1:AA:749:C:C5	2.66	0.47
1:AA:1004:A:H5'	1:AA:1025:U:C4	2.50	0.47
1:AA:1056:U:C5'	3:AC:163:ALA:HB2	2.44	0.47
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.28	0.47
1:AA:1180:A:OP1	9:AI:103:THR:HG23	2.14	0.47
1:AA:1216:G:H2'	1:AA:1217:C:C6	2.50	0.47
1:AA:1226:C:H5"	13:AM:103:THR:HB	1.96	0.47
1:AA:1426:C:O2'	1:AA:1427:U:H5'	2.15	0.47
1:AA:1465:C:C2'	1:AA:1466:C:H5'	2.44	0.47
1:AA:1477:C:H3'	1:AA:1477:C:C6	2.50	0.47
2:AB:51:LEU:HD22	2:AB:55:PHE:HE2	1.79	0.47
2:AB:81:VAL:O	2:AB:82:ARG:C	2.58	0.47
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.23	0.47
2:AB:219:VAL:O	2:AB:220:ASP:C	2.55	0.47
3:AC:29:TYR:HD2	3:AC:29:TYR:O	1.97	0.47
3:AC:46:GLU:O	3:AC:47:LEU:CB	2.48	0.47
3:AC:83:ARG:C	3:AC:85:ARG:N	2.72	0.47
4:AD:91:SER:O	4:AD:92:VAL:C	2.58	0.47
4:AD:173:TRP:CB	4:AD:187:ARG:NH1	2.76	0.47
5:AE:59:GLY:O	5:AE:62:ALA:HB3	2.14	0.47
5:AE:76:ILE:HD11	5:AE:142:LEU:HD21	1.97	0.47
6:AF:60:PHE:O	6:AF:61:LEU:HD12	2.15	0.47
7:AG:16:LEU:CD1	9:AI:42:ARG:HA	2.44	0.47
7:AG:61:VAL:O	7:AG:64:GLN:HB3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:30:ARG:HH11	8:AH:30:ARG:HB2	1.79	0.47
11:AK:34:ASP:CB	11:AK:35:PRO:CD	2.91	0.47
11:AK:54:ARG:C	11:AK:56:GLY:H	2.22	0.47
11:AK:111:ASP:HA	18:AR:84:LYS:CD	2.43	0.47
12:AL:46:LYS:NZ	12:AL:94:PRO:HG3	2.29	0.47
13:AM:97:PRO:HA	13:AM:110:ARG:CD	2.34	0.47
14:AN:36:PHE:CD1	14:AN:36:PHE:C	2.92	0.47
24:AY:34:TYR:O	24:AY:38:ARG:HB2	2.15	0.47
24:AY:130:VAL:HA	24:AY:131:PRO:HD3	1.61	0.47
24:AY:138:LYS:HE2	59:AY:702:GDP:C4	2.50	0.47
24:AY:170:ARG:H	24:AY:170:ARG:HD2	1.80	0.47
24:AY:316:ILE:N	24:AY:316:ILE:CD1	2.70	0.47
24:AY:466:LEU:CA	24:AY:470:PHE:HD2	2.20	0.47
24:AY:526:VAL:CB	24:AY:566:THR:HG23	2.44	0.47
24:AY:659:LEU:HD13	24:AY:659:LEU:O	2.15	0.47
27:B2:24:LEU:C	27:B2:24:LEU:CD2	2.87	0.47
28:B3:19:GLN:O	28:B3:22:ALA:HB3	2.15	0.47
32:B7:15:THR:HG22	32:B7:16:HIS:CD2	2.49	0.47
32:B7:45:ALA:C	32:B7:46:VAL:HG23	2.39	0.47
33:B8:10:ALA:O	33:B8:11:LYS:C	2.57	0.47
33:B8:13:ARG:HB3	47:BP:63:PRO:CB	2.41	0.47
35:BA:65:C:H5'	55:BX:71:GLY:HA3	1.97	0.47
35:BA:94(A):G:H2'	35:BA:95:G:O4'	2.14	0.47
35:BA:178:G:C2	35:BA:179:G:C8	3.02	0.47
35:BA:271(J):C:O2	35:BA:271(J):C:H2'	2.15	0.47
35:BA:294:A:N6	35:BA:345:A:H1'	2.30	0.47
35:BA:341:G:H2'	35:BA:342:G:C8	2.49	0.47
35:BA:511:U:C5	35:BA:512:G:C4	3.02	0.47
35:BA:565:C:O2'	35:BA:566:U:H5'	2.15	0.47
35:BA:658:C:H2'	35:BA:659:C:C6	2.49	0.47
35:BA:663:G:C6	35:BA:664:C:C4	3.03	0.47
35:BA:768:G:H2'	35:BA:769:G:C8	2.49	0.47
35:BA:795:C:H2'	35:BA:796:C:C6	2.50	0.47
35:BA:1077:A:O2'	35:BA:1078:U:H5'	2.14	0.47
35:BA:1266:G:O2'	35:BA:2012:G:O6	2.28	0.47
35:BA:1275:A:C4	49:BR:16:HIS:ND1	2.82	0.47
35:BA:1455:G:C2	35:BA:1456:G:C8	3.03	0.47
35:BA:1526:G:H2'	35:BA:1527:G:O4'	2.14	0.47
35:BA:1624:G:O2'	35:BA:1625:C:H5'	2.15	0.47
35:BA:1721:G:O6	35:BA:1739:U:H5'	2.12	0.47
35:BA:1814:G:H2'	35:BA:1815:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1877:A:H2'	35:BA:1877:A:N3	2.29	0.47
35:BA:1947:C:C2'	35:BA:1948:G:C5'	2.90	0.47
35:BA:2456:C:O5'	35:BA:2456:C:H6	1.97	0.47
35:BA:2696:U:H2'	35:BA:2697:G:C8	2.50	0.47
35:BA:2847:U:OP1	51:BT:98:LYS:HD3	2.14	0.47
35:BA:2883:A:C5'	35:BA:2884:U:H5'	2.44	0.47
36:BB:54:G:H2'	36:BB:55:U:C6	2.48	0.47
37:BC:98:GLU:CG	37:BC:120:VAL:HB	2.44	0.47
37:BC:139:PRO:HA	37:BC:145:THR:HG21	1.96	0.47
38:BD:30:GLU:HG3	38:BD:63:ARG:CZ	2.45	0.47
38:BD:53:PHE:HA	38:BD:218:ARG:HB2	1.97	0.47
38:BD:147:LEU:HD11	38:BD:183:ARG:NH1	2.29	0.47
38:BD:155:LEU:HD12	38:BD:155:LEU:N	2.30	0.47
38:BD:243:GLY:O	38:BD:244:ARG:HB3	2.15	0.47
40:BF:36:VAL:O	40:BF:39:TRP:HB3	2.15	0.47
40:BF:83:PHE:O	40:BF:84:VAL:C	2.57	0.47
40:BF:120:GLU:HB3	40:BF:122:LYS:HG2	1.96	0.47
41:BG:32:PRO:HA	41:BG:162:THR:HB	1.96	0.47
41:BG:107:LEU:HD23	41:BG:111:LEU:HD12	1.96	0.47
41:BG:153:ARG:CB	41:BG:153:ARG:HH11	2.28	0.47
42:BH:154:PRO:HB2	42:BH:163:TYR:CE2	2.50	0.47
46:BO:68:GLU:N	46:BO:68:GLU:OE1	2.47	0.47
46:BO:88:ASN:OD1	46:BO:88:ASN:N	2.47	0.47
48:BQ:12:GLN:HG2	48:BQ:73:PRO:HD2	1.96	0.47
48:BQ:35:VAL:CG2	48:BQ:36:ALA:N	2.78	0.47
48:BQ:79:LEU:HD23	48:BQ:80:GLU:N	2.25	0.47
49:BR:95:THR:N	49:BR:117:VAL:HG21	2.30	0.47
51:BT:50:ILE:HG23	51:BT:99:LEU:HD12	1.96	0.47
51:BT:55:ASN:HB3	51:BT:59:THR:HG22	1.96	0.47
51:BT:99:LEU:CB	51:BT:101:PHE:CE1	2.92	0.47
52:BU:53:ARG:O	52:BU:54:LYS:C	2.58	0.47
53:BV:16:PRO:O	53:BV:96:ILE:HB	2.14	0.47
54:BW:20:VAL:CG2	54:BW:21:VAL:N	2.62	0.47
54:BW:66:GLU:HA	54:BW:69:LEU:HD11	1.96	0.47
56:BY:12:THR:HG22	56:BY:75:ILE:HG21	1.97	0.47
1:AA:182:U:H5'	1:AA:183:G:P	2.54	0.47
1:AA:256:U:OP1	17:AQ:17:LYS:NZ	2.45	0.47
1:AA:506:G:H2'	1:AA:507:C:C6	2.49	0.47
1:AA:943:U:H2'	1:AA:944:G:C5'	2.43	0.47
1:AA:986:A:H2'	1:AA:987:G:C8	2.50	0.47
1:AA:1313:U:P	19:AS:6:LYS:HG3	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:8:LYS:NZ	2:AB:217:ARG:NH1	2.62	0.47
4:AD:105:VAL:CG1	4:AD:117:ALA:HB1	2.44	0.47
9:AI:93:ARG:HA	9:AI:96:LEU:CB	2.43	0.47
11:AK:17:GLY:O	11:AK:80:VAL:HA	2.15	0.47
12:AL:42:THR:HG23	12:AL:42:THR:O	2.13	0.47
13:AM:91:ARG:HD2	13:AM:97:PRO:O	2.14	0.47
24:AY:411:VAL:HG12	24:AY:412:ALA:O	2.15	0.47
24:AY:509:HIS:C	24:AY:510:VAL:HG23	2.40	0.47
24:AY:510:VAL:CG1	24:AY:511:LYS:N	2.78	0.47
26:B1:58:ILE:HG23	26:B1:58:ILE:O	2.14	0.47
27:B2:14:ARG:HG3	27:B2:14:ARG:HH11	1.78	0.47
29:B4:14:ILE:CG2	29:B4:15:ILE:N	2.78	0.47
32:B7:28:ARG:HG3	32:B7:28:ARG:NH1	2.29	0.47
33:B8:59:LYS:HD3	47:BP:50:ARG:HB3	1.97	0.47
35:BA:271(K):U:H3'	35:BA:271(L):U:C5'	2.45	0.47
35:BA:902:C:H2'	35:BA:903:C:H6	1.78	0.47
35:BA:1040:C:C5	35:BA:1041:C:N4	2.83	0.47
35:BA:1204:A:H1'	35:BA:1206:G:N7	2.30	0.47
35:BA:1227:G:O2'	35:BA:1228:G:H5'	2.14	0.47
35:BA:1434:A:H5'	35:BA:1435:G:OP2	2.14	0.47
35:BA:1495:A:N3	35:BA:1496:A:C2	2.82	0.47
35:BA:1656:C:O2'	35:BA:1657:C:H5'	2.15	0.47
38:BD:80:ALA:HB3	38:BD:94:LEU:HB3	1.96	0.47
39:BE:25:VAL:CG1	39:BE:181:LEU:HD12	2.45	0.47
39:BE:199:ARG:NH1	39:BE:199:ARG:HB2	2.30	0.47
40:BF:10:PRO:HG2	40:BF:11:VAL:N	2.27	0.47
40:BF:39:TRP:CH2	40:BF:106:ARG:NE	2.76	0.47
42:BH:85:LYS:C	42:BH:85:LYS:CD	2.87	0.47
43:BK:103:GLN:O	43:BK:107:ILE:HG13	2.15	0.47
49:BR:21:TYR:CD1	49:BR:21:TYR:N	2.83	0.47
52:BU:13:LYS:HA	52:BU:16:LYS:HD2	1.95	0.47
56:BY:31:LEU:HG	56:BY:34:LYS:HB2	1.96	0.47
57:BZ:129:SER:C	57:BZ:131:ARG:N	2.72	0.47
1:AA:141:A:H1'	1:AA:182:U:O2	2.15	0.47
1:AA:255:G:H5'	17:AQ:16:GLN:O	2.15	0.47
1:AA:707:C:H4'	11:AK:20:TYR:CE1	2.50	0.47
1:AA:779:C:O2'	11:AK:120:ARG:HD3	2.15	0.47
1:AA:807:A:C5	1:AA:808:C:C4	3.03	0.47
1:AA:897:C:O2'	1:AA:898:G:H5'	2.15	0.47
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.96	0.47
3:AC:72:LYS:HA	3:AC:72:LYS:CE	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:117:HIS:C	9:AI:118:LYS:HG3	2.40	0.47
11:AK:66:LEU:O	11:AK:67:ASP:C	2.56	0.47
19:AS:12:ASP:OD1	19:AS:35:SER:HB2	2.14	0.47
20:AT:61:SER:O	20:AT:62:LEU:C	2.55	0.47
22:AV:54:U:C2'	22:AV:55:U:H5'	2.45	0.47
22:AV:57:A:H2'	22:AV:58:A:H5'	1.96	0.47
24:AY:125:ALA:C	24:AY:127:LYS:N	2.69	0.47
24:AY:227:ILE:O	24:AY:227:ILE:CG2	2.62	0.47
24:AY:290:LYS:HB3	24:AY:298:VAL:HG22	1.97	0.47
24:AY:616:TYR:CD2	24:AY:663:THR:HA	2.50	0.47
25:B0:7:LEU:HD12	48:BQ:85:LYS:CE	2.31	0.47
25:B0:23:VAL:HG13	25:B0:38:VAL:HG22	1.97	0.47
25:B0:40:GLN:HE22	25:B0:43:THR:C	2.23	0.47
28:B3:10:LYS:HB3	28:B3:53:LEU:CD2	2.44	0.47
29:B4:18:CYS:O	29:B4:18:CYS:SG	2.73	0.47
29:B4:25:TYR:O	41:BG:105:LYS:NZ	2.48	0.47
31:B6:13:CYS:HA	31:B6:50:ARG:O	2.14	0.47
35:BA:259:G:N2	35:BA:621:A:H8	2.12	0.47
35:BA:483:A:C2	35:BA:484:C:H1'	2.50	0.47
35:BA:544:G:H21	35:BA:547:A:H2'	1.80	0.47
35:BA:729:G:C4	35:BA:1775:U:C2	3.02	0.47
35:BA:914:C:H2'	35:BA:915:C:C5'	2.42	0.47
35:BA:1108:U:O2	35:BA:1108:U:H2'	2.15	0.47
35:BA:1183:G:C8	35:BA:1183:G:H3'	2.50	0.47
35:BA:1296:G:O2'	35:BA:1297:C:H5'	2.15	0.47
35:BA:1485:G:H5'	35:BA:1485:G:H8	1.79	0.47
35:BA:1783:A:C2	35:BA:2587:A:C4	3.03	0.47
35:BA:1819:A:H2'	38:BD:179:SER:OG	2.14	0.47
35:BA:2416:C:H2'	35:BA:2417:C:H6	1.80	0.47
36:BB:21:G:O2'	36:BB:22:U:P	2.73	0.47
38:BD:26:LYS:O	38:BD:27:THR:HB	2.14	0.47
38:BD:210:GLY:O	38:BD:212:SER:N	2.45	0.47
40:BF:135:LYS:CB	40:BF:138:GLU:OE2	2.63	0.47
43:BK:77:LEU:H	43:BK:77:LEU:CD2	2.02	0.47
45:BN:26:LEU:C	45:BN:28:THR:N	2.69	0.47
49:BR:115:GLU:HG2	49:BR:117:VAL:H	1.79	0.47
51:BT:32:TYR:O	51:BT:33:LYS:HB2	2.13	0.47
51:BT:62:THR:HG22	51:BT:75:ILE:HG13	1.96	0.47
52:BU:82:GLY:O	52:BU:84:LYS:N	2.47	0.47
54:BW:22:ASP:HA	54:BW:25:ARG:HH12	1.79	0.47
57:BZ:92:SER:HB2	57:BZ:93:ASP:H	1.21	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:605:U:C2'	1:AA:606:G:H5'	2.44	0.47
1:AA:965:A:C2	1:AA:969:A:C2	3.02	0.47
1:AA:1054:C:OP1	1:AA:1198:G:OP2	2.33	0.47
1:AA:1105:A:O2'	1:AA:1106:G:H5'	2.14	0.47
1:AA:1202:G:C2'	1:AA:1203:C:H5'	2.45	0.47
1:AA:1411:C:C2'	1:AA:1412:C:H5'	2.45	0.47
2:AB:221:LEU:HD13	2:AB:221:LEU:O	2.14	0.47
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.44	0.47
5:AE:91:LEU:HD13	5:AE:120:THR:HG21	1.96	0.47
5:AE:107:ARG:HG2	5:AE:108:ALA:N	2.29	0.47
8:AH:17:THR:HB	8:AH:78:GLN:CD	2.38	0.47
10:AJ:3:LYS:N	10:AJ:75:ILE:O	2.48	0.47
12:AL:92:ASP:O	12:AL:94:PRO:HD3	2.14	0.47
20:AT:63:ILE:O	20:AT:65:LYS:N	2.48	0.47
24:AY:330:VAL:HB	24:AY:371:ALA:HA	1.95	0.47
24:AY:413:ILE:HD11	24:AY:474:ALA:CB	2.36	0.47
24:AY:415:PRO:HB2	24:AY:421:GLN:N	2.29	0.47
27:B2:69:ARG:HH22	35:BA:111:A:C5'	2.28	0.47
28:B3:7:LYS:O	28:B3:54:VAL:HG13	2.16	0.47
33:B8:30:ARG:NH1	35:BA:2419:U:O4	2.48	0.47
33:B8:33:ASN:O	33:B8:34:TRP:CB	2.61	0.47
34:B9:18:ARG:HG2	34:B9:18:ARG:O	2.15	0.47
35:BA:279:C:C2'	35:BA:280:C:H5"	2.45	0.47
35:BA:299:A:H1'	35:BA:322:A:N6	2.29	0.47
35:BA:311:A:O4'	35:BA:332:A:C4	2.67	0.47
35:BA:322:A:P	40:BF:169:ASN:HB2	2.54	0.47
35:BA:331:A:O2'	35:BA:332:A:OP1	2.31	0.47
35:BA:652:C:O2'	35:BA:653:A:H5"	2.15	0.47
35:BA:1633:G:C2'	35:BA:1634:A:H5"	2.45	0.47
35:BA:1819:A:O2'	35:BA:1820:U:P	2.72	0.47
35:BA:2322:A:O2'	35:BA:2323:G:H5'	2.15	0.47
35:BA:2367:G:H2'	35:BA:2368:C:H6	1.80	0.47
35:BA:2542:A:H2'	35:BA:2542:A:N3	2.29	0.47
36:BB:81:G:C2	36:BB:82:G:N7	2.83	0.47
40:BF:121:GLY:C	40:BF:123:LEU:N	2.72	0.47
43:BK:100:THR:HA	43:BK:139:VAL:CB	2.37	0.47
47:BP:16:ARG:NH2	47:BP:18:ARG:HG3	2.30	0.47
50:BS:89:ARG:HG3	50:BS:92:TYR:N	2.28	0.47
52:BU:82:GLY:C	52:BU:84:LYS:H	2.23	0.47
52:BU:113:ALA:O	52:BU:115:ALA:N	2.48	0.47
54:BW:12:ILE:CG1	54:BW:42:ARG:NH1	2.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:95:LYS:CE	56:BY:101:LYS:H	2.28	0.47
57:BZ:131:ARG:HG2	57:BZ:131:ARG:HH11	1.80	0.47
1:AA:160:A:H2'	1:AA:161:A:H5'	1.97	0.46
1:AA:164:U:H2'	1:AA:165:C:H6	1.80	0.46
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.15	0.46
1:AA:243:A:C2	1:AA:246:A:C8	3.02	0.46
1:AA:261:U:O2	1:AA:263:A:H8	1.98	0.46
1:AA:509:A:H2'	1:AA:509:A:N3	2.30	0.46
1:AA:1057:G:H5"	3:AC:154:SER:OG	2.15	0.46
1:AA:1163:C:H2'	1:AA:1164:G:C8	2.50	0.46
1:AA:1298:C:O2'	1:AA:1299:A:C2	2.67	0.46
1:AA:1508:G:O2'	1:AA:1509:C:H5'	2.14	0.46
2:AB:54:THR:O	2:AB:58:ILE:HG13	2.14	0.46
2:AB:74:LYS:O	2:AB:75:LYS:C	2.58	0.46
4:AD:192:GLU:O	4:AD:193:ASP:C	2.57	0.46
4:AD:196:LEU:C	4:AD:198:VAL:H	2.23	0.46
5:AE:52:PRO:O	5:AE:56:GLN:HB2	2.14	0.46
9:AI:10:ARG:O	9:AI:11:LYS:HB3	2.14	0.46
10:AJ:81:THR:C	10:AJ:83:GLU:N	2.70	0.46
12:AL:6:THR:H	12:AL:9:GLN:NE2	2.13	0.46
12:AL:115:LYS:O	12:AL:117:ARG:N	2.48	0.46
15:AO:82:ILE:HD13	15:AO:82:ILE:O	2.14	0.46
16:AP:18:ARG:HD3	16:AP:35:LYS:HD2	1.96	0.46
16:AP:50:LYS:HG2	16:AP:51:VAL:H	1.79	0.46
21:AU:8:THR:O	21:AU:12:LYS:HB2	2.15	0.46
22:AV:4:G:O2'	22:AV:5:G:P	2.74	0.46
24:AY:121:VAL:CA	24:AY:124:GLN:NE2	2.79	0.46
24:AY:264:LEU:C	24:AY:264:LEU:CD2	2.88	0.46
24:AY:274:ASP:O	24:AY:277:VAL:HG12	2.14	0.46
24:AY:276:VAL:O	24:AY:277:VAL:C	2.58	0.46
24:AY:653:PHE:O	24:AY:654:GLY:C	2.56	0.46
25:B0:49:LYS:H	25:B0:80:HIS:HD1	1.63	0.46
26:B1:45:ASN:HD22	26:B1:46:LEU:N	2.12	0.46
31:B6:5:VAL:O	31:B6:8:LYS:HB3	2.14	0.46
32:B7:34:ARG:CB	32:B7:42:LEU:HD22	2.41	0.46
33:B8:7:HIS:HB2	33:B8:59:LYS:HB3	1.97	0.46
33:B8:33:ASN:HA	33:B8:36:LYS:HD2	1.96	0.46
35:BA:99:U:O2	35:BA:99:U:C2'	2.64	0.46
35:BA:99:U:H5"	35:BA:102:G:H1'	1.97	0.46
35:BA:104:U:OP2	35:BA:105:C:C5	2.68	0.46
35:BA:271(Q):G:H2'	35:BA:271(R):G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:402:A:H2'	35:BA:403:U:H5'	1.95	0.46
35:BA:999:U:OP2	35:BA:1153:C:OP2	2.33	0.46
35:BA:1052:C:H6	35:BA:1052:C:C3'	2.26	0.46
35:BA:1428:C:N4	35:BA:1569:A:H3'	2.31	0.46
35:BA:1434:A:H5'	35:BA:1435:G:P	2.55	0.46
35:BA:2081:C:H2'	35:BA:2082:A:C8	2.51	0.46
35:BA:2580:U:H4'	39:BE:130:GLY:HA3	1.96	0.46
37:BC:186:LEU:O	37:BC:189:ASN:N	2.48	0.46
39:BE:26:ILE:HG13	39:BE:182:LEU:HB3	1.96	0.46
39:BE:144:ARG:O	39:BE:145:LYS:O	2.32	0.46
41:BG:162:THR:O	41:BG:163:ALA:C	2.58	0.46
42:BH:13:LYS:HE2	42:BH:13:LYS:CA	2.32	0.46
44:BL:94:LEU:C	44:BL:95:LYS:HG2	2.40	0.46
45:BN:22:THR:O	45:BN:25:ARG:N	2.44	0.46
45:BN:48:MET:HE2	45:BN:48:MET:H	1.71	0.46
45:BN:87:LEU:HD22	45:BN:91:LEU:CD2	2.45	0.46
47:BP:12:ALA:CB	47:BP:16:ARG:HB3	2.45	0.46
47:BP:55:ARG:CG	47:BP:56:SER:N	2.58	0.46
47:BP:136:GLU:O	47:BP:139:LYS:CB	2.63	0.46
48:BQ:6:ARG:O	48:BQ:7:MET:CG	2.58	0.46
50:BS:52:SER:HB2	50:BS:55:ALA:HB3	1.97	0.46
50:BS:95:HIS:O	50:BS:96:GLY:C	2.56	0.46
51:BT:132:LYS:HG2	51:BT:133:GLU:N	2.30	0.46
52:BU:92:ARG:NH1	53:BV:11:GLN:CG	2.78	0.46
53:BV:13:ARG:HH11	53:BV:13:ARG:HG2	1.77	0.46
56:BY:54:LYS:CE	56:BY:55:TYR:HE1	2.28	0.46
1:AA:374:A:C4	1:AA:375:U:C5	3.03	0.46
1:AA:481:G:H4'	1:AA:482:A:OP1	2.16	0.46
1:AA:506:G:C6	1:AA:507:C:C4	3.03	0.46
1:AA:595:G:H2'	1:AA:641:U:O4	2.15	0.46
1:AA:699:C:H6	1:AA:699:C:C5'	2.28	0.46
1:AA:957:U:O2	1:AA:959:A:H8	1.98	0.46
1:AA:1010:G:H2'	1:AA:1011:G:H8	1.80	0.46
1:AA:1030:C:C2'	1:AA:1030(A):G:H5'	2.45	0.46
1:AA:1060:C:H5'	14:AN:45:ARG:HH22	1.80	0.46
1:AA:1065:U:C2'	1:AA:1066:C:OP2	2.64	0.46
1:AA:1163:C:H2'	1:AA:1164:G:H8	1.80	0.46
1:AA:1409:C:O2'	1:AA:1410:G:H5'	2.15	0.46
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.50	0.46
1:AA:1498:U:O2'	1:AA:1499:A:OP2	2.32	0.46
2:AB:50:GLU:O	2:AB:51:LEU:C	2.56	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:70:ILE:O	4:AD:70:ILE:HG23	2.15	0.46
4:AD:70:ILE:HD11	4:AD:74:GLN:HB3	1.96	0.46
5:AE:119:LEU:N	5:AE:119:LEU:HD23	2.30	0.46
6:AF:56:PRO:HG2	6:AF:57:GLN:HG3	1.96	0.46
6:AF:67:MET:HE2	6:AF:72:VAL:HA	1.96	0.46
8:AH:46:LYS:HG3	8:AH:64:LYS:HB2	1.97	0.46
10:AJ:98:ILE:HD12	10:AJ:98:ILE:HA	1.81	0.46
18:AR:40:LEU:C	18:AR:42:ARG:N	2.73	0.46
20:AT:63:ILE:C	20:AT:65:LYS:N	2.67	0.46
20:AT:93:GLU:C	20:AT:95:ALA:N	2.70	0.46
24:AY:526:VAL:N	24:AY:565:VAL:O	2.48	0.46
24:AY:539:ILE:O	24:AY:542:VAL:HG12	2.16	0.46
26:B1:47:GLN:OE1	35:BA:2228:G:N2	2.48	0.46
27:B2:32:LEU:HD12	27:B2:53:LEU:HD22	1.98	0.46
28:B3:17:LYS:HZ2	28:B3:20:LYS:HE3	1.79	0.46
31:B6:15:GLU:CG	31:B6:41:PRO:HG3	2.44	0.46
31:B6:45:LYS:HG2	35:BA:2371:G:H4'	1.98	0.46
32:B7:35:ARG:CG	32:B7:35:ARG:NH1	2.78	0.46
35:BA:389:G:O4'	35:BA:2413:G:C4'	2.64	0.46
35:BA:768:G:H2'	35:BA:769:G:H8	1.79	0.46
35:BA:967:C:H3'	35:BA:967:C:C6	2.51	0.46
35:BA:979:G:H2'	35:BA:982:C:H41	1.79	0.46
35:BA:1019:U:N3	35:BA:1142(A):A:N6	2.63	0.46
35:BA:1231:G:H2'	35:BA:1232:G:H8	1.80	0.46
35:BA:1233:C:H2'	35:BA:1234:U:H6	1.80	0.46
35:BA:2128:C:O2'	35:BA:2174:C:H4'	2.15	0.46
35:BA:2326:C:O5'	35:BA:2326:C:H6	1.97	0.46
35:BA:2428:G:H5'	35:BA:2429:G:P	2.56	0.46
35:BA:2603:G:O2'	35:BA:2604:U:H5'	2.14	0.46
35:BA:2663:G:C2'	35:BA:2664:G:H5'	2.45	0.46
39:BE:36:ARG:NH2	39:BE:88:GLY:H	2.14	0.46
39:BE:82:ARG:CG	39:BE:83:ASP:H	2.13	0.46
41:BG:131:TYR:HE2	41:BG:133:LEU:HB3	1.80	0.46
41:BG:181:ARG:HG2	41:BG:181:ARG:O	2.14	0.46
45:BN:22:THR:HB	45:BN:25:ARG:HB2	1.97	0.46
47:BP:83:VAL:H	47:BP:115:LEU:HD21	1.79	0.46
47:BP:85:LEU:CD1	47:BP:120:ALA:HB2	2.41	0.46
48:BQ:39:PRO:HB3	48:BQ:99:PRO:HD3	1.96	0.46
49:BR:10:LEU:HB3	49:BR:17:ARG:NE	2.29	0.46
50:BS:89:ARG:NE	50:BS:91:PRO:HG2	2.27	0.46
51:BT:50:ILE:HA	51:BT:99:LEU:HD12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BV:35:LEU:HB3	53:BV:37:VAL:HG23	1.96	0.46
56:BY:32:PRO:C	56:BY:35:TYR:H	2.23	0.46
1:AA:32:A:H3'	1:AA:33:A:H8	1.80	0.46
1:AA:603:U:H2'	1:AA:604:G:H8	1.78	0.46
1:AA:624:C:H2'	1:AA:625:G:C8	2.50	0.46
1:AA:1060:C:H5'	14:AN:45:ARG:NH2	2.31	0.46
1:AA:1351:U:H5'	7:AG:33:ASP:OD1	2.15	0.46
1:AA:1361:G:H5'	1:AA:1362:C:OP2	2.15	0.46
4:AD:68:TYR:N	4:AD:68:TYR:HD1	2.13	0.46
4:AD:98:GLU:HG2	4:AD:189:PRO:CG	2.41	0.46
11:AK:107:SER:C	11:AK:108:ILE:HD12	2.40	0.46
12:AL:28:LYS:CE	12:AL:33:ARG:HH22	2.28	0.46
19:AS:72:GLY:C	19:AS:74:PHE:H	2.23	0.46
20:AT:26:ASN:O	20:AT:30:LYS:CB	2.63	0.46
24:AY:359:HIS:O	24:AY:361:ASN:N	2.48	0.46
24:AY:584:ILE:O	24:AY:588:MET:HG3	2.15	0.46
24:AY:608:VAL:HG13	24:AY:669:PHE:HD2	1.79	0.46
24:AY:635:GLU:OE1	24:AY:644:ARG:HD2	2.15	0.46
27:B2:2:LYS:O	27:B2:6:VAL:HG23	2.15	0.46
29:B4:2:LYS:HG2	36:BB:44:G:P	2.55	0.46
30:B5:40:LYS:HE2	30:B5:46:CYS:CB	2.45	0.46
33:B8:61:LEU:H	33:B8:61:LEU:HG	1.27	0.46
35:BA:271(C):C:H2'	35:BA:271(D):G:H8	1.79	0.46
35:BA:290:G:O2'	35:BA:291:C:H5'	2.16	0.46
35:BA:624:C:N4	47:BP:107:LYS:HZ2	2.14	0.46
35:BA:1159:U:H6	35:BA:1159:U:H5"	1.81	0.46
35:BA:1188:U:C2'	35:BA:1189:A:H5'	2.45	0.46
35:BA:1287:A:H2'	35:BA:1287:A:N3	2.31	0.46
35:BA:1416:G:N3	35:BA:1417:C:C4	2.84	0.46
35:BA:1523:U:H2'	35:BA:1524:G:H8	1.79	0.46
35:BA:2037:G:H2'	35:BA:2038:G:H8	1.76	0.46
35:BA:2377:A:O2'	35:BA:2378:A:H5'	2.15	0.46
35:BA:2460:U:C4	35:BA:2461:C:C5	3.04	0.46
35:BA:2644:G:H2'	35:BA:2645:G:C8	2.50	0.46
35:BA:2838:G:C1'	49:BR:45:ARG:HH11	2.29	0.46
38:BD:201:HIS:O	38:BD:204:ILE:HG12	2.16	0.46
40:BF:13:SER:HA	40:BF:14:PRO:HD3	1.72	0.46
40:BF:102:PRO:HB2	40:BF:105:VAL:HG23	1.96	0.46
40:BF:133:ASN:O	40:BF:134:GLY:C	2.59	0.46
41:BG:34:LEU:HD11	41:BG:100:TRP:CH2	2.50	0.46
44:BL:68:VAL:O	44:BL:72:VAL:HG23	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BO:102:VAL:HG23	46:BO:121:VAL:HG13	1.97	0.46
48:BQ:42:ILE:N	48:BQ:42:ILE:CD1	2.78	0.46
50:BS:63:THR:O	50:BS:64:GLU:C	2.59	0.46
51:BT:115:ARG:HB3	51:BT:115:ARG:HH11	1.80	0.46
1:AA:1329:A:H5"	13:AM:26:GLY:N	2.30	0.46
2:AB:92:TYR:C	2:AB:92:TYR:CD1	2.92	0.46
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.69	0.46
2:AB:121:LEU:HD21	2:AB:126:GLU:OE2	2.14	0.46
2:AB:145:LEU:O	2:AB:149:LEU:HB2	2.16	0.46
4:AD:86:LYS:HD3	4:AD:86:LYS:HA	1.31	0.46
4:AD:204:ILE:HG22	4:AD:205:GLU:N	2.29	0.46
6:AF:52:ILE:O	6:AF:53:ALA:HB3	2.16	0.46
7:AG:104:LEU:HD13	7:AG:104:LEU:HA	1.60	0.46
12:AL:82:VAL:C	12:AL:83:VAL:CG2	2.88	0.46
12:AL:119:LYS:C	12:AL:121:GLY:H	2.23	0.46
14:AN:18:VAL:HG23	14:AN:19:ARG:N	2.29	0.46
20:AT:23:ARG:HA	20:AT:26:ASN:HD21	1.80	0.46
24:AY:177:ILE:O	24:AY:178:ILE:HD12	2.15	0.46
24:AY:627:ARG:C	24:AY:629:GLY:N	2.72	0.46
35:BA:7:G:H2'	35:BA:8:A:O4'	2.16	0.46
35:BA:345:A:O2'	35:BA:346:A:N7	2.47	0.46
35:BA:465:G:C6	35:BA:466:A:N6	2.83	0.46
35:BA:470:A:H2'	35:BA:471:A:O4'	2.14	0.46
35:BA:531:C:C5	35:BA:2035:G:C2	3.04	0.46
35:BA:583:G:C5	35:BA:584:C:C5	3.03	0.46
35:BA:769:G:H4'	35:BA:1379:A:N1	2.30	0.46
35:BA:786:C:C2'	35:BA:787:U:H5'	2.44	0.46
35:BA:910:A:C6	48:BQ:13:GLN:HG3	2.50	0.46
35:BA:968:G:C6	35:BA:969:U:C4	3.03	0.46
35:BA:976:C:H4'	35:BA:1156:A:N6	2.30	0.46
35:BA:1299:G:H5"	35:BA:1300:U:OP1	2.16	0.46
35:BA:1462:C:H4'	35:BA:2703:C:H5'	1.96	0.46
35:BA:1747(A):G:O2'	35:BA:1748:G:H5"	2.10	0.46
35:BA:2704:C:H2'	35:BA:2705:A:O4'	2.16	0.46
35:BA:2787:C:H1'	39:BE:61:ARG:HD3	1.96	0.46
36:BB:74:U:O2	57:BZ:34:ASN:ND2	2.45	0.46
37:BC:145:THR:HG22	37:BC:145:THR:O	2.15	0.46
37:BC:186:LEU:O	37:BC:189:ASN:HB2	2.16	0.46
39:BE:16:ARG:O	39:BE:18:ASP:N	2.49	0.46
39:BE:177:PRO:O	39:BE:178:GLU:C	2.58	0.46
40:BF:33:LEU:HD12	40:BF:33:LEU:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:81:LYS:O	41:BG:82:LEU:C	2.57	0.46
41:BG:101:ILE:O	41:BG:104:GLU:HB3	2.16	0.46
42:BH:121:ILE:HD13	42:BH:144:VAL:HG21	1.96	0.46
42:BH:173:PRO:C	42:BH:175:LYS:N	2.73	0.46
47:BP:100:LEU:HD22	47:BP:100:LEU:N	2.31	0.46
49:BR:22:ARG:O	49:BR:26:LYS:HG3	2.16	0.46
50:BS:26:LEU:C	50:BS:26:LEU:CD2	2.89	0.46
51:BT:45:PHE:HE2	51:BT:74:ARG:HB2	1.80	0.46
52:BU:55:ARG:CB	52:BU:58:ARG:HD2	2.45	0.46
53:BV:67:GLY:C	53:BV:68:LYS:O	2.53	0.46
57:BZ:49:ARG:HA	57:BZ:49:ARG:HD3	1.65	0.46
1:AA:259:G:O2'	1:AA:260:G:H5'	2.16	0.46
1:AA:295:C:H2'	1:AA:296:U:C6	2.49	0.46
1:AA:318:G:H2'	1:AA:319:G:H8	1.79	0.46
1:AA:321:A:C2	1:AA:333:G:C2	3.04	0.46
1:AA:513:C:O2'	1:AA:514:C:H5'	2.15	0.46
1:AA:779:C:H2'	1:AA:780:A:O4'	2.15	0.46
1:AA:831:U:O2'	1:AA:832:C:H5'	2.15	0.46
1:AA:992:U:O2'	1:AA:993:G:P	2.73	0.46
1:AA:1053:G:C6	1:AA:1199:U:H2'	2.50	0.46
1:AA:1346:A:H1'	1:AA:1348:U:C5	2.51	0.46
3:AC:155:GLY:O	3:AC:156:ARG:HB2	2.14	0.46
3:AC:173:VAL:N	3:AC:174:PRO:HD3	2.30	0.46
8:AH:17:THR:O	8:AH:78:GLN:NE2	2.48	0.46
12:AL:78:GLN:O	12:AL:79:GLU:C	2.58	0.46
13:AM:50:GLU:H	13:AM:50:GLU:HG2	1.60	0.46
15:AO:63:ARG:O	15:AO:64:ARG:C	2.56	0.46
16:AP:50:LYS:HG2	16:AP:51:VAL:N	2.31	0.46
19:AS:6:LYS:C	19:AS:7:LYS:HE3	2.41	0.46
21:AU:23:PRO:C	21:AU:25:LYS:N	2.66	0.46
22:AV:75:C:N3	35:BA:2421:G:O2'	2.48	0.46
24:AY:150:ILE:C	24:AY:152:THR:H	2.22	0.46
24:AY:230:LYS:NZ	24:AY:237:PRO:HA	2.31	0.46
24:AY:354:ARG:C	24:AY:355:LEU:HD22	2.41	0.46
24:AY:414:GLU:HA	24:AY:415:PRO:HD2	1.74	0.46
24:AY:439:ARG:H	24:AY:452:SER:HB3	1.80	0.46
24:AY:535:PRO:HG2	24:AY:572:TYR:CD2	2.50	0.46
24:AY:567:LEU:O	24:AY:567:LEU:HG	2.15	0.46
31:B6:41:PRO:O	31:B6:41:PRO:CG	2.63	0.46
35:BA:57:C:H2'	35:BA:58:G:O4'	2.16	0.46
35:BA:234:C:H2'	35:BA:235:U:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:291:C:H2'	35:BA:292:C:C6	2.51	0.46
35:BA:893:C:H2'	35:BA:894:C:C6	2.50	0.46
35:BA:953:A:O2'	35:BA:954:G:H5'	2.15	0.46
35:BA:970:C:C5	35:BA:971:C:C5	3.04	0.46
35:BA:1040:C:H42	35:BA:1115:G:H1	1.63	0.46
35:BA:1377:G:O5'	35:BA:1377:G:H8	1.97	0.46
35:BA:1926:U:O2	35:BA:1928:A:C8	2.68	0.46
35:BA:2573:C:OP1	35:BA:2574:G:OP1	2.33	0.46
35:BA:2888:C:H2'	35:BA:2889:C:C6	2.49	0.46
38:BD:95:LEU:CD1	38:BD:103:ARG:O	2.57	0.46
40:BF:110:LEU:CD1	40:BF:202:PHE:CE1	2.99	0.46
40:BF:116:ASP:OD1	40:BF:119:ARG:NH2	2.45	0.46
40:BF:164:ARG:HG2	40:BF:164:ARG:HH11	1.80	0.46
41:BG:5:VAL:HG12	41:BG:104:GLU:OE2	2.15	0.46
41:BG:27:ASN:CB	41:BG:30:GLU:HB2	2.44	0.46
41:BG:100:TRP:O	41:BG:101:ILE:C	2.55	0.46
42:BH:17:VAL:O	42:BH:45:VAL:CG2	2.64	0.46
45:BN:91:LEU:HD23	45:BN:91:LEU:N	2.30	0.46
45:BN:104:LYS:HE3	45:BN:117:PHE:CZ	2.49	0.46
45:BN:119:ARG:HG3	45:BN:119:ARG:NH1	2.28	0.46
49:BR:10:LEU:HB3	49:BR:17:ARG:HD3	1.98	0.46
49:BR:83:ILE:O	49:BR:87:TYR:HE2	1.99	0.46
50:BS:40:ILE:HG22	50:BS:41:ASP:N	2.31	0.46
50:BS:89:ARG:CB	50:BS:92:TYR:HB3	2.46	0.46
51:BT:28:VAL:CG2	51:BT:46:GLU:HG3	2.43	0.46
51:BT:93:ARG:HA	51:BT:93:ARG:HD2	1.67	0.46
53:BV:19:LYS:HE2	53:BV:19:LYS:HA	1.98	0.46
53:BV:64:HIS:ND1	53:BV:92:THR:CG2	2.76	0.46
54:BW:88:ARG:CB	54:BW:92:ARG:HB3	2.45	0.46
55:BX:89:ILE:HG22	55:BX:91:ALA:HB3	1.98	0.46
56:BY:43:ASN:HA	56:BY:64:GLU:HA	1.98	0.46
56:BY:52:SER:O	56:BY:53:PRO:C	2.58	0.46
57:BZ:4:ARG:HH11	57:BZ:60:GLU:HG2	1.81	0.46
57:BZ:89:PHE:CE2	57:BZ:96:VAL:HG21	2.47	0.46
57:BZ:99:TYR:CE1	57:BZ:125:LEU:HB2	2.51	0.46
57:BZ:158:PRO:O	57:BZ:160:GLY:N	2.42	0.46
1:AA:340:U:C2	1:AA:350:G:C2	3.04	0.46
1:AA:423:G:H2'	1:AA:424:G:C5'	2.40	0.46
1:AA:589:C:O2'	1:AA:590:C:H5'	2.15	0.46
1:AA:675:A:H2'	1:AA:676:A:H8	1.80	0.46
1:AA:1256:A:C2	1:AA:1277:C:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1308:U:O2'	1:AA:1309:G:H5'	2.16	0.46
1:AA:1422:G:C2	1:AA:1423:G:C5	3.03	0.46
2:AB:152:PHE:C	2:AB:152:PHE:HD1	2.22	0.46
3:AC:156:ARG:HD3	3:AC:193:TYR:O	2.16	0.46
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.15	0.46
5:AE:135:THR:O	5:AE:138:ALA:HB3	2.15	0.46
11:AK:66:LEU:HD23	11:AK:66:LEU:HA	1.54	0.46
12:AL:51:ALA:O	12:AL:52:LEU:HD23	2.16	0.46
14:AN:25:VAL:HG23	14:AN:38:GLY:O	2.15	0.46
18:AR:21:LYS:O	18:AR:24:ALA:HB3	2.14	0.46
19:AS:52:TYR:HB2	19:AS:57:HIS:CE1	2.51	0.46
22:AV:20:U:C3'	22:AV:21:A:C5'	2.93	0.46
24:AY:174:PHE:HD2	24:AY:267:LYS:HD3	1.79	0.46
24:AY:408:VAL:HG22	24:AY:454:MET:CA	2.44	0.46
28:B3:40:THR:HG23	28:B3:43:ILE:CG1	2.46	0.46
35:BA:76:C:C2'	35:BA:77:C:H5'	2.46	0.46
35:BA:307:G:N2	35:BA:309:G:H3'	2.30	0.46
35:BA:760:G:H2'	35:BA:761:A:H5'	1.97	0.46
35:BA:777:A:C2	35:BA:778:G:C5	3.03	0.46
35:BA:833:U:H2'	35:BA:834:C:C6	2.51	0.46
35:BA:1608:A:C6	35:BA:1611:C:C2	3.03	0.46
35:BA:1859:A:H3'	35:BA:1860:G:C8	2.51	0.46
35:BA:2463:C:C2'	35:BA:2464:C:H5'	2.44	0.46
35:BA:2659:G:N2	35:BA:2661:G:H3'	2.30	0.46
37:BC:118:PRO:HB2	37:BC:148:PHE:CZ	2.51	0.46
38:BD:48:ARG:HG3	38:BD:48:ARG:NH1	2.30	0.46
39:BE:54:GLN:HE21	39:BE:54:GLN:HB3	1.29	0.46
39:BE:111:ARG:HA	49:BR:2:ARG:CB	2.27	0.46
40:BF:34:TRP:HB2	47:BP:11:GLY:H	1.81	0.46
40:BF:110:LEU:CD1	40:BF:202:PHE:HE1	2.29	0.46
43:BK:6:ALA:HB1	43:BK:8:VAL:HG23	1.97	0.46
45:BN:87:LEU:O	45:BN:90:MET:N	2.48	0.46
45:BN:96:GLU:C	45:BN:98:VAL:N	2.70	0.46
46:BO:77:ILE:HD11	51:BT:72:VAL:CG1	2.45	0.46
49:BR:59:ASP:O	49:BR:60:LEU:C	2.59	0.46
49:BR:100:LEU:HD22	49:BR:112:ALA:HA	1.98	0.46
53:BV:38:LEU:H	53:BV:51:VAL:HG13	1.79	0.46
54:BW:80:PRO:O	54:BW:100:THR:CG2	2.64	0.46
56:BY:46:LYS:C	56:BY:47:LYS:HD2	2.41	0.46
1:AA:177:C:C2	1:AA:178:C:C5	3.04	0.46
1:AA:949:A:C1'	1:AA:1364:U:H3	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1027:C:H2'	1:AA:1028:C:C5	2.51	0.46
1:AA:1090:U:H4'	1:AA:1170:A:C2	2.50	0.46
1:AA:1115:C:C4	1:AA:1116:C:C5	3.04	0.46
1:AA:1368:G:OP2	9:AI:112:LYS:HD3	2.16	0.46
1:AA:1423:G:P	46:BO:49:ARG:NH2	2.88	0.46
2:AB:34:ALA:HB1	2:AB:36:ARG:CD	2.46	0.46
2:AB:34:ALA:HB3	2:AB:36:ARG:HD2	1.97	0.46
2:AB:220:ASP:O	2:AB:222:ILE:N	2.48	0.46
6:AF:67:MET:CE	6:AF:75:LEU:HD22	2.45	0.46
8:AH:26:VAL:C	8:AH:58:TYR:HD2	2.23	0.46
9:AI:33:PHE:C	9:AI:35:GLU:H	2.23	0.46
13:AM:10:PRO:CG	13:AM:18:ALA:HB1	2.45	0.46
16:AP:45:THR:OG1	16:AP:46:PRO:HD2	2.15	0.46
17:AQ:47:PRO:HG2	17:AQ:48:GLU:H	1.81	0.46
19:AS:40:ILE:HD11	19:AS:74:PHE:CE2	2.51	0.46
20:AT:72:LEU:O	20:AT:73:HIS:CG	2.68	0.46
20:AT:73:HIS:O	20:AT:74:LYS:O	2.34	0.46
25:B0:26:TYR:O	25:B0:29:GLN:HB2	2.16	0.46
27:B2:4:SER:O	27:B2:5:GLU:C	2.59	0.46
31:B6:34:LEU:HD23	31:B6:51:GLU:HB3	1.98	0.46
31:B6:47:THR:HG23	31:B6:48:VAL:N	2.29	0.46
35:BA:27:G:H1'	35:BA:513:A:H62	1.80	0.46
35:BA:558:G:H5'	45:BN:112:LEU:HD22	1.97	0.46
35:BA:811:U:C3'	35:BA:812:C:C5'	2.94	0.46
35:BA:1062:G:H22	35:BA:1077:A:H1'	1.81	0.46
35:BA:1394:U:H3'	35:BA:1394:U:H6	1.80	0.46
35:BA:1441:G:O2'	35:BA:1442:G:H5'	2.15	0.46
35:BA:1452:A:C3'	35:BA:1453:U:C5'	2.84	0.46
35:BA:2155:G:C2'	35:BA:2156:G:H5'	2.46	0.46
35:BA:2463:C:O2'	35:BA:2464:C:C5'	2.55	0.46
35:BA:2657:A:O2'	42:BH:160:LYS:CE	2.64	0.46
35:BA:2867:G:N7	51:BT:23:ARG:NH1	2.64	0.46
36:BB:15:A:C3'	36:BB:16:G:H5'	2.40	0.46
38:BD:148:GLU:HB2	38:BD:151:LYS:CD	2.46	0.46
39:BE:59:VAL:CG2	39:BE:63:LEU:HA	2.44	0.46
40:BF:32:LEU:C	40:BF:32:LEU:CD2	2.81	0.46
42:BH:137:ASP:O	42:BH:138:LYS:HB2	2.15	0.46
43:BK:56:GLU:O	43:BK:67:PHE:HA	2.15	0.46
43:BK:121:GLU:O	43:BK:125:ARG:HG3	2.16	0.46
45:BN:103:VAL:C	45:BN:105:GLY:N	2.66	0.46
45:BN:128:HIS:HE2	45:BN:134:ARG:HD3	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:92:GLU:OE2	47:BP:121:LYS:HE2	2.16	0.46
47:BP:146:VAL:CG1	47:BP:147:LEU:N	2.65	0.46
55:BX:41:ASN:C	55:BX:43:VAL:N	2.67	0.46
56:BY:13:VAL:HG23	56:BY:73:ARG:O	2.16	0.46
57:BZ:45:ASP:OD1	57:BZ:49:ARG:HG2	2.16	0.46
57:BZ:100:VAL:HG12	57:BZ:101:PRO:HD2	1.97	0.46
1:AA:109:A:C6	1:AA:326:G:C6	3.04	0.46
1:AA:283:C:H2'	1:AA:284:G:H8	1.81	0.46
1:AA:666:G:C2	1:AA:667:G:C8	3.04	0.46
1:AA:1003:G:O2'	1:AA:1004:A:O3'	2.33	0.46
1:AA:1215:G:H2'	1:AA:1216:G:H8	1.81	0.46
1:AA:1300:G:O2'	1:AA:1301:U:OP2	2.34	0.46
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.16	0.46
2:AB:229:VAL:HG12	2:AB:230:VAL:N	2.30	0.46
3:AC:34:LEU:C	3:AC:34:LEU:CD2	2.89	0.46
3:AC:61:ALA:C	3:AC:62:ASP:OD1	2.59	0.46
3:AC:183:ASP:OD2	3:AC:184:TYR:N	2.49	0.46
4:AD:15:GLU:O	4:AD:17:VAL:HG23	2.15	0.46
4:AD:31:CYS:O	4:AD:32:ALA:HB3	2.16	0.46
4:AD:79:PHE:C	4:AD:81:GLU:N	2.73	0.46
5:AE:12:LEU:CD1	5:AE:31:LEU:HB3	2.44	0.46
5:AE:33:VAL:CG1	5:AE:34:VAL:N	2.78	0.46
6:AF:42:GLU:C	6:AF:44:GLY:H	2.24	0.46
8:AH:58:TYR:C	8:AH:59:LEU:HD23	2.40	0.46
10:AJ:51:ARG:H	10:AJ:60:ARG:HA	1.81	0.46
11:AK:18:ARG:HH21	11:AK:36:ASP:C	2.24	0.46
12:AL:86:ARG:HG2	12:AL:86:ARG:O	2.15	0.46
13:AM:86:CYS:HA	19:AS:73:GLU:O	2.16	0.46
15:AO:86:GLY:C	15:AO:87:ILE:CG2	2.89	0.46
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.16	0.46
22:AV:17:C:H5	22:AV:17(A):U:O4	1.98	0.46
24:AY:17:ILE:HG21	24:AY:25:LYS:HA	1.98	0.46
24:AY:111:SER:O	24:AY:113:GLY:N	2.49	0.46
24:AY:119:GLU:HB2	24:AY:120:THR:H	1.52	0.46
24:AY:176:GLY:C	24:AY:177:ILE:HG13	2.39	0.46
24:AY:486:THR:HG23	24:AY:600:VAL:CG1	2.46	0.46
26:B1:53:VAL:O	26:B1:54:ALA:C	2.57	0.46
31:B6:16:CYS:O	31:B6:17:LYS:HB2	2.16	0.46
31:B6:38:LYS:HD3	35:BA:2344:U:OP1	2.16	0.46
31:B6:51:GLU:HG2	31:B6:52:VAL:N	2.31	0.46
35:BA:42:G:H5'	35:BA:43:A:OP2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:272(I):U:O4	35:BA:363(A):A:C6	2.65	0.46
35:BA:332:A:H4'	35:BA:333:G:OP1	2.16	0.46
35:BA:410:G:C2	35:BA:2407:G:N7	2.84	0.46
35:BA:425:G:H2'	35:BA:426:C:C6	2.49	0.46
35:BA:483:A:H3'	35:BA:484:C:H6	1.81	0.46
35:BA:610:G:N2	35:BA:619:G:H1'	2.30	0.46
35:BA:718:A:H2'	35:BA:719:C:O4'	2.16	0.46
35:BA:779:U:OP1	38:BD:49:ILE:HG23	2.16	0.46
35:BA:1053:C:H2'	35:BA:1054:A:O4'	2.16	0.46
35:BA:1168:G:H2'	35:BA:1169:G:H8	1.77	0.46
35:BA:1390:U:H3	35:BA:1395:A:H62	1.64	0.46
35:BA:1511:C:H2'	35:BA:1512:U:O4'	2.15	0.46
35:BA:1952:A:C2	46:BO:22:ILE:HG23	2.51	0.46
35:BA:2072:G:C2	35:BA:2438:U:O2	2.69	0.46
35:BA:2305:A:O2'	41:BG:136:ARG:NH1	2.49	0.46
36:BB:5:C:O2'	36:BB:6:C:H5'	2.16	0.46
36:BB:61:G:O2'	36:BB:62:C:H5'	2.15	0.46
36:BB:103:G:OP2	36:BB:103:G:H8	1.99	0.46
42:BH:94:TYR:N	42:BH:94:TYR:HD1	2.14	0.46
42:BH:94:TYR:CD2	42:BH:107:VAL:HG12	2.51	0.46
47:BP:23:PRO:O	47:BP:29:LYS:O	2.34	0.46
47:BP:135:LEU:HD13	47:BP:135:LEU:C	2.41	0.46
48:BQ:109:VAL:HG12	48:BQ:110:THR:O	2.16	0.46
50:BS:63:THR:O	50:BS:66:ALA:N	2.47	0.46
50:BS:64:GLU:H	50:BS:64:GLU:CD	2.24	0.46
51:BT:48:ILE:O	51:BT:63:VAL:HA	2.15	0.46
51:BT:50:ILE:HG12	51:BT:102:ILE:HD11	1.96	0.46
52:BU:66:ASN:O	52:BU:68:ALA:N	2.49	0.46
57:BZ:70:LEU:HG	57:BZ:91:LEU:HD11	1.98	0.46
1:AA:60:A:H5"	1:AA:331:G:N2	2.30	0.46
1:AA:505:G:C6	1:AA:535:A:C2	3.04	0.46
1:AA:520:A:N1	1:AA:536:C:H1'	2.31	0.46
1:AA:541:G:O2'	1:AA:542:G:H5'	2.16	0.46
1:AA:652:U:C2	1:AA:752:G:N2	2.84	0.46
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.97	0.46
5:AE:56:GLN:O	5:AE:59:GLY:N	2.49	0.46
6:AF:62:TRP:O	6:AF:63:TYR:CD2	2.69	0.46
7:AG:50:ILE:HG21	7:AG:58:PRO:HA	1.97	0.46
13:AM:89:GLY:O	13:AM:90:LEU:C	2.59	0.46
15:AO:6:GLU:O	15:AO:9:GLN:N	2.48	0.46
17:AQ:88:TYR:O	17:AQ:89:LEU:C	2.59	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:122:TRP:O	24:AY:125:ALA:N	2.30	0.46
24:AY:228:MET:CE	24:AY:229:LEU:CD2	2.82	0.46
24:AY:315:LYS:C	24:AY:316:ILE:HD13	2.41	0.46
24:AY:351:ARG:O	24:AY:351:ARG:HG3	2.16	0.46
24:AY:422:GLU:C	24:AY:424:LEU:N	2.67	0.46
24:AY:439:ARG:O	24:AY:452:SER:HB3	2.16	0.46
24:AY:635:GLU:CD	24:AY:635:GLU:N	2.74	0.46
27:B2:33:MET:O	27:B2:37:PHE:HD1	1.99	0.46
29:B4:13:ARG:HG2	29:B4:29:PRO:O	2.16	0.46
32:B7:30:VAL:HA	32:B7:33:ARG:NH1	2.31	0.46
34:B9:2:LYS:HE3	34:B9:2:LYS:HB3	1.41	0.46
35:BA:483:A:H2'	35:BA:483:A:N3	2.30	0.46
35:BA:532:A:N1	35:BA:2020:A:H1'	2.31	0.46
35:BA:558:G:OP1	45:BN:112:LEU:HB2	2.16	0.46
35:BA:747:U:C5	35:BA:2613:U:C5	3.04	0.46
35:BA:1208:C:O2	35:BA:1208:C:C2'	2.61	0.46
35:BA:1826:G:H2'	35:BA:1827:C:C6	2.51	0.46
35:BA:1887:C:H2'	35:BA:1888:G:H5"	1.98	0.46
35:BA:1890:A:O5'	35:BA:1890:A:H8	1.98	0.46
37:BC:27:ALA:C	37:BC:29:LEU:N	2.74	0.46
37:BC:60:ARG:HD2	37:BC:142:LYS:HB3	1.97	0.46
38:BD:10:THR:HG23	38:BD:13:ARG:HB3	1.98	0.46
38:BD:132:PRO:HA	38:BD:190:TYR:HA	1.98	0.46
40:BF:31:HIS:O	40:BF:32:LEU:C	2.57	0.46
41:BG:14:GLU:C	41:BG:17:PRO:HD2	2.40	0.46
46:BO:77:ILE:HD11	51:BT:72:VAL:HG11	1.97	0.46
47:BP:91:PHE:HZ	47:BP:100:LEU:HD11	1.81	0.46
48:BQ:7:MET:HE1	48:BQ:93:TYR:OH	2.15	0.46
48:BQ:29:PHE:N	48:BQ:29:PHE:CD1	2.83	0.46
48:BQ:56:ARG:NE	48:BQ:56:ARG:CA	2.79	0.46
50:BS:83:LYS:HE3	50:BS:84:GLN:HG2	1.98	0.46
50:BS:85:VAL:H	50:BS:106:ARG:HA	1.81	0.46
50:BS:89:ARG:CG	50:BS:92:TYR:HB3	2.43	0.46
57:BZ:111:VAL:O	57:BZ:112:ARG:CB	2.63	0.46
57:BZ:127:LYS:O	57:BZ:128:VAL:HB	2.15	0.46
57:BZ:151:HIS:O	57:BZ:152:ALA:C	2.58	0.46
1:AA:408:A:OP1	4:AD:113:SER:OG	2.31	0.46
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.51	0.46
1:AA:1055:A:N7	1:AA:1200:C:N4	2.62	0.46
1:AA:1074:G:C2'	1:AA:1075:C:H5'	2.46	0.46
2:AB:236:TYR:C	2:AB:238:LEU:N	2.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:29:TYR:CD1	14:AN:36:PHE:HE1	2.34	0.46
8:AH:10:LEU:CD2	8:AH:83:ILE:HD11	2.45	0.46
8:AH:91:ARG:O	8:AH:91:ARG:HG2	2.16	0.46
11:AK:89:ALA:C	11:AK:91:ARG:H	2.21	0.46
11:AK:95:ILE:O	11:AK:96:ARG:C	2.55	0.46
15:AO:9:GLN:HB3	15:AO:13:GLN:HE22	1.80	0.46
15:AO:43:LEU:HD12	15:AO:56:LEU:HD22	1.98	0.46
15:AO:57:LEU:N	15:AO:57:LEU:HD23	2.31	0.46
17:AQ:12:SER:HB3	17:AQ:20:THR:CB	2.46	0.46
19:AS:25:LYS:O	19:AS:26:GLY:C	2.58	0.46
20:AT:63:ILE:HG22	20:AT:64:ASP:N	2.30	0.46
24:AY:15:ILE:C	24:AY:101:LEU:HD13	2.41	0.46
24:AY:286:ILE:N	24:AY:286:ILE:HD12	2.31	0.46
24:AY:470:PHE:O	24:AY:472:VAL:N	2.49	0.46
24:AY:553:GLY:HA2	24:AY:560:VAL:HG23	1.98	0.46
24:AY:605:ILE:HD12	24:AY:605:ILE:N	2.30	0.46
25:B0:78:TYR:N	25:B0:78:TYR:HD1	2.01	0.46
26:B1:64:ALA:HA	26:B1:67:ILE:CD1	2.46	0.46
28:B3:50:VAL:O	28:B3:51:ALA:C	2.59	0.46
29:B4:1:MET:N	36:BB:43:C:H4’	2.31	0.46
35:BA:347:A:H8	35:BA:347:A:O5’	1.99	0.46
35:BA:639:U:C4	35:BA:640:C:N4	2.84	0.46
35:BA:661:C:O2’	47:BP:16:ARG:O	2.30	0.46
35:BA:1020:A:O2’	35:BA:1021:A:P	2.74	0.46
35:BA:1080:C:H2’	35:BA:1081:U:O4’	2.15	0.46
35:BA:1185:C:H5’	35:BA:1186:G:P	2.56	0.46
35:BA:1237:A:O2’	35:BA:1238:G:O5’	2.34	0.46
35:BA:1301:A:H4’	35:BA:1302:A:OP1	2.16	0.46
35:BA:1685:C:H2’	35:BA:1686:C:C6	2.51	0.46
35:BA:1741:A:H2’	35:BA:1742:G:O4’	2.15	0.46
35:BA:1773:A:H2	35:BA:1977:A:N1	2.14	0.46
35:BA:1807:G:C2	35:BA:1811:G:C6	3.04	0.46
35:BA:1843:C:H6	35:BA:1843:C:O5’	1.99	0.46
35:BA:2076:U:H5	35:BA:2596:U:C2	2.33	0.46
35:BA:2116:G:N7	35:BA:2117:A:C6	2.83	0.46
35:BA:2401:U:H2’	35:BA:2402:C:H1’	1.98	0.46
35:BA:2679:A:H4’	39:BE:165:VAL:HG11	1.98	0.46
35:BA:2881:C:C2	35:BA:2882:A:C8	3.04	0.46
38:BD:5:LYS:HD2	38:BD:17:THR:HG22	1.98	0.46
40:BF:89:VAL:C	40:BF:91:GLY:H	2.24	0.46
40:BF:143:ALA:O	40:BF:148:LEU:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:85:GLY:C	41:BG:87:PRO:CD	2.87	0.46
41:BG:99:MET:O	41:BG:102:PHE:HB3	2.15	0.46
41:BG:106:LEU:CA	41:BG:110:ALA:HB3	2.41	0.46
43:BK:10:LEU:HD11	43:BK:27:LEU:HD11	1.98	0.46
43:BK:32:ALA:O	43:BK:34:ILE:N	2.49	0.46
45:BN:58:ASP:O	45:BN:59:LYS:HB2	2.16	0.46
47:BP:93:GLY:O	47:BP:123:LEU:HB2	2.15	0.46
47:BP:99:LEU:O	47:BP:99:LEU:HD12	2.15	0.46
49:BR:41:ALA:C	49:BR:43:GLU:N	2.74	0.46
51:BT:57:PHE:C	51:BT:58:ASN:HD22	2.24	0.46
52:BU:92:ARG:NH1	53:BV:11:GLN:HG3	2.31	0.46
52:BU:115:ALA:C	52:BU:117:GLN:H	2.23	0.46
53:BV:34:GLU:O	53:BV:36:PRO:HD2	2.16	0.46
56:BY:36:ALA:C	56:BY:37:VAL:HG13	2.42	0.46
57:BZ:24:LEU:C	57:BZ:24:LEU:CD2	2.89	0.46
1:AA:50:A:N6	1:AA:361:G:C4’	2.78	0.45
1:AA:403:C:H2’	1:AA:404:U:C6	2.49	0.45
1:AA:445:G:H2’	1:AA:446:G:H8	1.81	0.45
1:AA:1100:C:C2’	1:AA:1101:A:H5”	2.44	0.45
1:AA:1403:C:O2	1:AA:1403:C:H2’	2.14	0.45
3:AC:59:ARG:HD3	3:AC:64:VAL:HG22	1.97	0.45
7:AG:64:GLN:HG3	7:AG:128:ALA:CB	2.43	0.45
9:AI:37:PHE:CZ	9:AI:74:ILE:HG12	2.52	0.45
12:AL:91:LYS:HE2	12:AL:91:LYS:HB2	1.60	0.45
15:AO:74:ASP:OD1	15:AO:76:GLU:CB	2.64	0.45
21:AU:13:ILE:C	21:AU:15:ARG:H	2.22	0.45
24:AY:120:THR:O	24:AY:121:VAL:C	2.59	0.45
24:AY:141:LYS:CE	59:AY:702:GDP:N2	2.80	0.45
24:AY:205:TYR:O	24:AY:206:LEU:C	2.58	0.45
27:B2:69:ARG:HG2	27:B2:70:GLN:H	1.80	0.45
28:B3:16:PRO:HB2	28:B3:18:ASP:OD1	2.16	0.45
31:B6:30:THR:O	31:B6:31:PRO:C	2.59	0.45
33:B8:8:LYS:HD3	33:B8:8:LYS:HA	1.73	0.45
33:B8:58:ILE:HG22	33:B8:58:ILE:O	2.16	0.45
35:BA:220:G:N1	35:BA:427:U:H2’	2.31	0.45
35:BA:291:C:H2’	35:BA:292:C:H6	1.80	0.45
35:BA:643:A:H2’	35:BA:644:A:O4’	2.16	0.45
35:BA:695:G:C5	35:BA:768:G:C6	3.04	0.45
35:BA:832:G:OP1	47:BP:40:SER:HB3	2.16	0.45
35:BA:967:C:C6	35:BA:967:C:C3’	2.99	0.45
35:BA:975:C:OP2	35:BA:975:C:H4’	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1351:C:O2'	35:BA:1571:A:H1'	2.16	0.45
35:BA:1847:A:C3'	35:BA:1848:A:H5'	2.40	0.45
35:BA:2167:U:O2'	35:BA:2168:G:H5'	2.15	0.45
35:BA:2177:C:H4'	37:BC:214:TYR:CD1	2.51	0.45
35:BA:2221:G:C2	35:BA:2222:G:C8	3.04	0.45
37:BC:23:ILE:CB	37:BC:229:SER:OXT	2.61	0.45
37:BC:115:VAL:HG12	37:BC:145:THR:CG2	2.46	0.45
39:BE:38:THR:HG22	39:BE:40:GLU:HB2	1.99	0.45
40:BF:135:LYS:HB2	40:BF:138:GLU:OE2	2.16	0.45
45:BN:18:ALA:CB	45:BN:21:LYS:HB2	2.46	0.45
46:BO:103:ALA:O	46:BO:106:LEU:HG	2.16	0.45
46:BO:113:LYS:O	46:BO:117:LEU:HD12	2.16	0.45
48:BQ:18:LYS:HE2	48:BQ:18:LYS:HA	1.98	0.45
50:BS:19:LYS:C	50:BS:20:ARG:CZ	2.89	0.45
51:BT:129:ARG:HD3	51:BT:129:ARG:HH11	1.58	0.45
52:BU:99:ALA:HB2	52:BU:106:PHE:CZ	2.51	0.45
54:BW:25:ARG:NH2	54:BW:74:ALA:O	2.49	0.45
56:BY:52:SER:N	56:BY:53:PRO:CD	2.79	0.45
1:AA:151:A:H2'	1:AA:152:A:H5'	1.97	0.45
1:AA:966:G:C4	22:AV:34:C:H4'	2.51	0.45
1:AA:994:A:C2	1:AA:995:C:C6	3.05	0.45
1:AA:1158:C:H3'	1:AA:1158:C:O2	2.17	0.45
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.16	0.45
8:AH:85:ARG:NH1	8:AH:85:ARG:HG3	2.31	0.45
8:AH:85:ARG:HG3	8:AH:85:ARG:HH11	1.81	0.45
9:AI:100:GLY:C	9:AI:102:LEU:H	2.23	0.45
9:AI:111:ARG:O	9:AI:119:ALA:HB2	2.15	0.45
9:AI:114:TYR:H	9:AI:114:TYR:HD2	1.64	0.45
11:AK:59:TYR:O	11:AK:60:ALA:C	2.59	0.45
12:AL:28:LYS:O	12:AL:29:GLY:C	2.58	0.45
13:AM:34:LEU:HD13	13:AM:41:PRO:HG3	1.98	0.45
18:AR:40:LEU:O	18:AR:42:ARG:N	2.49	0.45
19:AS:7:LYS:HA	19:AS:7:LYS:HD3	1.41	0.45
22:AV:28:C:O2	22:AV:43:A:C2	2.69	0.45
24:AY:5:VAL:C	24:AY:7:TYR:H	2.24	0.45
24:AY:31:ARG:HD2	24:AY:263:ALA:O	2.16	0.45
24:AY:64:THR:O	24:AY:64:THR:CG2	2.64	0.45
24:AY:355:LEU:HD22	24:AY:355:LEU:N	2.30	0.45
24:AY:519:ARG:HH12	24:AY:678:GLU:HB2	1.71	0.45
24:AY:606:MET:SD	24:AY:673:PHE:HA	2.56	0.45
24:AY:632:LEU:HD11	24:AY:646:PHE:CD2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:52:ASP:O	27:B2:56:GLN:HG3	2.16	0.45
29:B4:13:ARG:HB3	29:B4:13:ARG:NH1	2.30	0.45
29:B4:14:ILE:HD13	29:B4:22:ILE:HB	1.98	0.45
35:BA:28:A:H2'	35:BA:28:A:N3	2.31	0.45
35:BA:582:G:C6	35:BA:1259:G:N1	2.84	0.45
35:BA:1190:G:OP1	47:BP:32:THR:OG1	2.30	0.45
35:BA:1412:A:O2'	35:BA:1413:G:H5'	2.15	0.45
35:BA:1528(A):A:H8	35:BA:1529:G:C8	2.35	0.45
35:BA:1689:A:N7	35:BA:1698:A:N1	2.64	0.45
35:BA:1814:G:C5'	38:BD:51:VAL:HG21	2.47	0.45
35:BA:2093:G:C6	35:BA:2225:A:C8	3.04	0.45
35:BA:2347:C:H2'	35:BA:2348:U:C5	2.50	0.45
35:BA:2711:A:OP2	35:BA:2712(A):A:OP2	2.35	0.45
35:BA:2716:U:O2'	35:BA:2717:G:H5'	2.16	0.45
35:BA:2850:A:OP2	35:BA:2866:U:C5	2.69	0.45
35:BA:2884:U:C2'	35:BA:2885:C:H5'	2.45	0.45
36:BB:94:C:O2'	36:BB:95:C:H5'	2.15	0.45
38:BD:67:PHE:CE2	38:BD:157:ARG:NH2	2.85	0.45
40:BF:7:TYR:HA	40:BF:125:LEU:HG	1.99	0.45
40:BF:34:TRP:CB	47:BP:10:PRO:HB2	2.43	0.45
40:BF:46:ARG:HG3	40:BF:46:ARG:NH1	2.31	0.45
40:BF:181:LEU:O	40:BF:205:ARG:NH1	2.50	0.45
42:BH:100:GLY:C	42:BH:102:ALA:N	2.72	0.45
42:BH:156:ALA:C	42:BH:158:HIS:H	2.25	0.45
45:BN:44:PRO:O	45:BN:112:LEU:HD21	2.16	0.45
45:BN:50:ASP:O	45:BN:52:VAL:HG23	2.16	0.45
45:BN:91:LEU:HA	45:BN:95:PRO:HB3	1.98	0.45
46:BO:90:GLN:HB2	46:BO:92:GLU:HG3	1.98	0.45
47:BP:7:ARG:CB	47:BP:8:PRO:CD	2.92	0.45
49:BR:83:ILE:O	49:BR:83:ILE:HG22	2.16	0.45
50:BS:46:VAL:HG12	50:BS:47:THR:H	1.81	0.45
51:BT:6:LEU:CD2	51:BT:7:ILE:N	2.79	0.45
54:BW:62:HIS:O	54:BW:64:MET:CG	2.62	0.45
55:BX:14:SER:H	55:BX:17:ALA:HB3	1.80	0.45
1:AA:55:A:O2'	24:AY:321:TYR:CD1	2.68	0.45
1:AA:152:A:N6	1:AA:170:U:C2	2.85	0.45
1:AA:335:C:O2'	1:AA:336:C:H5'	2.16	0.45
1:AA:460:G:H2'	1:AA:460:G:N3	2.31	0.45
1:AA:625:G:C4	1:AA:626:U:C5	3.03	0.45
1:AA:626:U:O2	1:AA:626:U:C2'	2.65	0.45
2:AB:28:PHE:O	2:AB:29:ALA:C	2.58	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:52:GLU:O	2:AB:56:ARG:HG2	2.16	0.45
4:AD:78:LEU:O	4:AD:81:GLU:HB3	2.16	0.45
4:AD:204:ILE:C	4:AD:206:PHE:H	2.23	0.45
7:AG:62:PHE:HD1	7:AG:124:LEU:HD21	1.81	0.45
9:AI:28:VAL:O	9:AI:31:GLN:N	2.48	0.45
12:AL:36:VAL:HG12	12:AL:37:CYS:N	2.30	0.45
16:AP:57:ARG:O	16:AP:58:TYR:C	2.59	0.45
20:AT:26:ASN:N	20:AT:26:ASN:HD22	2.14	0.45
20:AT:87:LYS:HD2	20:AT:87:LYS:HA	1.84	0.45
22:AV:50:U:O2'	22:AV:51:C:H5'	2.16	0.45
24:AY:147:TRP:O	24:AY:149:VAL:N	2.49	0.45
26:B1:30:VAL:H	35:BA:2396:G:C4'	2.30	0.45
27:B2:15:LYS:C	27:B2:16:LEU:HD23	2.38	0.45
30:B5:41:PRO:O	30:B5:44:THR:OG1	2.18	0.45
30:B5:44:THR:O	30:B5:51:TYR:HE2	1.99	0.45
35:BA:211:A:C3'	35:BA:212:G:H5"	2.44	0.45
35:BA:655:A:H1'	35:BA:656:G:H1'	1.97	0.45
35:BA:1024:G:H1	35:BA:1140:C:H42	1.64	0.45
35:BA:1181:C:O2'	35:BA:1182:A:H5'	2.16	0.45
35:BA:1469:A:H2'	35:BA:1470:G:O4'	2.16	0.45
35:BA:1485:G:C8	35:BA:1485:G:H3'	2.51	0.45
35:BA:1815:A:H1'	35:BA:1817:G:C8	2.51	0.45
35:BA:1829:A:H2'	35:BA:1830:C:O4'	2.16	0.45
35:BA:2050:C:H2'	35:BA:2051:A:O4'	2.17	0.45
35:BA:2400:G:H8	35:BA:2400:G:OP2	1.99	0.45
35:BA:2794:C:H42	35:BA:2801(A):A:N6	2.14	0.45
39:BE:114:ALA:HB3	39:BE:160:TYR:HB3	1.98	0.45
40:BF:64:ILE:HG12	40:BF:65:TRP:N	2.28	0.45
42:BH:50:VAL:CG1	42:BH:51:ARG:H	2.29	0.45
42:BH:103:LEU:CB	42:BH:123:PHE:CD2	2.99	0.45
43:BK:78:ILE:HD11	43:BK:136:VAL:HG11	1.97	0.45
47:BP:90:ARG:O	47:BP:121:LYS:NZ	2.49	0.45
50:BS:52:SER:O	50:BS:69:VAL:HG23	2.16	0.45
53:BV:15:GLU:O	53:BV:16:PRO:C	2.60	0.45
53:BV:62:LEU:N	53:BV:62:LEU:CD2	2.77	0.45
53:BV:88:ARG:O	53:BV:90:PRO:CD	2.61	0.45
53:BV:93:GLU:O	53:BV:94:LEU:HD23	2.16	0.45
56:BY:61:ILE:HG12	56:BY:62:GLU:N	2.31	0.45
56:BY:89:PHE:HB3	56:BY:90:LEU:HD23	1.97	0.45
57:BZ:9:TYR:HB3	57:BZ:35:ARG:HH22	1.80	0.45
57:BZ:9:TYR:HE1	57:BZ:61:LEU:HD13	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:23:LYS:HD3	57:BZ:38:TYR:HE2	1.79	0.45
1:AA:368:U:P	24:AY:353:ALA:CB	3.04	0.45
1:AA:1084:G:OP1	1:AA:1086:U:C4	2.69	0.45
2:AB:51:LEU:HD21	2:AB:201:ILE:HG23	1.97	0.45
2:AB:77:ALA:O	2:AB:81:VAL:HG23	2.16	0.45
3:AC:201:TYR:C	3:AC:202:ILE:HG12	2.41	0.45
4:AD:159:ARG:O	4:AD:160:GLN:C	2.58	0.45
7:AG:62:PHE:O	7:AG:63:LYS:C	2.59	0.45
10:AJ:39:PRO:HG2	10:AJ:39:PRO:O	2.16	0.45
11:AK:79:SER:HA	11:AK:104:GLN:O	2.16	0.45
17:AQ:9:VAL:HG13	17:AQ:56:VAL:HG22	1.98	0.45
17:AQ:13:ASP:HA	17:AQ:19:VAL:HG12	1.97	0.45
19:AS:12:ASP:OD1	19:AS:35:SER:CB	2.64	0.45
23:AX:16:A:H2'	23:AX:17:U:C6	2.50	0.45
23:AX:16:A:O2'	23:AX:17:U:H5'	2.16	0.45
24:AY:18:ALA:HA	24:AY:85:PRO:HG2	1.97	0.45
24:AY:379:GLY:O	24:AY:380:LEU:O	2.34	0.45
24:AY:529:ILE:HD11	24:AY:567:LEU:CD1	2.46	0.45
24:AY:553:GLY:H	24:AY:557:GLY:C	2.24	0.45
25:B0:62:LEU:C	25:B0:63:VAL:HG13	2.40	0.45
26:B1:64:ALA:CA	26:B1:67:ILE:HG13	2.43	0.45
31:B6:17:LYS:HB2	31:B6:44:ARG:HH12	1.81	0.45
32:B7:24:THR:HG23	32:B7:27:GLY:CA	2.47	0.45
33:B8:59:LYS:HE3	33:B8:59:LYS:HB2	1.65	0.45
35:BA:430:G:H2'	35:BA:431:U:H5'	1.99	0.45
35:BA:882:G:H22	35:BA:894:C:N4	2.14	0.45
35:BA:967:C:C2'	35:BA:968:G:H5'	2.46	0.45
35:BA:1091:G:H1	35:BA:1100:C:H42	1.63	0.45
35:BA:1341:U:OP1	35:BA:1397:U:N3	2.49	0.45
35:BA:1565:C:C2	35:BA:1567:A:C8	3.04	0.45
35:BA:1599:C:H2'	35:BA:1600:C:C6	2.47	0.45
35:BA:1719:G:C5	35:BA:1720:U:C5	3.04	0.45
35:BA:1763:G:H2'	35:BA:1764:G:H5'	1.99	0.45
35:BA:2015:A:H2'	35:BA:2016:U:O4'	2.16	0.45
35:BA:2086:U:H2'	35:BA:2087:G:H8	1.80	0.45
35:BA:2105:C:C2'	35:BA:2106:G:H5'	2.45	0.45
35:BA:2208:A:H1'	35:BA:2219:G:C4	2.52	0.45
35:BA:2359:C:O5'	35:BA:2359:C:H6	2.00	0.45
35:BA:2369:A:H2'	35:BA:2370:G:H8	1.80	0.45
35:BA:2837:G:H2'	35:BA:2838:G:H8	1.79	0.45
38:BD:108:PRO:HB3	38:BD:143:HIS:CE1	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:112:GLN:HB2	38:BD:115:GLN:HE21	1.81	0.45
39:BE:27:LEU:HD12	39:BE:181:LEU:HD13	1.97	0.45
39:BE:55:ASN:C	39:BE:57:LYS:H	2.25	0.45
40:BF:28:ILE:O	40:BF:30:PRO:HD3	2.16	0.45
41:BG:29:TRP:C	41:BG:31:VAL:N	2.73	0.45
41:BG:54:GLU:HA	41:BG:57:ALA:HB3	1.98	0.45
41:BG:98:ARG:H	41:BG:98:ARG:NH1	2.09	0.45
41:BG:173:LEU:HB3	41:BG:178:PHE:CG	2.52	0.45
42:BH:19:VAL:HG12	42:BH:20:ALA:N	2.23	0.45
42:BH:92:ILE:C	42:BH:94:TYR:H	2.24	0.45
43:BK:124:ALA:O	43:BK:127:ILE:HB	2.16	0.45
49:BR:13:HIS:O	49:BR:14:SER:C	2.59	0.45
50:BS:102:ALA:O	50:BS:103:GLU:C	2.59	0.45
52:BU:115:ALA:C	52:BU:117:GLN:N	2.74	0.45
56:BY:48:ALA:CB	56:BY:55:TYR:CE2	2.99	0.45
57:BZ:61:LEU:C	57:BZ:63:ASP:N	2.74	0.45
1:AA:189(D):C:H2'	1:AA:189(E):U:O4'	2.16	0.45
1:AA:230:G:H2'	1:AA:231:G:O4'	2.16	0.45
1:AA:429:U:H1'	1:AA:430:A:H5"	1.99	0.45
1:AA:432:A:N7	1:AA:433:C:C4	2.84	0.45
1:AA:448:A:C4	1:AA:487:A:C2	3.05	0.45
1:AA:689:C:OP1	11:AK:46:GLY:HA3	2.15	0.45
1:AA:975:A:H5'	1:AA:975:A:C8	2.49	0.45
1:AA:1002:G:H3'	1:AA:1003:G:C8	2.51	0.45
1:AA:1298:C:O2	1:AA:1298:C:C2'	2.63	0.45
1:AA:1472:U:H2'	1:AA:1473:A:H8	1.81	0.45
4:AD:148:VAL:HG11	4:AD:158:ILE:HD12	1.98	0.45
5:AE:12:LEU:HD13	5:AE:12:LEU:O	2.16	0.45
5:AE:34:VAL:O	5:AE:34:VAL:CG1	2.64	0.45
6:AF:24:GLU:O	6:AF:27:GLN:HB2	2.17	0.45
7:AG:141:VAL:O	7:AG:141:VAL:HG12	2.14	0.45
8:AH:17:THR:CG2	8:AH:63:LEU:HD12	2.45	0.45
8:AH:100:ILE:HA	8:AH:101:PRO:HD3	1.58	0.45
9:AI:36:TYR:HD2	9:AI:37:PHE:CE2	2.35	0.45
9:AI:111:ARG:HG2	9:AI:112:LYS:N	2.29	0.45
12:AL:38:THR:HG23	12:AL:57:LYS:CB	2.47	0.45
12:AL:89:ARG:HB2	12:AL:89:ARG:NH1	2.32	0.45
14:AN:42:ILE:HD13	14:AN:42:ILE:HA	1.63	0.45
17:AQ:22:LEU:HD13	17:AQ:41:LYS:CG	2.46	0.45
18:AR:36:ASN:O	18:AR:36:ASN:OD1	2.34	0.45
20:AT:84:LEU:C	20:AT:84:LEU:HD12	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:6:ARG:NH2	21:AU:15:ARG:NH2	2.64	0.45
21:AU:10:ARG:HA	21:AU:13:ILE:HD12	1.97	0.45
33:B8:30:ARG:HA	33:B8:30:ARG:NE	2.31	0.45
35:BA:7:G:O2'	35:BA:8:A:H5'	2.16	0.45
35:BA:63:U:OP1	35:BA:63:U:H4'	2.17	0.45
35:BA:90:U:H4'	35:BA:92:A:C8	2.50	0.45
35:BA:487:C:H1'	54:BW:53:SER:HA	1.98	0.45
35:BA:859:G:O3'	35:BA:860:U:O2	2.34	0.45
35:BA:1012:U:C4	45:BN:28:THR:HG21	2.50	0.45
35:BA:1248:G:C4	52:BU:3:ARG:HD2	2.52	0.45
35:BA:1415:U:H3	35:BA:1587:A:H61	1.63	0.45
35:BA:1433:U:H1'	35:BA:1561:G:N2	2.31	0.45
35:BA:1654:A:C2	39:BE:113:PHE:CD2	3.05	0.45
35:BA:1819:A:H1'	35:BA:1821:A:C5	2.52	0.45
35:BA:1819:A:OP1	38:BD:156:ALA:HA	2.17	0.45
35:BA:1826:G:H2'	35:BA:1827:C:H6	1.80	0.45
35:BA:1888:G:C5'	35:BA:1888:G:N3	2.80	0.45
35:BA:2321:G:N3	35:BA:2321:G:H2'	2.31	0.45
35:BA:2447:G:C5	35:BA:2501:C:N3	2.84	0.45
35:BA:2850:A:H5'	35:BA:2868:A:H2	1.81	0.45
36:BB:89:G:C6	36:BB:90:A:C2	3.04	0.45
38:BD:11:PRO:C	38:BD:13:ARG:N	2.74	0.45
38:BD:30:GLU:HB2	38:BD:35:LYS:NZ	2.31	0.45
39:BE:7:VAL:CG1	39:BE:27:LEU:HB3	2.46	0.45
41:BG:81:LYS:HB3	41:BG:82:LEU:H	1.51	0.45
42:BH:41:MET:SD	42:BH:53:GLU:O	2.74	0.45
48:BQ:12:GLN:NE2	48:BQ:72:LYS:HA	2.31	0.45
49:BR:60:LEU:O	49:BR:63:ARG:HB3	2.16	0.45
50:BS:16:ASN:OD1	50:BS:16:ASN:C	2.59	0.45
50:BS:26:LEU:O	50:BS:26:LEU:HD22	2.16	0.45
55:BX:3:THR:O	55:BX:4:ALA:HB3	2.16	0.45
56:BY:60:PHE:CG	56:BY:60:PHE:O	2.68	0.45
56:BY:95:LYS:HB3	56:BY:100:ALA:HA	1.99	0.45
57:BZ:40:ASP:HB3	57:BZ:43:GLU:HG2	1.99	0.45
57:BZ:47:VAL:O	57:BZ:51:ALA:HB3	2.16	0.45
57:BZ:61:LEU:C	57:BZ:63:ASP:H	2.24	0.45
57:BZ:176:PRO:HA	57:BZ:177:PRO:HD3	1.85	0.45
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.49	0.45
1:AA:707:C:H2'	1:AA:708:C:H6	1.79	0.45
1:AA:892:A:C6	1:AA:893:C:C4	3.04	0.45
1:AA:999:C:H2'	1:AA:1000:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1129:C:O2'	1:AA:1130:A:O5'	2.34	0.45
1:AA:1411:C:H2'	1:AA:1411:C:O2	2.17	0.45
2:AB:8:LYS:NZ	2:AB:217:ARG:HH11	2.12	0.45
4:AD:36:ARG:CG	4:AD:36:ARG:NH1	2.78	0.45
8:AH:124:ALA:HB1	8:AH:129:VAL:CG2	2.46	0.45
9:AI:84:ALA:C	9:AI:86:VAL:N	2.75	0.45
10:AJ:75:ILE:CG1	10:AJ:76:ASN:H	2.05	0.45
11:AK:34:ASP:HB3	11:AK:40:ILE:HD11	1.98	0.45
13:AM:106:ASN:O	13:AM:107:ALA:CB	2.55	0.45
15:AO:34:LEU:O	15:AO:35:ARG:C	2.60	0.45
24:AY:65:ILE:O	24:AY:67:ALA:N	2.50	0.45
24:AY:124:GLN:HE21	24:AY:124:GLN:HB2	1.41	0.45
24:AY:683:VAL:O	24:AY:683:VAL:HG12	2.17	0.45
26:B1:44:PRO:HG2	26:B1:46:LEU:HD11	1.98	0.45
26:B1:86:SER:O	26:B1:89:GLU:N	2.49	0.45
35:BA:343:C:O2'	35:BA:344:G:H5'	2.17	0.45
35:BA:372:G:O2'	35:BA:373:U:OP2	2.34	0.45
35:BA:661:C:H4'	47:BP:18:ARG:HG2	1.98	0.45
35:BA:710:G:H1	35:BA:721:C:N4	2.11	0.45
35:BA:970:C:C6	35:BA:971:C:H5	2.34	0.45
35:BA:1080:C:H4'	43:BK:125:ARG:CB	2.44	0.45
35:BA:1257:C:H2'	35:BA:1258:C:H6	1.81	0.45
35:BA:1385:G:H4'	35:BA:1386:C:OP1	2.16	0.45
35:BA:1999:C:O2'	35:BA:2000:G:H5'	2.16	0.45
35:BA:2154:G:H21	35:BA:2155:G:H1'	1.81	0.45
