Full wwPDB EM Validation Report

Mar 28, 2026 – 03:27 PM UTC

PDB ID	:	4V5N / pdb_00004v5n
EMDB ID	:	EMD-1799
Title	:	tRNA translocation on the 70S ribosome: the post- translocational translocation intermediate TI(POST)
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	:	2010-10-21
Resolution	:	7.60 Å(reported)
Based on initial models	:	2WRJ, 2WRI

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:

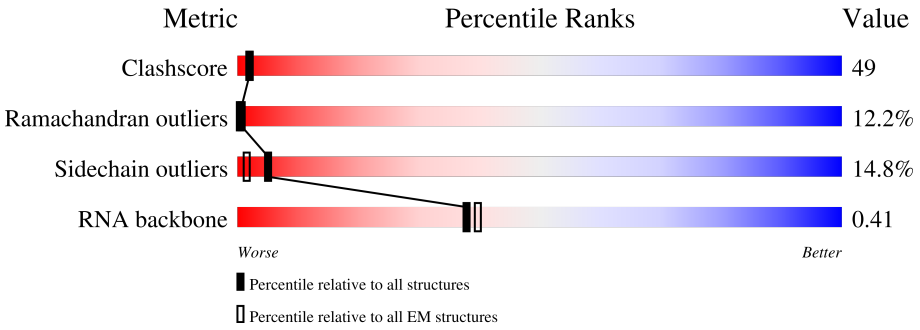
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data 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 7.60 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)
Clashscore	229148	23984
Ramachandran outliers	224038	23583
Sidechain outliers	223484	23102
RNA backbone	8273	3508

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	97% 17% 51% 25% 7%
2	AB	256	91% 16% 44% 25% 6% 9%
3	AC	239	86% 17% 40% 25% 14%
4	AD	209	100% 25% 42% 27% 6%
5	AE	162	93% 24% 41% 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
6	AF	101	100% 25% 51% 20%
7	AG	156	99% 25% 49% 20% 5%
8	AH	138	100% 24% 51% 24%
9	AI	128	99% 14% 52% 27% 6%
10	AJ	105	93% 8% 51% 25% 10% 7%
11	AK	129	92% 24% 45% 22% 8%
12	AL	132	94% 17% 47% 25% 5% 6%
13	AM	126	98% 16% 49% 26% 7%
14	AN	61	98% 28% 41% 25% 5%
15	AO	89	99% 30% 40% 24%
16	AP	88	94% 9% 55% 26% 5% 6%
17	AQ	105	94% 22% 48% 20% 5% 6%
18	AR	88	80% 14% 43% 23% 20%
19	AS	93	84% 8% 40% 31% 5% 16%
20	AT	106	93% 14% 37% 37% 6% 7%
21	AU	27	89% 26% 44% 15% 11%
22	AV	77	99% 26% 44% 22% 8%
23	AX	11	100% 9% 27% 27% 36%
24	AY	691	96% 15% 49% 27% 6%
25	B0	85	99% 33% 44% 18% 5%
26	B1	98	95% 14% 43% 33% 5% 5%
27	B2	72	99% 7% 50% 35% 7%
28	B3	60	98% 12% 55% 22% 10%
29	B4	71	80% 10% 32% 18% 20% 20%
30	B5	60	98% 30% 38% 23% 7%

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Mol	Chain	Length	Quality of chain
31	B6	54	93% 41% 31% 19% 7%
32	B7	49	98% 18% 51% 27%
33	B8	65	97% 14% 46% 25% 12%
34	B9	37	100% 19% 49% 27% 5%
35	BA	2915	97% 17% 50% 25% 7%
36	BB	122	98% 11% 59% 24%
37	BC	229	100% 28% 49% 19%
38	BD	276	100% 20% 43% 30% 7%
39	BE	206	99% 16% 45% 30% 9%
40	BF	210	99% 14% 48% 31% 5%
41	BG	182	99% 10% 52% 29% 9%
42	BH	180	92% 14% 44% 29% 5% 8%
43	BK	147	95% 20% 46% 27% 5%
44	BL	121	55% 33% 20% 45%
45	BN	140	99% 17% 43% 31% 7%
46	BO	122	100% 22% 49% 25%
47	BP	150	97% 12% 42% 32% 11%
48	BQ	141	100% 18% 47% 28% 7%
49	BR	118	99% 19% 44% 29% 7%
50	BS	112	88% 5% 48% 28% 6% 12%
51	BT	146	94% 10% 37% 35% 12% 6%
52	BU	118	99% 15% 49% 28% 7%
53	BV	101	100% 18% 47% 29% 7%
54	BW	113	100% 17% 60% 20%
55	BX	96	96% 18% 52% 22%

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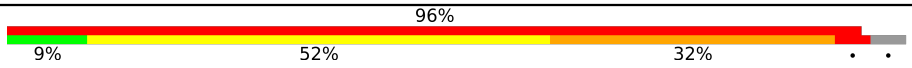
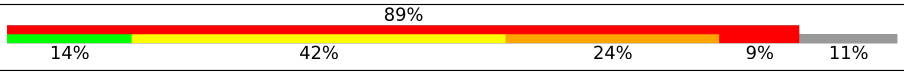
Mol	Chain	Length	Quality of chain
56	BY	110	
57	BZ	206	

2 Entry composition

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

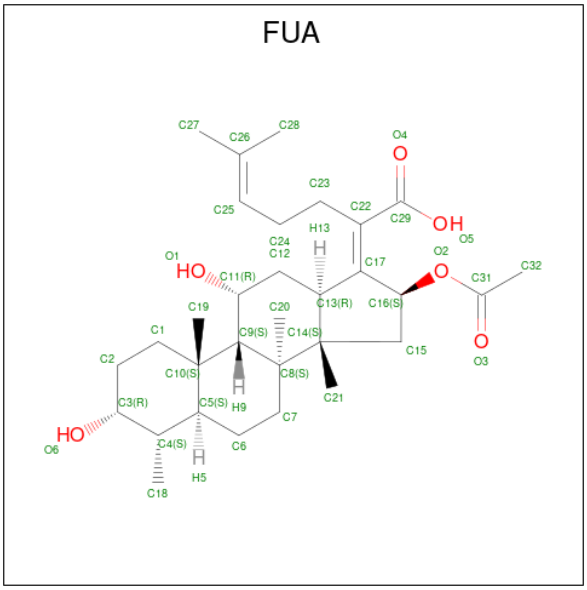
- Molecule 56 is a protein called 50S RIBOSOMAL PROTEIN L24.

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.

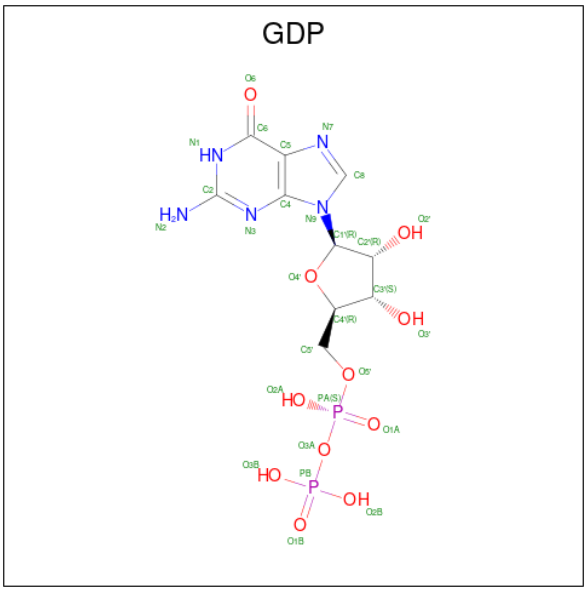
Mol	Chain	Residues	Atoms					AltConf	Trace
57	BZ	184	Total	C	N	O	S	0	0
			1467	936	261	268	2		

- 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: $C_{10}H_{15}N_5O_{11}P_2$).



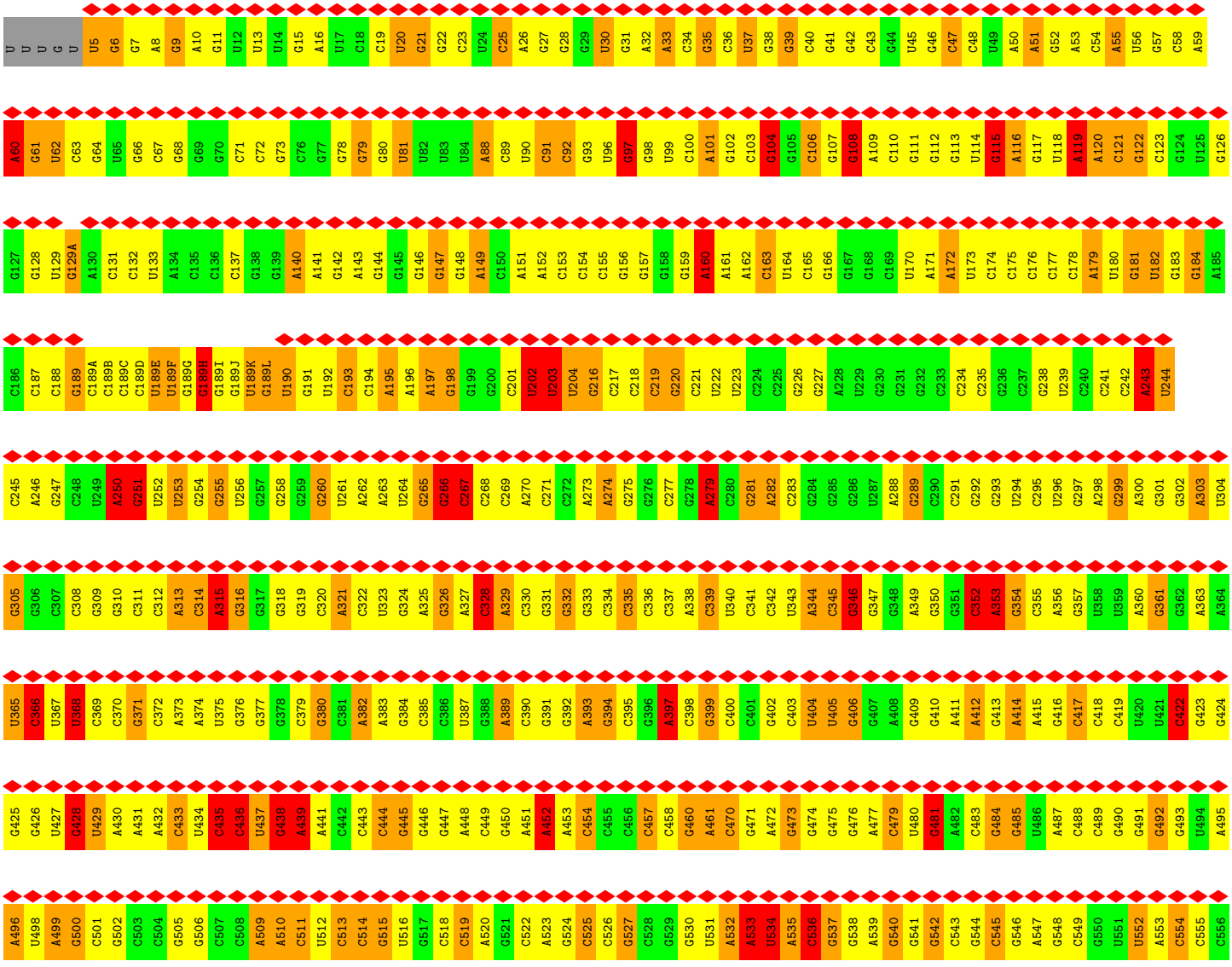
Mol	Chain	Residues	Atoms					AltConf
59	AY	1	Total	C	N	O	P	0
			28	10	5	11	2	

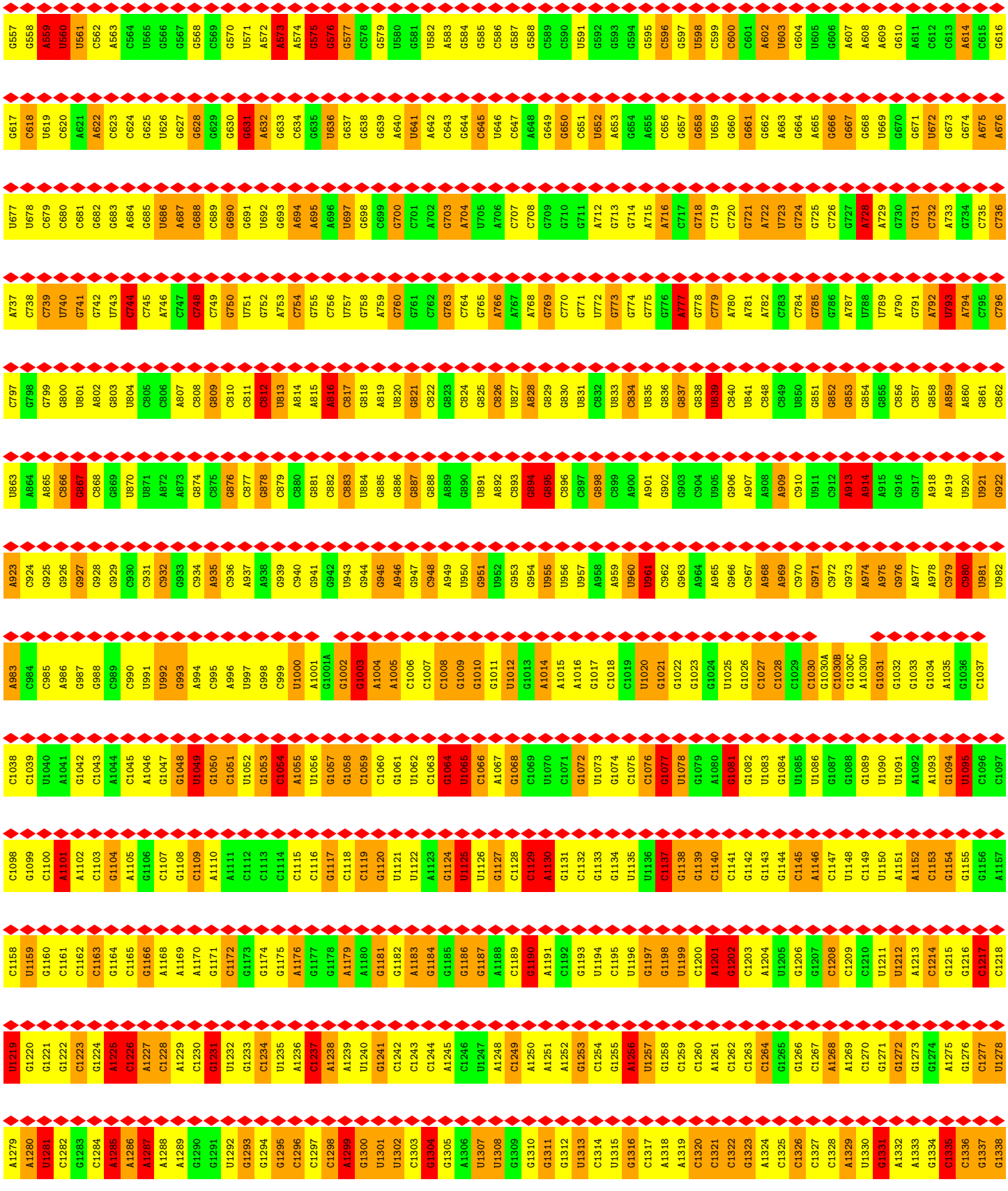
3 Residue-property plots

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: 97% 17% 51% 25% 7%




G557 G558 A559 U560 U561 C562 A563 C564 U565 G566 G567 G568 C569 G570 U571 A572 A573 A574 G575 G576 G577 C578 G579 U580 G581 U582 A583 G584 G585 C586 G587 G588 C589 G590 U591 G592 G593 G594 G595 C596 G597 U598 C599 C600 C601 A602 U603 G604 U605 G606 A607 A608 A609 G610 A611 C612 C613 A614 C615 G616
G617 C618 U619 C620 A621 A622 C623 C624 G625 U626 G627 G628 G629 G630 G631 A632 G633 C634 G635 U636 G637 G638 G639 A640 U641 A642 C643 G644 C645 U646 C647 A648 G649 G650 C651 U652 A653 G654 A655 C656 G657 G658 U659 G660 G661 G662 A663 G664 A665 G666 G667 G668 U669 G670 G671 U672 G673 G674 A675 A676
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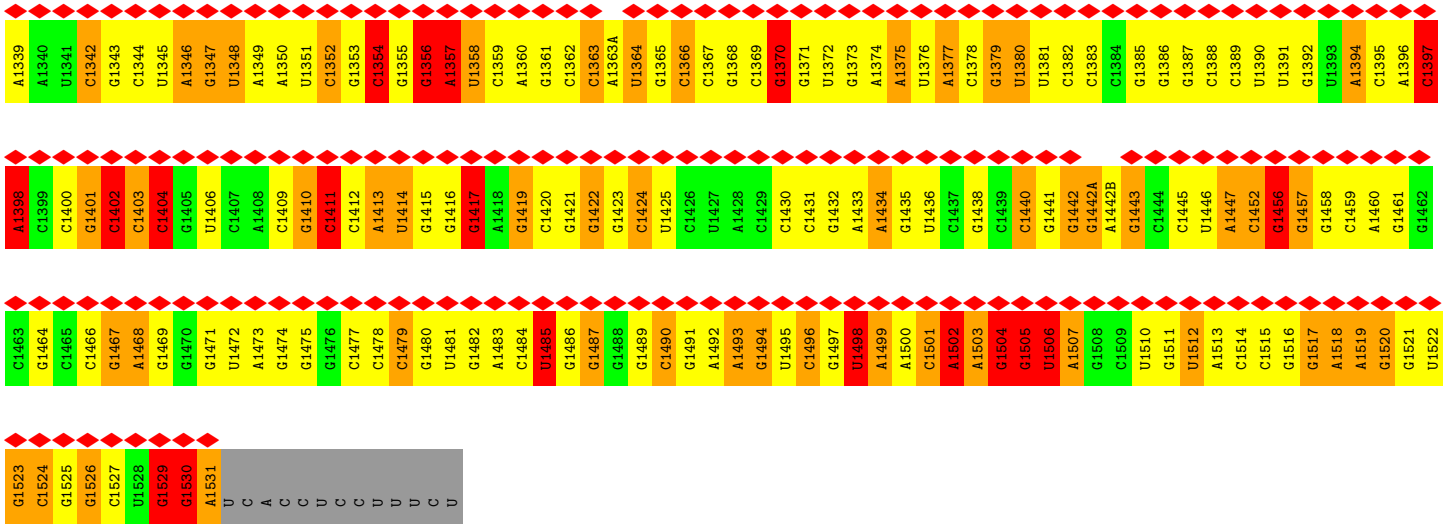
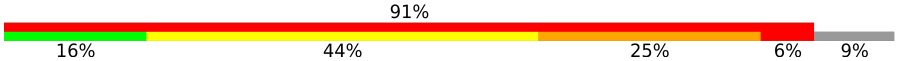
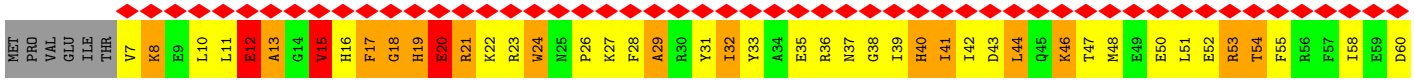
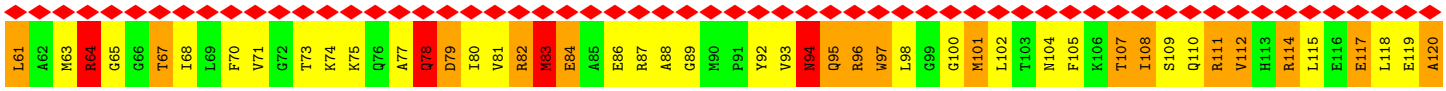


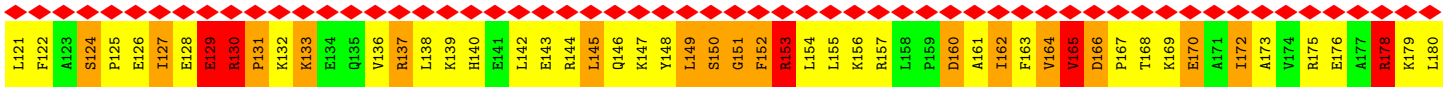
- Molecule 2: 30S RIBOSOMAL PROTEIN S2

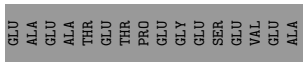
Chain AB:





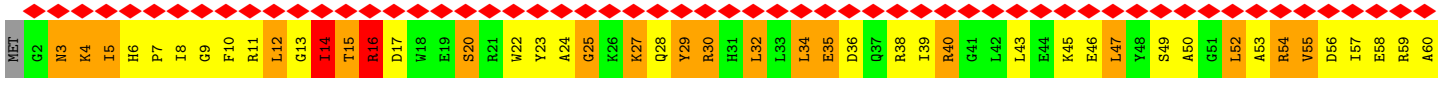


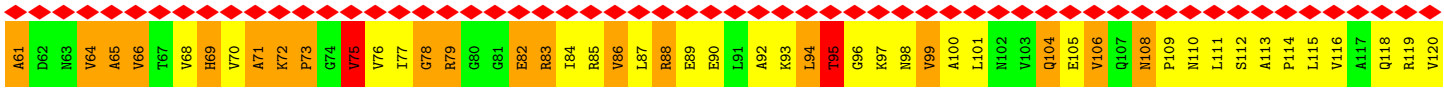


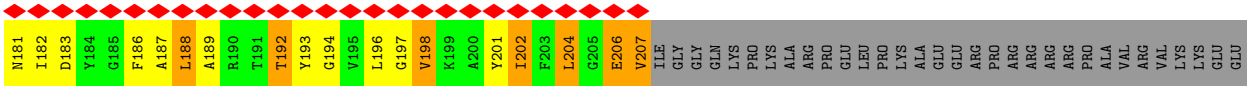


- Molecule 3: 30S RIBOSOMAL PROTEIN S3

Chain AC:

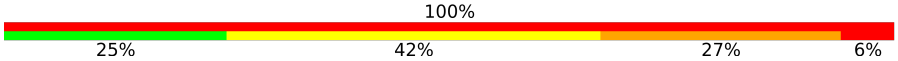


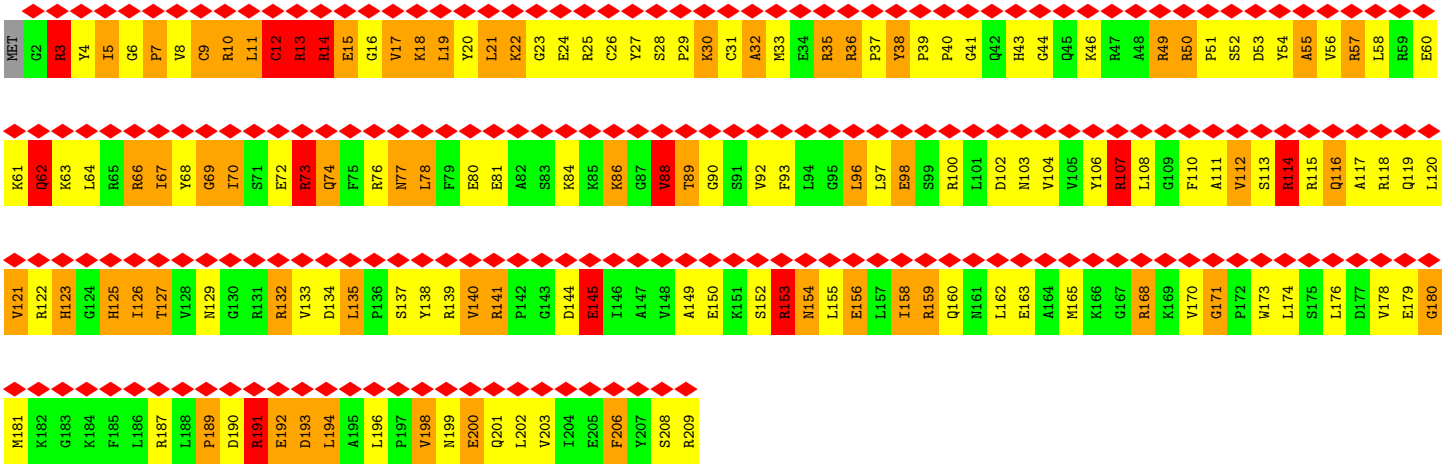




• Molecule 4: 30S RIBOSOMAL PROTEIN S4

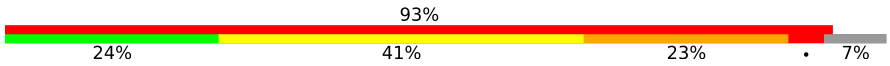
Chain AD:

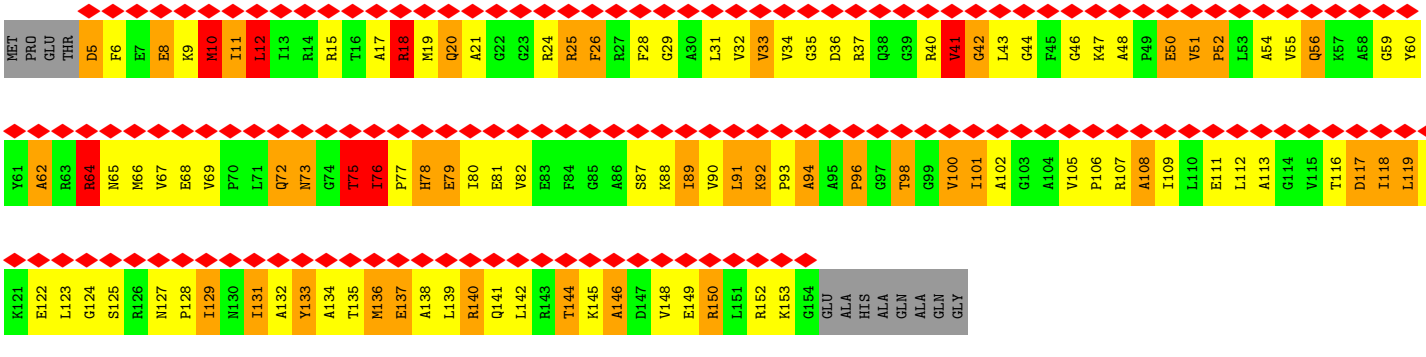




• Molecule 5: 30S RIBOSOMAL PROTEIN S5

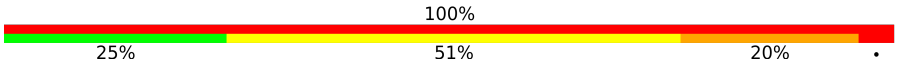
Chain AE:

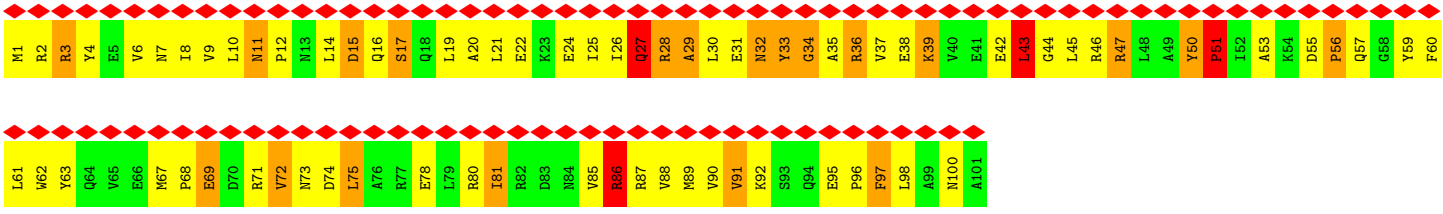




• Molecule 6: 30S RIBOSOMAL PROTEIN S6

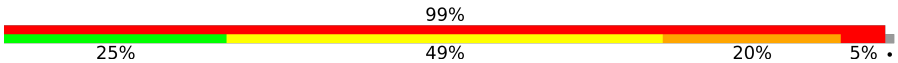
Chain AF:

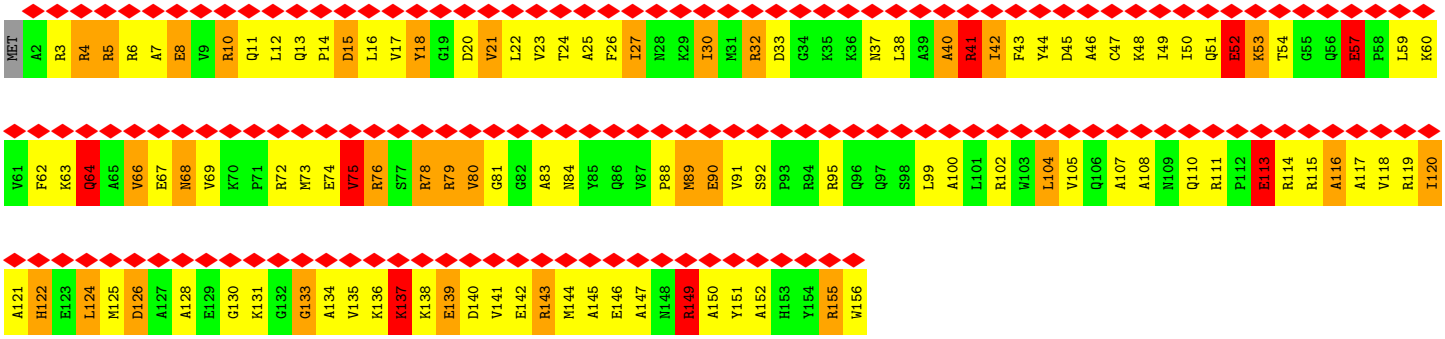




• Molecule 7: 30S RIBOSOMAL PROTEIN S7

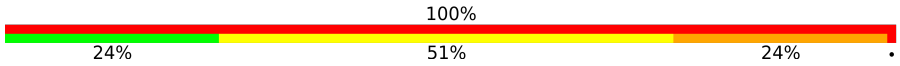
Chain AG:

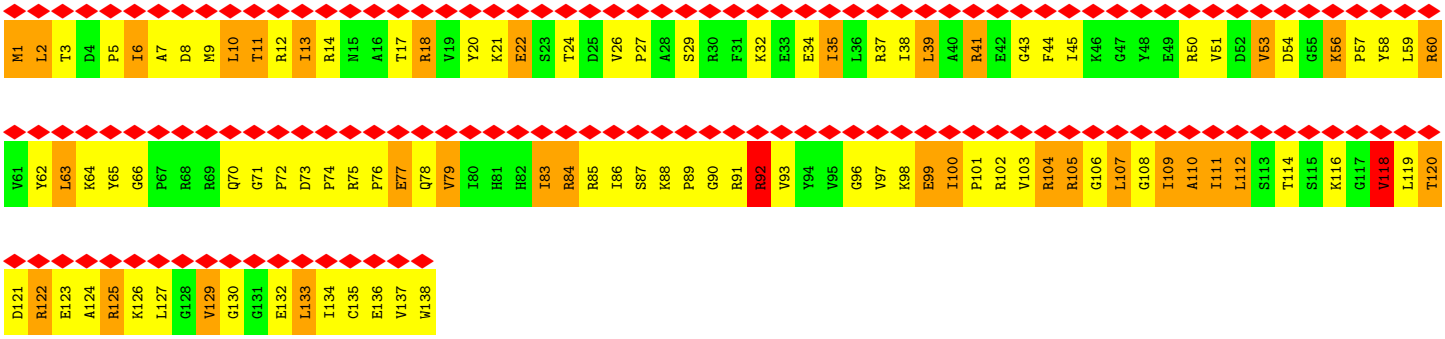




• Molecule 8: 30S RIBOSOMAL PROTEIN S8

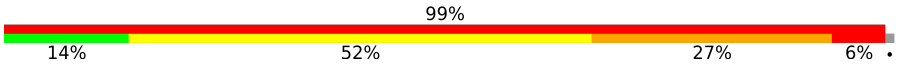
Chain AH:

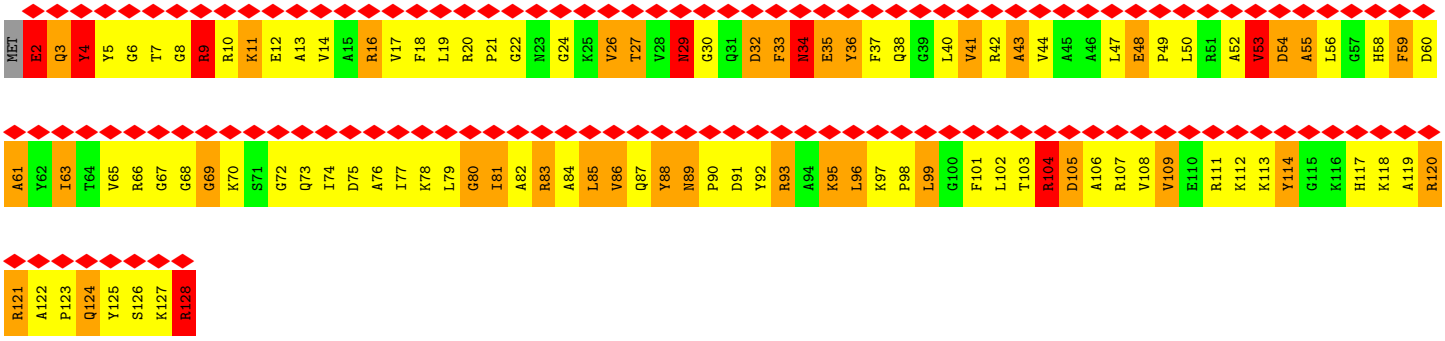




• Molecule 9: 30S RIBOSOMAL PROTEIN S9

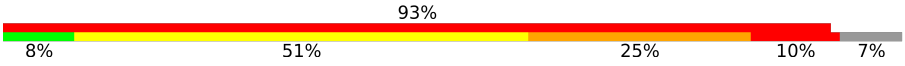
Chain AI:

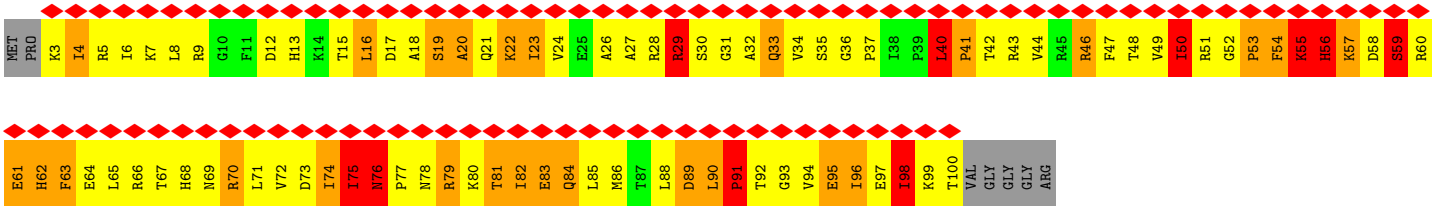




• Molecule 10: 30S RIBOSOMAL PROTEIN S10

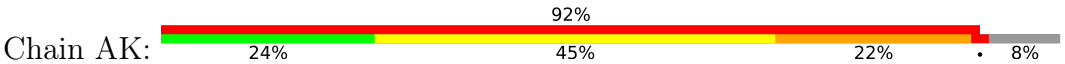
Chain AJ:

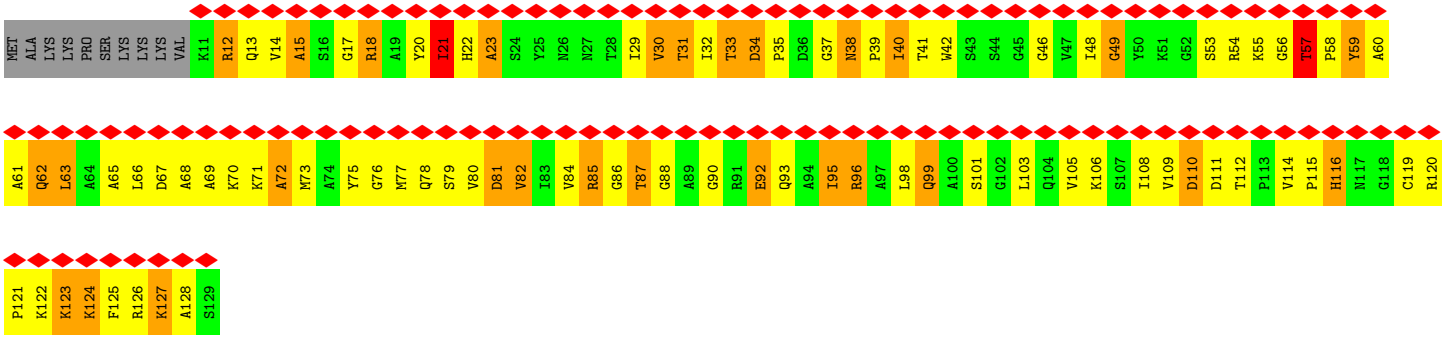




• Molecule 11: 30S RIBOSOMAL PROTEIN S11

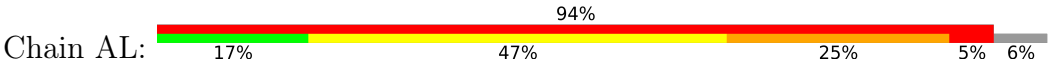
Chain AK:

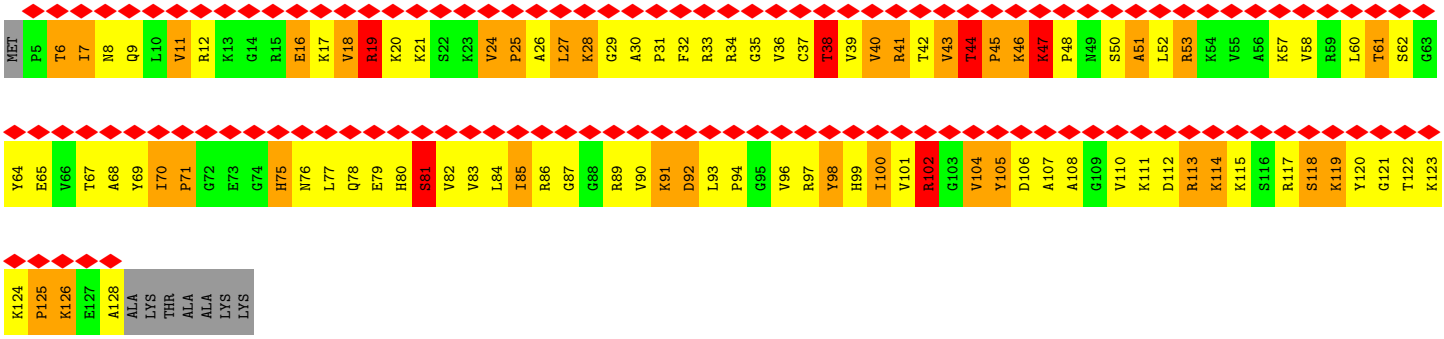




• Molecule 12: 30S RIBOSOMAL PROTEIN S12

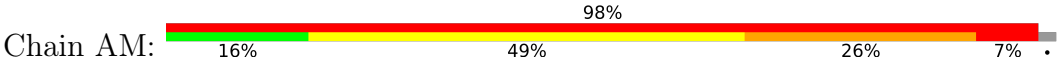
Chain AL:





• Molecule 13: 30S RIBOSOMAL PROTEIN S13

Chain AM:

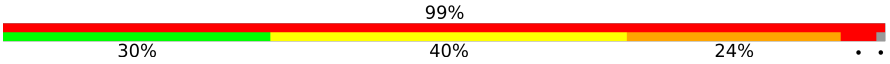


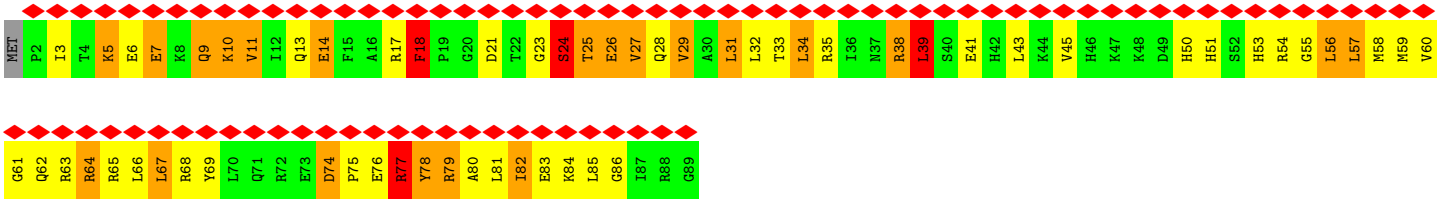
• Molecule 14: 30S RIBOSOMAL PROTEIN S14 TYPE Z

Chain AN:

• Molecule 15: 30S RIBOSOMAL PROTEIN S15

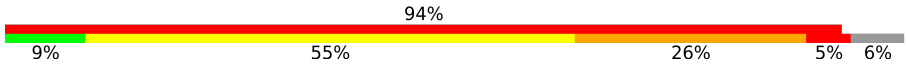
Chain AO:

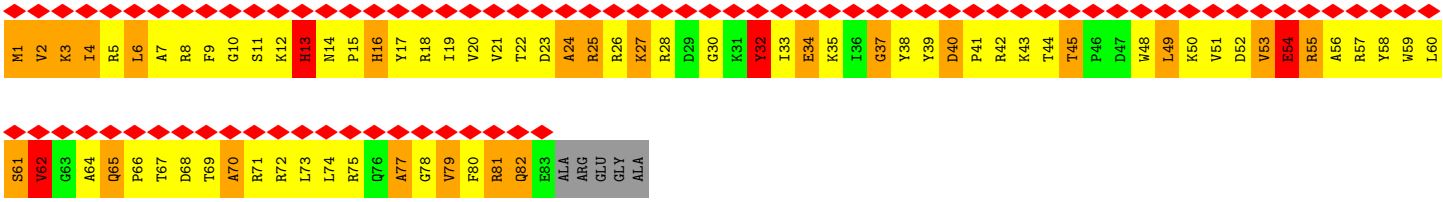




• Molecule 16: 30S RIBOSOMAL PROTEIN S16

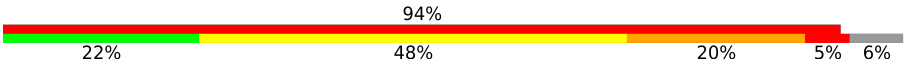
Chain AP:

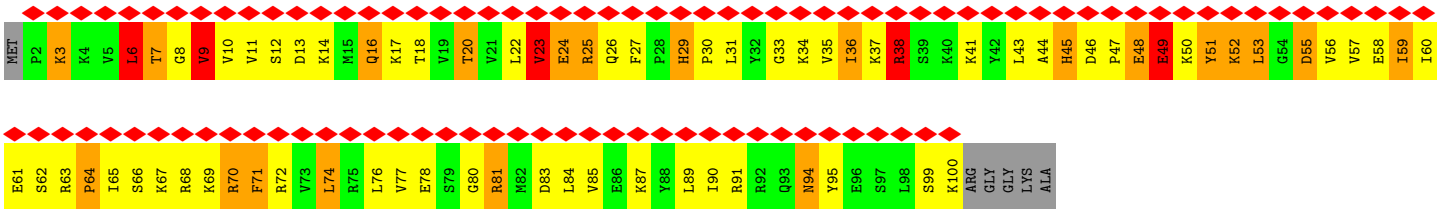




• Molecule 17: 30S RIBOSOMAL PROTEIN S17

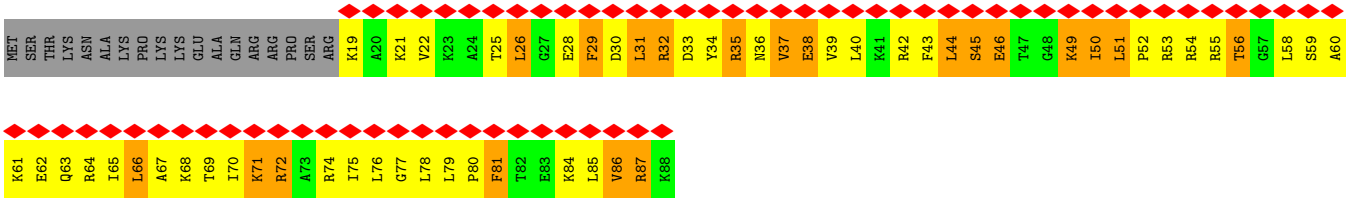
Chain AQ:





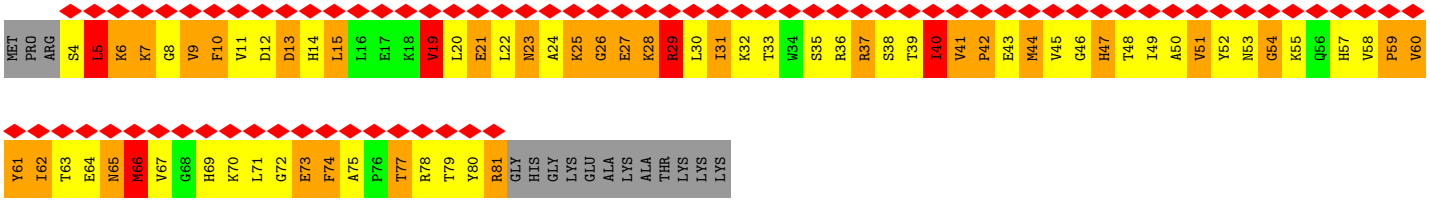
• Molecule 18: 30S RIBOSOMAL PROTEIN S18

Chain AR:

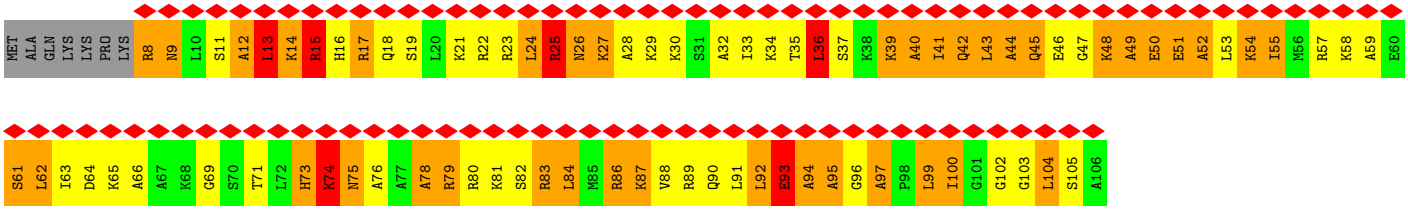


• Molecule 19: 30S RIBOSOMAL PROTEIN S19

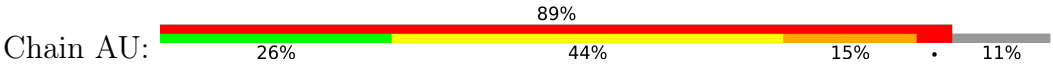
Chain AS:



• Molecule 20: 30S RIBOSOMAL PROTEIN S20



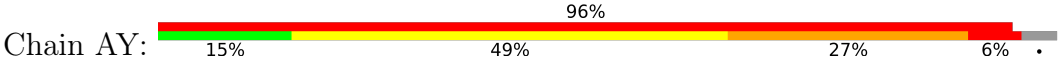
• Molecule 21: 30S RIBOSOMAL PROTEIN THX

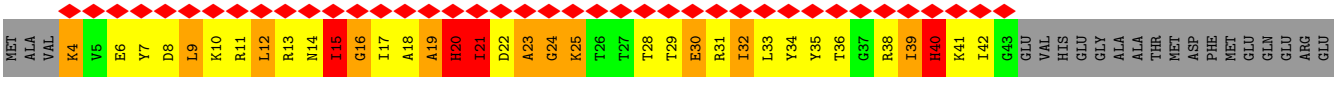


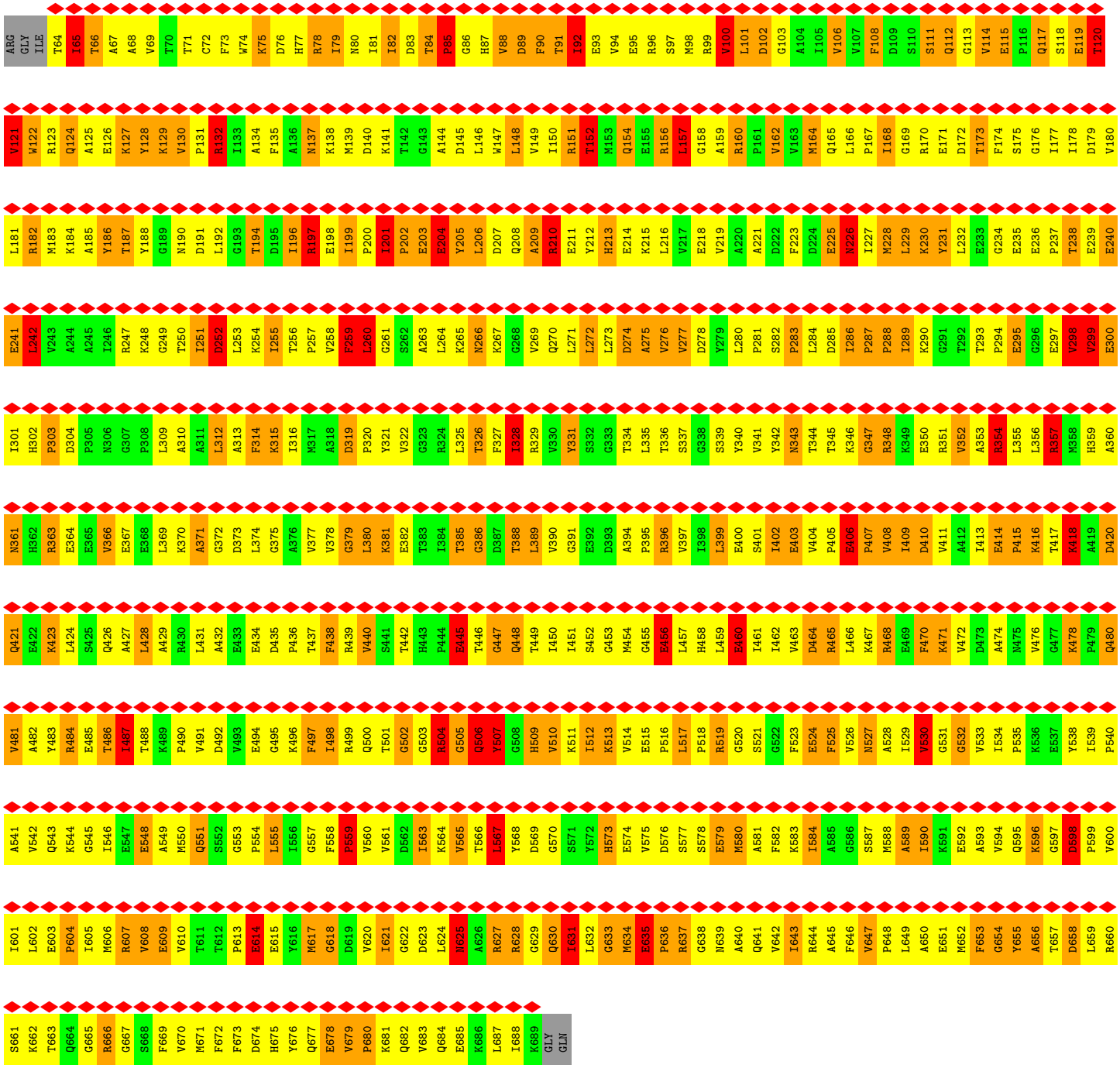
• Molecule 22: TRNA

• Molecule 23: MRNA

• Molecule 24: ELONGATION FACTOR G

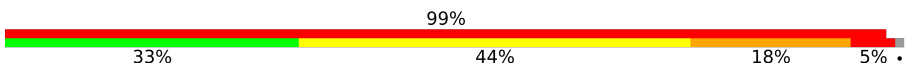


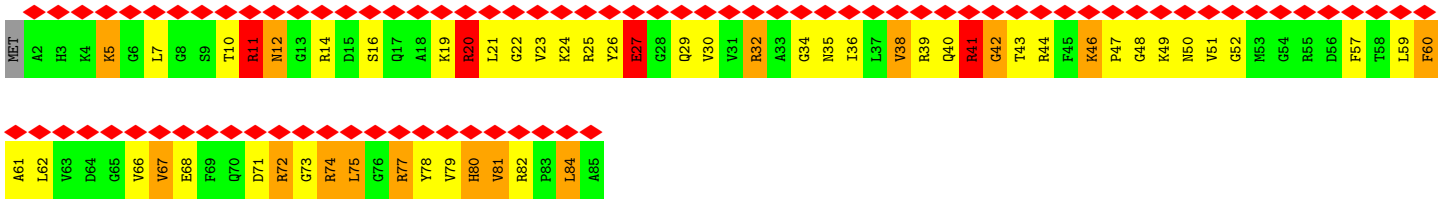




• Molecule 25: 50S RIBOSOMAL PROTEIN L27

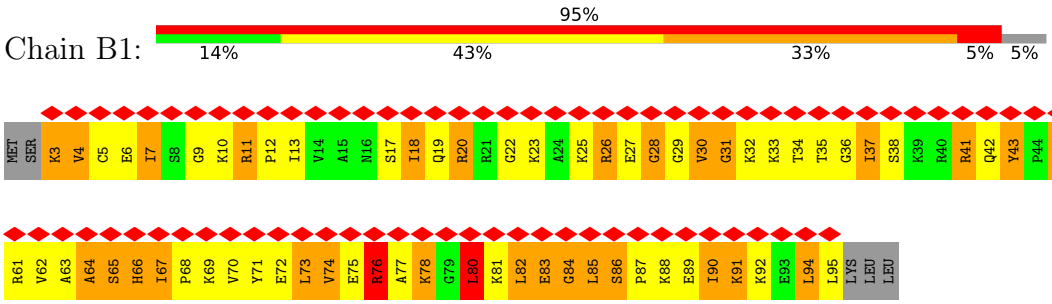
Chain B0:





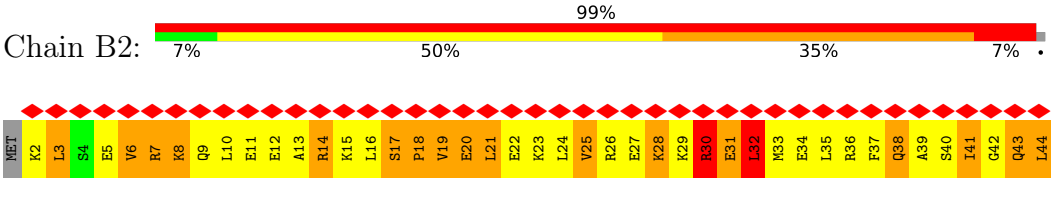
• Molecule 26: 50S RIBOSOMAL PROTEIN L28

Chain B1:



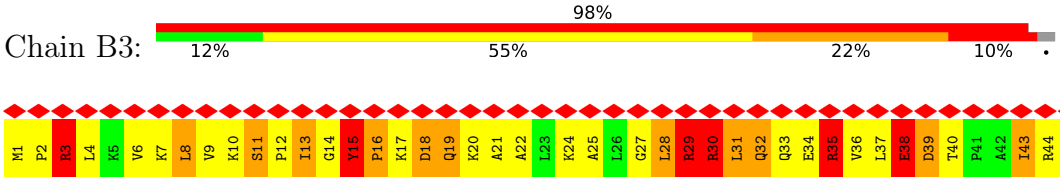
• Molecule 27: 50S RIBOSOMAL PROTEIN L29

Chain B2:



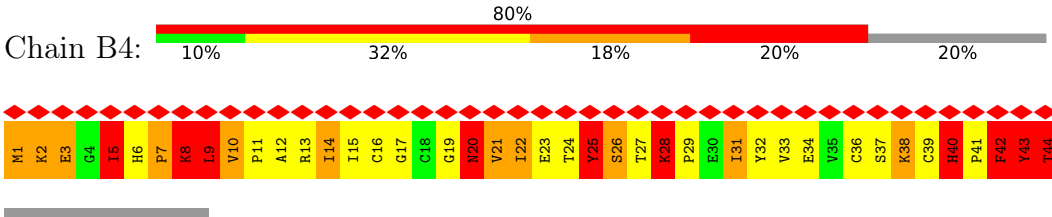
• Molecule 28: 50S RIBOSOMAL PROTEIN L30

Chain B3:



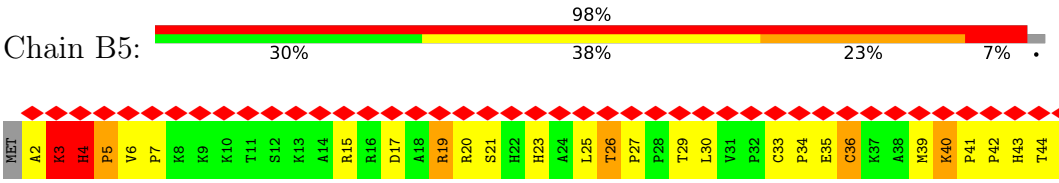
• Molecule 29: 50S RIBOSOMAL PROTEIN L31

Chain B4:



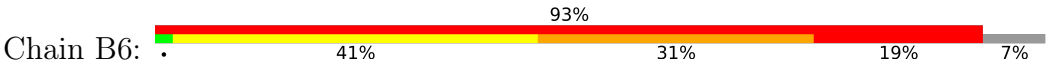
• Molecule 30: 50S RIBOSOMAL PROTEIN L32

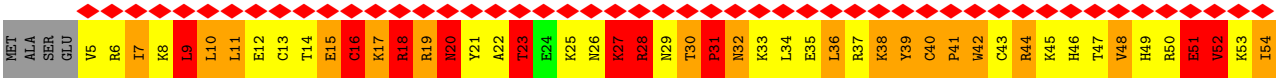
Chain B5:



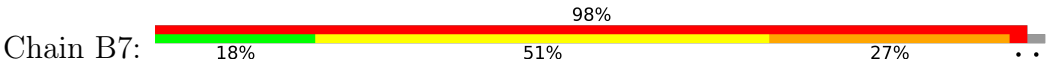
• Molecule 31: 50S RIBOSOMAL PROTEIN L33

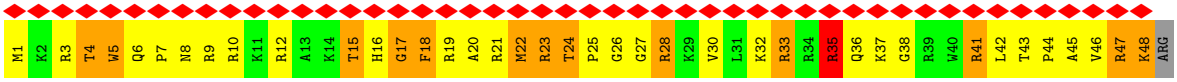
Chain B6:



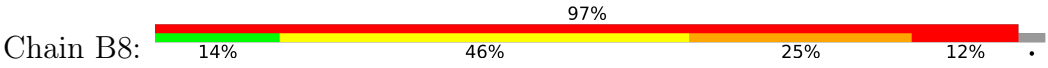


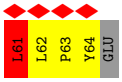
• Molecule 32: 50S RIBOSOMAL PROTEIN L34



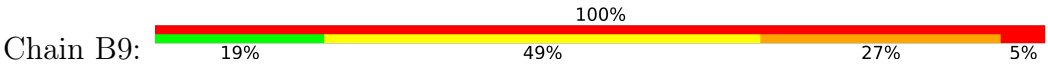


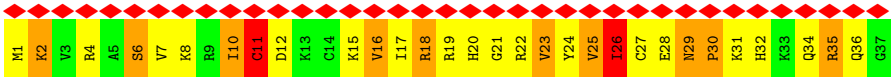
• Molecule 33: 50S RIBOSOMAL PROTEIN L35



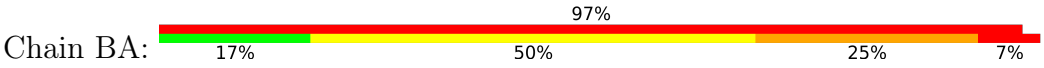


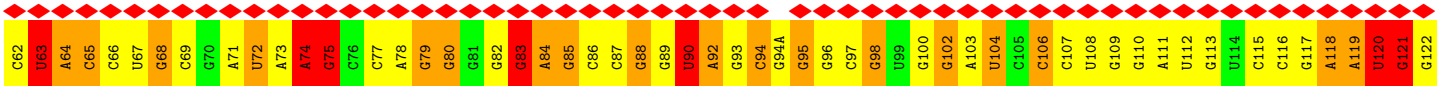
• Molecule 34: 50S RIBOSOMAL PROTEIN L36

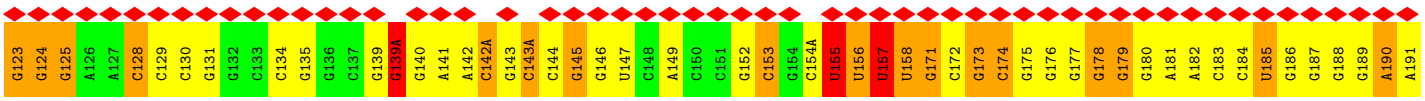


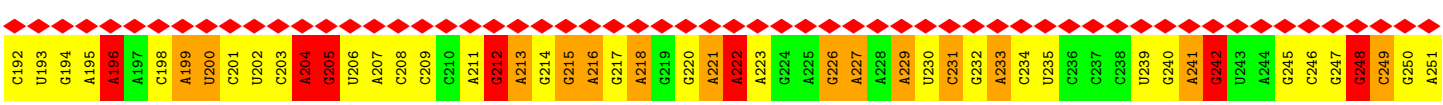


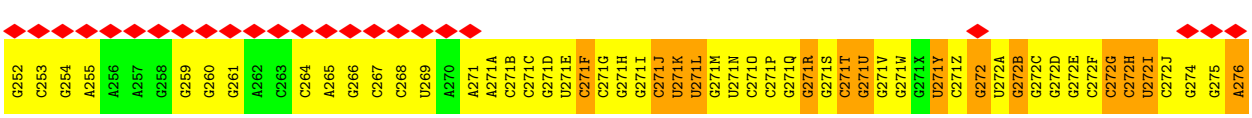
• Molecule 35: 23S RIBOSOMAL RNA

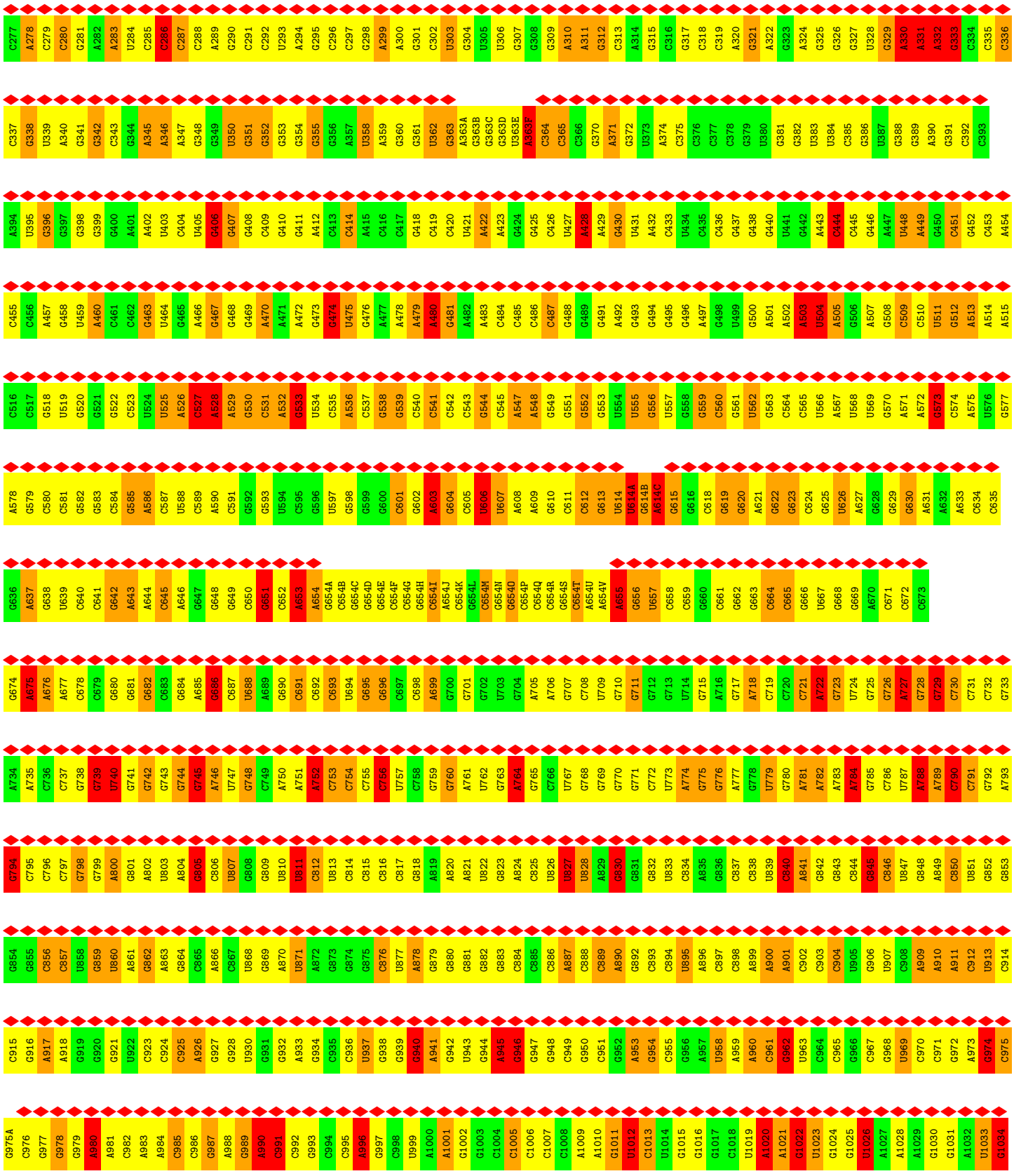








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A2019 A2020 C2021 U2022 G2023 G2024 C2025 C2026 G2027 U2028 G2029 A2030 A2031 G2032 A2033 U2034 G2035 C2036 G2037 G2038 C2039 C2040 U2041 A2042 C2043 C2044 C2045 G2046 U2047 G2048 G2049 C2050 A2051 G2052 G2053 A2054 C2055 G2056 A2057 A2058 A2059 A2060 G2061 A2062 C2063 C2064 C2065 C2066 G2067 U2068 G2069 G2070 A2071 G2072 C2073 U2074 U2075 U2076 A2077 C2078
U2079 G2080 C2081 A2082 G2083 C2084 C2085 U2086 G2087 G2088 U2089 G2090 U2091 U2092 G2093 G2094 C2095 U2096 C2097 U2098 U2099 G2100 G2101 U2102 C2103 G2104 C2105 G2106 C2107 C2108 U2109 G2110 C2111 G2112 U2113 A2114 G2115 G2116 A2117 U2118 A2119 G2120 G2121 U2122 G2123 G2124 G2125 A2126 G2127 C2128 C2129 U2130 G2131 U2132 G2133 A2134 A2135 C2136 C2137 C2138
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A2269 G2270 G2271 U2272 A2273 A2274 C2275 G2276 G2277 A2278 G2279 G2280 C2281 G2282 C2283 C2284 C2285 A2286 A2287 A2288 C2289 G2290 U2291 C2292 C2293 C2294 C2295 U2296 C2297 A2298 G2299 G2300 C2301 G2302 G2303 G2304 A2305 C2306 G2307 G2308 A2309 A2310 A2311 U2312 C2313 C2314 G2315 C2316 C2317 G2318 G2319 A2320 G2321 A2322 G2323 C2324 G2325 C2326 A2327 A2328
G2329 G2330 G2331 U2332 A2333 G2334 A2335 A2336 G2337 G2338 G2339 G2340 G2341 C2342 C2343 U2344 G2345 A2346 C2347 U2348 G2349 C2350 G2351 A2352 G2353 G2354 C2355 C2356 U2357 G2358 C2359 A2360 A2361 G2362 C2363 C2364 G2365 A2366 G2367 C2368 A2369 G2370 G2371 G2372 G2373 C2374 G2375 A2376 A2377 A2378 G2379 C2380 C2381 G2382 G2383 G2384 C2385 C2386 U2387 A2388
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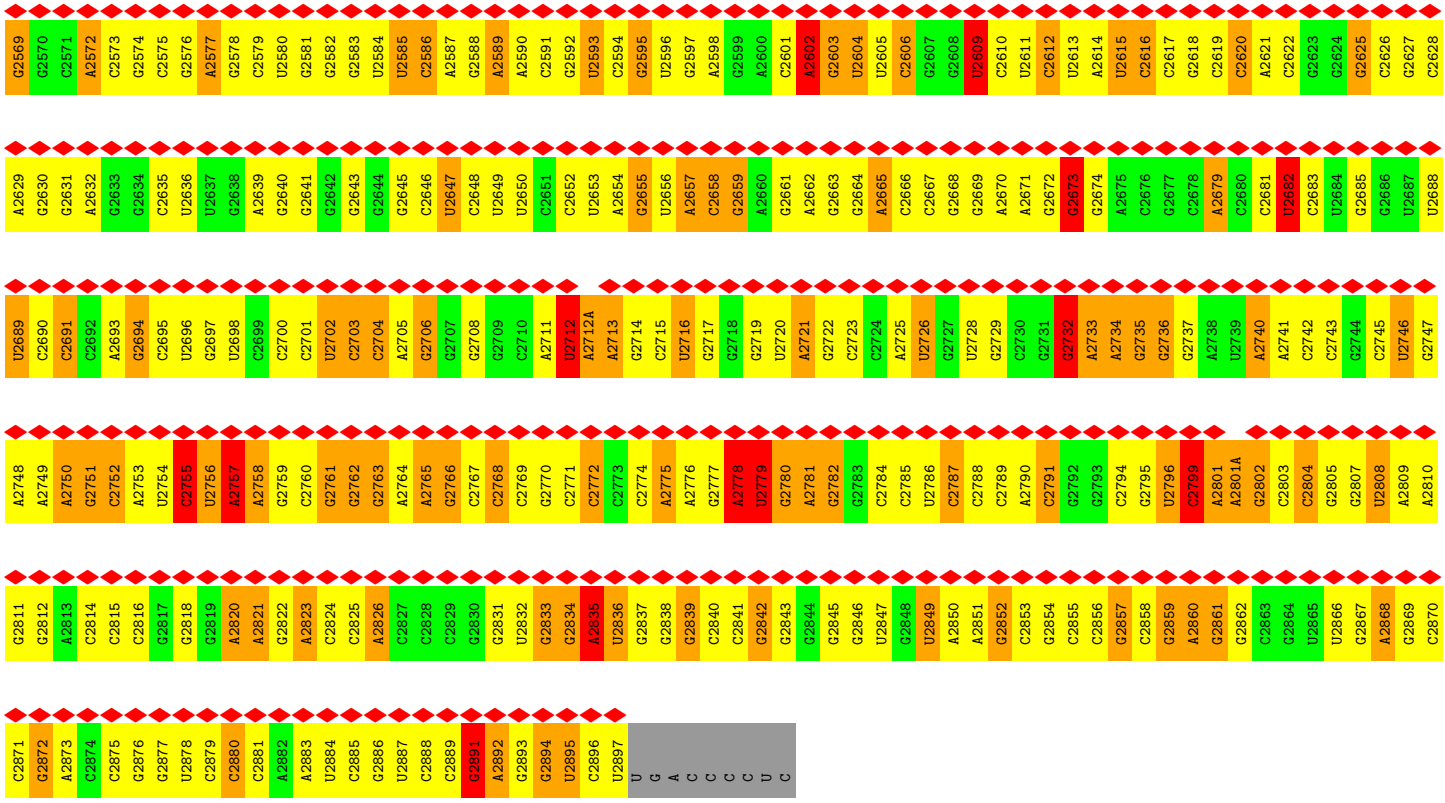
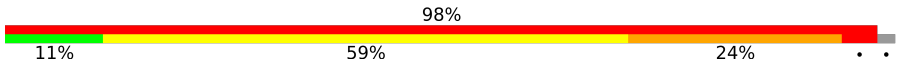
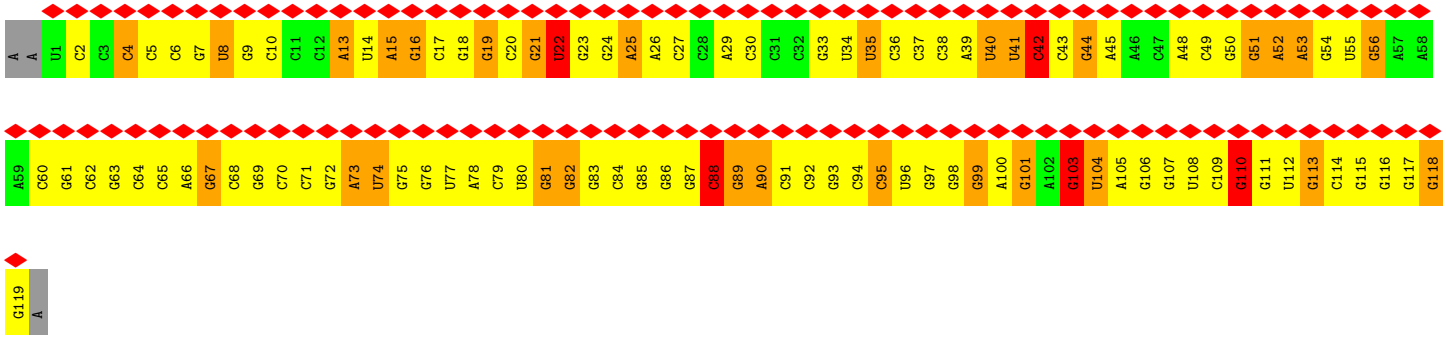
C2509 C2510 U2511 C2512 G2513 U2514 C2515 C2516 C2517 A2518 U2519 C2520 C2521 U2522 C2523 G2524 G2525 C2526 C2527 U2528 G2529 A2530 A2531 G2532 A2533 A2534 G2535 C2536 U2537 C2538 C2539 C2540 A2541 A2542 G2543 G2544 G2545 U2546 U2547 G2548 G2549 G2550 C2551 U2552 G2553 U2554 U2555 C2556 C2557 C2558 C2559 C2560 A2561 U2562 U2563 A2564 A2565 A2566 C2567 C2568



- Molecule 36: 5S RIBOSOMAL RNA

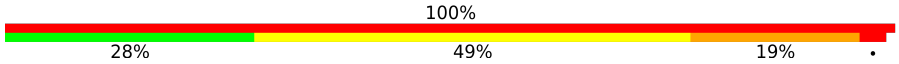
Chain BB:

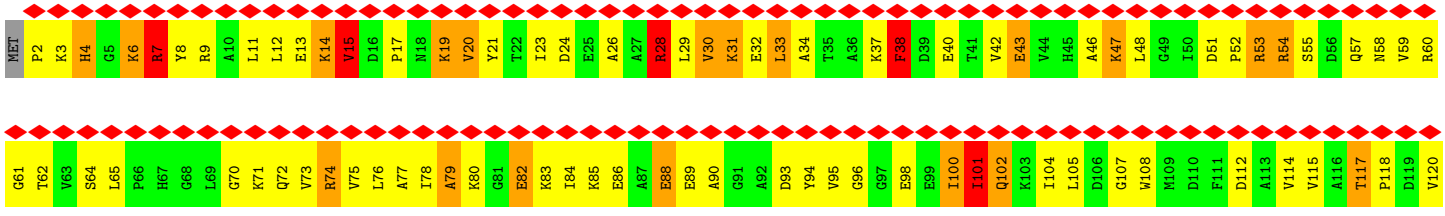


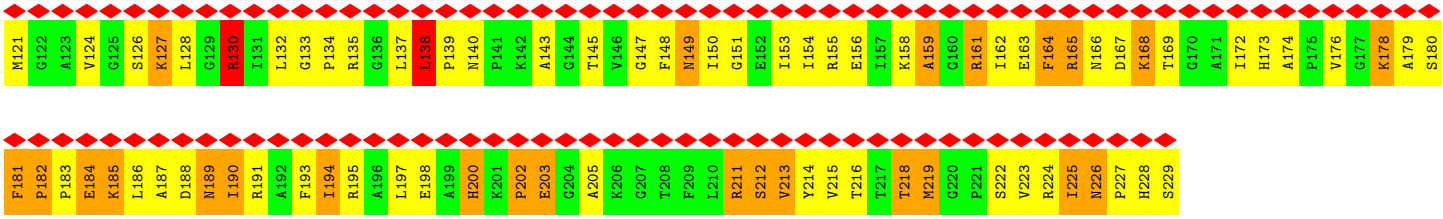


- Molecule 37: 50S RIBOSOMAL PROTEIN L1

Chain BC:

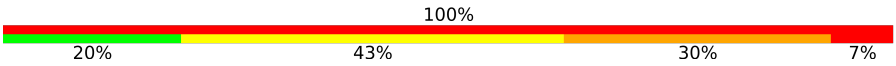


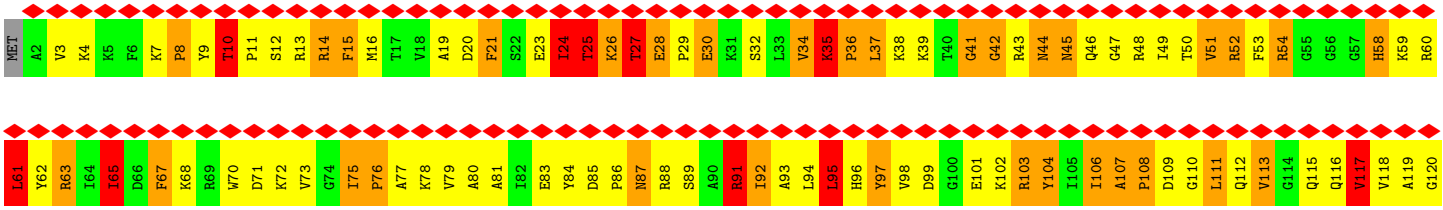




• Molecule 38: 50S RIBOSOMAL PROTEIN L2

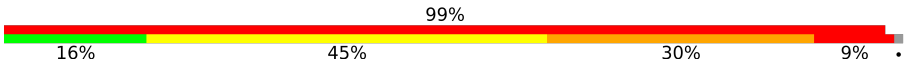
Chain BD:

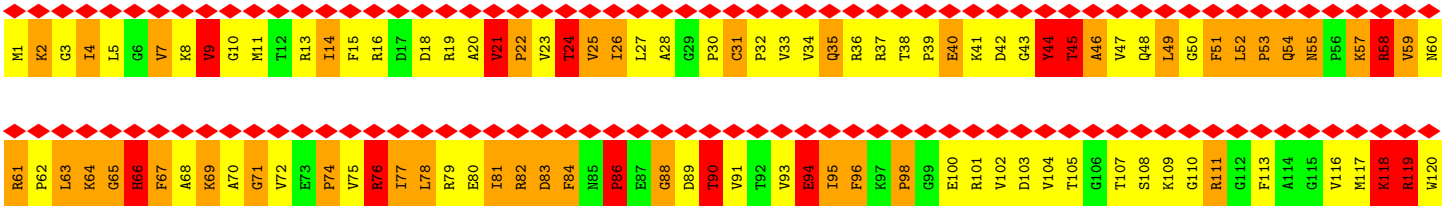




• Molecule 39: 50S RIBOSOMAL PROTEIN L3

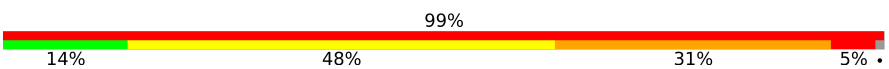
Chain BE:

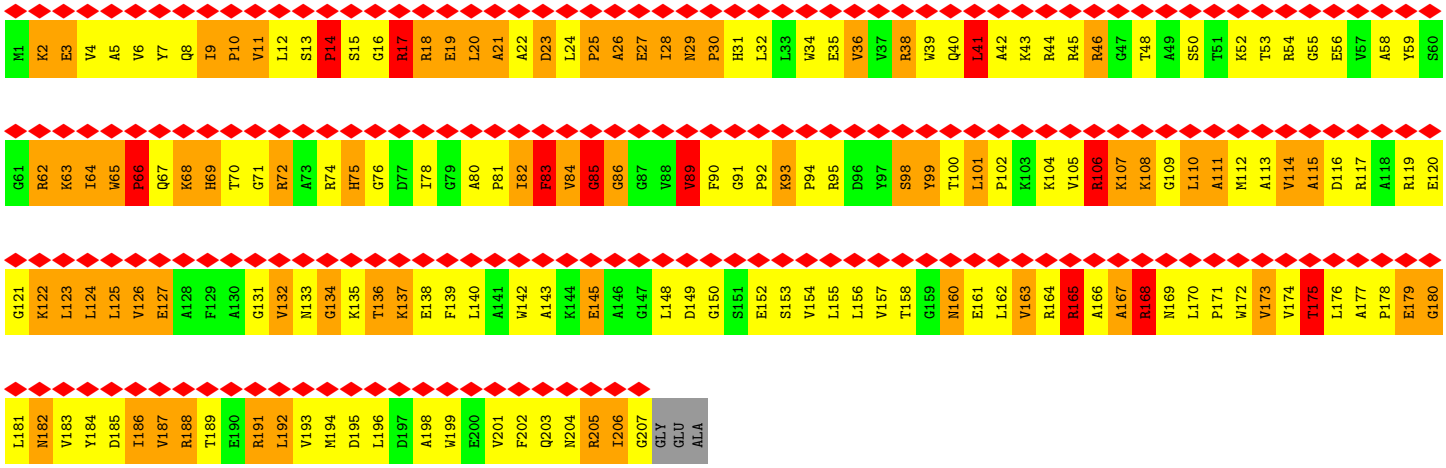




• Molecule 40: 50S RIBOSOMAL PROTEIN L4

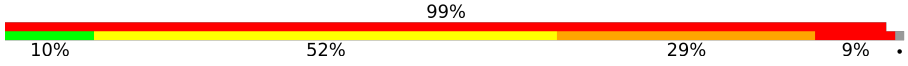
Chain BF:

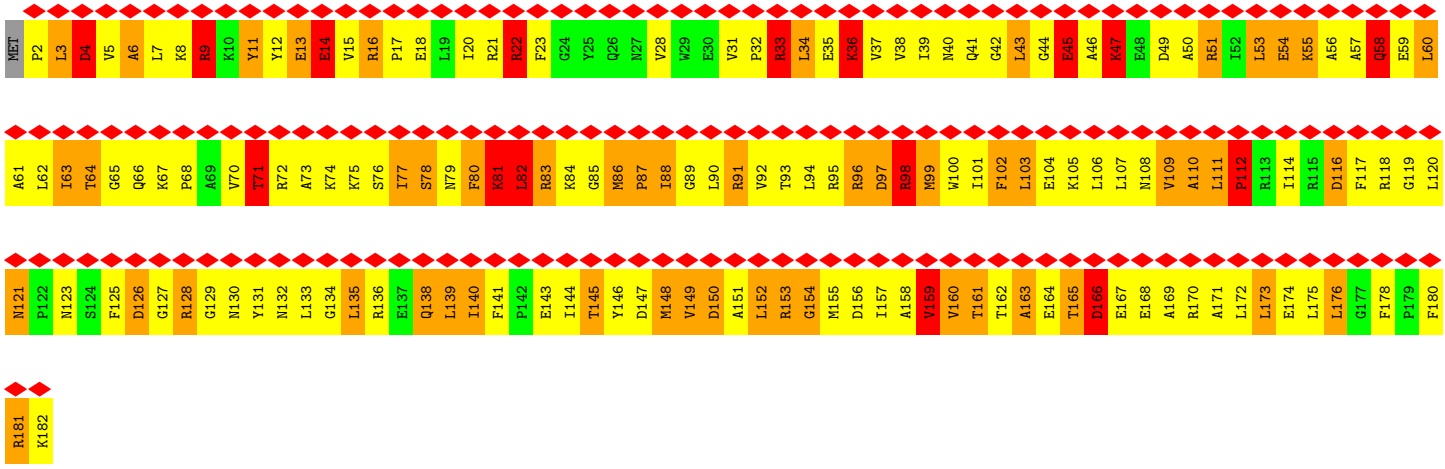




• Molecule 41: 50S RIBOSOMAL PROTEIN L5

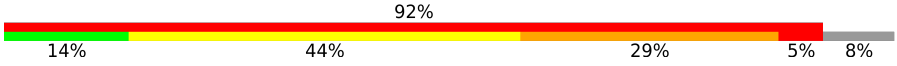
Chain BG:

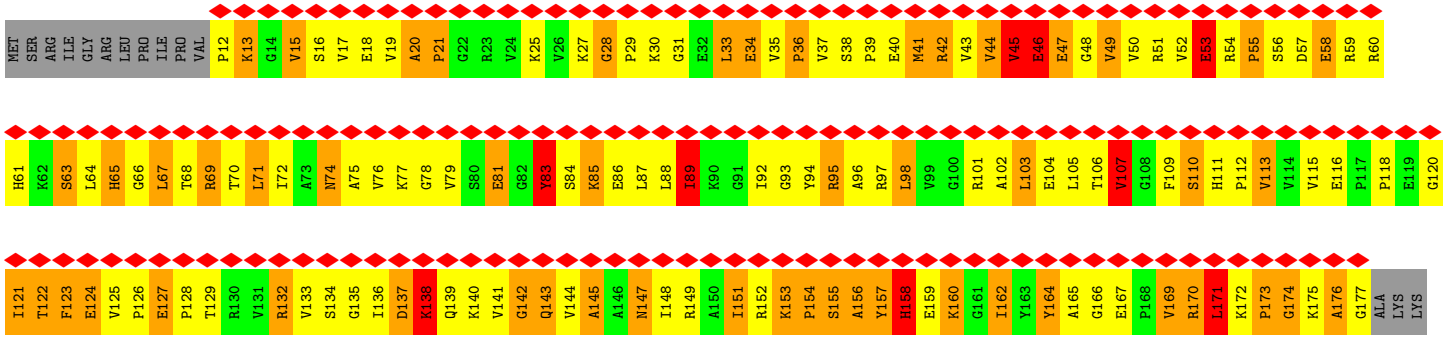




• Molecule 42: 50S RIBOSOMAL PROTEIN L6

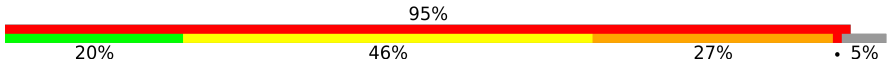
Chain BH:

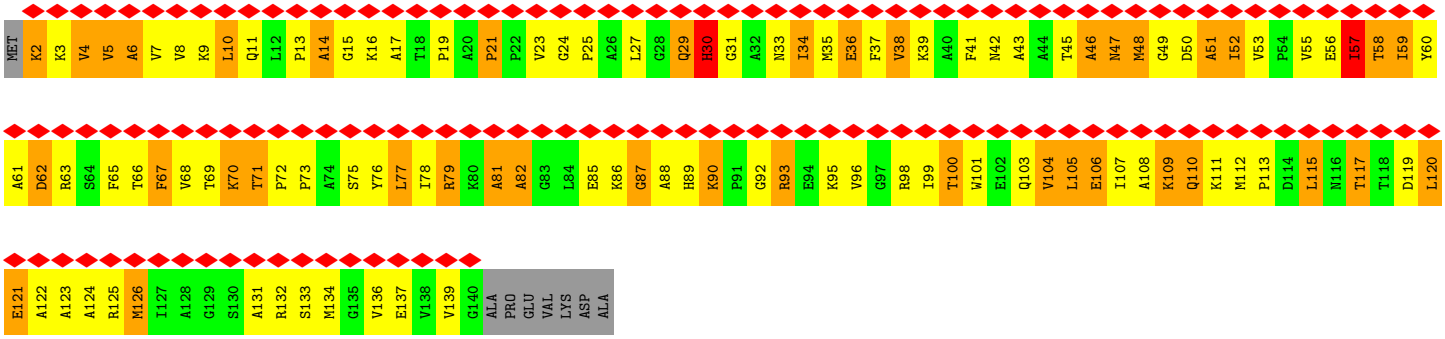




• Molecule 43: 50S RIBOSOMAL PROTEIN L11

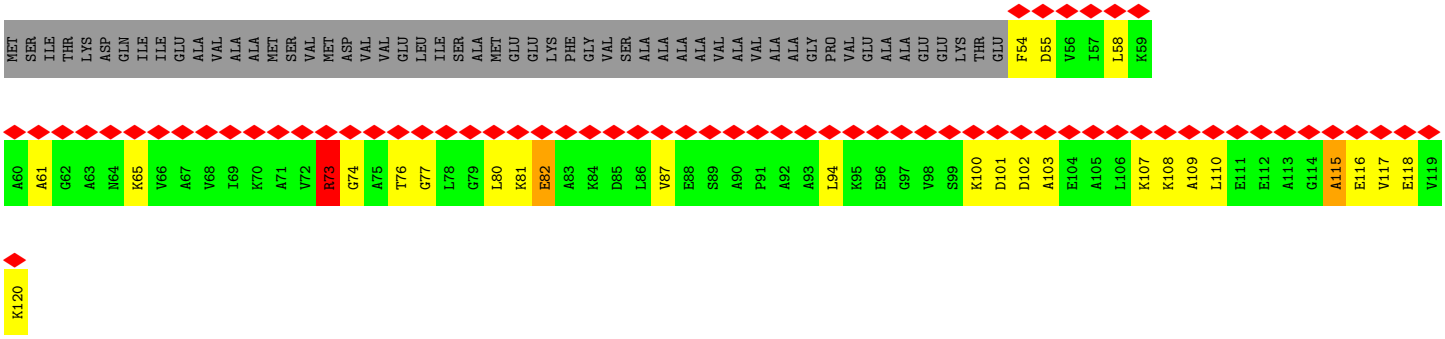
Chain BK:





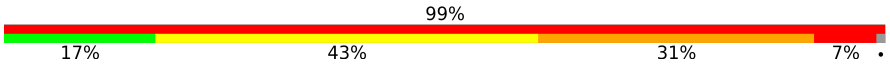
• Molecule 44: 50S RIBOSOMAL PROTEIN L7/L12

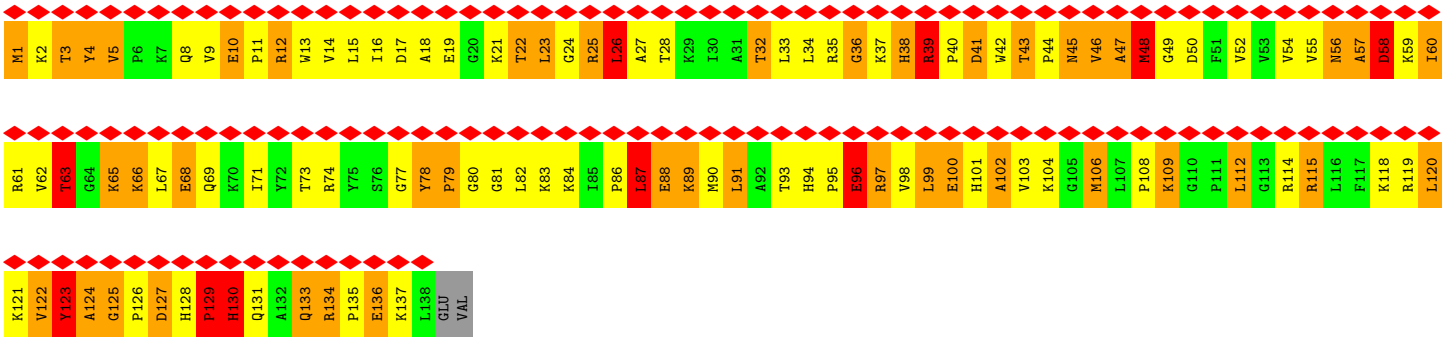
Chain BL:



• Molecule 45: 50S RIBOSOMAL PROTEIN L13

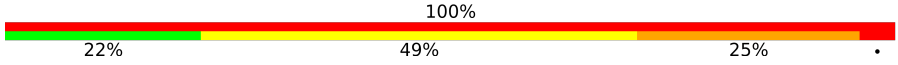
Chain BN:

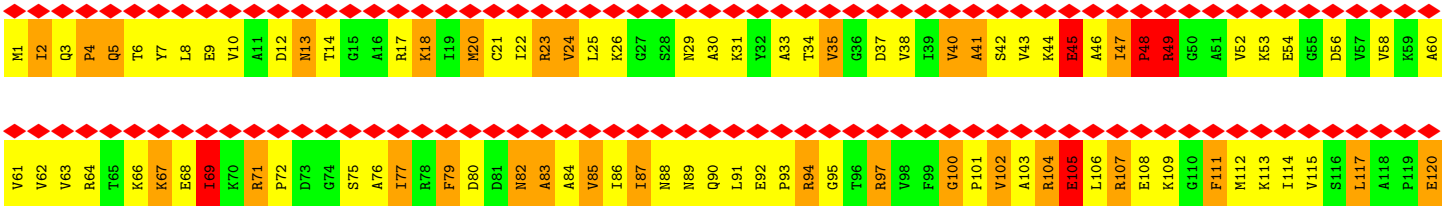




• Molecule 46: 50S RIBOSOMAL PROTEIN L14

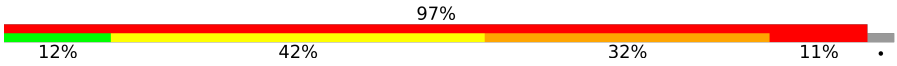
Chain BO:

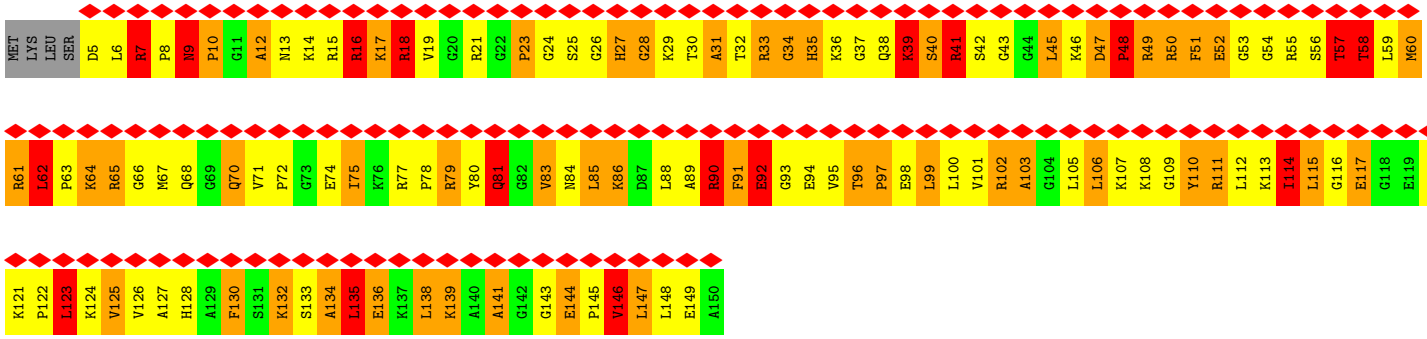




• Molecule 47: 50S RIBOSOMAL PROTEIN L15

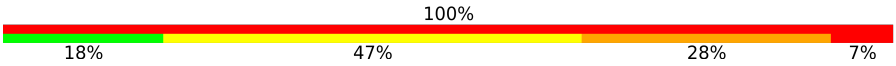
Chain BP:

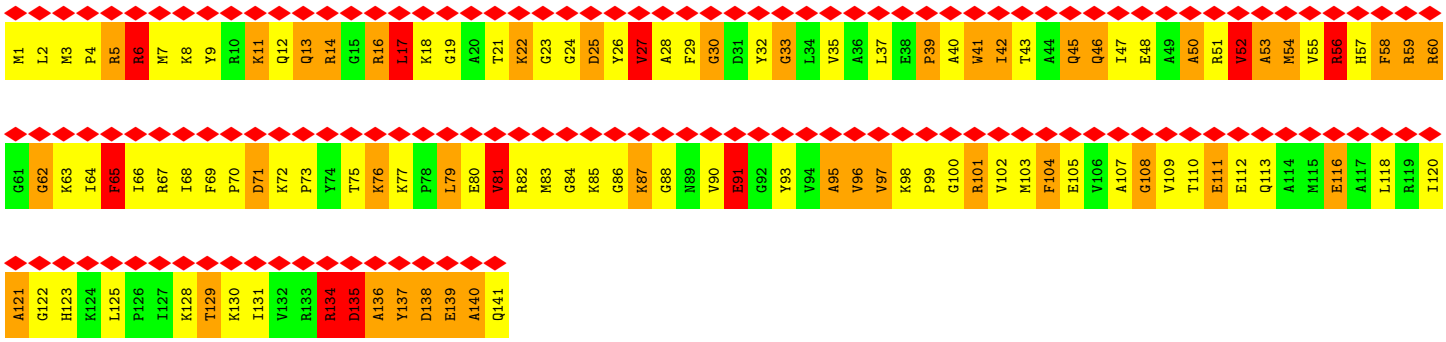




• Molecule 48: 50S RIBOSOMAL PROTEIN L16

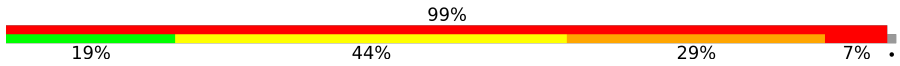
Chain BQ:

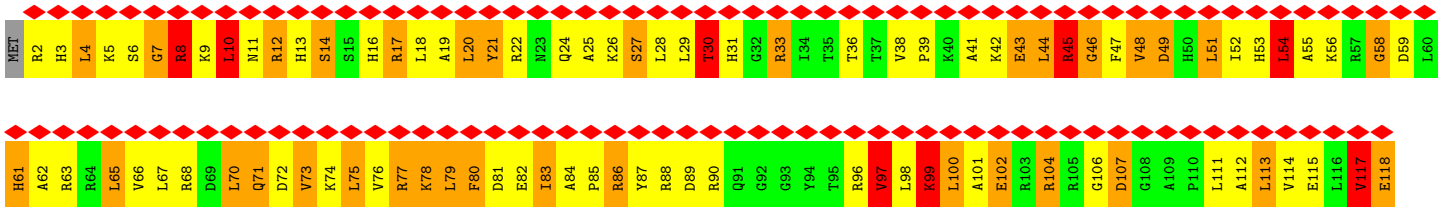




• Molecule 49: 50S RIBOSOMAL PROTEIN L17

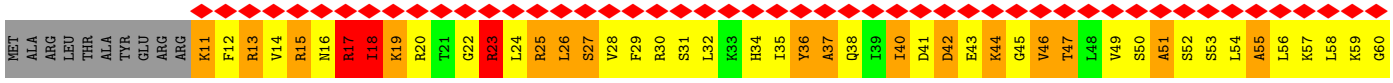
Chain BR:

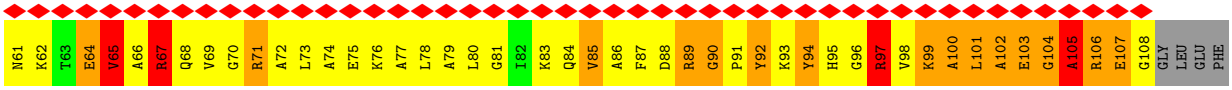




• Molecule 50: 50S RIBOSOMAL PROTEIN L18

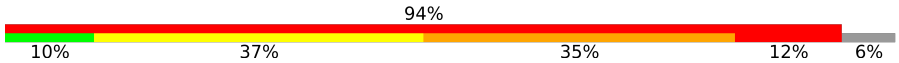
Chain BS:

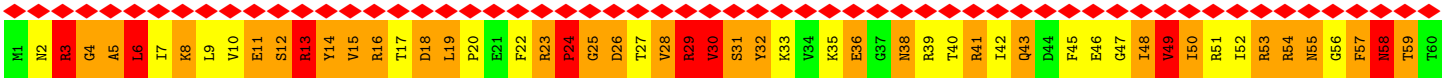


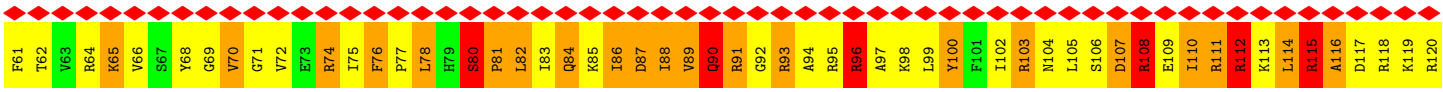


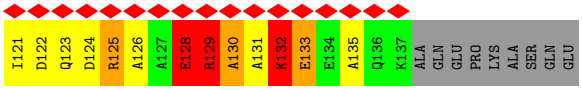
• Molecule 51: 50S RIBOSOMAL PROTEIN L19

Chain BT:



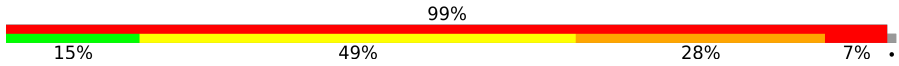


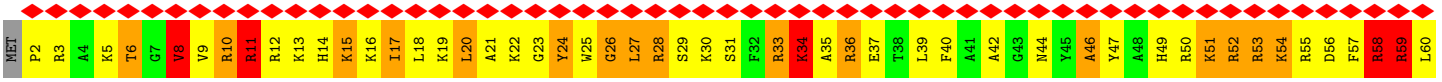


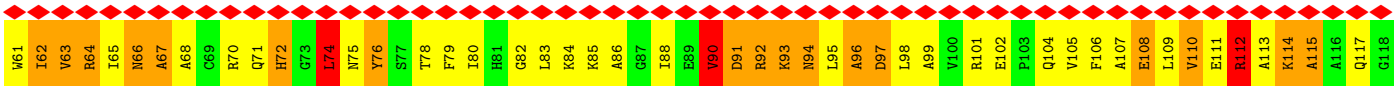


• Molecule 52: 50S RIBOSOMAL PROTEIN L20

Chain BU:

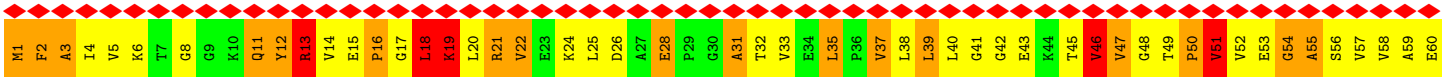


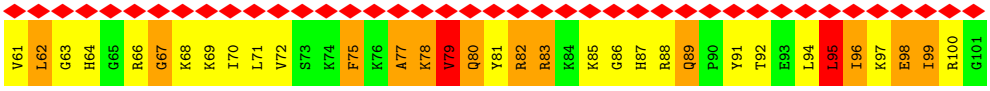




• Molecule 53: 50S RIBOSOMAL PROTEIN L21

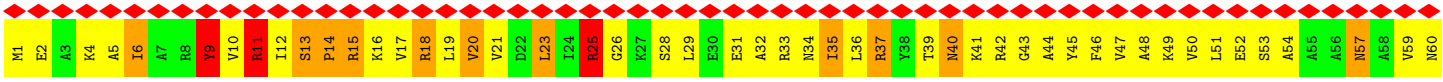
Chain BV:

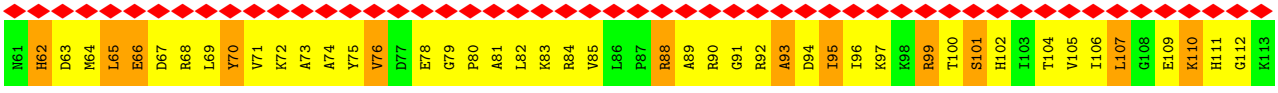




• Molecule 54: 50S RIBOSOMAL PROTEIN L22

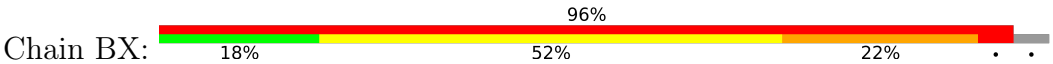
Chain BW:

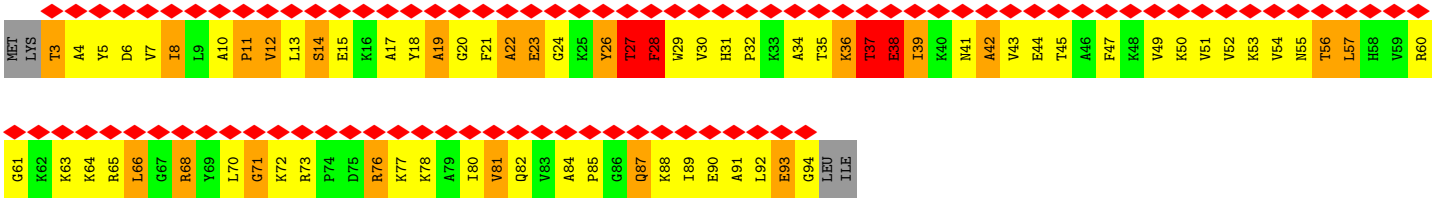




• Molecule 55: 50S RIBOSOMAL PROTEIN L23

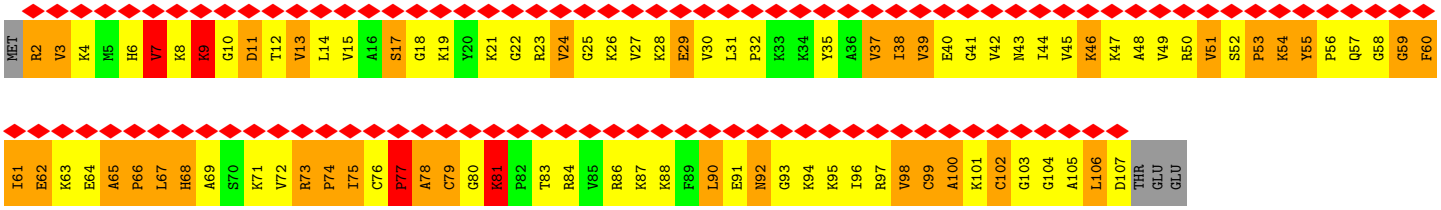
Chain BX:





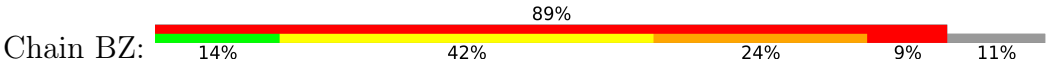
• Molecule 56: 50S RIBOSOMAL PROTEIN L24

Chain BY:



• Molecule 57: 50S RIBOSOMAL PROTEIN L25

Chain BZ:



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	11.899	Depositor
Minimum map value	-4.902	Depositor
Average map value	0.213	Depositor
Map value standard deviation	0.884	Depositor
Recommended contour level	2.5	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 (i)

5.1 Standard geometry (i)

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	84/36190 (0.2%)	1.41	346/56486 (0.6%)
2	AB	1.81	23/1935 (1.2%)	1.80	45/2609 (1.7%)
3	AC	2.05	33/1636 (2.0%)	1.88	38/2205 (1.7%)
4	AD	1.84	21/1733 (1.2%)	1.81	35/2318 (1.5%)
5	AE	1.96	18/1162 (1.5%)	1.83	25/1564 (1.6%)
6	AF	1.85	13/856 (1.5%)	1.77	10/1154 (0.9%)
7	AG	1.80	14/1276 (1.1%)	1.88	32/1709 (1.9%)
8	AH	1.89	7/1136 (0.6%)	1.94	25/1527 (1.6%)
9	AI	2.00	12/1029 (1.2%)	2.47	27/1379 (2.0%)
10	AJ	1.84	7/807 (0.9%)	1.82	14/1085 (1.3%)
11	AK	1.91	8/900 (0.9%)	1.89	21/1213 (1.7%)
12	AL	1.86	10/986 (1.0%)	1.91	23/1320 (1.7%)
13	AM	1.80	9/998 (0.9%)	1.87	23/1336 (1.7%)
14	AN	1.91	4/501 (0.8%)	1.92	11/664 (1.7%)
15	AO	1.95	12/745 (1.6%)	1.73	10/992 (1.0%)
16	AP	1.95	9/716 (1.3%)	1.84	14/963 (1.5%)
17	AQ	1.87	12/836 (1.4%)	1.81	19/1117 (1.7%)
18	AR	1.95	12/579 (2.1%)	1.89	15/768 (2.0%)
19	AS	1.70	3/642 (0.5%)	1.77	11/865 (1.3%)
20	AT	1.87	13/765 (1.7%)	1.81	12/1007 (1.2%)
21	AU	1.80	3/212 (1.4%)	1.84	4/277 (1.4%)
22	AV	1.60	4/1832 (0.2%)	1.38	11/2855 (0.4%)
23	AX	1.56	2/257 (0.8%)	1.53	6/398 (1.5%)
24	AY	1.81	66/5312 (1.2%)	1.85	114/7193 (1.6%)
25	B0	1.76	4/671 (0.6%)	1.97	21/892 (2.4%)
26	B1	1.77	9/738 (1.2%)	1.91	19/981 (1.9%)
27	B2	1.77	5/600 (0.8%)	1.86	13/793 (1.6%)
28	B3	1.93	7/472 (1.5%)	1.90	11/634 (1.7%)
29	B4	1.63	3/460 (0.7%)	2.24	18/621 (2.9%)
30	B5	1.70	4/473 (0.8%)	1.95	13/639 (2.0%)
31	B6	1.64	1/440 (0.2%)	2.07	17/586 (2.9%)
32	B7	1.85	3/426 (0.7%)	1.98	14/561 (2.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	B8	1.84	5/515 (1.0%)	1.88	14/679 (2.1%)
34	B9	1.81	3/310 (1.0%)	1.83	4/407 (1.0%)
35	BA	1.57	160/69972 (0.2%)	1.39	586/109237 (0.5%)
36	BB	1.58	9/2853 (0.3%)	1.38	16/4451 (0.4%)
37	BC	1.78	19/1774 (1.1%)	1.87	36/2391 (1.5%)
38	BD	1.86	33/2195 (1.5%)	1.96	59/2955 (2.0%)
39	BE	1.81	17/1596 (1.1%)	1.84	31/2153 (1.4%)
40	BF	1.84	24/1658 (1.4%)	1.88	36/2244 (1.6%)
41	BG	1.83	17/1499 (1.1%)	2.29	40/2016 (2.0%)
42	BH	1.70	7/1292 (0.5%)	1.86	32/1744 (1.8%)
43	BK	1.69	7/1044 (0.7%)	1.86	23/1416 (1.6%)
44	BL	1.45	1/478 (0.2%)	1.89	9/640 (1.4%)
45	BN	1.75	10/1131 (0.9%)	1.94	31/1525 (2.0%)
46	BO	1.93	9/943 (1.0%)	1.89	24/1269 (1.9%)
47	BP	1.87	11/1131 (1.0%)	1.99	33/1504 (2.2%)
48	BQ	1.89	22/1143 (1.9%)	1.84	25/1527 (1.6%)
49	BR	1.83	13/974 (1.3%)	1.76	22/1302 (1.7%)
50	BS	1.80	7/778 (0.9%)	1.87	12/1036 (1.2%)
51	BT	1.74	11/1155 (1.0%)	2.00	35/1542 (2.3%)
52	BU	1.90	14/975 (1.4%)	1.80	15/1297 (1.2%)
53	BV	1.66	6/790 (0.8%)	1.82	11/1057 (1.0%)
54	BW	1.82	4/907 (0.4%)	1.86	20/1216 (1.6%)
55	BX	1.83	6/739 (0.8%)	1.80	13/993 (1.3%)
56	BY	1.67	4/823 (0.5%)	1.77	9/1098 (0.8%)
57	BZ	1.87	21/1499 (1.4%)	1.83	25/2035 (1.2%)
All	All	1.67	875/165495 (0.5%)	1.56	2178/246445 (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	1	111
2	AB	0	10
3	AC	0	1
4	AD	0	14
5	AE	0	3
6	AF	0	5
7	AG	0	11
8	AH	0	8
9	AI	0	9

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Mol	Chain	#Chirality outliers	#Planarity outliers
10	AJ	0	3
11	AK	0	3
12	AL	0	3
13	AM	0	6
14	AN	0	3
15	AO	0	2
16	AP	0	2
18	AR	0	1
20	AT	0	7
21	AU	0	1
22	AV	0	4
23	AX	0	2
24	AY	0	19
25	B0	0	3
26	B1	0	3
27	B2	0	5
28	B3	0	4
29	B4	0	1
30	B5	0	1
31	B6	0	3
32	B7	0	2
33	B8	0	3
35	BA	2	161
36	BB	0	2
37	BC	0	7
38	BD	0	8
39	BE	0	6
40	BF	0	4
41	BG	0	4
42	BH	0	5
43	BK	0	5
44	BL	0	3
45	BN	0	5
46	BO	0	4
47	BP	0	6
48	BQ	0	4
49	BR	0	3
50	BS	0	3
51	BT	0	10
52	BU	0	4
53	BV	0	3
54	BW	0	5

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Mol	Chain	#Chirality outliers	#Planarity outliers
55	BX	0	1
56	BY	0	2
57	BZ	0	6
All	All	3	514