35:BA:2320:A:C2	35:BA:2333:A:N7	2.85	0.45
35:BA:2415:G:H2'	35:BA:2416:C:C6	2.52	0.45
35:BA:2745:C:H1'	42:BH:143:GLN:HG2	1.99	0.45
36:BB:40:U:O2'	36:BB:43:C:C5	2.69	0.45
38:BD:148:GLU:O	38:BD:151:LYS:HG3	2.16	0.45
39:BE:66:HIS:O	39:BE:66:HIS:CG	2.70	0.45
39:BE:119:ARG:HD2	39:BE:120:TRP:CE2	2.52	0.45
41:BG:38:VAL:HG22	41:BG:93:THR:HG23	1.97	0.45
47:BP:71:VAL:H	47:BP:72:PRO:CD	2.30	0.45
48:BQ:17:LEU:N	48:BQ:17:LEU:HD23	2.32	0.45
49:BR:11:ASN:O	49:BR:12:ARG:HB2	2.16	0.45
50:BS:89:ARG:HD2	50:BS:90:GLY:N	2.32	0.45
55:BX:61:GLY:HA3	55:BX:73:ARG:O	2.17	0.45
56:BY:28:LYS:HA	56:BY:39:VAL:H	1.81	0.45
1:AA:437:U:H2'	1:AA:438:G:O4'	2.17	0.45
1:AA:495:A:H4'	1:AA:496:A:OP1	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:542:G:H5'	4:AD:41:GLY:HA3	1.98	0.45
1:AA:1209:C:O2'	1:AA:1210:C:H5'	2.17	0.45
1:AA:1305:G:H5"	21:AU:4:GLY:O	2.16	0.45
1:AA:1321:C:H5"	1:AA:1322:C:H5'	1.96	0.45
2:AB:11:LEU:HB3	2:AB:213:LEU:HD11	1.98	0.45
2:AB:129:GLU:C	2:AB:130:ARG:CG	2.86	0.45
3:AC:173:VAL:O	3:AC:175:LEU:HD12	2.16	0.45
7:AG:16:LEU:HD13	9:AI:42:ARG:HA	1.99	0.45
9:AI:22:GLY:HA3	9:AI:60:ASP:OD1	2.16	0.45
9:AI:41:VAL:O	9:AI:41:VAL:CG1	2.57	0.45
10:AJ:4:ILE:CB	10:AJ:74:ILE:HD11	2.45	0.45
10:AJ:22:LYS:C	10:AJ:22:LYS:CD	2.84	0.45
11:AK:58:PRO:HB3	11:AK:90:GLY:HA2	1.98	0.45
13:AM:54:VAL:O	13:AM:55:ARG:C	2.59	0.45
13:AM:76:ALA:O	13:AM:79:LYS:HB2	2.17	0.45
17:AQ:80:GLY:O	17:AQ:81:ARG:CD	2.62	0.45
19:AS:39:THR:CG2	19:AS:40:ILE:N	2.79	0.45
24:AY:97:SER:O	24:AY:100:VAL:CG1	2.63	0.45
24:AY:336:THR:O	24:AY:339:SER:OG	2.24	0.45
24:AY:538:TYR:CE2	24:AY:577:SER:HB3	2.52	0.45
25:B0:7:LEU:HD22	48:BQ:81:VAL:HG23	1.98	0.45
27:B2:32:LEU:O	27:B2:35:LEU:HB3	2.17	0.45
27:B2:63:VAL:HA	27:B2:66:GLU:CG	2.41	0.45
31:B6:35:GLU:HB3	31:B6:51:GLU:HB2	1.97	0.45
33:B8:14:VAL:CG2	33:B8:22:VAL:HG13	2.47	0.45
33:B8:42:ARG:C	33:B8:44:LYS:H	2.25	0.45
35:BA:287:C:H2'	35:BA:288:C:C6	2.48	0.45
35:BA:363(C):G:O2'	35:BA:363(D):G:H5'	2.16	0.45
35:BA:436:C:H2'	35:BA:437:G:C8	2.51	0.45
35:BA:1002:G:H8	35:BA:1002:G:O5'	1.99	0.45
35:BA:1186:G:H8	35:BA:1186:G:O5'	1.98	0.45
35:BA:1271:G:N2	35:BA:1617:C:O4'	2.50	0.45
35:BA:1448:G:N3	35:BA:1528(A):A:C2	2.84	0.45
35:BA:1582:C:O2'	35:BA:1583:A:H5'	2.17	0.45
35:BA:1718:G:C8	35:BA:1718:G:C5'	2.97	0.45
35:BA:1815:A:C5	35:BA:1817:G:C6	3.05	0.45
35:BA:1859:A:H3'	35:BA:1860:G:H8	1.81	0.45
35:BA:1899:G:N2	35:BA:1902:C:C5	2.85	0.45
35:BA:2110:G:H4'	35:BA:2111:C:OP2	2.16	0.45
35:BA:2270:G:H2'	35:BA:2271:G:O4'	2.16	0.45
35:BA:2406:U:C2	47:BP:72:PRO:HB2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2531:A:C5'	42:BH:157:TYR:CZ	3.00	0.45
35:BA:2656:U:H2'	35:BA:2657:A:H5"	1.99	0.45
35:BA:2728:U:H5'	46:BO:70:LYS:HE2	1.98	0.45
35:BA:2887:U:H2'	35:BA:2888:C:H6	1.81	0.45
38:BD:24:ILE:O	38:BD:25:THR:O	2.35	0.45
38:BD:142:VAL:HG22	38:BD:143:HIS:N	2.31	0.45
39:BE:6:GLY:C	39:BE:196:VAL:HG22	2.42	0.45
39:BE:37:ARG:HA	39:BE:42:ASP:OD2	2.16	0.45
40:BF:65:TRP:C	40:BF:67:GLN:H	2.24	0.45
41:BG:41:GLN:HB3	41:BG:43:LEU:HD22	1.95	0.45
41:BG:95:ARG:O	41:BG:96:ARG:O	2.35	0.45
41:BG:109:VAL:CG1	41:BG:142:PRO:HD3	2.46	0.45
41:BG:141:PHE:O	41:BG:144:ILE:HG22	2.16	0.45
42:BH:88:LEU:HD13	42:BH:130:ARG:HG2	1.97	0.45
42:BH:99:VAL:O	42:BH:99:VAL:HG12	2.16	0.45
44:BL:106:LEU:O	44:BL:109:ALA:HB3	2.17	0.45
45:BN:28:THR:CG2	45:BN:29:LYS:N	2.80	0.45
45:BN:35:ARG:HB3	45:BN:42:TRP:CH2	2.51	0.45
48:BQ:18:LYS:HA	48:BQ:18:LYS:CE	2.47	0.45
48:BQ:139:GLU:OE1	48:BQ:141:GLN:HG3	2.17	0.45
49:BR:56:LYS:HE2	49:BR:88:ARG:H	1.82	0.45
51:BT:118:ARG:O	51:BT:122:ASP:N	2.47	0.45
53:BV:46:VAL:HG13	53:BV:47:VAL:N	2.31	0.45
54:BW:83:LYS:C	54:BW:84:ARG:HG2	2.42	0.45
56:BY:88:LYS:O	56:BY:90:LEU:CD2	2.65	0.45
57:BZ:9:TYR:OH	57:BZ:63:ASP:OD2	2.25	0.45
1:AA:48:C:H2'	1:AA:365:U:O4	2.17	0.45
1:AA:251:G:H4'	1:AA:252:U:O5'	2.16	0.45
1:AA:373:A:H2'	1:AA:374:A:H8	1.82	0.45
1:AA:383:A:H2'	1:AA:384:G:H5'	1.98	0.45
1:AA:719:C:O2	18:AR:50:ILE:HG12	2.17	0.45
1:AA:765:G:H22	1:AA:812:C:HO2'	1.64	0.45
1:AA:948:C:H2'	1:AA:949:A:H8	1.81	0.45
1:AA:1007:C:H2'	1:AA:1008:C:C6	2.51	0.45
1:AA:1371:G:C5	1:AA:1372:U:C5	3.05	0.45
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.52	0.45
1:AA:1438:G:C4	1:AA:1464:G:N2	2.85	0.45
1:AA:1458:G:C6	1:AA:1459:C:C4	3.05	0.45
2:AB:97:TRP:CZ2	2:AB:102:LEU:HD13	2.49	0.45
2:AB:223:ILE:O	2:AB:226:ARG:N	2.50	0.45
3:AC:43:LEU:C	3:AC:45:LYS:N	2.74	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:207:VAL:O	3:AC:207:VAL:CG1	2.46	0.45
4:AD:129:ASN:ND2	4:AD:129:ASN:N	2.63	0.45
7:AG:78:ARG:HE	7:AG:156:TRP:HB3	1.82	0.45
8:AH:56:LYS:HA	8:AH:57:PRO:HD2	1.77	0.45
8:AH:63:LEU:HD22	8:AH:63:LEU:N	2.32	0.45
10:AJ:3:LYS:NZ	10:AJ:77:PRO:HD2	2.31	0.45
10:AJ:16:LEU:C	10:AJ:16:LEU:CD1	2.90	0.45
13:AM:57:ARG:C	13:AM:59:TYR:N	2.71	0.45
13:AM:91:ARG:HH21	19:AS:81:ARG:NH2	2.15	0.45
16:AP:18:ARG:HD2	16:AP:32:TYR:HE1	1.82	0.45
19:AS:48:THR:HG22	19:AS:61:TYR:CD1	2.52	0.45
19:AS:79:THR:HG22	19:AS:80:TYR:N	2.31	0.45
24:AY:84:THR:O	24:AY:85:PRO:C	2.60	0.45
24:AY:388:THR:HG21	24:AY:399:LEU:N	2.28	0.45
24:AY:510:VAL:HG22	24:AY:534:ILE:HD11	1.97	0.45
31:B6:15:GLU:OE1	31:B6:44:ARG:CZ	2.65	0.45
32:B7:8:ASN:ND2	32:B7:8:ASN:C	2.75	0.45
35:BA:112:U:C2'	35:BA:113:G:H5'	2.46	0.45
35:BA:216:A:H2'	35:BA:217:G:H8	1.81	0.45
35:BA:285:C:H2'	35:BA:286:C:C5'	2.46	0.45
35:BA:285:C:C2'	35:BA:286:C:C5'	2.95	0.45
35:BA:321:G:N2	35:BA:341:G:H5"	2.31	0.45
35:BA:577:G:C6	35:BA:578:A:C6	3.05	0.45
35:BA:654(G):C:H2'	35:BA:654(H):G:C8	2.40	0.45
35:BA:812:C:H1'	35:BA:1250:G:C2	2.52	0.45
35:BA:883:G:H1	35:BA:893:C:H42	1.64	0.45
35:BA:1465:G:H2'	35:BA:1466:G:C8	2.49	0.45
35:BA:1839:G:C5	35:BA:1840:G:N7	2.85	0.45
35:BA:2314:C:O5'	35:BA:2314:C:H6	2.00	0.45
35:BA:2333:A:O4'	35:BA:2335:A:C5	2.70	0.45
37:BC:197:LEU:O	37:BC:198:GLU:C	2.60	0.45
38:BD:147:LEU:HD11	38:BD:183:ARG:HH12	1.82	0.45
38:BD:166:GLN:HB3	38:BD:174:ILE:HG22	1.99	0.45
38:BD:183:ARG:HG2	38:BD:183:ARG:HH11	1.79	0.45
38:BD:245:PRO:O	38:BD:245:PRO:HG2	2.17	0.45
40:BF:3:GLU:O	40:BF:3:GLU:HG3	2.16	0.45
43:BK:17:ALA:O	43:BK:35:MET:HE1	2.17	0.45
45:BN:120:LEU:CD1	45:BN:122:VAL:HG23	2.46	0.45
47:BP:61:ARG:H	47:BP:61:ARG:HD2	1.82	0.45
47:BP:85:LEU:HA	47:BP:88:LEU:HB3	1.99	0.45
47:BP:107:LYS:O	47:BP:109:GLY:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:90:VAL:HG12	48:BQ:91:GLU:N	2.32	0.45
49:BR:94:TYR:CD1	49:BR:94:TYR:N	2.85	0.45
51:BT:11:GLU:H	51:BT:11:GLU:CD	2.24	0.45
51:BT:102:ILE:O	51:BT:103:ARG:O	2.35	0.45
52:BU:66:ASN:ND2	52:BU:76:TYR:HB2	2.31	0.45
53:BV:34:GLU:O	53:BV:36:PRO:CD	2.65	0.45
53:BV:45:THR:O	53:BV:46:VAL:CG1	2.50	0.45
1:AA:323:U:H5'	20:AT:23:ARG:HB2	1.99	0.45
1:AA:965:A:C2	1:AA:969:A:N1	2.85	0.45
1:AA:993:G:H22	1:AA:996:A:H61	1.63	0.45
1:AA:1124:G:C5'	10:AJ:35:SER:HB2	2.46	0.45
1:AA:1303:C:N4	1:AA:1304:G:C6	2.85	0.45
5:AE:79:GLU:HB3	5:AE:92:LYS:HA	1.99	0.45
7:AG:79:ARG:O	7:AG:80:VAL:CG1	2.65	0.45
8:AH:6:ILE:C	8:AH:8:ASP:N	2.71	0.45
9:AI:43:ALA:O	9:AI:45:ALA:N	2.50	0.45
9:AI:58:HIS:C	9:AI:59:PHE:CD1	2.94	0.45
9:AI:117:HIS:O	9:AI:118:LYS:HG3	2.17	0.45
10:AJ:30:SER:HA	10:AJ:80:LYS:NZ	2.32	0.45
14:AN:43:CYS:HA	14:AN:46:GLU:HG3	1.99	0.45
20:AT:96:GLY:O	20:AT:97:ALA:O	2.35	0.45
20:AT:100:ILE:HD12	20:AT:100:ILE:HA	1.77	0.45
22:AV:35:A:C2	23:AX:18:G:C2	3.05	0.45
24:AY:20:HIS:ND1	24:AY:21:ILE:CD1	2.80	0.45
24:AY:180:VAL:O	24:AY:181:LEU:C	2.59	0.45
24:AY:289:ILE:O	24:AY:301:ILE:N	2.50	0.45
24:AY:411:VAL:HG13	24:AY:477:GLY:O	2.17	0.45
24:AY:450:ILE:CG2	24:AY:451:ILE:N	2.79	0.45
24:AY:548:GLU:O	24:AY:551:GLN:HG2	2.16	0.45
24:AY:549:ALA:C	24:AY:551:GLN:N	2.74	0.45
25:B0:44:ARG:HG2	25:B0:44:ARG:HH11	1.81	0.45
28:B3:31:LEU:O	28:B3:32:GLN:CB	2.65	0.45
29:B4:9:LEU:HD12	29:B4:10:VAL:H	1.81	0.45
30:B5:45:VAL:HG21	49:BR:98:LEU:HB3	1.99	0.45
31:B6:11:LEU:C	31:B6:11:LEU:HD13	2.42	0.45
33:B8:48:PHE:HB3	33:B8:49:VAL:H	1.51	0.45
34:B9:32:HIS:O	34:B9:34:GLN:HG3	2.17	0.45
35:BA:110:G:H2'	35:BA:111:A:H8	1.82	0.45
35:BA:139:G:H1	35:BA:142(A):C:N4	2.15	0.45
35:BA:199:A:N6	35:BA:2433:A:H2'	2.32	0.45
35:BA:628:G:N2	35:BA:636:G:H1'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:744:G:C4	35:BA:745:G:C8	3.04	0.45
35:BA:1405:U:H2'	35:BA:1406:U:C6	2.52	0.45
35:BA:1472:A:H2'	35:BA:1473:G:H8	1.82	0.45
35:BA:2134:A:H1'	35:BA:2159:G:H21	1.82	0.45
35:BA:2206:G:H3'	35:BA:2207:G:C5'	2.47	0.45
35:BA:2351:G:HO2'	35:BA:2352:A:H8	1.64	0.45
35:BA:2772:C:H2'	35:BA:2773:C:C6	2.52	0.45
35:BA:2839:G:H2'	35:BA:2840:C:H6	1.80	0.45
37:BC:11:LEU:C	37:BC:13:GLU:N	2.73	0.45
37:BC:16:ASP:HA	37:BC:17:PRO:HD2	1.79	0.45
37:BC:176:VAL:HG21	37:BC:190:ILE:HD13	1.92	0.45
38:BD:61:LEU:HD13	38:BD:62:TYR:H	1.80	0.45
38:BD:127:VAL:CA	38:BD:193:VAL:HG13	2.47	0.45
38:BD:275:LYS:HD2	38:BD:275:LYS:C	2.42	0.45
39:BE:6:GLY:HA2	39:BE:27:LEU:O	2.17	0.45
39:BE:176:ILE:HG22	39:BE:178:GLU:HB3	1.97	0.45
40:BF:107:LYS:HD2	40:BF:205:ARG:O	2.17	0.45
40:BF:198:ALA:C	40:BF:201:VAL:HG12	2.42	0.45
41:BG:39:ILE:CG1	41:BG:92:VAL:HG22	2.47	0.45
41:BG:52:ILE:O	41:BG:54:GLU:HG3	2.16	0.45
41:BG:62:LEU:N	41:BG:62:LEU:CD1	2.79	0.45
42:BH:136:ILE:N	42:BH:136:ILE:CD1	2.80	0.45
43:BK:12:LEU:HA	43:BK:13:PRO:HD3	1.75	0.45
49:BR:55:ALA:HB2	49:BR:79:LEU:HD11	1.98	0.45
50:BS:36:TYR:N	50:BS:36:TYR:HD1	2.15	0.45
51:BT:113:LYS:C	51:BT:114:LEU:HD23	2.41	0.45
52:BU:52:ARG:O	52:BU:53:ARG:C	2.59	0.45
55:BX:52:VAL:O	55:BX:52:VAL:CG1	2.61	0.45
56:BY:87:LYS:C	56:BY:89:PHE:H	2.24	0.45
56:BY:91:GLU:HB2	56:BY:92:ASN:H	1.60	0.45
57:BZ:9:TYR:CE2	57:BZ:35:ARG:NH1	2.83	0.45
1:AA:60:A:C5'	1:AA:331:G:N2	2.80	0.45
1:AA:542:G:O2'	1:AA:543:C:H5'	2.16	0.45
1:AA:892:A:C6	1:AA:893:C:N4	2.85	0.45
1:AA:1004:A:C6	1:AA:1034:G:H2'	2.52	0.45
1:AA:1030(C):G:H2'	1:AA:1030(D):A:H8	1.80	0.45
1:AA:1458:G:C5	1:AA:1459:C:C5	3.04	0.45
2:AB:223:ILE:C	2:AB:225:ALA:N	2.74	0.45
3:AC:40:ARG:HG2	3:AC:55:VAL:CG1	2.47	0.45
3:AC:131:ARG:O	3:AC:132:ARG:C	2.60	0.45
4:AD:37:PRO:O	4:AD:38:TYR:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:78:LEU:HD21	4:AD:96:LEU:CB	2.47	0.45
6:AF:99:ALA:O	6:AF:100:ASN:HB2	2.17	0.45
8:AH:50:ARG:HG2	8:AH:50:ARG:HH11	1.81	0.45
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.17	0.45
17:AQ:45:HIS:HB2	17:AQ:65:ILE:CD1	2.46	0.45
24:AY:106:VAL:HG21	24:AY:132:ARG:HG3	1.99	0.45
24:AY:166:LEU:HD21	24:AY:212:TYR:CD2	2.52	0.45
24:AY:168:ILE:HD11	24:AY:178:ILE:HD11	1.99	0.45
24:AY:637:ARG:NH1	24:AY:637:ARG:CG	2.65	0.45
25:B0:59:LEU:HD23	25:B0:59:LEU:HA	1.68	0.45
26:B1:56:GLN:HE21	26:B1:56:GLN:CA	2.25	0.45
26:B1:86:SER:O	26:B1:87:PRO:C	2.59	0.45
32:B7:5:TRP:CH2	35:BA:686:G:N7	2.85	0.45
33:B8:50:LEU:CG	33:B8:51:ALA:H	2.30	0.45
35:BA:18:C:O2	35:BA:554:U:H5"	2.16	0.45
35:BA:24:G:N2	35:BA:517:C:C2	2.84	0.45
35:BA:154(A):C:N4	35:BA:171:G:H1	2.15	0.45
35:BA:275:G:H2'	35:BA:276:A:C2	2.52	0.45
35:BA:607:U:P	40:BF:103:LYS:HG3	2.57	0.45
35:BA:665:C:H2'	35:BA:666:G:C8	2.51	0.45
35:BA:687:C:H2'	35:BA:688:U:O4'	2.17	0.45
35:BA:778:G:C6	35:BA:779:U:C4	3.05	0.45
35:BA:884:C:H41	35:BA:886:C:N4	2.12	0.45
35:BA:1140:C:O2'	35:BA:1143:A:H2'	2.17	0.45
35:BA:1202:C:H2'	35:BA:1203:G:H5'	1.98	0.45
35:BA:1335:U:H2'	35:BA:1336:A:H8	1.82	0.45
35:BA:1529:G:C6	35:BA:1541:G:N1	2.85	0.45
35:BA:1603:A:H2'	35:BA:1604:C:C6	2.51	0.45
35:BA:2007:C:C6	35:BA:2007:C:H5"	2.52	0.45
35:BA:2412:A:N6	35:BA:2413:G:C2	2.84	0.45
35:BA:2813:A:C6	35:BA:2814:C:C4	3.05	0.45
36:BB:30:C:OP2	50:BS:32:LEU:HD11	2.17	0.45
37:BC:27:ALA:C	37:BC:29:LEU:H	2.24	0.45
39:BE:30:PRO:HD3	39:BE:180:ASN:ND2	2.32	0.45
39:BE:55:ASN:HD22	39:BE:55:ASN:HA	1.61	0.45
41:BG:76:SER:HB3	41:BG:83:ARG:CB	2.43	0.45
41:BG:100:TRP:O	41:BG:104:GLU:HB2	2.17	0.45
46:BO:2:ILE:HG22	46:BO:3:GLN:N	2.31	0.45
46:BO:3:GLN:O	46:BO:4:PRO:C	2.58	0.45
46:BO:77:ILE:HG13	46:BO:78:ARG:N	2.32	0.45
48:BQ:55:VAL:HG13	48:BQ:56:ARG:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:134:ARG:C	48:BQ:137:TYR:CD1	2.95	0.45
49:BR:9:LYS:HG2	49:BR:43:GLU:OE1	2.16	0.45
49:BR:56:LYS:HE2	49:BR:88:ARG:N	2.32	0.45
50:BS:12:PHE:O	50:BS:13:ARG:C	2.59	0.45
51:BT:124:ASP:O	51:BT:125:ARG:C	2.60	0.45
52:BU:26:GLY:C	52:BU:28:ARG:H	2.25	0.45
54:BW:61:ASN:HD22	54:BW:61:ASN:HA	1.49	0.45
1:AA:182:U:O2	1:AA:182:U:H2'	2.16	0.44
1:AA:190:U:C2'	1:AA:191:G:H5'	2.47	0.44
1:AA:398:C:O5'	1:AA:398:C:H6	2.00	0.44
1:AA:738:C:H2'	1:AA:739:C:C6	2.49	0.44
1:AA:1303:C:OP1	1:AA:1304:G:OP2	2.35	0.44
2:AB:19:HIS:CD2	2:AB:20:GLU:CD	2.94	0.44
6:AF:21:LEU:O	6:AF:24:GLU:N	2.48	0.44
6:AF:29:ALA:O	6:AF:30:LEU:C	2.57	0.44
7:AG:136:LYS:HB3	7:AG:136:LYS:HE3	1.82	0.44
8:AH:41:ARG:NH2	8:AH:123:GLU:CD	2.60	0.44
10:AJ:43:ARG:HA	10:AJ:43:ARG:HD2	1.84	0.44
13:AM:78:ILE:HG22	13:AM:82:MET:HE2	1.98	0.44
17:AQ:45:HIS:O	17:AQ:73:VAL:HG23	2.17	0.44
17:AQ:45:HIS:CG	17:AQ:65:ILE:HD13	2.52	0.44
21:AU:2:GLY:C	21:AU:4:GLY:N	2.75	0.44
21:AU:6:ARG:HE	21:AU:15:ARG:CZ	2.30	0.44
22:AV:59:A:H2'	22:AV:60:U:H5'	1.98	0.44
24:AY:226:ASN:O	24:AY:230:LYS:HE3	2.18	0.44
24:AY:341:VAL:HG13	24:AY:352:VAL:CG1	2.47	0.44
24:AY:346:LYS:O	24:AY:347:GLY:C	2.60	0.44
26:B1:19:GLN:HB2	26:B1:35:THR:HG22	1.98	0.44
26:B1:73:LEU:CD2	26:B1:94:LEU:HD23	2.46	0.44
26:B1:84:GLY:O	26:B1:85:LEU:C	2.59	0.44
34:B9:27:CYS:SG	34:B9:29:ASN:ND2	2.90	0.44
35:BA:71:A:H5"	35:BA:72:U:O5'	2.17	0.44
35:BA:117:G:C6	35:BA:119:A:C6	3.05	0.44
35:BA:234:C:H2'	35:BA:235:U:H6	1.82	0.44
35:BA:706:A:H2'	35:BA:707:G:O4'	2.17	0.44
35:BA:947:G:N3	35:BA:984:A:C2	2.83	0.44
35:BA:1009:A:H1'	52:BU:59:ARG:NH1	2.33	0.44
35:BA:1053:C:H2'	35:BA:1054:A:C5'	2.45	0.44
35:BA:1314:C:H6	35:BA:1314:C:C5'	2.21	0.44
35:BA:1777:U:O2	35:BA:1777:U:H2'	2.17	0.44
35:BA:2240:C:C2'	35:BA:2241:A:H5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2287:A:N6	35:BA:2344:U:C2	2.86	0.44
37:BC:148:PHE:C	37:BC:150:ILE:H	2.25	0.44
41:BG:97:ASP:O	41:BG:98:ARG:C	2.61	0.44
42:BH:18:GLU:HG3	42:BH:25:LYS:HB2	1.99	0.44
45:BN:121:LYS:HD2	45:BN:121:LYS:HA	1.81	0.44
46:BO:17:ARG:NH2	46:BO:47:ILE:HD11	2.32	0.44
46:BO:103:ALA:C	46:BO:105:GLU:H	2.25	0.44
47:BP:24:GLY:N	47:BP:33:ARG:CZ	2.80	0.44
49:BR:55:ALA:CB	49:BR:79:LEU:CD1	2.96	0.44
50:BS:106:ARG:HD2	50:BS:106:ARG:C	2.43	0.44
51:BT:45:PHE:CE2	51:BT:63:VAL:HB	2.53	0.44
51:BT:55:ASN:HD22	51:BT:58:ASN:ND2	2.14	0.44
52:BU:26:GLY:O	52:BU:28:ARG:N	2.50	0.44
52:BU:61:TRP:CB	52:BU:93:LYS:HB3	2.47	0.44
1:AA:22:G:H2'	1:AA:23:C:C6	2.52	0.44
1:AA:193:C:N3	1:AA:194:C:N4	2.65	0.44
1:AA:229:U:O2'	1:AA:230:G:H5'	2.17	0.44
1:AA:786:G:C2	1:AA:797:C:O2	2.71	0.44
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.17	0.44
1:AA:1217:C:H5'	1:AA:1218:C:OP2	2.16	0.44
4:AD:18:LYS:O	4:AD:19:LEU:HD12	2.17	0.44
7:AG:46:ALA:C	7:AG:48:LYS:N	2.73	0.44
7:AG:101:LEU:O	7:AG:102:ARG:C	2.61	0.44
9:AI:27:THR:HG22	9:AI:31:GLN:H	1.82	0.44
13:AM:4:ILE:HG22	13:AM:5:ALA:H	1.82	0.44
13:AM:14:ARG:HE	13:AM:14:ARG:HB3	1.65	0.44
15:AO:65:ARG:HD2	15:AO:65:ARG:N	2.32	0.44
16:AP:50:LYS:O	16:AP:51:VAL:HG23	2.18	0.44
17:AQ:44:ALA:HA	17:AQ:71:PHE:O	2.17	0.44
20:AT:33:ILE:O	20:AT:37:SER:OG	2.33	0.44
24:AY:635:GLU:HA	24:AY:636:PRO:HD2	1.81	0.44
28:B3:15:TYR:HA	28:B3:16:PRO:HD3	1.73	0.44
33:B8:50:LEU:CG	33:B8:51:ALA:N	2.81	0.44
35:BA:80:G:O2'	35:BA:294:A:N1	2.50	0.44
35:BA:90:U:O2	35:BA:90:U:H3'	2.17	0.44
35:BA:247:G:C8	35:BA:249:C:C6	3.05	0.44
35:BA:327:G:N2	35:BA:328:U:H1'	2.32	0.44
35:BA:415:A:H8	35:BA:415:A:O5'	2.00	0.44
35:BA:605:C:C2	35:BA:606:U:C6	3.05	0.44
35:BA:939:G:H2'	35:BA:939:G:N3	2.31	0.44
35:BA:993:G:C5	35:BA:994:C:H5	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1204:A:N1	35:BA:1241:A:H2	2.15	0.44
35:BA:1306:C:H2'	35:BA:1307:A:C8	2.51	0.44
35:BA:1465:G:C2	35:BA:1466:G:C4	3.05	0.44
35:BA:1465:G:C4	35:BA:1466:G:C8	3.04	0.44
35:BA:1582:C:O5'	35:BA:1582:C:H6	2.00	0.44
35:BA:1712:C:H2'	35:BA:1713:U:O4'	2.17	0.44
35:BA:2617:C:C2'	35:BA:2618:G:H5'	2.47	0.44
35:BA:2880:C:O5'	35:BA:2880:C:H6	2.00	0.44
35:BA:2895:U:C3'	35:BA:2895:U:C6	3.00	0.44
38:BD:14:ARG:HG3	38:BD:15:PHE:H	1.81	0.44
38:BD:155:LEU:CD1	38:BD:155:LEU:N	2.80	0.44
40:BF:117:ARG:HH22	47:BP:5:ASP:N	2.14	0.44
40:BF:148:LEU:CD2	40:BF:191:ARG:NH1	2.74	0.44
40:BF:185:ASP:HA	40:BF:188:ARG:HD3	2.00	0.44
43:BK:30:HIS:ND1	43:BK:59:ILE:HB	2.32	0.44
45:BN:97:ARG:O	45:BN:101:HIS:HB2	2.16	0.44
48:BQ:1:MET:CE	48:BQ:44:ALA:HB3	2.46	0.44
52:BU:39:LEU:O	52:BU:42:ALA:N	2.51	0.44
53:BV:22:VAL:HG21	53:BV:94:LEU:HD12	1.99	0.44
53:BV:38:LEU:H	53:BV:51:VAL:CG1	2.30	0.44
1:AA:192:U:C1'	20:AT:103:GLY:HA2	2.47	0.44
1:AA:441:A:H2'	1:AA:442:C:H5'	2.00	0.44
1:AA:460:G:O6	1:AA:470:C:H4'	2.18	0.44
1:AA:691:G:H2'	1:AA:692:U:C6	2.52	0.44
1:AA:812:C:O2'	1:AA:813:U:P	2.74	0.44
1:AA:945:G:N3	1:AA:946:A:C8	2.86	0.44
1:AA:1123:A:H61	1:AA:1149:C:N4	2.15	0.44
1:AA:1162:C:C2	1:AA:1175:G:N2	2.85	0.44
1:AA:1275:A:C2'	1:AA:1276:G:H5'	2.46	0.44
1:AA:1430:C:C2	1:AA:1471:G:C2	3.06	0.44
1:AA:1442:G:H2'	51:BT:118:ARG:HH12	1.81	0.44
5:AE:15:ARG:HG3	5:AE:28:PHE:CZ	2.53	0.44
5:AE:144:THR:N	5:AE:147:ASP:OD2	2.39	0.44
8:AH:12:ARG:HH11	8:AH:26:VAL:HA	1.81	0.44
13:AM:10:PRO:HG3	13:AM:18:ALA:HB1	2.00	0.44
13:AM:11:ARG:HG2	13:AM:12:ASN:N	2.31	0.44
19:AS:45:VAL:HA	19:AS:62:ILE:HG13	1.99	0.44
20:AT:63:ILE:O	20:AT:66:ALA:N	2.50	0.44
22:AV:4:G:O2'	22:AV:5:G:H8	2.00	0.44
22:AV:11:A:O2'	22:AV:12:G:H5'	2.17	0.44
24:AY:152:THR:C	24:AY:154:GLN:H	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:312:LEU:HB2	24:AY:331:TYR:HE2	1.82	0.44
24:AY:679:VAL:HA	24:AY:680:PRO:HD3	1.72	0.44
26:B1:8:SER:HB3	26:B1:66:HIS:CD2	2.52	0.44
28:B3:4:LEU:O	28:B3:36:VAL:HA	2.16	0.44
32:B7:34:ARG:NH1	32:B7:39:ARG:HG3	2.33	0.44
33:B8:34:TRP:CD1	33:B8:34:TRP:O	2.70	0.44
35:BA:38:A:C2	35:BA:442:G:C2	3.05	0.44
35:BA:201:C:C4	35:BA:202:U:C5	3.05	0.44
35:BA:633:A:H2'	35:BA:634:C:H5'	1.99	0.44
35:BA:742:G:N1	35:BA:743:G:C5	2.86	0.44
35:BA:753:C:H2'	35:BA:754:C:C6	2.52	0.44
35:BA:827:U:H4'	35:BA:828:U:O2	2.17	0.44
35:BA:882:G:H22	35:BA:894:C:H42	1.64	0.44
35:BA:1057:A:H2'	35:BA:1058:G:C8	2.53	0.44
35:BA:2056:G:N2	35:BA:2057:A:C8	2.85	0.44
35:BA:2489:G:C6	35:BA:2490:G:C6	3.05	0.44
38:BD:176:ARG:CG	38:BD:176:ARG:NH1	2.78	0.44
40:BF:39:TRP:CB	40:BF:101:LEU:HD22	2.48	0.44
41:BG:25:TYR:OH	41:BG:168:GLU:OE1	2.25	0.44
41:BG:78:SER:HA	41:BG:83:ARG:HG2	2.00	0.44
43:BK:23:VAL:CG1	43:BK:27:LEU:HD22	2.42	0.44
46:BO:68:GLU:CB	46:BO:78:ARG:HB2	2.47	0.44
51:BT:27:THR:C	51:BT:28:VAL:HG23	2.39	0.44
52:BU:84:LYS:HD3	52:BU:84:LYS:HA	1.81	0.44
53:BV:34:GLU:HG3	53:BV:56:SER:OG	2.17	0.44
53:BV:49:THR:HB	53:BV:50:PRO:HD2	1.99	0.44
54:BW:41:LYS:C	54:BW:43:GLY:N	2.71	0.44
1:AA:33:A:H2'	1:AA:33:A:N3	2.33	0.44
1:AA:476:G:O2'	1:AA:477:A:H5'	2.16	0.44
1:AA:696:A:O2'	1:AA:697:U:H5'	2.17	0.44
1:AA:741:G:C2'	1:AA:742:G:H5'	2.47	0.44
1:AA:1005:A:OP1	1:AA:1024:G:N2	2.50	0.44
1:AA:1115:C:H2'	1:AA:1116:C:H6	1.81	0.44
1:AA:1147:C:O2'	9:AI:16:ARG:HD2	2.18	0.44
1:AA:1329:A:H4'	13:AM:24:GLY:O	2.18	0.44
1:AA:1345:U:OP1	9:AI:120:ARG:NH1	2.50	0.44
1:AA:1360:A:H8	1:AA:1360:A:OP1	2.00	0.44
1:AA:1432:G:H8	1:AA:1432:G:O5'	2.01	0.44
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.82	0.44
2:AB:58:ILE:O	2:AB:61:LEU:N	2.46	0.44
2:AB:151:GLY:O	2:AB:152:PHE:C	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:115:LEU:O	3:AC:116:VAL:C	2.60	0.44
5:AE:142:LEU:O	5:AE:143:ARG:CD	2.66	0.44
7:AG:17:VAL:HB	7:AG:18:TYR:HD1	1.82	0.44
8:AH:43:GLY:O	8:AH:64:LYS:NZ	2.34	0.44
10:AJ:24:VAL:C	10:AJ:26:ALA:N	2.72	0.44
10:AJ:74:ILE:O	10:AJ:75:ILE:C	2.60	0.44
13:AM:90:LEU:O	13:AM:91:ARG:C	2.60	0.44
16:AP:4:ILE:O	16:AP:66:PRO:HA	2.17	0.44
19:AS:63:THR:OG1	19:AS:64:GLU:N	2.47	0.44
24:AY:111:SER:OG	24:AY:141:LYS:HB3	2.17	0.44
24:AY:122:TRP:CZ2	24:AY:159:ALA:HB2	2.53	0.44
24:AY:308:PRO:O	24:AY:333:GLY:N	2.50	0.44
24:AY:605:ILE:N	24:AY:605:ILE:CD1	2.81	0.44
25:B0:38:VAL:HG12	25:B0:40:GLN:N	2.32	0.44
28:B3:4:LEU:HD23	28:B3:58:VAL:HA	1.99	0.44
29:B4:1:MET:N	29:B4:1:MET:CE	2.78	0.44
35:BA:229:A:H3'	35:BA:230:U:C5'	2.43	0.44
35:BA:260:G:C1'	35:BA:621:A:H1'	2.47	0.44
35:BA:358:U:H2'	35:BA:359:A:C8	2.30	0.44
35:BA:392:C:H2'	35:BA:393:C:H6	1.81	0.44
35:BA:428:A:H3'	35:BA:429:A:C8	2.53	0.44
35:BA:620:G:H4'	35:BA:621:A:C5'	2.47	0.44
35:BA:744:G:N3	35:BA:744:G:H2'	2.32	0.44
35:BA:1074:G:H2'	35:BA:1075:C:C6	2.52	0.44
35:BA:1131:G:N2	35:BA:1132:A:C4	2.85	0.44
35:BA:1307:A:C2	35:BA:1308:A:C8	3.06	0.44
35:BA:1464:C:C2	35:BA:1465:G:C8	3.04	0.44
35:BA:1472:A:C2'	35:BA:1473:G:H5'	2.47	0.44
35:BA:1565:C:H2'	38:BD:21:PHE:HE2	1.82	0.44
35:BA:1573:G:C2'	35:BA:1574:C:H5'	2.46	0.44
35:BA:1610:A:H4'	35:BA:1611:C:OP2	2.17	0.44
35:BA:1994:C:OP2	39:BE:127:ASP:HB2	2.17	0.44
35:BA:2366:A:O5'	35:BA:2366:A:H8	1.99	0.44
35:BA:2880:C:C4	35:BA:2881:C:H5	2.35	0.44
37:BC:11:LEU:C	37:BC:13:GLU:H	2.24	0.44
38:BD:131:LEU:HD13	38:BD:136:ILE:CD1	2.46	0.44
38:BD:175:LEU:HD23	38:BD:175:LEU:HA	1.78	0.44
39:BE:81:ILE:O	39:BE:82:ARG:C	2.58	0.44
39:BE:134:ILE:HG22	39:BE:137:HIS:CB	2.48	0.44
50:BS:35:ILE:O	50:BS:35:ILE:HG23	2.15	0.44
50:BS:35:ILE:CD1	50:BS:99:LYS:HE3	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BS:53:SER:OG	50:BS:54:LEU:N	2.50	0.44
53:BV:39:LEU:HB3	53:BV:47:VAL:HG11	1.99	0.44
55:BX:18:TYR:O	55:BX:20:GLY:N	2.51	0.44
57:BZ:127:LYS:HB3	57:BZ:127:LYS:HZ3	1.82	0.44
1:AA:16:A:N1	1:AA:919:A:C2	2.86	0.44
1:AA:135:C:H2'	1:AA:136:C:H5'	1.99	0.44
1:AA:159:G:N1	1:AA:163:C:N4	2.65	0.44
1:AA:427:U:C4	1:AA:428:G:C6	3.06	0.44
1:AA:600:C:H4'	8:AH:128:GLY:O	2.17	0.44
1:AA:742:G:OP1	15:AO:59:MET:HE1	2.18	0.44
1:AA:767:A:H2'	1:AA:768:A:C8	2.53	0.44
1:AA:851:G:C4	1:AA:852:G:C8	3.06	0.44
1:AA:969:A:N1	1:AA:970:C:C2	2.86	0.44
1:AA:1054:C:O2	1:AA:1054:C:C2'	2.65	0.44
1:AA:1370:G:C2	1:AA:1371:G:N7	2.86	0.44
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.52	0.44
1:AA:1505:G:H4'	1:AA:1506:U:C5'	2.47	0.44
5:AE:140:ARG:HE	5:AE:140:ARG:HB2	1.58	0.44
6:AF:8:ILE:CD1	6:AF:26:ILE:HD13	2.47	0.44
7:AG:87:VAL:HG22	7:AG:151:TYR:O	2.16	0.44
8:AH:109:ILE:CG1	8:AH:110:ALA:N	2.74	0.44
9:AI:20:ARG:O	9:AI:60:ASP:N	2.43	0.44
9:AI:74:ILE:O	9:AI:74:ILE:HG22	2.17	0.44
9:AI:95:LYS:C	9:AI:95:LYS:CD	2.91	0.44
11:AK:124:LYS:HB3	11:AK:125:PHE:CD1	2.52	0.44
13:AM:91:ARG:HH21	19:AS:81:ARG:HH21	1.65	0.44
14:AN:18:VAL:CG2	14:AN:19:ARG:N	2.80	0.44
15:AO:64:ARG:CZ	15:AO:64:ARG:CB	2.96	0.44
20:AT:61:SER:C	20:AT:63:ILE:N	2.76	0.44
24:AY:627:ARG:C	24:AY:629:GLY:H	2.25	0.44
24:AY:688:ILE:N	24:AY:688:ILE:HD12	2.30	0.44
27:B2:57:ILE:HG22	27:B2:61:LEU:CD1	2.47	0.44
27:B2:67:LYS:C	27:B2:69:ARG:N	2.74	0.44
28:B3:17:LYS:HZ3	28:B3:20:LYS:HE3	1.83	0.44
30:B5:44:THR:CG2	49:BR:101:ALA:N	2.81	0.44
32:B7:37:LYS:HE2	35:BA:469:G:O6	2.18	0.44
33:B8:28:GLY:CA	33:B8:32:LEU:HD21	2.47	0.44
35:BA:142:A:H1'	35:BA:1408:C:C1'	2.27	0.44
35:BA:154(A):C:H3'	35:BA:155:U:C4'	2.48	0.44
35:BA:154(A):C:H3'	35:BA:155:U:H4'	1.98	0.44
35:BA:569:U:OP1	35:BA:945:A:C8	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:777:A:C2	35:BA:778:G:C4	3.05	0.44
35:BA:835:A:O2'	35:BA:836:G:H5'	2.18	0.44
35:BA:845:G:OP2	35:BA:845:G:C8	2.59	0.44
35:BA:1114:G:H2'	35:BA:1115:G:C5'	2.47	0.44
35:BA:1485:G:C8	35:BA:1485:G:C3'	3.00	0.44
35:BA:1500:G:C6	35:BA:1501:C:C4	3.05	0.44
35:BA:1647:G:H3'	35:BA:1647:G:OP2	2.17	0.44
35:BA:1658:C:C2	35:BA:1659:U:C5	3.06	0.44
35:BA:1747(A):G:C3'	35:BA:1748:G:H5"	2.43	0.44
35:BA:2033:A:O2'	35:BA:2034:U:P	2.75	0.44
35:BA:2885:C:O5'	35:BA:2885:C:H6	2.00	0.44
36:BB:46:A:C6	36:BB:47:C:C4	3.05	0.44
36:BB:110:G:O2'	36:BB:111:G:H5'	2.17	0.44
38:BD:21:PHE:C	38:BD:23:GLU:N	2.74	0.44
38:BD:32:SER:O	38:BD:36:PRO:CG	2.54	0.44
39:BE:76:ARG:O	39:BE:77:ILE:O	2.34	0.44
39:BE:184:VAL:O	39:BE:186:GLY:N	2.42	0.44
41:BG:164:GLU:O	41:BG:165:THR:CG2	2.65	0.44
42:BH:46:GLU:CG	42:BH:51:ARG:HB2	2.48	0.44
43:BK:15:GLY:N	43:BK:41:PHE:HE2	2.16	0.44
43:BK:23:VAL:O	43:BK:23:VAL:CG1	2.65	0.44
43:BK:93:ARG:CB	57:BZ:112:ARG:HE	2.31	0.44
47:BP:71:VAL:O	47:BP:71:VAL:CG2	2.63	0.44
48:BQ:27:VAL:O	48:BQ:28:ALA:CB	2.62	0.44
49:BR:72:ASP:CG	49:BR:75:LEU:HB2	2.43	0.44
52:BU:59:ARG:O	52:BU:62:ILE:HB	2.18	0.44
53:BV:4:ILE:HB	53:BV:39:LEU:O	2.18	0.44
53:BV:13:ARG:NH1	53:BV:13:ARG:HG2	2.29	0.44
53:BV:39:LEU:HD13	53:BV:51:VAL:HA	1.97	0.44
54:BW:6:ILE:HG21	54:BW:8:ARG:HH12	1.83	0.44
57:BZ:149:SER:HB2	57:BZ:172:ALA:O	2.18	0.44
1:AA:472:A:H2'	1:AA:473:G:O4'	2.17	0.44
1:AA:502:G:OP1	12:AL:118:SER:HB3	2.18	0.44
1:AA:542:G:H5'	4:AD:41:GLY:HA2	1.99	0.44
1:AA:841:U:C3'	1:AA:848:C:H5'	2.48	0.44
1:AA:891:U:H2'	1:AA:892:A:C8	2.53	0.44
1:AA:1378:C:OP1	7:AG:7:ALA:CB	2.65	0.44
1:AA:1419:G:C6	1:AA:1482:G:C2	3.05	0.44
1:AA:1424:C:H2'	1:AA:1425:U:C6	2.49	0.44
1:AA:1493:A:H3'	35:BA:1913:A:N1	2.33	0.44
1:AA:1518:A:C2	1:AA:1519:A:C2	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:95:GLN:HE21	2:AB:147:LYS:CE	2.31	0.44
2:AB:98:LEU:O	2:AB:101:MET:HB2	2.16	0.44
3:AC:28:GLN:O	3:AC:29:TYR:C	2.59	0.44
3:AC:83:ARG:O	3:AC:86:VAL:N	2.50	0.44
3:AC:99:VAL:HG23	3:AC:99:VAL:O	2.17	0.44
3:AC:119:ARG:O	3:AC:122:GLU:HB2	2.18	0.44
4:AD:74:GLN:HE22	4:AD:137:SER:HB3	1.83	0.44
4:AD:92:VAL:O	4:AD:95:GLY:N	2.51	0.44
7:AG:155:ARG:HE	7:AG:155:ARG:HB2	1.64	0.44
13:AM:37:THR:HG21	13:AM:56:LEU:CD2	2.47	0.44
18:AR:31:LEU:HD23	18:AR:31:LEU:N	2.30	0.44
19:AS:70:LYS:O	19:AS:71:LEU:C	2.59	0.44
20:AT:69:GLY:O	20:AT:73:HIS:CE1	2.71	0.44
22:AV:15:G:H8	22:AV:15:G:O5'	2.00	0.44
24:AY:150:ILE:C	24:AY:152:THR:N	2.73	0.44
24:AY:260:LEU:HD13	24:AY:260:LEU:N	2.33	0.44
24:AY:414:GLU:C	24:AY:474:ALA:HB1	2.42	0.44
24:AY:495:GLY:N	24:AY:510:VAL:O	2.51	0.44
24:AY:625:ASN:C	24:AY:627:ARG:N	2.76	0.44
26:B1:8:SER:C	26:B1:10:LYS:N	2.75	0.44
26:B1:68:PRO:O	26:B1:70:VAL:N	2.50	0.44
27:B2:29:LYS:C	27:B2:31:GLU:N	2.76	0.44
35:BA:26:G:OP1	54:BW:80:PRO:HB3	2.18	0.44
35:BA:109:G:O2'	35:BA:110:G:H5'	2.18	0.44
35:BA:452:G:N3	35:BA:457:A:H2	2.15	0.44
35:BA:597:U:H2'	35:BA:598:G:C8	2.53	0.44
35:BA:750:A:C2	35:BA:753:C:C6	3.06	0.44
35:BA:990:A:H62	35:BA:1186:G:H1'	1.82	0.44
35:BA:1258:C:C2	35:BA:1259:G:C8	3.06	0.44
35:BA:1472:A:H2'	35:BA:1473:G:C8	2.53	0.44
35:BA:1542:A:C8	35:BA:1542:A:C3'	2.97	0.44
35:BA:1573:G:H2'	35:BA:1574:C:C5'	2.45	0.44
35:BA:1582:C:C2	35:BA:1583:A:C8	3.05	0.44
35:BA:1782:C:C6	35:BA:2609:U:C5	3.06	0.44
35:BA:2262:U:C2'	35:BA:2263:C:H5"	2.47	0.44
35:BA:2672:G:H3'	35:BA:2673:G:H5"	1.98	0.44
40:BF:65:TRP:HZ3	40:BF:75:HIS:CD2	2.27	0.44
41:BG:16:ARG:N	41:BG:17:PRO:HD2	2.33	0.44
42:BH:54:ARG:NH1	42:BH:62:LYS:HA	2.32	0.44
44:BL:94:LEU:C	44:BL:95:LYS:CG	2.90	0.44
45:BN:28:THR:HG23	45:BN:29:LYS:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:66:ILE:HG13	48:BQ:66:ILE:O	2.17	0.44
48:BQ:109:VAL:HG11	48:BQ:113:GLN:HB2	1.97	0.44
50:BS:59:LYS:HB2	50:BS:59:LYS:HE3	1.78	0.44
51:BT:91:ARG:CB	51:BT:116:ALA:HA	2.47	0.44
55:BX:14:SER:N	55:BX:17:ALA:HB3	2.33	0.44
56:BY:96:ILE:HG22	56:BY:97:ARG:N	2.32	0.44
57:BZ:5:LEU:HD13	57:BZ:59:LEU:CD2	2.47	0.44
1:AA:217:C:O2'	1:AA:470:C:N4	2.51	0.44
1:AA:219:C:C4	1:AA:220:G:C8	3.06	0.44
1:AA:509:A:N1	1:AA:510:A:C2	2.86	0.44
1:AA:523:A:H61	12:AL:53:ARG:NH1	2.15	0.44
1:AA:684:A:H2'	1:AA:685:G:H8	1.83	0.44
1:AA:728:A:C6	1:AA:729:A:N6	2.86	0.44
1:AA:756:C:H2'	1:AA:757:U:O4'	2.17	0.44
1:AA:1090:U:H4'	1:AA:1170:A:H2	1.78	0.44
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.83	0.44
1:AA:1150:U:O4	1:AA:1151:A:N6	2.51	0.44
1:AA:1197:G:OP1	1:AA:1198:G:OP2	2.36	0.44
1:AA:1309:G:C6	1:AA:1329:A:N1	2.86	0.44
1:AA:1358:U:O2'	1:AA:1359:C:H5'	2.17	0.44
1:AA:1367:C:H4'	10:AJ:48:THR:HG21	1.98	0.44
1:AA:1440:C:C2	1:AA:1462:G:C2	3.06	0.44
2:AB:24:TRP:N	2:AB:24:TRP:CD1	2.80	0.44
2:AB:214:ILE:O	2:AB:218:ALA:HB2	2.16	0.44
4:AD:133:VAL:HG12	4:AD:135:LEU:H	1.83	0.44
8:AH:34:GLU:O	8:AH:35:ILE:C	2.57	0.44
10:AJ:23:ILE:HG23	10:AJ:85:LEU:HD22	2.00	0.44
10:AJ:38:ILE:HG13	10:AJ:71:LEU:HB3	2.00	0.44
18:AR:76:LEU:C	18:AR:78:LEU:N	2.74	0.44
19:AS:35:SER:C	19:AS:37:ARG:N	2.75	0.44
24:AY:65:ILE:H	24:AY:65:ILE:HD12	1.81	0.44
24:AY:106:VAL:O	24:AY:108:PHE:HD2	2.00	0.44
24:AY:296:GLY:O	24:AY:297:GLU:HB3	2.17	0.44
24:AY:334:THR:HG23	24:AY:369:LEU:O	2.17	0.44
24:AY:568:TYR:CD2	24:AY:569:ASP:HB2	2.53	0.44
27:B2:58:ALA:O	27:B2:62:THR:N	2.43	0.44
29:B4:10:VAL:CG1	29:B4:27:THR:HA	2.47	0.44
31:B6:15:GLU:CD	31:B6:44:ARG:HH22	2.21	0.44
31:B6:27:LYS:HB3	31:B6:32:ASN:ND2	2.32	0.44
35:BA:70:G:H5"	35:BA:112:U:O2	2.18	0.44
35:BA:123:G:H8	35:BA:123:G:O5'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:290:G:C5	35:BA:291:C:C5	3.06	0.44
35:BA:443:A:H1'	35:BA:1201:C:O4'	2.18	0.44
35:BA:510:C:OP1	35:BA:511:U:OP2	2.36	0.44
35:BA:559:G:C6	35:BA:560:C:C4	3.06	0.44
35:BA:620:G:N3	35:BA:620:G:H5"	2.33	0.44
35:BA:823:G:C6	35:BA:824:A:C6	3.06	0.44
35:BA:949:C:H2'	35:BA:950:G:C8	2.49	0.44
35:BA:1133:U:O4	35:BA:2026:C:H1'	2.17	0.44
35:BA:1226:A:C2'	35:BA:1227:G:H5'	2.47	0.44
35:BA:1234:U:H2'	35:BA:1235:G:O4'	2.18	0.44
35:BA:1453:U:H2'	35:BA:1455:G:C8	2.53	0.44
35:BA:1675:C:O2	39:BE:129:HIS:HA	2.17	0.44
35:BA:1782:C:C2'	35:BA:1783:A:H5'	2.45	0.44
35:BA:1788:C:H2'	35:BA:1789:A:C8	2.51	0.44
35:BA:1798:U:O2	35:BA:1802:A:H2	2.01	0.44
35:BA:1945:G:C6	35:BA:1946:U:C4	3.06	0.44
35:BA:2370:G:H2'	35:BA:2371:G:O4'	2.18	0.44
35:BA:2406:U:N3	47:BP:72:PRO:HB2	2.32	0.44
35:BA:2781:A:H5"	35:BA:2782:G:H5'	2.00	0.44
35:BA:2837:G:H8	35:BA:2837:G:O5'	2.01	0.44
35:BA:2840:C:H2'	35:BA:2841:C:C6	2.52	0.44
39:BE:50:GLY:HA2	39:BE:78:LEU:HB3	1.98	0.44
40:BF:3:GLU:CB	40:BF:24:LEU:HG	2.47	0.44
40:BF:64:ILE:CD1	40:BF:65:TRP:CE3	3.01	0.44
40:BF:103:LYS:C	40:BF:105:VAL:N	2.76	0.44
41:BG:56:ALA:HB1	41:BG:153:ARG:NH2	2.33	0.44
46:BO:104:ARG:NE	51:BT:33:LYS:HE3	2.30	0.44
48:BQ:42:ILE:HG23	48:BQ:46:GLN:HB3	1.99	0.44
49:BR:116:LEU:O	49:BR:117:VAL:HB	2.17	0.44
52:BU:78:THR:O	52:BU:79:PHE:C	2.59	0.44
53:BV:39:LEU:N	53:BV:39:LEU:HD22	2.32	0.44
55:BX:26:TYR:N	55:BX:26:TYR:CD1	2.86	0.44
55:BX:35:THR:CG2	55:BX:36:LYS:N	2.81	0.44
55:BX:65:ARG:HG2	55:BX:66:LEU:N	2.32	0.44
56:BY:51:VAL:O	56:BY:52:SER:C	2.61	0.44
1:AA:45:U:H2'	1:AA:46:G:C8	2.53	0.44
1:AA:402:G:C5	1:AA:403:C:C5	3.06	0.44
1:AA:436:C:O2'	1:AA:437:U:P	2.76	0.44
1:AA:992:U:O2	1:AA:992:U:H2'	2.16	0.44
1:AA:1115:C:O2'	1:AA:1116:C:H5'	2.18	0.44
1:AA:1237:C:H3'	1:AA:1336:C:H41	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.18	0.44
2:AB:37:ASN:C	2:AB:39:ILE:H	2.26	0.44
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.96	0.44
2:AB:97:TRP:CZ3	2:AB:173:ALA:HA	2.52	0.44
3:AC:23:TYR:O	3:AC:24:ALA:HB2	2.18	0.44
4:AD:26:CYS:O	4:AD:31:CYS:HB2	2.17	0.44
11:AK:21:ILE:N	11:AK:21:ILE:CD1	2.79	0.44
12:AL:117:ARG:NH2	12:AL:124:LYS:HA	2.32	0.44
19:AS:72:GLY:C	19:AS:74:PHE:N	2.75	0.44
24:AY:86:GLY:O	24:AY:88:VAL:N	2.41	0.44
24:AY:214:GLU:O	24:AY:218:GLU:N	2.47	0.44
24:AY:290:LYS:HD3	24:AY:298:VAL:HG21	2.00	0.44
27:B2:67:LYS:O	27:B2:69:ARG:N	2.51	0.44
28:B3:56:VAL:CG1	28:B3:57:GLU:H	2.30	0.44
29:B4:6:HIS:HB3	29:B4:7:PRO:HD2	1.99	0.44
32:B7:48:LYS:HB3	32:B7:48:LYS:HE2	1.69	0.44
33:B8:49:VAL:O	33:B8:53:PRO:CG	2.66	0.44
35:BA:27:G:C2'	35:BA:28:A:OP2	2.66	0.44
35:BA:105:C:O2	35:BA:105:C:H2'	2.18	0.44
35:BA:272(H):C:H5'	35:BA:272(H):C:C6	2.33	0.44
35:BA:569:U:O4	35:BA:570:G:C6	2.70	0.44
35:BA:643:A:C2'	35:BA:644:A:H5'	2.47	0.44
35:BA:661:C:O3'	47:BP:18:ARG:HD2	2.18	0.44
35:BA:839:U:H2'	35:BA:840:C:H6	1.79	0.44
35:BA:960:A:H5"	35:BA:961:C:OP1	2.17	0.44
35:BA:1105:U:O5'	35:BA:1105:U:H6	2.01	0.44
35:BA:1132:A:C4	35:BA:1133:U:C5	3.06	0.44
35:BA:1141:U:OP1	45:BN:25:ARG:NH1	2.51	0.44
35:BA:1599:C:OP2	55:BX:36:LYS:HD3	2.17	0.44
35:BA:2074:U:H2'	35:BA:2075:U:H6	1.74	0.44
35:BA:2134:A:C2	35:BA:2159:G:O2'	2.67	0.44
35:BA:2467:C:O2	48:BQ:124:LYS:NZ	2.51	0.44
38:BD:67:PHE:HD1	38:BD:67:PHE:HA	1.60	0.44
38:BD:77:ALA:CB	38:BD:97:TYR:HA	2.48	0.44
39:BE:57:LYS:HE2	39:BE:63:LEU:HD11	2.00	0.44
39:BE:86:PRO:HB2	39:BE:87:GLU:H	1.63	0.44
39:BE:176:ILE:CG2	39:BE:178:GLU:HB3	2.47	0.44
40:BF:9:ILE:HG23	40:BF:13:SER:O	2.17	0.44
40:BF:16:GLY:O	40:BF:17:ARG:HG3	2.17	0.44
40:BF:69:HIS:CD2	40:BF:69:HIS:N	2.84	0.44
41:BG:181:ARG:O	41:BG:182:LYS:C	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:44:VAL:HG12	42:BH:45:VAL:H	1.82	0.44
45:BN:3:THR:HG22	45:BN:4:TYR:H	1.83	0.44
47:BP:84:ASN:CB	47:BP:86:LYS:HB3	2.48	0.44
48:BQ:56:ARG:HH21	57:BZ:180:VAL:CG2	2.29	0.44
50:BS:31:SER:HB3	50:BS:34:HIS:C	2.42	0.44
51:BT:45:PHE:HE2	51:BT:63:VAL:HB	1.82	0.44
51:BT:57:PHE:O	51:BT:58:ASN:C	2.61	0.44
52:BU:79:PHE:CE1	52:BU:83:LEU:HD21	2.52	0.44
53:BV:62:LEU:H	53:BV:62:LEU:CD2	2.29	0.44
54:BW:8:ARG:O	54:BW:9:TYR:C	2.61	0.44
55:BX:7:VAL:HG12	55:BX:8:ILE:CG1	2.48	0.44
55:BX:64:LYS:NZ	55:BX:73:ARG:NH2	2.66	0.44
56:BY:31:LEU:H	56:BY:31:LEU:CD2	2.31	0.44
56:BY:31:LEU:HB2	56:BY:32:PRO:HA	2.00	0.44
1:AA:303:A:H2'	1:AA:304:U:O4'	2.17	0.44
1:AA:315:A:O2'	1:AA:316:G:OP2	2.36	0.44
1:AA:563:A:N7	1:AA:567:G:H1'	2.33	0.44
1:AA:597:G:H1'	1:AA:644:G:N2	2.32	0.44
1:AA:645:C:H2'	1:AA:646:U:C6	2.53	0.44
1:AA:817:C:C5	1:AA:819:A:H1'	2.52	0.44
1:AA:973:G:O4'	10:AJ:55:LYS:HE2	2.18	0.44
1:AA:977:A:C2'	1:AA:978:A:H5'	2.48	0.44
1:AA:1206:G:O2'	1:AA:1207:G:H5'	2.17	0.44
1:AA:1287:A:C6	1:AA:1288:A:C6	3.05	0.44
1:AA:1359:C:OP2	14:AN:22:THR:HG21	2.18	0.44
1:AA:1440:C:C2'	1:AA:1441:G:H5'	2.48	0.44
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.95	0.44
2:AB:25:ASN:HA	2:AB:26:PRO:HD2	1.87	0.44
3:AC:34:LEU:CD2	3:AC:34:LEU:O	2.66	0.44
3:AC:42:LEU:O	3:AC:42:LEU:HD12	2.18	0.44
4:AD:100:ARG:HB3	4:AD:102:ASP:OD1	2.17	0.44
6:AF:87:ARG:CG	6:AF:87:ARG:NH1	2.77	0.44
8:AH:86:ILE:HG21	8:AH:133:LEU:HD22	1.99	0.44
8:AH:100:ILE:HD11	8:AH:112:LEU:HD11	1.99	0.44
17:AQ:18:THR:HG23	17:AQ:69:LYS:HE3	2.00	0.44
20:AT:33:ILE:HG21	20:AT:63:ILE:HG12	1.99	0.44
20:AT:73:HIS:HB3	20:AT:74:LYS:H	1.54	0.44
22:AV:41:C:O2'	22:AV:42:G:H5'	2.17	0.44
24:AY:9:LEU:C	24:AY:11:ARG:N	2.74	0.44
26:B1:4:VAL:CG2	26:B1:10:LYS:O	2.62	0.44
27:B2:48:HIS:CD2	35:BA:96:G:H4'	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:23:GLU:C	29:B4:24:THR:CG2	2.90	0.44
33:B8:29:LYS:HD2	33:B8:44:LYS:CG	2.39	0.44
35:BA:201:C:C5	35:BA:202:U:H5	2.33	0.44
35:BA:245:G:H5'	47:BP:73:GLY:HA2	2.00	0.44
35:BA:271(E):U:H3	35:BA:271(S):G:H1	1.66	0.44
35:BA:298:G:O5'	35:BA:298:G:H8	2.01	0.44
35:BA:361:G:H3'	35:BA:362:U:H5"	2.00	0.44
35:BA:496:G:H2'	35:BA:497:A:O4'	2.18	0.44
35:BA:811:U:HO2'	35:BA:812:C:H5"	1.83	0.44
35:BA:861:A:C2	35:BA:917:A:C4	3.05	0.44
35:BA:910:A:C6	35:BA:911:A:C6	3.06	0.44
35:BA:1499:C:H2'	35:BA:1500:G:O4'	2.17	0.44
35:BA:1600:C:O2	35:BA:1600:C:C2'	2.65	0.44
35:BA:2172:U:H1'	35:BA:2173:A:OP1	2.18	0.44
35:BA:2818:G:N2	35:BA:2829:C:C2	2.86	0.44
35:BA:2843:G:C2	35:BA:2875:C:N3	2.86	0.44
35:BA:2868:A:N6	35:BA:2869:G:C6	2.86	0.44
36:BB:38:C:O2	36:BB:48:A:H1'	2.16	0.44
37:BC:22:THR:O	37:BC:23:ILE:C	2.56	0.44
37:BC:54:ARG:O	37:BC:55:SER:C	2.56	0.44
37:BC:132:LEU:HB3	37:BC:137:LEU:C	2.42	0.44
41:BG:102:PHE:O	41:BG:105:LYS:N	2.49	0.44
42:BH:42:ARG:HH11	42:BH:42:ARG:CG	2.31	0.44
42:BH:65:HIS:HE1	42:BH:69:ARG:NH1	2.16	0.44
45:BN:57:ALA:CB	45:BN:124:ALA:HA	2.48	0.44
46:BO:22:ILE:O	46:BO:23:ARG:HB3	2.17	0.44
46:BO:47:ILE:O	46:BO:48:PRO:O	2.35	0.44
47:BP:13:ASN:HD22	47:BP:13:ASN:N	2.14	0.44
47:BP:122:PRO:HG3	47:BP:141:ALA:HB3	1.98	0.44
48:BQ:74:TYR:HD1	48:BQ:74:TYR:HA	1.61	0.44
48:BQ:76:LYS:HB3	48:BQ:91:GLU:HG3	2.00	0.44
49:BR:18:LEU:C	49:BR:20:LEU:N	2.76	0.44
49:BR:39:PRO:O	49:BR:40:LYS:C	2.61	0.44
51:BT:29:ARG:HA	51:BT:29:ARG:HD2	1.68	0.44
51:BT:132:LYS:HG2	51:BT:133:GLU:H	1.83	0.44
52:BU:55:ARG:HA	52:BU:58:ARG:HB2	1.98	0.44
52:BU:59:ARG:HG2	52:BU:59:ARG:NH1	2.30	0.44
53:BV:28:GLU:HB2	53:BV:31:ALA:HB3	1.97	0.44
1:AA:756:C:O2'	1:AA:757:U:H5'	2.18	0.43
1:AA:1217:C:H5'	14:AN:9:LYS:HE2	1.99	0.43
1:AA:1305:G:H22	1:AA:1331:G:C2'	2.27	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.47	0.43
2:AB:46:LYS:O	2:AB:47:THR:C	2.61	0.43
3:AC:150:LYS:O	3:AC:151:VAL:HG23	2.17	0.43
5:AE:145:LYS:HB2	8:AH:107:LEU:HD21	2.00	0.43
9:AI:93:ARG:C	9:AI:95:LYS:N	2.76	0.43
12:AL:75:HIS:CD2	12:AL:77:LEU:CB	2.99	0.43
12:AL:111:LYS:O	12:AL:112:ASP:CB	2.60	0.43
13:AM:91:ARG:NH2	19:AS:81:ARG:NH2	2.66	0.43
15:AO:82:ILE:HG12	15:AO:87:ILE:CG1	2.46	0.43
20:AT:84:LEU:O	20:AT:86:ARG:N	2.50	0.43
22:AV:17:C:C5	22:AV:17(A):U:O4	2.70	0.43
23:AX:11:U:H2'	23:AX:11:U:O2	2.18	0.43
24:AY:78:ARG:HH11	24:AY:78:ARG:HG3	1.82	0.43
24:AY:153:MET:HA	24:AY:157:LEU:HD21	1.99	0.43
24:AY:223:PHE:CE1	24:AY:249:GLY:HA2	2.53	0.43
24:AY:334:THR:CG2	24:AY:370:LYS:HG2	2.46	0.43
24:AY:530:VAL:CG1	24:AY:531:GLY:N	2.66	0.43
24:AY:573:HIS:HD2	24:AY:575:VAL:H	1.66	0.43
24:AY:612:THR:HA	24:AY:613:PRO:HD3	1.89	0.43
25:B0:9:SER:OG	25:B0:10:THR:N	2.51	0.43
26:B1:67:ILE:N	26:B1:68:PRO:CD	2.75	0.43
29:B4:23:GLU:O	29:B4:24:THR:CG2	2.66	0.43
31:B6:25:LYS:O	35:BA:2286:A:N1	2.50	0.43
32:B7:33:ARG:HB2	32:B7:33:ARG:NH1	2.33	0.43
33:B8:25:MET:HG3	47:BP:64:LYS:HB2	2.00	0.43
33:B8:56:GLU:O	33:B8:58:ILE:N	2.51	0.43
35:BA:190:A:H3'	35:BA:204:A:H61	1.83	0.43
35:BA:464:U:C4	35:BA:788:A:N7	2.86	0.43
35:BA:570:G:O6	35:BA:2499:C:OP1	2.36	0.43
35:BA:631:A:H1'	35:BA:2415:G:O2'	2.17	0.43
35:BA:650:C:H2'	35:BA:651:G:H5"	2.00	0.43
35:BA:654(P):C:O2'	35:BA:654(Q):C:H5'	2.18	0.43
35:BA:805:G:H4'	35:BA:806:C:OP2	2.18	0.43
35:BA:826:U:OP1	35:BA:2428:G:H5"	2.18	0.43
35:BA:999:U:H5"	35:BA:1154:G:O6	2.18	0.43
35:BA:1042:G:H2'	35:BA:1043:C:C6	2.53	0.43
35:BA:1052:C:O2'	35:BA:1053:C:P	2.76	0.43
35:BA:1057:A:H2'	35:BA:1058:G:H8	1.83	0.43
35:BA:1270:C:H5"	35:BA:1271:G:C5'	2.48	0.43
35:BA:1555:G:N3	35:BA:1555:G:H2'	2.33	0.43
35:BA:1858:G:H8	35:BA:1858:G:OP2	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1893:C:H2'	35:BA:1894:C:H5'	2.00	0.43
35:BA:1902:C:C5'	38:BD:246:PRO:HD3	2.48	0.43
35:BA:1931:U:O2'	35:BA:1932:A:H5'	2.18	0.43
35:BA:1998:G:OP2	39:BE:136:ARG:NH2	2.41	0.43
35:BA:2064:C:H1'	35:BA:2450:A:C6	2.52	0.43
35:BA:2404:C:H2'	35:BA:2405:G:O4'	2.18	0.43
35:BA:2453:A:H2'	35:BA:2454:G:H8	1.83	0.43
35:BA:2539:C:O2	35:BA:2539:C:C2'	2.66	0.43
35:BA:2574:G:H2'	35:BA:2575:C:C6	2.52	0.43
35:BA:2657:A:H3'	35:BA:2658:C:H6	1.83	0.43
35:BA:2682:U:C6	39:BE:11:MET:HE2	2.53	0.43
35:BA:2745:C:H4'	42:BH:142:GLY:O	2.17	0.43
36:BB:29:A:H3'	50:BS:32:LEU:HD11	2.00	0.43
36:BB:81:G:N3	36:BB:81:G:C5'	2.81	0.43
36:BB:96:U:N3	36:BB:97:G:N7	2.65	0.43
39:BE:188:VAL:CG2	39:BE:189:PRO:HD2	2.48	0.43
40:BF:24:LEU:CB	40:BF:25:PRO:HD2	2.29	0.43
41:BG:31:VAL:CG2	41:BG:32:PRO:CD	2.93	0.43
41:BG:34:LEU:HD13	41:BG:99:MET:HE2	2.00	0.43
41:BG:106:LEU:HD12	41:BG:110:ALA:CB	2.48	0.43
42:BH:159:GLU:O	42:BH:160:LYS:O	2.35	0.43
43:BK:48:MET:H	43:BK:48:MET:HG3	1.68	0.43
43:BK:134:MET:HG3	43:BK:136:VAL:HG12	2.00	0.43
45:BN:65:LYS:CB	45:BN:69:GLN:HG3	2.40	0.43
45:BN:122:VAL:CG1	45:BN:123:TYR:N	2.76	0.43
47:BP:125:VAL:O	47:BP:125:VAL:HG13	2.17	0.43
50:BS:56:LEU:C	50:BS:58:LEU:N	2.75	0.43
51:BT:118:ARG:HG2	51:BT:121:ILE:HD12	2.00	0.43
52:BU:91:ASP:O	52:BU:95:LEU:HB2	2.18	0.43
53:BV:49:THR:HB	53:BV:50:PRO:CD	2.48	0.43
54:BW:68:ARG:CA	54:BW:110:LYS:HG2	2.47	0.43
57:BZ:96:VAL:HG22	57:BZ:97:GLU:N	2.33	0.43
1:AA:59:A:H4'	1:AA:388:G:OP1	2.18	0.43
1:AA:926:G:C6	1:AA:1505:G:C6	3.06	0.43
1:AA:980:C:H2'	1:AA:981:U:H5'	1.99	0.43
1:AA:1030:C:N4	1:AA:1032:G:C2	2.86	0.43
1:AA:1313:U:OP2	19:AS:6:LYS:CB	2.66	0.43
1:AA:1478:C:H2'	1:AA:1479:C:H6	1.83	0.43
2:AB:117:GLU:O	2:AB:120:ALA:N	2.49	0.43
3:AC:13:GLY:HA3	14:AN:57:ARG:HH21	1.82	0.43
3:AC:53:ALA:O	3:AC:54:ARG:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:156:TRP:OXT	7:AG:156:TRP:CG	2.70	0.43
8:AH:1:MET:N	8:AH:1:MET:CE	2.70	0.43
8:AH:9:MET:O	8:AH:13:ILE:HG12	2.18	0.43
8:AH:104:ARG:NH2	8:AH:138:TRP:CH2	2.86	0.43
10:AJ:22:LYS:C	10:AJ:24:VAL:H	2.26	0.43
10:AJ:98:ILE:C	10:AJ:99:LYS:HG2	2.43	0.43
14:AN:8:GLU:O	14:AN:11:LYS:N	2.49	0.43
22:AV:7:G:H3'	22:AV:8:U:C5'	2.47	0.43
22:AV:38:A:H2'	22:AV:39:C:O4'	2.18	0.43
24:AY:162:VAL:O	24:AY:164:MET:HG2	2.18	0.43
24:AY:349:LYS:HB3	24:AY:349:LYS:HE3	1.72	0.43
24:AY:490:PRO:CG	24:AY:516:PRO:HD2	2.30	0.43
24:AY:549:ALA:O	24:AY:551:GLN:N	2.51	0.43
27:B2:35:LEU:HD23	27:B2:35:LEU:C	2.42	0.43
27:B2:43:GLN:HB2	27:B2:44:LEU:CD2	2.48	0.43
28:B3:10:LYS:HB3	28:B3:53:LEU:HD22	1.99	0.43
30:B5:5:PRO:C	30:B5:6:VAL:CG2	2.91	0.43
31:B6:30:THR:O	31:B6:32:ASN:N	2.50	0.43
31:B6:43:CYS:O	31:B6:44:ARG:CB	2.61	0.43
35:BA:141:A:H8	35:BA:1409:C:H5'	1.82	0.43
35:BA:149:A:H2'	35:BA:150:C:O4'	2.18	0.43
35:BA:315:G:C5	35:BA:316:C:C4	3.06	0.43
35:BA:325:G:H2'	35:BA:326:G:C8	2.52	0.43
35:BA:345:A:H5'	35:BA:346:A:OP1	2.18	0.43
35:BA:763:G:C4	35:BA:765:G:C8	3.05	0.43
35:BA:847:U:H3	35:BA:934:G:N2	2.16	0.43
35:BA:1101:U:H2'	35:BA:1102:C:C6	2.53	0.43
35:BA:1245:G:H5'	40:BF:34:TRP:CZ2	2.53	0.43
35:BA:1341:U:H4'	55:BX:57:LEU:HB3	2.00	0.43
35:BA:1518:U:H2'	35:BA:1519:G:O4'	2.18	0.43
35:BA:1799:G:H8	38:BD:181:GLU:OE1	2.01	0.43
35:BA:1884:A:C3'	35:BA:1885:A:H5"	2.48	0.43
35:BA:2101:G:C6	35:BA:2102:U:N3	2.86	0.43
35:BA:2192:G:H2'	35:BA:2192:G:N3	2.31	0.43
35:BA:2305:A:H5"	41:BG:134:GLY:HA3	2.00	0.43
36:BB:30:C:H2'	36:BB:31:C:O4'	2.18	0.43
36:BB:85:G:C6	36:BB:93:G:C6	3.06	0.43
37:BC:72:GLN:HB3	37:BC:74:ARG:HH12	1.82	0.43
39:BE:46:ALA:HA	39:BE:82:ARG:O	2.18	0.43
40:BF:84:VAL:CG1	40:BF:85:GLY:H	1.91	0.43
40:BF:157:VAL:HA	40:BF:176:LEU:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:195:ASP:CG	40:BF:196:LEU:H	2.25	0.43
42:BH:92:ILE:O	42:BH:94:TYR:N	2.44	0.43
42:BH:146:ALA:HA	42:BH:149:ARG:HB3	2.00	0.43
45:BN:38:HIS:C	52:BU:67:ALA:HB1	2.43	0.43
47:BP:94:GLU:HG3	47:BP:124:LYS:O	2.17	0.43
47:BP:99:LEU:O	47:BP:103:ALA:HB2	2.18	0.43
48:BQ:9:TYR:CD1	48:BQ:9:TYR:N	2.86	0.43
50:BS:29:PHE:CD1	50:BS:29:PHE:C	2.93	0.43
50:BS:99:LYS:O	50:BS:101:LEU:N	2.51	0.43
55:BX:35:THR:O	55:BX:39:ILE:N	2.41	0.43
56:BY:52:SER:N	56:BY:53:PRO:HD2	2.33	0.43
1:AA:91:C:OP2	1:AA:91:C:H6	2.01	0.43
1:AA:384:G:H2'	1:AA:385:C:H6	1.82	0.43
1:AA:520:A:H2'	1:AA:521:G:O4'	2.17	0.43
1:AA:738:C:OP1	6:AF:4:TYR:OH	2.36	0.43
1:AA:748:C:OP2	1:AA:748:C:C6	2.68	0.43
1:AA:1065:U:O2	1:AA:1065:U:H2'	2.17	0.43
1:AA:1352:C:OP1	21:AU:3:LYS:HE2	2.17	0.43
2:AB:194:PRO:HG2	2:AB:195:ASP:H	1.83	0.43
3:AC:77:ILE:O	3:AC:77:ILE:CG2	2.65	0.43
6:AF:36:ARG:CB	6:AF:36:ARG:HH11	2.31	0.43
6:AF:37:VAL:CG1	6:AF:38:GLU:H	2.27	0.43
8:AH:87:SER:HB2	8:AH:93:VAL:HB	2.00	0.43
15:AO:56:LEU:O	15:AO:59:MET:HB3	2.18	0.43
16:AP:15:PRO:O	16:AP:16:HIS:ND1	2.49	0.43
19:AS:52:TYR:HB2	19:AS:57:HIS:ND1	2.33	0.43
20:AT:26:ASN:HA	20:AT:29:LYS:HG2	1.99	0.43
25:B0:49:LYS:HE3	25:B0:80:HIS:CG	2.53	0.43
25:B0:66:VAL:CG2	25:B0:84:LEU:HD23	2.46	0.43
27:B2:3:LEU:O	27:B2:7:ARG:NH1	2.52	0.43
28:B3:43:ILE:HG12	28:B3:43:ILE:H	1.62	0.43
29:B4:5:ILE:N	29:B4:5:ILE:CD1	2.81	0.43
30:B5:55:ARG:NH1	49:BR:113:LEU:HD21	2.33	0.43
35:BA:120:U:O2'	35:BA:149:A:C8	2.69	0.43
35:BA:200:U:H2'	35:BA:201:C:H5'	2.00	0.43
35:BA:271(H):G:H1	35:BA:271(P):C:N4	2.16	0.43
35:BA:272(I):U:C4	35:BA:363(A):A:N1	2.79	0.43
35:BA:821:A:O2'	35:BA:945:A:H3'	2.19	0.43
35:BA:848:G:H5"	35:BA:928:G:N2	2.33	0.43
35:BA:1037:G:C2	35:BA:1119:C:N3	2.86	0.43
35:BA:1118:C:C6	35:BA:1118:C:C3'	3.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1161:C:H2'	35:BA:1162:G:C8	2.53	0.43
35:BA:1204:A:H61	35:BA:1240:U:H2'	1.83	0.43
35:BA:1344:G:H4'	35:BA:1384:A:C5	2.53	0.43
35:BA:1638:C:O2'	35:BA:1639:U:H5'	2.18	0.43
35:BA:1639:U:H2'	35:BA:1640:C:H5'	1.99	0.43
35:BA:2202:C:H2'	38:BD:151:LYS:HZ3	1.81	0.43
35:BA:2206:G:N2	35:BA:2207:G:H5'	2.33	0.43
35:BA:2361:A:H2'	35:BA:2361:A:N3	2.33	0.43
35:BA:2790:A:N3	35:BA:2791:C:H5"	2.33	0.43
36:BB:63:G:C2	36:BB:64:C:C2	3.06	0.43
37:BC:226:ASN:HA	37:BC:227:PRO:HD2	1.61	0.43
38:BD:213:ARG:C	38:BD:215:LEU:N	2.77	0.43
39:BE:23:VAL:HG12	39:BE:184:VAL:O	2.19	0.43
40:BF:103:LYS:HA	40:BF:106:ARG:CG	2.47	0.43
40:BF:157:VAL:CG2	40:BF:194:MET:CG	2.80	0.43
41:BG:77:ILE:O	41:BG:78:SER:C	2.60	0.43
42:BH:149:ARG:HG3	42:BH:162:ILE:O	2.18	0.43
42:BH:171:LEU:HD23	42:BH:171:LEU:O	2.15	0.43
47:BP:71:VAL:H	47:BP:72:PRO:HD3	1.84	0.43
47:BP:106:LEU:O	47:BP:107:LYS:CG	2.58	0.43
49:BR:88:ARG:HD2	49:BR:88:ARG:C	2.43	0.43
51:BT:8:LYS:C	51:BT:10:VAL:N	2.75	0.43
51:BT:30:VAL:HG22	51:BT:84:GLN:O	2.18	0.43
51:BT:65:LYS:CE	51:BT:65:LYS:CA	2.96	0.43
52:BU:79:PHE:O	52:BU:79:PHE:HD1	2.01	0.43
53:BV:82:ARG:C	53:BV:83:ARG:HG2	2.43	0.43
1:AA:43:C:O5'	1:AA:43:C:H6	2.02	0.43
1:AA:160:A:H2'	1:AA:161:A:C5'	2.48	0.43
1:AA:197:A:N6	1:AA:221:C:H4'	2.33	0.43
1:AA:398:C:H2'	1:AA:399:G:C8	2.53	0.43
1:AA:488:C:O5'	1:AA:488:C:H6	2.01	0.43
1:AA:504:C:O5'	1:AA:504:C:H6	2.01	0.43
1:AA:819:A:H4'	1:AA:820:U:OP2	2.17	0.43
1:AA:859:A:H2'	1:AA:860:A:O4'	2.18	0.43
1:AA:942:G:H2'	1:AA:943:U:C6	2.53	0.43
1:AA:1347:G:H1'	1:AA:1348:U:H5	1.83	0.43
5:AE:124:GLY:O	5:AE:125:SER:C	2.61	0.43
9:AI:96:LEU:HA	9:AI:96:LEU:HD12	1.77	0.43
10:AJ:81:THR:C	10:AJ:83:GLU:H	2.25	0.43
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.98	0.43
15:AO:23:GLY:O	15:AO:24:SER:O	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:63:GLN:OE1	18:AR:63:GLN:HA	2.18	0.43
19:AS:41:VAL:O	19:AS:43:GLU:N	2.52	0.43
24:AY:66:THR:O	24:AY:67:ALA:CB	2.63	0.43
24:AY:86:GLY:O	24:AY:87:HIS:HB3	2.18	0.43
24:AY:166:LEU:HD12	24:AY:166:LEU:N	2.34	0.43
24:AY:314:PHE:CD1	24:AY:315:LYS:HB2	2.47	0.43
24:AY:610:VAL:HG23	24:AY:610:VAL:O	2.17	0.43
26:B1:51:VAL:HG12	26:B1:58:ILE:HG23	1.99	0.43
30:B5:7:PRO:HA	35:BA:2615:U:N1	2.33	0.43
31:B6:42:TRP:NE1	35:BA:643:A:OP1	2.51	0.43
33:B8:16:ILE:HD12	33:B8:57:ARG:HG2	2.00	0.43
33:B8:34:TRP:HB2	35:BA:2420:C:OP1	2.19	0.43
35:BA:27:G:H1'	35:BA:513:A:N6	2.32	0.43
35:BA:88:G:H5"	35:BA:90:U:C4	2.54	0.43
35:BA:140:G:N3	35:BA:142:A:N1	2.66	0.43
35:BA:231:C:O2'	35:BA:232:G:H5'	2.18	0.43
35:BA:244:A:H4'	47:BP:74:GLU:HB2	2.00	0.43
35:BA:422:A:C2	35:BA:423:A:C4	3.06	0.43
35:BA:676:A:C8	35:BA:2443:C:H1'	2.53	0.43
35:BA:724:U:H2'	35:BA:725:G:H5'	2.00	0.43
35:BA:881:G:C2'	35:BA:882:G:H5'	2.48	0.43
35:BA:972:G:OP2	35:BA:974:G:H5"	2.18	0.43
35:BA:1081:U:H4'	43:BK:117:THR:CG2	2.49	0.43
35:BA:1167:U:C2	35:BA:1183:G:N2	2.86	0.43
35:BA:1183:G:C8	35:BA:1183:G:C3'	3.02	0.43
35:BA:1416:G:O2'	35:BA:1417:C:H5	2.00	0.43
35:BA:1431:U:O5'	35:BA:1431:U:H6	2.01	0.43
35:BA:1505:C:H3'	35:BA:1506:C:H6	1.83	0.43
35:BA:1775:U:O2'	35:BA:1776:G:H5'	2.18	0.43
35:BA:1941:C:N4	35:BA:1942:C:N4	2.66	0.43
35:BA:2392:A:C2	35:BA:2429:G:C2	3.06	0.43
35:BA:2461:C:O2	35:BA:2461:C:C2'	2.67	0.43
35:BA:2784:C:O5'	35:BA:2784:C:H6	2.01	0.43
35:BA:2846:G:H2'	35:BA:2847:U:O4'	2.18	0.43
36:BB:86:G:C6	36:BB:87:G:C6	3.07	0.43
38:BD:138:VAL:HG23	38:BD:165:ILE:HG22	1.99	0.43
39:BE:102:VAL:HG23	39:BE:104:VAL:HG23	2.00	0.43
40:BF:111:ALA:O	40:BF:112:MET:C	2.60	0.43
44:BL:110:LEU:CB	44:BL:117:VAL:HG21	2.48	0.43
46:BO:114:ILE:O	46:BO:117:LEU:N	2.41	0.43
47:BP:23:PRO:HD2	47:BP:33:ARG:HH21	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:99:LEU:HA	47:BP:102:ARG:HH22	1.83	0.43
47:BP:122:PRO:HA	47:BP:141:ALA:O	2.19	0.43
48:BQ:54:MET:HE3	48:BQ:64:ILE:HG21	2.01	0.43
50:BS:56:LEU:O	50:BS:58:LEU:N	2.52	0.43
51:BT:8:LYS:C	51:BT:10:VAL:H	2.25	0.43
51:BT:20:PRO:O	51:BT:21:GLU:C	2.61	0.43
51:BT:89:VAL:HB	51:BT:91:ARG:HG3	2.00	0.43
52:BU:101:ARG:C	52:BU:102:GLU:HG2	2.42	0.43
54:BW:41:LYS:C	54:BW:43:GLY:H	2.26	0.43
55:BX:8:ILE:HD11	55:BX:42:ALA:O	2.17	0.43
55:BX:52:VAL:O	55:BX:52:VAL:HG12	2.18	0.43
1:AA:439:A:C4	1:AA:496:A:C2	3.06	0.43
1:AA:571:U:O5’	1:AA:571:U:H6	2.01	0.43
1:AA:1006:C:H6	1:AA:1006:C:H3’	1.82	0.43
1:AA:1053:G:H4’	1:AA:1054:C:H5’	2.00	0.43
1:AA:1149:C:H2’	1:AA:1150:U:C6	2.53	0.43
1:AA:1178:G:N2	1:AA:1180:A:H3’	2.34	0.43
1:AA:1220:G:H2’	1:AA:1221:G:C8	2.48	0.43
1:AA:1296:C:H3’	1:AA:1297:C:H6	1.83	0.43
1:AA:1319:A:OP1	19:AS:10:PHE:CZ	2.70	0.43
3:AC:29:TYR:C	3:AC:29:TYR:CD2	2.96	0.43
4:AD:159:ARG:O	4:AD:162:LEU:N	2.51	0.43
5:AE:77:PRO:HG2	5:AE:78:HIS:H	1.83	0.43
7:AG:152:ALA:O	7:AG:155:ARG:HG3	2.18	0.43
9:AI:43:ALA:C	9:AI:45:ALA:N	2.76	0.43
10:AJ:33:GLN:H	10:AJ:75:ILE:HD11	1.81	0.43
10:AJ:55:LYS:O	10:AJ:56:HIS:CG	2.72	0.43
13:AM:106:ASN:HB3	13:AM:107:ALA:H	1.54	0.43
14:AN:43:CYS:O	14:AN:44:LEU:C	2.60	0.43
18:AR:19:LYS:N	18:AR:55:ARG:HD2	2.34	0.43
19:AS:58:VAL:HA	19:AS:59:PRO:HD2	1.89	0.43
19:AS:65:ASN:HA	29:B4:48:ARG:NH2	2.33	0.43
24:AY:5:VAL:O	24:AY:7:TYR:N	2.51	0.43
24:AY:166:LEU:CD1	24:AY:180:VAL:HG13	2.49	0.43
24:AY:168:ILE:HG23	24:AY:205:TYR:CE2	2.53	0.43
27:B2:2:LYS:CB	35:BA:97:C:H5”	2.43	0.43
27:B2:40:SER:C	27:B2:42:GLY:H	2.27	0.43
27:B2:59:ARG:HA	27:B2:62:THR:HB	2.01	0.43
28:B3:45:GLY:HA3	35:BA:851:U:HO2’	1.79	0.43
30:B5:26:THR:HA	30:B5:27:PRO:HD3	1.77	0.43
31:B6:45:LYS:HG2	35:BA:2371:G:C5’	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B7:40:TRP:CD2	35:BA:459:U:H5'	2.53	0.43
35:BA:130:C:O3'	35:BA:1349:A:H1'	2.17	0.43
35:BA:440:G:N2	40:BF:46:ARG:NH2	2.67	0.43
35:BA:600:G:H2'	35:BA:601:C:H6	1.83	0.43
35:BA:603:A:O2'	35:BA:604:G:OP2	2.33	0.43
35:BA:654(B):C:H2'	35:BA:654(C):G:C8	2.54	0.43
35:BA:708:C:O5'	35:BA:708:C:H6	2.02	0.43
35:BA:733:G:O6	35:BA:761:A:C8	2.71	0.43
35:BA:845:G:O2'	35:BA:846:C:C5	2.69	0.43
35:BA:847:U:N3	35:BA:934:G:N2	2.66	0.43
35:BA:997:G:O2'	35:BA:998:C:H5'	2.19	0.43
35:BA:1064:C:C1'	43:BK:89:HIS:HA	2.48	0.43
35:BA:1070:A:H5'	35:BA:1072:C:P	2.59	0.43
35:BA:1078:U:H1'	35:BA:1088:A:H5"	2.00	0.43
35:BA:1451:C:H4'	35:BA:1452:A:C8	2.54	0.43
35:BA:1471:A:C2	35:BA:1472:A:C5	3.06	0.43
35:BA:1665:A:H4'	46:BO:67:LYS:HB2	2.00	0.43
35:BA:2126:A:H1'	35:BA:2127:G:O4'	2.18	0.43
35:BA:2305:A:O2'	41:BG:136:ARG:HG2	2.18	0.43
35:BA:2485:G:C2	35:BA:2486:G:C8	3.07	0.43
35:BA:2786:U:O2'	39:BE:62:PRO:HA	2.18	0.43
36:BB:81:G:C6	36:BB:97:G:C2	3.07	0.43
37:BC:76:LEU:HD21	37:BC:104:ILE:CD1	2.48	0.43
38:BD:206:LEU:HD13	38:BD:212:SER:OG	2.19	0.43
41:BG:77:ILE:HG21	41:BG:80:PHE:HB3	1.99	0.43
42:BH:154:PRO:HB2	42:BH:155:SER:H	1.56	0.43
44:BL:85:ASP:O	44:BL:86:LEU:C	2.60	0.43
45:BN:38:HIS:CE1	45:BN:50:ASP:OD2	2.71	0.43
47:BP:84:ASN:HB3	47:BP:86:LYS:H	1.83	0.43
51:BT:29:ARG:HG3	51:BT:30:VAL:N	2.32	0.43
54:BW:26:GLY:HA2	54:BW:71:VAL:O	2.18	0.43
55:BX:71:GLY:C	55:BX:72:LYS:HG3	2.43	0.43
56:BY:54:LYS:NZ	56:BY:55:TYR:HE1	2.15	0.43
57:BZ:50:GLN:O	57:BZ:52:SER:N	2.51	0.43
1:AA:58:C:C6	1:AA:58:C:H3'	2.53	0.43
1:AA:68:G:O4'	1:AA:171:A:H1'	2.18	0.43
1:AA:308:C:H2'	1:AA:309:G:H8	1.84	0.43
1:AA:340:U:C2	1:AA:350:G:N2	2.87	0.43
1:AA:472:A:C1'	16:AP:82:GLN:HE22	2.31	0.43
1:AA:793:U:H5'	1:AA:794:A:H5'	2.00	0.43
1:AA:807:A:H2'	1:AA:808:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:961:U:H2'	1:AA:962:C:C5'	2.49	0.43
1:AA:980:C:C5	1:AA:981:U:N1	2.86	0.43
2:AB:166:ASP:OD1	2:AB:205:ASP:OD2	2.37	0.43
3:AC:92:ALA:C	3:AC:94:LEU:H	2.26	0.43
4:AD:92:VAL:HG12	4:AD:96:LEU:HD21	2.00	0.43
6:AF:4:TYR:HE1	6:AF:92:LYS:HD2	1.84	0.43
8:AH:54:ASP:O	8:AH:56:LYS:HG3	2.19	0.43
8:AH:88:LYS:CB	8:AH:89:PRO:HD2	2.47	0.43
8:AH:96:GLY:O	8:AH:97:VAL:C	2.61	0.43
10:AJ:79:ARG:HD3	10:AJ:79:ARG:HA	1.55	0.43
11:AK:120:ARG:NH1	11:AK:126:ARG:NE	2.66	0.43
17:AQ:52:LYS:HD2	17:AQ:55:ASP:OD2	2.17	0.43
22:AV:5:G:N2	22:AV:69:C:N3	2.65	0.43
24:AY:17:ILE:N	24:AY:17:ILE:HD12	2.33	0.43
24:AY:304:ASP:C	24:AY:306:ASN:N	2.76	0.43
24:AY:308:PRO:O	24:AY:332:SER:OG	2.28	0.43
26:B1:11:ARG:HB2	26:B1:12:PRO:HD2	1.99	0.43
31:B6:37:ARG:NH2	35:BA:2286:A:N6	2.65	0.43
35:BA:87:C:P	35:BA:90:U:O4	2.76	0.43
35:BA:112:U:H2'	35:BA:113:G:H5'	2.01	0.43
35:BA:123:G:C6	35:BA:124:G:C5	3.06	0.43
35:BA:208:C:C2	35:BA:209:C:C5	3.07	0.43
35:BA:287:C:O2'	35:BA:288:C:H5'	2.19	0.43
35:BA:333:G:H2'	35:BA:333:G:N3	2.33	0.43
35:BA:418:G:H2'	35:BA:419:C:H6	1.83	0.43
35:BA:482:A:H1'	35:BA:498:G:N2	2.34	0.43
35:BA:579:G:C2	35:BA:1262:A:C4	3.07	0.43
35:BA:626:U:O2	47:BP:105:LEU:HG	2.19	0.43
35:BA:729:G:C5	38:BD:208:LYS:HB2	2.53	0.43
35:BA:903:C:C3'	35:BA:904:C:H5"	2.47	0.43
35:BA:1052:C:O2'	35:BA:1053:C:C5'	2.67	0.43
35:BA:1204:A:C2	35:BA:1241:A:N1	2.86	0.43
35:BA:1526:G:H2'	35:BA:1527:G:C8	2.53	0.43
35:BA:1778:U:H2'	35:BA:1784:A:N6	2.33	0.43
35:BA:1889:A:H1'	35:BA:2087:G:O4'	2.19	0.43
35:BA:1948:G:C2'	35:BA:1949:G:H5'	2.46	0.43
35:BA:2055:C:C4'	35:BA:2056:G:H5"	2.42	0.43
35:BA:2246:G:H2'	35:BA:2247:A:C8	2.53	0.43
35:BA:2262:U:O2'	35:BA:2263:C:H5"	2.18	0.43
35:BA:2693:A:C6	35:BA:2717:G:C6	3.06	0.43
35:BA:2751:G:OP1	35:BA:2751:G:N2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2776:A:C6	35:BA:2782:G:H1'	2.54	0.43
36:BB:46:A:C6	36:BB:47:C:N3	2.87	0.43
38:BD:126:GLN:O	38:BD:127:VAL:C	2.62	0.43
39:BE:24:THR:HG23	39:BE:184:VAL:HG23	2.01	0.43
39:BE:28:ALA:HB3	39:BE:93:VAL:HG22	2.01	0.43
39:BE:45:THR:O	39:BE:46:ALA:CB	2.62	0.43
39:BE:101:ARG:HE	39:BE:171:GLU:HB2	1.75	0.43
39:BE:166:THR:O	39:BE:167:VAL:C	2.61	0.43
40:BF:20:LEU:O	40:BF:24:LEU:HD23	2.18	0.43
40:BF:107:LYS:O	40:BF:110:LEU:HB3	2.18	0.43
44:BL:94:LEU:O	44:BL:95:LYS:HG2	2.18	0.43
46:BO:23:ARG:HE	46:BO:23:ARG:HB2	1.24	0.43
47:BP:102:ARG:HH11	47:BP:102:ARG:HB2	1.78	0.43
48:BQ:137:TYR:CE2	57:BZ:81:ARG:CZ	3.02	0.43
49:BR:72:ASP:OD1	49:BR:72:ASP:C	2.62	0.43
51:BT:78:LEU:HB3	51:BT:79:HIS:CE1	2.53	0.43
52:BU:27:LEU:C	52:BU:29:SER:N	2.76	0.43
53:BV:46:VAL:HG22	53:BV:47:VAL:N	2.29	0.43
54:BW:11:ARG:O	54:BW:11:ARG:HD3	2.18	0.43
1:AA:189(A):C:H2'	1:AA:189(B):C:H6	1.83	0.43
1:AA:360:A:O2'	1:AA:361:G:H5'	2.18	0.43
1:AA:504:C:O4'	1:AA:510:A:C2	2.71	0.43
1:AA:944:G:C2	1:AA:1340:A:C6	3.06	0.43
1:AA:1072:G:H2'	1:AA:1073:U:H6	1.79	0.43
1:AA:1084:G:OP1	1:AA:1086:U:C5	2.72	0.43
1:AA:1095:U:C4	1:AA:1096:C:C4	3.06	0.43
1:AA:1298:C:H5"	7:AG:114:ARG:HH22	1.84	0.43
1:AA:1346:A:N6	1:AA:1375:A:OP2	2.48	0.43
4:AD:38:TYR:HA	4:AD:39:PRO:HD3	1.86	0.43
4:AD:159:ARG:HH11	4:AD:159:ARG:HG3	1.83	0.43
5:AE:12:LEU:HD22	5:AE:13:ILE:N	2.34	0.43
5:AE:20:GLN:HE21	5:AE:20:GLN:C	2.27	0.43
7:AG:12:LEU:HD13	7:AG:25:ALA:HB2	2.00	0.43
7:AG:80:VAL:CG2	7:AG:81:GLY:H	2.30	0.43
8:AH:85:ARG:O	8:AH:88:LYS:NZ	2.51	0.43
8:AH:102:ARG:HE	8:AH:102:ARG:HB2	1.63	0.43
9:AI:102:LEU:HA	9:AI:102:LEU:HD23	1.80	0.43
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	2.01	0.43
10:AJ:30:SER:HA	10:AJ:80:LYS:HE2	2.01	0.43
12:AL:47:LYS:HB3	12:AL:48:PRO:HD2	1.95	0.43
18:AR:40:LEU:C	18:AR:42:ARG:H	2.25	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:24:ALA:O	19:AS:25:LYS:CB	2.67	0.43
20:AT:22:ARG:H	20:AT:22:ARG:HG3	1.43	0.43
24:AY:237:PRO:HA	24:AY:241:GLU:OE1	2.19	0.43
24:AY:329:ARG:HG3	24:AY:331:TYR:CZ	2.54	0.43
24:AY:546:ILE:O	24:AY:550:MET:HG3	2.18	0.43
24:AY:591:LYS:HD3	24:AY:591:LYS:HA	1.87	0.43
26:B1:70:VAL:O	26:B1:73:LEU:N	2.45	0.43
26:B1:90:ILE:O	26:B1:94:LEU:CD1	2.67	0.43
31:B6:8:LYS:HE3	31:B6:25:LYS:CD	2.40	0.43
35:BA:88:G:P	35:BA:90:U:H5	2.42	0.43
35:BA:271(S):G:C6	35:BA:271(T):C:C4	3.06	0.43
35:BA:532:A:N3	35:BA:532:A:H2'	2.34	0.43
35:BA:615:G:C6	35:BA:616:G:C5	3.06	0.43
35:BA:673:C:H5'	35:BA:674:G:OP2	2.19	0.43
35:BA:750:A:H3'	35:BA:751:A:C5'	2.48	0.43
35:BA:900:A:C2	35:BA:901:A:H1'	2.54	0.43
35:BA:977:G:C4	35:BA:978:G:C8	3.06	0.43
35:BA:1022:G:O2'	35:BA:1023:U:OP2	2.34	0.43
35:BA:1064:C:H5"	43:BK:86:LYS:HB2	2.01	0.43
35:BA:1398:C:H2'	35:BA:1399:C:O4'	2.17	0.43
35:BA:1420:U:H2'	35:BA:1421:G:C5'	2.48	0.43
35:BA:1495:A:H2'	35:BA:1496:A:N3	2.34	0.43
35:BA:1533:G:N2	35:BA:1535:A:OP1	2.51	0.43
35:BA:1649:G:C2'	35:BA:1650:G:H5'	2.49	0.43
35:BA:1692:U:H2'	35:BA:1694:C:C5	2.53	0.43
35:BA:2375:G:N2	35:BA:2377:A:H3'	2.33	0.43
35:BA:2400:G:N2	35:BA:2417:C:C2	2.87	0.43
35:BA:2413:G:C5	35:BA:2414:G:C8	3.06	0.43
35:BA:2464:C:N4	35:BA:2487:G:C6	2.87	0.43
35:BA:2557:G:H2'	35:BA:2558:C:C6	2.53	0.43
35:BA:2688:U:H2'	35:BA:2719:G:N2	2.33	0.43
36:BB:50:G:O5'	36:BB:50:G:H8	2.02	0.43
37:BC:114:VAL:O	37:BC:139:PRO:HG3	2.19	0.43
37:BC:216:THR:HB	37:BC:222:SER:HA	2.00	0.43
38:BD:33:LEU:HD23	38:BD:33:LEU:C	2.44	0.43
39:BE:9:VAL:HG13	39:BE:25:VAL:HG12	1.99	0.43
39:BE:101:ARG:HG3	39:BE:169:ASN:ND2	2.34	0.43
40:BF:20:LEU:HD23	40:BF:21:ALA:H	1.78	0.43
40:BF:42:ALA:O	40:BF:45:ARG:HG3	2.19	0.43
40:BF:75:HIS:HE1	40:BF:82:ILE:HD11	1.84	0.43
40:BF:167:ALA:HA	40:BF:170:LEU:HD23	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:172:LYS:HD3	42:BH:172:LYS:HA	1.86	0.43
45:BN:22:THR:O	45:BN:23:LEU:C	2.61	0.43
45:BN:38:HIS:O	52:BU:67:ALA:HB1	2.19	0.43
48:BQ:17:LEU:C	48:BQ:18:LYS:HD2	2.43	0.43
48:BQ:34:LEU:HD12	48:BQ:130:LYS:O	2.19	0.43
51:BT:16:ARG:HB3	51:BT:17:THR:H	1.65	0.43
52:BU:65:ILE:HG12	52:BU:96:ALA:HB1	2.01	0.43
56:BY:43:ASN:ND2	56:BY:64:GLU:CG	2.82	0.43
57:BZ:175:VAL:HA	57:BZ:176:PRO:HD3	1.76	0.43
1:AA:295:C:C2	1:AA:296:U:C5	3.06	0.43
1:AA:396:G:O2'	1:AA:398:C:OP1	2.33	0.43
1:AA:397:A:H5'	1:AA:398:C:OP1	2.18	0.43
1:AA:619:U:N3	4:AD:134:ASP:OD2	2.48	0.43
1:AA:1119:C:O2'	1:AA:1120:G:H5'	2.19	0.43
1:AA:1254:C:H2'	1:AA:1255:G:C8	2.54	0.43
1:AA:1273:G:N3	1:AA:1273:G:H2'	2.34	0.43
1:AA:1291:G:H2'	1:AA:1292:U:C6	2.54	0.43
1:AA:1371:G:C6	1:AA:1372:U:C4	3.06	0.43
1:AA:1442:G:C5	1:AA:1442(B):A:C2	3.06	0.43
2:AB:32:ILE:HG23	2:AB:32:ILE:O	2.18	0.43
2:AB:102:LEU:HD12	2:AB:102:LEU:N	2.33	0.43
2:AB:207:ALA:O	2:AB:209:ARG:N	2.51	0.43
3:AC:6:HIS:NE2	3:AC:184:TYR:CE2	2.87	0.43
4:AD:57:ARG:HG2	4:AD:57:ARG:NH1	2.33	0.43
7:AG:23:VAL:HG13	7:AG:43:PHE:CE2	2.53	0.43
9:AI:11:LYS:O	9:AI:13:ALA:N	2.52	0.43
10:AJ:38:ILE:N	10:AJ:71:LEU:O	2.40	0.43
11:AK:20:TYR:HB2	11:AK:31:THR:HG22	2.00	0.43
12:AL:88:GLY:H	12:AL:98:TYR:HA	1.84	0.43
18:AR:66:LEU:HG	18:AR:70:ILE:HD11	1.99	0.43
22:AV:39:C:H2'	22:AV:40:C:C6	2.54	0.43
24:AY:15:ILE:CD1	24:AY:81:ILE:HG12	2.39	0.43
24:AY:120:THR:C	24:AY:124:GLN:NE2	2.76	0.43
25:B0:46:LYS:HD2	25:B0:78:TYR:CE1	2.54	0.43
26:B1:88:LYS:O	26:B1:92:LYS:HB3	2.18	0.43
33:B8:48:PHE:C	33:B8:49:VAL:CG2	2.89	0.43
35:BA:15:G:H2'	35:BA:16:G:C8	2.52	0.43
35:BA:435:C:C2'	35:BA:436:C:H5'	2.48	0.43
35:BA:481:G:N2	35:BA:507:A:H1'	2.33	0.43
35:BA:551:G:C2'	35:BA:552:G:H5'	2.44	0.43
35:BA:592:G:N2	35:BA:593:G:H1'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:603:A:O2'	35:BA:604:G:P	2.77	0.43
35:BA:649:G:H2'	35:BA:650:C:O4'	2.19	0.43
35:BA:860:U:H1'	35:BA:2268:A:H5'	1.99	0.43
35:BA:1323:U:O4	35:BA:1324:G:O6	2.37	0.43
35:BA:1439:A:H2'	35:BA:1440:G:O4'	2.19	0.43
35:BA:1485:G:H5'	35:BA:1485:G:C8	2.53	0.43
35:BA:2192:G:H2'	35:BA:2193:G:H5"	2.01	0.43
35:BA:2259:G:C5	35:BA:2427:C:N4	2.87	0.43
35:BA:2334:G:C2	50:BS:15:ARG:NH1	2.87	0.43
35:BA:2744:G:C2	35:BA:2761:G:C4	3.07	0.43
36:BB:39:A:C2	36:BB:44:G:C2	3.06	0.43
38:BD:9:TYR:O	38:BD:10:THR:CG2	2.59	0.43
38:BD:92:ILE:H	38:BD:92:ILE:CD1	2.30	0.43
39:BE:63:LEU:O	39:BE:64:LYS:C	2.62	0.43
39:BE:177:PRO:CG	39:BE:178:GLU:H	2.32	0.43
42:BH:61:HIS:O	42:BH:62:LYS:C	2.62	0.43
42:BH:162:ILE:HD13	42:BH:162:ILE:HG21	1.70	0.43
48:BQ:44:ALA:O	48:BQ:47:ILE:HB	2.19	0.43
49:BR:41:ALA:O	49:BR:43:GLU:N	2.51	0.43
51:BT:74:ARG:C	51:BT:75:ILE:HD12	2.44	0.43
53:BV:33:VAL:HG23	53:BV:35:LEU:HD22	2.01	0.43
54:BW:58:ALA:O	54:BW:63:ASP:N	2.50	0.43
55:BX:26:TYR:HD2	55:BX:92:LEU:HD12	1.83	0.43
56:BY:8:LYS:CD	56:BY:8:LYS:N	2.69	0.43
56:BY:10:GLY:C	56:BY:27:VAL:HG13	2.43	0.43
56:BY:38:ILE:O	56:BY:39:VAL:C	2.61	0.43
56:BY:73:ARG:O	56:BY:74:PRO:O	2.37	0.43
57:BZ:13:GLU:HB3	57:BZ:14:LYS:HZ2	1.84	0.43
57:BZ:115:GLY:H	57:BZ:177:PRO:HG2	1.82	0.43
57:BZ:153:SER:C	57:BZ:155:LEU:CD2	2.90	0.43
1:AA:37:U:C2'	1:AA:38:G:H5'	2.48	0.43
1:AA:147:G:N2	1:AA:148:G:H1'	2.33	0.43
1:AA:160:A:H2'	1:AA:161:A:O4'	2.19	0.43
1:AA:470:C:C2'	1:AA:471:G:OP1	2.67	0.43
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.66	0.43
1:AA:620:C:C2	4:AD:135:LEU:HG	2.54	0.43
1:AA:901:A:C5	1:AA:902:G:H1'	2.54	0.43
1:AA:1286:A:H5'	21:AU:25:LYS:HD2	2.01	0.43
1:AA:1349:A:C6	1:AA:1374:A:C8	3.06	0.43
1:AA:1479:C:O2'	1:AA:1480:G:H5'	2.19	0.43
2:AB:101:MET:HE3	2:AB:152:PHE:CD2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:230:VAL:CG2	2:AB:231:GLU:H	2.27	0.43
4:AD:111:ALA:HB2	4:AD:120:LEU:HD11	2.01	0.43
9:AI:5:TYR:O	9:AI:84:ALA:HA	2.19	0.43
9:AI:16:ARG:O	9:AI:63:ILE:HG23	2.19	0.43
9:AI:47:LEU:N	9:AI:47:LEU:CD1	2.81	0.43
11:AK:116:HIS:O	11:AK:117:ASN:HB2	2.18	0.43
13:AM:117:VAL:O	13:AM:118:ALA:C	2.62	0.43
15:AO:43:LEU:C	15:AO:45:VAL:H	2.27	0.43
15:AO:86:GLY:O	15:AO:87:ILE:CG2	2.67	0.43
18:AR:58:LEU:HD23	18:AR:62:GLU:HB3	2.00	0.43
18:AR:59:SER:N	18:AR:62:GLU:HB2	2.30	0.43
19:AS:9:VAL:C	19:AS:11:VAL:N	2.76	0.43
19:AS:19:VAL:CG1	19:AS:44:MET:HG2	2.47	0.43
20:AT:26:ASN:ND2	20:AT:26:ASN:H	2.17	0.43
22:AV:9:G:N3	22:AV:45:G:H2'	2.34	0.43
25:B0:43:THR:CG2	35:BA:2331:G:O3'	2.65	0.43
25:B0:70:GLN:NE2	25:B0:80:HIS:NE2	2.67	0.43
26:B1:19:GLN:CB	26:B1:35:THR:HG22	2.48	0.43
30:B5:11:THR:OG1	35:BA:1263:U:O3'	2.37	0.43
30:B5:58:LEU:C	30:B5:58:LEU:CD1	2.82	0.43
31:B6:19:ARG:O	31:B6:20:ASN:C	2.60	0.43
32:B7:45:ALA:C	32:B7:46:VAL:CG2	2.91	0.43
33:B8:4:MET:O	33:B8:62:LEU:CD1	2.57	0.43
35:BA:594:U:H2'	35:BA:595:C:H6	1.82	0.43
35:BA:622:G:OP2	47:BP:108:LYS:NZ	2.43	0.43
35:BA:657:U:C2	35:BA:658:C:C5	3.07	0.43
35:BA:1037:G:N2	35:BA:1038:C:C2	2.87	0.43
35:BA:1231:G:H2'	35:BA:1232:G:C8	2.53	0.43
35:BA:1325:G:OP2	35:BA:1616:A:H2'	2.18	0.43
35:BA:1367:A:H2'	35:BA:1368:G:H5'	2.00	0.43
35:BA:1572:A:O2'	35:BA:1573:G:H5'	2.19	0.43
35:BA:2415:G:C2	35:BA:2416:C:C2	3.07	0.43
35:BA:2777:G:C8	35:BA:2777:G:O5'	2.72	0.43
35:BA:2777:G:H4'	35:BA:2778:A:C5'	2.48	0.43
35:BA:2822:G:O6	49:BR:4:LEU:HB3	2.19	0.43
35:BA:2859:G:C6	35:BA:2860:A:N6	2.86	0.43
36:BB:70:C:HO2'	36:BB:71:C:H5'	1.83	0.43
38:BD:183:ARG:NH1	38:BD:183:ARG:CG	2.78	0.43
38:BD:213:ARG:HA	38:BD:213:ARG:HD2	1.61	0.43
41:BG:27:ASN:HB3	41:BG:30:GLU:H	1.84	0.43
41:BG:31:VAL:HG22	41:BG:32:PRO:HD2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:122:THR:HG22	42:BH:123:PHE:N	2.34	0.43
43:BK:99:ILE:HD12	43:BK:103:GLN:CB	2.45	0.43
45:BN:40:PRO:O	52:BU:64:ARG:NH1	2.51	0.43
45:BN:96:GLU:O	45:BN:100:GLU:HG3	2.18	0.43
47:BP:66:GLY:O	47:BP:67:MET:CB	2.66	0.43
50:BS:66:ALA:HB2	50:BS:97:ARG:HB2	1.99	0.43
50:BS:87:PHE:CG	50:BS:88:ASP:N	2.87	0.43
51:BT:40:THR:HB	51:BT:41:ARG:H	1.65	0.43
51:BT:79:HIS:O	51:BT:80:SER:CB	2.66	0.43
52:BU:47:TYR:CA	52:BU:50:ARG:HH12	2.32	0.43
53:BV:19:LYS:HG2	53:BV:94:LEU:C	2.44	0.43
54:BW:50:VAL:CG1	54:BW:51:LEU:N	2.81	0.43
56:BY:29:GLU:O	56:BY:30:VAL:C	2.62	0.43
56:BY:85:VAL:HG13	56:BY:93:GLY:O	2.19	0.43
1:AA:384:G:O2'	1:AA:385:C:H5'	2.18	0.43
1:AA:789:U:O2	1:AA:791:G:C8	2.72	0.43
1:AA:1033:G:H2'	1:AA:1034:G:H5'	2.01	0.43
1:AA:1108:G:H5'	3:AC:176:HIS:CD2	2.54	0.43
1:AA:1226:C:N4	13:AM:104:ARG:CD	2.75	0.43
2:AB:36:ARG:NE	2:AB:36:ARG:N	2.66	0.43
2:AB:168:THR:OG1	2:AB:169:LYS:N	2.52	0.43
4:AD:101:LEU:C	4:AD:103:ASN:N	2.77	0.43
5:AE:12:LEU:CD1	5:AE:31:LEU:CB	2.96	0.43
7:AG:116:ALA:C	7:AG:118:VAL:N	2.77	0.43
8:AH:53:VAL:HG12	8:AH:54:ASP:OD2	2.19	0.43
8:AH:85:ARG:HH12	8:AH:134:ILE:HG22	1.83	0.43
15:AO:80:ALA:O	15:AO:81:LEU:C	2.61	0.43
16:AP:67:THR:O	16:AP:70:ALA:HB3	2.19	0.43
19:AS:19:VAL:HG12	19:AS:20:LEU:HG	2.00	0.43
20:AT:58:LYS:O	20:AT:59:ALA:C	2.60	0.43
24:AY:238:THR:C	24:AY:240:GLU:H	2.26	0.43
24:AY:238:THR:C	24:AY:240:GLU:N	2.77	0.43
24:AY:276:VAL:O	24:AY:280:LEU:HB2	2.19	0.43
24:AY:659:LEU:CD1	24:AY:667:GLY:HA3	2.49	0.43
27:B2:24:LEU:HD22	27:B2:60:LEU:HD13	2.01	0.43
33:B8:37:SER:O	33:B8:38:GLY:C	2.61	0.43
34:B9:17:ILE:HG22	34:B9:19:ARG:H	1.83	0.43
35:BA:72:U:O2'	35:BA:73:A:H5'	2.18	0.43
35:BA:186:G:O2'	35:BA:187:G:H5'	2.18	0.43
35:BA:564:C:H2'	35:BA:565:C:H6	1.83	0.43
35:BA:603:A:N6	35:BA:626:U:H4'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:625:G:H5'	35:BA:657:U:OP1	2.19	0.43
35:BA:716:A:C2'	35:BA:717:G:O5'	2.67	0.43
35:BA:733:G:C6	35:BA:761:A:C8	3.07	0.43
35:BA:769:G:H5'	35:BA:1379:A:H61	1.84	0.43
35:BA:868:U:C4	35:BA:869:G:N7	2.86	0.43
35:BA:1022:G:N2	35:BA:1024:G:N2	2.66	0.43
35:BA:1027:A:H2'	35:BA:1027:A:N3	2.34	0.43
35:BA:1141:U:H1'	35:BA:1142(A):A:C2	2.54	0.43
35:BA:1270:C:H5"	35:BA:1271:G:H5'	2.00	0.43
35:BA:1290:C:O5'	35:BA:1290:C:H6	2.01	0.43
35:BA:1362:C:H2'	35:BA:1363:C:H6	1.84	0.43
35:BA:1722:A:C2	35:BA:1740:G:C8	3.06	0.43
35:BA:1891:G:H2'	35:BA:1892:C:O4'	2.19	0.43
35:BA:2053:G:H1	35:BA:2616:C:H42	1.67	0.43
35:BA:2652:C:H42	35:BA:2668:G:H1	1.67	0.43
37:BC:4:HIS:HB3	37:BC:8:TYR:HD2	1.82	0.43
38:BD:138:VAL:HG13	38:BD:138:VAL:O	2.19	0.43
39:BE:60:ASN:O	39:BE:61:ARG:C	2.59	0.43
39:BE:63:LEU:O	39:BE:63:LEU:HD23	2.19	0.43
40:BF:148:LEU:HD23	40:BF:191:ARG:HH12	1.80	0.43
42:BH:107:VAL:O	42:BH:107:VAL:HG23	2.19	0.43
43:BK:8:VAL:O	43:BK:56:GLU:HA	2.19	0.43
45:BN:9:VAL:HG12	45:BN:10:GLU:N	2.32	0.43
46:BO:9:GLU:O	46:BO:83:ALA:HA	2.19	0.43
47:BP:50:ARG:HG3	47:BP:51:PHE:N	2.34	0.43
47:BP:64:LYS:HD3	47:BP:64:LYS:C	2.44	0.43
49:BR:51:LEU:HD12	49:BR:51:LEU:N	2.33	0.43
50:BS:67:ARG:HH21	50:BS:100:ALA:HB3	1.82	0.43
51:BT:67:SER:O	51:BT:68:TYR:HB2	2.18	0.43
56:BY:36:ALA:HB1	56:BY:67:LEU:O	2.19	0.43
57:BZ:24:LEU:HD12	57:BZ:41:LEU:HD23	2.00	0.43
1:AA:234:C:H2'	1:AA:235:C:H6	1.84	0.42
1:AA:282:A:H3'	1:AA:283:C:H6	1.83	0.42
1:AA:310:G:C5	1:AA:311:C:C5	3.07	0.42
1:AA:415:A:H2'	1:AA:416:G:H8	1.83	0.42
1:AA:437:U:C5	1:AA:438:G:C5	3.07	0.42
1:AA:522:C:C5	12:AL:53:ARG:NH2	2.87	0.42
1:AA:644:G:N7	1:AA:645:C:C5	2.87	0.42
1:AA:698:G:C6	1:AA:699:C:C4	3.06	0.42
1:AA:753:A:H4'	1:AA:754:C:C5'	2.48	0.42
1:AA:993:G:H22	1:AA:996:A:N6	2.16	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1515:C:H2'	1:AA:1516:G:H8	1.82	0.42
2:AB:22:LYS:N	2:AB:40:HIS:HE1	2.11	0.42
4:AD:157:LEU:O	4:AD:158:ILE:C	2.62	0.42
8:AH:1:MET:O	8:AH:2:LEU:C	2.61	0.42
10:AJ:55:LYS:HE3	10:AJ:55:LYS:N	2.31	0.42
10:AJ:56:HIS:C	10:AJ:58:ASP:H	2.27	0.42
12:AL:82:VAL:N	12:AL:106:ASP:OD2	2.44	0.42
14:AN:32:SER:O	14:AN:40:CYS:HA	2.19	0.42
15:AO:26:GLU:CG	15:AO:77:ARG:NH1	2.82	0.42
17:AQ:59:ILE:CG2	17:AQ:71:PHE:CD1	3.02	0.42
18:AR:51:LEU:HA	18:AR:52:PRO:HD3	1.79	0.42
18:AR:69:THR:O	18:AR:72:ARG:HB2	2.19	0.42
19:AS:6:LYS:H	19:AS:6:LYS:CD	2.31	0.42
19:AS:44:MET:HA	19:AS:44:MET:HE3	2.01	0.42
20:AT:28:ALA:C	20:AT:30:LYS:N	2.74	0.42
22:AV:24:U:H2'	22:AV:25:C:H6	1.84	0.42
24:AY:401:SER:O	24:AY:403:GLU:CG	2.67	0.42
24:AY:519:ARG:NH2	24:AY:678:GLU:H	2.16	0.42
26:B1:30:VAL:HA	35:BA:2395:C:O2'	2.18	0.42
34:B9:1:MET:HB3	34:B9:4:ARG:NH2	2.34	0.42
35:BA:123:G:C2'	35:BA:124:G:H5'	2.49	0.42
35:BA:143(A):C:O2	35:BA:143(A):C:H2'	2.19	0.42
35:BA:285:C:C2'	35:BA:286:C:H5"	2.49	0.42
35:BA:347:A:H2'	35:BA:348:G:C8	2.54	0.42
35:BA:435:C:H2'	35:BA:436:C:H5'	2.00	0.42
35:BA:496:G:C2'	35:BA:497:A:H5'	2.49	0.42
35:BA:650:C:C2'	35:BA:651:G:H5"	2.49	0.42
35:BA:766:C:O2'	35:BA:767:U:H5'	2.19	0.42
35:BA:1114:G:O2'	35:BA:1115:G:H5"	2.19	0.42
35:BA:1161:C:H2'	35:BA:1162:G:H8	1.84	0.42
35:BA:1576:U:H2'	35:BA:1577:C:H6	1.83	0.42
35:BA:1668:A:C5	35:BA:1674:G:C5	3.07	0.42
35:BA:1930:G:H2'	35:BA:1931:U:OP2	2.17	0.42
35:BA:2447:G:O6	35:BA:2504:U:O4	2.37	0.42
35:BA:2459:A:C2	35:BA:2460:U:H1'	2.54	0.42
35:BA:2488:A:H2'	35:BA:2489:G:C8	2.55	0.42
35:BA:2555:U:H2'	35:BA:2556:C:C5'	2.43	0.42
39:BE:64:LYS:O	39:BE:64:LYS:HG2	2.19	0.42
42:BH:97:ARG:O	42:BH:98:LEU:C	2.62	0.42
43:BK:4:VAL:HG12	43:BK:5:VAL:HG22	2.00	0.42
43:BK:15:GLY:HA2	43:BK:42:ASN:OD1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BK:24:GLY:N	43:BK:25:PRO:HD2	2.22	0.42
46:BO:107:ARG:HG3	46:BO:107:ARG:HH11	1.84	0.42
47:BP:64:LYS:C	47:BP:66:GLY:H	2.27	0.42
47:BP:75:ILE:N	47:BP:75:ILE:CD1	2.81	0.42
48:BQ:63:LYS:HZ3	57:BZ:175:VAL:HG21	1.82	0.42
52:BU:25:TRP:HD1	52:BU:26:GLY:N	2.15	0.42
56:BY:81:LYS:NZ	56:BY:98:VAL:O	2.52	0.42
1:AA:182:U:H3'	1:AA:183:G:H5'	2.01	0.42
1:AA:324:G:N2	1:AA:326:G:H3'	2.33	0.42
1:AA:745:C:H5"	1:AA:851:G:H1'	2.01	0.42
1:AA:936:C:H2'	1:AA:937:A:H5'	2.01	0.42
1:AA:975:A:C4'	1:AA:976:G:H5"	2.29	0.42
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.48	0.42
1:AA:1260:C:H4'	1:AA:1284:C:H5'	2.01	0.42
1:AA:1416:G:H2'	1:AA:1417:G:C8	2.54	0.42
1:AA:1434:A:H3'	1:AA:1435:G:C8	2.54	0.42
1:AA:1490:C:C6	1:AA:1490:C:C4'	3.01	0.42
2:AB:187:LEU:HD23	2:AB:214:ILE:HG21	2.00	0.42
4:AD:165:MET:HE3	4:AD:176:LEU:HD23	2.00	0.42
5:AE:92:LYS:C	5:AE:118:ILE:HD12	2.44	0.42
6:AF:72:VAL:HG13	6:AF:73:ASN:N	2.34	0.42
9:AI:3:GLN:CD	9:AI:20:ARG:NH2	2.77	0.42
9:AI:9:ARG:HB2	9:AI:104:ARG:HH12	1.82	0.42
9:AI:83:ARG:O	9:AI:86:VAL:CG1	2.67	0.42
16:AP:55:ARG:O	16:AP:56:ALA:C	2.62	0.42
18:AR:41:LYS:O	18:AR:41:LYS:HG3	2.19	0.42
18:AR:66:LEU:O	18:AR:67:ALA:C	2.62	0.42
24:AY:99:ARG:CZ	24:AY:128:TYR:HB2	2.50	0.42
24:AY:230:LYS:NZ	24:AY:237:PRO:HG3	2.35	0.42
24:AY:451:ILE:O	24:AY:451:ILE:HG12	2.19	0.42
25:B0:19:LYS:HD3	25:B0:41:ARG:HH22	1.84	0.42
25:B0:40:GLN:NE2	25:B0:44:ARG:H	2.17	0.42
27:B2:60:LEU:HD23	27:B2:60:LEU:HA	1.85	0.42
30:B5:19:ARG:NH1	35:BA:1266:G:OP1	2.42	0.42
35:BA:271(P):C:H2'	35:BA:271(Q):G:C8	2.55	0.42
35:BA:338:G:H2'	35:BA:339:U:H6	1.84	0.42
35:BA:449:A:H2'	35:BA:450:G:C5'	2.49	0.42
35:BA:463:G:N2	35:BA:466:A:OP2	2.45	0.42
35:BA:563:G:C2	35:BA:564:C:C2	3.07	0.42
35:BA:649:G:C2	35:BA:650:C:C2	3.07	0.42
35:BA:692:C:N3	35:BA:771:G:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1142(A):A:C5	35:BA:1144:G:N7	2.86	0.42
35:BA:1464:C:O2'	35:BA:1528:A:H8	2.02	0.42
35:BA:1503:U:O2'	35:BA:1504:C:H5'	2.19	0.42
35:BA:2192:G:C2'	35:BA:2193:G:H5"	2.49	0.42
35:BA:2201:C:N3	35:BA:2223:G:C2	2.87	0.42
35:BA:2328:A:N1	35:BA:2329:G:C6	2.87	0.42
35:BA:2414:G:H2'	35:BA:2414:G:N3	2.34	0.42
35:BA:2845:G:H5"	51:BT:55:ASN:HA	2.01	0.42
35:BA:2851:A:C5	35:BA:2852:G:C5	3.08	0.42
37:BC:7:ARG:O	37:BC:11:LEU:HG	2.18	0.42
38:BD:176:ARG:NH1	38:BD:176:ARG:HB3	2.34	0.42
39:BE:95:ILE:H	39:BE:95:ILE:CD1	2.18	0.42
41:BG:64:THR:CG2	41:BG:66:GLN:H	2.13	0.42
42:BH:152:ARG:O	42:BH:153:LYS:C	2.60	0.42
43:BK:3:LYS:CB	43:BK:29:GLN:HB3	2.41	0.42
50:BS:89:ARG:HB3	50:BS:92:TYR:HB3	2.00	0.42
50:BS:101:LEU:HD13	50:BS:103:GLU:HB2	2.00	0.42
52:BU:28:ARG:NH1	52:BU:38:THR:HG23	2.34	0.42
53:BV:19:LYS:HG2	53:BV:94:LEU:CB	2.50	0.42
54:BW:20:VAL:CG2	54:BW:47:VAL:HG21	2.49	0.42
54:BW:34:ASN:O	54:BW:37:ARG:HB3	2.19	0.42
54:BW:80:PRO:O	54:BW:100:THR:HG21	2.19	0.42
55:BX:7:VAL:CG1	55:BX:8:ILE:CD1	2.97	0.42
56:BY:94:LYS:O	56:BY:102:CYS:HB2	2.14	0.42
1:AA:190:U:C2	20:AT:105:SER:HB2	2.55	0.42
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.19	0.42
2:AB:121:LEU:HD23	2:AB:124:SER:HB3	2.01	0.42
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.38	0.42
5:AE:76:ILE:CG2	5:AE:118:ILE:HD13	2.49	0.42
5:AE:142:LEU:O	5:AE:143:ARG:NE	2.52	0.42
6:AF:23:LYS:O	6:AF:27:GLN:HG2	2.20	0.42
9:AI:79:LEU:O	9:AI:82:ALA:N	2.52	0.42
9:AI:118:LYS:C	9:AI:120:ARG:H	2.26	0.42
10:AJ:47:PHE:N	10:AJ:47:PHE:HD1	2.15	0.42
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.67	0.42
12:AL:37:CYS:CB	12:AL:79:GLU:O	2.66	0.42
18:AR:85:LEU:CD1	18:AR:86:VAL:N	2.80	0.42
19:AS:44:MET:HB3	19:AS:47:HIS:HD2	1.83	0.42
20:AT:104:LEU:HD23	20:AT:105:SER:O	2.19	0.42
21:AU:6:ARG:HE	21:AU:15:ARG:NH2	2.17	0.42
22:AV:56:C:N4	35:BA:2169:A:N3	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:138:LYS:HG2	59:AY:702:GDP:C6	2.54	0.42
24:AY:209:ALA:O	24:AY:210:ARG:C	2.62	0.42
24:AY:513:LYS:N	24:AY:566:THR:O	2.53	0.42
26:B1:8:SER:HB3	26:B1:66:HIS:CG	2.54	0.42
28:B3:6:VAL:HB	28:B3:54:VAL:CG1	2.43	0.42
29:B4:4:GLY:O	29:B4:5:ILE:CG2	2.66	0.42
35:BA:7:G:H1	35:BA:2896:C:N4	2.16	0.42
35:BA:256:A:H2'	35:BA:257:A:C8	2.55	0.42
35:BA:301:G:HO2'	35:BA:302:C:H6	1.66	0.42
35:BA:363(F):A:O2'	35:BA:364:C:P	2.76	0.42
35:BA:392:C:H2'	35:BA:393:C:C6	2.53	0.42
35:BA:392:C:OP1	35:BA:409:C:OP1	2.37	0.42
35:BA:570:G:H2'	35:BA:2030:A:N7	2.35	0.42
35:BA:1022:G:N2	35:BA:1142(A):A:C2	2.86	0.42
35:BA:1614:A:N1	54:BW:91:GLY:HA2	2.34	0.42
35:BA:1654:A:OP1	49:BR:3:HIS:HB2	2.19	0.42
35:BA:2152:G:C6	35:BA:2153:G:N7	2.87	0.42
35:BA:2328:A:H2'	35:BA:2329:G:H8	1.83	0.42
35:BA:2397:G:H2'	35:BA:2398:U:H6	1.83	0.42
35:BA:2443:C:O2	35:BA:2443:C:C2'	2.65	0.42
35:BA:2555:U:C6	35:BA:2556:C:C6	3.07	0.42
35:BA:2593:U:C2	35:BA:2594:C:C5	3.08	0.42
36:BB:21:G:O2'	36:BB:22:U:O4'	2.37	0.42
37:BC:80:LYS:HB3	37:BC:119:ASP:OD1	2.19	0.42
37:BC:181:PHE:HA	37:BC:182:PRO:HD3	1.91	0.42
38:BD:132:PRO:HG3	38:BD:190:TYR:CD1	2.55	0.42
39:BE:177:PRO:HG2	39:BE:178:GLU:N	2.33	0.42
40:BF:154:VAL:HG13	40:BF:191:ARG:O	2.20	0.42
41:BG:2:PRO:HB2	41:BG:3:LEU:H	1.63	0.42
41:BG:63:ILE:CD1	41:BG:64:THR:HB	2.48	0.42
41:BG:97:ASP:O	41:BG:101:ILE:N	2.49	0.42
42:BH:72:ILE:C	42:BH:74:ASN:N	2.77	0.42
42:BH:105:LEU:HD21	42:BH:113:VAL:HB	2.00	0.42
43:BK:41:PHE:C	43:BK:43:ALA:H	2.25	0.42
43:BK:70:LYS:HB3	43:BK:71:THR:H	1.73	0.42
45:BN:2:LYS:NZ	53:BV:12:TYR:HA	2.34	0.42
47:BP:91:PHE:H	47:BP:91:PHE:HD1	1.60	0.42
51:BT:23:ARG:HA	51:BT:52:ILE:HD11	2.01	0.42
1:AA:622:A:C8	1:AA:623:C:C5	3.07	0.42
1:AA:669:U:H2'	1:AA:670:G:C8	2.55	0.42
1:AA:707:C:O2'	1:AA:708:C:C5'	2.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:765:G:N2	1:AA:812:C:O2'	2.52	0.42
1:AA:1101:A:H4'	1:AA:1102:A:H4'	2.00	0.42
1:AA:1286:A:H2'	1:AA:1287:A:H4'	2.01	0.42
1:AA:1339:A:H4'	22:AV:41:C:H4'	2.01	0.42
2:AB:91:PRO:HG2	2:AB:155:LEU:HD23	2.02	0.42
3:AC:25:GLY:C	3:AC:27:LYS:N	2.77	0.42
4:AD:120:LEU:CB	4:AD:126:ILE:HD11	2.49	0.42
4:AD:127:THR:HG23	4:AD:147:ALA:HB3	2.01	0.42
6:AF:38:GLU:HB2	6:AF:64:GLN:O	2.19	0.42
7:AG:108:ALA:HB1	7:AG:120:ILE:HD13	2.01	0.42
8:AH:83:ILE:CD1	8:AH:137:VAL:HG22	2.43	0.42
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.34	0.42
17:AQ:10:VAL:HG13	17:AQ:19:VAL:HB	2.00	0.42
17:AQ:67:LYS:CA	17:AQ:70:ARG:HH12	2.30	0.42
22:AV:64:G:C6	22:AV:65:C:C4	3.08	0.42
24:AY:31:ARG:C	24:AY:33:LEU:N	2.75	0.42
24:AY:307:GLY:O	24:AY:308:PRO:C	2.62	0.42
24:AY:356:LEU:C	24:AY:356:LEU:HD23	2.44	0.42
24:AY:509:HIS:CE1	24:AY:570:GLY:HA2	2.55	0.42
27:B2:43:GLN:H	27:B2:43:GLN:HG3	1.54	0.42
31:B6:51:GLU:O	31:B6:52:VAL:CB	2.60	0.42
35:BA:58:G:H1	35:BA:69:C:N4	2.16	0.42
35:BA:413:C:H4'	35:BA:1880:C:O2'	2.19	0.42
35:BA:703:U:C4	35:BA:704:G:C6	3.07	0.42
35:BA:826:U:OP1	35:BA:2429:G:OP1	2.37	0.42
35:BA:1087:G:H5"	35:BA:1088:A:OP2	2.19	0.42
35:BA:1473:G:O2'	35:BA:1474:C:H5'	2.18	0.42
35:BA:1581:G:C6	35:BA:1582:C:N3	2.88	0.42
35:BA:1917:U:C2'	35:BA:1918:A:C5'	2.94	0.42
35:BA:2473:U:C3'	35:BA:2474:C:C5'	2.85	0.42
35:BA:2483:C:H3'	35:BA:2484:G:C5'	2.44	0.42
35:BA:2656:U:C4	35:BA:2665:A:H2	2.37	0.42
36:BB:87:G:O3'	36:BB:88:C:C6	2.72	0.42
37:BC:29:LEU:O	37:BC:32:GLU:N	2.50	0.42
38:BD:117:VAL:HG22	38:BD:118:VAL:N	2.34	0.42
38:BD:127:VAL:HG22	38:BD:194:GLY:CA	2.49	0.42
38:BD:130:ALA:C	38:BD:131:LEU:HD12	2.43	0.42
38:BD:148:GLU:HB2	38:BD:151:LYS:HG3	2.00	0.42
38:BD:210:GLY:HA2	38:BD:213:ARG:HB2	2.02	0.42
39:BE:26:ILE:CD1	39:BE:198:VAL:HG21	2.49	0.42
39:BE:29:GLY:O	39:BE:30:PRO:C	2.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:97:ARG:O	42:BH:97:ARG:HG2	2.19	0.42
43:BK:79:ARG:HD2	43:BK:85:GLU:O	2.19	0.42
46:BO:111:PHE:O	46:BO:115:VAL:HG23	2.19	0.42
47:BP:106:LEU:N	47:BP:106:LEU:CD1	2.81	0.42
48:BQ:11:LYS:NZ	48:BQ:88:GLY:O	2.52	0.42
50:BS:27:SER:C	50:BS:28:VAL:HG23	2.44	0.42
53:BV:32:THR:HG22	53:BV:33:VAL:H	1.78	0.42
53:BV:81:TYR:C	53:BV:82:ARG:HD2	2.44	0.42
56:BY:4:LYS:O	56:BY:6:HIS:CD2	2.71	0.42
56:BY:95:LYS:HE2	56:BY:101:LYS:H	1.83	0.42
57:BZ:23:LYS:HD3	57:BZ:38:TYR:CE2	2.55	0.42
1:AA:119:A:N7	1:AA:288:A:C2	2.88	0.42
1:AA:189:G:H2'	1:AA:189(A):C:H6	1.80	0.42
1:AA:375:U:C4	1:AA:376:G:N7	2.87	0.42
1:AA:376:G:N3	1:AA:389:A:C2	2.88	0.42
1:AA:512:U:O2	1:AA:540:G:C2	2.73	0.42
1:AA:610:G:H2'	1:AA:610:G:N3	2.34	0.42
1:AA:1276:G:C2'	1:AA:1277:C:H5'	2.49	0.42
1:AA:1321:C:C5'	1:AA:1322:C:H5'	2.49	0.42
3:AC:16:ARG:CD	3:AC:17:ASP:N	2.82	0.42
3:AC:26:LYS:HD2	10:AJ:45:ARG:HH22	1.85	0.42
4:AD:205:GLU:OE1	5:AE:100:VAL:HG22	2.20	0.42
5:AE:64:ARG:CZ	5:AE:64:ARG:HB2	2.50	0.42
5:AE:76:ILE:HG22	5:AE:118:ILE:HD13	2.00	0.42
5:AE:91:LEU:HA	5:AE:120:THR:HG22	2.00	0.42
7:AG:29:LYS:HB3	7:AG:105:VAL:HG21	2.01	0.42
8:AH:102:ARG:O	8:AH:103:VAL:C	2.60	0.42
8:AH:104:ARG:C	8:AH:106:GLY:N	2.77	0.42
16:AP:1:MET:HG3	16:AP:65:GLN:CG	2.49	0.42
19:AS:39:THR:OG1	19:AS:70:LYS:HE2	2.18	0.42
22:AV:35:A:C4	22:AV:36:U:C5	3.06	0.42
22:AV:76:A:H1'	35:BA:2421:G:N2	2.34	0.42
24:AY:31:ARG:O	24:AY:32:ILE:C	2.62	0.42
24:AY:115:GLU:OE1	24:AY:118:SER:CB	2.68	0.42
24:AY:120:THR:C	24:AY:124:GLN:CD	2.86	0.42
24:AY:272:LEU:O	24:AY:275:ALA:HB3	2.19	0.42
24:AY:286:ILE:HA	24:AY:287:PRO:HD3	1.65	0.42
24:AY:309:LEU:HA	24:AY:333:GLY:HA3	2.01	0.42
24:AY:491:VAL:HG21	24:AY:597:GLY:CA	2.49	0.42
24:AY:538:TYR:HE2	24:AY:577:SER:HB3	1.84	0.42
24:AY:681:LYS:C	24:AY:683:VAL:N	2.76	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:19:LYS:CD	25:B0:41:ARG:HH22	2.31	0.42
27:B2:38:GLN:C	27:B2:40:SER:H	2.26	0.42
35:BA:342:G:N2	35:BA:343:C:C2	2.87	0.42
35:BA:438:G:H2'	35:BA:440:G:C8	2.53	0.42
35:BA:478:A:C6	35:BA:480:A:C6	3.06	0.42
35:BA:523:C:H5'	35:BA:541:C:H1'	2.02	0.42
35:BA:848:G:C4	35:BA:933:A:C8	3.05	0.42
35:BA:979:G:H3'	35:BA:980:A:H5"	1.93	0.42
35:BA:1289:C:O2	35:BA:1289:C:H2'	2.19	0.42
35:BA:1544:A:O2'	35:BA:1545:A:H5'	2.20	0.42
35:BA:1598:C:H2'	35:BA:1599:C:C6	2.54	0.42
35:BA:1771:C:H1'	35:BA:1786:A:C8	2.55	0.42
35:BA:1835:G:H1'	35:BA:1931:U:C2	2.55	0.42
35:BA:1854:A:H62	35:BA:1888:G:H8	1.67	0.42
35:BA:2333:A:C1'	35:BA:2335:A:C6	3.03	0.42
35:BA:2478:A:C2'	35:BA:2479:G:H5'	2.50	0.42
35:BA:2624:G:H2'	35:BA:2625:G:H5'	2.01	0.42
35:BA:2725:A:C4	35:BA:2727:G:C8	3.07	0.42
35:BA:2743:C:C2'	35:BA:2744:G:O5'	2.68	0.42
35:BA:2747:G:N2	35:BA:2757:A:H62	2.17	0.42
35:BA:2876:G:C5'	51:BT:3:ARG:HA	2.49	0.42
36:BB:28:C:C2'	36:BB:29:A:H5'	2.49	0.42
36:BB:114:C:O2'	50:BS:46:VAL:CG1	2.68	0.42
38:BD:183:ARG:HH11	38:BD:183:ARG:CG	2.33	0.42
39:BE:176:ILE:HG22	39:BE:179:GLU:H	1.85	0.42
40:BF:120:GLU:C	40:BF:122:LYS:H	2.27	0.42
40:BF:180:GLY:O	40:BF:182:ASN:N	2.52	0.42
41:BG:40:ASN:HD22	41:BG:91:ARG:HB2	1.85	0.42
41:BG:131:TYR:HE2	41:BG:133:LEU:CD2	2.31	0.42
42:BH:46:GLU:HG3	42:BH:51:ARG:HB2	2.00	0.42
42:BH:144:VAL:O	42:BH:144:VAL:HG12	2.18	0.42
43:BK:112:MET:HG3	43:BK:113:PRO:CD	2.44	0.42
47:BP:62:LEU:O	47:BP:62:LEU:HD23	2.20	0.42
48:BQ:19:GLY:O	48:BQ:20:ALA:HB3	2.19	0.42
49:BR:45:ARG:O	49:BR:46:GLY:C	2.60	0.42
50:BS:69:VAL:HG13	50:BS:99:LYS:HE2	2.01	0.42
50:BS:89:ARG:HB3	50:BS:92:TYR:CB	2.49	0.42
52:BU:49:HIS:HA	52:BU:52:ARG:HB2	2.02	0.42
54:BW:44:ALA:O	54:BW:47:VAL:N	2.52	0.42
55:BX:36:LYS:HB3	55:BX:56:THR:CG2	2.46	0.42
1:AA:444:C:O2	1:AA:444:C:H2'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:692:U:H5	11:AK:26:ASN:OD1	2.03	0.42
1:AA:999:C:H2'	1:AA:1000:U:C4	2.55	0.42
1:AA:1226:C:C5	13:AM:104:ARG:HB2	2.54	0.42
2:AB:128:GLU:HB3	2:AB:129:GLU:H	1.77	0.42
2:AB:235:SER:O	2:AB:237:ALA:N	2.48	0.42
5:AE:136:MET:O	5:AE:137:GLU:C	2.63	0.42
6:AF:2:ARG:CZ	6:AF:69:GLU:HG3	2.49	0.42
7:AG:151:TYR:OH	11:AK:54:ARG:CD	2.63	0.42
8:AH:32:LYS:C	8:AH:34:GLU:N	2.77	0.42
8:AH:109:ILE:CG2	8:AH:137:VAL:HB	2.50	0.42
9:AI:95:LYS:CA	9:AI:98:PRO:HD2	2.49	0.42
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	2.19	0.42
16:AP:43:LYS:HG3	16:AP:48:TRP:CE3	2.55	0.42
18:AR:45:SER:OG	18:AR:46:GLU:N	2.50	0.42
24:AY:42:ILE:O	24:AY:42:ILE:HG22	2.20	0.42
24:AY:165:GLN:HA	24:AY:178:ILE:O	2.19	0.42
24:AY:341:VAL:HG23	24:AY:350:GLU:HB2	2.02	0.42
24:AY:443:HIS:C	24:AY:445:GLU:H	2.26	0.42
25:B0:32:ARG:O	25:B0:33:ALA:C	2.63	0.42
25:B0:73:GLY:C	25:B0:75:LEU:N	2.74	0.42
26:B1:4:VAL:HG21	26:B1:11:ARG:HH11	1.84	0.42
26:B1:81:LYS:NZ	35:BA:271(H):G:O3'	2.32	0.42
31:B6:28:ARG:HB2	31:B6:29:ASN:H	1.65	0.42
33:B8:49:VAL:O	33:B8:53:PRO:HD3	2.19	0.42
35:BA:104:U:C6	35:BA:105:C:C6	3.08	0.42
35:BA:393:C:O2'	35:BA:394:A:H5'	2.18	0.42
35:BA:416:C:H6	35:BA:416:C:O5'	2.03	0.42
35:BA:652:C:O2'	35:BA:653:A:C5'	2.67	0.42
35:BA:653:A:H3'	35:BA:653:A:N3	2.34	0.42
35:BA:654:A:C8	35:BA:654(V):A:H4'	2.53	0.42
35:BA:684:G:O2'	35:BA:788:A:N7	2.53	0.42
35:BA:794:G:C2	35:BA:795:C:C2	3.08	0.42
35:BA:900:A:C5	35:BA:901:A:C8	3.07	0.42
35:BA:958:U:C3'	35:BA:958:U:C6	3.01	0.42
35:BA:978:G:N1	35:BA:985:C:N4	2.56	0.42
35:BA:1077:A:H2	35:BA:1088:A:H2'	1.84	0.42
35:BA:1171:G:N2	35:BA:1179:C:N3	2.67	0.42
35:BA:1452:A:H3'	35:BA:1453:U:H5'	1.99	0.42
35:BA:1653:G:O6	49:BR:11:ASN:HA	2.20	0.42
35:BA:1963:U:H4'	35:BA:1964:G:OP1	2.19	0.42
35:BA:2009:G:O2'	35:BA:2010:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2364:C:H2'	35:BA:2365:G:O4'	2.19	0.42
35:BA:2563:U:H2'	35:BA:2565:A:OP2	2.19	0.42
35:BA:2572:A:C5'	35:BA:2574:G:H4'	2.25	0.42
35:BA:2615:U:H2'	35:BA:2616:C:H6	1.84	0.42
35:BA:2624:G:C2'	35:BA:2625:G:H5'	2.50	0.42
35:BA:2876:G:H5"	51:BT:3:ARG:HA	2.01	0.42
36:BB:26:A:C8	36:BB:27:C:C5	3.07	0.42
36:BB:66:A:H4'	36:BB:67:G:OP1	2.18	0.42
37:BC:119:ASP:OD1	37:BC:120:VAL:HG13	2.20	0.42
38:BD:7:LYS:HB3	38:BD:8:PRO:HD2	2.02	0.42
38:BD:31:LYS:C	38:BD:33:LEU:N	2.78	0.42
38:BD:75:ILE:HA	38:BD:76:PRO:HD2	1.92	0.42
39:BE:67:PHE:O	39:BE:70:ALA:HB2	2.19	0.42
40:BF:64:ILE:HD13	40:BF:65:TRP:CE3	2.54	0.42
40:BF:154:VAL:HA	40:BF:191:ARG:O	2.19	0.42
41:BG:58:GLN:OE1	41:BG:62:LEU:HD11	2.20	0.42
41:BG:71:THR:HG23	41:BG:89:GLY:C	2.45	0.42
42:BH:138:LYS:C	42:BH:140:LYS:N	2.76	0.42
43:BK:100:THR:HG1	43:BK:103:GLN:HG3	1.84	0.42
45:BN:2:LYS:HZ3	53:BV:12:TYR:HA	1.85	0.42
48:BQ:59:ARG:CB	57:BZ:180:VAL:CG2	2.97	0.42
51:BT:28:VAL:HB	51:BT:88:ILE:HD11	2.02	0.42
52:BU:13:LYS:O	52:BU:16:LYS:HB2	2.19	0.42
52:BU:29:SER:C	52:BU:30:LYS:HD3	2.45	0.42
55:BX:3:THR:N	55:BX:6:ASP:OD2	2.52	0.42
55:BX:65:ARG:CG	55:BX:66:LEU:N	2.81	0.42
56:BY:46:LYS:HB3	56:BY:47:LYS:H	1.59	0.42
57:BZ:20:ARG:HB2	57:BZ:20:ARG:CZ	2.50	0.42
57:BZ:56:VAL:HG11	57:BZ:68:PRO:HB2	2.00	0.42
57:BZ:81:ARG:HB2	57:BZ:81:ARG:HH11	1.85	0.42
1:AA:409:G:C5'	4:AD:25:ARG:HB2	2.50	0.42
1:AA:535:A:H4'	1:AA:536:C:OP1	2.19	0.42
1:AA:649:G:H2'	1:AA:650:G:O4'	2.20	0.42
1:AA:721:G:H8	1:AA:721:G:OP1	2.02	0.42
1:AA:986:A:H2'	1:AA:987:G:H8	1.85	0.42
1:AA:1130:A:C5'	9:AI:18:PHE:HE1	2.31	0.42
1:AA:1217:C:O2	1:AA:1217:C:H2'	2.19	0.42
1:AA:1239:A:C2'	1:AA:1298:C:N4	2.81	0.42
1:AA:1442(B):A:C5	51:BT:118:ARG:NE	2.88	0.42
1:AA:1477:C:H2'	1:AA:1478:C:O4'	2.20	0.42
1:AA:1483:A:H2	35:BA:1959:G:N3	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:224:GLN:HG2	2:AB:224:GLN:O	2.20	0.42
3:AC:65:ALA:O	3:AC:66:VAL:HB	2.19	0.42
4:AD:96:LEU:C	4:AD:98:GLU:N	2.75	0.42
5:AE:143:ARG:HD3	5:AE:143:ARG:HA	1.74	0.42
7:AG:134:ALA:O	7:AG:135:VAL:C	2.61	0.42
8:AH:7:ALA:HA	8:AH:10:LEU:HD12	2.02	0.42
8:AH:9:MET:HG3	8:AH:26:VAL:HG21	2.01	0.42
8:AH:114:THR:C	8:AH:116:LYS:N	2.75	0.42
9:AI:4:TYR:CD2	9:AI:88:TYR:CB	2.94	0.42
11:AK:34:ASP:HB2	11:AK:35:PRO:HD2	2.00	0.42
11:AK:67:ASP:OD1	11:AK:71:LYS:HE3	2.19	0.42
16:AP:45:THR:O	16:AP:46:PRO:C	2.61	0.42
18:AR:40:LEU:O	18:AR:43:PHE:HD1	2.03	0.42
20:AT:43:LEU:O	20:AT:45:GLN:N	2.53	0.42
22:AV:76:A:N6	35:BA:2422:A:O4’	2.53	0.42
24:AY:251:ILE:HG13	24:AY:251:ILE:H	1.64	0.42
24:AY:260:LEU:O	24:AY:268:GLY:HA3	2.18	0.42
24:AY:529:ILE:HG12	24:AY:567:LEU:HG	2.02	0.42
25:B0:20:ARG:HD2	25:B0:20:ARG:N	2.19	0.42
25:B0:71:ASP:C	25:B0:71:ASP:OD1	2.63	0.42
26:B1:45:ASN:ND2	26:B1:47:GLN:HE21	2.18	0.42
27:B2:50:ILE:C	27:B2:52:ASP:N	2.74	0.42
31:B6:6:ARG:C	31:B6:8:LYS:N	2.78	0.42
35:BA:87:C:H5”	35:BA:88:G:H5’	2.02	0.42
35:BA:322:A:O5’	40:BF:169:ASN:ND2	2.47	0.42
35:BA:1297:C:C2	35:BA:1298:C:C5	3.06	0.42
35:BA:1331:A:C2’	35:BA:1332:G:H5”	2.49	0.42
35:BA:1475:G:C2	35:BA:1517:G:C4	3.08	0.42
35:BA:1503:U:C2	35:BA:1504:C:C5	3.07	0.42
35:BA:1632:A:C5	35:BA:1633:G:C6	3.07	0.42
35:BA:1770:G:C2’	35:BA:1771:C:H5’	2.50	0.42
35:BA:1948:G:H2’	35:BA:1949:G:C5’	2.47	0.42
35:BA:2000:G:OP2	49:BR:3:HIS:CE1	2.70	0.42
35:BA:2028:U:H2’	35:BA:2029:G:C8	2.54	0.42
35:BA:2582:G:N3	35:BA:2582:G:H2’	2.34	0.42
35:BA:2720:U:H2’	35:BA:2721:A:O4’	2.18	0.42
35:BA:2735:G:O2’	35:BA:2736:G:H5’	2.19	0.42
35:BA:2861:G:N3	35:BA:2862:G:C8	2.88	0.42
35:BA:2881:C:H2’	35:BA:2882:A:H8	1.85	0.42
36:BB:9:G:P	50:BS:25:ARG:NH2	2.92	0.42
38:BD:61:LEU:HD22	38:BD:61:LEU:HA	1.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:68:ALA:HB3	39:BE:69:LYS:HE2	2.02	0.42
39:BE:82:ARG:O	39:BE:83:ASP:C	2.62	0.42
39:BE:167:VAL:HG12	39:BE:189:PRO:CD	2.49	0.42
40:BF:53:THR:HG23	40:BF:55:GLY:CA	2.45	0.42
41:BG:97:ASP:C	41:BG:101:ILE:HG13	2.44	0.42
42:BH:65:HIS:HE1	42:BH:69:ARG:HH11	1.66	0.42
45:BN:67:LEU:HD23	45:BN:87:LEU:CB	2.49	0.42
46:BO:71:ARG:HH11	46:BO:71:ARG:HG3	1.85	0.42
49:BR:44:LEU:O	49:BR:45:ARG:C	2.62	0.42
1:AA:33:A:C2	12:AL:32:PHE:HE2	2.37	0.42
1:AA:98:G:H2'	1:AA:99:U:O4'	2.20	0.42
1:AA:542:G:N2	1:AA:543:C:C2	2.87	0.42
1:AA:1053:G:H3'	1:AA:1054:C:H5'	2.01	0.42
1:AA:1158:C:O2	1:AA:1158:C:C2'	2.67	0.42
1:AA:1238:A:OP1	1:AA:1336:C:H5	2.02	0.42
1:AA:1347:G:H2'	1:AA:1373:G:N1	2.35	0.42
2:AB:143:GLU:O	2:AB:146:GLN:HB3	2.20	0.42
2:AB:193:ASP:O	2:AB:194:PRO:C	2.61	0.42
3:AC:51:GLY:O	3:AC:115:LEU:HD21	2.20	0.42
3:AC:93:LYS:O	3:AC:93:LYS:CG	2.68	0.42
3:AC:182:ILE:HA	3:AC:202:ILE:O	2.19	0.42
5:AE:7:GLU:CB	5:AE:35:GLY:O	2.68	0.42
6:AF:81:ILE:O	6:AF:81:ILE:CG2	2.66	0.42
7:AG:137:LYS:O	7:AG:138:LYS:C	2.63	0.42
9:AI:5:TYR:CD2	9:AI:17:VAL:O	2.71	0.42
11:AK:54:ARG:C	11:AK:56:GLY:N	2.76	0.42
11:AK:60:ALA:O	11:AK:61:ALA:C	2.63	0.42
12:AL:87:GLY:HA2	12:AL:98:TYR:HA	2.02	0.42
13:AM:99:ARG:O	13:AM:101:GLN:HG3	2.19	0.42
16:AP:71:ARG:O	16:AP:74:LEU:N	2.52	0.42
20:AT:75:ASN:H	20:AT:75:ASN:ND2	2.15	0.42
20:AT:92:LEU:HD23	20:AT:92:LEU:HA	1.88	0.42
24:AY:9:LEU:HD23	24:AY:9:LEU:O	2.19	0.42
24:AY:282:SER:O	24:AY:283:PRO:C	2.62	0.42
24:AY:377:VAL:HG23	24:AY:378:VAL:N	2.35	0.42
24:AY:443:HIS:O	24:AY:445:GLU:N	2.52	0.42
24:AY:455:GLY:O	24:AY:456:GLU:C	2.63	0.42
24:AY:515:GLU:HG2	24:AY:564:LYS:HB3	2.01	0.42
29:B4:34:GLU:CD	29:B4:34:GLU:N	2.78	0.42
29:B4:39:CYS:C	29:B4:42:PHE:CE2	2.97	0.42
35:BA:88:G:N3	35:BA:88:G:H2'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:272(I):U:O2	35:BA:272(I):U:C3'	2.66	0.42
35:BA:303:U:H2'	35:BA:304:G:H8	1.84	0.42
35:BA:321:G:OP2	40:BF:135:LYS:HD2	2.20	0.42
35:BA:481:G:H2'	35:BA:507:A:C2	2.54	0.42
35:BA:530:G:N3	35:BA:530:G:O4'	2.52	0.42
35:BA:659:C:H1'	40:BF:102:PRO:HD3	2.02	0.42
35:BA:775:G:C4	35:BA:794:G:C8	3.08	0.42
35:BA:1288:U:H4'	35:BA:1289:C:OP2	2.19	0.42
35:BA:1985:G:O2'	35:BA:1986:A:H5'	2.19	0.42
35:BA:2203:U:H1'	38:BD:151:LYS:HE3	2.01	0.42
35:BA:2296:U:C4'	35:BA:2297:C:OP1	2.55	0.42
35:BA:2728:U:H2'	35:BA:2729:G:H8	1.84	0.42
35:BA:2787:C:H1'	39:BE:61:ARG:CD	2.49	0.42
35:BA:2820:A:C8	39:BE:191:PRO:CB	3.03	0.42
37:BC:76:LEU:HD23	37:BC:114:VAL:HG13	2.01	0.42
37:BC:104:ILE:HG12	37:BC:108:TRP:HE3	1.83	0.42
38:BD:142:VAL:CG2	38:BD:192:THR:C	2.87	0.42
39:BE:43:GLY:O	39:BE:44:TYR:HB3	2.20	0.42
39:BE:72:VAL:O	39:BE:73:GLU:C	2.63	0.42
39:BE:81:ILE:C	39:BE:82:ARG:O	2.62	0.42
48:BQ:118:LEU:CD1	48:BQ:131:ILE:HG23	2.50	0.42
49:BR:117:VAL:HG12	49:BR:118:GLU:H	1.82	0.42
52:BU:21:ALA:O	52:BU:22:LYS:C	2.62	0.42
52:BU:83:LEU:HG	52:BU:88:ILE:HD11	2.02	0.42
1:AA:143:A:H2	1:AA:220:G:H1	1.67	0.42
1:AA:176:C:C2	1:AA:177:C:C5	3.08	0.42
1:AA:876:G:C6	1:AA:877:C:N4	2.88	0.42
1:AA:883:C:C2'	1:AA:884:U:H5'	2.50	0.42
1:AA:1125:U:H2'	1:AA:1126:U:H2'	2.01	0.42
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.54	0.42
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.20	0.42
2:AB:35:GLU:C	2:AB:36:ARG:HH21	2.28	0.42
2:AB:90:MET:HA	2:AB:90:MET:CE	2.43	0.42
3:AC:79:ARG:HB2	3:AC:79:ARG:HH11	1.84	0.42
3:AC:200:ALA:C	3:AC:201:TYR:CD1	2.98	0.42
7:AG:82:GLY:HA3	23:AX:13:A:C2	2.53	0.42
7:AG:103:TRP:O	7:AG:104:LEU:C	2.62	0.42
8:AH:25:ASP:N	8:AH:25:ASP:OD1	2.53	0.42
9:AI:43:ALA:C	9:AI:45:ALA:H	2.27	0.42
10:AJ:32:ALA:CA	10:AJ:78:ASN:HD21	2.33	0.42
10:AJ:81:THR:O	10:AJ:83:GLU:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:3:ARG:HE	14:AN:3:ARG:HB3	1.67	0.42
14:AN:37:PHE:CB	14:AN:39:LEU:HD12	2.38	0.42
15:AO:34:LEU:HD12	15:AO:34:LEU:O	2.19	0.42
16:AP:20:VAL:CG2	16:AP:21:VAL:N	2.83	0.42
18:AR:62:GLU:O	18:AR:65:ILE:HG12	2.20	0.42
24:AY:422:GLU:O	24:AY:425:SER:N	2.52	0.42
24:AY:519:ARG:NH2	24:AY:677:GLN:HB2	2.33	0.42
25:B0:38:VAL:CG1	25:B0:39:ARG:N	2.81	0.42
30:B5:16:ARG:NH1	30:B5:16:ARG:CG	2.75	0.42
34:B9:10:ILE:HB	34:B9:32:HIS:CE1	2.54	0.42
35:BA:121:G:N2	35:BA:122:G:H1'	2.35	0.42
35:BA:272(D):G:H1	35:BA:364:C:N4	2.16	0.42
35:BA:448:U:C4	35:BA:583:G:H1'	2.55	0.42
35:BA:523:C:C3'	35:BA:523:C:C6	3.03	0.42
35:BA:876:C:H2'	35:BA:877:U:O4'	2.20	0.42
35:BA:1052:C:C6	35:BA:1052:C:O5'	2.73	0.42
35:BA:1144:G:C2'	35:BA:1145:C:H5'	2.49	0.42
35:BA:1375:C:H2'	35:BA:1376:C:C6	2.38	0.42
35:BA:1416:G:C2	35:BA:1417:C:C4	3.08	0.42
35:BA:1596:A:O2'	35:BA:1597:A:H5'	2.19	0.42
35:BA:1632:A:H2'	35:BA:1633:G:C8	2.55	0.42
35:BA:1765:C:O2'	35:BA:1766:U:H5'	2.20	0.42
35:BA:1845:G:C2'	35:BA:1846:G:C5'	2.76	0.42
35:BA:1912:A:C2	35:BA:1919:A:C6	3.08	0.42
35:BA:2126:A:O2'	35:BA:2127:G:P	2.78	0.42
35:BA:2219:G:O5'	35:BA:2219:G:C8	2.66	0.42
35:BA:2363:C:H2'	35:BA:2364:C:C6	2.55	0.42
35:BA:2469:A:N1	35:BA:2470:G:C4	2.88	0.42
35:BA:2547:U:H2'	35:BA:2548:G:H8	1.84	0.42
35:BA:2661:G:C6	35:BA:2662:A:C2	3.08	0.42
35:BA:2835:A:N6	35:BA:2878:U:H3'	2.35	0.42
36:BB:46:A:N6	36:BB:47:C:N4	2.67	0.42
36:BB:73:A:C4	36:BB:105:A:C2	3.08	0.42
38:BD:4:LYS:HZ3	38:BD:20:ASP:HA	1.84	0.42
38:BD:76:PRO:HB2	38:BD:116:GLN:NE2	2.35	0.42
40:BF:8:GLN:CB	40:BF:126:VAL:HA	2.30	0.42
41:BG:77:ILE:HG21	41:BG:77:ILE:HD13	1.65	0.42
41:BG:133:LEU:C	41:BG:133:LEU:CD1	2.91	0.42
43:BK:103:GLN:CA	43:BK:106:GLU:HG2	2.49	0.42
45:BN:61:ARG:HD3	45:BN:61:ARG:HA	1.88	0.42
46:BO:71:ARG:HB3	46:BO:72:PRO:HD2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:69:PHE:HA	48:BQ:70:PRO:HD2	1.88	0.42
51:BT:7:ILE:HG21	51:BT:7:ILE:HD13	1.72	0.42
52:BU:55:ARG:HA	52:BU:58:ARG:HD2	2.00	0.42
52:BU:106:PHE:HA	52:BU:109:LEU:HD12	2.02	0.42
53:BV:4:ILE:HA	53:BV:12:TYR:O	2.20	0.42
53:BV:54:GLY:O	53:BV:55:ALA:CB	2.66	0.42
56:BY:31:LEU:N	56:BY:31:LEU:CD2	2.79	0.42
1:AA:116:A:O2'	1:AA:117:G:H5'	2.19	0.42
1:AA:256:U:H2'	1:AA:257:G:C8	2.55	0.42
1:AA:310:G:C6	1:AA:311:C:C4	3.07	0.42
1:AA:587:G:C6	1:AA:755:G:C6	3.08	0.42
1:AA:715:A:H1'	1:AA:777:A:N1	2.35	0.42
1:AA:893:C:O2'	1:AA:894:G:H5'	2.19	0.42
1:AA:973:G:H1'	10:AJ:55:LYS:HZ1	1.80	0.42
1:AA:1049:U:O2'	1:AA:1050:G:OP2	2.28	0.42
1:AA:1103:C:H6	1:AA:1103:C:O5'	2.02	0.42
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.20	0.42
2:AB:23:ARG:HD2	2:AB:23:ARG:HA	1.71	0.42
3:AC:120:VAL:O	3:AC:121:ALA:C	2.58	0.42
4:AD:25:ARG:HH12	4:AD:30:LYS:HB2	1.84	0.42
5:AE:78:HIS:ND1	5:AE:79:GLU:N	2.67	0.42
10:AJ:20:ALA:O	10:AJ:24:VAL:HG23	2.19	0.42
12:AL:28:LYS:HE2	12:AL:33:ARG:CZ	2.49	0.42
12:AL:28:LYS:CG	12:AL:33:ARG:HH22	2.32	0.42
17:AQ:66:SER:HG	17:AQ:69:LYS:HG3	1.84	0.42
18:AR:37:VAL:O	18:AR:39:VAL:N	2.53	0.42
20:AT:45:GLN:HB2	20:AT:91:LEU:HD22	2.01	0.42
22:AV:46:G:H3'	22:AV:46:G:C8	2.55	0.42
22:AV:59:A:C2'	22:AV:60:U:H5'	2.49	0.42
24:AY:146:LEU:O	24:AY:147:TRP:C	2.63	0.42
24:AY:181:LEU:HD13	24:AY:216:LEU:HD21	2.02	0.42
24:AY:206:LEU:O	24:AY:207:ASP:C	2.62	0.42
24:AY:442:THR:HG23	24:AY:447:GLY:O	2.19	0.42
24:AY:486:THR:CG2	24:AY:600:VAL:CG1	2.97	0.42
24:AY:539:ILE:HA	24:AY:542:VAL:CG1	2.48	0.42
25:B0:62:LEU:C	25:B0:63:VAL:CG1	2.92	0.42
28:B3:6:VAL:O	28:B3:6:VAL:HG23	2.19	0.42
29:B4:22:ILE:CG2	29:B4:23:GLU:H	2.33	0.42
32:B7:39:ARG:NH2	35:BA:468:G:N7	2.61	0.42
34:B9:4:ARG:NH1	35:BA:2477:C:C4	2.85	0.42
35:BA:106:C:O2'	56:BY:2:ARG:NH2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:620:G:H4'	35:BA:621:A:H5"	2.01	0.42
35:BA:640:C:H2'	35:BA:641:C:C6	2.55	0.42
35:BA:660:G:H2'	35:BA:661:C:C6	2.55	0.42
35:BA:695:G:C5	35:BA:768:G:O6	2.73	0.42
35:BA:1448:G:H2'	35:BA:1449:A:C8	2.54	0.42
35:BA:1487:G:N3	35:BA:1487:G:H2'	2.35	0.42
35:BA:1499:C:C5	35:BA:1500:G:N7	2.88	0.42
35:BA:1541:G:H1'	35:BA:1542:A:N9	2.34	0.42
35:BA:1757:U:H2'	35:BA:1758:G:OP1	2.20	0.42
35:BA:1788:C:H2'	35:BA:1789:A:O4'	2.20	0.42
35:BA:1788:C:C2'	35:BA:1789:A:H5'	2.49	0.42
35:BA:1801:G:H3'	35:BA:1802:A:H5'	2.01	0.42
35:BA:1863:G:H2'	35:BA:1864:U:O4'	2.19	0.42
35:BA:2286:A:C6	35:BA:2346:A:N6	2.87	0.42
35:BA:2531:A:H5'	42:BH:157:TYR:CZ	2.55	0.42
35:BA:2779:U:H5'	35:BA:2780:G:O5'	2.20	0.42
37:BC:156:GLU:CD	37:BC:161:ARG:HD3	2.44	0.42
37:BC:191:ARG:CG	37:BC:191:ARG:NH1	2.71	0.42
38:BD:2:ALA:HB3	38:BD:20:ASP:OD2	2.20	0.42
38:BD:125:ILE:O	38:BD:125:ILE:HG22	2.20	0.42
38:BD:125:ILE:CD1	38:BD:137:PRO:HD3	2.50	0.42
38:BD:213:ARG:C	38:BD:215:LEU:H	2.28	0.42
39:BE:51:PHE:HD2	39:BE:52:LEU:HD13	1.85	0.42
40:BF:201:VAL:HA	40:BF:204:ASN:HD22	1.85	0.42
43:BK:57:ILE:H	43:BK:57:ILE:CD1	2.22	0.42
43:BK:119:ASP:HB3	43:BK:120:LEU:H	1.38	0.42
45:BN:87:LEU:HA	45:BN:90:MET:HB2	2.01	0.42
45:BN:99:LEU:HD13	45:BN:103:VAL:HG23	2.02	0.42
48:BQ:12:GLN:NE2	48:BQ:72:LYS:HG3	2.35	0.42
48:BQ:68:ILE:HG23	48:BQ:103:MET:HA	2.01	0.42
48:BQ:130:LYS:HZ3	57:BZ:80:ARG:HH11	1.67	0.42
48:BQ:135:ASP:CG	57:BZ:49:ARG:HH12	2.26	0.42
50:BS:66:ALA:CB	50:BS:97:ARG:HB2	2.50	0.42
51:BT:55:ASN:CA	51:BT:59:THR:HG22	2.49	0.42
53:BV:38:LEU:C	53:BV:39:LEU:HD13	2.45	0.42
54:BW:86:LEU:HD12	54:BW:87:PRO:CD	2.49	0.42
56:BY:28:LYS:O	56:BY:29:GLU:C	2.60	0.42
56:BY:55:TYR:N	56:BY:55:TYR:HD1	2.18	0.42
57:BZ:20:ARG:HH11	57:BZ:20:ARG:HB3	1.85	0.42
57:BZ:118:GLN:O	57:BZ:172:ALA:HB1	2.20	0.42
1:AA:163:C:C2'	1:AA:164:U:H5'	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:192:U:H4'	20:AT:103:GLY:HA2	2.02	0.41
1:AA:283:C:C6	1:AA:283:C:O5'	2.72	0.41
1:AA:518:C:H5"	1:AA:519:C:C6	2.54	0.41
1:AA:555:C:H2'	1:AA:556:C:C6	2.55	0.41
1:AA:665:A:H2'	1:AA:725:G:N2	2.35	0.41
1:AA:724:G:C2	1:AA:725:G:C8	3.07	0.41
1:AA:774:G:H2'	1:AA:775:G:O4'	2.20	0.41
1:AA:1061:G:H1'	10:AJ:56:HIS:CE1	2.55	0.41
1:AA:1112:C:O2'	3:AC:179:ARG:HG2	2.20	0.41
1:AA:1221:G:P	19:AS:36:ARG:HD3	2.60	0.41
1:AA:1457:G:C8	1:AA:1457:G:H3'	2.54	0.41
2:AB:12:GLU:CA	2:AB:16:HIS:ND1	2.81	0.41
4:AD:149:ALA:O	4:AD:153:ARG:HG3	2.20	0.41
4:AD:192:GLU:O	4:AD:194:LEU:N	2.53	0.41
5:AE:60:TYR:CE1	5:AE:64:ARG:NH2	2.68	0.41
6:AF:32:ASN:HD22	6:AF:32:ASN:HA	1.68	0.41
7:AG:38:LEU:O	7:AG:41:ARG:HB2	2.20	0.41
8:AH:75:ARG:HA	8:AH:76:PRO:HD2	1.91	0.41
10:AJ:24:VAL:C	10:AJ:26:ALA:H	2.28	0.41
10:AJ:94:VAL:CG1	10:AJ:95:GLU:N	2.83	0.41
12:AL:15:ARG:HA	12:AL:15:ARG:HD3	1.80	0.41
12:AL:27:LEU:HB2	12:AL:62:SER:CB	2.49	0.41
12:AL:105:TYR:N	12:AL:105:TYR:HD2	2.17	0.41
13:AM:53:VAL:O	13:AM:56:LEU:HB3	2.19	0.41
13:AM:81:LEU:N	13:AM:81:LEU:CD2	2.81	0.41
15:AO:31:LEU:HD22	15:AO:31:LEU:N	2.34	0.41
22:AV:49:G:H1	22:AV:65:C:N4	2.18	0.41
24:AY:97:SER:HB3	24:AY:101:LEU:HD21	2.01	0.41
24:AY:165:GLN:NE2	24:AY:260:LEU:CD2	2.83	0.41
24:AY:420:ASP:HB3	24:AY:472:VAL:HG13	2.01	0.41
26:B1:4:VAL:HA	26:B1:10:LYS:O	2.19	0.41
30:B5:2:ALA:CA	35:BA:2015:A:C1'	2.91	0.41
30:B5:48:GLU:C	30:B5:49:CYS:SG	3.03	0.41
33:B8:25:MET:O	33:B8:47:LYS:HG2	2.20	0.41
35:BA:284:U:O5'	35:BA:284:U:H6	2.03	0.41
35:BA:363:G:H2'	35:BA:363(A):A:C8	2.51	0.41
35:BA:364:C:C2'	35:BA:365:C:C5'	2.95	0.41
35:BA:482:A:N6	35:BA:506:G:C8	2.88	0.41
35:BA:717:G:H2'	35:BA:718:A:O4'	2.19	0.41
35:BA:814:C:N3	35:BA:1193:G:O6	2.53	0.41
35:BA:950:G:H2'	35:BA:951:C:H6	1.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1010:A:H1'	35:BA:1153:C:C1'	2.48	0.41
35:BA:1680:U:O2'	35:BA:1681:G:H5'	2.20	0.41
35:BA:1701:A:H2'	35:BA:1702:G:H5'	2.01	0.41
35:BA:1856:G:H1	35:BA:1886:C:N4	2.18	0.41
35:BA:1943:U:O2	35:BA:1943:U:C2'	2.67	0.41
35:BA:2189:U:H2'	35:BA:2189:U:O2	2.18	0.41
35:BA:2394:C:C5	35:BA:2395:C:C5	3.08	0.41
35:BA:2543:G:H2'	35:BA:2544:G:C8	2.55	0.41
35:BA:2655:G:HO2'	35:BA:2664:G:H1	1.64	0.41
35:BA:2656:U:H3	35:BA:2665:A:H2	1.66	0.41
35:BA:2693:A:C2	35:BA:2694:G:C8	3.08	0.41
35:BA:2720:U:O2'	35:BA:2721:A:H5'	2.20	0.41
36:BB:32:C:C2	36:BB:51:G:N2	2.88	0.41
38:BD:4:LYS:NZ	38:BD:21:PHE:H	2.17	0.41
38:BD:53:PHE:HB3	38:BD:218:ARG:HB2	2.01	0.41
38:BD:209:ALA:O	38:BD:210:GLY:O	2.38	0.41
39:BE:170:LEU:N	39:BE:170:LEU:CD1	2.83	0.41
40:BF:117:ARG:HD3	40:BF:117:ARG:HA	1.76	0.41
40:BF:179:GLU:C	40:BF:181:LEU:N	2.72	0.41
45:BN:14:VAL:CG1	45:BN:15:LEU:N	2.82	0.41
45:BN:133:GLN:O	45:BN:134:ARG:HB3	2.18	0.41
47:BP:114:ILE:HD12	47:BP:114:ILE:C	2.45	0.41
48:BQ:35:VAL:HG23	48:BQ:101:ARG:C	2.44	0.41
49:BR:10:LEU:HB3	49:BR:17:ARG:CD	2.50	0.41
49:BR:82:GLU:O	49:BR:85:PRO:HD2	2.20	0.41
51:BT:6:LEU:O	51:BT:7:ILE:C	2.63	0.41
52:BU:66:ASN:C	52:BU:68:ALA:N	2.77	0.41
54:BW:1:MET:HA	54:BW:1:MET:HE3	2.00	0.41
55:BX:29:TRP:CH2	55:BX:76:ARG:NH2	2.88	0.41
56:BY:9:LYS:HD3	56:BY:94:LYS:CE	2.48	0.41
56:BY:69:ALA:O	56:BY:72:VAL:HG22	2.19	0.41
57:BZ:46:LYS:O	57:BZ:46:LYS:HG2	2.20	0.41
57:BZ:107:THR:CG2	57:BZ:111:VAL:HB	2.49	0.41
1:AA:110:C:H2'	1:AA:111:G:O4'	2.20	0.41
1:AA:238:G:O2'	1:AA:239:U:H5'	2.19	0.41
1:AA:265:G:H2'	1:AA:267:C:C5	2.48	0.41
1:AA:303:A:C5	1:AA:304:U:C5	3.08	0.41
1:AA:602:A:H2'	1:AA:603:U:H6	1.84	0.41
1:AA:973:G:H1'	10:AJ:55:LYS:HE2	2.01	0.41
1:AA:1452:C:C1'	1:AA:1456:G:N2	2.67	0.41
1:AA:1474:G:H4'	35:BA:1701:A:H2	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:121:LEU:HD23	2:AB:121:LEU:HA	1.68	0.41
3:AC:62:ASP:O	3:AC:64:VAL:HG23	2.20	0.41
4:AD:28:SER:HB3	4:AD:29:PRO:CD	2.43	0.41
4:AD:67:ILE:HB	4:AD:68:TYR:HD1	1.85	0.41
4:AD:92:VAL:O	4:AD:93:PHE:C	2.62	0.41
4:AD:176:LEU:HD12	4:AD:177:ASP:H	1.84	0.41
4:AD:204:ILE:O	4:AD:206:PHE:N	2.53	0.41
6:AF:27:GLN:O	6:AF:28:ARG:C	2.62	0.41
6:AF:33:TYR:O	6:AF:34:GLY:C	2.63	0.41
7:AG:80:VAL:HG21	7:AG:85:TYR:CD1	2.55	0.41
7:AG:85:TYR:CD1	7:AG:154:TYR:HE1	2.38	0.41
10:AJ:81:THR:O	10:AJ:82:ILE:C	2.63	0.41