All (875) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	AI	53	VAL	C-N	14.74	1.54	1.33
9	AI	104	ARG	C-N	13.93	1.53	1.33
41	BG	112	PRO	C-N	13.32	1.53	1.33
3	AC	167	TRP	CA-C	-10.25	1.48	1.53
3	AC	164	ARG	CA-C	-10.05	1.48	1.53
16	AP	16	HIS	CA-C	-9.61	1.44	1.53
46	BO	95	GLY	N-CA	-8.81	1.37	1.44
26	B1	11	ARG	C-O	-8.46	1.15	1.24
18	AR	46	GLU	CA-C	-8.37	1.44	1.52
38	BD	241	PRO	N-CA	-8.18	1.41	1.47
20	AT	32	ALA	C-O	-8.01	1.14	1.24
24	AY	32	ILE	C-O	-7.88	1.15	1.24
3	AC	64	VAL	C-O	-7.87	1.16	1.24
6	AF	72	VAL	C-O	-7.85	1.15	1.24
24	AY	414	GLU	C-O	-7.83	1.15	1.24
38	BD	8	PRO	CA-CB	-7.70	1.48	1.53
45	BN	124	ALA	CA-CB	-7.62	1.43	1.52
24	AY	366	VAL	CA-C	-7.60	1.43	1.52
41	BG	159	VAL	CA-CB	-7.52	1.44	1.54
1	AA	1219	U	C4'-C3'	-7.51	1.41	1.52
18	AR	46	GLU	N-CA	-7.49	1.37	1.46
57	BZ	35	ARG	N-CA	-7.45	1.36	1.46
9	AI	92	TYR	CA-C	-7.44	1.45	1.53
1	AA	534	U	C1'-N1	-7.37	1.37	1.48
24	AY	331	TYR	CA-C	-7.34	1.45	1.52
57	BZ	93	ASP	C-O	-7.32	1.16	1.24
41	BG	86	MET	C-O	-7.30	1.20	1.23
35	BA	1865	G	C2'-O2'	-7.27	1.31	1.42
7	AG	18	TYR	CA-CB	-7.25	1.43	1.54
57	BZ	175	VAL	C-O	-7.22	1.15	1.24
3	AC	198	VAL	CA-CB	-7.20	1.44	1.54
40	BF	17	ARG	C-O	-7.17	1.16	1.23
40	BF	192	LEU	N-CA	-7.16	1.37	1.46
1	AA	1272	G	C2'-O2'	-7.15	1.31	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	AK	59	TYR	N-CA	-7.15	1.37	1.46
18	AR	86	VAL	C-O	-7.14	1.16	1.24
3	AC	88	ARG	C-N	-7.13	1.24	1.33
4	AD	198	VAL	CA-CB	-7.09	1.45	1.54
7	AG	48	LYS	C-N	-7.09	1.26	1.33
46	BO	49	ARG	C-O	-7.09	1.15	1.24
3	AC	142	MET	C-O	-7.08	1.15	1.24
48	BQ	68	ILE	CA-CB	-7.06	1.43	1.54
52	BU	94	ASN	CA-C	-7.05	1.43	1.52
33	B8	55	ALA	N-CA	-7.01	1.37	1.46
2	AB	107	THR	C-N	-7.01	1.25	1.34
39	BE	197	ILE	C-O	-6.98	1.16	1.24
31	B6	48	VAL	N-CA	-6.97	1.37	1.46
47	BP	114	ILE	N-CA	-6.92	1.37	1.46
51	BT	31	SER	CA-CB	-6.92	1.45	1.54
50	BS	65	VAL	C-O	-6.90	1.16	1.24
13	AM	103	THR	CA-CB	-6.89	1.44	1.53
1	AA	1153	C	O3'-P	-6.88	1.50	1.61
57	BZ	151	HIS	CD2-NE2	-6.88	1.30	1.37
40	BF	89	VAL	CA-C	-6.87	1.44	1.52
35	BA	1383	C	C4'-O4'	-6.87	1.35	1.45
16	AP	65	GLN	C-O	-6.86	1.18	1.24
32	B7	42	LEU	N-CA	-6.86	1.37	1.46
8	AH	37	ARG	NE-CZ	-6.82	1.25	1.33
1	AA	1228	C	O3'-P	-6.81	1.50	1.61
12	AL	125	PRO	CA-CB	-6.79	1.44	1.53
24	AY	527	ASN	C-O	-6.79	1.16	1.23
47	BP	90	ARG	C-N	-6.78	1.24	1.33
7	AG	120	ILE	CA-C	-6.75	1.44	1.52
46	BO	4	PRO	CA-C	-6.74	1.44	1.52
48	BQ	96	VAL	CA-CB	-6.74	1.46	1.53
3	AC	108	ASN	C-O	-6.74	1.19	1.25
38	BD	137	PRO	CA-C	-6.73	1.44	1.52
24	AY	551	GLN	C-O	-6.71	1.15	1.24
27	B2	69	ARG	C-O	-6.68	1.16	1.24
18	AR	75	ILE	N-CA	-6.68	1.38	1.46
21	AU	14	TRP	NE1-CE2	-6.67	1.30	1.37
43	BK	52	ILE	C-O	-6.67	1.16	1.24
38	BD	201	HIS	N-CA	-6.67	1.37	1.46
6	AF	27	GLN	N-CA	-6.66	1.37	1.46
35	BA	1818	U	C5'-C4'	-6.66	1.41	1.51
52	BU	105	VAL	CA-CB	-6.65	1.46	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	AD	67	ILE	CA-C	-6.64	1.45	1.52
48	BQ	93	TYR	C-N	-6.63	1.27	1.33
15	AO	38	ARG	CA-C	-6.63	1.44	1.52
40	BF	36	VAL	N-CA	-6.62	1.38	1.46
30	B5	48	GLU	C-O	-6.61	1.17	1.23
8	AH	60	ARG	N-CA	-6.59	1.38	1.46
8	AH	118	VAL	C-O	-6.57	1.16	1.24
35	BA	1347	G	C5'-C4'	-6.55	1.41	1.51
39	BE	25	VAL	N-CA	-6.53	1.38	1.46
52	BU	33	ARG	NE-CZ	-6.51	1.25	1.33
48	BQ	121	ALA	N-CA	-6.49	1.38	1.46
24	AY	128	TYR	N-CA	-6.49	1.38	1.46
24	AY	322	VAL	CA-CB	-6.48	1.45	1.54
51	BT	68	TYR	C-N	-6.47	1.25	1.33
46	BO	111	PHE	CA-C	-6.46	1.46	1.53
1	AA	787	A	O3'-P	-6.42	1.51	1.61
24	AY	573	HIS	CE1-NE2	-6.42	1.26	1.32
25	B0	41	ARG	C-O	-6.42	1.18	1.23
18	AR	55	ARG	CA-C	-6.41	1.47	1.52
20	AT	15	ARG	C-N	-6.41	1.25	1.33
24	AY	201	ILE	CA-CB	6.41	1.64	1.54
1	AA	728	A	O5'-C5'	-6.40	1.32	1.42
5	AE	48	ALA	CA-CB	-6.40	1.44	1.54
26	B1	31	GLY	C-O	-6.40	1.15	1.23
1	AA	1483	A	C4'-O4'	-6.39	1.35	1.45
2	AB	127	ILE	C-O	-6.39	1.17	1.24
24	AY	456	GLU	CA-C	-6.39	1.44	1.52
2	AB	84	GLU	C-O	-6.38	1.16	1.24
3	AC	75	VAL	C-O	-6.36	1.16	1.24
41	BG	13	GLU	N-CA	-6.34	1.38	1.46
5	AE	54	ALA	N-CA	-6.34	1.39	1.46
41	BG	149	VAL	CA-CB	-6.34	1.46	1.53
35	BA	2398	U	C5'-C4'	-6.33	1.41	1.51
35	BA	2569	G	C4'-C3'	-6.33	1.43	1.52
12	AL	114	LYS	N-CA	-6.33	1.39	1.46
35	BA	2689	U	C4'-C3'	-6.33	1.43	1.53
3	AC	153	VAL	CA-CB	-6.32	1.45	1.55
12	AL	100	ILE	CA-CB	-6.31	1.46	1.54
5	AE	88	LYS	C-O	-6.30	1.16	1.24
12	AL	6	THR	CA-C	-6.30	1.44	1.52
2	AB	71	VAL	CA-CB	-6.29	1.46	1.54
24	AY	199	ILE	N-CA	-6.29	1.41	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	AY	460	GLU	C-O	-6.29	1.16	1.24
7	AG	4	ARG	C-O	-6.29	1.17	1.23
39	BE	138	PRO	CA-CB	-6.29	1.45	1.53
42	BH	122	THR	C-O	-6.29	1.16	1.24
1	AA	1385	G	C1'-N9	-6.29	1.38	1.48
35	BA	271(Y)	U	C2'-O2'	-6.28	1.32	1.41
35	BA	2073	C	C2'-O2'	-6.28	1.33	1.42
35	BA	271(U)	G	P-O5'	-6.28	1.50	1.59
3	AC	108	ASN	N-CA	-6.28	1.40	1.46
48	BQ	116	GLU	C-N	-6.27	1.26	1.33
2	AB	213	LEU	N-CA	-6.27	1.38	1.46
35	BA	651	G	O4'-C1'	-6.27	1.32	1.41
38	BD	220	HIS	N-CA	-6.27	1.38	1.46
47	BP	125	VAL	CA-C	-6.27	1.45	1.52
36	BB	44	G	C1'-N9	-6.26	1.38	1.48
49	BR	81	ASP	CA-C	-6.25	1.44	1.52
11	AK	33	THR	N-CA	-6.24	1.37	1.45
38	BD	51	VAL	C-O	-6.24	1.17	1.24
9	AI	4	TYR	N-CA	-6.24	1.37	1.46
18	AR	64	ARG	C-N	-6.22	1.27	1.34
37	BC	190	ILE	C-N	-6.22	1.25	1.33
17	AQ	91	ARG	C-O	-6.22	1.16	1.24
52	BU	63	VAL	CA-CB	-6.22	1.46	1.54
2	AB	153	ARG	CA-C	-6.21	1.44	1.52
17	AQ	24	GLU	CA-C	-6.20	1.46	1.53
35	BA	1917	U	O3'-P	-6.19	1.51	1.61
52	BU	24	TYR	C-N	-6.19	1.25	1.33
15	AO	77	ARG	C-N	-6.19	1.26	1.33
1	AA	1299	A	C5'-C4'	-6.19	1.42	1.51
8	AH	63	LEU	CA-C	-6.18	1.44	1.53
16	AP	26	ARG	NE-CZ	-6.18	1.26	1.33
57	BZ	69	THR	CA-C	-6.18	1.45	1.52
37	BC	47	LYS	N-CA	-6.18	1.38	1.46
38	BD	253	GLN	CA-C	-6.18	1.44	1.53
5	AE	88	LYS	CA-C	-6.18	1.45	1.52
22	AV	32	C	P-O5'	-6.17	1.50	1.59
37	BC	88	GLU	N-CA	-6.17	1.38	1.46
4	AD	145	GLU	CA-C	-6.17	1.45	1.52
35	BA	827	U	O3'-P	-6.17	1.51	1.61
3	AC	24	ALA	CA-CB	-6.17	1.44	1.53
35	BA	65	C	C3'-C2'	-6.16	1.43	1.52
3	AC	83	ARG	C-O	-6.16	1.18	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	BD	144	ALA	CA-C	-6.15	1.45	1.53
57	BZ	38	TYR	C-O	-6.15	1.16	1.24
2	AB	136	VAL	CA-CB	-6.14	1.46	1.54
23	AX	16	A	P-O5'	-6.14	1.50	1.59
24	AY	507	TYR	CA-C	-6.13	1.46	1.52
4	AD	13	ARG	CA-C	-6.13	1.44	1.52
39	BE	176	ILE	C-O	-6.12	1.16	1.24
35	BA	2223	G	C3'-C2'	-6.12	1.43	1.52
24	AY	558	PHE	C-O	-6.11	1.18	1.24
41	BG	21	ARG	N-CA	-6.11	1.39	1.46
5	AE	131	ILE	CA-CB	-6.10	1.47	1.54
20	AT	14	LYS	C-O	-6.10	1.16	1.24
24	AY	167	PRO	CA-C	-6.10	1.44	1.52
49	BR	90	ARG	N-CA	-6.10	1.38	1.46
15	AO	56	LEU	N-CA	-6.08	1.39	1.46
10	AJ	76	ASN	C-O	-6.08	1.17	1.24
28	B3	19	GLN	N-CA	-6.08	1.38	1.46
35	BA	1741	A	C4'-C3'	-6.08	1.43	1.52
48	BQ	50	ALA	C-O	-6.08	1.16	1.24
24	AY	202	PRO	CA-C	-6.08	1.46	1.52
6	AF	57	GLN	CA-C	-6.08	1.45	1.52
57	BZ	72	ARG	NE-CZ	-6.07	1.26	1.33
8	AH	92	ARG	CA-C	-6.06	1.44	1.53
48	BQ	42	ILE	CA-C	-6.06	1.45	1.52
52	BU	64	ARG	N-CA	-6.06	1.39	1.46
24	AY	590	ILE	N-CA	-6.06	1.39	1.46
32	B7	15	THR	C-O	-6.05	1.17	1.24
6	AF	90	VAL	N-CA	-6.04	1.39	1.46
9	AI	72	GLY	N-CA	-6.04	1.38	1.45
25	B0	61	ALA	CA-CB	-6.03	1.45	1.53
38	BD	210	GLY	C-O	-6.03	1.17	1.23
26	B1	82	LEU	C-O	-6.02	1.17	1.23
24	AY	555	LEU	CA-C	-6.02	1.45	1.53
11	AK	65	ALA	C-N	-6.01	1.25	1.33
3	AC	133	ALA	CA-CB	-6.01	1.44	1.53
47	BP	16	ARG	C-O	-6.01	1.16	1.24
51	BT	64	ARG	C-O	-6.01	1.16	1.24
12	AL	24	VAL	C-O	-6.00	1.16	1.24
39	BE	144	ARG	NE-CZ	-6.00	1.26	1.33
13	AM	97	PRO	C-O	-6.00	1.16	1.23
24	AY	319	ASP	CA-C	-5.99	1.44	1.52
35	BA	2033	A	O4'-C1'	-5.99	1.32	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	BQ	57	HIS	CD2-NE2	-5.99	1.31	1.37
1	AA	921	U	O3'-P	-5.98	1.52	1.61
2	AB	153	ARG	NE-CZ	-5.98	1.26	1.33
5	AE	78	HIS	C-O	-5.98	1.16	1.24
13	AM	56	LEU	C-O	-5.98	1.17	1.23
40	BF	69	HIS	CE1-NE2	-5.98	1.26	1.32
35	BA	614	U	O3'-P	-5.98	1.53	1.61
53	BV	79	VAL	CA-CB	-5.97	1.48	1.54
5	AE	52	PRO	CA-CB	-5.97	1.45	1.53
18	AR	32	ARG	C-N	-5.97	1.25	1.33
12	AL	44	THR	C-O	-5.96	1.16	1.24
1	AA	1058	G	C4'-O4'	-5.96	1.36	1.45
41	BG	121	ASN	CA-CB	-5.95	1.45	1.53
3	AC	149	ALA	C-O	-5.94	1.16	1.23
25	B0	39	ARG	C-O	-5.94	1.16	1.24
48	BQ	111	GLU	C-O	-5.94	1.16	1.24
1	AA	327	A	C2'-O2'	-5.94	1.32	1.41
38	BD	220	HIS	CA-C	-5.93	1.45	1.52
45	BN	43	THR	N-CA	-5.92	1.37	1.46
50	BS	51	ALA	CA-CB	-5.92	1.43	1.53
24	AY	16	GLY	CA-C	-5.92	1.47	1.52
1	AA	310	G	C5'-C4'	-5.91	1.42	1.51
1	AA	1147	C	C4'-O4'	-5.91	1.36	1.45
13	AM	35	GLU	C-O	-5.90	1.17	1.24
40	BF	160	ASN	CA-CB	-5.90	1.45	1.53
24	AY	348	ARG	CD-NE	-5.89	1.38	1.46
12	AL	104	VAL	CA-C	-5.89	1.45	1.52
41	BG	22	ARG	NE-CZ	5.89	1.39	1.33
17	AQ	3	LYS	CA-C	-5.88	1.45	1.52
41	BG	111	LEU	C-O	-5.88	1.18	1.24
24	AY	259	PHE	CA-C	-5.88	1.44	1.52
47	BP	115	LEU	C-O	-5.88	1.18	1.24
1	AA	189(L)	G	C2'-O2'	-5.88	1.33	1.42
39	BE	66	HIS	CD2-NE2	-5.87	1.31	1.37
37	BC	4	HIS	CE1-NE2	-5.87	1.26	1.32
1	AA	394	G	O3'-P	-5.86	1.52	1.61
2	AB	165	VAL	CA-CB	-5.86	1.46	1.54
9	AI	35	GLU	CA-C	-5.86	1.45	1.52
6	AF	17	SER	CA-C	-5.85	1.45	1.52
4	AD	206	PHE	C-N	-5.85	1.26	1.33
1	AA	1504	G	C3'-O3'	-5.85	1.34	1.43
5	AE	76	ILE	CA-C	5.84	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	273	A	C2'-O2'	-5.84	1.33	1.42
1	AA	600	C	C4'-O4'	-5.84	1.36	1.45
10	AJ	75	ILE	C-O	-5.83	1.17	1.24
10	AJ	98	ILE	CA-CB	-5.83	1.47	1.54
1	AA	542	G	C5'-C4'	-5.83	1.42	1.51
18	AR	71	LYS	CA-C	-5.83	1.45	1.52
57	BZ	156	LYS	N-CA	-5.83	1.39	1.46
28	B3	35	ARG	CD-NE	-5.82	1.38	1.46
39	BE	90	THR	CA-C	-5.82	1.45	1.52
40	BF	173	VAL	CA-CB	-5.82	1.47	1.54
52	BU	9	VAL	C-N	-5.82	1.26	1.33
40	BF	85	GLY	C-N	-5.82	1.28	1.33
40	BF	165	ARG	C-O	-5.82	1.16	1.24
20	AT	55	ILE	N-CA	-5.81	1.39	1.46
1	AA	104	G	C5'-C4'	-5.80	1.42	1.51
1	AA	1503	A	O4'-C1'	-5.80	1.33	1.42
40	BF	35	GLU	C-N	-5.80	1.26	1.33
1	AA	559	A	O3'-P	-5.79	1.52	1.61
19	AS	21	GLU	C-O	-5.79	1.16	1.24
5	AE	92	LYS	CA-CB	-5.78	1.46	1.53
15	AO	18	PHE	CA-C	-5.78	1.45	1.52
35	BA	2261	C	C4'-O4'	-5.78	1.36	1.45
24	AY	179	ASP	CA-C	-5.78	1.45	1.52
53	BV	35	LEU	C-O	-5.78	1.16	1.24
35	BA	1818	U	O3'-P	-5.77	1.52	1.61
32	B7	22	MET	C-N	-5.77	1.26	1.33
35	BA	145	G	C1'-N9	-5.77	1.39	1.48
35	BA	2032	G	C4'-O4'	-5.77	1.37	1.45
35	BA	2604	U	C1'-N1	-5.77	1.39	1.48
46	BO	41	ALA	C-O	-5.77	1.17	1.23
42	BH	147	ASN	C-O	-5.77	1.16	1.24
4	AD	178	VAL	C-O	-5.76	1.17	1.24
35	BA	2157	G	C2'-O2'	-5.76	1.33	1.42
24	AY	266	ASN	CA-C	-5.76	1.48	1.53
5	AE	91	LEU	C-N	-5.75	1.27	1.33
27	B2	30	ARG	C-O	-5.75	1.16	1.24
35	BA	2704	C	P-O5'	-5.75	1.51	1.59
45	BN	38	HIS	CB-CG	-5.75	1.42	1.50
41	BG	37	VAL	C-O	-5.75	1.18	1.24
7	AG	69	VAL	C-O	-5.74	1.17	1.24
16	AP	54	GLU	C-N	-5.74	1.26	1.33
24	AY	328	ILE	CA-C	5.74	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
40	BF	63	LYS	N-CA	-5.74	1.39	1.46
55	BX	38	GLU	C-N	-5.74	1.26	1.33
35	BA	2583	G	C4'-O4'	-5.74	1.36	1.45
2	AB	131	PRO	N-CA	-5.74	1.40	1.47
38	BD	61	LEU	CA-CB	-5.74	1.45	1.53
40	BF	137	LYS	C-N	-5.74	1.26	1.33
54	BW	48	ALA	C-N	-5.74	1.26	1.34
1	AA	1009	G	C3'-C2'	-5.73	1.44	1.52
35	BA	1818	U	P-O5'	-5.73	1.51	1.59
51	BT	53	ARG	NE-CZ	-5.73	1.26	1.33
38	BD	76	PRO	CA-C	-5.72	1.45	1.52
24	AY	298	VAL	N-CA	-5.72	1.39	1.46
34	B9	23	VAL	CA-C	-5.72	1.46	1.53
52	BU	108	GLU	C-O	-5.72	1.17	1.24
35	BA	2671	A	C2'-C1'	-5.72	1.44	1.53
38	BD	63	ARG	CZ-NH2	-5.71	1.26	1.33
22	AV	57	A	C1'-N9	-5.71	1.39	1.48
40	BF	86	GLY	N-CA	-5.70	1.39	1.44
39	BE	86	PRO	C-N	-5.70	1.25	1.33
50	BS	76	LYS	C-N	-5.70	1.26	1.34
52	BU	54	LYS	C-N	-5.70	1.25	1.33
46	BO	2	ILE	CA-CB	-5.70	1.47	1.54
49	BR	68	ARG	CZ-NH2	-5.70	1.26	1.33
24	AY	256	THR	C-O	-5.69	1.19	1.24
35	BA	1583	A	C3'-C2'	-5.69	1.44	1.52
45	BN	100	GLU	N-CA	-5.69	1.39	1.46
25	B0	80	HIS	ND1-CE1	-5.68	1.26	1.32
1	AA	1398	A	C4'-C3'	-5.68	1.44	1.52
1	AA	945	G	C3'-C2'	-5.68	1.44	1.52
27	B2	6	VAL	C-O	-5.68	1.17	1.24
54	BW	95	ILE	CA-CB	-5.68	1.47	1.54
4	AD	35	ARG	C-O	-5.67	1.16	1.23
35	BA	2428	G	C4'-C3'	-5.67	1.44	1.52
37	BC	159	ALA	N-CA	-5.67	1.39	1.46
22	AV	38	A	C3'-O3'	-5.67	1.33	1.42
35	BA	1502	C	C3'-O3'	-5.67	1.33	1.42
40	BF	132	VAL	N-CA	-5.67	1.39	1.46
24	AY	40	HIS	CG-ND1	-5.67	1.32	1.38
3	AC	151	VAL	CA-CB	-5.66	1.45	1.55
35	BA	1046	A	C1'-N9	-5.66	1.39	1.48
48	BQ	42	ILE	CA-CB	-5.66	1.47	1.54
12	AL	126	LYS	N-CA	-5.66	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	AQ	55	ASP	CA-C	-5.66	1.45	1.52
24	AY	132	ARG	C-N	-5.66	1.25	1.33
35	BA	856	C	C2'-O2'	-5.66	1.33	1.42
38	BD	113	VAL	CA-CB	-5.66	1.48	1.54
1	AA	1095	U	C2'-O2'	-5.65	1.33	1.42
2	AB	108	ILE	CA-CB	-5.65	1.48	1.54
26	B1	38	SER	C-O	5.65	1.30	1.23
35	BA	762	U	C4'-O4'	-5.65	1.37	1.45
2	AB	64	ARG	NE-CZ	-5.65	1.26	1.33
41	BG	153	ARG	NE-CZ	5.65	1.39	1.33
51	BT	86	ILE	CA-C	-5.65	1.45	1.52
35	BA	2294	C	C5'-C4'	-5.64	1.42	1.51
36	BB	95	C	O3'-P	-5.64	1.52	1.61
1	AA	1293	G	C2'-O2'	-5.64	1.33	1.42
35	BA	1108	U	P-O5'	-5.64	1.51	1.59
38	BD	189	CYS	CA-C	-5.63	1.45	1.52
6	AF	97	PHE	N-CA	-5.63	1.39	1.46
39	BE	24	THR	CB-OG1	-5.63	1.34	1.43
3	AC	116	VAL	C-O	-5.63	1.17	1.24
24	AY	164	MET	CA-C	-5.63	1.45	1.52
35	BA	727	A	C2'-O2'	-5.63	1.34	1.42
35	BA	1876	A	C4'-O4'	-5.63	1.37	1.45
40	BF	26	ALA	N-CA	-5.63	1.39	1.46
17	AQ	6	LEU	CA-CB	-5.63	1.44	1.53
37	BC	188	ASP	CA-C	-5.63	1.45	1.52
42	BH	142	GLY	C-O	-5.62	1.16	1.23
38	BD	245	PRO	N-CD	-5.62	1.40	1.47
49	BR	33	ARG	NE-CZ	-5.62	1.26	1.33
35	BA	68	G	C2-N2	-5.62	1.23	1.34
10	AJ	20	ALA	N-CA	-5.61	1.39	1.46
37	BC	64	SER	N-CA	-5.61	1.39	1.46
24	AY	322	VAL	C-N	-5.61	1.25	1.33
35	BA	89	G	C4'-C3'	-5.61	1.44	1.52
20	AT	87	LYS	CA-C	-5.61	1.45	1.52
35	BA	1438	U	O3'-P	-5.61	1.52	1.61
35	BA	1523	U	C2'-C1'	-5.61	1.45	1.53
1	AA	826	C	O3'-P	-5.61	1.52	1.61
42	BH	53	GLU	CA-C	-5.60	1.45	1.53
18	AR	40	LEU	C-O	-5.60	1.17	1.24
43	BK	57	ILE	C-O	-5.60	1.17	1.23
49	BR	43	GLU	N-CA	-5.60	1.39	1.46
35	BA	1955	U	O5'-C5'	5.60	1.51	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	BB	100	A	C2'-O2'	-5.60	1.34	1.42
55	BX	52	VAL	CA-C	-5.60	1.45	1.53
3	AC	20	SER	CA-C	-5.60	1.45	1.52
35	BA	2513	G	C2'-O2'	-5.60	1.34	1.42
1	AA	1307	U	C1'-N1	-5.60	1.40	1.48
1	AA	948	C	C4'-C3'	-5.59	1.44	1.52
37	BC	218	THR	N-CA	-5.59	1.39	1.46
13	AM	58	GLU	C-O	-5.59	1.17	1.24
45	BN	123	TYR	C-N	-5.59	1.26	1.33
6	AF	69	GLU	C-O	-5.59	1.17	1.24
38	BD	86	PRO	N-CD	-5.59	1.40	1.47
1	AA	1208	C	C4'-O4'	-5.58	1.37	1.45
24	AY	315	LYS	CA-C	-5.58	1.46	1.52
1	AA	736	C	C4'-C3'	-5.58	1.44	1.52
3	AC	202	ILE	CA-CB	-5.58	1.47	1.54
4	AD	150	GLU	C-O	-5.58	1.17	1.24
24	AY	79	ILE	CA-CB	-5.58	1.47	1.54
35	BA	2861	G	C1'-N9	-5.58	1.39	1.48
9	AI	16	ARG	CA-C	-5.58	1.46	1.52
24	AY	409	ILE	C-O	-5.58	1.18	1.24
35	BA	451	C	O3'-P	-5.58	1.52	1.61
48	BQ	27	VAL	C-O	-5.58	1.17	1.24
35	BA	1229	G	P-OP1	-5.57	1.37	1.49
11	AK	82	VAL	C-O	-5.57	1.17	1.24
35	BA	44	G	O3'-P	-5.57	1.52	1.61
41	BG	94	LEU	N-CA	-5.57	1.39	1.46
35	BA	1141	U	C4'-O4'	-5.57	1.37	1.45
1	AA	716	A	C3'-C2'	-5.56	1.44	1.52
3	AC	29	TYR	C-O	-5.56	1.17	1.24
35	BA	2679	A	C2'-O2'	-5.56	1.34	1.42
38	BD	227	ASN	C-O	-5.56	1.19	1.24
1	AA	443	C	C1'-N1	-5.56	1.40	1.48
5	AE	108	ALA	CA-CB	-5.56	1.44	1.53
42	BH	74	ASN	CA-C	-5.56	1.45	1.52
35	BA	1426	G	C4'-O4'	-5.55	1.37	1.45
3	AC	189	ALA	N-CA	-5.55	1.39	1.46
38	BD	126	GLN	N-CA	-5.55	1.39	1.46
4	AD	17	VAL	CA-C	-5.55	1.45	1.52
6	AF	29	ALA	N-CA	-5.55	1.39	1.46
35	BA	1250	G	C4'-C3'	-5.55	1.44	1.53
52	BU	74	LEU	C-N	-5.54	1.25	1.33
3	AC	152	ILE	C-O	-5.54	1.17	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	AY	414	GLU	N-CA	-5.54	1.39	1.46
28	B3	19	GLN	C-O	-5.54	1.17	1.24
57	BZ	45	ASP	N-CA	-5.54	1.39	1.46
4	AD	194	LEU	C-O	-5.54	1.17	1.24
35	BA	606	U	C2'-O2'	-5.54	1.34	1.42
35	BA	1354	A	C1'-N9	-5.54	1.39	1.48
10	AJ	65	LEU	C-O	-5.54	1.18	1.23
1	AA	379	C	C1'-N1	-5.54	1.40	1.48
41	BG	121	ASN	N-CA	-5.53	1.39	1.45
29	B4	22	ILE	N-CA	-5.53	1.39	1.46
4	AD	153	ARG	CA-CB	-5.53	1.44	1.53
14	AN	46	GLU	CA-C	-5.53	1.45	1.52
1	AA	1264	C	C2'-O2'	-5.53	1.34	1.42
17	AQ	23	VAL	N-CA	-5.53	1.39	1.46
57	BZ	121	HIS	CB-CG	-5.53	1.42	1.50
35	BA	1764	G	C1'-N9	-5.52	1.39	1.48
1	AA	1308	U	C3'-O3'	-5.52	1.33	1.42
35	BA	991	C	O5'-C5'	-5.52	1.34	1.42
35	BA	2761	G	C2'-C1'	-5.52	1.45	1.53
35	BA	2868	A	C2'-O2'	-5.52	1.34	1.42
35	BA	2772	C	C3'-C2'	-5.51	1.44	1.52
18	AR	22	VAL	CA-C	-5.51	1.45	1.52
17	AQ	26	GLN	N-CA	-5.51	1.39	1.45
35	BA	606	U	O5'-C5'	-5.51	1.34	1.42
35	BA	2218	U	C2'-O2'	-5.51	1.34	1.42
24	AY	480	GLN	CA-C	-5.50	1.45	1.53
49	BR	56	LYS	N-CA	-5.50	1.40	1.46
2	AB	52	GLU	C-O	-5.50	1.17	1.24
55	BX	71	GLY	C-N	-5.50	1.26	1.33
1	AA	234	C	C5'-C4'	-5.50	1.43	1.51
6	AF	91	VAL	C-O	-5.50	1.17	1.23
35	BA	2329	G	C4'-O4'	-5.50	1.37	1.45
48	BQ	95	ALA	C-N	-5.50	1.28	1.33
3	AC	175	LEU	C-O	-5.49	1.17	1.24
26	B1	66	HIS	ND1-CE1	-5.49	1.27	1.32
35	BA	179	G	C1'-N9	-5.49	1.39	1.48
35	BA	487	C	O4'-C1'	-5.49	1.33	1.41
24	AY	228	MET	CA-C	-5.49	1.47	1.53
35	BA	2530	A	C1'-N9	-5.49	1.39	1.48
39	BE	82	ARG	NE-CZ	-5.49	1.27	1.33
48	BQ	39	PRO	C-O	-5.48	1.17	1.23
57	BZ	26	GLY	N-CA	-5.48	1.40	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	258	G	O3'-P	-5.47	1.52	1.61
1	AA	33	A	C3'-C2'	-5.47	1.44	1.52
35	BA	1431	U	C4'-C3'	-5.47	1.44	1.52
35	BA	1793	C	P-O5'	-5.47	1.51	1.59
35	BA	1932	A	C1'-N9	-5.47	1.39	1.48
48	BQ	33	GLY	CA-C	5.47	1.56	1.52
20	AT	36	LEU	C-O	-5.47	1.17	1.24
28	B3	43	ILE	C-O	-5.47	1.17	1.24
4	AD	121	VAL	CA-C	-5.47	1.46	1.52
35	BA	2625	G	C1'-N9	-5.46	1.39	1.48
15	AO	25	THR	C-O	-5.46	1.17	1.24
3	AC	147	LYS	N-CA	-5.46	1.39	1.46
13	AM	25	ILE	CA-CB	-5.46	1.47	1.54
40	BF	72	ARG	CA-C	-5.46	1.46	1.53
51	BT	116	ALA	CA-CB	-5.46	1.44	1.53
24	AY	108	PHE	CA-C	-5.45	1.46	1.52
35	BA	1655	A	C1'-N9	-5.45	1.39	1.48
45	BN	38	HIS	CG-CD2	-5.45	1.29	1.35
20	AT	51	GLU	CA-C	-5.45	1.44	1.52
1	AA	932	C	C3'-C2'	-5.45	1.44	1.52
24	AY	510	VAL	C-O	-5.45	1.17	1.23
35	BA	837	C	C3'-C2'	-5.45	1.44	1.52
1	AA	923	A	C5'-C4'	-5.44	1.43	1.51
40	BF	175	THR	C-O	-5.44	1.17	1.23
7	AG	68	ASN	C-O	-5.44	1.17	1.24
4	AD	49	ARG	NE-CZ	5.44	1.39	1.33
11	AK	71	LYS	C-O	-5.44	1.17	1.24
35	BA	218	A	C1'-N9	-5.44	1.39	1.48
42	BH	103	LEU	CA-C	-5.44	1.46	1.52
48	BQ	86	GLY	C-O	-5.44	1.16	1.23
48	BQ	57	HIS	C-O	-5.44	1.17	1.24
17	AQ	9	VAL	C-N	-5.43	1.27	1.33
17	AQ	62	SER	CA-C	-5.43	1.46	1.52
38	BD	142	VAL	N-CA	-5.43	1.40	1.46
15	AO	29	VAL	CA-CB	-5.42	1.47	1.54
24	AY	275	ALA	C-N	-5.42	1.26	1.33
35	BA	1665	A	C2'-C1'	-5.42	1.45	1.53
41	BG	82	LEU	CA-C	-5.42	1.45	1.52
16	AP	6	LEU	CA-C	-5.42	1.46	1.52
38	BD	117	VAL	C-N	-5.42	1.28	1.33
3	AC	138	VAL	CA-C	-5.42	1.46	1.52
1	AA	1237	C	C3'-C2'	-5.42	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	587	G	O3'-P	-5.41	1.53	1.61
50	BS	47	THR	C-O	-5.41	1.17	1.24
35	BA	1359	A	C1'-N9	-5.41	1.39	1.48
53	BV	83	ARG	C-N	-5.41	1.26	1.33
1	AA	898	G	C1'-N9	-5.41	1.39	1.48
38	BD	179	SER	CA-C	-5.40	1.45	1.52
6	AF	72	VAL	C-N	-5.40	1.26	1.33
36	BB	74	U	P-O5'	-5.40	1.51	1.59
1	AA	525	C	C3'-C2'	-5.40	1.44	1.52
1	AA	1413	A	C4'-O4'	-5.40	1.37	1.45
7	AG	75	VAL	N-CA	-5.40	1.39	1.46
16	AP	24	ALA	N-CA	-5.40	1.39	1.46
35	BA	1264	G	C1'-N9	-5.40	1.39	1.48
1	AA	313	A	C4'-C3'	-5.39	1.44	1.52
24	AY	185	ALA	C-O	-5.39	1.17	1.24
35	BA	27	G	C5'-C4'	-5.39	1.43	1.51
7	AG	126	ASP	C-O	-5.39	1.17	1.24
35	BA	2108	C	C2'-O2'	-5.39	1.34	1.42
2	AB	8	LYS	CA-C	-5.38	1.48	1.52
38	BD	204	ILE	CA-C	-5.38	1.46	1.52
24	AY	354	ARG	C-O	-5.38	1.17	1.23
7	AG	41	ARG	C-N	-5.38	1.26	1.33
49	BR	79	LEU	N-CA	-5.38	1.39	1.46
35	BA	173	G	C1'-N9	-5.38	1.39	1.48
35	BA	657	U	C2'-O2'	-5.38	1.34	1.42
35	BA	2647	U	C2'-C1'	-5.38	1.45	1.53
1	AA	1491	G	C2'-C1'	-5.38	1.45	1.53
7	AG	18	TYR	C-N	-5.37	1.27	1.33
1	AA	79	G	C1'-N9	-5.37	1.39	1.48
39	BE	163	GLU	C-O	-5.37	1.19	1.24
35	BA	79	G	C1'-N9	-5.37	1.39	1.48
38	BD	215	LEU	CA-CB	-5.37	1.44	1.53
35	BA	1356	G	C1'-N9	-5.36	1.40	1.48
3	AC	194	GLY	CA-C	-5.36	1.46	1.52
37	BC	164	PHE	C-N	-5.36	1.26	1.33
35	BA	2700	C	C4'-O4'	-5.36	1.37	1.45
35	BA	2735	G	C1'-N9	-5.36	1.40	1.48
36	BB	103	G	O5'-C5'	-5.36	1.34	1.42
37	BC	225	ILE	N-CA	-5.36	1.40	1.46
24	AY	675	HIS	CD2-NE2	-5.36	1.31	1.37
35	BA	2511	U	C4'-C3'	-5.36	1.44	1.52
52	BU	72	HIS	CD2-NE2	-5.36	1.31	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	55	G	C2'-O2'	-5.36	1.34	1.42
47	BP	130	PHE	C-O	-5.36	1.17	1.23
48	BQ	13	GLN	C-N	-5.36	1.26	1.33
51	BT	4	GLY	N-CA	-5.36	1.39	1.45
1	AA	852	G	C4'-C3'	-5.35	1.44	1.52
35	BA	1985	G	C4'-O4'	-5.35	1.37	1.45
35	BA	614(A)	U	C2'-C1'	-5.35	1.45	1.53
6	AF	51	PRO	CA-CB	-5.35	1.46	1.53
35	BA	452	G	C1'-N9	-5.35	1.40	1.48
35	BA	1418	G	C1'-N9	-5.35	1.40	1.48
1	AA	545	C	C1'-N1	-5.34	1.40	1.48
2	AB	12	GLU	N-CA	-5.34	1.39	1.46
47	BP	21	ARG	NE-CZ	-5.34	1.27	1.33
57	BZ	96	VAL	CA-CB	-5.34	1.46	1.54
24	AY	20	HIS	C-O	-5.34	1.17	1.23
6	AF	11	ASN	C-O	-5.34	1.17	1.24
20	AT	45	GLN	N-CA	-5.34	1.40	1.46
4	AD	55	ALA	N-CA	-5.34	1.39	1.46
35	BA	2740	A	O3'-P	-5.34	1.53	1.61
52	BU	105	VAL	C-N	-5.34	1.26	1.33
23	AX	12	A	P-O5'	-5.33	1.51	1.59
1	AA	1130	A	C2'-C1'	-5.33	1.45	1.53
16	AP	53	VAL	CA-C	-5.33	1.46	1.52
43	BK	36	GLU	N-CA	-5.33	1.40	1.46
35	BA	2230	G	C4'-C3'	-5.33	1.44	1.52
9	AI	83	ARG	CZ-NH2	-5.33	1.26	1.33
5	AE	150	ARG	N-CA	-5.33	1.39	1.46
24	AY	302	HIS	N-CA	-5.33	1.37	1.46
40	BF	93	LYS	CA-CB	-5.33	1.46	1.53
20	AT	32	ALA	C-N	-5.32	1.27	1.34
35	BA	1139	G	C1'-N9	-5.32	1.40	1.48
15	AO	26	GLU	C-N	-5.32	1.26	1.33
35	BA	1704	G	C3'-C2'	-5.32	1.44	1.52
4	AD	145	GLU	C-O	-5.32	1.18	1.24
49	BR	21	TYR	C-N	-5.31	1.25	1.33
1	AA	160	A	P-O5'	-5.31	1.51	1.59
2	AB	149	LEU	CA-C	-5.31	1.46	1.52
10	AJ	81	THR	CA-C	-5.31	1.47	1.53
41	BG	151	ALA	CA-C	-5.31	1.46	1.52
1	AA	544	G	C1'-N9	-5.31	1.40	1.48
27	B2	68	ARG	NE-CZ	-5.31	1.27	1.33
2	AB	83	MET	CA-C	-5.31	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	BD	54	ARG	CA-C	-5.31	1.46	1.52
15	AO	74	ASP	C-O	-5.31	1.18	1.24
35	BA	1943	U	C2'-O2'	-5.31	1.33	1.41
2	AB	40	HIS	ND1-CE1	-5.30	1.27	1.32
35	BA	2286	A	C1'-N9	-5.30	1.39	1.47
43	BK	106	GLU	CA-CB	-5.30	1.45	1.53
57	BZ	28	MET	C-N	-5.30	1.27	1.33
4	AD	11	LEU	N-CA	-5.30	1.39	1.46
13	AM	116	THR	CA-C	-5.30	1.45	1.52
50	BS	75	GLU	N-CA	-5.30	1.40	1.46
20	AT	43	LEU	CA-C	-5.29	1.45	1.52
40	BF	14	PRO	N-CA	-5.29	1.40	1.47
34	B9	6	SER	CA-C	-5.29	1.47	1.53
52	BU	90	VAL	N-CA	-5.29	1.39	1.46
17	AQ	53	LEU	C-O	-5.29	1.17	1.24
35	BA	428	A	C2'-O2'	-5.29	1.34	1.42
49	BR	8	ARG	C-O	-5.29	1.17	1.24
37	BC	202	PRO	CA-C	-5.29	1.46	1.52
3	AC	116	VAL	CA-C	-5.28	1.46	1.52
26	B1	66	HIS	CA-C	-5.28	1.46	1.52
35	BA	696	G	O3'-P	-5.28	1.53	1.61
35	BA	2032	G	O4'-C1'	-5.28	1.34	1.42
24	AY	162	VAL	N-CA	-5.28	1.39	1.46
39	BE	127	ASP	CA-C	5.28	1.59	1.52
47	BP	102	ARG	NE-CZ	-5.28	1.27	1.33
1	AA	856	C	O3'-P	-5.28	1.53	1.61
35	BA	2674	G	O5'-C5'	-5.28	1.34	1.42
52	BU	8	VAL	C-O	-5.28	1.19	1.24
1	AA	739	C	C4'-O4'	-5.28	1.37	1.45
57	BZ	52	SER	CA-C	-5.28	1.48	1.53
36	BB	51	G	C2'-C1'	-5.27	1.45	1.53
43	BK	79	ARG	CA-C	-5.27	1.45	1.52
11	AK	62	GLN	N-CA	-5.27	1.40	1.46
24	AY	230	LYS	C-N	-5.27	1.27	1.33
57	BZ	90	VAL	C-O	5.27	1.29	1.24
35	BA	2509	G	C4'-C3'	-5.27	1.44	1.52
40	BF	99	TYR	CA-CB	-5.27	1.47	1.53
35	BA	1765	C	C3'-C2'	-5.26	1.44	1.52
18	AR	56	THR	C-O	-5.26	1.17	1.24
35	BA	1112	G	C4'-C3'	-5.26	1.44	1.52
53	BV	82	ARG	NE-CZ	-5.26	1.27	1.33
57	BZ	8	TYR	C-N	-5.26	1.26	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	B8	24	ALA	CA-CB	-5.26	1.47	1.53
48	BQ	52	VAL	C-O	-5.26	1.17	1.24
2	AB	108	ILE	CA-C	5.26	1.58	1.52
33	B8	12	LYS	C-O	-5.25	1.17	1.24
35	BA	754	C	C1'-N1	-5.25	1.40	1.48
47	BP	65	ARG	NE-CZ	-5.25	1.27	1.33
37	BC	182	PRO	CA-CB	-5.25	1.46	1.54
35	BA	2694	G	C1'-N9	-5.25	1.40	1.48
17	AQ	45	HIS	C-O	-5.24	1.17	1.23
1	AA	481	G	O5'-C5'	-5.24	1.34	1.42
1	AA	927	G	C1'-N9	-5.24	1.40	1.48
5	AE	73	ASN	C-N	-5.24	1.26	1.33
5	AE	42	GLY	CA-C	-5.24	1.47	1.52
8	AH	110	ALA	CA-C	-5.24	1.47	1.53
57	BZ	100	VAL	CA-C	-5.24	1.48	1.52
49	BR	70	LEU	CA-C	-5.23	1.46	1.52
10	AJ	79	ARG	CZ-NH2	-5.23	1.26	1.33
35	BA	2447	G	C1'-N9	-5.23	1.39	1.47
1	AA	1395	C	C5'-C4'	-5.23	1.43	1.51
24	AY	295	GLU	CA-C	-5.23	1.46	1.52
24	AY	655	TYR	C-O	-5.23	1.17	1.24
1	AA	966	G	C3'-C2'	-5.23	1.45	1.52
38	BD	258	LYS	N-CA	-5.23	1.39	1.46
45	BN	129	PRO	N-CA	-5.23	1.40	1.47
51	BT	8	LYS	CA-C	-5.23	1.46	1.52
12	AL	35	GLY	CA-C	-5.23	1.45	1.51
21	AU	15	ARG	C-N	-5.22	1.26	1.33
35	BA	1340	U	C2'-O2'	-5.22	1.33	1.41
39	BE	102	VAL	C-O	-5.22	1.18	1.23
7	AG	57	GLU	CA-C	-5.22	1.47	1.52
35	BA	139(A)	G	C4'-C3'	-5.22	1.44	1.52
19	AS	69	HIS	CG-CD2	-5.22	1.30	1.35
51	BT	69	GLY	C-N	-5.22	1.26	1.33
54	BW	20	VAL	C-O	-5.22	1.18	1.24
2	AB	166	ASP	CA-CB	-5.22	1.45	1.53
4	AD	14	ARG	NE-CZ	-5.22	1.27	1.33
14	AN	25	VAL	CA-C	-5.22	1.47	1.52
35	BA	2295	C	C4'-O4'	-5.21	1.37	1.45
24	AY	120	THR	CA-C	-5.21	1.45	1.52
24	AY	168	ILE	N-CA	-5.21	1.40	1.46
24	AY	582	PHE	C-O	-5.21	1.18	1.24
35	BA	541	C	C3'-O3'	-5.21	1.34	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1048	G	O3'-P	-5.21	1.53	1.61
1	AA	631	G	C2'-C1'	-5.21	1.45	1.53
1	AA	1256	A	P-O5'	-5.21	1.51	1.59
26	B1	67	ILE	C-O	-5.21	1.17	1.24
28	B3	13	ILE	CA-C	-5.21	1.46	1.52
35	BA	414	C	C3'-C2'	-5.21	1.45	1.52
56	BY	65	ALA	CA-CB	-5.21	1.47	1.53
24	AY	15	ILE	CA-CB	-5.21	1.48	1.54
24	AY	530	VAL	C-N	-5.21	1.27	1.33
35	BA	1823	G	P-O5'	-5.21	1.51	1.59
48	BQ	81	VAL	C-O	-5.20	1.18	1.23
35	BA	488	G	C2'-O2'	-5.20	1.34	1.42
45	BN	71	ILE	C-O	-5.20	1.19	1.24
56	BY	65	ALA	C-O	-5.20	1.17	1.24
3	AC	141	VAL	N-CA	-5.20	1.39	1.46
12	AL	100	ILE	N-CA	-5.20	1.39	1.46
24	AY	596	LYS	N-CA	5.20	1.52	1.46
33	B8	53	PRO	N-CA	-5.20	1.40	1.47
1	AA	1163	C	C4'-C3'	-5.19	1.44	1.52
3	AC	146	ALA	CA-C	-5.19	1.47	1.52
9	AI	88	TYR	N-CA	-5.19	1.40	1.46
53	BV	67	GLY	C-O	-5.19	1.17	1.23
24	AY	20	HIS	CG-ND1	-5.19	1.32	1.38
1	AA	618	C	C3'-C2'	-5.19	1.45	1.52
38	BD	75	ILE	CA-CB	-5.19	1.47	1.54
41	BG	165	THR	C-O	-5.18	1.17	1.23
1	AA	913	A	C4'-O4'	-5.18	1.38	1.45
24	AY	115	GLU	N-CA	-5.18	1.38	1.46
16	AP	70	ALA	CA-C	-5.18	1.46	1.53
35	BA	1528(A)	A	C1'-N9	-5.18	1.40	1.48
35	BA	2258	C	C4'-C3'	-5.18	1.45	1.53
1	AA	439	A	C3'-O3'	-5.18	1.34	1.42
24	AY	589	ALA	CA-C	5.18	1.59	1.52
29	B4	52	THR	CA-CB	5.18	1.61	1.53
35	BA	1678	G	C4'-C3'	-5.18	1.44	1.52
41	BG	173	LEU	CA-C	-5.17	1.46	1.52
21	AU	7	ARG	C-N	-5.17	1.27	1.33
35	BA	511	U	C2'-C1'	-5.17	1.45	1.53
35	BA	34	C	O3'-P	-5.17	1.53	1.61
45	BN	91	LEU	CA-C	-5.17	1.46	1.52
1	AA	614	A	C2'-O2'	-5.16	1.34	1.42
35	BA	2540	C	C2'-O2'	-5.16	1.34	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	B1	20	ARG	NE-CZ	5.16	1.38	1.33
35	BA	527	C	C3'-O3'	-5.16	1.35	1.43
35	BA	1455	G	C3'-O3'	-5.16	1.34	1.42
35	BA	560	C	C2'-C1'	-5.16	1.45	1.53
35	BA	2493	U	C3'-O3'	-5.16	1.34	1.42
43	BK	30	HIS	CG-CD2	-5.16	1.30	1.35
7	AG	122	HIS	CG-ND1	-5.16	1.32	1.38
44	BL	61	ALA	N-CA	-5.15	1.39	1.46
35	BA	691	C	C2'-O2'	-5.15	1.34	1.42
35	BA	1919	A	C2'-O2'	-5.15	1.34	1.42
37	BC	70	GLY	C-N	-5.15	1.27	1.33
1	AA	740	U	C2'-O2'	-5.15	1.34	1.42
34	B9	21	GLY	C-N	-5.15	1.26	1.33
29	B4	21	VAL	C-O	-5.15	1.18	1.24
37	BC	161	ARG	C-N	-5.15	1.26	1.33
1	AA	30	U	C5'-C4'	-5.15	1.43	1.51
7	AG	120	ILE	CA-CB	-5.15	1.48	1.54
35	BA	2641	G	C4'-C3'	-5.15	1.44	1.52
35	BA	1901	A	C1'-N9	-5.14	1.40	1.48
46	BO	45	GLU	C-N	-5.14	1.27	1.33
49	BR	21	TYR	N-CA	-5.14	1.39	1.46
22	AV	38	A	C1'-N9	-5.14	1.40	1.48
4	AD	62	GLN	CA-C	-5.14	1.45	1.52
46	BO	77	ILE	C-O	-5.14	1.18	1.23
1	AA	927	G	P-OP1	-5.14	1.38	1.49
9	AI	124	GLN	CA-C	-5.14	1.46	1.52
35	BA	664	C	C1'-N1	-5.14	1.40	1.48
40	BF	188	ARG	CA-C	-5.14	1.45	1.52
57	BZ	174	VAL	C-N	-5.14	1.27	1.33
2	AB	138	LEU	CA-C	-5.14	1.45	1.52
38	BD	266	SER	C-O	-5.14	1.17	1.24
46	BO	105	GLU	C-O	-5.14	1.17	1.24
5	AE	44	GLY	N-CA	-5.13	1.40	1.45
35	BA	2665	A	C4'-C3'	-5.13	1.44	1.52
37	BC	82	GLU	N-CA	-5.13	1.39	1.46
15	AO	7	GLU	C-N	-5.13	1.26	1.33
40	BF	101	LEU	CA-C	5.13	1.58	1.53
7	AG	53	LYS	N-CA	-5.13	1.40	1.46
19	AS	19	VAL	C-O	-5.13	1.18	1.23
35	BA	1994	C	O4'-C1'	-5.13	1.33	1.41
24	AY	9	LEU	C-O	-5.12	1.17	1.24
1	AA	616	G	C1'-N9	-5.12	1.40	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	1624	G	C1'-N9	-5.12	1.40	1.48
36	BB	19	G	O3'-P	-5.12	1.53	1.61
48	BQ	135	ASP	N-CA	-5.12	1.39	1.46
20	AT	92	LEU	N-CA	-5.12	1.39	1.46
35	BA	779	U	C3'-C2'	-5.12	1.45	1.52
38	BD	221	VAL	CA-C	-5.12	1.46	1.52
54	BW	70	TYR	C-N	-5.12	1.28	1.33
50	BS	27	SER	CA-C	-5.12	1.46	1.53
56	BY	11	ASP	C-O	-5.12	1.17	1.24
1	AA	1166	G	C5'-C4'	-5.11	1.43	1.51
24	AY	565	VAL	CA-CB	-5.11	1.48	1.54
27	B2	59	ARG	N-CA	-5.11	1.40	1.46
57	BZ	17	ALA	CA-CB	-5.11	1.44	1.53
3	AC	32	LEU	N-CA	-5.11	1.39	1.46
24	AY	32	ILE	CA-C	-5.11	1.46	1.52
24	AY	524	GLU	N-CA	-5.11	1.40	1.46
11	AK	72	ALA	CA-C	-5.11	1.46	1.52
35	BA	248	G	C1'-N9	-5.11	1.40	1.48
39	BE	9	VAL	N-CA	-5.11	1.40	1.46
55	BX	50	LYS	C-O	-5.11	1.17	1.24
56	BY	66	PRO	C-N	-5.11	1.26	1.33
1	AA	189(E)	U	C2'-C1'	-5.10	1.45	1.53
13	AM	45	VAL	CA-CB	-5.10	1.48	1.54
38	BD	113	VAL	N-CA	-5.10	1.40	1.46
38	BD	134	ARG	CD-NE	-5.10	1.39	1.46
1	AA	1419	G	C5'-C4'	-5.10	1.43	1.51
1	AA	1321	C	C2'-O2'	-5.10	1.34	1.42
6	AF	56	PRO	CA-CB	-5.10	1.48	1.53
35	BA	1409	C	C4-C5	-5.10	1.32	1.43
51	BT	49	VAL	C-O	-5.09	1.18	1.24
9	AI	9	ARG	CZ-NH2	-5.09	1.26	1.33
30	B5	21	SER	C-N	-5.09	1.26	1.33
35	BA	2387	U	O3'-P	-5.09	1.53	1.61
4	AD	140	VAL	C-O	-5.09	1.18	1.24
40	BF	145	GLU	CA-C	-5.09	1.45	1.52
26	B1	76	ARG	C-O	-5.09	1.18	1.24
30	B5	40	LYS	CA-C	-5.09	1.47	1.52
35	BA	1280	G	O4'-C1'	-5.09	1.34	1.41
35	BA	2418	A	C1'-N9	-5.09	1.40	1.48
20	AT	27	LYS	C-O	-5.08	1.18	1.24
35	BA	342	G	C3'-O3'	-5.08	1.34	1.42
9	AI	48	GLU	C-O	-5.08	1.20	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	AY	315	LYS	C-O	-5.08	1.18	1.23
35	BA	740	U	O5'-C5'	5.08	1.50	1.42
35	BA	2852	G	O3'-P	-5.08	1.53	1.61
4	AD	144	ASP	CA-C	-5.08	1.46	1.52
18	AR	43	PHE	C-N	-5.07	1.26	1.33
48	BQ	87	LYS	CA-CB	-5.07	1.45	1.53
35	BA	1320	C	O4'-C1'	-5.07	1.34	1.42
55	BX	31	HIS	ND1-CE1	-5.07	1.27	1.32
8	AH	84	ARG	CA-CB	-5.07	1.45	1.53
24	AY	152	THR	N-CA	-5.07	1.39	1.46
3	AC	106	VAL	N-CA	-5.07	1.39	1.46
14	AN	12	ARG	CZ-NH2	-5.07	1.26	1.33
35	BA	1046	A	C4'-C3'	-5.07	1.45	1.52
35	BA	1963	U	C4'-O4'	-5.07	1.38	1.45
35	BA	1676	A	O3'-P	-5.06	1.53	1.61
3	AC	197	GLY	C-O	-5.06	1.17	1.23
20	AT	40	ALA	N-CA	-5.06	1.39	1.46
35	BA	1214	A	C3'-C2'	-5.06	1.45	1.52
35	BA	2595	G	C1'-N9	-5.06	1.40	1.48
2	AB	236	TYR	C-O	-5.06	1.17	1.24
37	BC	228	HIS	ND1-CE1	-5.06	1.27	1.32
45	BN	79	PRO	CA-CB	-5.06	1.47	1.53
35	BA	2635	C	C1'-N1	-5.06	1.40	1.48
47	BP	114	ILE	CA-C	-5.06	1.46	1.52
35	BA	271(F)	C	C3'-C2'	-5.06	1.45	1.52
42	BH	63	SER	C-O	-5.06	1.18	1.24
1	AA	340	U	C2'-O2'	-5.05	1.34	1.42
30	B5	15	ARG	C-N	-5.05	1.27	1.33
5	AE	51	VAL	N-CA	-5.05	1.40	1.46
40	BF	75	HIS	CE1-NE2	-5.05	1.27	1.32
33	B8	59	LYS	C-O	-5.05	1.17	1.24
35	BA	1187	G	O5'-C5'	5.05	1.50	1.42
57	BZ	54	HIS	CB-CG	-5.05	1.43	1.50
35	BA	978	G	C1'-N9	-5.04	1.40	1.48
1	AA	733	A	C5'-C4'	-5.04	1.43	1.51
2	AB	23	ARG	CA-C	-5.04	1.46	1.53
16	AP	49	LEU	C-O	-5.04	1.17	1.24
35	BA	726	G	C3'-O3'	-5.04	1.35	1.43
35	BA	2199	A	O4'-C1'	-5.04	1.34	1.41
39	BE	20	ALA	C-O	-5.04	1.18	1.24
1	AA	922	G	P-O5'	-5.04	1.52	1.59
43	BK	67	PHE	C-O	-5.04	1.17	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	AN	52	GLN	CA-C	-5.04	1.45	1.52
38	BD	27	THR	CA-C	5.04	1.59	1.52
53	BV	28	GLU	C-N	-5.04	1.28	1.34
49	BR	48	VAL	N-CA	-5.04	1.40	1.46
15	AO	51	HIS	C-O	-5.04	1.18	1.24
35	BA	2787	C	P-O5'	-5.04	1.52	1.59
50	BS	67	ARG	CA-CB	-5.04	1.45	1.53
13	AM	123	ALA	C-O	-5.03	1.18	1.24
51	BT	25	GLY	C-O	-5.03	1.19	1.24
4	AD	39	PRO	CA-C	-5.03	1.47	1.52
35	BA	1710	C	C5'-C4'	-5.03	1.43	1.51
11	AK	65	ALA	N-CA	-5.03	1.39	1.46
35	BA	1680	U	C4'-O4'	-5.03	1.38	1.45
35	BA	2729	G	C3'-O3'	-5.03	1.34	1.42
3	AC	73	PRO	CA-CB	-5.03	1.46	1.53
3	AC	153	VAL	CA-C	-5.03	1.46	1.52
17	AQ	64	PRO	CA-CB	-5.03	1.46	1.53
39	BE	175	VAL	C-N	-5.03	1.27	1.33
28	B3	7	LYS	N-CA	-5.03	1.40	1.46
35	BA	1650	G	C1'-N9	-5.03	1.40	1.48
5	AE	62	ALA	CA-CB	-5.02	1.45	1.53
36	BB	25	A	O3'-P	-5.02	1.53	1.61
5	AE	41	VAL	CA-C	-5.02	1.46	1.52
37	BC	14	LYS	CA-CB	-5.02	1.46	1.52
1	AA	537	G	O5'-C5'	5.02	1.50	1.42
24	AY	407	PRO	CA-CB	-5.02	1.46	1.53
48	BQ	41	TRP	N-CA	-5.01	1.40	1.46
57	BZ	171	ILE	C-N	-5.01	1.27	1.33
35	BA	2026	C	P-O5'	-5.01	1.52	1.59
35	BA	2161	C	O3'-P	-5.01	1.53	1.61
38	BD	8	PRO	C-N	-5.01	1.26	1.33
15	AO	5	LYS	CA-CB	-5.01	1.45	1.53
37	BC	200	HIS	CE1-NE2	-5.01	1.27	1.32
28	B3	35	ARG	CA-CB	-5.01	1.45	1.53
1	AA	255	G	C1'-N9	-5.00	1.40	1.48
15	AO	41	GLU	CA-C	-5.00	1.46	1.52
36	BB	17	C	O5'-C5'	-5.00	1.34	1.42
49	BR	56	LYS	CA-C	-5.00	1.46	1.52
35	BA	721	C	C3'-O3'	-5.00	1.34	1.42
37	BC	20	VAL	C-O	-5.00	1.18	1.24
39	BE	20	ALA	CA-CB	-5.00	1.46	1.53
47	BP	50	ARG	C-O	-5.00	1.17	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BX	60	ARG	NE-CZ	-5.00	1.27	1.33