13:AM:10:PRO:O	13:AM:11:ARG:CB	2.67	0.41
13:AM:21:TYR:N	13:AM:21:TYR:CD2	2.87	0.41
15:AO:27:VAL:O	15:AO:28:GLN:C	2.63	0.41
15:AO:59:MET:HB2	15:AO:59:MET:HE3	1.45	0.41
20:AT:54:LYS:O	20:AT:55:ILE:C	2.63	0.41
20:AT:78:ALA:HA	20:AT:81:LYS:HD3	2.01	0.41
21:AU:24:ARG:O	21:AU:25:LYS:CB	2.68	0.41
24:AY:99:ARG:NE	24:AY:128:TYR:HB2	2.34	0.41
24:AY:232:LEU:HD11	44:BL:69:ILE:CD1	2.50	0.41
24:AY:265:LYS:HB2	24:AY:267:LYS:HD2	2.01	0.41
24:AY:496:LYS:HA	24:AY:509:HIS:HB2	2.02	0.41
26:B1:27:GLU:O	26:B1:28:GLY:C	2.61	0.41
27:B2:41:ILE:CD1	27:B2:44:LEU:HD12	2.43	0.41
27:B2:58:ALA:O	27:B2:61:LEU:N	2.53	0.41
29:B4:16:CYS:SG	29:B4:36:CYS:SG	3.14	0.41
29:B4:43:TYR:HB2	29:B4:44:THR:H	1.60	0.41
30:B5:34:PRO:HG3	35:BA:2885:C:O2'	2.19	0.41
33:B8:26:LYS:NZ	35:BA:2361:A:OP2	2.53	0.41
35:BA:187:G:N3	35:BA:1365:A:H2	2.18	0.41
35:BA:216:A:C4	35:BA:432:A:C2	3.08	0.41
35:BA:250:G:C6	35:BA:251:A:C6	3.07	0.41
35:BA:598:G:C5'	47:BP:15:ARG:HB2	2.41	0.41
35:BA:786:C:H6	35:BA:786:C:O5'	2.02	0.41
35:BA:881:G:H2'	35:BA:882:G:H5'	2.02	0.41
35:BA:1034:G:C6	35:BA:1035:U:N3	2.89	0.41
35:BA:1061:U:H5"	35:BA:1062:G:OP2	2.19	0.41
35:BA:1063:G:N2	35:BA:1076:C:O2	2.53	0.41
35:BA:1081:U:H4'	43:BK:117:THR:HG21	2.02	0.41
35:BA:1100:C:O2	35:BA:1100:C:H2'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1169:G:H1	35:BA:1180:C:N4	2.19	0.41
35:BA:1203:G:OP2	35:BA:1204:A:H2'	2.20	0.41
35:BA:1478:G:HO2'	35:BA:1558:A:H2	1.62	0.41
35:BA:1545:A:N7	35:BA:1546:C:C2	2.88	0.41
35:BA:1688:U:O2	35:BA:1700:A:H5"	2.21	0.41
35:BA:2293:C:OP1	50:BS:92:TYR:OH	2.38	0.41
35:BA:2339:G:H2'	35:BA:2340:G:C8	2.55	0.41
35:BA:2345:G:N7	35:BA:2372:G:C2	2.87	0.41
35:BA:2748:A:C5	35:BA:2757:A:C6	3.07	0.41
35:BA:2835:A:N6	35:BA:2878:U:C6	2.88	0.41
35:BA:2857:G:C2	35:BA:2861:G:C6	3.09	0.41
36:BB:46:A:C5	36:BB:47:C:C4	3.08	0.41
36:BB:82:G:C2	36:BB:83:G:C8	3.08	0.41
38:BD:148:GLU:C	38:BD:151:LYS:HG3	2.46	0.41
39:BE:26:ILE:CG2	39:BE:196:VAL:HG21	2.47	0.41
39:BE:93:VAL:C	39:BE:95:ILE:N	2.77	0.41
40:BF:11:VAL:HB	40:BF:12:LEU:H	1.59	0.41
40:BF:198:ALA:HA	40:BF:201:VAL:HG12	2.01	0.41
41:BG:46:ALA:CA	41:BG:51:ARG:HG3	2.49	0.41
41:BG:54:GLU:CA	41:BG:57:ALA:HB3	2.51	0.41
41:BG:98:ARG:HA	41:BG:98:ARG:HD3	1.76	0.41
46:BO:10:VAL:HG21	46:BO:16:ALA:C	2.45	0.41
49:BR:75:LEU:HD13	49:BR:75:LEU:C	2.44	0.41
49:BR:78:LYS:O	49:BR:78:LYS:HG2	2.19	0.41
49:BR:84:ALA:CB	49:BR:85:PRO:HD3	2.33	0.41
50:BS:74:ALA:HB3	50:BS:103:GLU:HG3	2.02	0.41
51:BT:48:ILE:HD12	51:BT:48:ILE:N	2.35	0.41
51:BT:89:VAL:CB	51:BT:91:ARG:HG3	2.50	0.41
55:BX:18:TYR:HA	55:BX:21:PHE:CE2	2.55	0.41
1:AA:119:A:C8	1:AA:288:A:C2	3.09	0.41
1:AA:124:G:H2'	1:AA:125:U:C6	2.55	0.41
1:AA:174:C:O5'	1:AA:174:C:H6	2.02	0.41
1:AA:193:C:H2'	1:AA:194:C:C6	2.55	0.41
1:AA:605:U:O2'	1:AA:606:G:H5'	2.20	0.41
1:AA:666:G:N2	1:AA:667:G:H1'	2.35	0.41
1:AA:986:A:O2'	1:AA:987:G:H5'	2.20	0.41
1:AA:1047:G:O2'	1:AA:1048:G:H5'	2.20	0.41
1:AA:1122:U:H2'	1:AA:1123:A:H5'	2.02	0.41
1:AA:1226:C:C6	13:AM:103:THR:O	2.73	0.41
1:AA:1329:A:H5"	13:AM:26:GLY:H	1.85	0.41
1:AA:1350:A:C6	1:AA:1351:U:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1452:C:H1'	1:AA:1456:G:C2	2.51	0.41
2:AB:121:LEU:HD21	2:AB:126:GLU:CD	2.44	0.41
3:AC:113:ALA:N	3:AC:114:PRO:CD	2.83	0.41
4:AD:58:LEU:C	4:AD:58:LEU:CD2	2.93	0.41
6:AF:61:LEU:HD12	6:AF:61:LEU:N	2.32	0.41
6:AF:97:PHE:HB2	18:AR:32:ARG:HH21	1.86	0.41
11:AK:26:ASN:O	11:AK:27:ASN:HB2	2.20	0.41
11:AK:27:ASN:HD22	11:AK:29:ILE:CG2	2.21	0.41
13:AM:70:LEU:O	13:AM:73:GLU:N	2.53	0.41
13:AM:80:ARG:O	13:AM:83:ASP:HB3	2.20	0.41
17:AQ:63:ARG:HA	17:AQ:64:PRO:HD3	1.79	0.41
18:AR:31:LEU:HD11	18:AR:62:GLU:HG2	2.02	0.41
18:AR:36:ASN:OD1	18:AR:39:VAL:CG2	2.68	0.41
19:AS:12:ASP:O	19:AS:15:LEU:HB2	2.20	0.41
24:AY:15:ILE:HD12	24:AY:15:ILE:C	2.45	0.41
24:AY:384:ILE:N	24:AY:387:ASP:OD2	2.53	0.41
24:AY:447:GLY:O	24:AY:448:GLN:O	2.37	0.41
24:AY:459:LEU:O	24:AY:463:VAL:HG23	2.21	0.41
24:AY:528:ALA:HB3	24:AY:568:TYR:HA	2.02	0.41
24:AY:659:LEU:C	24:AY:659:LEU:CD1	2.94	0.41
26:B1:52:ARG:HA	26:B1:52:ARG:HD3	1.89	0.41
26:B1:89:GLU:O	26:B1:93:GLU:HG2	2.20	0.41
28:B3:28:LEU:N	28:B3:28:LEU:CD2	2.78	0.41
30:B5:33:CYS:HA	30:B5:34:PRO:HD2	1.91	0.41
35:BA:15:G:C4	35:BA:16:G:C8	3.09	0.41
35:BA:84:A:N6	35:BA:102:G:O2'	2.52	0.41
35:BA:137:C:N4	35:BA:139:G:O6	2.53	0.41
35:BA:271(P):C:H2'	35:BA:271(Q):G:O4'	2.20	0.41
35:BA:271(Z):C:H1'	35:BA:272(C):G:H1'	2.00	0.41
35:BA:286:C:C6	35:BA:286:C:C5'	2.88	0.41
35:BA:442:G:O4'	40:BF:46:ARG:HG2	2.20	0.41
35:BA:503:A:O2'	35:BA:504:U:O5'	2.37	0.41
35:BA:685:A:C6	35:BA:774:A:C2	3.08	0.41
35:BA:813:U:C2	35:BA:814:C:C5	3.08	0.41
35:BA:814:C:C5	47:BP:27:HIS:CE1	3.08	0.41
35:BA:953:A:OP2	48:BQ:16:ARG:NH2	2.53	0.41
35:BA:1453:U:OP1	49:BR:63:ARG:NH2	2.52	0.41
35:BA:1680:U:O2	35:BA:1763:G:H3'	2.20	0.41
35:BA:1803:A:O5'	35:BA:1803:A:H8	2.02	0.41
35:BA:1821:A:H2'	35:BA:1822:G:C8	2.53	0.41
35:BA:1887:C:C2'	35:BA:1888:G:H5"	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2126:A:O2'	35:BA:2127:G:OP2	2.37	0.41
35:BA:2183:C:C2'	35:BA:2184:G:H5'	2.50	0.41
37:BC:60:ARG:CD	37:BC:142:LYS:O	2.69	0.41
38:BD:259:THR:O	38:BD:260:ARG:C	2.63	0.41
39:BE:38:THR:C	39:BE:40:GLU:H	2.28	0.41
39:BE:51:PHE:HB3	39:BE:52:LEU:H	1.69	0.41
39:BE:101:ARG:CD	39:BE:171:GLU:HA	2.51	0.41
40:BF:199:TRP:CZ3	40:BF:203:GLN:HG2	2.55	0.41
41:BG:37:VAL:HA	41:BG:158:ALA:O	2.20	0.41
42:BH:82:GLY:O	42:BH:83:TYR:O	2.39	0.41
43:BK:34:ILE:H	43:BK:34:ILE:HG12	1.44	0.41
45:BN:9:VAL:HG12	45:BN:10:GLU:H	1.84	0.41
45:BN:82:LEU:HD21	45:BN:84:LYS:HG3	2.02	0.41
47:BP:16:ARG:O	47:BP:18:ARG:N	2.54	0.41
49:BR:84:ALA:HB3	49:BR:85:PRO:CD	2.35	0.41
50:BS:99:LYS:O	50:BS:100:ALA:C	2.62	0.41
52:BU:26:GLY:C	52:BU:28:ARG:N	2.77	0.41
53:BV:47:VAL:O	53:BV:48:GLY:C	2.63	0.41
56:BY:17:SER:O	56:BY:21:LYS:HG2	2.21	0.41
56:BY:39:VAL:HG12	56:BY:40:GLU:N	2.35	0.41
57:BZ:30:ASN:HA	57:BZ:89:PHE:HE1	1.86	0.41
1:AA:160:A:C2'	1:AA:161:A:H5'	2.50	0.41
1:AA:313:A:H2'	1:AA:314:C:C6	2.54	0.41
1:AA:509:A:N3	1:AA:543:C:O2'	2.52	0.41
1:AA:522:C:H5	12:AL:53:ARG:HH22	1.66	0.41
1:AA:525:C:OP1	12:AL:91:LYS:CE	2.68	0.41
1:AA:763:G:H2'	1:AA:764:C:H6	1.86	0.41
1:AA:1047:G:C2'	1:AA:1048:G:H5'	2.50	0.41
1:AA:1066:C:O2	1:AA:1066:C:H2'	2.21	0.41
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.55	0.41
1:AA:1270:C:H2'	1:AA:1271:G:H8	1.79	0.41
1:AA:1305:G:O2'	1:AA:1331:G:N2	2.53	0.41
1:AA:1457:G:C8	1:AA:1457:G:C3'	3.03	0.41
1:AA:1472:U:O5'	1:AA:1472:U:H6	2.03	0.41
1:AA:1515:C:H2'	1:AA:1516:G:C8	2.55	0.41
2:AB:163:PHE:HA	2:AB:185:ILE:HG13	2.03	0.41
4:AD:30:LYS:HB3	4:AD:35:ARG:HD2	2.02	0.41
4:AD:57:ARG:NH1	4:AD:205:GLU:OE2	2.51	0.41
4:AD:107:ARG:NH2	4:AD:194:LEU:HD12	2.29	0.41
7:AG:21:VAL:HG23	7:AG:22:LEU:H	1.85	0.41
8:AH:137:VAL:CG1	8:AH:138:TRP:N	2.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:83:ARG:C	9:AI:86:VAL:HG12	2.45	0.41
11:AK:20:TYR:CE2	11:AK:83:ILE:HD12	2.55	0.41
18:AR:66:LEU:HG	18:AR:70:ILE:CD1	2.51	0.41
20:AT:81:LYS:C	20:AT:83:ARG:H	2.27	0.41
24:AY:74:TRP:NE1	24:AY:273:LEU:HB3	2.36	0.41
24:AY:121:VAL:HA	24:AY:124:GLN:NE2	2.35	0.41
24:AY:262:SER:HB3	24:AY:265:LYS:HB2	2.02	0.41
24:AY:302:HIS:HA	24:AY:303:PRO:HD2	1.62	0.41
24:AY:417:THR:O	24:AY:419:ALA:N	2.54	0.41
24:AY:519:ARG:HH12	24:AY:678:GLU:HB3	1.85	0.41
26:B1:92:LYS:NZ	35:BA:153:C:OP1	2.46	0.41
31:B6:42:TRP:HH2	35:BA:643:A:N7	2.17	0.41
33:B8:40:GLU:O	33:B8:44:LYS:HD3	2.21	0.41
35:BA:301:G:C4	35:BA:302:C:C4	3.08	0.41
35:BA:565:C:C2	35:BA:577:G:N2	2.88	0.41
35:BA:664:C:H4'	35:BA:941:A:OP1	2.21	0.41
35:BA:705:A:C2	35:BA:727:A:H1'	2.55	0.41
35:BA:754:C:H2'	35:BA:755:C:C6	2.55	0.41
35:BA:1485:G:H2'	35:BA:1486:A:C8	2.55	0.41
35:BA:1814:G:C6	35:BA:1815:A:C6	3.08	0.41
35:BA:1860:G:C6	35:BA:1883:G:N2	2.89	0.41
35:BA:1983:C:O2'	35:BA:1984:G:H5'	2.20	0.41
35:BA:2033:A:HO2'	35:BA:2034:U:P	2.41	0.41
35:BA:2262:U:O2'	35:BA:2328:A:H1'	2.19	0.41
35:BA:2464:C:O2'	35:BA:2465:C:P	2.78	0.41
36:BB:29:A:OP2	50:BS:32:LEU:HG	2.19	0.41
36:BB:89:G:H8	36:BB:89:G:OP2	2.03	0.41
36:BB:115:G:C4	36:BB:116:G:C8	3.08	0.41
38:BD:133:LEU:O	38:BD:135:PHE:N	2.53	0.41
38:BD:148:GLU:HB2	38:BD:151:LYS:HD2	2.03	0.41
40:BF:106:ARG:CG	40:BF:106:ARG:HH11	2.34	0.41
41:BG:34:LEU:HD12	41:BG:34:LEU:N	2.35	0.41
42:BH:40:GLU:O	42:BH:41:MET:CB	2.68	0.41
42:BH:130:ARG:CZ	42:BH:130:ARG:HB3	2.50	0.41
42:BH:173:PRO:O	42:BH:175:LYS:N	2.53	0.41
43:BK:99:ILE:O	43:BK:138:VAL:HA	2.20	0.41
45:BN:23:LEU:HD23	45:BN:23:LEU:C	2.44	0.41
45:BN:49:GLY:HA3	45:BN:119:ARG:NH1	2.35	0.41
46:BO:53:LYS:O	46:BO:54:GLU:C	2.62	0.41
46:BO:63:VAL:O	46:BO:64:ARG:CG	2.68	0.41
49:BR:63:ARG:HB2	49:BR:80:PHE:HE2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BS:75:GLU:O	50:BS:76:LYS:C	2.63	0.41
50:BS:83:LYS:HG2	50:BS:84:GLN:N	2.35	0.41
51:BT:29:ARG:CG	51:BT:85:LYS:HA	2.50	0.41
51:BT:29:ARG:HG2	51:BT:85:LYS:CA	2.50	0.41
51:BT:76:PHE:HA	51:BT:77:PRO:HD3	1.76	0.41
51:BT:120:ARG:HA	51:BT:123:GLN:HG2	2.02	0.41
51:BT:125:ARG:HH11	51:BT:125:ARG:CA	2.25	0.41
56:BY:7:VAL:CB	56:BY:8:LYS:CE	2.93	0.41
56:BY:42:VAL:HG23	56:BY:67:LEU:HD13	2.02	0.41
56:BY:45:VAL:C	56:BY:46:LYS:O	2.62	0.41
57:BZ:132:ASN:O	57:BZ:134:PRO:CD	2.69	0.41
1:AA:44:G:N2	1:AA:45:U:H1'	2.36	0.41
1:AA:146:G:C2	1:AA:147:G:C8	3.08	0.41
1:AA:552:U:H4'	12:AL:86:ARG:CG	2.51	0.41
1:AA:597:G:C4	1:AA:644:G:C2	3.09	0.41
1:AA:747:C:H2'	1:AA:748:C:C1'	2.50	0.41
1:AA:748:C:O2'	1:AA:749:C:C6	2.71	0.41
1:AA:769:G:C2'	1:AA:770:C:H5'	2.50	0.41
1:AA:1001(A):G:H8	1:AA:1002:G:C8	2.38	0.41
1:AA:1198:G:C6	1:AA:1199:U:C4	3.08	0.41
1:AA:1287:A:C5	1:AA:1288:A:C6	3.08	0.41
2:AB:60:ASP:O	2:AB:64:ARG:NE	2.53	0.41
3:AC:29:TYR:OH	14:AN:54:PRO:HD2	2.21	0.41
3:AC:96:GLY:C	3:AC:97:LYS:HG3	2.45	0.41
4:AD:61:LYS:CE	4:AD:62:GLN:HE21	2.32	0.41
5:AE:57:LYS:O	5:AE:61:TYR:HD2	2.04	0.41
5:AE:80:ILE:HG22	8:AH:104:ARG:HH22	1.83	0.41
5:AE:92:LYS:HA	5:AE:93:PRO:HD2	1.71	0.41
6:AF:42:GLU:C	6:AF:44:GLY:N	2.78	0.41
7:AG:146:GLU:O	7:AG:147:ALA:C	2.63	0.41
9:AI:86:VAL:HB	9:AI:96:LEU:CD2	2.50	0.41
10:AJ:30:SER:O	10:AJ:81:THR:HG23	2.20	0.41
10:AJ:65:LEU:HD12	14:AN:55:GLY:O	2.20	0.41
12:AL:30:ALA:HA	12:AL:31:PRO:HD3	1.88	0.41
19:AS:58:VAL:O	19:AS:60:VAL:N	2.52	0.41
20:AT:57:ARG:HB2	20:AT:57:ARG:HH11	1.85	0.41
20:AT:86:ARG:O	20:AT:90:GLN:HG3	2.21	0.41
24:AY:357:ARG:NH1	24:AY:373:ASP:OD1	2.53	0.41
25:B0:24:LYS:HA	25:B0:24:LYS:HD3	1.84	0.41
26:B1:58:ILE:HD11	26:B1:91:LYS:CB	2.49	0.41
27:B2:20:GLU:O	27:B2:23:LYS:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B5:31:VAL:HA	30:B5:32:PRO:HD3	1.95	0.41
31:B6:5:VAL:HB	35:BA:2284:C:OP1	2.21	0.41
34:B9:29:ASN:HA	34:B9:30:PRO:HD2	1.86	0.41
35:BA:265:A:H1'	35:BA:266:G:H1'	2.02	0.41
35:BA:279:C:H2'	35:BA:280:C:H5"	2.01	0.41
35:BA:312:G:C2	35:BA:313:C:C2	3.09	0.41
35:BA:492:A:C2'	35:BA:493:G:C5'	2.94	0.41
35:BA:637:A:OP1	47:BP:133:SER:CB	2.67	0.41
35:BA:646:A:H2'	35:BA:647:G:O4'	2.19	0.41
35:BA:738:G:H2'	35:BA:739:G:C8	2.56	0.41
35:BA:938:G:C2	35:BA:939:G:N7	2.89	0.41
35:BA:1210:A:O2'	35:BA:1211:U:P	2.79	0.41
35:BA:1332:G:H22	35:BA:1609:A:H3'	1.86	0.41
35:BA:1445(A):C:O2	35:BA:1445(A):C:H2'	2.21	0.41
35:BA:1467:C:H5	35:BA:1546:C:H2'	1.85	0.41
35:BA:1469:A:C6	35:BA:1470:G:C5	3.08	0.41
35:BA:1623:G:H2'	35:BA:1624:G:H8	1.86	0.41
35:BA:1786:A:H4'	35:BA:1787:A:OP2	2.20	0.41
35:BA:1865:G:C3'	35:BA:1866:C:C5'	2.98	0.41
35:BA:2298:A:N6	35:BA:2318:G:C8	2.86	0.41
35:BA:2404:C:C2'	35:BA:2405:G:H5'	2.50	0.41
35:BA:2814:C:H2'	35:BA:2815:C:H6	1.84	0.41
35:BA:2857:G:N1	35:BA:2861:G:C6	2.88	0.41
36:BB:89:G:C6	36:BB:90:A:N1	2.89	0.41
37:BC:34:ALA:HA	37:BC:40:GLU:OE2	2.21	0.41
39:BE:51:PHE:CD2	39:BE:52:LEU:HD12	2.55	0.41
40:BF:152:GLU:O	40:BF:153:SER:C	2.64	0.41
42:BH:45:VAL:O	42:BH:47:GLU:N	2.54	0.41
48:BQ:52:VAL:HG12	48:BQ:53:ALA:N	2.35	0.41
49:BR:38:VAL:HB	49:BR:39:PRO:CD	2.41	0.41
49:BR:111:LEU:N	49:BR:111:LEU:HD23	2.35	0.41
51:BT:29:ARG:HD3	51:BT:86:ILE:CG2	2.48	0.41
52:BU:37:GLU:O	52:BU:38:THR:C	2.63	0.41
53:BV:38:LEU:C	53:BV:38:LEU:CD2	2.93	0.41
53:BV:47:VAL:HB	53:BV:49:THR:O	2.19	0.41
55:BX:53:LYS:HB3	55:BX:82:GLN:HB3	2.03	0.41
1:AA:104:G:OP1	20:AT:21:LYS:NZ	2.34	0.41
1:AA:186:C:H2'	1:AA:187:C:C6	2.56	0.41
1:AA:745:C:OP1	1:AA:851:G:O2'	2.37	0.41
1:AA:771:G:C6	1:AA:809:G:N1	2.88	0.41
1:AA:918:A:H2'	1:AA:919:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1026:G:H3'	1:AA:1027:C:C5'	2.50	0.41
1:AA:1030(A):G:O2'	1:AA:1030(C):G:N7	2.50	0.41
1:AA:1065:U:O2'	1:AA:1066:C:OP2	2.37	0.41
1:AA:1118:C:O5'	1:AA:1118:C:H6	2.03	0.41
1:AA:1437:C:O2'	1:AA:1438:G:H5'	2.20	0.41
1:AA:1520:G:H2'	1:AA:1521:G:H8	1.85	0.41
2:AB:51:LEU:CD2	2:AB:55:PHE:HE2	2.32	0.41
2:AB:75:LYS:HD3	2:AB:75:LYS:O	2.21	0.41
2:AB:113:HIS:HE1	2:AB:156:LYS:NZ	2.18	0.41
4:AD:10:ARG:O	4:AD:13:ARG:HB2	2.21	0.41
4:AD:50:ARG:HD2	4:AD:51:PRO:O	2.21	0.41
5:AE:69:VAL:HA	5:AE:70:PRO:HD2	1.76	0.41
6:AF:76:ALA:O	6:AF:77:ARG:C	2.62	0.41
7:AG:79:ARG:O	7:AG:79:ARG:HD2	2.21	0.41
8:AH:17:THR:HG22	8:AH:63:LEU:CD1	2.48	0.41
9:AI:100:GLY:C	9:AI:102:LEU:N	2.78	0.41
13:AM:2:ALA:C	13:AM:9:ILE:HG23	2.46	0.41
13:AM:22:ILE:CG2	13:AM:66:LEU:CD2	2.99	0.41
18:AR:75:ILE:C	18:AR:77:GLY:H	2.27	0.41
24:AY:16:GLY:CA	24:AY:101:LEU:HD13	2.49	0.41
24:AY:230:LYS:O	24:AY:235:GLU:O	2.39	0.41
24:AY:402:ILE:O	24:AY:402:ILE:HG22	2.18	0.41
24:AY:422:GLU:C	24:AY:424:LEU:H	2.28	0.41
27:B2:18:PRO:O	27:B2:19:VAL:C	2.63	0.41
29:B4:1:MET:H1	36:BB:43:C:H4'	1.85	0.41
30:B5:30:LEU:HD23	30:B5:40:LYS:C	2.46	0.41
35:BA:405:U:H3'	35:BA:406:G:C5'	2.51	0.41
35:BA:467:G:H4'	35:BA:796:C:O2'	2.20	0.41
35:BA:511:U:C5	35:BA:512:G:C5	3.07	0.41
35:BA:723:G:C5	35:BA:724:U:C4	3.09	0.41
35:BA:920:G:O2'	35:BA:921:G:H5'	2.21	0.41
35:BA:970:C:C6	35:BA:971:C:C5	3.09	0.41
35:BA:1064:C:H42	35:BA:1074:G:H1	1.69	0.41
35:BA:1345:C:H5'	35:BA:1345:C:H6	1.85	0.41
35:BA:1354:A:H2'	35:BA:1355:G:O4'	2.20	0.41
35:BA:1445(A):C:H42	35:BA:1466:G:H1	1.68	0.41
35:BA:1654:A:O2'	35:BA:1655:A:H5'	2.20	0.41
35:BA:1775:U:C2'	35:BA:1776:G:C5'	2.95	0.41
35:BA:1907:G:O2'	35:BA:1908:C:H5'	2.20	0.41
35:BA:2171:A:C1'	35:BA:2172:U:C5	2.99	0.41
35:BA:2339:G:H2'	35:BA:2340:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2632:A:H1'	39:BE:61:ARG:NH1	2.36	0.41
38:BD:69:ARG:O	38:BD:69:ARG:HG2	2.20	0.41
38:BD:145:VAL:O	38:BD:153:ALA:HA	2.19	0.41
40:BF:25:PRO:HB3	40:BF:119:ARG:HD3	2.01	0.41
41:BG:6:ALA:O	41:BG:7:LEU:C	2.63	0.41
41:BG:129:GLY:H	41:BG:166:ASP:N	2.18	0.41
42:BH:87:LEU:HD21	42:BH:164:TYR:CE1	2.56	0.41
45:BN:47:ALA:C	45:BN:49:GLY:H	2.27	0.41
48:BQ:21:THR:OG1	48:BQ:99:PRO:O	2.39	0.41
51:BT:50:ILE:N	51:BT:50:ILE:CD1	2.84	0.41
54:BW:20:VAL:C	54:BW:22:ASP:N	2.78	0.41
55:BX:59:VAL:HG21	55:BX:78:LYS:HD2	2.01	0.41
57:BZ:102:LEU:HD21	57:BZ:124:ILE:HD13	2.01	0.41
1:AA:33:A:C2	12:AL:32:PHE:CE2	3.09	0.41
1:AA:101:A:C2	1:AA:102:G:C8	3.09	0.41
1:AA:115:G:H1'	1:AA:116:A:N7	2.35	0.41
1:AA:407:G:HO2'	4:AD:116:GLN:HG3	1.84	0.41
1:AA:622:A:C8	1:AA:623:C:C6	3.09	0.41
1:AA:796:C:O2	1:AA:796:C:C2'	2.68	0.41
1:AA:926:G:H4'	23:AX:12:A:N6	2.36	0.41
1:AA:1008:C:C6	1:AA:1008:C:C3'	3.04	0.41
1:AA:1015:A:O2'	1:AA:1218:C:H4'	2.19	0.41
1:AA:1310:G:C2	1:AA:1328:C:N3	2.89	0.41
1:AA:1323:G:C6	1:AA:1324:A:N6	2.88	0.41
1:AA:1447:A:H2'	1:AA:1447:A:N3	2.36	0.41
1:AA:1513:A:C4	1:AA:1514:C:C5	3.09	0.41
5:AE:103:GLY:O	5:AE:107:ARG:HB3	2.21	0.41
6:AF:16:GLN:HA	6:AF:19:LEU:HB3	2.02	0.41
13:AM:33:ALA:HA	13:AM:59:TYR:HE2	1.85	0.41
19:AS:10:PHE:CE2	19:AS:37:ARG:O	2.74	0.41
20:AT:49:ALA:CB	20:AT:99:LEU:HG	2.51	0.41
22:AV:29:G:O5'	22:AV:29:G:H8	2.04	0.41
22:AV:70:G:C5	22:AV:71:C:C5	3.08	0.41
24:AY:89:ASP:HB2	24:AY:90:PHE:H	1.50	0.41
24:AY:120:THR:O	24:AY:124:GLN:NE2	2.53	0.41
24:AY:137:ASN:ND2	24:AY:263:ALA:HB2	2.36	0.41
24:AY:355:LEU:CD2	24:AY:355:LEU:N	2.83	0.41
27:B2:56:GLN:HA	27:B2:59:ARG:HE	1.85	0.41
30:B5:30:LEU:HD21	54:BW:38:TYR:CD2	2.55	0.41
31:B6:15:GLU:CB	31:B6:47:THR:HG21	2.50	0.41
35:BA:86:C:H2'	35:BA:87:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:86:C:H4'	35:BA:104:U:H1'	2.02	0.41
35:BA:116:C:H1'	35:BA:127:A:H1'	2.01	0.41
35:BA:118:A:H5'	35:BA:119:A:H8	1.86	0.41
35:BA:140:G:N2	35:BA:142:A:N1	2.62	0.41
35:BA:237:C:O2	35:BA:237:C:H2'	2.20	0.41
35:BA:654(P):C:H2'	35:BA:654(Q):C:O4'	2.21	0.41
35:BA:705:A:N1	35:BA:727:A:H1'	2.35	0.41
35:BA:755:C:H2'	35:BA:756:C:H6	1.84	0.41
35:BA:764:A:C5	38:BD:209:ALA:HB1	2.55	0.41
35:BA:1085:A:O2'	35:BA:1086:A:H5'	2.20	0.41
35:BA:1092:C:O2'	35:BA:1093:G:H5'	2.20	0.41
35:BA:1206:G:C6	35:BA:1207:C:C4	3.08	0.41
35:BA:1491:G:N2	35:BA:1492:G:H1'	2.36	0.41
35:BA:1654:A:OP2	49:BR:3:HIS:CD2	2.74	0.41
35:BA:1827:C:H2'	35:BA:1828:G:H5'	2.03	0.41
35:BA:1884:A:C3'	35:BA:1885:A:C5'	2.98	0.41
35:BA:1999:C:H4'	35:BA:2723:C:O2	2.20	0.41
35:BA:2068:U:C4	35:BA:2430:A:H2	2.37	0.41
35:BA:2130:U:O2'	35:BA:2158:A:N6	2.52	0.41
35:BA:2392:A:C2	35:BA:2429:G:N3	2.88	0.41
35:BA:2521:C:O2	35:BA:2521:C:H2'	2.20	0.41
35:BA:2607:G:C6	35:BA:2608:G:C6	3.09	0.41
35:BA:2616:C:O2	35:BA:2616:C:H2'	2.19	0.41
35:BA:2684:U:H2'	35:BA:2685:G:O4'	2.21	0.41
35:BA:2883:A:H5'	35:BA:2884:U:H5'	2.02	0.41
36:BB:104:U:C4'	36:BB:104:U:C6	3.04	0.41
37:BC:62:THR:OG1	37:BC:161:ARG:HD2	2.20	0.41
37:BC:195:ARG:HG3	37:BC:195:ARG:NH1	2.34	0.41
40:BF:89:VAL:HG12	40:BF:90:PHE:N	2.35	0.41
41:BG:55:LYS:C	41:BG:57:ALA:H	2.27	0.41
41:BG:119:GLY:O	41:BG:181:ARG:HB2	2.21	0.41
42:BH:52:VAL:HG11	42:BH:68:THR:HB	2.03	0.41
42:BH:137:ASP:HB3	42:BH:140:LYS:CB	2.49	0.41
43:BK:58:THR:N	43:BK:66:THR:O	2.52	0.41
45:BN:43:THR:HB	45:BN:46:VAL:HG11	2.03	0.41
49:BR:87:TYR:C	49:BR:89:ASP:N	2.67	0.41
51:BT:50:ILE:HG23	51:BT:99:LEU:C	2.46	0.41
51:BT:112:ARG:C	51:BT:115:ARG:HD3	2.46	0.41
52:BU:92:ARG:CZ	53:BV:11:GLN:HG2	2.51	0.41
53:BV:8:GLY:O	53:BV:10:LYS:HE2	2.21	0.41
55:BX:65:ARG:HG2	55:BX:65:ARG:HH11	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:14:LYS:C	57:BZ:16:SER:N	2.79	0.41
57:BZ:27:VAL:O	57:BZ:27:VAL:CG1	2.69	0.41
57:BZ:68:PRO:O	57:BZ:68:PRO:HG2	2.20	0.41
57:BZ:166:SER:HB2	57:BZ:167:PRO:O	2.18	0.41
1:AA:6:G:H2'	5:AE:119:LEU:HD11	2.03	0.41
1:AA:110:C:O5'	1:AA:110:C:C6	2.69	0.41
1:AA:149:A:C2	1:AA:150:C:C2	3.09	0.41
1:AA:169:C:O2	1:AA:169:C:H2'	2.20	0.41
1:AA:547:A:H4'	1:AA:548:G:O5'	2.21	0.41
1:AA:657:G:H2'	1:AA:658:G:H8	1.85	0.41
1:AA:857:C:H2'	1:AA:858:G:O4'	2.20	0.41
1:AA:1111:A:N6	1:AA:1112:C:N4	2.68	0.41
1:AA:1465:C:H2'	1:AA:1466:C:C5'	2.51	0.41
2:AB:101:MET:O	2:AB:102:LEU:HD12	2.21	0.41
2:AB:211:ILE:HG22	2:AB:215:LEU:HD23	2.03	0.41
7:AG:91:VAL:CG1	7:AG:92:SER:H	2.33	0.41
8:AH:120:THR:O	8:AH:121:ASP:O	2.38	0.41
9:AI:96:LEU:HG	9:AI:102:LEU:HG	2.03	0.41
10:AJ:54:PHE:HA	10:AJ:55:LYS:HE3	2.03	0.41
13:AM:57:ARG:C	13:AM:59:TYR:H	2.27	0.41
14:AN:6:LEU:HA	14:AN:6:LEU:HD23	1.86	0.41
20:AT:27:LYS:O	20:AT:30:LYS:HB3	2.20	0.41
24:AY:335:LEU:O	24:AY:368:GLU:HB2	2.21	0.41
24:AY:499:ARG:NH1	24:AY:499:ARG:HG3	2.34	0.41
27:B2:63:VAL:HG12	27:B2:67:LYS:HE2	2.02	0.41
32:B7:32:LYS:HE2	35:BA:180:G:OP1	2.20	0.41
35:BA:20:C:HO2'	35:BA:21:A:H5'	1.86	0.41
35:BA:87:C:OP2	35:BA:90:U:O4	2.39	0.41
35:BA:336:C:O3'	56:BY:7:VAL:HG22	2.21	0.41
35:BA:695:G:C6	35:BA:768:G:C6	3.08	0.41
35:BA:1024:G:C8	35:BA:1025:G:H2'	2.56	0.41
35:BA:1040:C:C6	35:BA:1041:C:C5	3.09	0.41
35:BA:1237:A:O2'	35:BA:1238:G:P	2.78	0.41
35:BA:1312:U:O2	35:BA:1603:A:C2	2.74	0.41
35:BA:1313:U:C2	35:BA:1610:A:H2	2.39	0.41
35:BA:1778:U:C4	35:BA:1784:A:C4	3.09	0.41
35:BA:1841:U:H2'	35:BA:1842:G:C8	2.56	0.41
35:BA:1899:G:C2'	35:BA:1900:A:OP2	2.68	0.41
35:BA:1908:C:O2'	35:BA:1909:C:H5'	2.21	0.41
35:BA:1971:A:C2	38:BD:240:ALA:HA	2.55	0.41
35:BA:2097:C:O2'	35:BA:2098:U:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2393:A:O2'	35:BA:2394:C:H5'	2.20	0.41
35:BA:2533:A:N6	35:BA:2534:A:C2	2.89	0.41
35:BA:2576:G:H3'	35:BA:2576:G:OP1	2.20	0.41
35:BA:2642:G:O2'	35:BA:2643:G:H5'	2.21	0.41
36:BB:36:C:H2'	36:BB:37:C:C6	2.55	0.41
36:BB:65:C:H42	36:BB:109:C:H2'	1.78	0.41
36:BB:86:G:C6	36:BB:92:C:N3	2.88	0.41
36:BB:115:G:C1'	50:BS:47:THR:HB	2.50	0.41
37:BC:115:VAL:CG1	37:BC:145:THR:HG23	2.51	0.41
37:BC:153:ILE:O	37:BC:157:ILE:HG13	2.21	0.41
39:BE:59:VAL:CG2	39:BE:62:PRO:O	2.68	0.41
40:BF:8:GLN:HG2	40:BF:126:VAL:HG12	2.03	0.41
41:BG:9:ARG:O	41:BG:10:LYS:C	2.63	0.41
41:BG:58:GLN:O	41:BG:61:ALA:HB3	2.20	0.41
41:BG:76:SER:CB	41:BG:83:ARG:CB	2.84	0.41
42:BH:105:LEU:CD2	42:BH:105:LEU:H	2.26	0.41
45:BN:120:LEU:CD1	45:BN:120:LEU:C	2.93	0.41
45:BN:125:GLY:CA	45:BN:126:PRO:O	2.69	0.41
47:BP:115:LEU:HD23	47:BP:115:LEU:H	1.85	0.41
48:BQ:52:VAL:C	48:BQ:54:MET:N	2.78	0.41
50:BS:25:ARG:CG	50:BS:26:LEU:N	2.84	0.41
52:BU:31:SER:CB	52:BU:34:LYS:HB2	2.39	0.41
55:BX:63:LYS:HE2	55:BX:63:LYS:HB3	1.83	0.41
57:BZ:100:VAL:CG2	57:BZ:126:VAL:HG22	2.50	0.41
1:AA:55:A:N3	24:AY:321:TYR:O	2.54	0.41
1:AA:64:G:OP1	1:AA:382:A:N6	2.53	0.41
1:AA:93:G:N1	1:AA:96:U:C4	2.89	0.41
1:AA:341:C:O2	1:AA:349:A:C2	2.74	0.41
1:AA:381:C:H2'	1:AA:382:A:O4'	2.21	0.41
1:AA:409:G:H5'	4:AD:25:ARG:HB2	2.02	0.41
1:AA:512:U:O2	1:AA:540:G:N2	2.54	0.41
1:AA:608:A:H2'	1:AA:609:A:C5'	2.50	0.41
1:AA:723:U:C5'	1:AA:724:G:OP2	2.69	0.41
1:AA:973:G:C1'	10:AJ:55:LYS:HE2	2.50	0.41
1:AA:1008:C:H2'	1:AA:1009:G:H8	1.86	0.41
1:AA:1060:C:N4	3:AC:2:GLY:HA3	2.36	0.41
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.85	0.41
1:AA:1349:A:OP2	9:AI:118:LYS:NZ	2.53	0.41
1:AA:1371:G:OP2	9:AI:11:LYS:HD2	2.21	0.41
1:AA:1422:G:H2'	1:AA:1423:G:C8	2.55	0.41
1:AA:1458:G:OP2	1:AA:1458:G:H8	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1493:A:H4'	1:AA:1494:G:OP2	2.19	0.41
1:AA:1513:A:C6	1:AA:1514:C:N4	2.89	0.41
2:AB:15:VAL:HG21	2:AB:209:ARG:HH21	1.86	0.41
2:AB:43:ASP:OD2	2:AB:46:LYS:HE3	2.21	0.41
2:AB:129:GLU:O	2:AB:130:ARG:HG3	2.21	0.41
2:AB:163:PHE:CD2	2:AB:185:ILE:HG13	2.56	0.41
3:AC:29:TYR:HD2	3:AC:29:TYR:C	2.29	0.41
3:AC:181:ASN:HD22	3:AC:205:GLY:H	1.68	0.41
4:AD:56:VAL:HG12	4:AD:202:LEU:HD13	2.02	0.41
4:AD:61:LYS:HE2	4:AD:61:LYS:HB3	1.92	0.41
4:AD:65:ARG:HD3	4:AD:75:PHE:CD2	2.56	0.41
4:AD:201:GLN:O	4:AD:202:LEU:C	2.63	0.41
5:AE:34:VAL:O	5:AE:34:VAL:HG13	2.21	0.41
5:AE:144:THR:O	5:AE:147:ASP:OD2	2.39	0.41
7:AG:13:GLN:HG3	7:AG:14:PRO:HD2	2.03	0.41
7:AG:13:GLN:O	7:AG:24:THR:HG21	2.20	0.41
7:AG:31:MET:SD	7:AG:36:LYS:CB	3.05	0.41
7:AG:101:LEU:HD23	7:AG:101:LEU:H	1.80	0.41
8:AH:6:ILE:HD12	8:AH:6:ILE:H	1.75	0.41
8:AH:103:VAL:HG21	8:AH:136:GLU:HB2	2.02	0.41
9:AI:59:PHE:N	9:AI:59:PHE:HD1	2.17	0.41
11:AK:30:VAL:O	11:AK:30:VAL:CG2	2.63	0.41
13:AM:22:ILE:HG21	13:AM:66:LEU:CD2	2.51	0.41
13:AM:34:LEU:HA	13:AM:34:LEU:HD23	1.81	0.41
13:AM:37:THR:HG21	13:AM:56:LEU:HD22	2.03	0.41
16:AP:14:ASN:N	16:AP:15:PRO:CD	2.84	0.41
16:AP:43:LYS:HA	16:AP:48:TRP:CB	2.49	0.41
17:AQ:86:GLU:O	17:AQ:87:LYS:C	2.63	0.41
18:AR:42:ARG:O	18:AR:42:ARG:CG	2.62	0.41
18:AR:76:LEU:C	18:AR:78:LEU:H	2.28	0.41
20:AT:11:SER:HA	20:AT:13:LEU:CD1	2.51	0.41
20:AT:42:GLN:HE21	20:AT:42:GLN:CA	2.28	0.41
20:AT:89:ARG:HD2	20:AT:104:LEU:CD1	2.51	0.41
21:AU:6:ARG:NH2	21:AU:15:ARG:HH22	2.19	0.41
22:AV:41:C:H2'	22:AV:42:G:O4'	2.21	0.41
24:AY:14:ASN:ND2	24:AY:80:ASN:HD22	2.19	0.41
24:AY:85:PRO:HG3	24:AY:94:VAL:HG13	2.03	0.41
24:AY:105:ILE:N	24:AY:105:ILE:CD1	2.81	0.41
24:AY:132:ARG:HH22	24:AY:253:LEU:HG	1.84	0.41
24:AY:145:ASP:O	24:AY:146:LEU:C	2.64	0.41
24:AY:148:LEU:HA	24:AY:148:LEU:HD12	1.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:227:ILE:HG23	24:AY:237:PRO:CB	2.51	0.41
24:AY:337:SER:CB	24:AY:355:LEU:HD23	2.48	0.41
24:AY:486:THR:HG22	24:AY:600:VAL:HG13	2.03	0.41
24:AY:507:TYR:CD1	24:AY:507:TYR:O	2.71	0.41
24:AY:647:VAL:HA	24:AY:648:PRO:HD3	1.81	0.41
58:AY:701:FUA:H191	58:AY:701:FUA:H62	1.84	0.41
25:B0:11:ARG:O	25:B0:12:ASN:ND2	2.53	0.41
25:B0:14:ARG:NH1	35:BA:2279:G:N7	2.67	0.41
25:B0:25:ARG:HH11	25:B0:25:ARG:HG2	1.86	0.41
25:B0:27:GLU:HG3	25:B0:68:GLU:HA	2.03	0.41
25:B0:49:LYS:HG3	25:B0:80:HIS:CG	2.55	0.41
26:B1:78:LYS:O	26:B1:80:LEU:N	2.54	0.41
27:B2:7:ARG:NH1	27:B2:7:ARG:CG	2.64	0.41
29:B4:48:ARG:O	29:B4:48:ARG:CG	2.47	0.41
30:B5:58:LEU:HD13	30:B5:59:GLU:N	2.35	0.41
31:B6:7:ILE:N	31:B6:7:ILE:CD1	2.84	0.41
31:B6:11:LEU:HA	31:B6:54:ILE:O	2.20	0.41
31:B6:30:THR:HG21	35:BA:2286:A:OP2	2.20	0.41
31:B6:44:ARG:HB3	31:B6:45:LYS:H	1.57	0.41
33:B8:61:LEU:O	33:B8:64:TYR:N	2.54	0.41
35:BA:48:G:N2	35:BA:177:G:H21	2.18	0.41
35:BA:182:A:C2	35:BA:183:C:C2	3.09	0.41
35:BA:191:A:H8	35:BA:191:A:O5'	2.02	0.41
35:BA:216:A:C8	35:BA:432:A:C6	3.09	0.41
35:BA:272(H):C:C2'	35:BA:272(I):U:C5'	2.88	0.41
35:BA:279:C:H3'	35:BA:280:C:C5'	2.37	0.41
35:BA:353:G:H2'	35:BA:354:G:H5'	2.03	0.41
35:BA:578:A:C8	35:BA:2018:G:H5'	2.56	0.41
35:BA:637:A:OP2	47:BP:115:LEU:HB2	2.20	0.41
35:BA:654:A:H4'	35:BA:654(A):G:O5'	2.21	0.41
35:BA:686:G:N2	35:BA:788:A:H61	2.18	0.41
35:BA:703:U:H2'	35:BA:704:G:O4'	2.20	0.41
35:BA:851:U:H2'	35:BA:852:G:C8	2.55	0.41
35:BA:1012:U:O4	45:BN:28:THR:HG21	2.21	0.41
35:BA:1050:A:C4	35:BA:1051:G:H1'	2.55	0.41
35:BA:1064:C:C5'	43:BK:87:GLY:H	2.33	0.41
35:BA:1125:G:C6	35:BA:1126:A:N6	2.89	0.41
35:BA:1177:A:H4'	35:BA:1178:C:H5'	2.03	0.41
35:BA:1187:G:H5"	53:BV:81:TYR:CE1	2.56	0.41
35:BA:1291:C:H2'	35:BA:1292:U:C6	2.56	0.41
35:BA:1399:C:O2	35:BA:1399:C:C2'	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1450:G:C6	35:BA:1450(A):C:N4	2.89	0.41
35:BA:1567:A:H2'	38:BD:84:TYR:CE2	2.55	0.41
35:BA:1629:U:H2'	35:BA:1630:G:C8	2.56	0.41
35:BA:1630:G:N1	35:BA:1637:A:N1	2.69	0.41
35:BA:1638:C:H1'	35:BA:2698:U:O2'	2.21	0.41
35:BA:1639:U:O2'	35:BA:1640:C:H5"	2.21	0.41
35:BA:1689:A:N6	35:BA:1698:A:H2	2.15	0.41
35:BA:1692:U:H2'	35:BA:1694:C:C4	2.56	0.41
35:BA:1827:C:H2'	35:BA:1828:G:C5'	2.51	0.41
35:BA:2103:C:H1'	35:BA:2187:G:H1	1.85	0.41
35:BA:2137:C:H2'	35:BA:2138:C:O4'	2.20	0.41
35:BA:2177:C:O5'	35:BA:2177:C:H6	2.04	0.41
35:BA:2369:A:H2'	35:BA:2370:G:C8	2.56	0.41
35:BA:2636:U:OP1	39:BE:79:ARG:HG3	2.21	0.41
35:BA:2787:C:O2	35:BA:2787:C:H2'	2.20	0.41
35:BA:2822:G:H2'	35:BA:2823:A:H5"	2.03	0.41
36:BB:5:C:O2'	36:BB:27:C:O2	2.39	0.41
36:BB:75:G:H2'	36:BB:76:G:O4'	2.21	0.41
36:BB:77:U:O2	36:BB:101:G:O6	2.39	0.41
37:BC:101:ILE:HG23	37:BC:128:LEU:HG	2.02	0.41
38:BD:94:LEU:HD23	38:BD:95:LEU:H	1.84	0.41
39:BE:51:PHE:HD2	39:BE:52:LEU:HD12	1.84	0.41
39:BE:108:SER:O	39:BE:109:LYS:C	2.62	0.41
40:BF:9:ILE:H	40:BF:9:ILE:HG13	1.62	0.41
40:BF:10:PRO:HB3	40:BF:127:GLU:CG	2.50	0.41
40:BF:106:ARG:NH1	40:BF:106:ARG:HG3	2.35	0.41
40:BF:117:ARG:NH1	40:BF:120:GLU:OE1	2.54	0.41
40:BF:140:LEU:O	40:BF:141:ALA:C	2.63	0.41
40:BF:157:VAL:O	40:BF:157:VAL:HG23	2.20	0.41
41:BG:23:PHE:CZ	41:BG:168:GLU:HA	2.56	0.41
41:BG:55:LYS:HE2	41:BG:58:GLN:NE2	2.36	0.41
41:BG:77:ILE:HG22	41:BG:80:PHE:CB	2.50	0.41
41:BG:79:ASN:OD1	41:BG:79:ASN:N	2.52	0.41
41:BG:82:LEU:CD2	41:BG:87:PRO:HG3	2.49	0.41
42:BH:20:ALA:HB1	42:BH:21:PRO:HD2	2.01	0.41
43:BK:75:SER:O	43:BK:78:ILE:HG22	2.21	0.41
43:BK:100:THR:HG22	43:BK:139:VAL:HB	2.03	0.41
45:BN:15:LEU:HD23	45:BN:53:VAL:HB	2.01	0.41
45:BN:21:LYS:O	45:BN:60:ILE:HG23	2.21	0.41
45:BN:23:LEU:HB3	45:BN:60:ILE:CG2	2.44	0.41
45:BN:55:VAL:HB	45:BN:128:HIS:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:132:ALA:O	45:BN:133:GLN:HB2	2.21	0.41
46:BO:24:VAL:HG21	46:BO:30:ALA:HB3	2.03	0.41
46:BO:69:ILE:N	46:BO:69:ILE:CD1	2.80	0.41
46:BO:101:PRO:C	46:BO:102:VAL:CG1	2.93	0.41
47:BP:83:VAL:HG13	47:BP:114:ILE:HA	2.03	0.41
47:BP:114:ILE:HG13	47:BP:130:PHE:HD1	1.86	0.41
51:BT:13:ARG:C	51:BT:14:TYR:CD1	2.99	0.41
51:BT:25:GLY:HA3	51:BT:90:GLN:O	2.21	0.41
51:BT:79:HIS:O	51:BT:80:SER:HB3	2.20	0.41
51:BT:110:ILE:HD12	51:BT:110:ILE:HG23	1.81	0.41
52:BU:53:ARG:HG3	52:BU:57:PHE:HE1	1.86	0.41
55:BX:83:VAL:O	55:BX:84:ALA:C	2.64	0.41
56:BY:81:LYS:HD2	56:BY:96:ILE:HG22	2.03	0.41
57:BZ:52:SER:OG	57:BZ:53:ILE:N	2.52	0.41
57:BZ:110:GLY:HA2	57:BZ:145:GLU:OE1	2.21	0.41
1:AA:260:G:O2'	1:AA:261:U:H5'	2.21	0.41
1:AA:395:C:H4'	24:AY:340:TYR:OH	2.21	0.41
1:AA:765:G:H1	1:AA:812:C:H2'	1.86	0.41
1:AA:793:U:C3'	1:AA:794:A:C5'	2.85	0.41
1:AA:930:C:C2'	1:AA:931:C:H5'	2.51	0.41
1:AA:1089:G:N1	1:AA:1097:C:N3	2.69	0.41
1:AA:1221:G:H4'	19:AS:77:THR:CG2	2.47	0.41
2:AB:11:LEU:HD11	2:AB:217:ARG:HH22	1.86	0.41
2:AB:158:LEU:HA	2:AB:159:PRO:HD3	1.90	0.41
4:AD:87:GLY:O	4:AD:88:VAL:C	2.63	0.41
4:AD:162:LEU:CD2	4:AD:178:VAL:HG13	2.51	0.41
5:AE:51:VAL:HG12	5:AE:55:VAL:CG2	2.51	0.41
5:AE:70:PRO:C	5:AE:71:LEU:O	2.60	0.41
8:AH:35:ILE:HG22	8:AH:39:LEU:HD21	2.03	0.41
9:AI:19:LEU:CD2	9:AI:61:ALA:HB2	2.50	0.41
9:AI:50:LEU:CB	9:AI:56:LEU:HG	2.50	0.41
10:AJ:31:GLY:HA3	10:AJ:78:ASN:CG	2.46	0.41
11:AK:36:ASP:N	11:AK:36:ASP:OD2	2.54	0.41
11:AK:79:SER:CB	11:AK:106:LYS:HD2	2.51	0.41
11:AK:112:THR:HG23	11:AK:113:PRO:HD2	2.02	0.41
12:AL:93:LEU:HB2	12:AL:96:VAL:CG2	2.51	0.41
13:AM:68:GLY:CA	13:AM:71:ARG:HB3	2.51	0.41
15:AO:17:ARG:NH1	15:AO:17:ARG:CG	2.78	0.41
17:AQ:13:ASP:CA	17:AQ:19:VAL:HG12	2.51	0.41
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.63	0.41
19:AS:9:VAL:HG21	29:B4:53:GLU:CG	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:74:LYS:HB2	20:AT:75:ASN:H	1.57	0.41
24:AY:21:ILE:HG23	24:AY:88:VAL:HG13	2.02	0.41
24:AY:162:VAL:HG23	24:AY:255:ILE:HG13	2.01	0.41
24:AY:180:VAL:HG23	24:AY:216:LEU:CD1	2.51	0.41
24:AY:549:ALA:HB2	24:AY:587:SER:OG	2.20	0.41
24:AY:631:ILE:HA	24:AY:645:ALA:HB2	2.03	0.41
26:B1:6:GLU:OE1	26:B1:61:ARG:N	2.39	0.41
26:B1:45:ASN:HD21	26:B1:47:GLN:NE2	2.19	0.41
33:B8:5:LYS:HG2	35:BA:242:G:C8	2.56	0.41
33:B8:42:ARG:C	33:B8:44:LYS:N	2.79	0.41
35:BA:154(A):C:N4	35:BA:172:C:N4	2.69	0.41
35:BA:182:A:C6	35:BA:183:C:C4	3.09	0.41
35:BA:271(B):C:C2'	35:BA:271(C):C:H5'	2.51	0.41
35:BA:300:A:H2'	35:BA:334:C:H1'	2.03	0.41
35:BA:583:G:C4	35:BA:584:C:C5	3.09	0.41
35:BA:701:G:C6	35:BA:732:C:N4	2.89	0.41
35:BA:747:U:C4	35:BA:2613:U:C5	3.09	0.41
35:BA:841:A:C2	35:BA:842:G:C4	3.09	0.41
35:BA:996:A:H2'	35:BA:997:G:H8	1.86	0.41
35:BA:1009:A:C2	35:BA:1010:A:C2	3.08	0.41
35:BA:1063:G:O2'	35:BA:1064:C:H5'	2.21	0.41
35:BA:1127:A:C6	35:BA:2518:A:C2	3.09	0.41
35:BA:1190:G:H5'	47:BP:35:HIS:N	2.32	0.41
35:BA:1401:G:C6	35:BA:1402:C:C4	3.09	0.41
35:BA:1441:G:H2'	35:BA:1442:G:H8	1.86	0.41
35:BA:1461:G:O2'	35:BA:1462:C:H5'	2.21	0.41
35:BA:1471:A:H2'	35:BA:1472:A:C8	2.56	0.41
35:BA:1528:A:N6	35:BA:1544:A:C2	2.89	0.41
35:BA:1578:U:H2'	35:BA:1579:A:C5'	2.47	0.41
35:BA:1721:G:H8	35:BA:1741:A:N6	2.18	0.41
35:BA:1722:A:H2	35:BA:1740:G:C2'	2.33	0.41
35:BA:1850:G:H5'	35:BA:1851:U:OP2	2.21	0.41
35:BA:1889:A:H8	35:BA:1889:A:H5"	1.86	0.41
35:BA:2147:G:O2'	35:BA:2148:G:H5'	2.21	0.41
35:BA:2313:C:H6	35:BA:2313:C:C5'	2.23	0.41
35:BA:2323:G:H8	35:BA:2323:G:O5'	2.03	0.41
35:BA:2681:C:H6	35:BA:2683:C:H41	1.69	0.41
35:BA:2792:G:N3	35:BA:2792:G:H2'	2.36	0.41
35:BA:2869:G:H2'	35:BA:2870:C:C6	2.56	0.41
36:BB:49:C:OP1	50:BS:97:ARG:HG3	2.21	0.41
36:BB:69:G:C2	36:BB:70:C:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:73:VAL:O	37:BC:73:VAL:CG1	2.66	0.41
37:BC:132:LEU:HD22	37:BC:137:LEU:CB	2.50	0.41
38:BD:182:LEU:HD23	38:BD:182:LEU:HA	1.74	0.41
40:BF:32:LEU:HD23	40:BF:32:LEU:O	2.18	0.41
40:BF:43:LYS:HG3	40:BF:44:ARG:N	2.35	0.41
40:BF:89:VAL:HG12	40:BF:90:PHE:H	1.86	0.41
40:BF:99:TYR:HE2	40:BF:101:LEU:HD12	1.84	0.41
41:BG:58:GLN:C	41:BG:60:LEU:N	2.76	0.41
41:BG:98:ARG:HG2	41:BG:98:ARG:NH1	2.34	0.41
42:BH:133:VAL:CG1	42:BH:134:SER:N	2.83	0.41
44:BL:64:ASN:O	44:BL:68:VAL:HG23	2.20	0.41
46:BO:83:ALA:O	46:BO:84:ALA:HB2	2.21	0.41
47:BP:23:PRO:C	47:BP:33:ARG:NE	2.79	0.41
48:BQ:3:MET:CB	48:BQ:4:PRO:CD	2.97	0.41
48:BQ:130:LYS:NZ	57:BZ:80:ARG:NH1	2.66	0.41
49:BR:33:ARG:CG	49:BR:115:GLU:HG3	2.51	0.41
50:BS:16:ASN:C	50:BS:18:ILE:H	2.29	0.41
50:BS:68:GLN:C	50:BS:70:GLY:N	2.78	0.41
52:BU:72:HIS:HE1	52:BU:107:ALA:CB	2.30	0.41
52:BU:79:PHE:C	52:BU:79:PHE:HD1	2.29	0.41
53:BV:35:LEU:C	53:BV:37:VAL:H	2.29	0.41
55:BX:14:SER:O	55:BX:15:GLU:C	2.64	0.41
56:BY:43:ASN:HD21	56:BY:64:GLU:HG3	1.86	0.41
56:BY:61:ILE:CG1	56:BY:62:GLU:N	2.84	0.41
57:BZ:166:SER:HB2	57:BZ:167:PRO:CA	2.49	0.41
1:AA:37:U:H2'	1:AA:38:G:H5'	2.03	0.40
1:AA:93:G:O2'	1:AA:96:U:H5'	2.21	0.40
1:AA:97:G:HO2'	1:AA:98:G:P	2.44	0.40
1:AA:354:G:C2	1:AA:355:C:C5	3.09	0.40
1:AA:592:G:H2'	1:AA:593:G:H8	1.86	0.40
1:AA:961:U:H2'	1:AA:962:C:H5'	2.04	0.40
1:AA:1296:C:O2'	1:AA:1302:U:C5	2.63	0.40
1:AA:1423:G:H5"	46:BO:49:ARG:NH2	2.36	0.40
1:AA:1478:C:O5'	1:AA:1478:C:H6	2.04	0.40
2:AB:114:ARG:O	2:AB:117:GLU:HB2	2.21	0.40
4:AD:36:ARG:HB3	4:AD:38:TYR:CE2	2.56	0.40
4:AD:65:ARG:HD2	4:AD:72:GLU:HA	2.03	0.40
4:AD:112:VAL:HG12	4:AD:112:VAL:H	1.70	0.40
4:AD:163:GLU:O	4:AD:165:MET:N	2.54	0.40
5:AE:37:ARG:HG2	5:AE:37:ARG:HH11	1.86	0.40
5:AE:53:LEU:N	5:AE:53:LEU:HD23	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:81:GLU:HA	5:AE:89:ILE:O	2.22	0.40
7:AG:79:ARG:C	7:AG:80:VAL:HG13	2.45	0.40
7:AG:132:GLY:C	7:AG:134:ALA:N	2.73	0.40
9:AI:42:ARG:HH22	9:AI:75:ASP:CG	2.29	0.40
9:AI:69:GLY:O	9:AI:73:GLN:HG3	2.20	0.40
9:AI:99:LEU:HB2	9:AI:101:PHE:CE1	2.56	0.40
10:AJ:27:ALA:CB	10:AJ:85:LEU:HD11	2.51	0.40
12:AL:119:LYS:C	12:AL:120:TYR:CD1	3.00	0.40
13:AM:77:ASN:O	13:AM:81:LEU:CD2	2.69	0.40
15:AO:15:PHE:O	15:AO:16:ALA:C	2.63	0.40
16:AP:25:ARG:HG3	16:AP:25:ARG:NH1	2.35	0.40
16:AP:44:THR:O	16:AP:45:THR:HB	2.21	0.40
17:AQ:17:LYS:HA	17:AQ:49:GLU:HG2	2.03	0.40
17:AQ:89:LEU:HA	17:AQ:89:LEU:HD23	1.90	0.40
19:AS:64:GLU:C	29:B4:48:ARG:NH2	2.78	0.40
20:AT:81:LYS:C	20:AT:83:ARG:N	2.79	0.40
22:AV:71:C:H5'	22:AV:72:A:OP2	2.21	0.40
24:AY:10:LYS:CE	24:AY:284:LEU:HD23	2.50	0.40
24:AY:160:ARG:O	24:AY:255:ILE:HA	2.21	0.40
24:AY:470:PHE:C	24:AY:472:VAL:H	2.29	0.40
24:AY:470:PHE:C	24:AY:472:VAL:N	2.78	0.40
24:AY:590:ILE:C	24:AY:592:GLU:H	2.29	0.40
24:AY:622:GLY:O	24:AY:623:ASP:C	2.64	0.40
24:AY:684:GLN:HB2	24:AY:684:GLN:HE21	1.58	0.40
25:B0:44:ARG:HG2	25:B0:44:ARG:NH1	2.36	0.40
25:B0:55:ARG:HE	25:B0:55:ARG:HB3	1.60	0.40
27:B2:57:ILE:HG22	27:B2:61:LEU:HD12	2.02	0.40
28:B3:19:GLN:O	28:B3:22:ALA:N	2.44	0.40
31:B6:27:LYS:HB3	31:B6:32:ASN:HD21	1.86	0.40
32:B7:13:ALA:O	32:B7:14:LYS:C	2.62	0.40
33:B8:33:ASN:CA	33:B8:36:LYS:HD2	2.50	0.40
35:BA:341:G:H2'	35:BA:342:G:H8	1.86	0.40
35:BA:352:G:H1'	35:BA:354:G:N7	2.36	0.40
35:BA:547:A:O2'	35:BA:548:A:N7	2.46	0.40
35:BA:605:C:C4	35:BA:606:U:C5	3.09	0.40
35:BA:806:C:P	47:BP:39:LYS:HD3	2.56	0.40
35:BA:1185:C:C5'	35:BA:1186:G:P	3.10	0.40
35:BA:1299:G:H8	35:BA:1299:G:O5'	2.03	0.40
35:BA:1335:U:OP1	55:BX:65:ARG:NH2	2.54	0.40
35:BA:1430:C:N4	35:BA:1563:G:H1	2.17	0.40
35:BA:1599:C:O5'	35:BA:1599:C:H6	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1668:A:N3	35:BA:1670:C:C4	2.88	0.40
35:BA:1705:G:O2'	35:BA:1706:U:H5'	2.21	0.40
35:BA:1722:A:O2'	35:BA:1739:U:C5'	2.63	0.40
35:BA:1722:A:C2	35:BA:1740:G:H2'	2.48	0.40
35:BA:1891:G:O5'	35:BA:1891:G:C8	2.72	0.40
35:BA:2262:U:C3'	35:BA:2263:C:H5'	2.51	0.40
35:BA:2820:A:H8	39:BE:191:PRO:HB3	1.86	0.40
35:BA:2832:U:H1'	35:BA:2834:G:C4	2.55	0.40
35:BA:2835:A:O2'	35:BA:2836:U:C5	2.73	0.40
37:BC:109:MET:HA	37:BC:111:PHE:CE2	2.56	0.40
38:BD:27:THR:HG23	38:BD:27:THR:O	2.20	0.40
38:BD:183:ARG:HD2	38:BD:270:ILE:CG2	2.49	0.40
38:BD:268:ARG:HH11	38:BD:268:ARG:HD3	1.70	0.40
40:BF:70:THR:HB	40:BF:72:ARG:H	1.86	0.40
40:BF:109:GLY:HA2	40:BF:112:MET:HB2	2.01	0.40
41:BG:77:ILE:O	41:BG:80:PHE:N	2.54	0.40
42:BH:89:ILE:CD1	42:BH:94:TYR:CB	2.99	0.40
45:BN:65:LYS:HZ2	45:BN:65:LYS:CB	2.34	0.40
46:BO:64:ARG:NH1	46:BO:83:ALA:CB	2.84	0.40
48:BQ:37:LEU:HD21	48:BQ:130:LYS:HB2	2.03	0.40
48:BQ:50:ALA:O	48:BQ:52:VAL:N	2.55	0.40
49:BR:12:ARG:HD2	49:BR:20:LEU:HD22	2.03	0.40
49:BR:48:VAL:O	49:BR:49:ASP:C	2.63	0.40
52:BU:47:TYR:CD1	52:BU:47:TYR:C	2.97	0.40
53:BV:35:LEU:O	53:BV:36:PRO:C	2.59	0.40
57:BZ:72:ARG:HG2	57:BZ:89:PHE:HB2	2.03	0.40
57:BZ:115:GLY:H	57:BZ:177:PRO:HG3	1.84	0.40
1:AA:63:C:O2'	1:AA:380:G:H4'	2.21	0.40
1:AA:103:C:H5'	1:AA:104:G:OP2	2.22	0.40
1:AA:117:G:H2'	1:AA:118:U:O4'	2.21	0.40
1:AA:310:G:H2'	1:AA:311:C:H6	1.86	0.40
1:AA:332:G:C4	1:AA:333:G:C8	3.10	0.40
1:AA:477:A:C2'	1:AA:479:C:H5'	2.52	0.40
1:AA:687:A:N1	1:AA:700:G:O2'	2.36	0.40
1:AA:734:G:H2'	1:AA:735:C:O4'	2.21	0.40
1:AA:972:C:O2	10:AJ:55:LYS:HG2	2.20	0.40
1:AA:974:A:C8	14:AN:31:ARG:HD2	2.56	0.40
1:AA:1031:G:C2'	1:AA:1032:G:H5'	2.51	0.40
1:AA:1053:G:C4	1:AA:1199:U:C5	3.09	0.40
1:AA:1097:C:O2'	1:AA:1098:C:H5'	2.21	0.40
1:AA:1133:G:N3	1:AA:1142:G:N2	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1134:G:N1	1:AA:1142:G:C6	2.89	0.40
1:AA:1137:C:C4'	1:AA:1138:G:C2	3.04	0.40
2:AB:102:LEU:C	2:AB:104:ASN:N	2.77	0.40
3:AC:3:ASN:O	3:AC:4:LYS:HB2	2.21	0.40
3:AC:40:ARG:O	3:AC:44:GLU:HB2	2.21	0.40
3:AC:58:GLU:HB2	3:AC:65:ALA:CB	2.51	0.40
4:AD:57:ARG:HH11	4:AD:57:ARG:CG	2.32	0.40
4:AD:68:TYR:O	4:AD:69:GLY:C	2.61	0.40
5:AE:148:VAL:C	5:AE:150:ARG:H	2.29	0.40
7:AG:145:ALA:O	7:AG:146:GLU:CB	2.67	0.40
10:AJ:98:ILE:O	10:AJ:99:LYS:HD3	2.20	0.40
11:AK:55:LYS:HB2	11:AK:55:LYS:HE3	1.82	0.40
12:AL:7:ILE:HG22	12:AL:8:ASN:N	2.36	0.40
13:AM:88:ARG:HG2	13:AM:88:ARG:NH1	2.33	0.40
13:AM:100:GLY:C	13:AM:101:GLN:HG3	2.46	0.40
16:AP:65:GLN:HA	16:AP:66:PRO:HD2	1.82	0.40
17:AQ:67:LYS:HA	17:AQ:70:ARG:NH1	2.33	0.40
18:AR:45:SER:HB3	18:AR:51:LEU:HD21	2.02	0.40
19:AS:78:ARG:O	19:AS:81:ARG:HD3	2.21	0.40
20:AT:18:GLN:O	20:AT:19:SER:C	2.62	0.40
22:AV:35:A:C6	22:AV:36:U:C4	3.08	0.40
24:AY:19:ALA:C	24:AY:121:VAL:HG11	2.46	0.40
24:AY:309:LEU:HD12	24:AY:309:LEU:C	2.46	0.40
24:AY:484:ARG:HA	24:AY:484:ARG:HD3	1.75	0.40
27:B2:59:ARG:C	27:B2:61:LEU:N	2.79	0.40
29:B4:56:VAL:O	29:B4:56:VAL:CG1	2.59	0.40
30:B5:2:ALA:N	35:BA:2014:A:O2'	2.52	0.40
31:B6:43:CYS:C	31:B6:44:ARG:HE	2.28	0.40
33:B8:7:HIS:HB3	33:B8:10:ALA:HB3	2.03	0.40
35:BA:222:A:N6	35:BA:224:G:C2	2.89	0.40
35:BA:281:G:N2	35:BA:358:U:C5	2.89	0.40
35:BA:286:C:O2'	35:BA:287:C:H5'	2.20	0.40
35:BA:444:C:O2'	35:BA:445:C:H5'	2.21	0.40
35:BA:775:G:H4'	35:BA:776:G:O5'	2.19	0.40
35:BA:777:A:N3	35:BA:778:G:C8	2.89	0.40
35:BA:841:A:C6	35:BA:842:G:C5	3.09	0.40
35:BA:1012:U:O4	45:BN:25:ARG:HA	2.21	0.40
35:BA:1042:G:O2'	35:BA:1043:C:H5'	2.21	0.40
35:BA:1052:C:H4'	35:BA:1053:C:OP1	2.21	0.40
35:BA:1221(A):C:C2	35:BA:1229:G:C2	3.09	0.40
35:BA:1329:U:H5'	35:BA:1330:C:C5	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1337:G:H2'	35:BA:1338:G:H8	1.85	0.40
35:BA:1558:A:HO2'	35:BA:1559:G:P	2.43	0.40
35:BA:1687:G:O2'	35:BA:1701:A:N6	2.50	0.40
35:BA:2061:G:OP2	35:BA:2502:G:OP2	2.39	0.40
35:BA:2346:A:O2'	35:BA:2383:G:C8	2.73	0.40
35:BA:2443:C:H2'	35:BA:2444:G:H5'	2.03	0.40
35:BA:2687:U:H2'	35:BA:2688:U:H5'	2.04	0.40
35:BA:2810:A:C2'	39:BE:61:ARG:NH2	2.82	0.40
36:BB:14:U:H5'	36:BB:71:C:O4'	2.22	0.40
36:BB:58:A:H2'	36:BB:59:A:C8	2.57	0.40
37:BC:86:GLU:O	37:BC:90:ALA:HB2	2.21	0.40
38:BD:9:TYR:O	38:BD:10:THR:CB	2.67	0.40
40:BF:113:ALA:HB1	40:BF:186:ILE:HG21	2.03	0.40
40:BF:168:ARG:C	40:BF:170:LEU:N	2.78	0.40
41:BG:109:VAL:HG11	41:BG:142:PRO:HD3	2.02	0.40
41:BG:153:ARG:HB3	41:BG:153:ARG:HH11	1.85	0.40
42:BH:83:TYR:HA	42:BH:135:GLY:O	2.20	0.40
46:BO:26:LYS:HB3	46:BO:27:GLY:H	1.59	0.40
46:BO:115:VAL:HG13	46:BO:121:VAL:CG2	2.43	0.40
47:BP:9:ASN:N	47:BP:10:PRO:CD	2.84	0.40
47:BP:23:PRO:O	47:BP:33:ARG:CD	2.67	0.40
47:BP:136:GLU:O	47:BP:139:LYS:HB2	2.21	0.40
49:BR:35:THR:HG23	49:BR:112:ALA:O	2.22	0.40
50:BS:27:SER:C	50:BS:28:VAL:CG2	2.93	0.40
50:BS:74:ALA:HB2	50:BS:101:LEU:CD2	2.51	0.40
51:BT:6:LEU:CD2	51:BT:10:VAL:HG23	2.51	0.40
51:BT:29:ARG:CD	51:BT:30:VAL:HG13	2.51	0.40
51:BT:56:GLY:N	51:BT:59:THR:HG21	2.37	0.40
52:BU:11:ARG:O	52:BU:11:ARG:HG2	2.21	0.40
52:BU:17:ILE:HD13	52:BU:17:ILE:HG21	1.91	0.40
56:BY:94:LYS:CG	56:BY:102:CYS:SG	3.09	0.40
57:BZ:57:ILE:N	57:BZ:57:ILE:CD1	2.85	0.40
1:AA:69:G:C2	1:AA:70:G:C5	3.09	0.40
1:AA:201:C:C3'	1:AA:202:U:H5"	2.51	0.40
1:AA:677:U:H2'	1:AA:678:U:O4'	2.21	0.40
1:AA:836:G:C6	1:AA:851:G:C6	3.09	0.40
1:AA:908:A:H2'	1:AA:909:A:C8	2.55	0.40
1:AA:1117:G:O3'	9:AI:104:ARG:CD	2.70	0.40
1:AA:1352:C:OP1	21:AU:3:LYS:CE	2.70	0.40
1:AA:1442:G:H2'	51:BT:118:ARG:NH1	2.36	0.40
2:AB:48:MET:O	2:AB:49:GLU:C	2.63	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:5:ILE:HD13	3:AC:5:ILE:H	1.81	0.40
3:AC:52:LEU:HD12	3:AC:55:VAL:CG2	2.52	0.40
3:AC:84:ILE:HD11	3:AC:88:ARG:HH21	1.87	0.40
5:AE:148:VAL:C	5:AE:150:ARG:N	2.76	0.40
7:AG:44:TYR:C	7:AG:46:ALA:N	2.76	0.40
7:AG:153:HIS:ND1	7:AG:153:HIS:N	2.70	0.40
8:AH:103:VAL:CG1	8:AH:108:GLY:HA3	2.50	0.40
17:AQ:46:ASP:HA	17:AQ:47:PRO:HD2	1.78	0.40
20:AT:87:LYS:HA	20:AT:90:GLN:HB2	2.03	0.40
23:AX:11:U:H4'	23:AX:12:A:O5'	2.21	0.40
25:B0:10:THR:HG21	35:BA:2277:G:OP2	2.21	0.40
26:B1:82:LEU:HD23	26:B1:90:ILE:HG23	2.02	0.40
29:B4:1:MET:CE	29:B4:1:MET:H3	2.34	0.40
31:B6:16:CYS:C	31:B6:18:ARG:N	2.73	0.40
32:B7:16:HIS:ND1	35:BA:684:G:OP1	2.54	0.40
35:BA:51:G:N3	35:BA:119:A:C2	2.90	0.40
35:BA:279:C:C3'	35:BA:280:C:C5'	2.94	0.40
35:BA:286:C:C6	35:BA:286:C:C4'	3.04	0.40
35:BA:310:A:O2'	35:BA:311:A:H2'	2.21	0.40
35:BA:312:G:H5'	35:BA:331:A:H2'	2.03	0.40
35:BA:503:A:O2'	35:BA:506:G:OP2	2.36	0.40
35:BA:613:G:C2	35:BA:615:G:C5	3.10	0.40
35:BA:883:G:N2	35:BA:894:C:C2	2.89	0.40
35:BA:1343:G:N2	35:BA:1405:U:C2	2.89	0.40
35:BA:1635:G:C2	35:BA:1636:C:C2	3.09	0.40
35:BA:1820:U:H3	38:BD:199:ALA:HA	1.86	0.40
35:BA:1997:G:O2'	35:BA:1998:G:H5'	2.21	0.40
35:BA:2394:C:C5	35:BA:2395:C:H5	2.39	0.40
35:BA:2617:C:C4	35:BA:2618:G:N7	2.89	0.40
35:BA:2777:G:C5'	35:BA:2778:A:H5"	2.52	0.40
36:BB:76:G:O3'	57:BZ:19:ARG:NH2	2.52	0.40
37:BC:140:ASN:HB3	37:BC:143:ALA:HB2	2.02	0.40
40:BF:39:TRP:O	40:BF:43:LYS:HG2	2.20	0.40
40:BF:84:VAL:O	40:BF:86:GLY:N	2.50	0.40
41:BG:129:GLY:O	41:BG:130:ASN:CG	2.65	0.40
43:BK:21:PRO:HA	43:BK:22:PRO:C	2.45	0.40
45:BN:34:LEU:HD13	45:BN:34:LEU:HA	1.97	0.40
45:BN:120:LEU:HD13	45:BN:120:LEU:C	2.45	0.40
46:BO:22:ILE:O	46:BO:22:ILE:HG22	2.20	0.40
46:BO:101:PRO:C	46:BO:102:VAL:HG13	2.46	0.40
47:BP:16:ARG:NH1	47:BP:16:ARG:HB2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:16:ARG:NE	47:BP:18:ARG:HB2	2.36	0.40
47:BP:17:LYS:C	47:BP:19:VAL:N	2.79	0.40
47:BP:124:LYS:HD3	47:BP:143:GLY:CA	2.51	0.40
48:BQ:59:ARG:CB	57:BZ:180:VAL:HG23	2.51	0.40
50:BS:48:LEU:HD12	50:BS:48:LEU:N	2.37	0.40
50:BS:97:ARG:NH2	50:BS:98:VAL:HA	2.36	0.40
54:BW:34:ASN:HA	54:BW:37:ARG:HB3	2.04	0.40
55:BX:86:GLY:O	55:BX:87:GLN:C	2.61	0.40
56:BY:38:ILE:HG23	56:BY:39:VAL:N	2.36	0.40
57:BZ:29:TYR:CD1	57:BZ:29:TYR:C	3.00	0.40
57:BZ:129:SER:C	57:BZ:131:ARG:H	2.29	0.40
1:AA:529:G:O6	12:AL:49:ASN:HA	2.21	0.40
1:AA:718:G:C1’	11:AK:116:HIS:HA	2.51	0.40
1:AA:867:G:H2’	1:AA:868:C:H6	1.87	0.40
1:AA:935:A:H2’	1:AA:936:C:C6	2.56	0.40
1:AA:1495:U:H2’	1:AA:1496:C:C6	2.57	0.40
2:AB:39:ILE:CG2	2:AB:40:HIS:N	2.84	0.40
2:AB:137:ARG:CD	2:AB:137:ARG:C	2.94	0.40
2:AB:204:ASN:ND2	2:AB:204:ASN:C	2.77	0.40
3:AC:84:ILE:O	3:AC:84:ILE:HG12	2.21	0.40
5:AE:72:GLN:NE2	5:AE:144:THR:HG22	2.33	0.40
6:AF:54:LYS:HA	6:AF:54:LYS:HD3	1.82	0.40
6:AF:67:MET:HB2	6:AF:68:PRO:CD	2.48	0.40
7:AG:93:PRO:HG2	7:AG:94:ARG:H	1.86	0.40
7:AG:113:GLU:HG3	7:AG:119:ARG:HA	2.03	0.40
10:AJ:51:ARG:HG3	10:AJ:60:ARG:O	2.21	0.40
10:AJ:56:HIS:C	10:AJ:58:ASP:N	2.80	0.40
12:AL:38:THR:C	12:AL:39:VAL:HG23	2.46	0.40
15:AO:31:LEU:N	15:AO:31:LEU:CD2	2.85	0.40
19:AS:63:THR:H	19:AS:63:THR:HG23	1.59	0.40
22:AV:38:A:C6	22:AV:39:C:C2	3.09	0.40
24:AY:177:ILE:CG2	24:AY:178:ILE:H	2.33	0.40
27:B2:47:ASN:HB3	27:B2:48:HIS:H	1.53	0.40
30:B5:30:LEU:C	30:B5:31:VAL:HG13	2.45	0.40
32:B7:25:PRO:N	32:B7:28:ARG:NH2	2.70	0.40
35:BA:370:G:C6	35:BA:424:G:C8	3.09	0.40
35:BA:537:C:H6	35:BA:537:C:O5’	2.05	0.40
35:BA:848:G:H3’	35:BA:849:A:H8	1.86	0.40
35:BA:892:G:O2’	35:BA:893:C:H5’	2.21	0.40
35:BA:1132:A:H2’	35:BA:1133:U:H6	1.87	0.40
35:BA:1344:G:C2	35:BA:1404:C:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1548:C:C6	35:BA:1548:C:C3'	3.04	0.40
35:BA:1902:C:O2'	38:BD:244:ARG:NE	2.50	0.40
35:BA:2291:U:O2'	35:BA:2292:C:H5'	2.21	0.40
35:BA:2318:G:C2'	35:BA:2319:G:OP1	2.69	0.40
35:BA:2470:G:H4'	35:BA:2470:G:OP1	2.20	0.40
35:BA:2519:U:H2'	35:BA:2541:A:H61	1.87	0.40
35:BA:2625:G:H2'	35:BA:2626:C:O4'	2.22	0.40
35:BA:2685:G:O2'	35:BA:2726:U:H5	2.04	0.40
35:BA:2825:C:O5'	35:BA:2825:C:H6	2.04	0.40
36:BB:58:A:H2'	36:BB:59:A:O4'	2.21	0.40
37:BC:54:ARG:HD2	37:BC:56:ASP:OD1	2.22	0.40
37:BC:138:LEU:O	37:BC:139:PRO:C	2.60	0.40
37:BC:140:ASN:HB3	37:BC:143:ALA:CB	2.51	0.40
37:BC:149:ASN:ND2	37:BC:153:ILE:HG13	2.36	0.40
38:BD:25:THR:HG22	38:BD:26:LYS:HD2	2.03	0.40
38:BD:197:GLY:O	38:BD:198:ASN:CB	2.69	0.40
39:BE:82:ARG:O	39:BE:84:PHE:N	2.55	0.40
41:BG:9:ARG:CG	41:BG:13:GLU:HG2	2.51	0.40
41:BG:82:LEU:C	41:BG:83:ARG:HG3	2.47	0.40
42:BH:109:PHE:C	42:BH:111:HIS:H	2.30	0.40
42:BH:169:VAL:CG2	42:BH:170:ARG:H	2.21	0.40
47:BP:30:THR:O	47:BP:31:ALA:C	2.65	0.40
48:BQ:120:ILE:O	48:BQ:121:ALA:C	2.65	0.40
49:BR:76:VAL:CG1	49:BR:77:ARG:N	2.84	0.40
50:BS:98:VAL:HG12	50:BS:100:ALA:HB2	2.03	0.40
51:BT:82:LEU:HD22	51:BT:85:LYS:HD2	2.03	0.40
52:BU:55:ARG:HA	52:BU:58:ARG:CB	2.51	0.40
53:BV:59:ALA:HA	53:BV:95:LEU:O	2.21	0.40
57:BZ:4:ARG:O	57:BZ:5:LEU:HB2	2.21	0.40
57:BZ:19:ARG:NH1	57:BZ:25:PRO:HG3	2.37	0.40
57:BZ:105:VAL:HG13	57:BZ:105:VAL:O	2.22	0.40
1:AA:15:G:H4'	5:AE:24:ARG:HH12	1.85	0.40
1:AA:59:A:N3	1:AA:59:A:C2'	2.82	0.40
1:AA:178:C:N3	1:AA:179:A:C8	2.90	0.40
1:AA:341:C:C2	1:AA:349:A:C2	3.10	0.40
1:AA:375:U:N3	1:AA:376:G:N7	2.69	0.40
1:AA:448:A:C5	1:AA:487:A:C2	3.10	0.40
1:AA:826:C:C2	1:AA:827:U:C5	3.09	0.40
1:AA:913:A:H1'	1:AA:914:A:O4'	2.21	0.40
1:AA:968:A:H4'	1:AA:969:A:OP2	2.20	0.40
1:AA:999:C:C2	1:AA:1000:U:C4	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1282:C:H6	1:AA:1282:C:O5'	2.04	0.40
1:AA:1304:G:N7	1:AA:1305:G:C6	2.89	0.40
1:AA:1368:G:H5"	9:AI:112:LYS:HD2	2.02	0.40
1:AA:1416:G:H2'	1:AA:1417:G:O4'	2.21	0.40
1:AA:1452:C:H1'	1:AA:1456:G:H22	1.75	0.40
2:AB:24:TRP:HA	2:AB:190:THR:O	2.22	0.40
2:AB:32:ILE:CD1	2:AB:40:HIS:HB3	2.52	0.40
3:AC:69:HIS:CD2	3:AC:69:HIS:N	2.88	0.40
3:AC:73:PRO:HA	3:AC:76:VAL:HG22	2.02	0.40
4:AD:96:LEU:O	4:AD:99:SER:N	2.51	0.40
7:AG:27:ILE:HD13	7:AG:40:ALA:HA	2.01	0.40
7:AG:68:ASN:ND2	7:AG:128:ALA:HA	2.37	0.40
8:AH:19:VAL:C	8:AH:21:LYS:N	2.78	0.40
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.36	0.40
15:AO:9:GLN:C	15:AO:11:VAL:N	2.78	0.40
16:AP:9:PHE:CD2	16:AP:18:ARG:CZ	3.05	0.40
19:AS:5:LEU:HD12	19:AS:8:GLY:C	2.47	0.40
19:AS:36:ARG:HA	19:AS:71:LEU:HB2	2.02	0.40
19:AS:62:ILE:HG23	19:AS:62:ILE:O	2.21	0.40
20:AT:73:HIS:O	20:AT:76:ALA:N	2.55	0.40
20:AT:79:ARG:HH11	20:AT:79:ARG:HD3	1.71	0.40
24:AY:207:ASP:O	24:AY:208:GLN:C	2.64	0.40
25:B0:23:VAL:HG11	25:B0:69:PHE:HZ	1.87	0.40
26:B1:75:GLU:HA	26:B1:75:GLU:OE1	2.21	0.40
29:B4:2:LYS:HD3	36:BB:44:G:OP1	2.21	0.40
29:B4:16:CYS:CB	29:B4:20:ASN:O	2.68	0.40
29:B4:26:SER:HB3	41:BG:105:LYS:NZ	2.37	0.40
30:B5:6:VAL:HG12	35:BA:2016:U:H1'	2.04	0.40
32:B7:5:TRP:CZ3	35:BA:464:U:H4'	2.57	0.40
33:B8:32:LEU:CB	33:B8:36:LYS:NZ	2.80	0.40
35:BA:383:U:H2'	35:BA:385:C:H5	1.87	0.40
35:BA:566:U:C2'	35:BA:567:A:H5'	2.52	0.40
35:BA:1139:G:C2	35:BA:1140:C:C5	3.10	0.40
35:BA:1216:G:N2	35:BA:1234:U:H1'	2.36	0.40
35:BA:1497:U:C2	35:BA:1578:U:OP1	2.74	0.40
35:BA:1607:C:H5"	35:BA:1608:A:H5'	2.03	0.40
35:BA:2290:G:C5	35:BA:2291:U:C4	3.09	0.40
35:BA:2307:G:H3'	35:BA:2308:G:C5'	2.52	0.40
35:BA:2345:G:C3'	35:BA:2346:A:H5'	2.50	0.40
35:BA:2380:C:C4	35:BA:2381:C:C5	3.09	0.40
35:BA:2579:C:H2'	35:BA:2580:U:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:13:A:N6	36:BB:70:C:H5'	2.37	0.40
36:BB:81:G:H2'	36:BB:82:G:H5'	2.03	0.40
38:BD:144:ALA:HB3	38:BD:192:THR:CG2	2.39	0.40
40:BF:10:PRO:CG	40:BF:11:VAL:N	2.84	0.40
40:BF:177:ALA:HB1	40:BF:178:PRO:CD	2.49	0.40
41:BG:33:ARG:HE	41:BG:33:ARG:HB2	1.72	0.40
41:BG:35:GLU:O	41:BG:36:LYS:HB3	2.20	0.40
41:BG:62:LEU:HD12	41:BG:62:LEU:H	1.83	0.40
41:BG:111:LEU:N	41:BG:112:PRO:CD	2.85	0.40
42:BH:86:GLU:HG2	42:BH:87:LEU:N	2.32	0.40
43:BK:48:MET:HB2	43:BK:49:GLY:H	1.77	0.40
43:BK:120:LEU:O	43:BK:124:ALA:CB	2.69	0.40
45:BN:62:VAL:O	45:BN:62:VAL:CG1	2.67	0.40
47:BP:96:THR:O	47:BP:97:PRO:C	2.64	0.40
47:BP:131:SER:O	47:BP:132:LYS:C	2.62	0.40
50:BS:20:ARG:HG2	50:BS:20:ARG:HH11	1.86	0.40
50:BS:31:SER:HB3	50:BS:34:HIS:O	2.22	0.40
51:BT:1:MET:H1	51:BT:7:ILE:HD11	1.85	0.40
51:BT:19:LEU:HD13	51:BT:78:LEU:HD22	2.03	0.40
51:BT:28:VAL:CB	51:BT:46:GLU:HA	2.51	0.40
52:BU:74:LEU:C	52:BU:74:LEU:HD12	2.45	0.40
52:BU:84:LYS:C	52:BU:86:ALA:N	2.79	0.40
54:BW:6:ILE:HG21	54:BW:6:ILE:HD13	1.87	0.40
56:BY:47:LYS:HA	56:BY:60:PHE:CD1	2.56	0.40
56:BY:88:LYS:HD3	56:BY:93:GLY:N	2.36	0.40
57:BZ:69:THR:HA	57:BZ:89:PHE:O	2.22	0.40
57:BZ:71:VAL:HG13	57:BZ:86:VAL:HG12	2.03	0.40
57:BZ:115:GLY:N	57:BZ:177:PRO:CG	2.81	0.40

There are no symmetry-related clashes.

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 PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	AB	232/256 (91%)	146 (63%)	55 (24%)	31 (13%)	0 4
3	AC	204/239 (85%)	129 (63%)	58 (28%)	17 (8%)	0 9
4	AD	206/209 (99%)	133 (65%)	52 (25%)	21 (10%)	0 7
5	AE	148/162 (91%)	116 (78%)	27 (18%)	5 (3%)	3 21
6	AF	99/101 (98%)	78 (79%)	15 (15%)	6 (6%)	1 13
7	AG	153/156 (98%)	107 (70%)	34 (22%)	12 (8%)	1 10
8	AH	136/138 (99%)	106 (78%)	23 (17%)	7 (5%)	1 15
9	AI	125/128 (98%)	84 (67%)	26 (21%)	15 (12%)	0 4
10	AJ	96/105 (91%)	64 (67%)	19 (20%)	13 (14%)	0 4
11	AK	117/129 (91%)	93 (80%)	18 (15%)	6 (5%)	1 15
12	AL	122/132 (92%)	81 (66%)	26 (21%)	15 (12%)	0 4
13	AM	122/126 (97%)	77 (63%)	25 (20%)	20 (16%)	0 2
14	AN	58/61 (95%)	48 (83%)	6 (10%)	4 (7%)	1 11
15	AO	86/89 (97%)	53 (62%)	25 (29%)	8 (9%)	0 8
16	AP	81/88 (92%)	58 (72%)	19 (24%)	4 (5%)	1 16
17	AQ	97/105 (92%)	76 (78%)	16 (16%)	5 (5%)	1 15
18	AR	68/88 (77%)	51 (75%)	11 (16%)	6 (9%)	0 8
19	AS	76/93 (82%)	39 (51%)	20 (26%)	17 (22%)	0 1
20	AT	97/106 (92%)	52 (54%)	30 (31%)	15 (16%)	0 3
21	AU	22/27 (82%)	14 (64%)	6 (27%)	2 (9%)	0 8
24	AY	662/691 (96%)	442 (67%)	135 (20%)	85 (13%)	0 4
25	B0	82/85 (96%)	64 (78%)	16 (20%)	2 (2%)	4 27
26	B1	91/98 (93%)	60 (66%)	20 (22%)	11 (12%)	0 4
27	B2	69/72 (96%)	34 (49%)	22 (32%)	13 (19%)	0 2
28	B3	57/60 (95%)	41 (72%)	12 (21%)	4 (7%)	1 11
29	B4	55/71 (78%)	25 (46%)	16 (29%)	14 (26%)	0 1
30	B5	57/60 (95%)	40 (70%)	6 (10%)	11 (19%)	0 2
31	B6	48/54 (89%)	22 (46%)	10 (21%)	16 (33%)	0 0
32	B7	46/49 (94%)	35 (76%)	9 (20%)	2 (4%)	2 17
33	B8	61/65 (94%)	35 (57%)	17 (28%)	9 (15%)	0 3
34	B9	35/37 (95%)	23 (66%)	8 (23%)	4 (11%)	0 5
37	BC	226/229 (99%)	173 (76%)	42 (19%)	11 (5%)	1 16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
38	BD	273/276 (99%)	185 (68%)	55 (20%)	33 (12%)	0 4
39	BE	202/206 (98%)	121 (60%)	49 (24%)	32 (16%)	0 2
40	BF	205/210 (98%)	134 (65%)	44 (22%)	27 (13%)	0 4
41	BG	179/182 (98%)	113 (63%)	44 (25%)	22 (12%)	0 4
42	BH	164/180 (91%)	89 (54%)	37 (23%)	38 (23%)	0 1
43	BK	137/147 (93%)	89 (65%)	36 (26%)	12 (9%)	0 8
44	BL	65/121 (54%)	56 (86%)	9 (14%)	0	100 100
45	BN	136/140 (97%)	89 (65%)	31 (23%)	16 (12%)	0 4
46	BO	120/122 (98%)	94 (78%)	17 (14%)	9 (8%)	1 10
47	BP	144/150 (96%)	75 (52%)	44 (31%)	25 (17%)	0 2
48	BQ	139/141 (99%)	104 (75%)	28 (20%)	7 (5%)	1 16
49	BR	115/118 (98%)	79 (69%)	24 (21%)	12 (10%)	0 6
50	BS	96/112 (86%)	43 (45%)	34 (35%)	19 (20%)	0 2
51	BT	135/146 (92%)	76 (56%)	34 (25%)	25 (18%)	0 2
52	BU	115/118 (98%)	70 (61%)	33 (29%)	12 (10%)	0 6
53	BV	99/101 (98%)	67 (68%)	15 (15%)	17 (17%)	0 2
54	BW	111/113 (98%)	80 (72%)	18 (16%)	13 (12%)	0 4
55	BX	90/96 (94%)	62 (69%)	23 (26%)	5 (6%)	1 14
56	BY	104/110 (94%)	45 (43%)	35 (34%)	24 (23%)	0 1
57	BZ	182/206 (88%)	108 (59%)	41 (22%)	33 (18%)	0 2
All	All	6645/7104 (94%)	4378 (66%)	1475 (22%)	792 (12%)	1 4