All (2178) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	BG	112	PRO	O-C-N	-50.01	50.85	122.37
9	AI	53	VAL	O-C-N	-49.12	61.16	122.57
9	AI	104	ARG	O-C-N	-35.08	75.94	122.59
41	BG	112	PRO	CA-C-N	-20.66	90.40	122.62
41	BG	112	PRO	C-N-CA	-20.66	90.40	122.62
35	BA	1992	G	C2'-C3'-O3'	18.03	136.55	109.50
29	B4	42	PHE	N-CA-C	17.59	131.31	107.73
1	AA	1498	U	C2'-C3'-O3'	15.37	132.56	109.50
51	BT	25	GLY	O-C-N	15.04	130.27	121.85
1	AA	575	G	C2'-C3'-O3'	14.35	131.03	109.50
35	BA	1799	G	C2'-C3'-O3'	13.99	130.48	109.50
29	B4	43	TYR	N-CA-C	12.01	136.39	110.80
1	AA	115	G	C2'-C3'-O3'	11.93	127.39	109.50
51	BT	29	ARG	N-CA-C	11.93	127.61	108.76
26	B1	7	ILE	CB-CA-C	-11.75	101.72	111.71
1	AA	328	C	C2'-C3'-O3'	11.50	126.75	109.50
31	B6	17	LYS	N-CA-C	-11.31	96.47	111.74
1	AA	60	A	C2'-C3'-O3'	11.16	126.24	109.50
45	BN	3	THR	N-CA-C	-11.05	93.78	109.69
35	BA	2799	C	C2'-C3'-O3'	11.01	126.01	109.50
1	AA	921	U	C5'-C4'-C3'	-10.98	99.52	116.00
3	AC	167	TRP	N-CA-C	10.91	117.72	108.78
45	BN	109	LYS	N-CA-C	10.77	125.80	112.23
35	BA	739	G	C4'-C3'-O3'	10.62	125.33	109.40
9	AI	93	ARG	N-CA-C	-10.60	101.40	114.75
8	AH	56	LYS	CA-C-N	10.44	130.55	119.90
8	AH	56	LYS	C-N-CA	10.44	130.55	119.90
35	BA	49	A	C2'-C3'-O3'	10.42	125.13	109.50
43	BK	46	ALA	N-CA-C	-10.38	100.02	112.89
36	BB	103	G	C5'-C4'-C3'	-10.30	100.54	116.00
2	AB	117	GLU	N-CA-C	-10.29	100.59	113.55
51	BT	125	ARG	N-CA-C	-10.26	100.17	111.36
45	BN	97	ARG	N-CA-C	-10.17	100.27	111.36
42	BH	139	GLN	N-CA-C	-10.15	99.99	112.38
41	BG	88	ILE	N-CA-C	10.12	123.43	108.45
18	AR	51	LEU	CA-C-N	10.03	130.13	120.31
18	AR	51	LEU	C-N-CA	10.03	130.13	120.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	BZ	45	ASP	N-CA-C	-10.03	99.90	111.03
28	B3	15	TYR	CA-C-N	10.01	130.07	119.76
28	B3	15	TYR	C-N-CA	10.01	130.07	119.76
24	AY	137	ASN	N-CA-C	9.92	123.13	111.02
35	BA	503	A	C2'-C3'-O3'	9.91	124.36	109.50
3	AC	27	LYS	N-CA-C	-9.79	103.46	114.62
51	BT	19	LEU	CA-C-O	9.75	126.54	119.32
5	AE	69	VAL	CA-C-O	-9.67	114.91	119.94
1	AA	366	C	C2'-C3'-O3'	9.61	123.92	109.50
29	B4	49	PHE	N-CA-C	9.58	122.70	108.14
24	AY	579	GLU	N-CA-C	-9.54	100.86	111.07
40	BF	111	ALA	N-CA-C	-9.54	100.44	111.03
35	BA	1818	U	C4'-C3'-O3'	-9.32	99.01	113.00
57	BZ	93	ASP	N-CA-C	-9.31	104.00	114.62
1	AA	533	A	C2'-C3'-O3'	9.31	123.47	109.50
55	BX	14	SER	N-CA-C	9.24	123.50	108.99
51	BT	30	VAL	N-CA-C	9.17	128.42	109.34
9	AI	36	TYR	N-CA-C	-9.16	101.87	113.23
1	AA	1285	A	C2'-C3'-O3'	9.15	123.23	109.50
24	AY	302	HIS	CA-C-N	9.13	131.26	119.84
24	AY	302	HIS	C-N-CA	9.13	131.26	119.84
3	AC	164	ARG	CA-C-O	9.12	123.23	117.94
47	BP	110	TYR	CB-CA-C	-9.09	106.08	116.63
40	BF	72	ARG	NE-CZ-NH1	-9.03	112.47	121.50
39	BE	51	PHE	N-CA-C	9.03	122.47	108.12
39	BE	135	HIS	N-CA-C	8.99	121.16	111.36
13	AM	82	MET	N-CA-C	-8.98	102.42	112.57
11	AK	38	ASN	CA-C-N	8.96	129.04	119.90
11	AK	38	ASN	C-N-CA	8.96	129.04	119.90
25	B0	27	GLU	N-CA-C	-8.94	98.72	110.43
1	AA	1335	C	C2'-C3'-O3'	-8.93	100.30	113.70
35	BA	1501	C	C5'-C4'-C3'	-8.93	102.61	116.00
24	AY	286	ILE	CA-C-N	8.91	129.56	120.38
24	AY	286	ILE	C-N-CA	8.91	129.56	120.38
51	BT	112	ARG	N-CA-C	-8.91	101.74	114.12
29	B4	43	TYR	CA-C-N	8.90	138.54	121.54
29	B4	43	TYR	C-N-CA	8.90	138.54	121.54
41	BG	54	GLU	N-CA-C	-8.88	101.78	114.12
30	B5	4	HIS	CA-C-N	-8.87	110.99	120.66
30	B5	4	HIS	C-N-CA	-8.87	110.99	120.66
35	BA	1379	A	N9-C1'-C2'	8.86	127.29	114.00
55	BX	37	THR	N-CA-C	-8.83	103.02	113.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AD	12	CYS	N-CA-C	-8.81	96.83	111.37
35	BA	1819	A	C2'-C3'-O3'	8.81	122.72	109.50
5	AE	69	VAL	O-C-N	8.80	129.22	120.59
1	AA	1404	C	C5'-C4'-C3'	-8.79	102.81	116.00
43	BK	98	ARG	N-CA-C	8.79	121.43	108.60
47	BP	51	PHE	N-CA-C	8.79	123.98	110.36
38	BD	14	ARG	N-CA-C	-8.78	101.63	111.82
24	AY	274	ASP	N-CA-C	-8.78	101.68	111.07
35	BA	1237	A	C2'-C3'-O3'	8.77	122.65	109.50
15	AO	35	ARG	NE-CZ-NH1	-8.76	112.75	121.50
20	AT	83	ARG	N-CA-C	-8.75	102.18	113.12
52	BU	115	ALA	N-CA-C	-8.75	101.29	112.93
1	AA	560	U	N1-C1'-C2'	8.74	125.11	112.00
38	BD	136	ILE	N-CA-C	8.74	116.58	107.76
1	AA	346	G	N9-C1'-C2'	8.73	125.09	112.00
35	BA	2506	U	C2'-C3'-O3'	8.71	122.56	109.50
7	AG	107	ALA	N-CA-C	-8.66	101.79	111.14
12	AL	26	ALA	N-CA-C	-8.64	103.27	113.21
51	BT	23	ARG	CA-C-N	8.63	130.63	119.84
51	BT	23	ARG	C-N-CA	8.63	130.63	119.84
48	BQ	17	LEU	N-CA-C	8.62	122.02	108.67
41	BG	86	MET	CA-C-N	-8.58	109.12	119.84
41	BG	86	MET	C-N-CA	-8.58	109.12	119.84
39	BE	65	GLY	N-CA-C	-8.56	101.04	115.34
1	AA	668	G	C4'-C3'-C2'	-8.55	94.05	102.60
7	AG	40	ALA	N-CA-C	-8.54	101.92	111.14
33	B8	57	ARG	NE-CZ-NH1	-8.53	112.97	121.50
31	B6	21	TYR	N-CA-C	8.52	121.96	109.69
54	BW	37	ARG	NE-CZ-NH1	-8.52	112.98	121.50
24	AY	462	ILE	N-CA-C	-8.50	102.56	111.58
28	B3	31	LEU	O-C-N	8.49	132.97	123.04
47	BP	62	LEU	N-CA-C	8.48	120.60	109.83
29	B4	42	PHE	CA-C-N	8.48	137.73	121.54
29	B4	42	PHE	C-N-CA	8.48	137.73	121.54
8	AH	79	VAL	N-CA-C	-8.47	102.60	111.58
29	B4	44	THR	N-CA-C	8.47	128.85	110.80
35	BA	1799	G	C4'-C3'-O3'	8.46	122.10	109.40
35	BA	788	A	N9-C1'-C2'	8.46	124.68	112.00
35	BA	1022	G	C2'-C3'-O3'	8.45	122.17	109.50
13	AM	80	ARG	N-CA-C	-8.41	102.06	111.82
31	B6	23	THR	N-CA-C	8.40	128.70	110.80
35	BA	2732	G	N9-C1'-C2'	8.40	124.61	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	614(A)	U	C2'-C3'-O3'	-8.39	101.11	113.70
57	BZ	110	GLY	N-CA-C	-8.39	104.91	115.31
3	AC	30	ARG	N-CA-C	8.36	121.14	111.11
35	BA	363(F)	A	C2'-C3'-O3'	8.36	122.03	109.50
51	BT	76	PHE	CA-C-N	8.33	129.36	120.12
51	BT	76	PHE	C-N-CA	8.33	129.36	120.12
47	BP	54	GLY	N-CA-C	-8.32	103.49	115.64
48	BQ	91	GLU	CA-C-N	8.29	128.54	122.16
48	BQ	91	GLU	C-N-CA	8.29	128.54	122.16
35	BA	945	A	N9-C1'-C2'	8.27	126.41	114.00
4	AD	89	THR	N-CA-C	8.26	121.32	111.33
41	BG	176	LEU	N-CA-C	-8.25	103.36	113.50
41	BG	55	LYS	N-CA-C	-8.24	101.34	111.40
4	AD	114	ARG	N-CA-C	-8.23	102.26	111.07
1	AA	1456	G	N9-C1'-C2'	8.21	124.32	112.00
57	BZ	131	ARG	N-CA-C	-8.21	102.02	110.97
1	AA	1201	A	C2'-C3'-O3'	8.20	121.80	109.50
46	BO	83	ALA	N-CA-C	8.19	120.81	109.18
1	AA	1054	C	N1-C1'-C2'	8.17	124.26	112.00
51	BT	93	ARG	N-CA-C	-8.17	103.82	113.38
52	BU	62	ILE	N-CA-C	8.17	119.90	111.00
18	AR	81	PHE	N-CA-C	-8.16	102.21	112.90
35	BA	2674	G	C3'-C2'-O2'	8.16	122.94	110.70
40	BF	99	TYR	N-CA-C	8.15	119.02	108.34
35	BA	1654	A	C5'-C4'-C3'	8.14	128.21	116.00
48	BQ	5	ARG	N-CA-C	-8.12	103.50	113.41
35	BA	1838	C	C2'-C3'-O3'	8.12	121.68	109.50
26	B1	77	ALA	N-CA-C	8.12	120.85	111.11
35	BA	1212	G	C2'-C3'-O3'	-8.11	97.33	109.50
9	AI	34	ASN	OD1-CG-ND2	-8.04	114.56	122.60
47	BP	52	GLU	N-CA-C	8.03	127.90	110.80
8	AH	22	GLU	N-CA-C	8.00	121.16	111.40
1	AA	516	U	N1-C1'-C2'	7.97	123.96	112.00
35	BA	1236	G	N9-C1'-C2'	7.97	123.96	112.00
35	BA	2679	A	C4'-C3'-C2'	-7.97	94.63	102.60
1	AA	560	U	C2'-C3'-O3'	-7.93	101.81	113.70
38	BD	227	ASN	O-C-N	7.93	126.85	121.14
57	BZ	175	VAL	CA-C-N	7.93	128.55	120.38
57	BZ	175	VAL	C-N-CA	7.93	128.55	120.38
47	BP	64	LYS	N-CA-C	-7.92	103.59	113.18
1	AA	631	G	C4'-C3'-O3'	-7.88	101.18	113.00
35	BA	2428	G	N9-C1'-C2'	7.88	123.82	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	BX	39	ILE	CA-C-O	-7.88	112.82	121.17
1	AA	1241	G	C5'-C4'-C3'	-7.87	104.19	116.00
35	BA	1156	A	N9-C1'-C2'	7.85	125.78	114.00
40	BF	26	ALA	N-CA-C	-7.85	102.67	111.07
45	BN	89	LYS	CA-C-N	7.85	131.01	120.65
45	BN	89	LYS	C-N-CA	7.85	131.01	120.65
37	BC	138	LEU	O-C-N	7.84	128.47	121.18
1	AA	575	G	C4'-C3'-O3'	7.84	121.16	109.40
24	AY	29	THR	N-CA-C	7.84	119.90	111.36
54	BW	101	SER	N-CA-C	7.83	120.97	109.07
35	BA	1408	C	C4'-C3'-C2'	-7.82	94.78	102.60
55	BX	38	GLU	N-CA-C	-7.80	102.72	111.07
12	AL	61	THR	N-CA-C	-7.79	103.04	112.54
3	AC	138	VAL	N-CA-C	-7.78	103.66	110.74
35	BA	788	A	C4'-C3'-O3'	-7.77	101.34	113.00
8	AH	125	ARG	N-CA-C	-7.76	102.45	112.23
16	AP	4	ILE	CB-CA-C	-7.76	101.87	111.88
42	BH	71	LEU	N-CA-C	-7.75	102.79	111.71
35	BA	1236	G	C4'-C3'-O3'	-7.75	101.37	113.00
35	BA	474	G	C2'-C3'-O3'	7.74	121.10	109.50
47	BP	116	GLY	N-CA-C	7.72	120.04	111.85
1	AA	260	G	O4'-C4'-C3'	7.72	111.72	104.00
35	BA	1944	U	O4'-C1'-C2'	7.71	113.51	105.80
35	BA	2335	A	C5'-C4'-O4'	7.71	120.66	109.10
35	BA	790	C	C1'-C2'-O2'	-7.70	100.25	111.80
52	BU	96	ALA	N-CA-C	-7.70	104.31	112.93
48	BQ	54	MET	N-CA-C	-7.68	102.60	110.97
2	AB	154	LEU	N-CA-C	-7.68	102.77	113.37
43	BK	104	VAL	N-CA-C	-7.67	103.44	111.58
3	AC	173	VAL	CA-C-N	7.67	129.43	119.84
3	AC	173	VAL	C-N-CA	7.67	129.43	119.84
18	AR	44	LEU	N-CA-C	7.64	120.48	109.71
13	AM	11	ARG	NE-CZ-NH1	-7.63	113.87	121.50
35	BA	2732	G	C4'-C3'-O3'	-7.63	101.55	113.00
47	BP	53	GLY	N-CA-C	-7.63	95.09	113.18
7	AG	116	ALA	N-CA-C	7.63	119.28	110.97
1	AA	266	G	C2'-C3'-O3'	-7.61	102.28	113.70
20	AT	17	ARG	N-CA-C	-7.60	101.99	111.11
38	BD	65	ILE	N-CA-C	7.60	121.12	108.81
2	AB	122	PHE	N-CA-C	-7.59	102.94	111.07
7	AG	89	MET	N-CA-C	7.59	121.18	108.13
52	BU	34	LYS	N-CA-C	-7.59	102.48	112.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
39	BE	183	LEU	N-CA-C	7.58	121.08	108.73
35	BA	1818	U	C5'-C4'-C3'	-7.57	104.64	116.00
20	AT	25	ARG	NE-CZ-NH2	7.57	126.01	119.20
26	B1	91	LYS	N-CA-C	-7.56	101.80	111.02
57	BZ	158	PRO	N-CA-C	7.55	119.91	110.70
10	AJ	46	ARG	N-CA-C	7.54	122.31	110.17
38	BD	245	PRO	CA-C-N	7.54	129.26	119.84
38	BD	245	PRO	C-N-CA	7.54	129.26	119.84
38	BD	240	ALA	N-CA-C	7.53	114.99	108.22
7	AG	155	ARG	NE-CZ-NH2	7.52	125.97	119.20
27	B2	28	LYS	N-CA-C	-7.52	103.06	111.71
1	AA	766	A	C3'-C2'-O2'	7.52	121.98	110.70
37	BC	219	MET	N-CA-C	7.52	122.90	112.45
35	BA	312	G	N9-C1'-C2'	7.51	123.27	112.00
38	BD	261	LYS	N-CA-C	7.50	121.27	110.10
46	BO	82	ASN	N-CA-C	-7.49	96.05	108.34
43	BK	53	VAL	CA-C-N	7.48	127.52	119.89
43	BK	53	VAL	C-N-CA	7.48	127.52	119.89
18	AR	66	LEU	N-CA-C	-7.47	102.28	111.40
46	BO	58	VAL	CB-CA-C	-7.47	100.88	111.34
41	BG	33	ARG	CA-C-O	-7.46	111.36	120.54
42	BH	28	GLY	CA-C-N	7.46	129.17	119.84
42	BH	28	GLY	C-N-CA	7.46	129.17	119.84
11	AK	40	ILE	CB-CA-C	-7.46	104.41	111.05
50	BS	25	ARG	NE-CZ-NH1	-7.46	114.04	121.50
1	AA	250	A	C2'-C3'-O3'	7.46	120.69	109.50
24	AY	213	HIS	CA-C-O	7.45	128.64	119.11
37	BC	182	PRO	CA-C-N	7.45	126.71	118.97
37	BC	182	PRO	C-N-CA	7.45	126.71	118.97
8	AH	100	ILE	CA-C-N	7.44	127.40	120.03
8	AH	100	ILE	C-N-CA	7.44	127.40	120.03
20	AT	93	GLU	N-CA-C	-7.44	103.94	113.16
35	BA	2225	A	C2'-C3'-O3'	7.43	120.65	109.50
35	BA	2542	A	N9-C1'-C2'	7.43	125.15	114.00
39	BE	19	ARG	NE-CZ-NH1	-7.43	114.07	121.50
1	AA	545	C	C5'-C4'-C3'	7.41	127.11	116.00
19	AS	74	PHE	CA-CB-CG	-7.40	106.40	113.80
35	BA	2172	U	C2'-C3'-O3'	7.40	120.60	109.50
40	BF	17	ARG	N-CA-C	7.38	120.19	107.28
35	BA	2598	A	C4'-C3'-O3'	-7.38	101.93	113.00
24	AY	15	ILE	N-CA-C	7.37	119.09	108.48
1	AA	428	G	C2'-C3'-O3'	7.36	120.53	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
39	BE	137	HIS	CA-C-N	7.36	126.99	119.19
39	BE	137	HIS	C-N-CA	7.36	126.99	119.19
35	BA	1026	U	C4'-C3'-C2'	7.35	109.95	102.60
26	B1	65	SER	N-CA-C	-7.34	104.46	113.19
54	BW	35	ILE	N-CA-C	-7.33	103.53	110.42
35	BA	1210	A	C2'-C3'-O3'	7.32	120.48	109.50
12	AL	44	THR	CA-C-N	7.31	128.98	119.84
12	AL	44	THR	C-N-CA	7.31	128.98	119.84
20	AT	94	ALA	N-CA-C	-7.31	103.26	113.20
40	BF	38	ARG	N-CA-C	-7.29	103.41	111.36
2	AB	112	VAL	N-CA-C	-7.29	104.67	111.45
8	AH	10	LEU	N-CA-C	-7.28	103.34	111.28
44	BL	87	VAL	O-C-N	7.28	129.22	121.87
32	B7	5	TRP	N-CA-C	7.28	119.95	108.67
13	AM	104	ARG	NE-CZ-NH1	-7.27	114.23	121.50
2	AB	214	ILE	N-CA-C	7.26	117.35	110.53
13	AM	123	ALA	CA-C-N	7.25	128.90	119.84
13	AM	123	ALA	C-N-CA	7.25	128.90	119.84
9	AI	104	ARG	CA-C-N	-7.25	107.70	121.54
9	AI	104	ARG	C-N-CA	-7.25	107.70	121.54
27	B2	6	VAL	O-C-N	7.25	129.40	121.94
38	BD	229	VAL	CB-CA-C	-7.24	102.23	112.22
4	AD	11	LEU	N-CA-C	-7.23	103.48	111.36
3	AC	3	ASN	N-CA-C	7.22	119.04	108.86
1	AA	115	G	C4'-C3'-O3'	7.22	120.23	109.40
17	AQ	70	ARG	NE-CZ-NH2	-7.21	112.71	119.20
40	BF	18	ARG	CA-C-O	-7.21	113.74	121.88
26	B1	74	VAL	N-CA-C	-7.21	102.42	113.16
30	B5	56	LYS	CA-C-N	7.19	134.92	121.97
30	B5	56	LYS	C-N-CA	7.19	134.92	121.97
41	BG	45	GLU	N-CA-C	-7.19	101.70	111.55
35	BA	2481	G	N9-C1'-C2'	7.18	124.77	114.00
17	AQ	81	ARG	CD-NE-CZ	-7.18	114.35	124.40
10	AJ	95	GLU	N-CA-C	7.18	121.39	108.69
29	B4	53	GLU	N-CA-C	7.18	122.02	109.96
16	AP	82	GLN	N-CA-C	7.17	123.06	112.94
33	B8	57	ARG	NE-CZ-NH2	7.17	125.66	119.20
37	BC	3	LYS	N-CA-C	-7.17	103.19	112.23
25	B0	11	ARG	NE-CZ-NH2	-7.17	112.75	119.20
8	AH	120	THR	N-CA-C	-7.17	99.61	110.14
41	BG	138	GLN	N-CA-C	7.17	121.68	113.15
38	BD	62	TYR	N-CA-C	7.16	120.20	109.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	BZ	100	VAL	CB-CA-C	-7.16	102.95	110.53
16	AP	40	ASP	O-C-N	7.15	128.41	120.83
35	BA	74	A	O4'-C1'-C2'	7.14	112.94	105.80
25	B0	22	GLY	CA-C-O	-7.14	114.22	122.78
35	BA	332	A	C2'-C3'-O3'	7.14	120.20	109.50
51	BT	108	ARG	N-CA-C	-7.13	104.20	113.12
45	BN	26	LEU	N-CA-C	-7.13	105.51	114.56
35	BA	945	A	C5'-C4'-C3'	7.12	125.88	115.20
39	BE	152	LYS	N-CA-C	-7.12	101.34	110.53
9	AI	83	ARG	NE-CZ-NH1	-7.11	114.39	121.50
35	BA	1777	U	C5'-C4'-C3'	-7.11	105.34	116.00
55	BX	39	ILE	O-C-N	7.10	128.87	121.91
35	BA	196	A	C1'-C2'-O2'	-7.10	101.15	111.80
43	BK	100	THR	N-CA-C	7.09	118.99	110.19
41	BG	118	ARG	N-CA-C	-7.09	104.62	113.55
2	AB	160	ASP	N-CA-C	-7.09	103.80	113.30
26	B1	57	GLU	N-CA-C	-7.07	99.99	110.46
42	BH	164	TYR	CA-C-O	7.07	124.70	119.68
24	AY	40	HIS	CA-C-O	-7.07	113.19	122.03
52	BU	105	VAL	CB-CA-C	-7.06	102.77	112.02
47	BP	136	GLU	N-CA-C	-7.06	103.00	111.69
25	B0	32	ARG	NE-CZ-NH2	7.06	125.55	119.20
1	AA	728	A	C2'-C3'-O3'	7.05	124.28	113.70
35	BA	120	U	O4'-C4'-C3'	-7.04	99.06	106.10
35	BA	2422	A	C2'-C3'-O3'	7.04	124.26	113.70
35	BA	1493	C	N1-C1'-C2'	7.04	124.56	114.00
51	BT	70	VAL	N-CA-C	7.04	118.17	110.21
51	BT	80	SER	N-CA-C	7.04	125.36	109.81
1	AA	796	C	O4'-C1'-C2'	-7.04	100.56	107.60
6	AF	28	ARG	N-CA-C	-7.04	102.82	111.33
47	BP	96	THR	O-C-N	7.03	126.77	121.85
35	BA	1427	A	C2'-C3'-O3'	7.03	120.05	109.50
12	AL	70	ILE	CA-C-N	7.03	128.63	119.84
12	AL	70	ILE	C-N-CA	7.03	128.63	119.84
38	BD	136	ILE	CA-C-O	7.03	123.30	119.15
54	BW	57	ASN	CA-CB-CG	7.02	119.62	112.60
8	AH	111	ILE	CB-CA-C	-7.01	101.60	111.28
4	AD	140	VAL	N-CA-C	7.01	118.14	108.89
30	B5	15	ARG	NE-CZ-NH2	7.00	125.50	119.20
39	BE	163	GLU	N-CA-C	7.00	117.11	107.73
35	BA	363(F)	A	O4'-C1'-C2'	7.00	112.80	105.80
1	AA	1375	A	C5'-C4'-C3'	-6.99	105.51	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	BF	65	TRP	N-CA-C	6.99	120.98	109.58
22	AV	4	G	N9-C1'-C2'	-6.98	103.53	114.00
32	B7	37	LYS	N-CA-C	-6.98	104.49	112.87
35	BA	1558	A	C2'-C3'-O3'	6.98	119.97	109.50
1	AA	1358	U	N1-C1'-C2'	6.97	122.46	112.00
3	AC	137	ALA	CA-C-N	6.96	129.38	120.88
3	AC	137	ALA	C-N-CA	6.96	129.38	120.88
24	AY	633	GLY	N-CA-C	6.96	120.34	111.09
46	BO	94	ARG	NE-CZ-NH1	-6.95	114.55	121.50
47	BP	144	GLU	CA-C-N	-6.95	113.15	120.03
47	BP	144	GLU	C-N-CA	-6.95	113.15	120.03
24	AY	304	ASP	CA-C-O	6.94	124.45	119.32
39	BE	63	LEU	N-CA-C	-6.93	104.69	113.01
39	BE	164	ARG	N-CA-C	6.93	119.72	108.63
37	BC	169	THR	N-CA-C	-6.93	104.98	113.50
35	BA	2674	G	C5'-C4'-C3'	-6.92	105.62	116.00
7	AG	137	LYS	N-CA-C	-6.92	103.35	111.03
20	AT	32	ALA	CB-CA-C	-6.92	100.22	110.95
51	BT	125	ARG	NE-CZ-NH1	-6.92	114.58	121.50
18	AR	32	ARG	N-CA-C	-6.91	104.37	114.39
37	BC	59	VAL	N-CA-C	6.91	118.54	108.53
50	BS	17	ARG	NE-CZ-NH2	6.89	125.41	119.20
1	AA	1035	A	O4'-C1'-C2'	6.89	114.49	107.60
35	BA	1041	C	C1'-C2'-O2'	6.88	118.73	108.40
35	BA	2752	C	C5'-C4'-C3'	-6.88	105.69	116.00
8	AH	13	ILE	O-C-N	6.87	130.83	121.90
36	BB	40	U	N1-C1'-C2'	6.87	122.30	112.00
40	BF	30	PRO	CA-C-N	6.87	130.33	120.79
40	BF	30	PRO	C-N-CA	6.87	130.33	120.79
35	BA	2015	A	N9-C1'-C2'	6.86	122.29	112.00
37	BC	213	VAL	CA-C-O	6.86	127.59	120.39
1	AA	1225	A	C4'-C3'-O3'	6.86	119.69	109.40
35	BA	784	A	N9-C1'-C2'	6.85	122.27	112.00
42	BH	133	VAL	N-CA-C	6.85	118.91	108.71
48	BQ	135	ASP	CA-CB-CG	-6.85	105.75	112.60
7	AG	143	ARG	CA-C-N	6.84	130.30	120.79
7	AG	143	ARG	C-N-CA	6.84	130.30	120.79
32	B7	10	ARG	NE-CZ-NH1	-6.84	114.66	121.50
1	AA	1101	A	C1'-C2'-O2'	-6.84	101.54	111.80
37	BC	53	ARG	NE-CZ-NH2	6.84	125.36	119.20
35	BA	1141	U	C4'-C3'-O3'	-6.83	102.75	113.00
1	AA	1253	G	C4'-C3'-O3'	-6.83	102.75	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1049	U	C2'-C3'-O3'	6.83	119.75	109.50
42	BH	63	SER	N-CA-C	6.82	118.40	110.97
42	BH	65	HIS	N-CA-C	-6.82	101.08	110.35
55	BX	36	LYS	N-CA-C	-6.81	105.04	113.15
5	AE	50	GLU	O-C-N	-6.80	115.36	123.31
35	BA	744	G	C5'-C4'-C3'	-6.80	105.80	116.00
13	AM	84	ILE	N-CA-C	-6.79	103.69	110.62
30	B5	17	ASP	O-C-N	6.79	129.32	122.12
47	BP	103	ALA	CA-C-O	6.79	124.50	119.68
2	AB	184	VAL	N-CA-C	6.79	117.89	108.12
35	BA	2689	U	C4'-C3'-O3'	6.78	119.57	109.40
13	AM	84	ILE	O-C-N	6.78	128.44	121.87
35	BA	2017	U	C2'-C3'-O3'	-6.78	103.53	113.70
4	AD	38	TYR	N-CA-C	6.77	114.31	108.22
12	AL	119	LYS	N-CA-C	-6.77	100.51	110.52
20	AT	13	LEU	N-CA-C	-6.76	104.29	112.54
51	BT	96	ARG	NE-CZ-NH1	-6.76	114.74	121.50
14	AN	19	ARG	N-CA-C	6.76	118.65	111.28
35	BA	1313	U	N1-C1'-C2'	6.76	122.14	112.00
38	BD	196	VAL	N-CA-C	6.76	121.62	111.89
1	AA	106	C	O3'-P-O5'	-6.75	93.87	104.00
19	AS	23	ASN	CA-CB-CG	6.75	119.35	112.60
35	BA	619	G	C2'-C3'-O3'	-6.75	103.57	113.70
13	AM	122	LYS	N-CA-C	6.74	118.39	108.14
1	AA	983	A	C3'-C2'-C1'	6.74	108.04	101.30
5	AE	94	ALA	N-CA-C	6.73	120.13	109.50
52	BU	97	ASP	N-CA-C	-6.73	105.15	113.15
1	AA	30	U	C2'-C3'-O3'	6.72	119.58	109.50
17	AQ	94	ASN	CA-CB-CG	-6.72	105.88	112.60
39	BE	104	VAL	N-CA-C	6.72	117.81	107.99
38	BD	210	GLY	CA-C-O	-6.72	114.21	122.75
24	AY	234	GLY	O-C-N	6.72	129.50	122.51
35	BA	83	G	C4'-C3'-O3'	-6.72	102.92	113.00
24	AY	650	ALA	N-CA-C	-6.72	103.58	111.03
35	BA	1899	G	C4'-C3'-O3'	-6.71	102.93	113.00
25	B0	12	ASN	CA-C-O	6.71	126.61	119.03
35	BA	2033	A	O4'-C1'-C2'	6.70	112.50	105.80
45	BN	102	ALA	CA-C-N	-6.70	114.27	121.84
45	BN	102	ALA	C-N-CA	-6.70	114.27	121.84
35	BA	1301	A	C2'-C3'-O3'	6.69	119.54	109.50
39	BE	44	TYR	N-CA-C	6.69	125.04	110.80
38	BD	176	ARG	NE-CZ-NH1	-6.68	114.82	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	BN	26	LEU	O-C-N	6.68	129.19	122.10
35	BA	332	A	C4'-C3'-C2'	6.68	109.28	102.60
31	B6	17	LYS	CA-C-N	6.68	134.30	121.54
31	B6	17	LYS	C-N-CA	6.68	134.30	121.54
21	AU	22	ARG	CA-C-N	6.68	126.64	119.76
21	AU	22	ARG	C-N-CA	6.68	126.64	119.76
24	AY	487	ILE	N-CA-C	6.67	118.33	108.65
35	BA	2682	U	C5'-C4'-O4'	-6.67	99.79	109.80
27	B2	71	ASN	N-CA-C	-6.67	106.34	114.75
52	BU	28	ARG	N-CA-C	-6.67	104.40	112.54
16	AP	79	VAL	N-CA-C	6.66	117.42	110.62
1	AA	1321	C	C3'-C2'-O2'	6.66	120.69	110.70
35	BA	1838	C	C5'-C4'-C3'	-6.66	105.21	115.20
36	BB	84	C	C5'-C4'-C3'	-6.65	106.02	116.00
43	BK	126	MET	N-CA-C	-6.65	104.42	112.54
3	AC	40	ARG	O-C-N	6.63	129.76	122.20
35	BA	2835	A	N9-C1'-C2'	6.63	121.95	112.00
56	BY	68	HIS	CA-CB-CG	-6.63	107.17	113.80
7	AG	120	ILE	CB-CA-C	-6.63	103.19	112.14
13	AM	17	VAL	N-CA-C	-6.63	106.53	111.90
5	AE	68	GLU	CA-C-N	-6.63	117.08	122.85
5	AE	68	GLU	C-N-CA	-6.63	117.08	122.85
1	AA	876	G	C4'-C3'-O3'	-6.63	103.06	113.00
2	AB	46	LYS	N-CA-C	-6.63	105.33	113.41
38	BD	244	ARG	NE-CZ-NH2	-6.63	113.24	119.20
56	BY	106	LEU	N-CA-C	-6.62	102.88	113.28
1	AA	1049	U	O4'-C1'-C2'	6.62	112.42	105.80
30	B5	26	THR	CA-C-N	6.62	127.20	120.38
30	B5	26	THR	C-N-CA	6.62	127.20	120.38
1	AA	554	C	C1'-C2'-O2'	6.62	118.33	108.40
35	BA	2401	U	N1-C1'-C2'	6.61	121.91	112.00
35	BA	1382	G	C5'-C4'-C3'	-6.60	106.09	116.00
38	BD	151	LYS	N-CA-C	-6.60	104.86	113.12
35	BA	2224	G	P-O5'-C5'	-6.60	111.00	120.90
24	AY	658	ASP	N-CA-C	-6.60	105.11	113.43
35	BA	1246	A	C4'-C3'-O3'	-6.60	103.10	113.00
26	B1	4	VAL	N-CA-CB	-6.60	104.82	112.34
24	AY	654	GLY	O-C-N	-6.60	117.17	122.51
7	AG	135	VAL	CB-CA-C	-6.60	102.42	112.05
9	AI	69	GLY	O-C-N	-6.59	117.55	123.29
2	AB	19	HIS	CA-C-O	-6.59	114.38	121.36
1	AA	1402	C	C3'-C2'-O2'	6.59	120.58	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1487	G	C1'-C2'-O2'	6.59	118.28	108.40
35	BA	845	G	C3'-C2'-C1'	6.59	107.89	101.30
1	AA	189(L)	G	O5'-C5'-C4'	-6.58	101.62	111.50
1	AA	1020	U	N1-C1'-C2'	6.58	121.87	112.00
8	AH	37	ARG	NE-CZ-NH2	6.58	125.13	119.20
1	AA	1502	A	N9-C1'-C2'	6.58	123.87	114.00
1	AA	1531	A	C2'-C3'-O3'	-6.58	99.63	109.50
24	AY	241	GLU	N-CA-C	-6.58	104.73	112.89
50	BS	23	ARG	NE-CZ-NH2	-6.58	113.28	119.20
35	BA	1609	A	N9-C1'-C2'	6.58	121.86	112.00
35	BA	1203	G	N9-C1'-C2'	6.57	121.86	112.00
35	BA	2027	G	C5'-C4'-C3'	-6.57	106.15	116.00
5	AE	26	PHE	N-CA-C	6.57	120.04	109.86
37	BC	130	ARG	N-CA-C	-6.57	104.58	112.59
14	AN	4	LYS	N-CA-C	6.56	120.89	113.01
38	BD	21	PHE	N-CA-C	6.56	120.89	113.02
24	AY	423	LYS	CA-C-N	6.56	129.07	120.28
24	AY	423	LYS	C-N-CA	6.56	129.07	120.28
9	AI	99	LEU	N-CA-C	-6.55	99.02	109.76
35	BA	2540	C	O4'-C1'-C2'	-6.55	101.05	107.60
38	BD	158	ALA	N-CA-C	-6.55	101.09	110.59
35	BA	2035	G	N9-C1'-C2'	6.55	123.82	114.00
44	BL	73	ARG	NE-CZ-NH1	-6.55	114.95	121.50
10	AJ	56	HIS	N-CA-C	-6.54	96.86	110.80
35	BA	2555	U	O4'-C4'-C3'	-6.54	97.45	104.00
24	AY	302	HIS	N-CA-C	6.54	117.89	109.65
41	BG	160	VAL	O-C-N	-6.54	116.31	123.18
20	AT	12	ALA	N-CA-C	-6.54	103.80	113.61
24	AY	660	ARG	NE-CZ-NH1	-6.54	114.96	121.50
4	AD	208	SER	N-CA-C	-6.54	105.84	113.88
13	AM	83	ASP	CA-CB-CG	6.53	119.12	112.60
39	BE	168	MET	N-CA-C	6.53	120.12	110.46
35	BA	1351	C	C5'-C4'-C3'	-6.52	106.22	116.00
13	AM	81	LEU	CA-C-O	6.52	127.52	119.05
37	BC	222	SER	N-CA-C	6.52	120.66	110.17
35	BA	330	A	C4'-C3'-O3'	-6.51	103.24	113.00
1	AA	115	G	C4'-C3'-C2'	6.50	109.11	102.60
1	AA	433	C	C2'-C3'-O3'	-6.50	103.95	113.70
24	AY	126	GLU	N-CA-C	-6.50	105.07	112.87
35	BA	729	G	N9-C1'-C2'	6.49	121.74	112.00
50	BS	55	ALA	N-CA-C	-6.49	103.47	111.33
41	BG	58	GLN	OE1-CD-NE2	-6.49	116.11	122.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	913	A	C2'-C3'-O3'	6.49	119.23	109.50
1	AA	1316	G	C3'-C2'-O2'	6.49	120.43	110.70
3	AC	71	ALA	N-CA-C	-6.49	103.64	113.89
30	B5	19	ARG	NE-CZ-NH1	-6.49	115.01	121.50
50	BS	16	ASN	N-CA-C	-6.48	105.29	113.72
5	AE	10	MET	N-CA-C	6.47	119.79	109.24
27	B2	8	LYS	N-CA-C	-6.47	103.84	111.03
43	BK	31	GLY	N-CA-C	-6.47	106.30	115.30
16	AP	12	LYS	N-CA-C	-6.47	101.81	110.55
41	BG	4	ASP	N-CA-C	6.47	124.58	110.80
35	BA	2451	A	C3'-C2'-O2'	6.46	120.39	110.70
10	AJ	29	ARG	NE-CZ-NH1	-6.46	115.04	121.50
12	AL	93	LEU	CB-CA-C	-6.46	102.65	110.08
24	AY	379	GLY	N-CA-C	-6.46	101.17	110.60
28	B3	11	SER	CA-C-N	6.46	127.91	119.84
28	B3	11	SER	C-N-CA	6.46	127.91	119.84
24	AY	322	VAL	N-CA-C	6.46	118.30	112.17
43	BK	71	THR	N-CA-C	6.45	119.01	110.36
35	BA	876	C	C5'-C4'-C3'	6.45	125.68	116.00
12	AL	102	ARG	NE-CZ-NH1	-6.45	115.05	121.50
47	BP	132	LYS	N-CA-C	-6.45	104.17	111.14
35	BA	1459	G	N9-C1'-C2'	6.45	121.67	112.00
49	BR	73	VAL	CB-CA-C	-6.45	103.72	111.97
49	BR	17	ARG	CA-C-O	-6.44	113.09	120.24
35	BA	1381	G	C3'-C2'-C1'	6.44	107.74	101.30
37	BC	181	PHE	CA-C-N	6.44	127.01	120.38
37	BC	181	PHE	C-N-CA	6.44	127.01	120.38
45	BN	96	GLU	N-CA-C	-6.44	105.56	113.41
5	AE	89	ILE	N-CA-C	6.44	117.12	108.11
42	BH	145	ALA	O-C-N	6.43	128.72	122.03
38	BD	194	GLY	CA-C-O	-6.43	117.82	122.45
35	BA	1020	A	C2'-C3'-O3'	6.43	119.14	109.50
37	BC	226	ASN	CA-C-N	6.42	127.87	119.84
37	BC	226	ASN	C-N-CA	6.42	127.87	119.84
35	BA	1127	A	C1'-C2'-O2'	6.42	118.03	108.40
35	BA	1406	U	C5'-C4'-C3'	-6.42	106.36	116.00
35	BA	857	C	C4'-C3'-O3'	-6.42	103.37	113.00
43	BK	121	GLU	N-CA-C	-6.42	104.93	112.89
24	AY	226	ASN	OD1-CG-ND2	6.42	129.02	122.60
40	BF	165	ARG	NE-CZ-NH1	-6.42	115.08	121.50
1	AA	951	G	O4'-C4'-C3'	6.42	110.42	104.00
35	BA	1418	G	O4'-C1'-C2'	6.42	114.02	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	AE	75	THR	CA-C-O	-6.41	113.84	120.89
41	BG	141	PHE	CA-C-N	6.41	127.23	120.12
41	BG	141	PHE	C-N-CA	6.41	127.23	120.12
27	B2	50	ILE	N-CA-C	6.41	116.57	110.74
38	BD	103	ARG	N-CA-C	6.41	118.91	109.24
38	BD	233	HIS	O-C-N	6.40	128.90	122.12
1	AA	1198	G	C2'-C3'-O3'	-6.40	104.10	113.70
38	BD	53	PHE	N-CA-C	6.40	120.38	111.74
24	AY	78	ARG	NE-CZ-NH2	-6.40	113.44	119.20
6	AF	95	GLU	CA-C-N	6.40	126.41	119.89
6	AF	95	GLU	C-N-CA	6.40	126.41	119.89
35	BA	1598	C	C4'-C3'-C2'	-6.39	96.21	102.60
55	BX	45	THR	CA-C-O	6.39	125.98	119.97
41	BG	78	SER	N-CA-C	-6.39	103.57	111.75
49	BR	24	GLN	N-CA-C	-6.39	105.52	113.38
4	AD	159	ARG	NE-CZ-NH1	-6.39	115.11	121.50
1	AA	6	G	C4'-C3'-O3'	-6.37	103.44	113.00
7	AG	143	ARG	N-CA-C	-6.37	104.39	111.71
1	AA	639	G	C4'-C3'-C2'	-6.37	96.23	102.60
35	BA	2262	U	C3'-C2'-O2'	6.36	120.25	110.70
47	BP	99	LEU	N-CA-C	-6.36	103.47	111.11
54	BW	85	VAL	N-CA-C	6.36	117.74	108.58
13	AM	63	THR	CB-CA-C	-6.36	107.18	116.53
26	B1	56	GLN	CA-C-N	-6.36	111.67	122.67
26	B1	56	GLN	C-N-CA	-6.36	111.67	122.67
6	AF	50	TYR	CA-C-N	6.36	127.78	119.84
6	AF	50	TYR	C-N-CA	6.36	127.78	119.84
52	BU	58	ARG	NE-CZ-NH1	-6.36	115.14	121.50
24	AY	127	LYS	N-CA-C	-6.35	104.41	111.71
25	B0	38	VAL	N-CA-C	6.35	117.92	108.46
46	BO	121	VAL	N-CA-C	6.35	115.87	106.85
36	BB	40	U	C2'-C3'-O3'	-6.35	104.18	113.70
11	AK	40	ILE	N-CA-C	-6.34	106.61	111.62
24	AY	197	ARG	NE-CZ-NH2	6.34	124.90	119.20
35	BA	2191	G	O5'-C5'-C4'	-6.34	102.00	111.50
35	BA	1252	G	C4'-C3'-O3'	-6.33	103.50	113.00
10	AJ	16	LEU	N-CA-C	-6.33	104.47	111.82
1	AA	1151	A	C4'-C3'-O3'	-6.33	99.91	109.40
55	BX	27	THR	N-CA-C	6.33	121.97	107.48
35	BA	614(C)	A	C2'-C3'-O3'	6.32	118.99	109.50
11	AK	18	ARG	NE-CZ-NH1	-6.31	115.19	121.50
29	B4	55	ARG	O-C-N	6.31	129.82	121.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	B4	42	PHE	CA-C-O	6.31	127.50	120.94
45	BN	80	GLY	CA-C-O	6.31	126.03	119.02
3	AC	138	VAL	CB-CA-C	-6.31	103.61	111.94
30	B5	46	CYS	CA-C-N	6.31	127.72	119.84
30	B5	46	CYS	C-N-CA	6.31	127.72	119.84
1	AA	1417	G	C2'-C3'-O3'	-6.30	104.25	113.70
1	AA	552	U	O3'-P-O5'	-6.30	94.55	104.00
25	B0	61	ALA	O-C-N	-6.30	116.03	123.22
36	BB	4	C	O5'-C5'-C4'	-6.30	102.05	111.50
47	BP	26	GLY	N-CA-C	-6.29	106.54	114.16
12	AL	43	VAL	N-CA-C	6.29	118.86	109.17
35	BA	352	G	N9-C1'-C2'	6.29	121.43	112.00
35	BA	538	G	N9-C1'-C2'	-6.29	102.57	112.00
54	BW	66	GLU	N-CA-C	6.29	118.66	111.11
24	AY	30	GLU	N-CA-C	-6.29	104.43	111.28
24	AY	625	ASN	CA-CB-CG	6.29	118.89	112.60
35	BA	121	G	C3'-C2'-O2'	6.28	120.12	110.70
35	BA	2225	A	C1'-O4'-C4'	6.28	115.98	109.70
36	BB	21	G	N9-C1'-C2'	-6.28	104.58	114.00
1	AA	115	G	O4'-C1'-C2'	6.28	112.08	105.80
1	AA	920	U	C4'-C3'-O3'	-6.28	103.58	113.00
22	AV	36	U	O4'-C4'-C3'	6.28	110.28	104.00
35	BA	406	G	N9-C1'-C2'	-6.28	104.59	114.00
33	B8	12	LYS	N-CA-C	6.27	120.54	113.01
35	BA	2354	G	O4'-C4'-C3'	6.27	110.27	104.00
53	BV	12	TYR	N-CA-C	6.27	118.49	109.14
24	AY	574	GLU	O-C-N	6.27	128.61	122.09
49	BR	7	GLY	N-CA-C	6.27	120.47	111.12
54	BW	23	LEU	CA-C-N	-6.27	114.39	121.85
54	BW	23	LEU	C-N-CA	-6.27	114.39	121.85
35	BA	656	G	N9-C1'-C2'	6.27	121.41	112.00
7	AG	115	ARG	CA-C-N	6.26	128.92	120.65
7	AG	115	ARG	C-N-CA	6.26	128.92	120.65
4	AD	63	LYS	N-CA-C	-6.26	104.08	111.03
35	BA	1641	A	C4'-C3'-O3'	-6.26	103.61	113.00
35	BA	2145	C	C4'-C3'-C2'	6.26	108.86	102.60
52	BU	76	TYR	N-CA-C	6.26	118.66	111.02
16	AP	3	LYS	N-CA-C	6.26	119.44	109.24
24	AY	462	ILE	CB-CA-C	-6.26	104.05	111.94
35	BA	1031	G	C4'-C3'-O3'	-6.26	103.61	113.00
35	BA	2369	A	C4'-C3'-C2'	-6.26	96.34	102.60
53	BV	80	GLN	CB-CA-C	-6.25	103.48	111.86