All (792) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	13	ALA
2	AB	20	GLU
2	AB	95	GLN
2	AB	190	THR
2	AB	195	ASP
2	AB	216	SER
2	AB	233	SER
2	AB	239	VAL
3	AC	12	LEU
3	AC	47	LEU

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Mol	Chain	Res	Type
3	AC	95	THR
3	AC	154	SER
3	AC	156	ARG
4	AD	3	ARG
4	AD	13	ARG
4	AD	14	ARG
4	AD	18	LYS
4	AD	30	LYS
4	AD	44	GLY
4	AD	153	ARG
4	AD	156	GLU
5	AE	11	ILE
6	AF	39	LYS
7	AG	8	GLU
7	AG	52	GLU
8	AH	105	ARG
9	AI	41	VAL
9	AI	43	ALA
9	AI	44	VAL
9	AI	61	ALA
9	AI	89	ASN
9	AI	105	ASP
10	AJ	33	GLN
10	AJ	55	LYS
10	AJ	56	HIS
10	AJ	57	LYS
10	AJ	59	SER
10	AJ	75	ILE
11	AK	123	LYS
11	AK	127	LYS
12	AL	18	VAL
12	AL	28	LYS
12	AL	38	THR
12	AL	45	PRO
12	AL	91	LYS
13	AM	12	ASN
13	AM	83	ASP
13	AM	90	LEU
13	AM	91	ARG
13	AM	100	GLY
13	AM	124	PRO
14	AN	15	LYS