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	B5	19	ARG	NE-CZ-NH2	6.25	124.83	119.20
35	BA	6	A	N9-C1'-C2'	6.25	121.38	112.00
40	BF	106	ARG	N-CA-C	-6.25	105.41	113.16
35	BA	1481	U	C1'-O4'-C4'	6.25	116.15	109.90
38	BD	108	PRO	CA-C-N	6.25	130.18	120.75
38	BD	108	PRO	C-N-CA	6.25	130.18	120.75
35	BA	597	U	C4'-C3'-C2'	-6.24	96.36	102.60
25	B0	71	ASP	CA-CB-CG	6.24	118.84	112.60
35	BA	1786	A	N9-C1'-C2'	6.24	123.36	114.00
40	BF	68	LYS	O-C-N	6.24	125.45	120.83
15	AO	35	ARG	N-CA-C	6.24	117.74	111.07
36	BB	22	U	C3'-C2'-O2'	6.23	120.04	110.70
1	AA	812	C	C2'-C3'-O3'	6.22	118.84	109.50
29	B4	28	LYS	CA-C-N	6.22	127.62	119.84
29	B4	28	LYS	C-N-CA	6.22	127.62	119.84
34	B9	18	ARG	CA-C-N	-6.22	112.24	120.95
34	B9	18	ARG	C-N-CA	-6.22	112.24	120.95
40	BF	114	VAL	N-CA-C	-6.22	104.28	110.62
48	BQ	129	THR	N-CA-C	6.22	119.16	109.52
35	BA	1992	G	N9-C1'-C2'	6.22	123.32	114.00
35	BA	653	A	C4'-C3'-O3'	-6.21	103.68	113.00
35	BA	2031	A	C4'-C3'-O3'	-6.21	103.69	113.00
51	BT	26	ASP	CA-CB-CG	6.21	118.81	112.60
40	BF	95	ARG	N-CA-C	6.21	117.57	108.14
35	BA	860	U	O4'-C4'-C3'	6.20	110.20	104.00
57	BZ	67	LEU	N-CA-C	6.20	118.64	110.08
40	BF	20	LEU	N-CA-C	6.20	118.60	108.55
2	AB	10	LEU	CA-C-O	-6.20	113.98	120.55
2	AB	13	ALA	CA-C-N	6.20	126.82	119.94
2	AB	13	ALA	C-N-CA	6.20	126.82	119.94
11	AK	110	ASP	CA-CB-CG	-6.20	106.40	112.60
35	BA	1020	A	N9-C1'-C2'	6.20	123.30	114.00
35	BA	2518	A	C2'-C3'-O3'	-6.20	104.40	113.70
1	AA	515	G	C5'-C4'-C3'	-6.20	106.70	116.00
35	BA	2619	C	C4'-C3'-O3'	-6.20	103.70	113.00
24	AY	429	ALA	N-CA-C	-6.20	105.44	112.87
51	BT	4	GLY	N-CA-C	-6.19	105.15	112.64
35	BA	2170	A	O4'-C4'-C3'	6.19	110.19	104.00
35	BA	2679	A	C4'-C3'-O3'	-6.19	103.72	113.00
39	BE	118	LYS	N-CA-C	-6.19	97.62	110.80
47	BP	28	GLY	N-CA-C	-6.19	98.52	113.18
35	BA	1458	C	C2'-C3'-O3'	-6.18	104.42	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	B2	7	ARG	NE-CZ-NH2	-6.18	113.64	119.20
41	BG	3	LEU	N-CA-C	-6.18	106.96	114.75
2	AB	196	LEU	N-CA-C	6.18	119.52	112.97
35	BA	153	C	C1'-O4'-C4'	-6.18	103.72	109.90
35	BA	1540	U	O4'-C1'-N1	6.18	117.77	108.50
35	BA	1598	C	O4'-C4'-C3'	6.18	110.18	104.00
36	BB	51	G	O4'-C1'-C2'	6.18	113.78	107.60
20	AT	52	ALA	N-CA-C	-6.17	103.15	112.04
1	AA	1190	G	N9-C1'-C2'	6.17	121.25	112.00
35	BA	1422	G	C5'-C4'-C3'	-6.17	106.75	116.00
57	BZ	104	PHE	CA-CB-CG	6.17	119.97	113.80
9	AI	109	VAL	CA-C-O	-6.17	114.58	121.36
35	BA	124	G	P-O5'-C5'	6.16	130.15	120.90
35	BA	1108	U	C4'-C3'-O3'	-6.16	103.75	113.00
3	AC	78	GLY	N-CA-C	-6.16	101.62	112.77
19	AS	19	VAL	CB-CA-C	-6.16	104.47	111.55
10	AJ	22	LYS	N-CA-C	-6.15	104.85	112.72
3	AC	109	PRO	N-CA-C	-6.15	105.85	113.84
19	AS	23	ASN	N-CA-C	-6.15	105.73	113.72
41	BG	9	ARG	NE-CZ-NH2	-6.15	113.67	119.20
41	BG	91	ARG	NE-CZ-NH2	6.15	124.73	119.20
4	AD	192	GLU	CB-CA-C	-6.14	100.41	110.85
35	BA	2511	U	C5'-C4'-C3'	-6.14	106.79	116.00
35	BA	1156	A	C2'-C3'-O3'	6.14	118.71	109.50
35	BA	2609	U	C3'-C2'-C1'	-6.14	95.36	101.50
40	BF	68	LYS	CA-C-O	-6.14	116.27	119.77
1	AA	299	G	C4'-C3'-O3'	-6.13	103.80	113.00
35	BA	1212	G	O4'-C1'-C2'	6.13	111.93	105.80
32	B7	35	ARG	CA-C-O	-6.13	114.38	120.82
46	BO	85	VAL	N-CA-C	-6.13	99.66	108.48
5	AE	76	ILE	CA-C-N	6.12	125.61	119.24
5	AE	76	ILE	C-N-CA	6.12	125.61	119.24
1	AA	1045	C	C5'-C4'-C3'	-6.12	106.82	116.00
24	AY	504	ARG	NE-CZ-NH2	6.12	124.71	119.20
41	BG	71	THR	N-CA-C	-6.12	100.66	110.14
1	AA	754	C	N1-C1'-C2'	6.12	121.18	112.00
45	BN	104	LYS	N-CA-C	-6.11	104.68	111.71
50	BS	18	ILE	N-CA-C	-6.11	105.34	112.98
35	BA	2040	C	C4'-C3'-O3'	-6.11	103.83	113.00
54	BW	11	ARG	NE-CZ-NH1	-6.11	115.39	121.50
24	AY	639	ASN	N-CA-C	-6.11	105.79	113.18
35	BA	1148	A	C4'-C3'-O3'	-6.11	103.84	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	470	C	C4'-C3'-O3'	-6.10	103.84	113.00
1	AA	1064	G	N9-C1'-C2'	6.10	123.16	114.00
1	AA	140	A	C3'-C2'-C1'	-6.10	95.20	101.30
15	AO	78	TYR	N-CA-C	-6.10	101.58	111.04
18	AR	49	LYS	CA-C-O	-6.10	115.09	121.55
27	B2	43	GLN	OE1-CD-NE2	-6.10	116.50	122.60
1	AA	792	A	C5'-C4'-C3'	-6.10	106.06	115.20
35	BA	212	G	C3'-C2'-O2'	6.10	119.85	110.70
42	BH	67	LEU	N-CA-C	-6.10	103.58	111.02
1	AA	220	G	C5'-C4'-C3'	-6.10	106.86	116.00
11	AK	18	ARG	NE-CZ-NH2	6.10	124.69	119.20
14	AN	53	LEU	CA-C-N	6.10	127.46	119.84
14	AN	53	LEU	C-N-CA	6.10	127.46	119.84
35	BA	2196	C	C2'-C3'-O3'	-6.10	104.56	113.70
35	BA	859	G	C1'-C2'-O2'	-6.09	102.66	111.80
3	AC	16	ARG	NE-CZ-NH1	6.09	127.59	121.50
35	BA	1917	U	C4'-C3'-O3'	-6.09	103.86	113.00
10	AJ	50	ILE	CB-CA-C	-6.09	103.36	110.91
35	BA	1051	G	N9-C1'-C2'	6.09	121.13	112.00
41	BG	81	LYS	N-CA-C	6.09	123.77	110.80
35	BA	2826	A	C5'-C4'-C3'	-6.09	106.87	116.00
1	AA	839	U	N1-C1'-C2'	6.09	121.13	112.00
1	AA	1028	C	O4'-C4'-C3'	6.08	110.08	104.00
1	AA	1237	C	C2'-C3'-O3'	-6.08	104.58	113.70
35	BA	363(F)	A	C4'-C3'-C2'	6.08	108.68	102.60
40	BF	182	ASN	N-CA-C	6.08	119.15	109.24
35	BA	2059	A	C4'-C3'-C2'	-6.08	96.52	102.60
1	AA	809	G	C5'-C4'-O4'	-6.08	100.69	109.80
7	AG	99	LEU	CA-C-N	6.08	128.42	120.28
7	AG	99	LEU	C-N-CA	6.08	128.42	120.28
8	AH	35	ILE	N-CA-C	-6.08	104.59	110.42
1	AA	1434	A	C5'-C4'-C3'	-6.07	106.89	116.00
13	AM	87	TYR	N-CA-C	-6.07	104.58	111.07
36	BB	118	G	C3'-C2'-O2'	6.07	119.80	110.70
45	BN	106	MET	N-CA-C	6.07	119.64	112.72
3	AC	116	VAL	N-CA-C	-6.07	103.99	110.36
18	AR	77	GLY	N-CA-C	-6.07	107.52	115.47
39	BE	100	GLU	CA-C-O	-6.07	115.20	121.87
48	BQ	56	ARG	NE-CZ-NH2	6.06	124.66	119.20
1	AA	184	G	P-O5'-C5'	6.06	130.00	120.90
12	AL	53	ARG	NE-CZ-NH1	-6.06	115.44	121.50
35	BA	1690	A	C4'-C3'-C2'	-6.06	96.54	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BW	62	HIS	CA-CB-CG	6.06	119.86	113.80
24	AY	386	GLY	N-CA-C	6.06	127.54	113.18
35	BA	2031	A	N9-C1'-C2'	6.06	121.09	112.00
1	AA	514	C	C1'-O4'-C4'	-6.06	103.84	109.90
12	AL	82	VAL	N-CA-C	-6.06	101.77	109.58
35	BA	2471	C	C4'-C3'-O3'	-6.06	103.91	113.00
57	BZ	124	ILE	N-CA-C	6.06	118.36	108.97
35	BA	1614	A	O4'-C1'-C2'	6.05	113.65	107.60
35	BA	1356	G	C3'-C2'-O2'	6.05	119.78	110.70
35	BA	2334	G	C3'-C2'-O2'	-6.05	105.52	114.60
35	BA	1208	C	C5'-C4'-C3'	-6.05	106.93	116.00
35	BA	2761	G	C4'-C3'-O3'	-6.05	103.92	113.00
15	AO	18	PHE	CA-CB-CG	6.05	119.85	113.80
18	AR	26	LEU	N-CA-C	6.05	119.40	109.85
35	BA	1149	G	C4'-C3'-C2'	-6.05	96.55	102.60
35	BA	2026	C	C5'-C4'-C3'	-6.05	106.93	116.00
36	BB	110	G	C1'-C2'-O2'	6.04	117.47	108.40
2	AB	23	ARG	CA-C-O	6.04	125.80	119.51
39	BE	7	VAL	N-CA-C	6.04	116.79	107.78
5	AE	50	GLU	CA-C-O	6.04	127.03	120.32
18	AR	35	ARG	N-CA-C	6.04	123.67	110.80
35	BA	2438	U	C2'-C3'-O3'	-6.04	104.65	113.70
2	AB	23	ARG	N-CA-C	-6.03	103.43	112.54
29	B4	47	GLN	N-CA-C	6.03	119.81	108.65
49	BR	12	ARG	NE-CZ-NH1	-6.03	115.47	121.50
35	BA	2306	C	C5'-C4'-C3'	-6.03	106.96	116.00
1	AA	88	A	N9-C1'-C2'	6.03	121.04	112.00
52	BU	112	ARG	N-CA-C	-6.03	104.79	111.36
6	AF	25	ILE	N-CA-C	-6.03	103.52	111.05
35	BA	1849	G	C1'-C2'-O2'	6.03	117.44	108.40
24	AY	151	ARG	N-CA-C	-6.03	106.02	113.19
35	BA	47	C	C1'-C2'-O2'	6.02	117.44	108.40
56	BY	106	LEU	CA-C-O	6.02	125.02	119.00
1	AA	181	G	C2'-C3'-O3'	-6.02	104.67	113.70
35	BA	1495	A	N9-C1'-C2'	6.02	121.03	112.00
1	AA	728	A	C4'-C3'-O3'	-6.00	103.99	113.00
42	BH	167	GLU	CB-CA-C	6.00	117.88	108.63
43	BK	68	VAL	O-C-N	-6.00	117.02	123.14
1	AA	652	U	C4'-C3'-O3'	-6.00	100.40	109.40
32	B7	21	ARG	NE-CZ-NH1	-6.00	115.50	121.50
1	AA	645	C	O4'-C4'-C3'	6.00	110.00	104.00
4	AD	126	ILE	O-C-N	6.00	128.27	122.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	BR	117	VAL	CA-C-N	6.00	132.49	121.70
49	BR	117	VAL	C-N-CA	6.00	132.49	121.70
35	BA	974	G	O4'-C4'-C3'	5.99	112.09	106.10
47	BP	79	ARG	NE-CZ-NH1	-5.99	115.51	121.50
35	BA	1319	G	C3'-C2'-C1'	5.99	107.28	101.30
14	AN	10	ALA	CA-C-N	5.98	128.77	120.63
14	AN	10	ALA	C-N-CA	5.98	128.77	120.63
47	BP	35	HIS	ND1-CE1-NE2	5.98	114.38	108.40
1	AA	785	G	C5'-C4'-C3'	-5.98	107.03	116.00
8	AH	6	ILE	N-CA-C	5.98	116.45	110.23
22	AV	17(A)	U	N1-C1'-C2'	5.98	120.97	112.00
1	AA	913	A	O4'-C1'-C2'	5.98	111.78	105.80
8	AH	66	GLY	CA-C-N	5.98	125.94	119.78
8	AH	66	GLY	C-N-CA	5.98	125.94	119.78
24	AY	252	ASP	N-CA-C	-5.97	106.03	113.38
35	BA	2839	G	C1'-O4'-C4'	-5.97	103.93	109.90
41	BG	139	LEU	N-CA-C	5.97	119.87	112.59
57	BZ	48	PHE	N-CA-C	-5.97	104.77	111.28
1	AA	519	C	C3'-C2'-O2'	5.97	119.65	110.70
39	BE	81	ILE	N-CA-C	-5.97	106.94	112.43
19	AS	31	ILE	N-CA-CB	-5.96	105.69	111.89
35	BA	811	U	C5'-C4'-C3'	-5.96	106.25	115.20
24	AY	470	PHE	O-C-N	5.96	128.59	122.09
37	BC	15	VAL	CB-CA-C	-5.96	101.52	111.29
31	B6	16	CYS	CA-C-N	-5.96	113.79	122.19
31	B6	16	CYS	C-N-CA	-5.96	113.79	122.19
49	BR	10	LEU	N-CA-C	5.96	117.46	108.46
35	BA	2729	G	O5'-C5'-C4'	-5.96	102.56	111.50
38	BD	44	ASN	N-CA-C	5.96	116.10	108.24
24	AY	604	PRO	N-CA-C	5.95	120.25	110.55
41	BG	132	ASN	CA-C-N	-5.95	112.37	123.03
41	BG	132	ASN	C-N-CA	-5.95	112.37	123.03
35	BA	1212	G	C4'-C3'-O3'	5.95	118.32	109.40
35	BA	696	G	O4'-C1'-N9	-5.95	99.58	108.50
1	AA	533	A	O4'-C1'-C2'	5.95	111.75	105.80
17	AQ	9	VAL	N-CA-C	5.95	118.00	108.85
1	AA	1354	C	C5'-C4'-C3'	-5.94	107.09	116.00
35	BA	390	A	C4'-C3'-C2'	5.94	108.54	102.60
35	BA	2041	U	C5'-C4'-C3'	-5.94	107.09	116.00
38	BD	106	ILE	CA-C-O	-5.93	113.68	120.98
43	BK	81	ALA	CB-CA-C	-5.93	103.74	111.40
47	BP	40	SER	N-CA-C	-5.93	98.16	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	BF	41	LEU	N-CA-C	-5.93	105.75	112.87
53	BV	51	VAL	CB-CA-C	-5.93	101.56	111.29
7	AG	11	GLN	N-CA-C	5.93	117.93	107.61
43	BK	120	LEU	CB-CA-C	5.93	116.81	109.16
24	AY	336	THR	N-CA-C	5.93	119.14	109.24
36	BB	44	G	C4'-C3'-O3'	-5.93	104.11	113.00
49	BR	30	THR	N-CA-C	-5.93	103.20	110.61
54	BW	13	SER	N-CA-C	5.92	117.35	109.83
35	BA	2555	U	C5'-C4'-C3'	5.92	124.88	116.00
46	BO	121	VAL	CB-CA-C	-5.92	103.83	111.53
35	BA	2349	G	C3'-C2'-C1'	-5.92	95.38	101.30
24	AY	635	GLU	CA-C-N	5.92	127.23	119.84
24	AY	635	GLU	C-N-CA	5.92	127.23	119.84
35	BA	1695	G	C2'-C3'-O3'	-5.92	104.83	113.70
50	BS	97	ARG	NE-CZ-NH2	-5.92	113.88	119.20
38	BD	191	ALA	N-CA-C	-5.91	99.71	108.99
2	AB	114	ARG	N-CA-C	-5.91	105.73	113.12
38	BD	259	THR	N-CA-C	5.91	120.29	112.72
49	BR	20	LEU	N-CA-C	-5.91	103.62	111.24
1	AA	980	C	N1-C1'-C2'	5.91	120.86	112.00
35	BA	1186	G	C3'-C2'-O2'	5.91	119.56	110.70
35	BA	2799	C	C4'-C3'-O3'	5.91	118.26	109.40
35	BA	1298	C	C2'-C3'-O3'	-5.91	104.84	113.70
35	BA	1918	A	C4'-C3'-O3'	5.91	118.26	109.40
42	BH	36	PRO	O-C-N	-5.90	118.54	122.73
33	B8	34	TRP	N-CA-C	-5.90	98.23	110.80
36	BB	52	A	N9-C1'-C2'	5.90	120.85	112.00
35	BA	978	G	C2'-C3'-O3'	-5.90	104.85	113.70
1	AA	675	A	O3'-P-O5'	-5.90	95.16	104.00
24	AY	271	LEU	N-CA-C	-5.90	105.17	112.90
35	BA	1156	A	C1'-C2'-O2'	-5.90	102.95	111.80
24	AY	478	LYS	CA-C-O	5.89	126.73	120.66
35	BA	2313	C	C5'-C4'-O4'	-5.89	100.96	109.80
1	AA	121	C	C4'-C3'-O3'	-5.89	100.56	109.40
1	AA	1224	G	C1'-C2'-O2'	-5.89	102.96	111.80
4	AD	107	ARG	CD-NE-CZ	5.89	132.65	124.40
10	AJ	40	LEU	N-CA-CB	5.89	116.15	109.49
35	BA	2409	G	C3'-C2'-O2'	5.89	119.54	110.70
46	BO	71	ARG	CA-C-N	5.89	125.59	119.64
46	BO	71	ARG	C-N-CA	5.89	125.59	119.64
35	BA	1378	A	C2'-C3'-O3'	5.89	118.33	109.50
35	BA	593	G	C4'-C3'-O3'	-5.89	104.17	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1329	A	C4'-C3'-C2'	-5.89	96.71	102.60
1	AA	1264	C	C3'-C2'-C1'	5.88	107.19	101.30
1	AA	1304	G	C5'-C4'-C3'	-5.88	107.17	116.00
1	AA	1501	C	C4'-C3'-O3'	-5.88	104.18	113.00
8	AH	77	GLU	N-CA-C	-5.88	101.81	110.52
35	BA	2477	C	P-O5'-C5'	-5.88	112.08	120.90
56	BY	13	VAL	O-C-N	-5.88	115.22	122.57
1	AA	744	C	C5'-C4'-C3'	-5.88	107.19	116.00
1	AA	1012	U	C3'-C2'-C1'	5.88	107.18	101.30
3	AC	156	ARG	N-CA-C	-5.88	98.28	110.80
40	BF	38	ARG	NE-CZ-NH1	5.88	127.38	121.50
26	B1	52	ARG	NE-CZ-NH2	-5.88	113.91	119.20
53	BV	95	LEU	N-CA-C	-5.88	98.29	108.69
41	BG	154	GLY	CA-C-O	-5.87	116.41	122.28
24	AY	584	ILE	CB-CA-C	-5.87	104.30	111.87
37	BC	178	LYS	CA-C-O	-5.87	114.68	121.49
51	BT	87	ASP	N-CA-C	5.87	119.24	110.14
35	BA	2030	A	C2'-C3'-O3'	-5.87	104.90	113.70
1	AA	789	U	P-O5'-C5'	-5.87	112.10	120.90
24	AY	132	ARG	N-CA-C	5.87	118.05	108.55
38	BD	107	ALA	CA-C-N	5.87	126.33	120.52
38	BD	107	ALA	C-N-CA	5.87	126.33	120.52
45	BN	58	ASP	CA-CB-CG	5.87	118.47	112.60
1	AA	1120	G	C3'-C2'-O2'	5.86	119.49	110.70
43	BK	93	ARG	CA-C-O	5.86	126.73	120.10
3	AC	23	TYR	N-CA-C	5.86	118.09	109.24
24	AY	574	GLU	CA-C-O	-5.86	114.63	120.90
35	BA	470	A	C5'-C4'-C3'	-5.86	107.21	116.00
47	BP	139	LYS	N-CA-C	-5.86	104.97	111.36
48	BQ	41	TRP	CA-C-N	-5.86	115.55	122.93
48	BQ	41	TRP	C-N-CA	-5.86	115.55	122.93
35	BA	196	A	C5'-C4'-C3'	5.86	123.99	115.20
1	AA	1224	G	C3'-C2'-O2'	-5.86	105.81	114.60
52	BU	10	ARG	N-CA-C	5.86	117.47	111.14
3	AC	167	TRP	CB-CA-C	-5.86	108.64	117.07
35	BA	686	G	O4'-C1'-N9	-5.86	99.42	108.20
1	AA	499	A	O3'-P-O5'	-5.85	95.22	104.00
28	B3	11	SER	N-CA-C	5.85	117.07	109.64
1	AA	1009	G	C1'-O4'-C4'	-5.85	104.05	109.90
39	BE	82	ARG	CB-CA-C	-5.85	108.83	115.79
4	AD	10	ARG	N-CA-C	-5.85	98.34	110.80
24	AY	653	PHE	N-CA-C	5.85	118.75	110.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	2033	A	C2'-C3'-O3'	5.85	118.27	109.50
27	B2	47	ASN	N-CA-C	5.84	123.25	110.80
57	BZ	155	LEU	N-CA-C	5.84	117.73	108.79
1	AA	1183	A	C3'-C2'-O2'	5.84	119.46	110.70
35	BA	1331	A	C4'-C3'-O3'	-5.84	104.24	113.00
18	AR	64	ARG	NE-CZ-NH2	5.84	124.46	119.20
27	B2	32	LEU	N-CA-C	5.84	118.14	111.02
8	AH	107	LEU	CA-C-N	-5.83	115.27	121.45
8	AH	107	LEU	C-N-CA	-5.83	115.27	121.45
12	AL	118	SER	N-CA-C	-5.83	104.27	111.33
35	BA	2264	C	C4'-C3'-O3'	-5.83	104.25	113.00
4	AD	3	ARG	N-CA-C	5.83	123.22	110.80
4	AD	19	LEU	O-C-N	-5.83	116.07	123.24
2	AB	193	ASP	N-CA-C	5.83	117.00	109.72
11	AK	38	ASN	N-CA-C	-5.83	102.44	109.72
35	BA	2493	U	C1'-C2'-O2'	5.83	117.14	108.40
53	BV	28	GLU	CA-C-N	5.82	125.20	118.85
53	BV	28	GLU	C-N-CA	5.82	125.20	118.85
1	AA	1411	C	C4'-C3'-C2'	5.82	108.42	102.60
35	BA	740	U	C5'-C4'-C3'	5.82	124.73	116.00
1	AA	436	C	O4'-C4'-C3'	5.82	109.82	104.00
15	AO	34	LEU	N-CA-C	-5.82	104.63	110.97
35	BA	2345	G	O4'-C1'-C2'	-5.82	99.98	105.80
35	BA	286	C	C5'-C4'-O4'	-5.81	101.08	109.80
1	AA	243	A	C2'-C3'-O3'	5.81	118.22	109.50
1	AA	1424	C	C4'-C3'-C2'	5.81	108.41	102.60
35	BA	1781	C	N1-C1'-C2'	5.81	122.71	114.00
1	AA	1342	C	O4'-C1'-C2'	-5.81	101.79	107.60
13	AM	70	LEU	N-CA-C	-5.80	98.44	110.80
1	AA	728	A	N9-C1'-C2'	5.80	120.70	112.00
35	BA	2361	A	C4'-C3'-O3'	-5.80	104.30	113.00
24	AY	287	PRO	N-CA-C	5.80	117.77	110.70
33	B8	18	ALA	N-CA-C	5.80	117.29	110.97
38	BD	15	PHE	CA-CB-CG	5.80	119.60	113.80
35	BA	655	A	O4'-C4'-C3'	5.79	111.89	106.10
35	BA	90	U	C4'-C3'-C2'	5.79	108.39	102.60
4	AD	135	LEU	CA-C-O	5.79	123.61	119.32
35	BA	1471	A	C1'-O4'-C4'	-5.79	104.11	109.90
35	BA	1897	G	O4'-C4'-C3'	5.79	109.79	104.00
35	BA	633	A	C1'-O4'-C4'	-5.79	104.11	109.90
11	AK	21	ILE	N-CA-CB	5.79	117.98	111.21
35	BA	1162	G	C4'-C3'-C2'	-5.79	96.81	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	BL	115	ALA	CA-C-N	-5.79	115.07	122.77
44	BL	115	ALA	C-N-CA	-5.79	115.07	122.77
24	AY	647	VAL	CA-C-N	5.79	127.07	119.84
24	AY	647	VAL	C-N-CA	5.79	127.07	119.84
35	BA	850	C	O4'-C4'-C3'	5.79	109.79	104.00
16	AP	62	VAL	CA-C-N	-5.78	113.25	122.10
16	AP	62	VAL	C-N-CA	-5.78	113.25	122.10
35	BA	2051	A	C3'-C2'-O2'	-5.78	105.93	114.60
1	AA	883	C	C4'-C3'-O3'	-5.78	104.33	113.00
35	BA	2343	C	N1-C1'-C2'	5.78	120.67	112.00
47	BP	117	GLU	N-CA-C	-5.78	101.62	109.95
1	AA	1420	C	C4'-C3'-O3'	-5.78	104.33	113.00
35	BA	1948	G	C4'-C3'-O3'	-5.78	104.33	113.00
35	BA	2304	G	C5'-C4'-O4'	5.78	118.47	109.80
35	BA	351	G	N9-C1'-C2'	5.78	120.67	112.00
3	AC	88	ARG	N-CA-C	-5.78	104.36	111.75
35	BA	2179	C	C5'-C4'-C3'	-5.78	107.34	116.00
2	AB	233	SER	CA-C-N	-5.77	114.02	120.14
2	AB	233	SER	C-N-CA	-5.77	114.02	120.14
35	BA	1681	G	C3'-C2'-O2'	-5.77	105.94	114.60
24	AY	121	VAL	CA-C-N	5.77	128.29	120.44
24	AY	121	VAL	C-N-CA	5.77	128.29	120.44
53	BV	62	LEU	CB-CA-C	-5.77	102.34	111.17
35	BA	77	C	C3'-C2'-O2'	5.77	119.36	110.70
1	AA	1217	C	C4'-C3'-O3'	-5.77	104.34	113.00
35	BA	2199	A	C1'-C2'-O2'	-5.77	99.75	108.40
1	AA	1253	G	N9-C1'-C2'	5.77	120.65	112.00
35	BA	2099	U	C4'-C3'-O3'	-5.77	104.35	113.00
40	BF	23	ASP	N-CA-C	-5.77	105.34	112.38
35	BA	1717	G	O4'-C4'-C3'	5.76	109.76	104.00
38	BD	59	LYS	N-CA-C	-5.76	101.87	110.23
45	BN	122	VAL	N-CA-C	5.76	117.65	108.89
1	AA	1394	A	O4'-C1'-C2'	5.76	111.56	105.80
35	BA	272	G	O5'-C5'-C4'	-5.76	103.06	111.70
35	BA	2498	C	C4'-C3'-O3'	-5.76	104.36	113.00
4	AD	158	ILE	O-C-N	5.76	129.77	122.57
35	BA	1897	G	C4'-C3'-O3'	-5.76	104.36	113.00
43	BK	58	THR	N-CA-C	5.76	118.62	109.24
35	BA	1227	G	C4'-C3'-C2'	-5.76	96.84	102.60
35	BA	1012	U	O4'-C1'-C2'	-5.75	100.05	105.80
8	AH	84	ARG	NE-CZ-NH1	-5.75	115.75	121.50
1	AA	479	C	N1-C1'-C2'	5.75	120.63	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	379	GLY	CA-C-O	-5.75	115.66	121.30
35	BA	2405	G	N9-C1'-C2'	5.75	120.63	112.00
46	BO	20	MET	CA-C-O	-5.75	114.61	120.71
1	AA	1233	G	O4'-C4'-C3'	5.75	109.75	104.00
38	BD	86	PRO	CA-C-N	-5.75	113.53	122.67
38	BD	86	PRO	C-N-CA	-5.75	113.53	122.67
35	BA	912	C	C2'-C3'-O3'	-5.75	105.08	113.70
41	BG	156	ASP	CA-CB-CG	5.75	118.35	112.60
1	AA	1498	U	C4'-C3'-C2'	5.75	108.35	102.60
35	BA	2318	G	C4'-C3'-C2'	-5.75	96.85	102.60
47	BP	92	GLU	N-CA-C	5.75	117.97	109.69
14	AN	50	LYS	N-CA-C	-5.74	106.12	113.01
26	B1	90	ILE	CA-C-N	5.74	128.77	120.79
26	B1	90	ILE	C-N-CA	5.74	128.77	120.79
1	AA	1505	G	N9-C1'-C2'	5.74	120.61	112.00
32	B7	35	ARG	O-C-N	5.74	127.98	122.07
51	BT	59	THR	N-CA-C	-5.74	100.35	109.59
35	BA	2133	G	N9-C1'-C2'	5.74	120.61	112.00
35	BA	2782	G	C5'-C4'-O4'	-5.74	101.19	109.80
35	BA	205	G	N9-C1'-C2'	5.74	122.60	114.00
35	BA	2839	G	C2'-C3'-O3'	-5.73	105.10	113.70
1	AA	576	G	C5'-C4'-C3'	5.73	123.80	115.20
1	AA	443	C	C4'-C3'-O3'	-5.73	104.41	113.00
35	BA	1682	G	O4'-C4'-C3'	5.73	109.73	104.00
1	AA	1523	G	C4'-C3'-C2'	-5.72	96.88	102.60
54	BW	37	ARG	CA-C-N	-5.72	115.31	123.20
54	BW	37	ARG	C-N-CA	-5.72	115.31	123.20
1	AA	513	C	O4'-C4'-C3'	5.72	109.72	104.00
17	AQ	29	HIS	CA-C-N	5.72	126.10	119.47
17	AQ	29	HIS	C-N-CA	5.72	126.10	119.47
24	AY	628	ARG	NE-CZ-NH2	5.72	124.35	119.20
35	BA	1527	G	N9-C1'-C2'	5.72	120.58	112.00
1	AA	1078	U	C1'-C2'-O2'	-5.72	99.83	108.40
2	AB	94	ASN	O-C-N	5.72	130.68	122.28
25	B0	67	VAL	O-C-N	5.72	128.51	122.62
26	B1	41	ARG	N-CA-C	5.72	118.79	109.24
48	BQ	25	ASP	CA-CB-CG	5.72	118.32	112.60
1	AA	481	G	C5'-C4'-C3'	-5.71	106.63	115.20
35	BA	1471	A	O4'-C4'-C3'	5.71	109.71	104.00
43	BK	96	VAL	CA-C-O	5.71	125.35	119.35
1	AA	266	G	C5'-C4'-O4'	-5.71	101.23	109.80
11	AK	49	GLY	N-CA-C	5.71	119.80	112.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AX	19	U	C3'-C2'-C1'	5.71	107.01	101.30
35	BA	774	A	O4'-C1'-C2'	5.71	111.51	105.80
35	BA	1396	U	N1-C1'-C2'	5.71	122.56	114.00
22	AV	31	G	C4'-C3'-O3'	-5.71	104.44	113.00
35	BA	603	A	C2'-C3'-O3'	5.71	118.06	109.50
35	BA	2362	G	O4'-C4'-C3'	-5.70	98.30	104.00
1	AA	219	C	P-O5'-C5'	5.70	129.44	120.90
1	AA	1101	A	C5'-C4'-O4'	5.70	117.64	109.10
51	BT	96	ARG	N-CA-C	5.70	117.45	108.96
1	AA	1223	C	C4'-C3'-O3'	-5.69	104.46	113.00
1	AA	92	C	C3'-C2'-O2'	5.69	119.23	110.70
4	AD	154	ASN	N-CA-C	5.69	117.82	110.65
35	BA	888	C	N1-C1'-C2'	5.69	120.53	112.00
2	AB	21	ARG	N-CA-C	5.69	117.38	107.49
42	BH	162	ILE	N-CA-C	5.69	114.79	106.55
35	BA	29	U	O4'-C4'-C3'	5.68	109.69	104.00
3	AC	167	TRP	CA-C-O	5.68	121.24	117.94
4	AD	125	HIS	CA-CB-CG	5.68	119.48	113.80
35	BA	1791	A	O4'-C4'-C3'	5.68	109.68	104.00
24	AY	627	ARG	N-CA-CB	-5.68	103.70	111.65
24	AY	154	GLN	N-CA-C	-5.68	106.16	114.39
35	BA	1491	G	O4'-C4'-C3'	5.68	109.68	104.00
35	BA	1885	A	C5'-C4'-O4'	-5.68	101.28	109.80
8	AH	60	ARG	NE-CZ-NH1	-5.67	115.83	121.50
15	AO	9	GLN	CA-C-O	5.67	126.74	120.90
17	AQ	71	PHE	CA-CB-CG	5.67	119.47	113.80
24	AY	497	PHE	CA-CB-CG	-5.67	108.13	113.80
35	BA	34	C	C4'-C3'-O3'	-5.67	104.49	113.00
45	BN	12	ARG	NE-CZ-NH2	5.67	124.30	119.20
22	AV	76	A	C2'-C3'-O3'	-5.67	101.00	109.50
35	BA	2877	G	C5'-C4'-C3'	-5.67	107.50	116.00
35	BA	2581	G	O4'-C4'-C3'	5.67	111.77	106.10
42	BH	121	ILE	N-CA-C	5.67	116.44	108.17
50	BS	40	ILE	N-CA-C	5.66	117.00	108.96
35	BA	1818	U	N1-C1'-C2'	5.66	120.49	112.00
24	AY	157	LEU	N-CA-C	-5.66	105.03	111.14
35	BA	358	U	O4'-C1'-C2'	5.66	113.26	107.60
35	BA	630	G	O3'-P-O5'	5.66	112.49	104.00
24	AY	260	LEU	N-CA-C	5.66	116.74	108.14
35	BA	422	A	C1'-O4'-C4'	5.66	115.56	109.90
35	BA	2115	G	C4'-C3'-O3'	-5.66	104.51	113.00
35	BA	2225	A	C4'-C3'-C2'	5.66	108.26	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	BF	68	LYS	N-CA-C	5.66	117.13	108.30
42	BH	170	ARG	NE-CZ-NH1	-5.66	115.84	121.50
1	AA	1398	A	C5'-C4'-C3'	-5.66	107.52	116.00
2	AB	199	TYR	CB-CA-C	-5.66	104.29	111.70
35	BA	1858	G	N9-C1'-C2'	5.66	120.48	112.00
42	BH	33	LEU	N-CA-C	5.66	117.61	108.34
8	AH	99	GLU	N-CA-C	5.65	119.35	112.23
24	AY	7	TYR	CA-C-N	-5.65	113.21	122.54
24	AY	7	TYR	C-N-CA	-5.65	113.21	122.54
39	BE	137	HIS	N-CA-C	5.65	118.49	110.24
49	BR	97	VAL	CB-CA-C	-5.65	103.97	110.41
7	AG	37	ASN	OD1-CG-ND2	-5.65	116.95	122.60
35	BA	2728	U	C1'-O4'-C4'	-5.65	104.25	109.90
35	BA	911	A	O4'-C4'-C3'	5.65	109.65	104.00
1	AA	97	G	O3'-P-O5'	-5.65	95.53	104.00
1	AA	622	A	C2'-C3'-O3'	-5.65	105.23	113.70
1	AA	887	G	N9-C1'-C2'	-5.65	103.53	112.00
35	BA	338	G	O4'-C4'-C3'	5.65	109.65	104.00
35	BA	1364	G	C5'-C4'-C3'	-5.64	107.53	116.00
35	BA	807	U	C5'-C4'-C3'	5.64	124.46	116.00
2	AB	54	THR	N-CA-C	-5.64	104.75	111.69
38	BD	251	GLY	N-CA-C	5.64	121.47	114.37
12	AL	85	ILE	N-CA-CB	-5.64	102.78	110.56
16	AP	77	ALA	N-CA-C	-5.64	104.76	111.69
24	AY	541	ALA	N-CA-C	5.64	118.19	111.71
10	AJ	41	PRO	CA-C-O	-5.63	115.12	121.43
35	BA	2101	G	C4'-C3'-O3'	-5.63	104.55	113.00
21	AU	12	LYS	N-CA-C	-5.63	105.28	111.82
24	AY	160	ARG	CD-NE-CZ	-5.63	116.51	124.40
2	AB	29	ALA	N-CA-C	5.63	122.80	110.80
33	B8	39	LYS	CA-C-O	5.63	128.56	120.51
35	BA	1557	C	N1-C1'-C2'	5.63	120.45	112.00
35	BA	131	G	C3'-C2'-O2'	5.63	119.14	110.70
7	AG	10	ARG	NE-CZ-NH1	-5.63	115.87	121.50
35	BA	2388	A	C4'-C3'-C2'	5.63	108.23	102.60
1	AA	834	C	O5'-C5'-C4'	-5.63	103.06	111.50
1	AA	1000	U	C3'-C2'-O2'	5.63	119.14	110.70
24	AY	504	ARG	N-CA-C	-5.62	105.55	113.20
34	B9	8	LYS	N-CA-C	5.62	116.79	108.86
35	BA	384	U	C1'-O4'-C4'	-5.62	104.28	109.90
38	BD	241	PRO	N-CA-CB	5.62	106.50	102.79
43	BK	36	GLU	CA-C-O	5.62	127.40	120.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	2035	G	O4'-C4'-C3'	5.62	111.72	106.10
41	BG	51	ARG	CD-NE-CZ	5.62	132.27	124.40
57	BZ	184	ALA	CA-C-O	5.62	126.33	119.64
36	BB	88	C	N1-C1'-C2'	5.62	120.42	112.00
37	BC	9	ARG	CA-C-N	5.62	129.59	120.60
37	BC	9	ARG	C-N-CA	5.62	129.59	120.60
46	BO	58	VAL	N-CA-C	5.62	115.67	108.82
46	BO	41	ALA	N-CA-C	5.61	118.58	108.48
48	BQ	5	ARG	NE-CZ-NH2	5.61	124.25	119.20
35	BA	962	G	C5'-C4'-O4'	-5.61	101.39	109.80
51	BT	54	ARG	CA-C-O	5.61	128.09	121.36
33	B8	23	VAL	N-CA-C	5.61	117.48	108.85
37	BC	191	ARG	O-C-N	5.61	128.54	122.15
42	BH	138	LYS	N-CA-C	-5.61	98.86	110.80
35	BA	40	C	N1-C1'-C2'	5.60	120.41	112.00
35	BA	1513	C	C4'-C3'-O3'	-5.60	104.60	113.00
42	BH	115	VAL	N-CA-C	5.60	114.88	106.42
13	AM	57	ARG	CA-C-N	5.60	128.34	120.28
13	AM	57	ARG	C-N-CA	5.60	128.34	120.28
25	B0	72	ARG	NE-CZ-NH1	-5.60	115.90	121.50
35	BA	1389	G	N9-C1'-C2'	5.60	120.40	112.00
4	AD	11	LEU	CA-C-N	5.60	129.21	120.82
4	AD	11	LEU	C-N-CA	5.60	129.21	120.82
35	BA	1568	G	N9-C1'-C2'	5.59	120.39	112.00
35	BA	1590	U	O4'-C1'-C2'	-5.59	102.01	107.60
35	BA	2340	G	P-O5'-C5'	5.59	129.29	120.90
54	BW	11	ARG	NE-CZ-NH2	5.59	124.23	119.20
2	AB	139	LYS	O-C-N	5.59	128.06	122.08
38	BD	213	ARG	NE-CZ-NH2	5.59	124.23	119.20
10	AJ	89	ASP	N-CA-C	5.59	117.80	109.25
29	B4	55	ARG	N-CA-C	-5.59	103.63	110.61
34	B9	26	ILE	N-CA-C	5.59	117.45	108.85
35	BA	157	U	N1-C1'-C2'	5.59	120.38	112.00
35	BA	1057	A	C1'-O4'-C4'	5.59	115.49	109.90
35	BA	2616	C	O4'-C1'-C2'	5.59	113.19	107.60
2	AB	108	ILE	N-CA-C	-5.58	105.47	113.07
3	AC	14	ILE	CA-CB-CG1	-5.58	100.91	110.40
42	BH	58	GLU	N-CA-C	-5.58	103.12	110.43
46	BO	69	ILE	CA-C-O	5.58	126.40	120.48
26	B1	26	ARG	N-CA-C	-5.58	104.89	110.97
35	BA	2250	G	C2'-C3'-O3'	5.58	117.87	109.50
35	BA	2376	A	C4'-C3'-O3'	-5.58	104.63	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	335	C	C3'-C2'-O2'	5.58	119.06	110.70
1	AA	763	G	O4'-C4'-C3'	5.58	109.58	104.00
35	BA	1791	A	C5'-C4'-C3'	-5.58	107.64	116.00
35	BA	573	G	C5'-C4'-C3'	5.57	123.56	115.20
35	BA	1610	A	O4'-C4'-C3'	5.57	111.67	106.10
48	BQ	58	PHE	CA-CB-CG	5.57	119.37	113.80
1	AA	712	A	N9-C1'-C2'	5.57	120.36	112.00
56	BY	81	LYS	CA-C-N	5.57	125.57	119.89
56	BY	81	LYS	C-N-CA	5.57	125.57	119.89
4	AD	74	GLN	CB-CG-CD	5.57	122.07	112.60
35	BA	459	U	N1-C1'-C2'	5.57	120.35	112.00
35	BA	43	A	C4'-C3'-O3'	-5.57	104.65	113.00
35	BA	2858	C	C3'-C2'-C1'	5.57	106.87	101.30
1	AA	1172	C	C5'-C4'-C3'	-5.57	107.65	116.00
18	AR	40	LEU	N-CA-C	-5.57	104.60	111.33
35	BA	2203	U	C5'-C4'-C3'	-5.57	107.65	116.00
47	BP	58	THR	N-CA-C	-5.57	98.94	110.80
35	BA	2218	U	N1-C1'-C2'	5.56	120.35	112.00
5	AE	100	VAL	N-CA-CB	5.56	117.84	111.39
35	BA	745	G	N9-C1'-C2'	5.56	120.34	112.00
35	BA	838	C	O5'-C5'-C4'	-5.56	103.16	111.50
45	BN	10	GLU	CB-CA-C	5.56	116.15	109.31
46	BO	67	LYS	CA-C-O	-5.56	115.14	120.92
1	AA	853	G	C4'-C3'-O3'	5.56	121.34	113.00
35	BA	1718	G	C5'-C4'-O4'	-5.56	101.46	109.80
1	AA	480	U	C4'-C3'-O3'	-5.56	104.67	113.00
2	AB	67	THR	N-CA-C	5.56	118.29	110.23
14	AN	37	PHE	N-CA-C	5.55	119.23	112.23
35	BA	728	G	C2'-C3'-O3'	5.55	117.83	109.50
55	BX	47	PHE	N-CA-C	-5.55	105.94	114.16
1	AA	1311	G	C4'-C3'-O3'	-5.55	104.67	113.00
40	BF	163	VAL	N-CA-C	-5.55	104.11	111.05
51	BT	111	ARG	CD-NE-CZ	5.55	132.17	124.40
35	BA	1747	G	C5'-C4'-C3'	-5.55	107.67	116.00
45	BN	86	PRO	CA-C-N	5.55	127.97	120.65
45	BN	86	PRO	C-N-CA	5.55	127.97	120.65
1	AA	809	G	O4'-C4'-C3'	5.55	109.55	104.00
1	AA	1529	G	C1'-O4'-C4'	-5.55	104.15	109.70
19	AS	65	ASN	OD1-CG-ND2	5.54	128.15	122.60
1	AA	775	G	C5'-C4'-C3'	-5.54	107.68	116.00
1	AA	1366	C	C4'-C3'-O3'	-5.54	104.68	113.00
35	BA	719	C	N1-C1'-C2'	5.54	120.32	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1260	G	C4'-C3'-O3'	-5.54	104.68	113.00
3	AC	94	LEU	CA-C-O	5.54	126.96	121.20
10	AJ	28	ARG	CA-C-O	5.54	126.61	120.90
35	BA	1319	G	C4'-C3'-C2'	-5.54	97.06	102.60
35	BA	2401	U	C2'-C3'-O3'	-5.54	105.39	113.70
39	BE	74	PRO	N-CA-C	5.54	120.93	111.68
35	BA	1989	G	C3'-C2'-C1'	5.54	106.84	101.30
1	AA	1253	G	C5'-C4'-O4'	5.54	118.11	109.80
46	BO	47	ILE	CA-C-N	5.54	126.76	119.84
46	BO	47	ILE	C-N-CA	5.54	126.76	119.84
1	AA	1257	U	O4'-C1'-N1	-5.54	100.19	108.50
35	BA	2842	G	C3'-C2'-O2'	5.54	119.00	110.70
40	BF	72	ARG	NE-CZ-NH2	5.54	124.18	119.20
35	BA	501	A	C4'-C3'-C2'	-5.53	97.07	102.60
42	BH	124	GLU	N-CA-C	5.53	117.76	108.96
57	BZ	176	PRO	N-CA-C	5.53	117.45	110.70
28	B3	30	ARG	CA-C-O	5.53	127.23	121.15
48	BQ	16	ARG	NE-CZ-NH1	-5.53	115.97	121.50
35	BA	271(T)	C	C4'-C3'-O3'	-5.53	104.71	113.00
35	BA	923	C	C4'-C3'-C2'	-5.53	97.07	102.60
35	BA	1185	C	C4'-C3'-O3'	-5.53	104.71	113.00
38	BD	35	LYS	N-CA-C	5.53	122.03	109.81
57	BZ	158	PRO	CA-C-N	5.53	126.75	119.84
57	BZ	158	PRO	C-N-CA	5.53	126.75	119.84
35	BA	2387	U	C1'-C2'-O2'	5.53	116.69	108.40
35	BA	1559	G	C5'-C4'-C3'	5.53	123.49	115.20
17	AQ	29	HIS	CA-C-O	5.52	125.92	120.17
8	AH	77	GLU	CA-C-O	-5.52	115.20	121.72
9	AI	63	ILE	N-CA-C	5.52	116.69	108.46
47	BP	74	GLU	N-CA-C	-5.52	100.68	109.96
35	BA	665	C	O4'-C1'-C2'	5.52	113.12	107.60
38	BD	210	GLY	N-CA-C	-5.52	103.03	112.30
41	BG	11	TYR	N-CA-C	-5.52	99.04	110.80
1	AA	1054	C	O4'-C1'-N1	-5.52	100.22	108.50
24	AY	643	ILE	CB-CA-C	-5.52	102.27	110.33
39	BE	40	GLU	N-CA-C	-5.52	104.73	112.12
11	AK	85	ARG	CB-CA-C	-5.51	103.12	110.79
1	AA	799	G	O5'-C5'-C4'	-5.51	103.23	111.50
2	AB	225	ALA	N-CA-C	-5.51	103.91	110.41
10	AJ	28	ARG	O-C-N	-5.51	116.08	122.03
16	AP	55	ARG	O-C-N	5.51	127.75	122.07
1	AA	552	U	C1'-C2'-O2'	5.51	116.67	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1130	A	C2'-C3'-O3'	-5.51	105.44	113.70
24	AY	464	ASP	N-CA-C	-5.51	104.11	112.04
24	AY	574	GLU	N-CA-C	5.51	117.72	111.11
35	BA	871	U	O4'-C1'-C2'	-5.51	102.09	107.60
35	BA	960	A	C2'-C3'-O3'	-5.51	105.44	113.70
39	BE	119	ARG	N-CA-C	-5.51	104.91	111.69
40	BF	46	ARG	NE-CZ-NH2	5.51	124.16	119.20
4	AD	102	ASP	CA-CB-CG	5.51	118.11	112.60
48	BQ	11	LYS	CA-C-O	-5.51	114.89	121.11
35	BA	1279	G	O5'-C5'-C4'	-5.51	103.24	111.50
24	AY	674	ASP	CA-CB-CG	-5.50	107.09	112.60
1	AA	775	G	C2'-C3'-O3'	5.50	121.95	113.70
20	AT	54	LYS	N-CA-C	-5.50	104.97	110.97
1	AA	563	A	C4'-C3'-O3'	-5.50	104.75	113.00
3	AC	16	ARG	NE-CZ-NH2	-5.50	114.25	119.20
35	BA	2172	U	C4'-C3'-O3'	-5.50	101.15	109.40
35	BA	1835	G	C5'-C4'-C3'	-5.50	107.76	116.00
1	AA	837	G	C4'-C3'-C2'	-5.50	97.11	102.60
35	BA	479	A	C2'-C3'-O3'	-5.49	101.26	109.50
35	BA	2501	C	C1'-O4'-C4'	-5.49	104.41	109.90
18	AR	55	ARG	NE-CZ-NH1	-5.49	116.01	121.50
24	AY	242	LEU	N-CA-C	-5.49	104.70	111.40
24	AY	409	ILE	N-CA-C	5.49	116.64	108.46
35	BA	222	A	C1'-O4'-C4'	-5.49	104.21	109.70
51	BT	84	GLN	OE1-CD-NE2	5.49	128.09	122.60
1	AA	1137	C	C3'-C2'-C1'	5.49	106.79	101.30
1	AA	1287	A	C3'-C2'-O2'	5.49	118.93	110.70
7	AG	133	GLY	N-CA-C	-5.49	108.63	114.67
35	BA	34	C	O4'-C4'-C3'	5.49	109.49	104.00
35	BA	204	A	C1'-C2'-O2'	-5.49	103.57	111.80
35	BA	213	A	C3'-C2'-O2'	5.49	118.93	110.70
1	AA	750	G	C3'-C2'-C1'	-5.49	95.81	101.30
35	BA	2345	G	C5'-C4'-O4'	5.49	117.33	109.10
54	BW	81	ALA	N-CA-C	5.49	118.23	110.50
35	BA	2712	U	C4'-C3'-O3'	-5.48	104.77	113.00
56	BY	7	VAL	N-CA-C	5.48	120.75	109.34
32	B7	18	PHE	CA-CB-CG	5.48	119.28	113.80
50	BS	19	LYS	N-CA-C	-5.48	106.91	113.21
53	BV	77	ALA	N-CA-C	5.48	117.61	110.43
1	AA	1518	A	O4'-C1'-C2'	-5.48	102.12	107.60
7	AG	32	ARG	NE-CZ-NH1	-5.48	116.02	121.50
1	AA	189(K)	U	C3'-C2'-O2'	5.47	118.91	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	840	C	C1'-C2'-O2'	5.47	116.61	108.40
35	BA	1900	A	N9-C1'-C2'	-5.47	105.79	114.00
45	BN	22	THR	N-CA-C	5.47	117.39	108.63
1	AA	339	C	C3'-C2'-C1'	-5.47	95.83	101.30
1	AA	1524	C	C5'-C4'-C3'	-5.47	107.79	116.00
4	AD	77	ASN	CA-C-N	5.47	127.56	120.44
4	AD	77	ASN	C-N-CA	5.47	127.56	120.44
1	AA	1065	U	C2'-C3'-O3'	5.47	117.71	109.50
33	B8	30	ARG	N-CA-C	5.47	119.70	113.19
4	AD	11	LEU	CA-C-O	5.47	126.22	120.42
35	BA	315	G	C1'-C2'-O2'	5.47	116.60	108.40
1	AA	616	G	C4'-C3'-O3'	-5.47	104.80	113.00
9	AI	128	ARG	NE-CZ-NH1	-5.47	116.03	121.50
28	B3	43	ILE	O-C-N	5.47	127.25	121.89
36	BB	44	G	N9-C1'-C2'	5.47	120.20	112.00
1	AA	1526	G	P-O5'-C5'	-5.46	112.70	120.90
35	BA	1141	U	C2'-C3'-O3'	-5.46	105.50	113.70
55	BX	23	GLU	N-CA-C	-5.46	102.81	110.35
35	BA	612	C	C4'-C3'-O3'	5.46	121.19	113.00
35	BA	764	A	O4'-C1'-C2'	-5.46	100.34	105.80
40	BF	29	ASN	CA-CB-CG	5.46	118.06	112.60
35	BA	480	A	C3'-C2'-C1'	5.46	106.76	101.30
35	BA	1959	G	C5'-C4'-C3'	-5.46	107.81	116.00
1	AA	435	C	C5'-C4'-C3'	-5.46	107.81	116.00
35	BA	843	G	C4'-C3'-C2'	5.46	108.06	102.60
35	BA	1704	G	N9-C1'-C2'	-5.46	103.81	112.00
45	BN	48	MET	N-CA-C	-5.46	104.83	112.25
48	BQ	125	LEU	N-CA-C	5.46	118.20	110.24
1	AA	267	C	C4'-C3'-O3'	-5.45	104.82	113.00
35	BA	740	U	N1-C1'-C2'	5.45	120.18	112.00
52	BU	36	ARG	CA-C-O	5.45	126.52	120.63
39	BE	200	GLU	N-CA-C	-5.45	102.81	110.50
1	AA	791	G	O5'-C5'-C4'	-5.45	103.32	111.50
14	AN	25	VAL	N-CA-C	-5.45	107.12	111.81
31	B6	28	ARG	CA-C-N	5.45	127.53	120.44
31	B6	28	ARG	C-N-CA	5.45	127.53	120.44
51	BT	74	ARG	NE-CZ-NH2	5.45	124.11	119.20
1	AA	534	U	C2'-C3'-O3'	-5.45	105.53	113.70
1	AA	1352	C	C3'-C2'-C1'	5.45	106.75	101.30
1	AA	1440	C	C3'-C2'-C1'	5.45	106.75	101.30
57	BZ	56	VAL	CB-CA-C	-5.45	105.35	111.45
15	AO	35	ARG	NE-CZ-NH2	5.45	124.10	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	AI	3	GLN	N-CA-C	5.45	117.39	108.52
24	AY	187	THR	N-CA-C	5.45	117.25	109.14
35	BA	756	C	C1'-O4'-C4'	-5.45	104.45	109.90
49	BR	77	ARG	NE-CZ-NH2	-5.45	114.30	119.20
22	AV	47	U	O4'-C4'-C3'	5.44	109.44	104.00
24	AY	481	VAL	N-CA-C	5.44	115.73	108.11
1	AA	1145	C	N1-C1'-C2'	-5.44	105.83	114.00
2	AB	71	VAL	CB-CA-C	-5.44	103.01	110.96
13	AM	29	ARG	NE-CZ-NH2	5.44	124.10	119.20
17	AQ	20	THR	O-C-N	-5.44	116.87	123.13
1	AA	1335	C	C4'-C3'-O3'	-5.44	104.84	113.00
2	AB	82	ARG	O-C-N	5.44	127.90	122.08
35	BA	1572	A	C3'-C2'-O2'	5.44	118.86	110.70
7	AG	113	GLU	CA-C-O	-5.44	115.03	120.96
35	BA	1897	G	N9-C1'-C2'	5.44	120.16	112.00
39	BE	198	VAL	N-CA-CB	-5.44	104.46	110.99
1	AA	1051	C	C1'-O4'-C4'	-5.44	104.46	109.90
35	BA	675	A	C4'-C3'-O3'	-5.44	104.84	113.00
1	AA	452	A	C4'-C3'-C2'	5.43	108.03	102.60
1	AA	909	A	O5'-C5'-C4'	-5.43	103.35	111.50
24	AY	420	ASP	CA-C-N	5.43	129.38	120.63
24	AY	420	ASP	C-N-CA	5.43	129.38	120.63
35	BA	2096	U	C3'-C2'-O2'	5.43	118.85	110.70
1	AA	779	C	O5'-C5'-C4'	-5.43	103.35	111.50
24	AY	524	GLU	N-CA-C	5.43	117.28	108.26
25	B0	22	GLY	N-CA-C	5.43	122.06	112.83
35	BA	2518	A	C3'-C2'-C1'	5.43	106.73	101.30
35	BA	2679	A	C3'-C2'-C1'	5.43	106.73	101.30
40	BF	98	SER	N-CA-C	5.43	118.84	110.42
38	BD	174	ILE	N-CA-C	5.43	116.13	108.36
54	BW	110	LYS	O-C-N	5.43	129.81	122.59
37	BC	19	LYS	O-C-N	5.43	128.98	122.79
56	BY	61	ILE	N-CA-C	5.43	117.46	108.99
1	AA	1342	C	C4'-C3'-C2'	-5.43	97.17	102.60
6	AF	33	TYR	CB-CA-C	-5.43	104.30	111.74
35	BA	795	C	C4'-C3'-C2'	-5.43	97.17	102.60
35	BA	1821	A	C1'-C2'-O2'	-5.43	100.26	108.40
38	BD	262	ARG	NE-CZ-NH2	5.43	124.08	119.20
32	B7	41	ARG	NE-CZ-NH1	-5.43	116.07	121.50
35	BA	61	G	O4'-C1'-N9	-5.43	100.36	108.50
39	BE	96	PHE	N-CA-C	5.43	117.48	108.20
1	AA	137	C	C5'-C4'-O4'	5.42	117.94	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1031	G	N9-C1'-C2'	5.42	120.14	112.00
9	AI	26	VAL	N-CA-C	5.42	115.70	108.27
35	BA	1420	U	O4'-C1'-C2'	5.42	113.03	107.60
35	BA	1839	G	C1'-C2'-O2'	5.42	116.54	108.40
12	AL	102	ARG	CA-C-O	-5.42	114.52	120.43
35	BA	513	A	O4'-C1'-C2'	5.42	113.02	107.60
11	AK	87	THR	N-CA-C	-5.42	104.63	113.19
1	AA	1398	A	C1'-C2'-O2'	5.42	116.53	108.40
35	BA	798	G	C5'-C4'-C3'	5.42	124.13	116.00
55	BX	28	PHE	N-CA-C	5.42	118.10	109.81
1	AA	785	G	C2'-C3'-O3'	5.42	121.82	113.70
1	AA	1072	G	O4'-C4'-C3'	5.42	109.42	104.00
35	BA	1573	G	O4'-C1'-N9	-5.42	100.38	108.50
37	BC	7	ARG	NE-CZ-NH2	5.42	124.08	119.20
35	BA	742	G	C3'-C2'-O2'	5.42	118.82	110.70
35	BA	1992	G	C4'-C3'-O3'	5.42	117.52	109.40
41	BG	111	LEU	CA-C-N	5.42	125.13	119.82
41	BG	111	LEU	C-N-CA	5.42	125.13	119.82
4	AD	189	PRO	CA-C-N	-5.41	113.34	123.03
4	AD	189	PRO	C-N-CA	-5.41	113.34	123.03
31	B6	9	LEU	N-CA-C	5.41	122.33	110.80
35	BA	255	A	N9-C1'-C2'	5.41	120.12	112.00
35	BA	1904	G	C5'-C4'-C3'	-5.41	107.88	116.00
35	BA	676	A	C5'-C4'-C3'	-5.41	107.88	116.00
35	BA	722	A	C5'-C4'-C3'	-5.41	107.88	116.00
44	BL	61	ALA	N-CA-C	-5.41	105.41	112.23
45	BN	130	HIS	CA-CB-CG	5.41	119.21	113.80
1	AA	303	A	O5'-C5'-C4'	-5.41	103.39	111.50
1	AA	1356	G	C4'-C3'-O3'	-5.41	104.89	113.00
2	AB	166	ASP	CA-C-N	5.41	126.60	119.84
2	AB	166	ASP	C-N-CA	5.41	126.60	119.84
11	AK	23	ALA	N-CA-C	5.41	117.12	108.41
12	AL	82	VAL	CB-CA-C	-5.41	103.04	111.26
14	AN	23	ARG	NE-CZ-NH2	-5.41	114.33	119.20
35	BA	62	C	C3'-C2'-C1'	5.41	106.71	101.30
37	BC	52	PRO	N-CA-C	5.41	120.65	113.40
2	AB	124	SER	N-CA-C	5.41	113.09	108.22
31	B6	40	CYS	CA-C-N	5.41	126.60	119.84
31	B6	40	CYS	C-N-CA	5.41	126.60	119.84
35	BA	2897	U	C2'-C3'-O3'	5.41	121.81	113.70
57	BZ	47	VAL	CB-CA-C	-5.41	106.11	111.30
1	AA	620	C	N1-C1'-C2'	5.40	120.11	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	BT	103	ARG	NE-CZ-NH1	-5.40	116.10	121.50
1	AA	299	G	C4'-C3'-C2'	-5.40	97.20	102.60
1	AA	1296	C	O3'-P-O5'	-5.40	95.90	104.00
35	BA	1496	A	C4'-C3'-O3'	-5.40	104.90	113.00
49	BR	25	ALA	N-CA-C	-5.40	104.95	112.45
1	AA	35	G	C4'-C3'-O3'	-5.39	104.91	113.00
35	BA	139(A)	G	N9-C1'-C2'	5.39	120.09	112.00
1	AA	417	C	N1-C1'-C2'	5.39	120.09	112.00
53	BV	75	PHE	CB-CA-C	-5.39	104.04	110.94
4	AD	21	LEU	N-CA-C	-5.39	105.49	111.36
24	AY	563	ILE	N-CA-C	5.39	115.40	107.75
33	B8	54	GLU	N-CA-C	-5.39	105.30	111.07
35	BA	525	U	N1-C1'-C2'	5.39	120.08	112.00
4	AD	191	ARG	NE-CZ-NH1	-5.39	116.11	121.50
1	AA	368	U	N1-C1'-C2'	5.39	120.08	112.00
41	BG	91	ARG	NE-CZ-NH1	-5.39	116.11	121.50
1	AA	816	A	O5'-C5'-C4'	-5.38	103.42	111.50
3	AC	131	ARG	NE-CZ-NH1	5.38	126.88	121.50
5	AE	26	PHE	CA-CB-CG	-5.38	108.42	113.80
35	BA	1674	G	C2'-C3'-O3'	5.38	117.58	109.50
24	AY	567	LEU	N-CA-C	-5.38	99.00	108.20
1	AA	1281	U	N1-C1'-C2'	5.38	120.07	112.00
35	BA	1381	G	C4'-C3'-C2'	-5.38	97.22	102.60
35	BA	2606	C	O4'-C4'-C3'	-5.38	98.62	104.00
51	BT	39	ARG	NE-CZ-NH1	-5.38	116.12	121.50
1	AA	1104	G	C4'-C3'-O3'	-5.38	104.93	113.00
25	B0	66	VAL	CA-C-N	5.38	127.83	120.35
25	B0	66	VAL	C-N-CA	5.38	127.83	120.35
35	BA	2486	G	O4'-C4'-C3'	-5.38	98.62	104.00
35	BA	2603	G	O4'-C1'-C2'	5.38	112.97	107.60
1	AA	801	U	C3'-C2'-C1'	5.37	106.67	101.30
35	BA	467	G	O4'-C4'-C3'	-5.37	98.63	104.00
35	BA	504	U	C4'-C3'-O3'	-5.37	104.94	113.00
35	BA	1390	U	C3'-C2'-O2'	5.37	118.76	110.70
35	BA	2564	A	N9-C1'-C2'	5.37	120.06	112.00
1	AA	1059	C	C3'-C2'-O2'	5.37	118.76	110.70
35	BA	1250	G	O4'-C1'-C2'	5.37	111.17	105.80
7	AG	64	GLN	O-C-N	5.37	127.60	122.07
29	B4	7	PRO	N-CA-C	-5.37	106.86	113.84
35	BA	1696	G	C4'-C3'-O3'	-5.37	104.94	113.00
1	AA	732	C	P-O5'-C5'	5.37	128.95	120.90
1	AA	193	C	O4'-C1'-N1	5.37	116.55	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	47	LYS	N-CA-C	5.37	121.67	109.81
12	AL	68	ALA	CA-C-O	-5.37	115.36	121.58
15	AO	35	ARG	CB-CA-C	-5.37	102.46	110.88
32	B7	24	THR	CA-C-N	5.36	126.55	119.84
32	B7	24	THR	C-N-CA	5.36	126.55	119.84
35	BA	2123	G	C1'-C2'-O2'	-5.36	100.36	108.40
19	AS	40	ILE	N-CA-C	5.36	116.08	107.98
35	BA	2532	G	C5'-C4'-C3'	-5.36	107.96	116.00
41	BG	51	ARG	N-CA-C	5.36	117.26	108.52
1	AA	1021	G	C3'-C2'-O2'	5.36	118.74	110.70
25	B0	81	VAL	CA-C-O	-5.36	114.08	120.78
35	BA	1252	G	O4'-C1'-C2'	5.36	112.96	107.60
38	BD	45	ASN	N-CA-C	5.36	122.21	110.80
1	AA	1442(A)	G	C1'-C2'-O2'	-5.36	103.77	111.80
11	AK	112	THR	CA-C-O	5.36	123.58	119.46
12	AL	36	VAL	O-C-N	-5.36	116.58	122.69
27	B2	6	VAL	CA-C-O	-5.36	115.56	121.29
1	AA	587	G	C4'-C3'-C2'	5.35	107.95	102.60
15	AO	39	LEU	N-CA-C	-5.35	104.69	111.11
40	BF	186	ILE	N-CA-CB	5.35	116.45	110.51
43	BK	47	ASN	OD1-CG-ND2	-5.35	117.25	122.60
1	AA	279	A	C5'-C4'-C3'	-5.35	107.17	115.20
31	B6	52	VAL	CA-C-N	5.35	131.76	121.54
31	B6	52	VAL	C-N-CA	5.35	131.76	121.54
11	AK	12	ARG	CA-C-N	5.35	129.53	121.40
11	AK	12	ARG	C-N-CA	5.35	129.53	121.40
3	AC	116	VAL	CB-CA-C	-5.35	105.03	111.88
3	AC	146	ALA	CA-C-O	-5.35	113.72	119.98
4	AD	76	ARG	CA-C-O	-5.35	114.75	120.42
5	AE	98	THR	N-CA-C	-5.35	105.82	112.93
22	AV	75	C	C2'-C3'-O3'	-5.35	105.68	113.70
24	AY	563	ILE	CB-CA-C	-5.35	103.86	111.40
1	AA	25	C	C3'-C2'-C1'	-5.35	95.95	101.30
57	BZ	100	VAL	CA-C-O	5.35	122.67	119.19
9	AI	4	TYR	CA-C-N	-5.35	113.84	122.82
9	AI	4	TYR	C-N-CA	-5.35	113.84	122.82
35	BA	2517	C	C5'-C4'-O4'	-5.35	101.08	109.10
1	AA	1077	G	P-O5'-C5'	-5.34	112.88	120.90
35	BA	1347	G	C5'-C4'-C3'	-5.34	107.98	116.00
45	BN	32	THR	N-CA-C	-5.34	105.86	112.38
49	BR	113	LEU	N-CA-C	5.34	117.94	109.50
52	BU	11	ARG	NE-CZ-NH1	-5.34	116.16	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	AE	65	ASN	CA-CB-CG	5.34	117.94	112.60
35	BA	1584	C	N1-C1'-C2'	5.34	120.01	112.00
35	BA	1836	C	C3'-C2'-O2'	5.34	118.71	110.70
42	BH	141	VAL	N-CA-C	5.34	115.78	110.23
46	BO	46	ALA	N-CA-C	5.34	116.96	108.79
1	AA	968	A	C3'-C2'-O2'	-5.34	106.59	114.60
1	AA	1256	A	O4'-C1'-C2'	5.34	112.94	107.60
33	B8	49	VAL	CA-C-N	-5.33	113.44	122.67
33	B8	49	VAL	C-N-CA	-5.33	113.44	122.67
1	AA	122	G	C1'-C2'-O2'	5.33	116.40	108.40
1	AA	1186	G	C5'-C4'-C3'	-5.33	108.00	116.00
35	BA	924	C	O4'-C4'-C3'	5.33	109.33	104.00
7	AG	155	ARG	NE-CZ-NH1	-5.33	116.17	121.50
35	BA	362	U	C3'-C2'-C1'	5.33	106.63	101.30
35	BA	715	G	C1'-O4'-C4'	5.33	115.23	109.90
37	BC	88	GLU	CA-C-N	5.33	127.86	120.29
37	BC	88	GLU	C-N-CA	5.33	127.86	120.29
35	BA	2891	G	C2'-C3'-O3'	-5.33	105.71	113.70
23	AX	14	A	C3'-C2'-O2'	5.33	118.69	110.70
25	B0	46	LYS	CA-C-N	5.33	125.49	119.90
25	B0	46	LYS	C-N-CA	5.33	125.49	119.90
35	BA	925	C	C1'-O4'-C4'	-5.33	104.58	109.90
35	BA	2306	C	O4'-C1'-C2'	-5.33	102.27	107.60
51	BT	31	SER	CA-C-O	5.33	125.73	120.56
1	AA	740	U	C5'-C4'-C3'	5.32	123.99	116.00
1	AA	1125	U	C4'-C3'-O3'	-5.32	105.01	113.00
6	AF	86	ARG	CA-C-O	5.32	125.00	119.14
35	BA	1654	A	C2'-C3'-O3'	-5.32	105.72	113.70
49	BR	54	LEU	N-CA-C	-5.32	105.64	111.82
2	AB	82	ARG	CA-C-O	-5.32	115.22	121.07
35	BA	2781	A	C2'-C3'-O3'	-5.32	105.72	113.70
35	BA	2126	A	N9-C1'-C2'	5.32	121.98	114.00
35	BA	2325	G	C2'-C3'-O3'	-5.32	105.72	113.70
11	AK	99	GLN	N-CA-C	-5.32	105.17	110.97
38	BD	263	ARG	N-CA-C	5.32	119.46	112.92
1	AA	1313	U	O4'-C1'-C2'	-5.32	102.28	107.60
30	B5	5	PRO	O-C-N	-5.32	116.78	123.21
35	BA	1087	G	N9-C1'-C2'	5.32	119.98	112.00
44	BL	55	ASP	CA-CB-CG	5.32	117.92	112.60
35	BA	1318	C	C1'-C2'-O2'	5.32	116.37	108.40
42	BH	153	LYS	CA-C-O	5.32	124.17	119.71
51	BT	31	SER	CA-C-N	5.32	128.02	121.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	BT	31	SER	C-N-CA	5.32	128.02	121.64
8	AH	11	THR	CA-C-O	-5.31	115.23	120.70
5	AE	33	VAL	CA-C-N	-5.31	113.82	121.95
5	AE	33	VAL	C-N-CA	-5.31	113.82	121.95
37	BC	151	GLY	CA-C-O	5.31	126.29	120.66
1	AA	137	C	C5'-C4'-C3'	-5.31	108.04	116.00
11	AK	30	VAL	N-CA-C	5.31	115.50	107.75
45	BN	50	ASP	CA-CB-CG	5.31	117.91	112.60
45	BN	66	LYS	CA-C-O	5.31	125.03	119.51
35	BA	924	C	C5'-C4'-C3'	-5.31	108.04	116.00
49	BR	58	GLY	N-CA-C	5.31	125.76	113.18
35	BA	1928	A	C1'-O4'-C4'	-5.31	104.59	109.90
47	BP	48	PRO	N-CD-CG	-5.31	97.43	103.80
1	AA	1129	C	O4'-C4'-C3'	5.30	109.30	104.00
2	AB	215	LEU	O-C-N	5.30	127.74	122.12
14	AN	29	ARG	NE-CZ-NH2	-5.30	114.42	119.20
35	BA	1223	G	O4'-C4'-C3'	5.30	109.31	104.00
46	BO	104	ARG	N-CA-C	5.30	122.10	110.80
25	B0	77	ARG	NE-CZ-NH1	-5.30	116.20	121.50
32	B7	33	ARG	NE-CZ-NH1	-5.30	116.20	121.50
35	BA	1665	A	C5'-C4'-C3'	5.30	123.95	116.00
35	BA	1954	G	C5'-C4'-C3'	5.30	123.15	115.20
51	BT	76	PHE	N-CA-C	5.30	118.14	110.14
1	AA	853	G	C2'-C3'-O3'	-5.30	105.75	113.70
7	AG	149	ARG	N-CA-C	-5.30	106.77	113.18
1	AA	55	A	C4'-C3'-C2'	-5.30	97.30	102.60
1	AA	536	C	C4'-C3'-O3'	-5.30	105.05	113.00
35	BA	940	G	C5'-C4'-C3'	-5.30	108.06	116.00
35	BA	1270	C	C3'-C2'-O2'	5.29	118.64	110.70
1	AA	1479	C	C4'-C3'-C2'	5.29	107.89	102.60
3	AC	192	THR	N-CA-C	-5.29	105.59	111.36
35	BA	1261	C	C3'-C2'-O2'	5.29	118.64	110.70
35	BA	2372	G	C3'-C2'-O2'	5.29	118.64	110.70
54	BW	76	VAL	N-CA-CB	-5.29	105.46	112.34
1	AA	360	A	P-O5'-C5'	-5.29	112.96	120.90
1	AA	1337	G	C5'-C4'-O4'	-5.29	101.86	109.80
7	AG	74	GLU	O-C-N	5.29	129.63	122.59
16	AP	27	LYS	N-CA-C	-5.29	102.63	110.46
35	BA	1252	G	N9-C1'-C2'	5.29	119.94	112.00
35	BA	1352	U	C5'-C4'-C3'	5.29	123.94	116.00
35	BA	1396	U	O4'-C1'-C2'	-5.29	100.51	105.80
1	AA	189(L)	G	O4'-C1'-N9	5.29	116.43	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	748	C	N1-C1'-C2'	5.29	119.94	112.00
1	AA	1008	C	O4'-C4'-C3'	5.29	109.29	104.00
25	B0	75	LEU	O-C-N	5.29	127.30	121.85
45	BN	78	TYR	CA-C-N	5.29	125.05	119.76
45	BN	78	TYR	C-N-CA	5.29	125.05	119.76
1	AA	1214	C	N1-C1'-C2'	5.29	121.93	114.00
21	AU	22	ARG	NE-CZ-NH1	-5.29	116.21	121.50
27	B2	63	VAL	N-CA-C	-5.29	105.34	110.42
1	AA	404	U	O4'-C4'-C3'	5.29	109.29	104.00
35	BA	909	A	O5'-C5'-C4'	-5.29	103.57	111.50
35	BA	1127	A	O4'-C1'-C2'	5.29	112.89	107.60
35	BA	1924	C	C4'-C3'-O3'	-5.29	105.07	113.00
1	AA	436	C	C1'-C2'-O2'	5.29	116.33	108.40
35	BA	321	G	C3'-C2'-C1'	5.29	106.79	101.50
35	BA	675	A	N9-C1'-C2'	5.29	119.93	112.00
52	BU	17	ILE	CB-CA-C	-5.29	105.11	112.04
32	B7	47	ARG	O-C-N	-5.28	118.23	123.46
35	BA	568	U	C4'-C3'-O3'	-5.28	105.07	113.00
35	BA	743	G	P-O5'-C5'	-5.28	112.97	120.90
40	BF	107	LYS	N-CA-C	-5.28	104.89	112.13
54	BW	13	SER	CA-C-N	5.28	126.44	119.84
54	BW	13	SER	C-N-CA	5.28	126.44	119.84
1	AA	481	G	P-O5'-C5'	-5.28	112.98	120.90
11	AK	67	ASP	N-CA-C	-5.28	105.52	111.28
1	AA	1065	U	O4'-C1'-C2'	5.28	111.08	105.80
36	BB	51	G	C2'-C3'-O3'	-5.28	105.78	113.70
40	BF	83	PHE	N-CA-C	5.28	118.02	110.68
1	AA	454	C	O5'-C5'-C4'	-5.28	103.58	111.50
35	BA	63	U	O5'-C5'-C4'	-5.28	103.78	111.70
35	BA	271(A)	A	N9-C1'-C2'	5.28	119.92	112.00
35	BA	586	A	O4'-C4'-C3'	5.28	109.28	104.00
1	AA	457	C	C1'-O4'-C4'	5.28	115.18	109.90
35	BA	1202	C	C3'-C2'-O2'	5.27	118.61	110.70
35	BA	2224	G	O4'-C4'-C3'	5.27	109.27	104.00
1	AA	326	G	C4'-C3'-O3'	-5.27	105.09	113.00
35	BA	996	A	C3'-C2'-O2'	5.27	118.61	110.70
35	BA	1954	G	C4'-C3'-O3'	-5.27	101.49	109.40
1	AA	417	C	C2'-C3'-O3'	-5.27	105.80	113.70
37	BC	194	ILE	CB-CA-C	-5.27	105.14	112.04
39	BE	158	GLY	N-CA-C	5.27	118.10	111.09
35	BA	752	A	C4'-C3'-O3'	5.27	117.30	109.40
35	BA	2622	C	O4'-C1'-C2'	5.27	112.87	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	834	C	C2'-C3'-O3'	-5.27	105.80	113.70
11	AK	116	HIS	N-CA-C	-5.27	103.36	110.68
35	BA	1609	A	C5'-C4'-C3'	-5.27	108.10	116.00
51	BT	29	ARG	CA-C-N	5.27	131.45	121.97
51	BT	29	ARG	C-N-CA	5.27	131.45	121.97
1	AA	20	U	O4'-C4'-C3'	5.26	109.27	104.00
5	AE	133	TYR	CB-CA-C	-5.26	102.39	110.81
35	BA	2477	C	N1-C1'-C2'	5.26	119.90	112.00
35	BA	2498	C	C5'-C4'-C3'	-5.26	108.10	116.00
35	BA	2595	G	C5'-C4'-C3'	5.26	123.90	116.00
42	BH	153	LYS	CA-C-N	5.26	126.42	119.84
42	BH	153	LYS	C-N-CA	5.26	126.42	119.84
49	BR	99	LYS	N-CA-C	5.26	118.13	109.76
1	AA	405	U	C4'-C3'-O3'	-5.26	105.11	113.00
35	BA	1526	G	O4'-C4'-C3'	5.26	109.26	104.00
38	BD	262	ARG	N-CA-C	5.26	117.43	111.11
53	BV	96	ILE	CB-CA-C	-5.26	104.92	111.08
1	AA	119	A	N9-C1'-C2'	5.26	121.89	114.00
41	BG	98	ARG	NE-CZ-NH1	-5.26	116.24	121.50
42	BH	155	SER	N-CA-C	5.26	122.01	110.80
24	AY	389	LEU	CA-C-O	5.26	126.11	120.32
35	BA	1061	U	C2'-C3'-O3'	-5.26	105.81	113.70
35	BA	1850	G	C4'-C3'-O3'	-5.26	105.11	113.00
43	BK	47	ASN	N-CA-C	-5.26	105.19	111.03
1	AA	640	A	C4'-C3'-C2'	-5.26	97.34	102.60
1	AA	754	C	C4'-C3'-O3'	-5.26	105.11	113.00
19	AS	81	ARG	NE-CZ-NH2	5.26	123.93	119.20
24	AY	194	THR	CA-C-O	5.26	128.03	120.51
35	BA	1185	C	C5'-C4'-C3'	-5.26	108.11	116.00
1	AA	777	A	O3'-P-O5'	5.25	111.88	104.00
1	AA	990	C	O5'-C5'-C4'	-5.25	103.62	111.50
15	AO	64	ARG	NE-CZ-NH1	-5.25	116.25	121.50
47	BP	27	HIS	N-CA-C	5.25	117.64	108.76
1	AA	920	U	C5'-C4'-C3'	-5.25	108.12	116.00
10	AJ	54	PHE	CA-C-N	5.25	131.57	121.54
10	AJ	54	PHE	C-N-CA	5.25	131.57	121.54
45	BN	87	LEU	N-CA-C	5.25	116.69	110.97
1	AA	393	A	C3'-C2'-O2'	5.25	118.57	110.70
13	AM	14	ARG	NE-CZ-NH2	-5.25	114.48	119.20
24	AY	184	LYS	CA-C-O	-5.25	115.03	120.70
35	BA	2127	G	C1'-O4'-C4'	5.25	115.15	109.90
35	BA	2196	C	C4'-C3'-O3'	-5.25	105.13	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AC	188	LEU	CB-CA-C	-5.25	103.80	111.77
38	BD	148	GLU	N-CA-C	-5.25	101.03	109.58
44	BL	101	ASP	CA-CB-CG	5.25	117.85	112.60
7	AG	41	ARG	NE-CZ-NH2	5.25	123.92	119.20
16	AP	81	ARG	O-C-N	-5.24	116.83	123.12
35	BA	2205	C	C5'-C4'-C3'	-5.24	108.13	116.00
48	BQ	136	ALA	CA-C-N	-5.24	113.95	122.65
48	BQ	136	ALA	C-N-CA	-5.24	113.95	122.65
20	AT	66	ALA	O-C-N	5.24	128.72	122.27
52	BU	15	LYS	CA-C-O	5.24	125.83	119.38
1	AA	126	G	P-O5'-C5'	-5.24	113.04	120.90
19	AS	65	ASN	N-CA-C	5.24	117.41	111.02
37	BC	79	ALA	N-CA-C	5.24	118.34	108.65
49	BR	78	LYS	N-CA-C	-5.24	106.95	113.19
1	AA	492	G	C1'-O4'-C4'	-5.24	104.66	109.90
35	BA	98	G	C3'-C2'-O2'	5.24	118.56	110.70
35	BA	1312	U	C5'-C4'-C3'	-5.24	107.34	115.20
37	BC	24	ASP	O-C-N	5.24	127.67	122.12
37	BC	51	ASP	CA-CB-CG	-5.24	107.36	112.60
42	BH	123	PHE	N-CA-C	5.24	117.06	108.52
9	AI	53	VAL	CA-C-N	-5.24	111.54	121.54
9	AI	53	VAL	C-N-CA	-5.24	111.54	121.54
35	BA	626	U	C1'-O4'-C4'	5.24	115.14	109.90
35	BA	2304	G	C1'-C2'-O2'	5.24	116.25	108.40
35	BA	2488	A	C4'-C3'-C2'	5.24	107.83	102.60
35	BA	2679	A	O4'-C4'-C3'	5.24	109.24	104.00
37	BC	33	LEU	CA-C-O	5.24	124.81	119.05
40	BF	71	GLY	N-CA-C	-5.24	107.66	113.79
57	BZ	72	ARG	NE-CZ-NH1	-5.24	116.26	121.50
1	AA	500	G	O4'-C1'-N9	-5.23	100.65	108.50
1	AA	30	U	C4'-C3'-C2'	5.23	107.83	102.60
1	AA	792	A	C2'-C3'-O3'	5.23	117.35	109.50
35	BA	104	U	C2'-C3'-O3'	-5.23	105.85	113.70
35	BA	1244	G	C5'-C4'-C3'	5.23	123.85	116.00
35	BA	2643	G	C5'-C4'-C3'	-5.23	108.15	116.00
50	BS	105	ALA	CA-C-N	5.23	127.24	120.44
50	BS	105	ALA	C-N-CA	5.23	127.24	120.44
19	AS	13	ASP	N-CA-C	5.23	117.72	111.71
35	BA	1541	G	O5'-C5'-C4'	-5.23	103.66	111.50
35	BA	838	C	C5'-C4'-O4'	-5.23	101.96	109.80
43	BK	90	LYS	CA-C-N	5.23	126.38	119.84
43	BK	90	LYS	C-N-CA	5.23	126.38	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	581	ALA	N-CA-C	5.23	121.94	110.80
35	BA	1405	U	C1'-O4'-C4'	-5.23	104.67	109.90
35	BA	333	G	O4'-C4'-C3'	5.23	109.23	104.00
1	AA	243	A	O3'-P-O5'	5.22	111.84	104.00
1	AA	1091	U	C2'-C3'-O3'	5.22	121.54	113.70
17	AQ	62	SER	N-CA-C	5.22	115.95	108.74
35	BA	1644	C	C5'-C4'-C3'	-5.22	108.16	116.00
12	AL	96	VAL	CB-CA-C	-5.22	103.33	110.96
13	AM	99	ARG	N-CA-C	5.22	117.61	108.52
35	BA	1109	C	N1-C1'-C2'	5.22	119.83	112.00
35	BA	2673	G	O4'-C4'-C3'	5.22	109.22	104.00
35	BA	2763	G	O4'-C1'-C2'	-5.22	102.38	107.60
35	BA	1943	U	N1-C1'-C2'	5.22	121.83	114.00
35	BA	1987	G	O4'-C1'-C2'	-5.22	102.38	107.60
26	B1	37	ILE	CB-CA-C	-5.22	103.08	111.59
35	BA	264	C	C4'-C3'-C2'	5.22	107.82	102.60
35	BA	2028	U	O4'-C1'-C2'	-5.22	102.38	107.60
24	AY	316	ILE	CB-CA-C	-5.22	104.08	111.38
35	BA	1173	G	C2'-C3'-O3'	-5.22	105.88	113.70
35	BA	1395	A	C2'-C3'-O3'	-5.22	105.88	113.70
1	AA	438	G	C4'-C3'-O3'	5.21	117.22	109.40
1	AA	573	A	N9-C1'-C2'	5.21	119.82	112.00
1	AA	1366	C	C4'-C3'-C2'	-5.21	97.39	102.60
5	AE	25	ARG	N-CA-C	-5.21	100.40	108.90
22	AV	35	A	O3'-P-O5'	-5.21	96.18	104.00
35	BA	2520	C	C4'-C3'-O3'	-5.21	105.18	113.00
35	BA	2831	G	C4'-C3'-O3'	-5.21	105.18	113.00
1	AA	1502	A	C5'-C4'-O4'	-5.21	101.28	109.10
1	AA	30	U	O4'-C1'-C2'	5.21	111.01	105.80
1	AA	352	C	P-O5'-C5'	5.21	128.72	120.90
35	BA	1970	A	C3'-C2'-O2'	-5.21	106.78	114.60
1	AA	20	U	C1'-C2'-O2'	-5.21	100.59	108.40
7	AG	75	VAL	N-CA-C	5.21	115.46	108.17
38	BD	107	ALA	N-CA-C	5.21	118.87	109.44
29	B4	21	VAL	CA-C-O	-5.21	115.57	121.09
35	BA	2388	A	O4'-C1'-C2'	5.21	112.81	107.60
37	BC	13	GLU	CA-C-O	5.21	126.47	121.00
35	BA	1744	C	O5'-C5'-C4'	5.21	119.31	111.50
35	BA	1828	G	C2'-C3'-O3'	-5.21	101.69	109.50
47	BP	41	ARG	N-CA-C	-5.21	96.69	107.67
35	BA	643	A	O3'-P-O5'	-5.20	96.19	104.00
35	BA	1811	G	C4'-C3'-C2'	-5.20	97.40	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	2721	A	P-O5'-C5'	-5.20	113.10	120.90
1	AA	422	C	C2'-C3'-O3'	-5.20	105.90	113.70
7	AG	21	VAL	CB-CA-C	-5.20	105.22	111.88
35	BA	242	G	N9-C1'-C2'	5.20	121.80	114.00
35	BA	522	G	O4'-C1'-C2'	-5.20	102.40	107.60
35	BA	665	C	C1'-O4'-C4'	-5.20	104.70	109.90
46	BO	6	THR	CA-CB-OG1	-5.20	101.80	109.60
1	AA	1377	A	O3'-P-O5'	5.20	111.80	104.00
1	AA	1410	G	O5'-C5'-C4'	-5.20	103.70	111.50
17	AQ	11	VAL	N-CA-C	-5.20	108.22	113.47
35	BA	1943	U	C2'-C3'-O3'	5.20	117.30	109.50
39	BE	31	CYS	O-C-N	5.20	126.08	121.19
9	AI	81	ILE	CB-CA-C	-5.20	105.31	111.81
11	AK	15	ALA	N-CA-C	5.20	119.72	113.17
12	AL	25	PRO	CA-C-O	-5.20	115.85	121.77
1	AA	202	U	C5'-C4'-C3'	-5.19	107.41	115.20
18	AR	50	ILE	N-CA-C	-5.19	100.85	108.54
35	BA	1065	U	C1'-O4'-C4'	-5.19	104.71	109.90
35	BA	1914	C	N1-C1'-C2'	5.19	119.79	112.00
3	AC	86	VAL	CB-CA-C	-5.19	105.13	112.14
9	AI	86	VAL	N-CA-C	-5.19	105.03	112.35
1	AA	616	G	N9-C1'-C2'	5.19	119.78	112.00
24	AY	679	VAL	CA-C-N	5.19	126.33	119.84
24	AY	679	VAL	C-N-CA	5.19	126.33	119.84
31	B6	32	ASN	N-CA-C	5.19	116.49	107.93
35	BA	1328	G	N9-C1'-C2'	5.19	119.79	112.00
35	BA	2035	G	C1'-O4'-C4'	-5.19	104.51	109.70
37	BC	102	GLN	N-CA-C	5.19	116.63	110.97
1	AA	25	C	C4'-C3'-C2'	5.19	107.79	102.60
1	AA	545	C	N1-C1'-C2'	-5.19	104.22	112.00
35	BA	479	A	N9-C1'-C2'	5.19	121.78	114.00
1	AA	700	G	N9-C1'-C2'	-5.19	104.22	112.00
35	BA	603	A	O4'-C1'-C2'	5.19	110.99	105.80
1	AA	365	U	C3'-C2'-C1'	5.18	106.48	101.30
35	BA	1273	U	C4'-C3'-O3'	-5.18	105.22	113.00
46	BO	104	ARG	O-C-N	5.18	129.49	122.59
56	BY	9	LYS	CB-CA-C	-5.18	107.04	114.87
2	AB	138	LEU	N-CA-C	5.18	117.60	111.33
35	BA	2132	U	C4'-C3'-O3'	-5.18	105.23	113.00
1	AA	184	G	C3'-C2'-C1'	5.18	106.48	101.30
22	AV	60	U	O5'-C5'-C4'	-5.18	103.93	111.70
35	BA	504	U	C4'-C3'-C2'	5.18	107.78	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	AF	75	LEU	O-C-N	5.18	127.48	122.09
20	AT	9	ASN	N-CA-C	5.18	116.86	109.14
24	AY	255	ILE	N-CA-CB	-5.18	105.27	112.52
35	BA	1252	G	C1'-C2'-O2'	-5.18	100.63	108.40
35	BA	1991	U	O4'-C4'-C3'	5.18	109.18	104.00
35	BA	2768	C	O4'-C1'-N1	-5.18	100.73	108.50
1	AA	693	G	C4'-C3'-O3'	-5.18	105.23	113.00
35	BA	2602	A	C3'-C2'-O2'	-5.18	106.83	114.60
1	AA	793	U	C3'-C2'-C1'	5.18	106.68	101.50
13	AM	72	ALA	N-CA-C	-5.18	105.32	111.69
35	BA	614(A)	U	OP1-P-O3'	5.18	116.59	105.20
1	AA	672	U	C4'-C3'-O3'	-5.17	105.24	113.00
23	AX	11	U	O5'-C5'-C4'	5.17	119.46	111.70
35	BA	189	G	N9-C1'-C2'	-5.17	104.24	112.00
35	BA	2065	C	C5'-C4'-C3'	-5.17	108.24	116.00
35	BA	2527	C	C4'-C3'-O3'	-5.17	105.24	113.00
38	BD	273	ARG	CD-NE-CZ	-5.17	117.16	124.40
1	AA	313	A	C4'-C3'-O3'	-5.17	105.24	113.00
1	AA	895	G	C4'-C3'-O3'	-5.17	105.24	113.00
1	AA	535	A	C4'-C3'-C2'	5.17	107.77	102.60
40	BF	17	ARG	NE-CZ-NH1	-5.17	116.33	121.50
1	AA	914	A	C2'-C3'-O3'	-5.17	105.95	113.70
3	AC	54	ARG	NE-CZ-NH1	-5.17	116.33	121.50
3	AC	69	HIS	CA-CB-CG	5.17	118.97	113.80
3	AC	99	VAL	N-CA-CB	-5.17	105.08	110.82
17	AQ	38	ARG	CA-C-N	-5.17	113.84	122.21
17	AQ	38	ARG	C-N-CA	-5.17	113.84	122.21
24	AY	325	LEU	CA-C-O	-5.17	115.32	121.16
37	BC	6	LYS	N-CA-C	-5.17	105.29	111.03
47	BP	97	PRO	N-CA-C	-5.17	101.83	112.47
24	AY	484	ARG	NE-CZ-NH1	5.16	126.66	121.50
35	BA	906	G	C5'-C4'-C3'	-5.16	108.25	116.00
38	BD	95	LEU	N-CA-C	5.16	117.98	109.72
35	BA	601	C	O5'-C5'-C4'	-5.16	103.76	111.50
23	AX	16	A	C3'-C2'-O2'	-5.16	102.96	110.70
33	B8	10	ALA	N-CA-C	-5.16	105.57	111.14
35	BA	1433	U	P-O5'-C5'	-5.16	113.16	120.90
35	BA	1989	G	O4'-C4'-C3'	5.16	109.16	104.00
35	BA	2261	C	C2'-C3'-O3'	-5.16	105.96	113.70
35	BA	2833	G	C4'-C3'-O3'	5.16	117.14	109.40
43	BK	109	LYS	N-CA-C	-5.16	105.28	112.45
1	AA	1313	U	C1'-O4'-C4'	5.16	115.06	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	BC	190	ILE	CB-CA-C	-5.16	104.16	112.16
1	AA	368	U	C4'-C3'-O3'	-5.16	105.26	113.00
1	AA	559	A	C2'-C3'-O3'	-5.16	101.77	109.50
1	AA	1127	G	C3'-C2'-O2'	5.16	118.43	110.70
35	BA	2860	A	C4'-C3'-O3'	-5.16	105.27	113.00
46	BO	97	ARG	N-CA-C	-5.16	101.23	109.07
53	BV	13	ARG	NE-CZ-NH2	-5.16	114.56	119.20
5	AE	12	LEU	CA-C-N	5.15	130.13	122.71
5	AE	12	LEU	C-N-CA	5.15	130.13	122.71
35	BA	355	G	P-O5'-C5'	-5.15	113.17	120.90
1	AA	1485	U	C5'-C4'-C3'	5.15	123.73	116.00
42	BH	107	VAL	CB-CA-C	-5.15	102.84	111.29
1	AA	353	A	O4'-C1'-C2'	-5.15	102.45	107.60
1	AA	857	C	C5'-C4'-C3'	5.15	123.73	116.00
24	AY	106	VAL	CA-C-N	5.15	127.40	120.50
24	AY	106	VAL	C-N-CA	5.15	127.40	120.50
24	AY	234	GLY	CA-C-O	-5.15	113.93	118.77
35	BA	535	C	O4'-C1'-C2'	-5.15	102.45	107.60
35	BA	748	G	C1'-O4'-C4'	-5.15	104.75	109.90
40	BF	136	THR	O-C-N	5.15	127.59	122.08
47	BP	9	ASN	CA-CB-CG	-5.15	107.45	112.60
26	B1	70	VAL	N-CA-C	-5.15	106.66	111.45
1	AA	1277	C	N1-C1'-C2'	-5.15	104.28	112.00
35	BA	1651	G	C3'-C2'-O2'	5.15	118.42	110.70
35	BA	2772	C	C4'-C3'-C2'	5.15	107.75	102.60
46	BO	79	PHE	CA-CB-CG	5.15	118.95	113.80
57	BZ	11	GLU	N-CA-C	-5.15	105.36	111.69
1	AA	1447	A	O3'-P-O5'	5.14	111.72	104.00
1	AA	1467	G	C5'-C4'-C3'	-5.14	108.28	116.00
17	AQ	16	GLN	CA-C-O	5.14	126.19	120.43
17	AQ	53	LEU	O-C-N	-5.14	117.02	123.04
35	BA	2221	G	O4'-C4'-C3'	5.14	109.14	104.00
35	BA	2778	A	O3'-P-O5'	5.14	111.72	104.00
55	BX	26	TYR	CA-C-N	-5.14	115.31	123.23
55	BX	26	TYR	C-N-CA	-5.14	115.31	123.23
35	BA	1332	G	C3'-C2'-O2'	-5.14	106.89	114.60
35	BA	1543	C	C5'-C4'-C3'	-5.14	108.29	116.00
35	BA	1790	C	C2'-C3'-O3'	-5.14	105.98	113.70
35	BA	2117	A	O4'-C1'-C2'	5.14	112.74	107.60
40	BF	160	ASN	CB-CA-C	-5.14	102.55	110.78
24	AY	259	PHE	CA-CB-CG	5.14	118.94	113.80
35	BA	2597	G	C4'-C3'-O3'	-5.14	105.29	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	BD	188	GLU	N-CA-C	5.14	119.18	113.01
46	BO	42	SER	CA-C-O	-5.14	115.19	121.36
1	AA	314	C	O5'-C5'-C4'	-5.14	103.79	111.50
9	AI	93	ARG	O-C-N	5.14	127.96	121.64
35	BA	2502	G	N9-C1'-C2'	5.14	119.71	112.00
38	BD	58	HIS	N-CA-C	5.14	117.48	110.24
35	BA	2788	C	O4'-C4'-C3'	5.14	109.14	104.00
35	BA	1740	G	O4'-C1'-C2'	5.14	110.94	105.80
38	BD	15	PHE	CA-C-N	5.14	131.35	121.54
38	BD	15	PHE	C-N-CA	5.14	131.35	121.54
57	BZ	102	LEU	CB-CA-C	-5.14	101.38	109.80
12	AL	21	LYS	N-CA-C	-5.13	102.68	110.28
35	BA	995	C	C4'-C3'-O3'	-5.13	101.70	109.40
35	BA	1655	A	O4'-C4'-C3'	5.13	109.13	104.00
35	BA	1284	A	C4'-C3'-O3'	-5.13	105.30	113.00
35	BA	2121	G	C5'-C4'-C3'	-5.13	108.30	116.00
31	B6	51	GLU	N-CA-C	-5.13	103.83	110.19
35	BA	1385	G	N9-C1'-C2'	5.13	121.69	114.00
41	BG	161	THR	CB-CA-C	-5.13	105.11	113.37
1	AA	1326	C	N1-C1'-C2'	5.13	119.69	112.00
24	AY	272	LEU	N-CA-C	-5.13	105.77	112.23
25	B0	11	ARG	N-CA-C	-5.13	104.32	110.88
35	BA	1445	A	C5'-C4'-C3'	-5.13	107.51	115.20
1	AA	591	U	C4'-C3'-C2'	5.13	107.73	102.60
35	BA	185	U	C5'-C4'-C3'	5.13	123.69	116.00
35	BA	231	C	N1-C1'-C2'	5.13	119.69	112.00
35	BA	278	A	O4'-C4'-C3'	5.13	109.13	104.00
35	BA	944	G	N9-C1'-C2'	5.13	119.69	112.00
1	AA	1422	G	C1'-O4'-C4'	-5.12	104.78	109.90
24	AY	480	GLN	N-CA-C	-5.12	102.57	109.95
5	AE	17	ALA	N-CA-C	5.12	116.86	108.76
35	BA	2345	G	O4'-C4'-C3'	-5.12	100.98	106.10
36	BB	101	G	O4'-C4'-C3'	5.12	109.12	104.00
40	BF	205	ARG	N-CA-C	-5.12	107.32	113.21
29	B4	25	TYR	N-CA-C	5.12	117.19	109.41
35	BA	1962	C	C5'-C4'-C3'	-5.12	107.52	115.20
35	BA	1253	A	C3'-C2'-O2'	-5.12	106.92	114.60
48	BQ	140	ALA	N-CA-C	-5.12	99.89	110.80
9	AI	36	TYR	CA-C-O	5.12	125.26	119.27
16	AP	37	GLY	N-CA-C	5.12	117.97	111.37
26	B1	64	ALA	CA-C-O	5.12	125.97	119.78
1	AA	445	G	C1'-O4'-C4'	-5.12	104.78	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1406	U	C5'-C4'-C3'	5.12	123.67	116.00
7	AG	57	GLU	N-CA-C	-5.12	103.20	109.65
35	BA	1416	G	O4'-C1'-N9	5.12	115.88	108.20
24	AY	450	ILE	CB-CA-C	-5.12	104.06	111.68
35	BA	739	G	C3'-C2'-O2'	-5.12	106.93	114.60
35	BA	1796	U	C2'-C3'-O3'	5.12	121.37	113.70
1	AA	570	G	N9-C1'-C2'	5.11	119.67	112.00
12	AL	25	PRO	O-C-N	5.11	128.39	122.26
35	BA	901	A	C1'-C2'-O2'	5.11	116.07	108.40
35	BA	1146	C	C5'-C4'-C3'	-5.11	108.33	116.00
35	BA	1819	A	N9-C1'-C2'	5.11	121.67	114.00
44	BL	103	ALA	O-C-N	5.11	127.54	122.12
1	AA	821	G	C4'-C3'-C2'	-5.11	97.49	102.60
35	BA	2755	C	C5'-C4'-C3'	-5.11	108.34	116.00
35	BA	249	C	N1-C1'-C2'	5.11	121.66	114.00
38	BD	163	ALA	CA-C-N	-5.11	114.87	122.74
38	BD	163	ALA	C-N-CA	-5.11	114.87	122.74
1	AA	1401	G	C4'-C3'-C2'	-5.11	97.50	102.60
25	B0	57	PHE	CA-CB-CG	5.11	118.91	113.80
35	BA	460	A	P-O5'-C5'	-5.11	113.24	120.90
38	BD	97	TYR	N-CA-C	-5.10	102.73	110.28
43	BK	14	ALA	N-CA-C	5.10	116.62	108.41
46	BO	24	VAL	N-CA-CB	5.10	117.11	110.99
1	AA	785	G	C4'-C3'-O3'	-5.10	105.35	113.00
13	AM	91	ARG	NE-CZ-NH1	-5.10	116.40	121.50
24	AY	372	GLY	CA-C-O	5.10	124.66	119.10
35	BA	444	C	C2'-C3'-O3'	-5.10	106.05	113.70
35	BA	585	G	C3'-C2'-C1'	5.10	106.40	101.30
35	BA	805	G	C5'-C4'-C3'	-5.10	107.55	115.20
35	BA	1136	G	O4'-C4'-C3'	5.10	109.10	104.00
38	BD	91	ARG	N-CA-C	-5.10	100.14	108.76
1	AA	1213	A	C5'-C4'-C3'	5.10	122.85	115.20
16	AP	13	HIS	CA-CB-CG	5.10	118.90	113.80
35	BA	1648	C	C2'-C3'-O3'	-5.10	106.05	113.70
35	BA	2243	U	C5'-C4'-O4'	-5.10	102.16	109.80
38	BD	213	ARG	N-CA-C	-5.10	105.18	111.40
1	AA	179	A	O3'-P-O5'	-5.10	96.36	104.00
35	BA	2202	C	O3'-P-O5'	-5.10	96.36	104.00
1	AA	189(I)	G	O5'-C5'-C4'	-5.09	103.86	111.50
2	AB	160	ASP	CA-C-O	5.09	125.38	119.32
7	AG	18	TYR	N-CA-C	-5.09	107.00	114.39
35	BA	34	C	N1-C1'-C2'	5.09	119.64	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	536	A	N9-C1'-C2'	-5.09	104.36	112.00
57	BZ	163	LEU	N-CA-C	5.09	121.65	110.80
1	AA	128	G	C3'-C2'-O2'	5.09	118.34	110.70
5	AE	33	VAL	CB-CA-C	-5.09	103.91	111.19
35	BA	1507	A	N9-C1'-C2'	5.09	119.64	112.00
1	AA	20	U	C4'-C3'-O3'	-5.09	105.36	113.00
1	AA	603	U	C3'-C2'-O2'	5.09	118.34	110.70
35	BA	741	G	C4'-C3'-O3'	-5.09	105.36	113.00
27	B2	47	ASN	O-C-N	5.09	129.36	122.59
35	BA	503	A	C1'-C2'-O2'	-5.09	104.17	111.80
35	BA	1801	G	C3'-C2'-O2'	-5.09	106.97	114.60
39	BE	21	VAL	CA-C-N	5.09	125.53	120.14
39	BE	21	VAL	C-N-CA	5.09	125.53	120.14
4	AD	112	VAL	N-CA-C	5.09	115.81	110.62
24	AY	231	TYR	N-CA-CB	-5.09	102.61	109.98
35	BA	26	G	O4'-C4'-C3'	5.09	109.09	104.00
35	BA	1972	A	N9-C1'-C2'	5.09	119.63	112.00
2	AB	78	GLN	N-CA-C	-5.08	99.97	110.80
3	AC	40	ARG	N-CA-CB	5.08	118.17	110.14
35	BA	2736	G	O5'-C5'-C4'	-5.08	103.87	111.50
41	BG	118	ARG	NE-CZ-NH1	-5.08	116.42	121.50
1	AA	718	G	O5'-C5'-C4'	5.08	119.12	111.50
1	AA	866	C	C2'-C3'-O3'	-5.08	106.07	113.70
1	AA	1010	G	N9-C1'-C2'	5.08	119.62	112.00
28	B3	21	ALA	N-CA-C	-5.08	106.34	112.54
2	AB	115	LEU	CB-CA-C	-5.08	102.04	110.68
24	AY	502	GLY	N-CA-C	5.08	125.22	113.18
35	BA	845	G	O4'-C4'-C3'	5.08	109.08	104.00
4	AD	139	ARG	CA-C-O	-5.08	114.92	120.36
32	B7	47	ARG	CB-CA-C	-5.08	101.90	110.43
35	BA	887	A	C3'-C2'-O2'	5.08	118.32	110.70
1	AA	695	A	O4'-C4'-C3'	5.08	109.08	104.00
35	BA	937	U	C3'-C2'-O2'	5.08	118.32	110.70
49	BR	77	ARG	N-CA-C	-5.08	105.75	111.28
1	AA	190	U	O4'-C4'-C3'	-5.08	98.92	104.00
1	AA	935	A	O5'-C5'-C4'	-5.08	103.89	111.50
35	BA	862	G	C1'-C2'-O2'	5.08	116.01	108.40
37	BC	38	PHE	CA-CB-CG	5.08	118.88	113.80
41	BG	123	ASN	N-CA-C	5.08	118.96	112.26
1	AA	658	G	C4'-C3'-O3'	-5.07	105.39	113.00
9	AI	2	GLU	CA-C-N	-5.07	115.95	123.05
9	AI	2	GLU	C-N-CA	-5.07	115.95	123.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	538	TYR	N-CA-C	5.07	119.52	113.23
35	BA	1987	G	C1'-O4'-C4'	5.07	114.97	109.90
47	BP	134	ALA	N-CA-CB	5.07	117.89	110.58
2	AB	104	ASN	N-CA-C	-5.07	106.40	112.59
24	AY	229	LEU	N-CA-C	-5.07	105.44	110.97
35	BA	2896	C	C3'-C2'-C1'	-5.07	96.23	101.30
2	AB	197	VAL	CB-CA-C	-5.07	104.70	110.73
13	AM	75	ALA	CA-C-O	-5.07	115.47	120.90
1	AA	389	A	C5'-C4'-C3'	5.07	123.60	116.00
1	AA	1443	G	C3'-C2'-O2'	5.07	118.30	110.70
23	AX	17	U	C3'-C2'-C1'	5.07	106.37	101.30
1	AA	279	A	N9-C1'-C2'	-5.07	106.40	114.00
1	AA	735	C	C5'-C4'-C3'	-5.07	108.40	116.00
3	AC	82	GLU	N-CA-C	-5.07	108.36	114.75
35	BA	1523	U	O4'-C4'-C3'	-5.07	98.93	104.00
38	BD	104	TYR	N-CA-C	5.07	116.99	108.73
42	BH	89	ILE	CA-C-O	5.07	126.59	120.66
35	BA	358	U	C1'-O4'-C4'	-5.07	104.83	109.90
35	BA	512	G	C4'-C3'-O3'	-5.07	105.40	113.00
35	BA	794	G	N9-C1'-C2'	5.07	119.60	112.00
35	BA	2030	A	C1'-O4'-C4'	-5.07	104.83	109.90
41	BG	82	LEU	N-CA-C	5.07	121.59	110.80
44	BL	102	ASP	CA-CB-CG	5.07	117.67	112.60
17	AQ	36	ILE	N-CA-C	5.06	116.82	108.97
18	AR	21	LYS	N-CA-C	5.06	117.68	110.24
35	BA	264	C	P-O5'-C5'	-5.06	113.31	120.90
35	BA	533	G	C3'-C2'-O2'	5.06	118.29	110.70
1	AA	577	G	OP1-P-O3'	-5.06	92.82	108.00
22	AV	65	C	C3'-C2'-O2'	5.06	118.29	110.70
57	BZ	71	VAL	N-CA-CB	-5.06	102.88	111.23
1	AA	305	G	O5'-C5'-C4'	-5.06	104.11	111.70
1	AA	315	A	C4'-C3'-O3'	-5.06	105.41	113.00
1	AA	553	A	C5'-C4'-C3'	-5.06	108.41	116.00
17	AQ	11	VAL	CA-CB-CG1	-5.06	101.80	110.40
28	B3	16	PRO	N-CA-CB	5.06	107.81	103.31
28	B3	51	ALA	CA-C-O	-5.06	115.26	120.92
35	BA	909	A	O4'-C1'-C2'	-5.06	102.54	107.60
35	BA	1709	U	O5'-C5'-C4'	-5.06	103.91	111.50
35	BA	2193	G	C3'-C2'-C1'	-5.06	96.24	101.30
54	BW	28	SER	CA-C-O	-5.06	115.98	121.44
35	BA	623	G	P-O5'-C5'	-5.06	113.32	120.90
48	BQ	65	PHE	CA-C-N	-5.06	116.06	122.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	BQ	65	PHE	C-N-CA	-5.06	116.06	122.43
22	AV	19	G	N9-C1'-C2'	5.05	121.58	114.00
40	BF	187	VAL	N-CA-C	5.05	116.51	111.00
49	BR	51	LEU	O-C-N	5.05	127.35	122.09
42	BH	166	GLY	N-CA-C	-5.05	103.74	111.98
1	AA	473	G	C3'-C2'-O2'	5.05	118.28	110.70
1	AA	1093	A	N9-C1'-C2'	5.05	119.58	112.00
2	AB	153	ARG	NE-CZ-NH1	-5.05	116.45	121.50
35	BA	559	G	C3'-C2'-O2'	5.05	118.28	110.70
35	BA	693	C	C3'-C2'-C1'	-5.05	96.25	101.30
35	BA	728	G	C4'-C3'-O3'	5.05	116.98	109.40
24	AY	504	ARG	NE-CZ-NH1	-5.05	116.45	121.50
24	AY	598	ASP	CA-C-N	5.05	125.03	120.03
24	AY	598	ASP	C-N-CA	5.05	125.03	120.03
27	B2	69	ARG	CA-C-O	5.05	126.67	120.56
35	BA	2859	G	C1'-O4'-C4'	-5.05	104.85	109.90
51	BT	11	GLU	CB-CG-CD	-5.05	104.02	112.60
6	AF	81	ILE	CA-CB-CG1	-5.05	101.82	110.40
1	AA	1014	A	C3'-C2'-O2'	5.05	118.27	110.70
1	AA	1234	C	C1'-O4'-C4'	-5.05	104.85	109.90
2	AB	165	VAL	CA-C-O	-5.05	114.47	120.78
3	AC	139	GLN	OE1-CD-NE2	-5.05	117.55	122.60
1	AA	554	C	P-O5'-C5'	-5.04	113.33	120.90
35	BA	1568	G	O4'-C1'-N9	-5.04	100.93	108.50
35	BA	1820	U	C3'-C2'-C1'	-5.04	96.45	101.50
35	BA	1880	C	C3'-C2'-O2'	5.04	118.27	110.70
3	AC	25	GLY	N-CA-C	-5.04	105.86	112.82
23	AX	14	A	C1'-O4'-C4'	-5.04	104.86	109.90
47	BP	138	LEU	N-CA-C	-5.04	106.05	113.61
1	AA	948	C	O4'-C4'-C3'	5.04	109.04	104.00
48	BQ	6	ARG	CA-C-O	-5.04	115.73	121.58
24	AY	190	ASN	OD1-CG-ND2	-5.04	117.56	122.60
35	BA	1464	C	O4'-C4'-C3'	5.04	109.04	104.00
1	AA	602	A	O4'-C1'-C2'	5.04	112.64	107.60
2	AB	61	LEU	N-CA-C	-5.04	107.26	113.41
35	BA	158	U	N1-C1'-C2'	5.04	119.56	112.00
35	BA	718	A	C3'-C2'-C1'	5.04	106.34	101.30
35	BA	2405	G	C1'-C2'-O2'	-5.04	100.84	108.40
47	BP	135	LEU	N-CA-C	-5.04	100.07	110.80
49	BR	17	ARG	O-C-N	5.04	128.78	122.23
1	AA	473	G	C1'-O4'-C4'	-5.04	104.86	109.90
1	AA	906	G	C5'-C4'-C3'	-5.04	108.44	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	2339	G	C4'-C3'-C2'	-5.04	97.56	102.60
1	AA	189	G	C3'-C2'-O2'	5.04	118.25	110.70
1	AA	189(H)	G	C3'-C2'-O2'	5.04	118.25	110.70
1	AA	1057	G	C3'-C2'-O2'	5.04	118.25	110.70
1	AA	1076	C	C5'-C4'-C3'	-5.04	108.44	116.00
1	AA	1242	C	O5'-C5'-C4'	-5.04	103.95	111.50
33	B8	32	LEU	O-C-N	5.04	127.26	122.07
17	AQ	51	TYR	O-C-N	-5.03	117.43	123.27
35	BA	188	G	C3'-C2'-O2'	5.03	118.25	110.70
35	BA	1494	A	C2'-C3'-O3'	5.03	121.25	113.70
35	BA	1511	C	C2'-C3'-O3'	-5.03	106.15	113.70
35	BA	1578	U	C3'-C2'-C1'	5.03	106.33	101.30
35	BA	1127	A	C1'-O4'-C4'	-5.03	104.87	109.90
35	BA	1779	U	C2'-C3'-O3'	-5.03	106.15	113.70
45	BN	115	ARG	N-CA-C	-5.03	105.80	111.28
7	AG	5	ARG	N-CA-C	5.03	117.91	110.46
9	AI	65	VAL	O-C-N	-5.03	117.75	122.98
31	B6	18	ARG	N-CA-C	5.03	121.52	110.80
35	BA	327	G	C2'-C3'-O3'	-5.03	106.15	113.70
35	BA	917	A	C1'-C2'-O2'	-5.03	100.85	108.40
42	BH	113	VAL	N-CA-C	5.03	115.82	108.53
2	AB	133	LYS	N-CA-C	-5.03	105.69	111.07
24	AY	621	ILE	CA-CB-CG2	-5.03	101.95	110.50
26	B1	80	LEU	CA-C-N	5.03	129.38	122.84
26	B1	80	LEU	C-N-CA	5.03	129.38	122.84
35	BA	1254	A	C3'-C2'-O2'	5.03	118.24	110.70
35	BA	430	G	C2'-C3'-O3'	-5.03	106.16	113.70
1	AA	583	A	C2'-C3'-O3'	-5.03	106.16	113.70
1	AA	1397	C	O5'-C5'-C4'	-5.03	103.96	111.50
35	BA	331	A	C2'-C3'-O3'	5.03	117.04	109.50
33	B8	7	HIS	N-CA-C	5.02	116.87	108.23
48	BQ	98	LYS	CA-C-N	5.02	124.93	119.76
48	BQ	98	LYS	C-N-CA	5.02	124.93	119.76
1	AA	282	A	C1'-C2'-O2'	-5.02	100.86	108.40
35	BA	1247	A	C4'-C3'-C2'	5.02	107.62	102.60
24	AY	414	GLU	CA-C-N	5.02	126.12	119.84
24	AY	414	GLU	C-N-CA	5.02	126.12	119.84
35	BA	1249	U	C3'-C2'-O2'	5.02	118.23	110.70
35	BA	1255	U	O4'-C1'-N1	5.02	116.03	108.50
35	BA	2694	G	O5'-C5'-C4'	-5.02	103.97	111.50
1	AA	13	U	C4'-C3'-O3'	5.02	116.93	109.40
19	AS	81	ARG	NE-CZ-NH1	-5.02	116.48	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	723	G	C1'-C2'-O2'	5.02	115.93	108.40
35	BA	2495	G	C5'-C4'-C3'	-5.02	108.47	116.00
38	BD	217	ARG	NE-CZ-NH1	-5.02	116.48	121.50
39	BE	134	ILE	CB-CA-C	-5.02	103.06	111.29
24	AY	609	GLU	N-CA-C	5.02	115.61	107.23
35	BA	1069	A	N9-C1'-C2'	5.02	119.53	112.00
45	BN	39	ARG	CA-C-N	5.02	126.11	119.84
45	BN	39	ARG	C-N-CA	5.02	126.11	119.84
48	BQ	56	ARG	NE-CZ-NH1	-5.02	116.48	121.50
1	AA	540	G	O5'-C5'-C4'	-5.02	103.98	111.50
1	AA	894	G	O5'-C5'-C4'	-5.01	103.98	111.50
1	AA	1231	G	C5'-C4'-O4'	5.01	117.32	109.80
8	AH	53	VAL	CA-C-O	5.01	125.22	120.25
50	BS	44	LYS	CA-C-O	5.01	127.68	120.51
7	AG	95	ARG	CA-C-O	-5.01	115.22	120.63
24	AY	175	SER	CA-C-O	5.01	123.24	119.68
1	AA	108	G	C1'-C2'-O2'	5.01	115.92	108.40
1	AA	133	U	C5'-C4'-O4'	-5.01	102.28	109.80
1	AA	308	C	C1'-C2'-O2'	5.01	115.92	108.40
1	AA	856	C	O5'-C5'-C4'	-5.01	103.98	111.50
17	AQ	90	ILE	CB-CA-C	-5.01	105.30	112.22
35	BA	1880	C	C1'-O4'-C4'	-5.01	104.89	109.90
1	AA	5	U	N1-C1'-C2'	-5.01	106.48	114.00
35	BA	1090	U	C3'-C2'-O2'	5.01	118.21	110.70
35	BA	1827	C	P-O5'-C5'	-5.01	113.39	120.90
35	BA	1926	U	C5'-C4'-O4'	5.01	117.31	109.80
42	BH	113	VAL	CA-C-N	-5.01	116.58	123.14
42	BH	113	VAL	C-N-CA	-5.01	116.58	123.14
35	BA	2593	U	C3'-C2'-C1'	5.01	106.31	101.30
1	AA	1357	A	N9-C1'-C2'	5.01	119.51	112.00
32	B7	28	ARG	N-CA-C	-5.01	105.90	111.36
35	BA	2757	A	C5'-C4'-C3'	5.01	123.51	116.00
1	AA	340	U	O5'-C5'-C4'	-5.00	103.99	111.50
4	AD	98	GLU	N-CA-C	5.00	117.63	111.82
49	BR	44	LEU	N-CA-C	5.00	118.16	111.75
1	AA	775	G	O4'-C1'-C2'	-5.00	102.60	107.60
9	AI	29	ASN	O-C-N	5.00	128.82	122.57
25	B0	32	ARG	NH1-CZ-NH2	-5.00	112.80	119.30
51	BT	57	PHE	N-CA-C	-5.00	101.94	109.60
4	AD	180	GLY	O-C-N	-5.00	117.13	122.73
35	BA	2804	C	C3'-C2'-C1'	5.00	106.30	101.30