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Mol	Chain	Res	Type
14	AN	29	ARG
15	AO	24	SER
18	AR	38	GLU
19	AS	10	PHE
19	AS	27	GLU
19	AS	28	LYS
19	AS	61	TYR
20	AT	74	LYS
20	AT	99	LEU
21	AU	3	LYS
24	AY	6	GLU
24	AY	21	ILE
24	AY	23	ALA
24	AY	34	TYR
24	AY	39	ILE
24	AY	66	THR
24	AY	68	ALA
24	AY	84	THR
24	AY	85	PRO
24	AY	88	VAL
24	AY	119	GLU
24	AY	121	VAL
24	AY	129	LYS
24	AY	144	ALA
24	AY	183	MET
24	AY	197	ARG
24	AY	203	GLU
24	AY	204	GLU
24	AY	205	TYR
24	AY	206	LEU
24	AY	209	ALA
24	AY	210	ARG
24	AY	251	ILE
24	AY	276	VAL
24	AY	299	VAL
24	AY	360	ALA
24	AY	402	ILE
24	AY	416	LYS
24	AY	447	GLY
24	AY	448	GLN
24	AY	456	GLU
24	AY	498	ILE

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Mol	Chain	Res	Type
24	AY	530	VAL
24	AY	559	PRO
24	AY	614	GLU
26	B1	28	GLY
26	B1	52	ARG
26	B1	85	LEU
27	B2	19	VAL
27	B2	20	GLU
27	B2	47	ASN
27	B2	48	HIS
28	B3	3	ARG
29	B4	5	ILE
29	B4	20	ASN
29	B4	26	SER
29	B4	38	LYS
29	B4	40	HIS
29	B4	43	TYR
29	B4	44	THR
29	B4	50	VAL
30	B5	49	CYS
30	B5	53	ALA
30	B5	56	LYS
30	B5	57	VAL
30	B5	58	LEU
31	B6	7	ILE
31	B6	9	LEU
31	B6	18	ARG
31	B6	20	ASN
31	B6	27	LYS
31	B6	28	ARG
31	B6	31	PRO
31	B6	44	ARG
31	B6	52	VAL
33	B8	31	HIS
33	B8	33	ASN
33	B8	34	TRP
33	B8	49	VAL
34	B9	11	CYS
34	B9	35	ARG
38	BD	24	ILE
38	BD	25	THR
38	BD	27	THR

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Mol	Chain	Res	Type
38	BD	34	VAL
38	BD	35	LYS
38	BD	127	VAL
38	BD	225	ALA
38	BD	239	ARG
38	BD	246	PRO
39	BE	2	LYS
39	BE	35	GLN
39	BE	46	ALA
39	BE	53	PRO
39	BE	54	GLN
39	BE	77	ILE
39	BE	88	GLY
39	BE	90	THR
39	BE	118	LYS
39	BE	129	HIS
39	BE	145	LYS
39	BE	189	PRO
40	BF	11	VAL
40	BF	21	ALA
40	BF	82	ILE
40	BF	89	VAL
40	BF	127	GLU
41	BG	4	ASP
41	BG	6	ALA
41	BG	14	GLU
41	BG	47	LYS
41	BG	81	LYS
41	BG	87	PRO
41	BG	96	ARG
41	BG	109	VAL
41	BG	110	ALA
41	BG	181	ARG
42	BH	13	LYS
42	BH	46	GLU
42	BH	55	PRO
42	BH	83	TYR
42	BH	154	PRO
42	BH	155	SER
42	BH	157	TYR
42	BH	160	LYS
42	BH	169	VAL

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Mol	Chain	Res	Type
42	BH	173	PRO
43	BK	51	ALA
43	BK	82	ALA
43	BK	115	LEU
45	BN	8	GLN
45	BN	36	GLY
45	BN	46	VAL
45	BN	47	ALA
45	BN	58	ASP
45	BN	63	THR
45	BN	130	HIS
45	BN	133	GLN
46	BO	35	VAL
46	BO	48	PRO
46	BO	68	GLU
47	BP	12	ALA
47	BP	14	LYS
47	BP	17	LYS
47	BP	31	ALA
47	BP	47	ASP
47	BP	48	PRO
47	BP	52	GLU
47	BP	57	THR
47	BP	58	THR
47	BP	135	LEU
47	BP	147	LEU
48	BQ	27	VAL
48	BQ	135	ASP
49	BR	14	SER
49	BR	58	GLY
49	BR	88	ARG
49	BR	107	ASP
49	BR	117	VAL
50	BS	13	ARG
50	BS	37	ALA
50	BS	97	ARG
50	BS	103	GLU
51	BT	6	LEU
51	BT	24	PRO
51	BT	28	VAL
51	BT	30	VAL
51	BT	55	ASN

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Mol	Chain	Res	Type
51	BT	80	SER
51	BT	91	ARG
51	BT	97	ALA
51	BT	103	ARG
51	BT	104	ASN
51	BT	107	ASP
51	BT	132	LYS
51	BT	133	GLU
52	BU	67	ALA
52	BU	91	ASP
52	BU	93	LYS
53	BV	16	PRO
53	BV	18	LEU
53	BV	26	ASP
53	BV	46	VAL
55	BX	42	ALA
56	BY	7	VAL
56	BY	17	SER
56	BY	24	VAL
56	BY	48	ALA
56	BY	60	PHE
56	BY	77	PRO
56	BY	78	ALA
56	BY	99	CYS
57	BZ	27	VAL
57	BZ	51	ALA
57	BZ	78	LYS
57	BZ	80	ARG
57	BZ	81	ARG
57	BZ	85	HIS
57	BZ	142	SER
57	BZ	146	ILE
57	BZ	163	LEU
57	BZ	168	GLU
57	BZ	180	VAL
2	AB	12	GLU
2	AB	18	GLY
2	AB	65	GLY
2	AB	153	ARG
2	AB	221	LEU
2	AB	224	GLN
2	AB	238	LEU

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Mol	Chain	Res	Type
3	AC	61	ALA
3	AC	96	GLY
4	AD	5	ILE
4	AD	32	ALA
4	AD	171	GLY
6	AF	34	GLY
6	AF	43	LEU
7	AG	41	ARG
7	AG	80	VAL
7	AG	90	GLU
7	AG	114	ARG
7	AG	131	LYS
8	AH	2	LEU
8	AH	121	ASP
10	AJ	19	SER
10	AJ	36	GLY
10	AJ	61	GLU
12	AL	27	LEU
12	AL	46	LYS
12	AL	47	LYS
12	AL	81	SER
12	AL	121	GLY
13	AM	4	ILE
13	AM	67	GLU
13	AM	70	LEU
13	AM	114	ARG
13	AM	116	THR
13	AM	118	ALA
13	AM	121	LYS
14	AN	14	PRO
16	AP	34	GLU
17	AQ	13	ASP
17	AQ	49	GLU
18	AR	37	VAL
18	AR	41	LYS
18	AR	45	SER
18	AR	60	ALA
19	AS	14	HIS
19	AS	25	LYS
19	AS	26	GLY
19	AS	29	ARG
19	AS	62	ILE

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Mol	Chain	Res	Type
19	AS	63	THR
20	AT	49	ALA
20	AT	69	GLY
24	AY	19	ALA
24	AY	42	ILE
24	AY	92	ILE
24	AY	114	VAL
24	AY	120	THR
24	AY	196	ILE
24	AY	347	GLY
24	AY	380	LEU
24	AY	386	GLY
24	AY	396	ARG
24	AY	457	LEU
24	AY	458	HIS
24	AY	471	LYS
24	AY	505	GLY
24	AY	519	ARG
24	AY	618	GLY
24	AY	657	THR
25	B0	20	ARG
26	B1	53	VAL
26	B1	84	GLY
27	B2	18	PRO
27	B2	21	LEU
27	B2	26	ARG
27	B2	64	LEU
27	B2	68	ARG
28	B3	45	GLY
29	B4	8	LYS
29	B4	9	LEU
29	B4	48	ARG
30	B5	36	CYS
30	B5	59	GLU
31	B6	19	ARG
31	B6	43	CYS
33	B8	40	GLU
34	B9	2	LYS
37	BC	101	ILE
38	BD	12	SER
38	BD	32	SER
38	BD	36	PRO

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Mol	Chain	Res	Type
38	BD	41	GLY
38	BD	198	ASN
39	BE	71	GLY
39	BE	72	VAL
39	BE	82	ARG
39	BE	83	ASP
39	BE	134	ILE
39	BE	144	ARG
39	BE	185	LYS
39	BE	186	GLY
39	BE	187	ALA
40	BF	10	PRO
40	BF	64	ILE
40	BF	84	VAL
40	BF	85	GLY
40	BF	126	VAL
40	BF	167	ALA
40	BF	169	ASN
40	BF	181	LEU
40	BF	206	ILE
41	BG	22	ARG
41	BG	43	LEU
41	BG	82	LEU
41	BG	84	LYS
41	BG	102	PHE
41	BG	166	ASP
42	BH	21	PRO
42	BH	41	MET
42	BH	49	VAL
42	BH	69	ARG
42	BH	126	PRO
42	BH	138	LYS
42	BH	156	ALA
42	BH	158	HIS
42	BH	165	ALA
42	BH	171	LEU
42	BH	174	GLY
42	BH	176	ALA
43	BK	10	LEU
43	BK	87	GLY
45	BN	110	GLY
46	BO	5	GLN

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Mol	Chain	Res	Type
46	BO	29	ASN
46	BO	89	ASN
46	BO	104	ARG
46	BO	120	GLU
47	BP	34	GLY
47	BP	36	LYS
47	BP	49	ARG
47	BP	98	GLU
47	BP	111	ARG
47	BP	123	LEU
48	BQ	52	VAL
48	BQ	71	ASP
49	BR	4	LEU
49	BR	8	ARG
49	BR	12	ARG
50	BS	23	ARG
50	BS	85	VAL
50	BS	94	TYR
50	BS	100	ALA
50	BS	102	ALA
50	BS	104	GLY
50	BS	105	ALA
51	BT	5	ALA
51	BT	17	THR
51	BT	130	ALA
51	BT	135	ALA
52	BU	114	LYS
53	BV	2	PHE
53	BV	67	GLY
54	BW	6	ILE
54	BW	18	ARG
54	BW	63	ASP
55	BX	12	VAL
55	BX	22	ALA
56	BY	38	ILE
56	BY	39	VAL
56	BY	41	GLY
56	BY	74	PRO
56	BY	92	ASN
56	BY	100	ALA
56	BY	104	GLY
57	BZ	30	ASN

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Mol	Chain	Res	Type
57	BZ	42	VAL
57	BZ	112	ARG
57	BZ	120	ILE
57	BZ	121	HIS
57	BZ	128	VAL
57	BZ	148	ASP
57	BZ	170	THR
57	BZ	185	GLU
2	AB	15	VAL
2	AB	83	MET
2	AB	97	TRP
2	AB	230	VAL
3	AC	129	ALA
3	AC	131	ARG
3	AC	168	ALA
4	AD	40	PRO
4	AD	149	ALA
4	AD	179	GLU
6	AF	21	LEU
7	AG	14	PRO
7	AG	62	PHE
7	AG	153	HIS
8	AH	33	GLU
9	AI	11	LYS
9	AI	12	GLU
9	AI	33	PHE
9	AI	34	ASN
9	AI	85	LEU
9	AI	95	LYS
10	AJ	84	GLN
12	AL	87	GLY
12	AL	92	ASP
13	AM	113	PRO
15	AO	14	GLU
15	AO	25	THR
15	AO	80	ALA
15	AO	84	LYS
16	AP	2	VAL
16	AP	76	GLN
17	AQ	95	TYR
19	AS	5	LEU
19	AS	54	GLY

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Mol	Chain	Res	Type
19	AS	73	GLU
20	AT	21	LYS
20	AT	25	ARG
20	AT	34	LYS
20	AT	48	LYS
20	AT	62	LEU
24	AY	146	LEU
24	AY	148	LEU
24	AY	361	ASN
24	AY	385	THR
24	AY	406	GLU
24	AY	418	LYS
24	AY	506	GLN
24	AY	550	MET
24	AY	636	PRO
24	AY	680	PRO
24	AY	681	LYS
25	B0	13	GLY
26	B1	69	LYS
27	B2	49	LYS
28	B3	29	ARG
28	B3	32	GLN
29	B4	51	ASP
31	B6	23	THR
31	B6	41	PRO
31	B6	49	HIS
32	B7	17	GLY
37	BC	38	PHE
37	BC	168	LYS
37	BC	227	PRO
38	BD	19	ALA
38	BD	125	ILE
38	BD	129	ASN
38	BD	197	GLY
38	BD	242	ARG
38	BD	267	SER
38	BD	268	ARG
39	BE	17	ASP
39	BE	34	VAL
39	BE	73	GLU
39	BE	86	PRO
39	BE	117	MET

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Mol	Chain	Res	Type
40	BF	3	GLU
40	BF	43	LYS
40	BF	108	LYS
40	BF	122	LYS
40	BF	134	GLY
41	BG	99	MET
41	BG	116	ASP
41	BG	129	GLY
42	BH	42	ARG
42	BH	48	GLY
42	BH	85	LYS
42	BH	98	LEU
43	BK	48	MET
43	BK	63	ARG
43	BK	137	GLU
45	BN	40	PRO
45	BN	57	ALA
45	BN	60	ILE
45	BN	129	PRO
46	BO	54	GLU
47	BP	23	PRO
47	BP	43	GLY
49	BR	29	LEU
49	BR	45	ARG
50	BS	76	LYS
50	BS	92	TYR
50	BS	107	GLU
51	BT	11	GLU
51	BT	12	SER
51	BT	58	ASN
51	BT	127	ALA
52	BU	66	ASN
52	BU	83	LEU
53	BV	3	ALA
53	BV	19	LYS
53	BV	50	PRO
53	BV	53	GLU
53	BV	55	ALA
53	BV	78	LYS
54	BW	25	ARG
54	BW	57	ASN
54	BW	67	ASP

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Mol	Chain	Res	Type
54	BW	93	ALA
54	BW	99	ARG
57	BZ	5	LEU
57	BZ	83	PRO
57	BZ	152	ALA
57	BZ	159	PRO
57	BZ	166	SER
2	AB	29	ALA
2	AB	64	ARG
2	AB	128	GLU
2	AB	130	ARG
2	AB	151	GLY
2	AB	165	VAL
3	AC	15	THR
3	AC	26	LYS
3	AC	135	LYS
3	AC	144	SER
4	AD	4	TYR
4	AD	92	VAL
4	AD	123	HIS
4	AD	159	ARG
4	AD	193	ASP
4	AD	205	GLU
6	AF	30	LEU
6	AF	80	ARG
8	AH	104	ARG
8	AH	135	CYS
9	AI	127	LYS
10	AJ	83	GLU
13	AM	10	PRO
13	AM	11	ARG
14	AN	16	PHE
16	AP	56	ALA
17	AQ	25	ARG
17	AQ	88	TYR
20	AT	96	GLY
20	AT	97	ALA
21	AU	9	ARG
24	AY	22	ASP
24	AY	24	GLY
24	AY	25	LYS
24	AY	75	LYS

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Mol	Chain	Res	Type
24	AY	112	GLN
24	AY	532	GLY
27	B2	58	ALA
29	B4	3	GLU
30	B5	35	GLU
31	B6	16	CYS
31	B6	36	LEU
33	B8	43	GLN
37	BC	14	LYS
37	BC	28	ARG
37	BC	30	VAL
37	BC	82	GLU
38	BD	3	VAL
38	BD	30	GLU
39	BE	64	LYS
40	BF	90	PHE
40	BF	115	ALA
40	BF	195	ASP
42	BH	20	ALA
42	BH	73	ALA
42	BH	84	SER
42	BH	170	ARG
43	BK	16	LYS
43	BK	116	ASN
47	BP	83	VAL
47	BP	89	ALA
47	BP	107	LYS
47	BP	146	VAL
48	BQ	76	LYS
48	BQ	134	ARG
50	BS	24	LEU
51	BT	88	ILE
51	BT	90	GLN
52	BU	27	LEU
53	BV	31	ALA
54	BW	11	ARG
54	BW	111	HIS
56	BY	81	LYS
56	BY	105	ALA
57	BZ	46	LYS
2	AB	161	ALA
2	AB	237	ALA

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Mol	Chain	Res	Type
5	AE	8	GLU
5	AE	146	ALA
7	AG	47	CYS
11	AK	34	ASP
11	AK	94	ALA
12	AL	19	ARG
12	AL	51	ALA
13	AM	7	VAL
13	AM	55	ARG
15	AO	77	ARG
18	AR	87	ARG
19	AS	51	VAL
19	AS	59	PRO
19	AS	69	HIS
20	AT	44	ALA
24	AY	67	ALA
24	AY	76	ASP
24	AY	90	PHE
24	AY	200	PRO
24	AY	277	VAL
24	AY	333	GLY
24	AY	393	ASP
24	AY	502	GLY
24	AY	535	PRO
24	AY	577	SER
24	AY	598	ASP
26	B1	54	ALA
26	B1	87	PRO
27	B2	30	ARG
27	B2	70	GLN
29	B4	28	LYS
33	B8	35	GLN
33	B8	37	SER
37	BC	12	LEU
38	BD	28	GLU
38	BD	90	ALA
38	BD	210	GLY
39	BE	45	THR
39	BE	57	LYS
40	BF	58	ALA
40	BF	66	PRO
41	BG	75	LYS

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Mol	Chain	Res	Type
47	BP	33	ARG
47	BP	67	MET
49	BR	31	HIS
50	BS	88	ASP
52	BU	46	ALA
52	BU	92	ARG
52	BU	110	VAL
53	BV	47	VAL
53	BV	51	VAL
54	BW	14	PRO
56	BY	37	VAL
56	BY	46	LYS
56	BY	90	LEU
57	BZ	119	GLU
57	BZ	165	VAL
3	AC	4	LYS
4	AD	71	SER
9	AI	80	GLY
11	AK	88	GLY
12	AL	71	PRO
15	AO	26	GLU
20	AT	63	ILE
20	AT	78	ALA
20	AT	98	PRO
24	AY	371	ALA
30	B5	3	LYS
30	B5	38	ALA
37	BC	198	GLU
38	BD	273	ARG
39	BE	69	LYS
41	BG	24	GLY
41	BG	64	THR
42	BH	47	GLU
45	BN	22	THR
50	BS	62	LYS
50	BS	89	ARG
50	BS	90	GLY
51	BT	41	ARG
55	BX	11	PRO
55	BX	59	VAL
56	BY	3	VAL
57	BZ	134	PRO

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Mol	Chain	Res	Type
2	AB	26	PRO
2	AB	127	ILE
3	AC	66	VAL
7	AG	42	ILE
10	AJ	23	ILE
10	AJ	91	PRO
24	AY	303	PRO
24	AY	444	PRO
26	B1	30	VAL
26	B1	86	SER
32	B7	25	PRO
38	BD	178	PRO
38	BD	236	GLY
42	BH	45	VAL
42	BH	92	ILE
51	BT	81	PRO
52	BU	90	VAL
53	BV	22	VAL
57	BZ	133	ILE
57	BZ	158	PRO
5	AE	118	ILE
5	AE	129	ILE
13	AM	53	VAL
15	AO	75	PRO
24	AY	622	GLY
38	BD	234	GLY
40	BF	180	GLY
45	BN	5	VAL
45	BN	134	ARG
49	BR	106	GLY
53	BV	35	LEU
56	BY	75	ILE
56	BY	98	VAL
57	BZ	126	VAL
2	AB	158	LEU
2	AB	232	PRO
8	AH	76	PRO
13	AM	74	VAL
19	AS	42	PRO
24	AY	65	ILE
30	B5	4	HIS
38	BD	10	THR

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Mol	Chain	Res	Type
38	BD	228	PRO
39	BE	75	VAL
40	BF	81	PRO
42	BH	52	VAL
42	BH	72	ILE
42	BH	107	VAL
43	BK	13	PRO
43	BK	34	ILE
54	BW	21	VAL
57	BZ	68	PRO
3	AC	145	GLY
11	AK	95	ILE
34	B9	30	PRO
38	BD	123	ALA
39	BE	55	ASN
42	BH	39	PRO
42	BH	111	HIS
48	BQ	62	GLY
56	BY	53	PRO
9	AI	81	ILE
26	B1	36	GLY
33	B8	58	ILE
37	BC	107	GLY
40	BF	132	VAL
52	BU	65	ILE
54	BW	59	VAL

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AB	202/220 (92%)	178 (88%)	24 (12%)	5 18
3	AC	160/188 (85%)	136 (85%)	24 (15%)	3 12
4	AD	180/181 (99%)	158 (88%)	22 (12%)	5 17
5	AE	115/123 (94%)	99 (86%)	16 (14%)	3 14

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
6	AF	90/90 (100%)	79 (88%)	11 (12%)	5 17
7	AG	126/127 (99%)	109 (86%)	17 (14%)	4 14
8	AH	119/119 (100%)	105 (88%)	14 (12%)	5 18
9	AI	98/99 (99%)	89 (91%)	9 (9%)	8 27
10	AJ	88/92 (96%)	74 (84%)	14 (16%)	2 11
11	AK	90/99 (91%)	81 (90%)	9 (10%)	7 24
12	AL	104/109 (95%)	92 (88%)	12 (12%)	5 18
13	AM	99/101 (98%)	86 (87%)	13 (13%)	4 15
14	AN	49/50 (98%)	43 (88%)	6 (12%)	5 17
15	AO	79/80 (99%)	67 (85%)	12 (15%)	3 12
16	AP	72/74 (97%)	65 (90%)	7 (10%)	8 24
17	AQ	94/97 (97%)	83 (88%)	11 (12%)	5 18
18	AR	61/77 (79%)	56 (92%)	5 (8%)	10 31
19	AS	69/80 (86%)	59 (86%)	10 (14%)	3 13
20	AT	76/82 (93%)	66 (87%)	10 (13%)	4 15
21	AU	19/22 (86%)	19 (100%)	0	100 100
24	AY	563/582 (97%)	472 (84%)	91 (16%)	2 11
25	B0	66/67 (98%)	57 (86%)	9 (14%)	3 14
26	B1	78/83 (94%)	63 (81%)	15 (19%)	1 8
27	B2	66/67 (98%)	58 (88%)	8 (12%)	5 17
28	B3	51/52 (98%)	44 (86%)	7 (14%)	3 14
29	B4	51/63 (81%)	35 (69%)	16 (31%)	0 2
30	B5	51/52 (98%)	46 (90%)	5 (10%)	7 24
31	B6	49/52 (94%)	35 (71%)	14 (29%)	0 2
32	B7	41/42 (98%)	36 (88%)	5 (12%)	5 17
33	B8	53/55 (96%)	47 (89%)	6 (11%)	5 19
34	B9	34/34 (100%)	26 (76%)	8 (24%)	1 5
37	BC	180/181 (99%)	158 (88%)	22 (12%)	5 17
38	BD	217/218 (100%)	178 (82%)	39 (18%)	2 9
39	BE	165/166 (99%)	136 (82%)	29 (18%)	2 9
40	BF	165/166 (99%)	149 (90%)	16 (10%)	8 24

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
41	BG	155/156 (99%)	131 (84%)	24 (16%)	2 12
42	BH	136/148 (92%)	111 (82%)	25 (18%)	1 8
43	BK	104/111 (94%)	88 (85%)	16 (15%)	2 12
44	BL	46/85 (54%)	41 (89%)	5 (11%)	6 21
45	BN	117/119 (98%)	96 (82%)	21 (18%)	2 9
46	BO	100/100 (100%)	85 (85%)	15 (15%)	3 12
47	BP	112/116 (97%)	86 (77%)	26 (23%)	1 5
48	BQ	111/111 (100%)	93 (84%)	18 (16%)	2 11
49	BR	100/101 (99%)	86 (86%)	14 (14%)	3 13
50	BS	77/88 (88%)	66 (86%)	11 (14%)	3 13
51	BT	120/127 (94%)	95 (79%)	25 (21%)	1 6
52	BU	92/94 (98%)	84 (91%)	8 (9%)	9 29
53	BV	82/82 (100%)	67 (82%)	15 (18%)	2 8
54	BW	91/92 (99%)	78 (86%)	13 (14%)	3 13
55	BX	74/78 (95%)	61 (82%)	13 (18%)	2 9
56	BY	87/91 (96%)	72 (83%)	15 (17%)	2 9
57	BZ	162/179 (90%)	132 (82%)	30 (18%)	1 8
All	All	5586/5868 (95%)	4756 (85%)	830 (15%)	5 12

All (830) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	16	HIS
2	AB	17	PHE
2	AB	20	GLU
2	AB	36	ARG
2	AB	44	LEU
2	AB	79	ASP
2	AB	80	ILE
2	AB	93	VAL
2	AB	94	ASN
2	AB	101	MET
2	AB	129	GLU
2	AB	145	LEU
2	AB	152	PHE
2	AB	155	LEU

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Mol	Chain	Res	Type
2	AB	157	ARG
2	AB	162	ILE
2	AB	172	ILE
2	AB	178	ARG
2	AB	179	LYS
2	AB	192	SER
2	AB	200	ILE
2	AB	213	LEU
2	AB	221	LEU
2	AB	223	ILE
3	AC	5	ILE
3	AC	14	ILE
3	AC	16	ARG
3	AC	22	TRP
3	AC	34	LEU
3	AC	38	ARG
3	AC	46	GLU
3	AC	52	LEU
3	AC	56	ASP
3	AC	72	LYS
3	AC	75	VAL
3	AC	79	ARG
3	AC	95	THR
3	AC	124	ILE
3	AC	125	GLU
3	AC	150	LYS
3	AC	152	ILE
3	AC	156	ARG
3	AC	165	THR
3	AC	167	TRP
3	AC	178	LEU
3	AC	179	ARG
3	AC	192	THR
3	AC	202	ILE
4	AD	3	ARG
4	AD	7	PRO
4	AD	8	VAL
4	AD	9	CYS
4	AD	12	CYS
4	AD	15	GLU
4	AD	22	LYS
4	AD	36	ARG

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Mol	Chain	Res	Type
4	AD	49	ARG
4	AD	58	LEU
4	AD	68	TYR
4	AD	70	ILE
4	AD	73	ARG
4	AD	78	LEU
4	AD	96	LEU
4	AD	105	VAL
4	AD	114	ARG
4	AD	127	THR
4	AD	135	LEU
4	AD	162	LEU
4	AD	168	ARG
4	AD	200	GLU
5	AE	12	LEU
5	AE	20	GLN
5	AE	26	PHE
5	AE	31	LEU
5	AE	41	VAL
5	AE	51	VAL
5	AE	64	ARG
5	AE	67	VAL
5	AE	68	GLU
5	AE	75	THR
5	AE	76	ILE
5	AE	79	GLU
5	AE	96	PRO
5	AE	101	ILE
5	AE	119	LEU
5	AE	149	GLU
6	AF	9	VAL
6	AF	15	ASP
6	AF	32	ASN
6	AF	36	ARG
6	AF	43	LEU
6	AF	47	ARG
6	AF	69	GLU
6	AF	70	ASP
6	AF	86	ARG
6	AF	87	ARG
6	AF	98	LEU
7	AG	14	PRO

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Mol	Chain	Res	Type
7	AG	18	TYR
7	AG	22	LEU
7	AG	27	ILE
7	AG	30	ILE
7	AG	41	ARG
7	AG	57	GLU
7	AG	66	VAL
7	AG	75	VAL
7	AG	79	ARG
7	AG	98	SER
7	AG	101	LEU
7	AG	104	LEU
7	AG	113	GLU
7	AG	137	LYS
7	AG	151	TYR
7	AG	156	TRP
8	AH	1	MET
8	AH	26	VAL
8	AH	30	ARG
8	AH	39	LEU
8	AH	83	ILE
8	AH	91	ARG
8	AH	98	LYS
8	AH	100	ILE
8	AH	102	ARG
8	AH	118	VAL
8	AH	120	THR
8	AH	122	ARG
8	AH	123	GLU
8	AH	129	VAL
9	AI	4	TYR
9	AI	10	ARG
9	AI	27	THR
9	AI	29	ASN
9	AI	53	VAL
9	AI	59	PHE
9	AI	95	LYS
9	AI	114	TYR
9	AI	128	ARG
10	AJ	16	LEU
10	AJ	17	ASP
10	AJ	23	ILE

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Mol	Chain	Res	Type
10	AJ	40	LEU
10	AJ	43	ARG
10	AJ	50	ILE
10	AJ	55	LYS
10	AJ	59	SER
10	AJ	63	PHE
10	AJ	70	ARG
10	AJ	80	LYS
10	AJ	82	ILE
10	AJ	91	PRO
10	AJ	96	ILE
11	AK	29	ILE
11	AK	31	THR
11	AK	57	THR
11	AK	87	THR
11	AK	91	ARG
11	AK	92	GLU
11	AK	117	ASN
11	AK	119	CYS
11	AK	124	LYS
12	AL	7	ILE
12	AL	13	LYS
12	AL	37	CYS
12	AL	41	ARG
12	AL	47	LYS
12	AL	57	LYS
12	AL	75	HIS
12	AL	81	SER
12	AL	85	ILE
12	AL	89	ARG
12	AL	105	TYR
12	AL	113	ARG
13	AM	22	ILE
13	AM	50	GLU
13	AM	64	TRP
13	AM	66	LEU
13	AM	70	LEU
13	AM	81	LEU
13	AM	98	VAL
13	AM	108	ARG
13	AM	113	PRO
13	AM	115	LYS

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Mol	Chain	Res	Type
13	AM	121	LYS
13	AM	122	LYS
13	AM	124	PRO
14	AN	16	PHE
14	AN	18	VAL
14	AN	29	ARG
14	AN	41	ARG
14	AN	42	ILE
14	AN	44	LEU
15	AO	10	LYS
15	AO	19	PRO
15	AO	22	THR
15	AO	24	SER
15	AO	39	LEU
15	AO	41	GLU
15	AO	57	LEU
15	AO	59	MET
15	AO	67	LEU
15	AO	82	ILE
15	AO	85	LEU
15	AO	88	ARG
16	AP	1	MET
16	AP	6	LEU
16	AP	11	SER
16	AP	16	HIS
16	AP	32	TYR
16	AP	62	VAL
16	AP	74	LEU
17	AQ	7	THR
17	AQ	9	VAL
17	AQ	23	VAL
17	AQ	35	VAL
17	AQ	37	LYS
17	AQ	52	LYS
17	AQ	57	VAL
17	AQ	59	ILE
17	AQ	64	PRO
17	AQ	74	LEU
17	AQ	78	GLU
18	AR	29	PHE
18	AR	31	LEU
18	AR	76	LEU

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Mol	Chain	Res	Type
18	AR	82	THR
18	AR	86	VAL
19	AS	4	SER
19	AS	5	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	15	LEU
19	AS	19	VAL
19	AS	37	ARG
19	AS	62	ILE
19	AS	63	THR
19	AS	66	MET
20	AT	13	LEU
20	AT	24	LEU
20	AT	26	ASN
20	AT	36	LEU
20	AT	42	GLN
20	AT	45	GLN
20	AT	50	GLU
20	AT	75	ASN
20	AT	84	LEU
20	AT	93	GLU
24	AY	14	ASN
24	AY	17	ILE
24	AY	20	HIS
24	AY	21	ILE
24	AY	27	THR
24	AY	40	HIS
24	AY	65	ILE
24	AY	82	ILE
24	AY	83	ASP
24	AY	85	PRO
24	AY	88	VAL
24	AY	89	ASP
24	AY	92	ILE
24	AY	96	ARG
24	AY	100	VAL
24	AY	101	LEU
24	AY	102	ASP
24	AY	105	ILE
24	AY	117	GLN
24	AY	124	GLN

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Mol	Chain	Res	Type
24	AY	130	VAL
24	AY	132	ARG
24	AY	152	THR
24	AY	157	LEU
24	AY	192	LEU
24	AY	216	LEU
24	AY	225	GLU
24	AY	230	LYS
24	AY	232	LEU
24	AY	238	THR
24	AY	240	GLU
24	AY	242	LEU
24	AY	252	ASP
24	AY	255	ILE
24	AY	259	PHE
24	AY	260	LEU
24	AY	269	VAL
24	AY	280	LEU
24	AY	283	PRO
24	AY	285	ASP
24	AY	289	ILE
24	AY	298	VAL
24	AY	299	VAL
24	AY	312	LEU
24	AY	316	ILE
24	AY	326	THR
24	AY	337	SER
24	AY	343	ASN
24	AY	349	LYS
24	AY	352	VAL
24	AY	357	ARG
24	AY	377	VAL
24	AY	378	VAL
24	AY	381	LYS
24	AY	385	THR
24	AY	388	THR
24	AY	399	LEU
24	AY	406	GLU
24	AY	409	ILE
24	AY	410	ASP
24	AY	421	GLN
24	AY	426	GLN

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Mol	Chain	Res	Type
24	AY	428	LEU
24	AY	438	PHE
24	AY	440	VAL
24	AY	451	ILE
24	AY	468	ARG
24	AY	476	VAL
24	AY	481	VAL
24	AY	487	ILE
24	AY	499	ARG
24	AY	501	THR
24	AY	504	ARG
24	AY	506	GLN
24	AY	509	HIS
24	AY	512	ILE
24	AY	515	GLU
24	AY	567	LEU
24	AY	572	TYR
24	AY	574	GLU
24	AY	595	GLN
24	AY	598	ASP
24	AY	614	GLU
24	AY	625	ASN
24	AY	630	GLN
24	AY	631	ILE
24	AY	634	MET
24	AY	657	THR
24	AY	659	LEU
24	AY	685	GLU
24	AY	688	ILE
25	B0	5	LYS
25	B0	11	ARG
25	B0	20	ARG
25	B0	27	GLU
25	B0	30	VAL
25	B0	41	ARG
25	B0	75	LEU
25	B0	78	TYR
25	B0	84	LEU
26	B1	3	LYS
26	B1	7	ILE
26	B1	18	ILE
26	B1	35	THR

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Mol	Chain	Res	Type
26	B1	45	ASN
26	B1	46	LEU
26	B1	56	GLN
26	B1	65	SER
26	B1	72	GLU
26	B1	75	GLU
26	B1	80	LEU
26	B1	82	LEU
26	B1	83	GLU
26	B1	94	LEU
26	B1	95	LEU
27	B2	3	LEU
27	B2	30	ARG
27	B2	32	LEU
27	B2	37	PHE
27	B2	43	GLN
27	B2	44	LEU
27	B2	52	ASP
27	B2	59	ARG
28	B3	18	ASP
28	B3	28	LEU
28	B3	29	ARG
28	B3	31	LEU
28	B3	38	GLU
28	B3	48	GLU
28	B3	52	HIS
29	B4	1	MET
29	B4	5	ILE
29	B4	8	LYS
29	B4	9	LEU
29	B4	10	VAL
29	B4	13	ARG
29	B4	20	ASN
29	B4	28	LYS
29	B4	31	ILE
29	B4	32	TYR
29	B4	39	CYS
29	B4	40	HIS
29	B4	42	PHE
29	B4	49	PHE
29	B4	51	ASP
29	B4	55	ARG

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Mol	Chain	Res	Type
30	B5	3	LYS
30	B5	4	HIS
30	B5	36	CYS
30	B5	55	ARG
30	B5	58	LEU
31	B6	6	ARG
31	B6	9	LEU
31	B6	10	LEU
31	B6	11	LEU
31	B6	15	GLU
31	B6	18	ARG
31	B6	23	THR
31	B6	27	LYS
31	B6	30	THR
31	B6	31	PRO
31	B6	39	TYR
31	B6	42	TRP
31	B6	52	VAL
31	B6	54	ILE
32	B7	1	MET
32	B7	4	THR
32	B7	24	THR
32	B7	44	PRO
32	B7	48	LYS
33	B8	31	HIS
33	B8	32	LEU
33	B8	33	ASN
33	B8	34	TRP
33	B8	61	LEU
33	B8	64	TYR
34	B9	1	MET
34	B9	2	LYS
34	B9	10	ILE
34	B9	16	VAL
34	B9	18	ARG
34	B9	25	VAL
34	B9	26	ILE
34	B9	29	ASN
37	BC	18	ASN
37	BC	28	ARG
37	BC	29	LEU
37	BC	31	LYS

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Mol	Chain	Res	Type
37	BC	48	LEU
37	BC	54	ARG
37	BC	58	ASN
37	BC	60	ARG
37	BC	74	ARG
37	BC	115	VAL
37	BC	130	ARG
37	BC	138	LEU
37	BC	149	ASN
37	BC	150	ILE
37	BC	184	GLU
37	BC	185	LYS
37	BC	189	ASN
37	BC	191	ARG
37	BC	203	GLU
37	BC	211	ARG
37	BC	212	SER
37	BC	216	THR
38	BD	8	PRO
38	BD	10	THR
38	BD	23	GLU
38	BD	24	ILE
38	BD	25	THR
38	BD	26	LYS
38	BD	35	LYS
38	BD	37	LEU
38	BD	46	GLN
38	BD	61	LEU
38	BD	65	ILE
38	BD	67	PHE
38	BD	82	ILE
38	BD	87	ASN
38	BD	89	SER
38	BD	92	ILE
38	BD	95	LEU
38	BD	104	TYR
38	BD	106	ILE
38	BD	111	LEU
38	BD	117	VAL
38	BD	131	LEU
38	BD	157	ARG
38	BD	166	GLN

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Mol	Chain	Res	Type
38	BD	176	ARG
38	BD	183	ARG
38	BD	192	THR
38	BD	202	LYS
38	BD	212	SER
38	BD	221	VAL
38	BD	228	PRO
38	BD	244	ARG
38	BD	245	PRO
38	BD	257	LEU
38	BD	260	ARG
38	BD	263	ARG
38	BD	270	ILE
38	BD	271	ILE
38	BD	275	LYS
39	BE	4	ILE
39	BE	9	VAL
39	BE	14	ILE
39	BE	22	PRO
39	BE	26	ILE
39	BE	33	VAL
39	BE	36	ARG
39	BE	40	GLU
39	BE	47	VAL
39	BE	49	LEU
39	BE	54	GLN
39	BE	61	ARG
39	BE	67	PHE
39	BE	69	LYS
39	BE	76	ARG
39	BE	78	LEU
39	BE	94	GLU
39	BE	95	ILE
39	BE	111	ARG
39	BE	118	LYS
39	BE	134	ILE
39	BE	144	ARG
39	BE	149	ARG
39	BE	188	VAL
39	BE	192	ASN
39	BE	195	LEU
39	BE	197	ILE

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Mol	Chain	Res	Type
39	BE	202	LYS
39	BE	203	LYS
40	BF	19	GLU
40	BF	28	ILE
40	BF	41	LEU
40	BF	64	ILE
40	BF	66	PRO
40	BF	83	PHE
40	BF	88	VAL
40	BF	89	VAL
40	BF	106	ARG
40	BF	110	LEU
40	BF	125	LEU
40	BF	149	ASP
40	BF	157	VAL
40	BF	165	ARG
40	BF	175	THR
40	BF	206	ILE
41	BG	4	ASP
41	BG	5	VAL
41	BG	14	GLU
41	BG	33	ARG
41	BG	34	LEU
41	BG	36	LYS
41	BG	43	LEU
41	BG	60	LEU
41	BG	63	ILE
41	BG	71	THR
41	BG	80	PHE
41	BG	83	ARG
41	BG	88	ILE
41	BG	92	VAL
41	BG	98	ARG
41	BG	135	LEU
41	BG	140	ILE
41	BG	143	GLU
41	BG	145	THR
41	BG	147	ASP
41	BG	148	MET
41	BG	159	VAL
41	BG	161	THR
41	BG	166	ASP

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Mol	Chain	Res	Type
42	BH	15	VAL
42	BH	42	ARG
42	BH	44	VAL
42	BH	45	VAL
42	BH	46	GLU
42	BH	49	VAL
42	BH	53	GLU
42	BH	54	ARG
42	BH	71	LEU
42	BH	83	TYR
42	BH	84	SER
42	BH	85	LYS
42	BH	89	ILE
42	BH	94	TYR
42	BH	104	GLU
42	BH	105	LEU
42	BH	111	HIS
42	BH	117	PRO
42	BH	125	VAL
42	BH	136	ILE
42	BH	143	GLN
42	BH	155	SER
42	BH	158	HIS
42	BH	169	VAL
42	BH	171	LEU
43	BK	2	LYS
43	BK	3	LYS
43	BK	5	VAL
43	BK	29	GLN
43	BK	30	HIS
43	BK	34	ILE
43	BK	38	VAL
43	BK	48	MET
43	BK	57	ILE
43	BK	59	ILE
43	BK	65	PHE
43	BK	70	LYS
43	BK	77	LEU
43	BK	79	ARG
43	BK	86	LYS
43	BK	105	LEU
44	BL	58	LEU

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Mol	Chain	Res	Type
44	BL	65	LYS
44	BL	82	GLU
44	BL	107	LYS
44	BL	120	LYS
45	BN	1	MET
45	BN	4	TYR
45	BN	21	LYS
45	BN	23	LEU
45	BN	26	LEU
45	BN	39	ARG
45	BN	41	ASP
45	BN	45	ASN
45	BN	48	MET
45	BN	56	ASN
45	BN	63	THR
45	BN	65	LYS
45	BN	78	TYR
45	BN	87	LEU
45	BN	90	MET
45	BN	93	THR
45	BN	96	GLU
45	BN	101	HIS
45	BN	109	LYS
45	BN	120	LEU
45	BN	123	TYR
46	BO	8	LEU
46	BO	23	ARG
46	BO	38	VAL
46	BO	40	VAL
46	BO	48	PRO
46	BO	49	ARG
46	BO	52	VAL
46	BO	57	VAL
46	BO	66	LYS
46	BO	69	ILE
46	BO	87	ILE
46	BO	97	ARG
46	BO	98	VAL
46	BO	114	ILE
46	BO	117	LEU
47	BP	7	ARG
47	BP	13	ASN

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Mol	Chain	Res	Type
47	BP	16	ARG
47	BP	18	ARG
47	BP	39	LYS
47	BP	40	SER
47	BP	41	ARG
47	BP	42	SER
47	BP	45	LEU
47	BP	55	ARG
47	BP	57	THR
47	BP	59	LEU
47	BP	60	MET
47	BP	61	ARG
47	BP	62	LEU
47	BP	70	GLN
47	BP	84	ASN
47	BP	85	LEU
47	BP	86	LYS
47	BP	105	LEU
47	BP	112	LEU
47	BP	114	ILE
47	BP	123	LEU
47	BP	125	VAL
47	BP	136	GLU
47	BP	149	GLU
48	BQ	17	LEU
48	BQ	29	PHE
48	BQ	45	GLN
48	BQ	46	GLN
48	BQ	56	ARG
48	BQ	76	LYS
48	BQ	79	LEU
48	BQ	81	VAL
48	BQ	94	VAL
48	BQ	97	VAL
48	BQ	102	VAL
48	BQ	104	PHE
48	BQ	106	VAL
48	BQ	110	THR
48	BQ	134	ARG
48	BQ	135	ASP
48	BQ	137	TYR
48	BQ	139	GLU

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Mol	Chain	Res	Type
49	BR	4	LEU
49	BR	8	ARG
49	BR	27	SER
49	BR	30	THR
49	BR	54	LEU
49	BR	65	LEU
49	BR	71	GLN
49	BR	74	LYS
49	BR	75	LEU
49	BR	94	TYR
49	BR	97	VAL
49	BR	99	LYS
49	BR	100	LEU
49	BR	118	GLU
50	BS	11	LYS
50	BS	12	PHE
50	BS	25	ARG
50	BS	26	LEU
50	BS	35	ILE
50	BS	39	ILE
50	BS	63	THR
50	BS	67	ARG
50	BS	92	TYR
50	BS	97	ARG
50	BS	106	ARG
51	BT	1	MET
51	BT	6	LEU
51	BT	13	ARG
51	BT	24	PRO
51	BT	32	TYR
51	BT	38	ASN
51	BT	46	GLU
51	BT	49	VAL
51	BT	58	ASN
51	BT	62	THR
51	BT	65	LYS
51	BT	66	VAL
51	BT	78	LEU
51	BT	81	PRO
51	BT	82	LEU
51	BT	90	GLN
51	BT	93	ARG

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Mol	Chain	Res	Type
51	BT	96	ARG
51	BT	100	TYR
51	BT	108	ARG
51	BT	113	LYS
51	BT	115	ARG
51	BT	125	ARG
51	BT	128	GLU
51	BT	129	ARG
52	BU	20	LEU
52	BU	34	LYS
52	BU	74	LEU
52	BU	83	LEU
52	BU	92	ARG
52	BU	101	ARG
52	BU	108	GLU
52	BU	112	ARG
53	BV	1	MET
53	BV	10	LYS
53	BV	18	LEU
53	BV	19	LYS
53	BV	21	ARG
53	BV	37	VAL
53	BV	39	LEU
53	BV	51	VAL
53	BV	62	LEU
53	BV	72	VAL
53	BV	79	VAL
53	BV	89	GLN
53	BV	95	LEU
53	BV	98	GLU
53	BV	99	ILE
54	BW	11	ARG
54	BW	36	LEU
54	BW	40	ASN
54	BW	51	LEU
54	BW	52	GLU
54	BW	61	ASN
54	BW	67	ASP
54	BW	70	TYR
54	BW	76	VAL
54	BW	88	ARG
54	BW	98	LYS

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Mol	Chain	Res	Type
54	BW	106	ILE
54	BW	107	LEU
55	BX	3	THR
55	BX	7	VAL
55	BX	27	THR
55	BX	28	PHE
55	BX	38	GLU
55	BX	51	VAL
55	BX	56	THR
55	BX	57	LEU
55	BX	59	VAL
55	BX	68	ARG
55	BX	70	LEU
55	BX	80	ILE
55	BX	83	VAL
56	BY	7	VAL
56	BY	9	LYS
56	BY	29	GLU
56	BY	31	LEU
56	BY	32	PRO
56	BY	51	VAL
56	BY	53	PRO
56	BY	54	LYS
56	BY	55	TYR
56	BY	62	GLU
56	BY	66	PRO
56	BY	77	PRO
56	BY	79	CYS
56	BY	90	LEU
56	BY	102	CYS
57	BZ	5	LEU
57	BZ	6	LYS
57	BZ	18	LEU
57	BZ	24	LEU
57	BZ	28	MET
57	BZ	29	TYR
57	BZ	30	ASN
57	BZ	31	ARG
57	BZ	34	ASN
57	BZ	55	HIS
57	BZ	63	ASP
57	BZ	68	PRO

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Mol	Chain	Res	Type
57	BZ	78	LYS
57	BZ	83	PRO
57	BZ	86	VAL
57	BZ	87	ASP
57	BZ	92	SER
57	BZ	100	VAL
57	BZ	107	THR
57	BZ	123	ASP
57	BZ	127	LYS
57	BZ	140	ASP
57	BZ	146	ILE
57	BZ	150	LEU
57	BZ	151	HIS
57	BZ	163	LEU
57	BZ	166	SER
57	BZ	171	ILE
57	BZ	175	VAL
57	BZ	186	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (189) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	19	HIS
2	AB	40	HIS
2	AB	78	GLN
2	AB	94	ASN
2	AB	95	GLN
2	AB	110	GLN
2	AB	113	HIS
2	AB	146	GLN
2	AB	204	ASN
3	AC	3	ASN
3	AC	28	GLN
3	AC	98	ASN
3	AC	162	GLN
3	AC	170	GLN
3	AC	176	HIS
3	AC	181	ASN
4	AD	42	GLN
4	AD	62	GLN
4	AD	74	GLN
4	AD	77	ASN

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Mol	Chain	Res	Type
4	AD	119	GLN
4	AD	129	ASN
5	AE	20	GLN
5	AE	72	GLN
5	AE	73	ASN
6	AF	18	GLN
6	AF	27	GLN
6	AF	32	ASN
6	AF	57	GLN
6	AF	73	ASN
6	AF	100	ASN
7	AG	13	GLN
7	AG	68	ASN
7	AG	84	ASN
7	AG	96	GLN
7	AG	106	GLN
7	AG	122	HIS
9	AI	3	GLN
9	AI	29	ASN
9	AI	58	HIS
9	AI	87	GLN
9	AI	124	GLN
10	AJ	56	HIS
10	AJ	68	HIS
10	AJ	76	ASN
10	AJ	84	GLN
11	AK	22	HIS
11	AK	99	GLN
11	AK	116	HIS
12	AL	9	GLN
12	AL	49	ASN
12	AL	75	HIS
12	AL	99	HIS
13	AM	12	ASN
14	AN	49	HIS
15	AO	13	GLN
15	AO	37	ASN
15	AO	62	GLN
16	AP	13	HIS
16	AP	76	GLN
17	AQ	16	GLN
19	AS	14	HIS

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Mol	Chain	Res	Type
19	AS	47	HIS
19	AS	69	HIS
20	AT	18	GLN
20	AT	26	ASN
20	AT	42	GLN
20	AT	45	GLN
20	AT	75	ASN
20	AT	90	GLN
24	AY	14	ASN
24	AY	124	GLN
24	AY	137	ASN
24	AY	165	GLN
24	AY	190	ASN
24	AY	208	GLN
24	AY	226	ASN
24	AY	270	GLN
24	AY	343	ASN
24	AY	421	GLN
24	AY	443	HIS
24	AY	475	ASN
24	AY	527	ASN
24	AY	543	GLN
24	AY	573	HIS
24	AY	625	ASN
24	AY	630	GLN
24	AY	641	GLN
25	B0	12	ASN
25	B0	70	GLN
26	B1	45	ASN
26	B1	56	GLN
27	B2	9	GLN
27	B2	38	GLN
27	B2	47	ASN
27	B2	56	GLN
28	B3	19	GLN
29	B4	20	ASN
30	B5	43	HIS
31	B6	20	ASN
31	B6	26	ASN
31	B6	32	ASN
31	B6	49	HIS
32	B7	8	ASN

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Mol	Chain	Res	Type
32	B7	36	GLN
33	B8	31	HIS
33	B8	33	ASN
33	B8	43	GLN
34	B9	29	ASN
37	BC	18	ASN
37	BC	58	ASN
37	BC	67	HIS
37	BC	149	ASN
37	BC	189	ASN
38	BD	58	HIS
38	BD	112	GLN
38	BD	115	GLN
38	BD	116	GLN
38	BD	126	GLN
38	BD	164	GLN
38	BD	166	GLN
38	BD	198	ASN
38	BD	227	ASN
38	BD	253	GLN
39	BE	48	GLN
39	BE	54	GLN
39	BE	55	ASN
39	BE	129	HIS
39	BE	143	ASN
39	BE	169	ASN
39	BE	180	ASN
39	BE	192	ASN
40	BF	69	HIS
40	BF	75	HIS
40	BF	133	ASN
40	BF	169	ASN
40	BF	204	ASN
41	BG	27	ASN
41	BG	40	ASN
42	BH	65	HIS
42	BH	147	ASN
42	BH	158	HIS
43	BK	29	GLN
43	BK	30	HIS
43	BK	47	ASN
43	BK	89	HIS

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Mol	Chain	Res	Type
45	BN	45	ASN
45	BN	56	ASN
46	BO	5	GLN
46	BO	82	ASN
47	BP	9	ASN
47	BP	13	ASN
47	BP	27	HIS
47	BP	84	ASN
47	BP	128	HIS
48	BQ	12	GLN
48	BQ	13	GLN
49	BR	3	HIS
49	BR	23	ASN
49	BR	50	HIS
49	BR	61	HIS
50	BS	16	ASN
50	BS	34	HIS
50	BS	38	GLN
50	BS	95	HIS
51	BT	38	ASN
51	BT	43	GLN
51	BT	55	ASN
51	BT	58	ASN
51	BT	90	GLN
52	BU	14	HIS
52	BU	44	ASN
52	BU	49	HIS
52	BU	66	ASN
52	BU	72	HIS
52	BU	81	HIS
54	BW	34	ASN
54	BW	61	ASN
54	BW	62	HIS
54	BW	102	HIS
55	BX	55	ASN
55	BX	82	GLN
56	BY	6	HIS
56	BY	43	ASN
57	BZ	30	ASN
57	BZ	54	HIS
57	BZ	75	ASN
57	BZ	118	GLN

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Mol	Chain	Res	Type
57	BZ	121	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	280 (18%)	47 (3%)
22	AV	76/77 (98%)	17 (22%)	0
23	AX	10/11 (90%)	5 (50%)	0
35	BA	2900/2915 (99%)	635 (21%)	77 (2%)
36	BB	118/122 (96%)	27 (22%)	2 (1%)
All	All	4607/4647 (99%)	964 (20%)	126 (2%)

All (964) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	33	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	60	A
1	AA	61	G
1	AA	62	U
1	AA	81	U
1	AA	84	U
1	AA	88	A
1	AA	89	C
1	AA	90	U
1	AA	91	C
1	AA	97	G
1	AA	98	G
1	AA	101	A
1	AA	104	G
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	129	U
1	AA	129(A)	G

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Mol	Chain	Res	Type
1	AA	131	C
1	AA	144	G
1	AA	146	G
1	AA	147	G
1	AA	149	A
1	AA	160	A
1	AA	163	C
1	AA	181	G
1	AA	182	U
1	AA	189(F)	U
1	AA	189(G)	G
1	AA	189(H)	G
1	AA	195	A
1	AA	197	A
1	AA	198	G
1	AA	202	U
1	AA	203	U
1	AA	204	U
1	AA	216	G
1	AA	243	A
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	268	C
1	AA	279	A
1	AA	281	G
1	AA	289	G
1	AA	316	G
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	344	A
1	AA	345	C
1	AA	346	G
1	AA	350	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	366	C

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Mol	Chain	Res	Type
1	AA	367	U
1	AA	372	C
1	AA	397	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	422	C
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	435	C
1	AA	437	U
1	AA	439	A
1	AA	444	C
1	AA	452	A
1	AA	460	G
1	AA	461	A
1	AA	471	G
1	AA	480	U
1	AA	481	G
1	AA	484	G
1	AA	485	G
1	AA	496	A
1	AA	498	U
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	518	C
1	AA	527	G
1	AA	530	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	536	C
1	AA	547	A
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A

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Mol	Chain	Res	Type
1	AA	575	G
1	AA	576	G
1	AA	577	G
1	AA	588	G
1	AA	596	C
1	AA	631	G
1	AA	632	A
1	AA	650	G
1	AA	653	A
1	AA	665	A
1	AA	672	U
1	AA	673	G
1	AA	682	G
1	AA	683	G
1	AA	686	U
1	AA	687	A
1	AA	688	G
1	AA	704	A
1	AA	721	G
1	AA	722	A
1	AA	723	U
1	AA	724	G
1	AA	728	A
1	AA	731	G
1	AA	734	G
1	AA	744	C
1	AA	748	C
1	AA	755	G
1	AA	759	A
1	AA	761	G
1	AA	777	A
1	AA	793	U
1	AA	794	A
1	AA	812	C
1	AA	813	U
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

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Mol	Chain	Res	Type
1	AA	858	G
1	AA	859	A
1	AA	867	G
1	AA	895	G
1	AA	907	A
1	AA	914	A
1	AA	921	U
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	951	G
1	AA	960	U
1	AA	961	U
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	981	U
1	AA	982	U
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	997	U
1	AA	1003	G
1	AA	1004	A
1	AA	1005	A
1	AA	1027	C
1	AA	1030	C
1	AA	1030(B)	C
1	AA	1050	G
1	AA	1054	C
1	AA	1065	U
1	AA	1066	C
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A

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Mol	Chain	Res	Type
1	AA	1117	G
1	AA	1124	G
1	AA	1125	U
1	AA	1129	C
1	AA	1130	A
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1146	A
1	AA	1152	A
1	AA	1159	U
1	AA	1160	G
1	AA	1181	G
1	AA	1184	G
1	AA	1187	G
1	AA	1196	U
1	AA	1197	G
1	AA	1202	G
1	AA	1212	U
1	AA	1214	C
1	AA	1217	C
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1238	A
1	AA	1240	U
1	AA	1241	G
1	AA	1249	C
1	AA	1256	A
1	AA	1257	U
1	AA	1273	G
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1297	C
1	AA	1298	C
1	AA	1299	A
1	AA	1300	G

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Mol	Chain	Res	Type
1	AA	1301	U
1	AA	1302	U
1	AA	1317	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1335	C
1	AA	1336	C
1	AA	1346	A
1	AA	1348	U
1	AA	1354	C
1	AA	1363	C
1	AA	1364	U
1	AA	1365	G
1	AA	1379	G
1	AA	1394	A
1	AA	1397	C
1	AA	1398	A
1	AA	1404	C
1	AA	1419	G
1	AA	1434	A
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1443	G
1	AA	1445	C
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1490	C
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1499	A
1	AA	1503	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1529	G

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Mol	Chain	Res	Type
1	AA	1530	G
1	AA	1531	A
22	AV	4	G
22	AV	5	G
22	AV	8	U
22	AV	17	C
22	AV	17(A)	U
22	AV	18	G
22	AV	19	G
22	AV	20	U
22	AV	21	A
22	AV	36	U
22	AV	47	U
22	AV	48	C
22	AV	63	G
22	AV	71	C
22	AV	74	C
22	AV	75	C
22	AV	76	A
23	AX	12	A
23	AX	13	A
23	AX	14	A
23	AX	19	U
23	AX	21	C
35	BA	9	U
35	BA	18	C
35	BA	28	A
35	BA	35	G
35	BA	42	G
35	BA	43	A
35	BA	45	C
35	BA	49	A
35	BA	50	U
35	BA	61	G
35	BA	63	U
35	BA	69	C
35	BA	72	U
35	BA	75	G
35	BA	83	G
35	BA	84	A
35	BA	85	G
35	BA	88	G

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Mol	Chain	Res	Type
35	BA	90	U
35	BA	92	A
35	BA	94	C
35	BA	95	G
35	BA	100	G
35	BA	102	G
35	BA	106	C
35	BA	116	C
35	BA	118	A
35	BA	119	A
35	BA	121	G
35	BA	125	G
35	BA	129	C
35	BA	139(A)	G
35	BA	141	A
35	BA	142(A)	C
35	BA	155	U
35	BA	156	U
35	BA	157	U
35	BA	171	G
35	BA	174	C
35	BA	190	A
35	BA	191	A
35	BA	196	A
35	BA	199	A
35	BA	204	A
35	BA	205	G
35	BA	212	G
35	BA	215	G
35	BA	216	A
35	BA	221	A
35	BA	222	A
35	BA	227	A
35	BA	230	U
35	BA	233	A
35	BA	241	A
35	BA	248	G
35	BA	252	G
35	BA	261	G
35	BA	271(J)	C
35	BA	271(K)	U
35	BA	271(L)	U

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Mol	Chain	Res	Type
35	BA	271(O)	C
35	BA	271(Y)	U
35	BA	272	G
35	BA	272(A)	U
35	BA	272(B)	G
35	BA	272(G)	C
35	BA	272(H)	C
35	BA	272(I)	U
35	BA	274	G
35	BA	276	A
35	BA	280	C
35	BA	283	A
35	BA	286	C
35	BA	287	C
35	BA	299	A
35	BA	310	A
35	BA	311	A
35	BA	329	G
35	BA	330	A
35	BA	332	A
35	BA	333	G
35	BA	336	C
35	BA	345	A
35	BA	346	A
35	BA	352	G
35	BA	353	G
35	BA	362	U
35	BA	363	G
35	BA	363(F)	A
35	BA	364	C
35	BA	365	C
35	BA	370	G
35	BA	371	A
35	BA	372	G
35	BA	386	G
35	BA	396	G
35	BA	405	U
35	BA	406	G
35	BA	407	G
35	BA	411	G
35	BA	412	A
35	BA	428	A

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Mol	Chain	Res	Type
35	BA	444	C
35	BA	448	U
35	BA	449	A
35	BA	451	C
35	BA	455	C
35	BA	456	C
35	BA	458	G
35	BA	475	U
35	BA	480	A
35	BA	481	G
35	BA	504	U
35	BA	505	A
35	BA	508	G
35	BA	509	C
35	BA	526	A
35	BA	527	C
35	BA	528	A
35	BA	529	A
35	BA	530	G
35	BA	531	C
35	BA	532	A
35	BA	533	G
35	BA	544	G
35	BA	548	A
35	BA	549	G
35	BA	552	G
35	BA	555	U
35	BA	556	G
35	BA	562	U
35	BA	563	G
35	BA	573	G
35	BA	575	A
35	BA	587	C
35	BA	591	C
35	BA	592	G
35	BA	599	G
35	BA	604	G
35	BA	607	U
35	BA	613	G
35	BA	614	U
35	BA	614(B)	G
35	BA	615	G

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Mol	Chain	Res	Type
35	BA	620	G
35	BA	622	G
35	BA	627	A
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
35	BA	654(M)	C
35	BA	654(T)	C
35	BA	655	A
35	BA	675	A
35	BA	682	G
35	BA	686	G
35	BA	695	G
35	BA	699	A
35	BA	722	A
35	BA	727	A
35	BA	729	G
35	BA	730	C
35	BA	740	U
35	BA	745	G
35	BA	746	A
35	BA	753	C
35	BA	764	A
35	BA	765	G
35	BA	775	G
35	BA	776	G
35	BA	782	A
35	BA	784	A
35	BA	785	G
35	BA	788	A
35	BA	789	A
35	BA	790	C
35	BA	791	C
35	BA	792	G
35	BA	793	A
35	BA	794	G

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Mol	Chain	Res	Type
35	BA	800	A
35	BA	805	G
35	BA	811	U
35	BA	812	C
35	BA	827	U
35	BA	828	U
35	BA	830	G
35	BA	840	C
35	BA	841	A
35	BA	845	G
35	BA	846	C
35	BA	859	G
35	BA	865	C
35	BA	866	A
35	BA	878	A
35	BA	889	C
35	BA	896	A
35	BA	897	C
35	BA	900	A
35	BA	904	C
35	BA	910	A
35	BA	926	A
35	BA	932	G
35	BA	940	G
35	BA	941	A
35	BA	945	A
35	BA	946	G
35	BA	948	G
35	BA	959	A
35	BA	961	C
35	BA	962	G
35	BA	969	U
35	BA	974	G
35	BA	975	C
35	BA	980	A
35	BA	983	A
35	BA	985	C
35	BA	989	G
35	BA	990	A
35	BA	991	C
35	BA	996	A
35	BA	1005	C

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Mol	Chain	Res	Type
35	BA	1011	G
35	BA	1012	U
35	BA	1013	C
35	BA	1021	A
35	BA	1022	G
35	BA	1023	U
35	BA	1026	U
35	BA	1027	A
35	BA	1033	U
35	BA	1034	G
35	BA	1036	G
35	BA	1039	G
35	BA	1044	G
35	BA	1045	A
35	BA	1046	A
35	BA	1047	G
35	BA	1049	C
35	BA	1052	C
35	BA	1053	C
35	BA	1054	A
35	BA	1058	G
35	BA	1060	U
35	BA	1062	G
35	BA	1067	A
35	BA	1068	G
35	BA	1070	A
35	BA	1073	A
35	BA	1076	C
35	BA	1088	A
35	BA	1090	U
35	BA	1109	C
35	BA	1111	A
35	BA	1112	G
35	BA	1114	G
35	BA	1115	G
35	BA	1122	G
35	BA	1126	A
35	BA	1129	A
35	BA	1135	C
35	BA	1136	G
35	BA	1141	U
35	BA	1142(A)	A

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Mol	Chain	Res	Type
35	BA	1143	A
35	BA	1146	C
35	BA	1152	C
35	BA	1155	A
35	BA	1157	G
35	BA	1158	C
35	BA	1159	U
35	BA	1170	G
35	BA	1173	G
35	BA	1174	A
35	BA	1175	U
35	BA	1176	G
35	BA	1177	A
35	BA	1204	A
35	BA	1210	A
35	BA	1211	U
35	BA	1212	G
35	BA	1213	A
35	BA	1220	A
35	BA	1221	C
35	BA	1224	C
35	BA	1238	G
35	BA	1247	A
35	BA	1248	G
35	BA	1250	G
35	BA	1251	C
35	BA	1252	G
35	BA	1255	U
35	BA	1256	G
35	BA	1266	G
35	BA	1271	G
35	BA	1272	A
35	BA	1273	U
35	BA	1287	A
35	BA	1300	U
35	BA	1302	A
35	BA	1314	C
35	BA	1321	A
35	BA	1326	U
35	BA	1329	U
35	BA	1330	C
35	BA	1332	G

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Mol	Chain	Res	Type
35	BA	1342	A
35	BA	1345	C
35	BA	1349	A
35	BA	1359	A
35	BA	1365	A
35	BA	1368	G
35	BA	1379	A
35	BA	1380	G
35	BA	1384	A
35	BA	1385	G
35	BA	1386	C
35	BA	1396	U
35	BA	1403	C
35	BA	1406	U
35	BA	1411	C
35	BA	1416	G
35	BA	1421	G
35	BA	1427	A
35	BA	1428	C
35	BA	1434	A
35	BA	1435	G
35	BA	1445	A
35	BA	1445(A)	C
35	BA	1453	U
35	BA	1455	G
35	BA	1459	G
35	BA	1460	A
35	BA	1461	G
35	BA	1467	C
35	BA	1476	C
35	BA	1477	A
35	BA	1478	G
35	BA	1482	G
35	BA	1484	G
35	BA	1485	G
35	BA	1488	G
35	BA	1490	A
35	BA	1491	G
35	BA	1493	C
35	BA	1494	A
35	BA	1495	A
35	BA	1496	A

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Mol	Chain	Res	Type
35	BA	1497	U
35	BA	1505	C
35	BA	1509	C
35	BA	1509(A)	A
35	BA	1517	G
35	BA	1528(A)	A
35	BA	1537	G
35	BA	1540	U
35	BA	1541	G
35	BA	1542	A
35	BA	1544	A
35	BA	1547	C
35	BA	1553	A
35	BA	1554	A
35	BA	1558	A
35	BA	1559	G
35	BA	1569	A
35	BA	1578	U
35	BA	1579	A
35	BA	1584	C
35	BA	1586	A
35	BA	1588	C
35	BA	1603	A
35	BA	1608	A
35	BA	1609	A
35	BA	1610	A
35	BA	1616	A
35	BA	1618	A
35	BA	1634	A
35	BA	1640	C
35	BA	1644	C
35	BA	1648	C
35	BA	1668	A
35	BA	1674	G
35	BA	1678	G
35	BA	1698	A
35	BA	1699	G
35	BA	1718	G
35	BA	1722	A
35	BA	1739	U
35	BA	1740	G
35	BA	1744	C

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Mol	Chain	Res	Type
35	BA	1748	G
35	BA	1756	G
35	BA	1759	A
35	BA	1763	G
35	BA	1764	G
35	BA	1773	A
35	BA	1776	G
35	BA	1780	A
35	BA	1781	C
35	BA	1784	A
35	BA	1785	A
35	BA	1787	A
35	BA	1791	A
35	BA	1799	G
35	BA	1800	C
35	BA	1801	G
35	BA	1815	A
35	BA	1816	G
35	BA	1820	U
35	BA	1821	A
35	BA	1829	A
35	BA	1839	G
35	BA	1846	G
35	BA	1847	A
35	BA	1850	G
35	BA	1858	G
35	BA	1862	G
35	BA	1866	C
35	BA	1877	A
35	BA	1878	G
35	BA	1885	A
35	BA	1888	G
35	BA	1889	A
35	BA	1900	A
35	BA	1906	G
35	BA	1912	A
35	BA	1929	G
35	BA	1930	G
35	BA	1931	U
35	BA	1937	A
35	BA	1938	A
35	BA	1943	U

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Mol	Chain	Res	Type
35	BA	1944	U
35	BA	1945	G
35	BA	1948	G
35	BA	1955	U
35	BA	1960	A
35	BA	1963	U
35	BA	1964	G
35	BA	1967	C
35	BA	1969	A
35	BA	1970	A
35	BA	1971	A
35	BA	1972	A
35	BA	1993	U
35	BA	1997	G
35	BA	2004	G
35	BA	2021	C
35	BA	2022	U
35	BA	2023	G
35	BA	2031	A
35	BA	2033	A
35	BA	2034	U
35	BA	2043	C
35	BA	2055	C
35	BA	2056	G
35	BA	2060	A
35	BA	2061	G
35	BA	2062	A
35	BA	2065	C
35	BA	2069	G
35	BA	2076	U
35	BA	2100	G
35	BA	2103	C
35	BA	2104	G
35	BA	2112	G
35	BA	2116	G
35	BA	2118	U
35	BA	2127	G
35	BA	2131	G
35	BA	2132	U
35	BA	2133	G
35	BA	2134	A
35	BA	2147	G

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Mol	Chain	Res	Type
35	BA	2157	G
35	BA	2158	A
35	BA	2159	G
35	BA	2163	C
35	BA	2172	U
35	BA	2173	A
35	BA	2185	C
35	BA	2187	G
35	BA	2189	U
35	BA	2190	G
35	BA	2192	G
35	BA	2193	G
35	BA	2198	A
35	BA	2199	A
35	BA	2200	C
35	BA	2202	C
35	BA	2203	U
35	BA	2205	C
35	BA	2206	G
35	BA	2207	G
35	BA	2208	A
35	BA	2219	G
35	BA	2225	A
35	BA	2226	C
35	BA	2238	G
35	BA	2239	G
35	BA	2263	C
35	BA	2273	A
35	BA	2283	C
35	BA	2286	A
35	BA	2288	A
35	BA	2296	U
35	BA	2297	C
35	BA	2302	G
35	BA	2305	A
35	BA	2307	G
35	BA	2308	G
35	BA	2309	A
35	BA	2313	C
35	BA	2319	G
35	BA	2320	A
35	BA	2325	G

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Mol	Chain	Res	Type
35	BA	2334	G
35	BA	2336	A
35	BA	2345	G
35	BA	2346	A
35	BA	2347	C
35	BA	2348	U
35	BA	2349	G
35	BA	2350	C
35	BA	2383	G
35	BA	2385	C
35	BA	2402	C
35	BA	2406	U
35	BA	2423	U
35	BA	2424	C
35	BA	2425	A
35	BA	2426	A
35	BA	2427	C
35	BA	2428	G
35	BA	2429	G
35	BA	2430	A
35	BA	2431	U
35	BA	2434	A
35	BA	2435	A
35	BA	2439	A
35	BA	2441	C
35	BA	2448	A
35	BA	2461	C
35	BA	2465	C
35	BA	2469	A
35	BA	2470	G
35	BA	2473	U
35	BA	2474	C
35	BA	2475	C
35	BA	2476	A
35	BA	2477	C
35	BA	2478	A
35	BA	2482	G
35	BA	2484	G
35	BA	2491	U
35	BA	2502	G
35	BA	2503	A
35	BA	2505	G

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Mol	Chain	Res	Type
35	BA	2513	G
35	BA	2518	A
35	BA	2519	U
35	BA	2520	C
35	BA	2524	G
35	BA	2529	G
35	BA	2554	U
35	BA	2566	A
35	BA	2567	G
35	BA	2572	A
35	BA	2577	A
35	BA	2585	U
35	BA	2586	C
35	BA	2602	A
35	BA	2609	U
35	BA	2610	C
35	BA	2611	U
35	BA	2612	C
35	BA	2615	U
35	BA	2630	G
35	BA	2646	C
35	BA	2655	G
35	BA	2657	A
35	BA	2658	C
35	BA	2670	A
35	BA	2673	G
35	BA	2682	U
35	BA	2690	C
35	BA	2691	C
35	BA	2703	C
35	BA	2706	G
35	BA	2712	U
35	BA	2712(A)	A
35	BA	2713	A
35	BA	2726	U
35	BA	2733	A
35	BA	2750	A
35	BA	2751	G
35	BA	2755	C
35	BA	2756	U
35	BA	2757	A
35	BA	2758	A

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Mol	Chain	Res	Type
35	BA	2762	G
35	BA	2763	G
35	BA	2764	A
35	BA	2765	A
35	BA	2778	A
35	BA	2779	U
35	BA	2780	G
35	BA	2790	A
35	BA	2791	C
35	BA	2796	U
35	BA	2799	C
35	BA	2801	A
35	BA	2802	G
35	BA	2803	C
35	BA	2808	U
35	BA	2820	A
35	BA	2821	A
35	BA	2832	U
35	BA	2833	G
35	BA	2834	G
35	BA	2836	U
35	BA	2849	U
35	BA	2850	A
35	BA	2872	G
35	BA	2879	C
35	BA	2880	C
35	BA	2892	A
35	BA	2894	G
35	BA	2895	U
36	BB	8	U
36	BB	12	C
36	BB	13	A
36	BB	15	A
36	BB	16	G
36	BB	22	U
36	BB	24	G
36	BB	25	A
36	BB	33	G
36	BB	35	U
36	BB	41	U
36	BB	42	C
36	BB	45	A

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Mol	Chain	Res	Type
36	BB	52	A
36	BB	53	A
36	BB	56	G
36	BB	67	G
36	BB	73	A
36	BB	81	G
36	BB	82	G
36	BB	88	C
36	BB	89	G
36	BB	90	A
36	BB	103	G
36	BB	104	U
36	BB	110	G
36	BB	113	G

All (126) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	30	U
1	AA	60	A
1	AA	115	G
1	AA	119	A
1	AA	203	U
1	AA	243	A
1	AA	244	U
1	AA	250	A
1	AA	266	G
1	AA	315	A
1	AA	328	C
1	AA	344	A
1	AA	353	A
1	AA	366	C
1	AA	428	G
1	AA	429	U
1	AA	438	G
1	AA	532	A
1	AA	533	A
1	AA	535	A
1	AA	560	U
1	AA	561	U
1	AA	575	G
1	AA	631	G

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Mol	Chain	Res	Type
1	AA	672	U
1	AA	703	G
1	AA	812	C
1	AA	913	A
1	AA	992	U
1	AA	1049	U
1	AA	1065	U
1	AA	1094	G
1	AA	1101	A
1	AA	1129	C
1	AA	1201	A
1	AA	1225	A
1	AA	1226	C
1	AA	1285	A
1	AA	1299	A
1	AA	1300	G
1	AA	1335	C
1	AA	1347	G
1	AA	1364	U
1	AA	1493	A
1	AA	1498	U
1	AA	1505	G
1	AA	1529	G
35	BA	27	G
35	BA	49	A
35	BA	74	A
35	BA	120	U
35	BA	128	C
35	BA	221	A
35	BA	226	G
35	BA	286	C
35	BA	329	G
35	BA	331	A
35	BA	332	A
35	BA	363(F)	A
35	BA	474	G
35	BA	503	A
35	BA	603	A
35	BA	614(A)	U
35	BA	614(C)	A
35	BA	728	G
35	BA	739	G

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Mol	Chain	Res	Type
35	BA	752	A
35	BA	764	A
35	BA	790	C
35	BA	945	A
35	BA	961	C
35	BA	1020	A
35	BA	1022	G
35	BA	1052	C
35	BA	1057	A
35	BA	1067	A
35	BA	1143	A
35	BA	1155	A
35	BA	1156	A
35	BA	1210	A
35	BA	1212	G
35	BA	1237	A
35	BA	1288	U
35	BA	1301	A
35	BA	1378	A
35	BA	1427	A
35	BA	1453	U
35	BA	1494	A
35	BA	1528	A
35	BA	1541	G
35	BA	1558	A
35	BA	1799	G
35	BA	1819	A
35	BA	1838	C
35	BA	1846	G
35	BA	1930	G
35	BA	1943	U
35	BA	1948	G
35	BA	1992	G
35	BA	2033	A
35	BA	2111	C
35	BA	2126	A
35	BA	2172	U
35	BA	2198	A
35	BA	2225	A
35	BA	2282	G
35	BA	2296	U
35	BA	2344	U

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Mol	Chain	Res	Type
35	BA	2345	G
35	BA	2422	A
35	BA	2425	A
35	BA	2428	G
35	BA	2481	G
35	BA	2689	U
35	BA	2690	C
35	BA	2756	U
35	BA	2762	G
35	BA	2778	A
35	BA	2779	U
35	BA	2799	C
35	BA	2801(A)	A
35	BA	2835	A
35	BA	2849	U
35	BA	2891	G
36	BB	25	A
36	BB	40	U

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

2 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
59	GDP	AY	702	-	29,30,30	1.34	5 (17%)	45,47,47	1.86	10 (22%)
58	FUA	AY	701	-	39,40,40	2.15	12 (30%)	50,64,64	1.91	11 (22%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
59	GDP	AY	702	-	-	2/16/32/32	0/3/3/3
58	FUA	AY	701	-	-	6/16/92/92	0/4/4/4

All (17) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	AY	701	FUA	C23-C22	-5.46	1.37	1.51
58	AY	701	FUA	C15-C14	-4.28	1.46	1.54
58	AY	701	FUA	C23-C24	-4.28	1.39	1.53
58	AY	701	FUA	C19-C10	-4.03	1.47	1.54
58	AY	701	FUA	C29-C22	3.92	1.53	1.47
58	AY	701	FUA	C24-C25	-3.84	1.38	1.50
58	AY	701	FUA	O2-C16	-3.28	1.39	1.45
58	AY	701	FUA	C14-C8	-3.07	1.53	1.59
59	AY	702	GDP	C4-N9	-2.99	1.30	1.38
59	AY	702	GDP	C8-N9	-2.83	1.31	1.37
59	AY	702	GDP	PB-O3B	-2.66	1.44	1.54
58	AY	701	FUA	C12-C11	-2.49	1.48	1.52
58	AY	701	FUA	O5-C29	-2.29	1.24	1.30
58	AY	701	FUA	C14-C13	-2.17	1.51	1.57
59	AY	702	GDP	PB-O2B	-2.15	1.46	1.54
59	AY	702	GDP	PA-O2A	-2.15	1.45	1.55
58	AY	701	FUA	O6-C3	-2.05	1.39	1.43

All (21) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
58	AY	701	FUA	C8-C9-C10	-6.33	109.63	116.42
59	AY	702	GDP	C2-N3-C4	4.80	120.56	112.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
59	AY	702	GDP	C5-C4-N3	-4.63	121.02	128.39
58	AY	701	FUA	C6-C5-C10	-4.58	106.16	111.66
58	AY	701	FUA	C24-C23-C22	4.30	121.88	112.72
59	AY	702	GDP	C4-C5-N7	-3.85	104.57	110.67
59	AY	702	GDP	C2-N1-C6	-3.67	118.46	125.11
58	AY	701	FUA	O6-C3-C2	-3.41	101.66	109.99
59	AY	702	GDP	C5-C4-N9	3.15	111.30	105.66
58	AY	701	FUA	C10-C5-C4	-3.09	109.45	113.20
59	AY	702	GDP	O4'-C4'-C3'	2.90	110.91	105.15
58	AY	701	FUA	C19-C10-C5	-2.63	107.64	111.18
59	AY	702	GDP	C6-C5-N7	2.49	134.82	130.29
58	AY	701	FUA	C7-C6-C5	-2.48	108.91	113.14
58	AY	701	FUA	C15-C14-C8	2.33	119.12	116.84
59	AY	702	GDP	C4'-O4'-C1'	-2.27	104.45	109.47
58	AY	701	FUA	O2-C31-C32	2.19	114.99	111.09
58	AY	701	FUA	O5-C29-O4	-2.15	118.77	123.90
58	AY	701	FUA	C20-C8-C7	2.13	111.33	107.83
59	AY	702	GDP	O2'-C2'-C3'	-2.08	105.16	111.82
59	AY	702	GDP	N2-C2-N1	2.07	121.14	116.76

There are no chirality outliers.

All (8) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
58	AY	701	FUA	C13-C17-C22-C23
58	AY	701	FUA	C13-C17-C22-C29
59	AY	702	GDP	C5'-O5'-PA-O3A
59	AY	702	GDP	C5'-O5'-PA-O1A
58	AY	701	FUA	C32-C31-O2-C16
58	AY	701	FUA	O3-C31-O2-C16
58	AY	701	FUA	C29-C22-C23-C24
58	AY	701	FUA	C17-C22-C23-C24

There are no ring outliers.

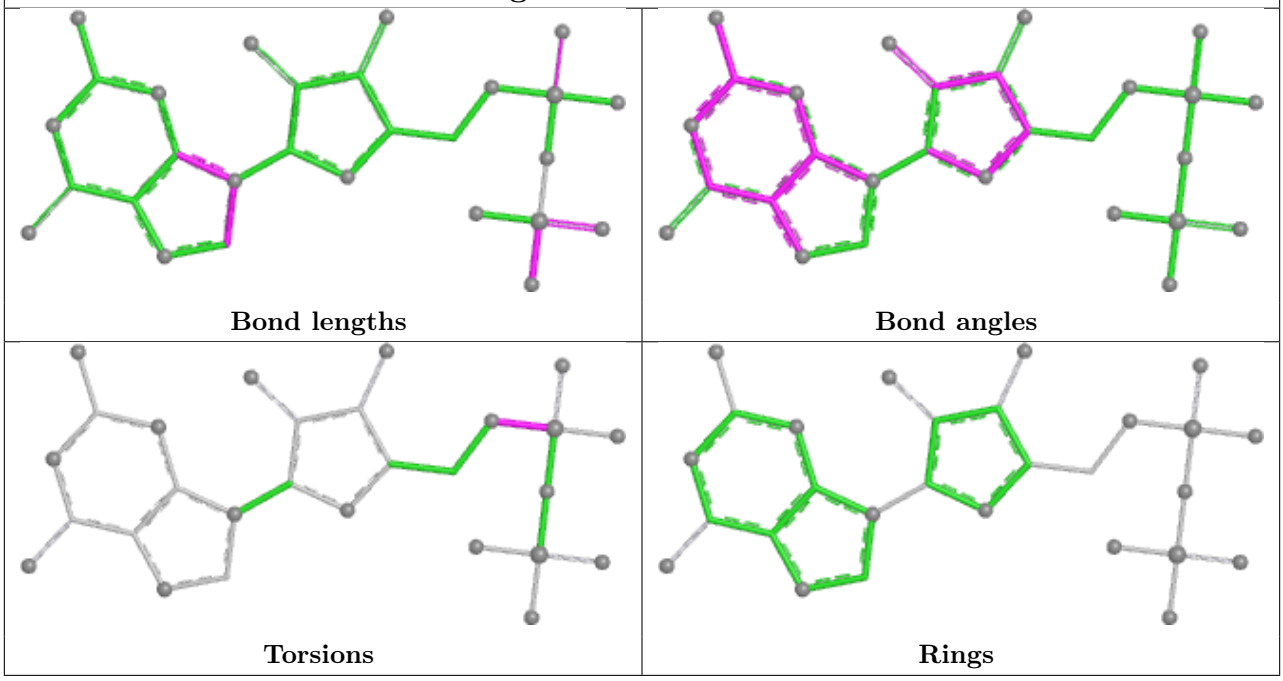
2 monomers are involved in 19 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
59	AY	702	GDP	7	0
58	AY	701	FUA	12	0

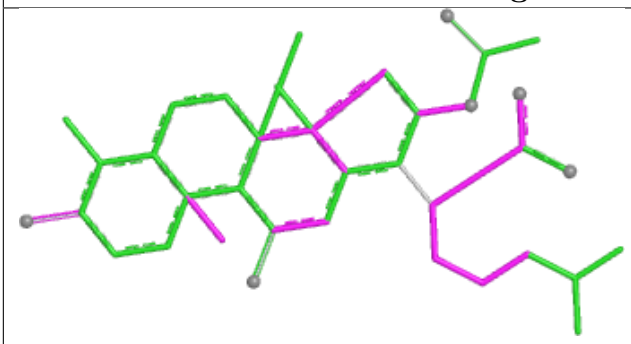
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths,

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.

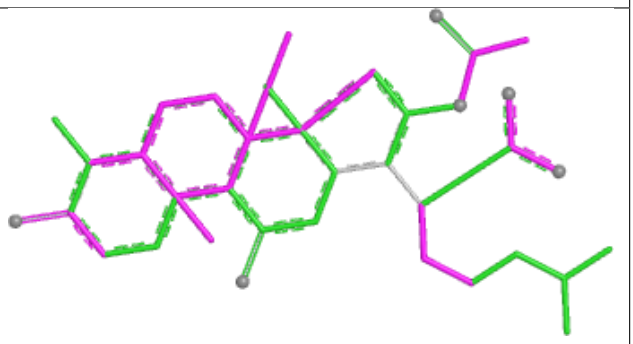
Ligand GDP AY 702



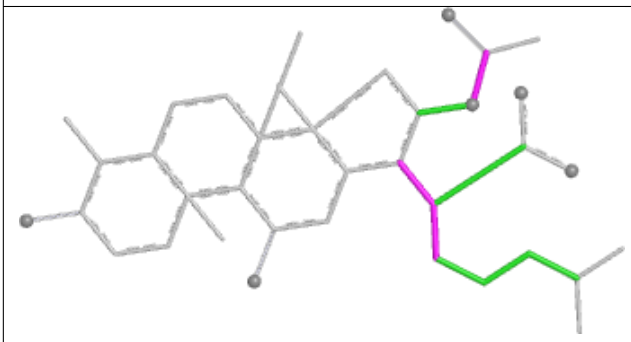
Ligand FUA AY 701



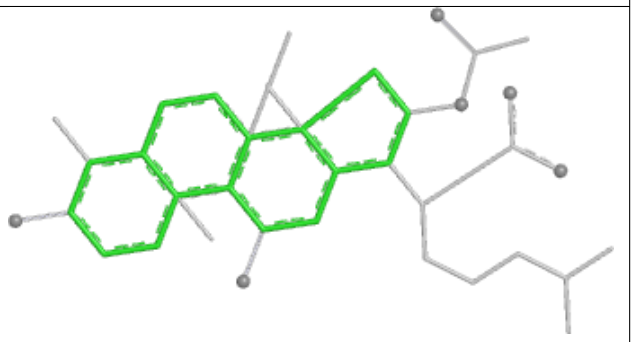
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

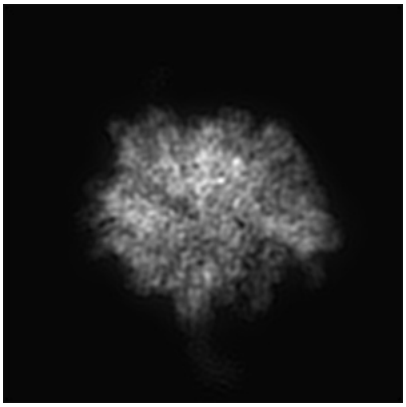
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-1798. These allow visual inspection of the internal detail of the map and identification of artifacts.

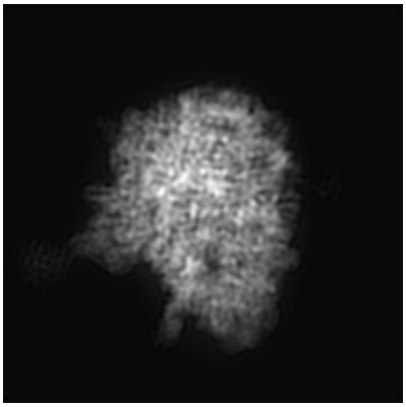
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

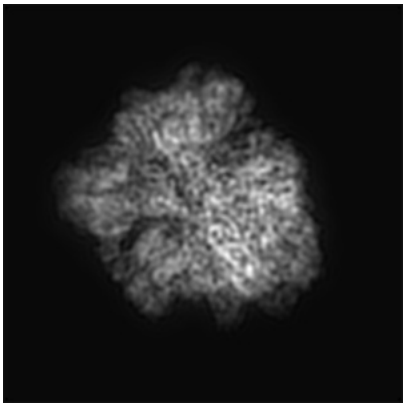
6.1.1 Primary map



X



Y

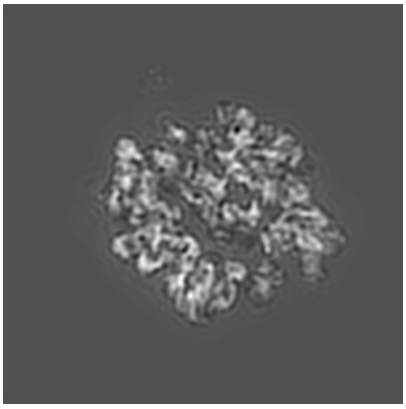


Z

The images above show the map projected in three orthogonal directions.

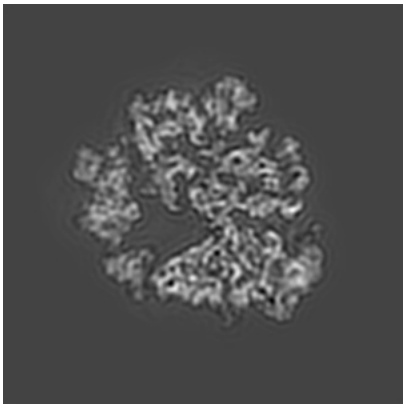
6.2 Central slices

6.2.1 Primary map



X Index: 150

Y Index: 150



Z Index: 150

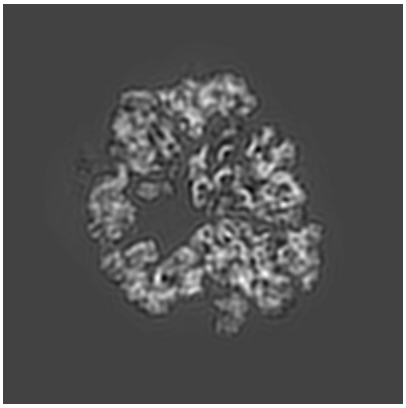
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

6.3.1 Primary map

X Index: 162

Y Index: 152

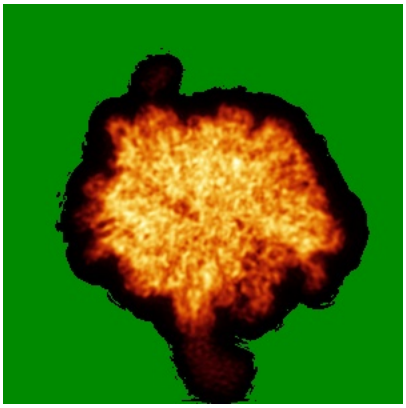


Z Index: 142

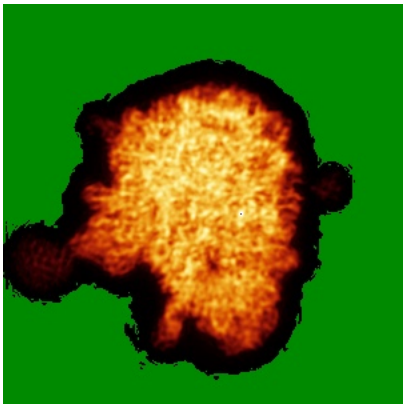
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

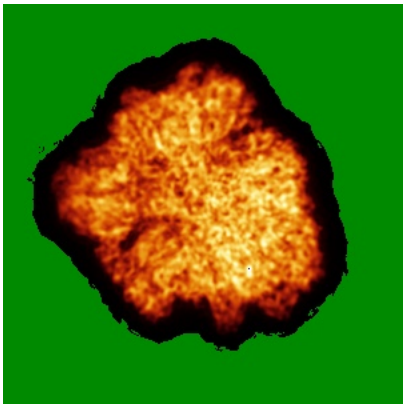
6.4.1 Primary map



X



Y

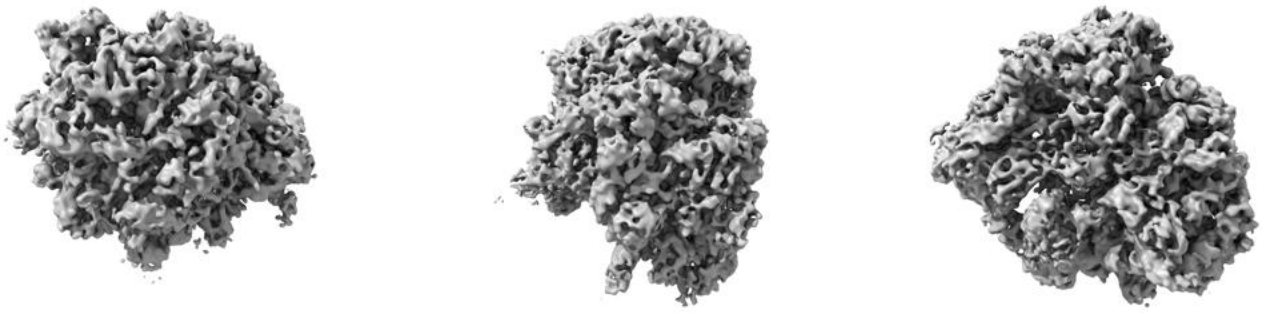


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 3000.0. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

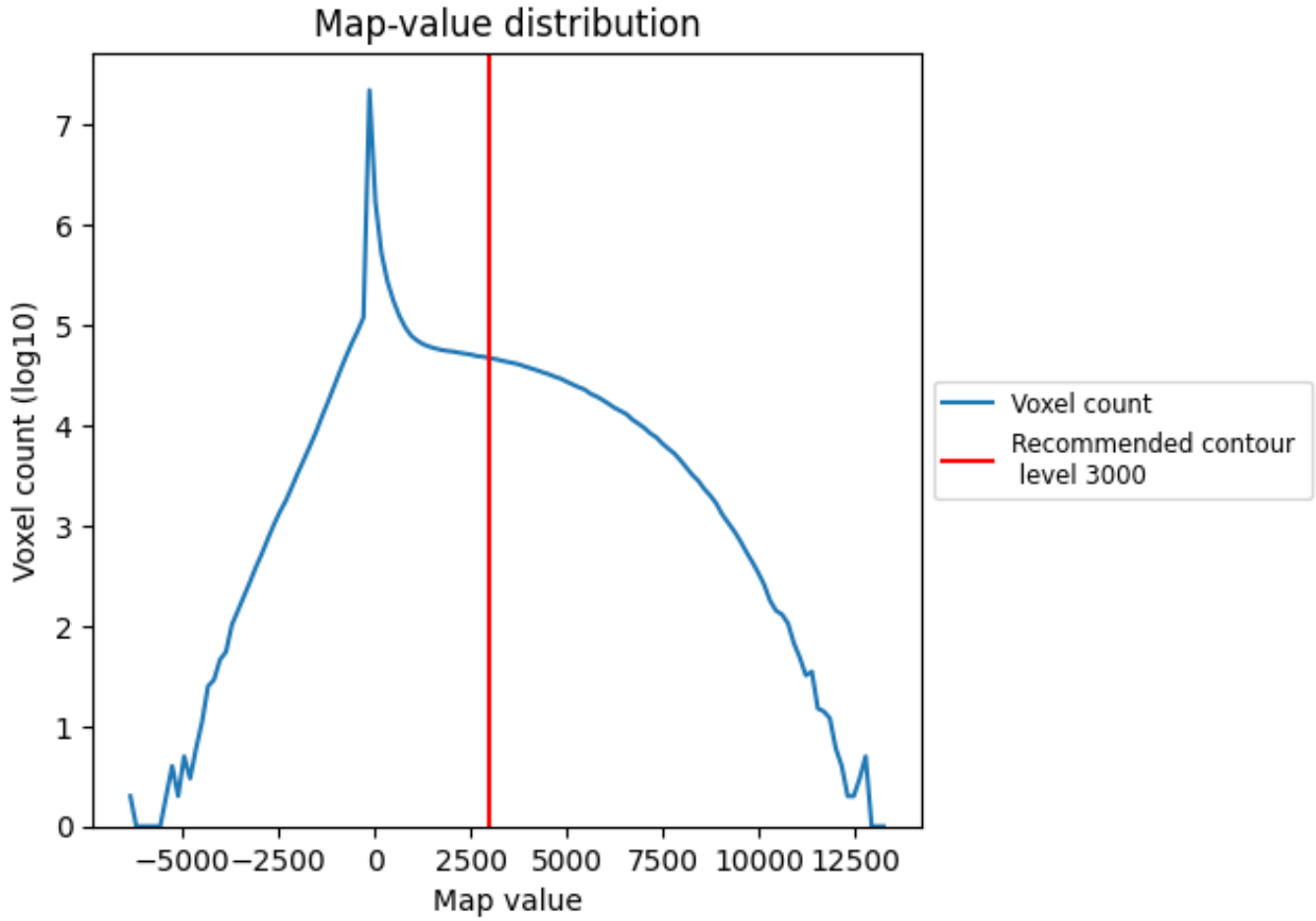
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

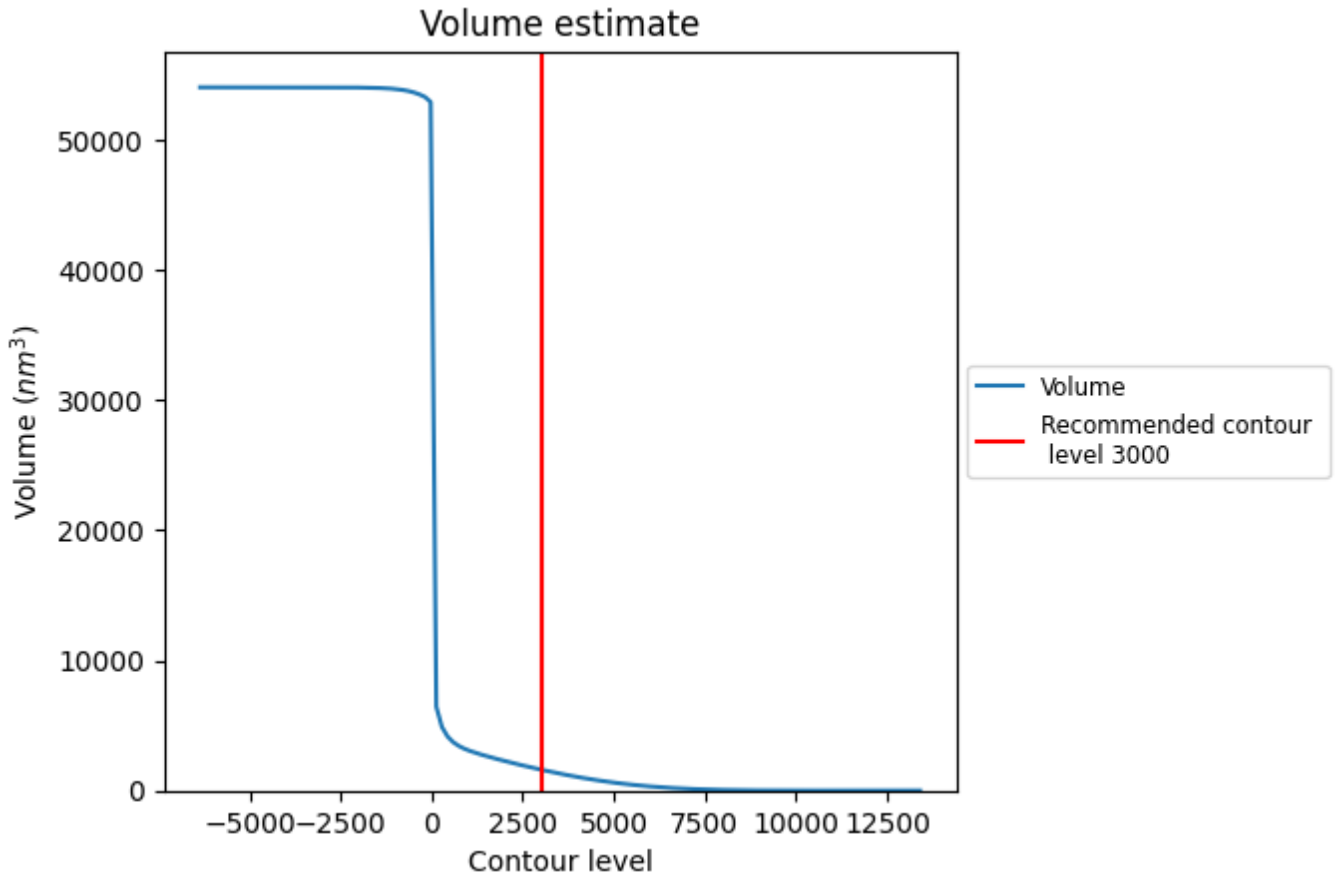
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

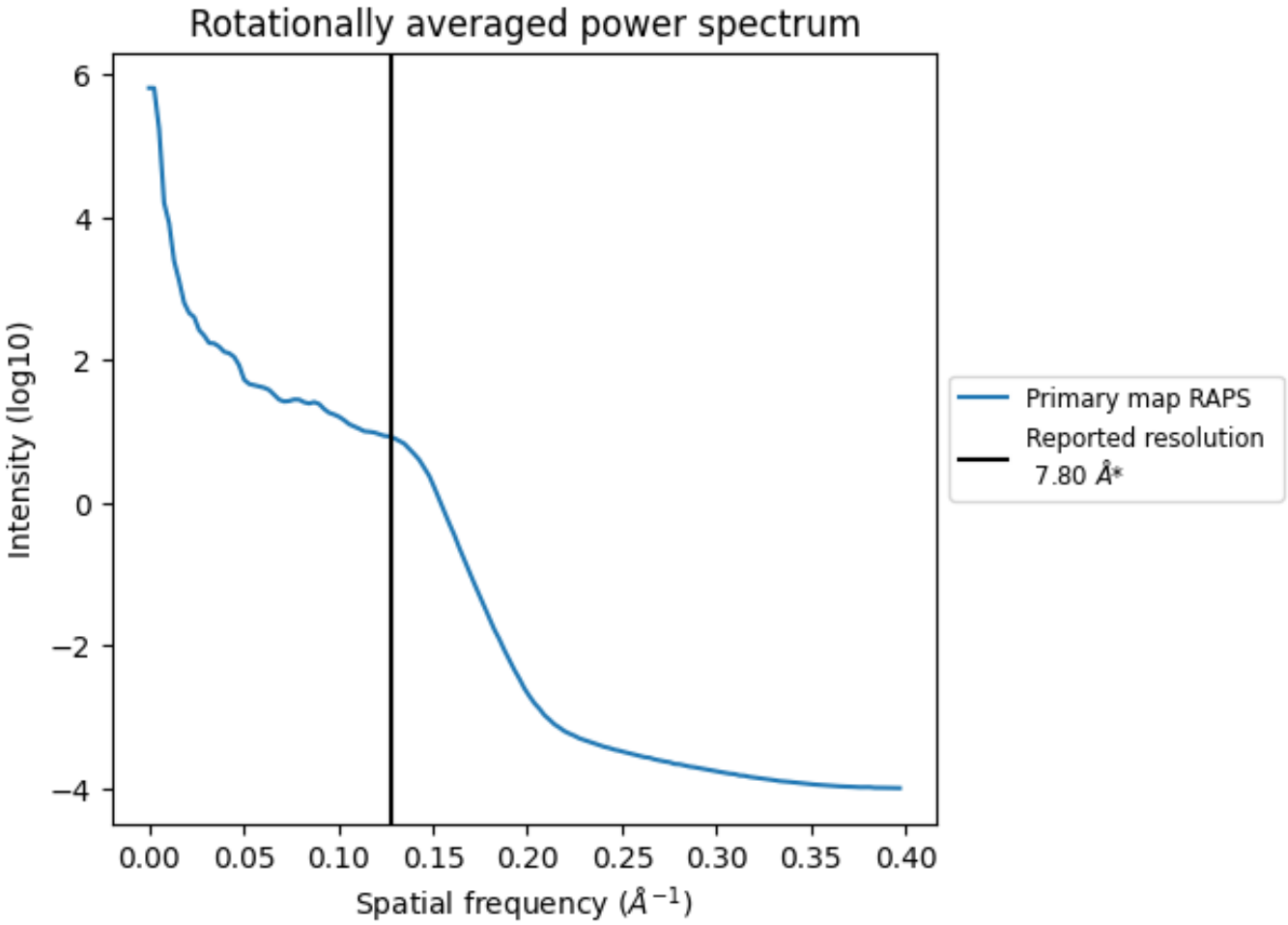
7.2 Volume estimate



The volume at the recommended contour level is 1609 nm^3; this corresponds to an approximate mass of 1453 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.128 Å^{-1}

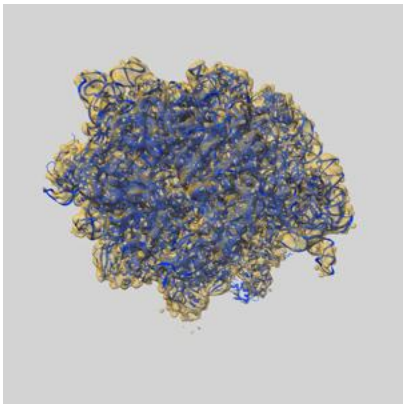
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

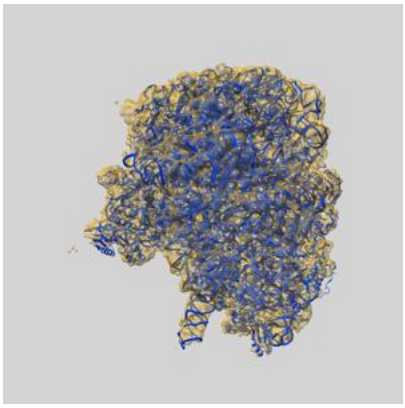
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-1798 and PDB model 4V5M. Per-residue inclusion information can be found in section 3 on page 16.

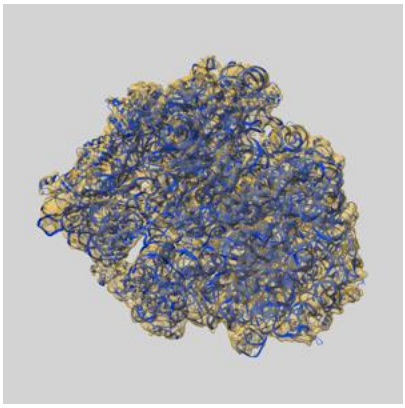
9.1 Map-model overlay



X



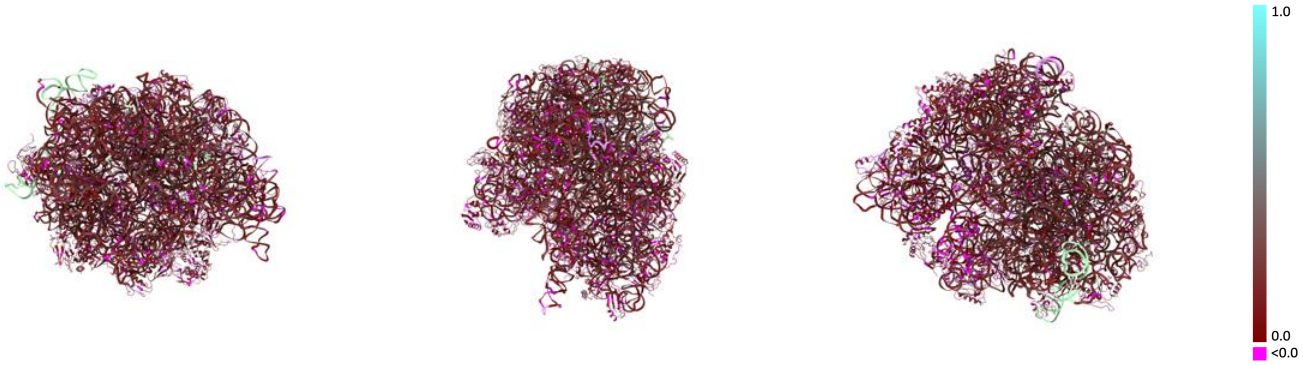
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 3000.0 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

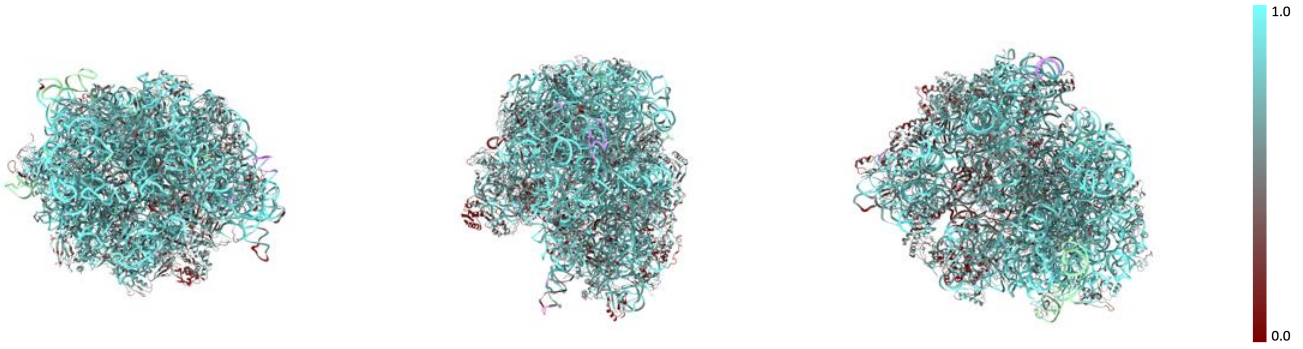
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

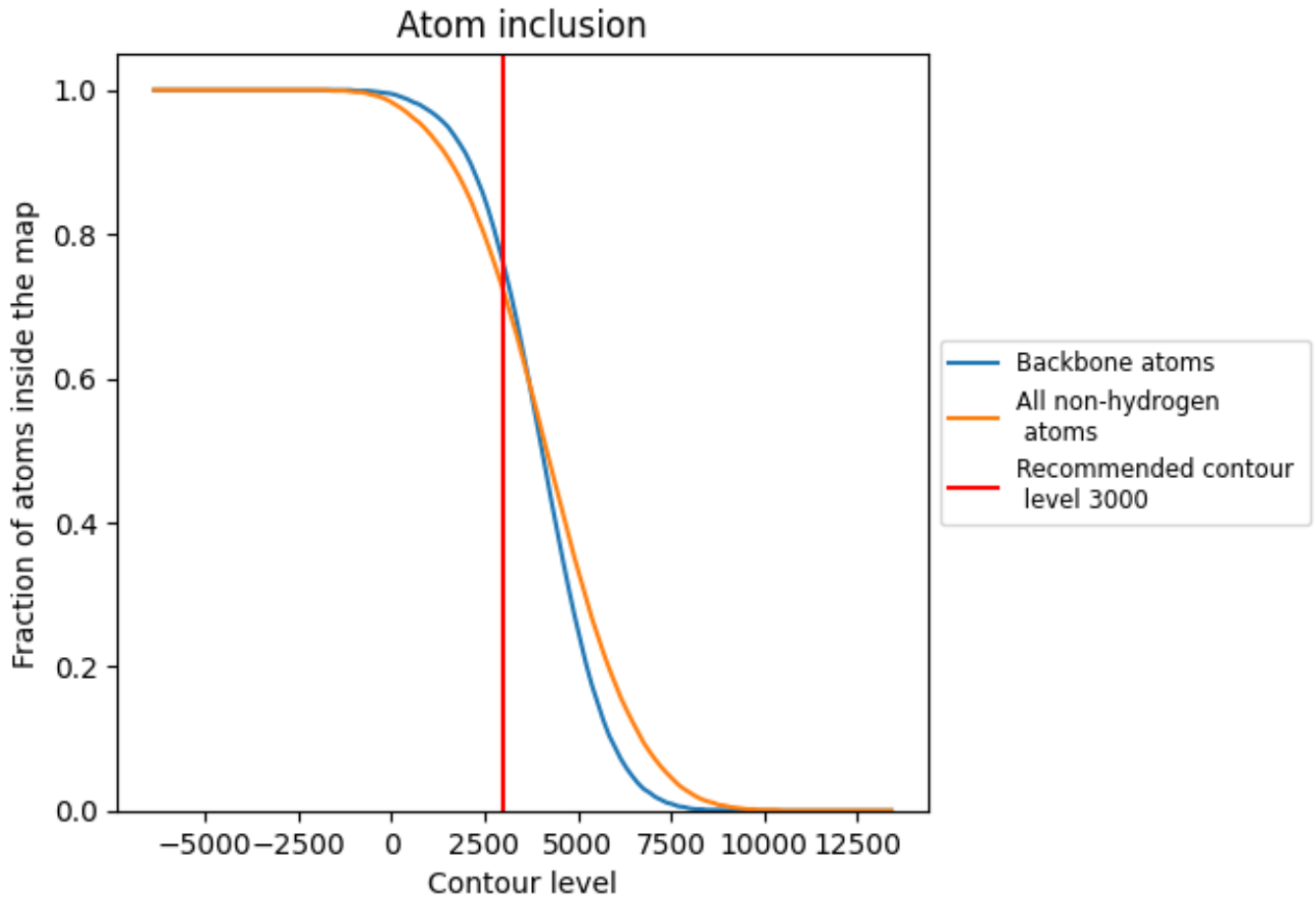
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (3000).

9.4 Atom inclusion (i)



At the recommended contour level, 76% of all backbone atoms, 72% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (3000) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7220	0.1590
AA	0.8290	0.1700
AB	0.4670	0.1320
AC	0.5500	0.1360
AD	0.5930	0.1270
AE	0.5820	0.1350
AF	0.5400	0.1510
AG	0.4980	0.1130
AH	0.5840	0.1400
AI	0.5860	0.0960
AJ	0.4570	0.0840
AK	0.5290	0.1310
AL	0.4580	0.1200
AM	0.4250	0.0790
AN	0.5970	0.1230
AO	0.5990	0.1410
AP	0.6300	0.1120
AQ	0.5510	0.1200
AR	0.5230	0.1210
AS	0.5220	0.0840
AT	0.5600	0.1220
AU	0.4760	0.0650
AV	0.6490	0.1350
AX	0.2700	0.0910
AY	0.4490	0.1190
B0	0.5200	0.0990
B1	0.5770	0.1340
B2	0.6330	0.1500
B3	0.6040	0.1520
B4	0.3880	0.1080
B5	0.6000	0.1540
B6	0.5940	0.0930
B7	0.6160	0.1230
B8	0.5530	0.1240
B9	0.2820	0.0620

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Chain	Atom inclusion	Q-score
BA	0.8410	0.1880
BB	0.8680	0.1790
BC	0.2520	0.0480
BD	0.5130	0.1240
BE	0.5330	0.1270
BF	0.6150	0.1380
BG	0.5160	0.0980
BH	0.5730	0.1330
BK	0.3590	0.0890
BL	0.0590	0.0440
BN	0.5870	0.1450
BO	0.3680	0.1210
BP	0.5850	0.1430
BQ	0.2790	0.0930
BR	0.6000	0.1370
BS	0.6620	0.1480
BT	0.4780	0.1260
BU	0.6310	0.1220
BV	0.5540	0.1420
BW	0.6050	0.1280
BX	0.6140	0.1420
BY	0.4970	0.1340
BZ	0.4570	0.0750