All (3) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	575	G	C3'
35	BA	1799	G	C3'
35	BA	1992	G	C3'

All (514) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1001	A	Sidechain
1	AA	1002	G	Sidechain
1	AA	1003	G	Sidechain
1	AA	1053	G	Sidechain
1	AA	1055	A	Sidechain
1	AA	1067	A	Sidechain
1	AA	1077	G	Sidechain
1	AA	108	G	Sidechain
1	AA	1081	G	Sidechain
1	AA	110	C	Sidechain
1	AA	1109	C	Sidechain
1	AA	1119	C	Sidechain
1	AA	112	G	Sidechain
1	AA	1129	C	Sidechain
1	AA	1176	A	Sidechain
1	AA	1179	A	Sidechain
1	AA	1183	A	Sidechain
1	AA	1184	G	Sidechain
1	AA	1190	G	Sidechain
1	AA	1201	A	Sidechain
1	AA	1202	G	Sidechain
1	AA	1219	U	Sidechain
1	AA	1226	C	Sidechain
1	AA	1231	G	Sidechain
1	AA	1268	A	Sidechain
1	AA	1278	U	Sidechain
1	AA	1295	G	Sidechain
1	AA	1304	G	Sidechain
1	AA	1331	G	Sidechain
1	AA	1356	G	Sidechain
1	AA	1357	A	Sidechain
1	AA	1370	G	Sidechain
1	AA	1380	U	Sidechain
1	AA	1390	U	Sidechain
1	AA	1401	G	Sidechain
1	AA	1402	C	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1403	C	Sidechain
1	AA	1414	U	Sidechain
1	AA	1417	G	Sidechain
1	AA	1421	G	Sidechain
1	AA	1456	G	Sidechain
1	AA	1457	G	Sidechain
1	AA	1485	U	Sidechain
1	AA	1496	C	Sidechain
1	AA	1498	U	Sidechain
1	AA	1502	A	Sidechain
1	AA	1506	U	Sidechain
1	AA	1512	U	Sidechain
1	AA	1530	G	Sidechain
1	AA	172	A	Sidechain
1	AA	203	U	Sidechain
1	AA	21	G	Sidechain
1	AA	251	G	Sidechain
1	AA	253	U	Sidechain
1	AA	265	G	Sidechain
1	AA	274	A	Sidechain
1	AA	361	G	Sidechain
1	AA	368	U	Sidechain
1	AA	37	U	Sidechain
1	AA	371	G	Sidechain
1	AA	380	G	Sidechain
1	AA	382	A	Sidechain
1	AA	387	U	Sidechain
1	AA	39	G	Sidechain
1	AA	397	A	Sidechain
1	AA	399	G	Sidechain
1	AA	412	A	Sidechain
1	AA	436	C	Sidechain
1	AA	493	G	Sidechain
1	AA	5	U	Sidechain
1	AA	510	A	Sidechain
1	AA	548	G	Sidechain
1	AA	573	A	Sidechain
1	AA	575	G	Sidechain
1	AA	576	G	Sidechain
1	AA	596	C	Sidechain
1	AA	598	U	Sidechain
1	AA	628	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	636	U	Sidechain
1	AA	641	U	Sidechain
1	AA	657	G	Sidechain
1	AA	661	G	Sidechain
1	AA	666	G	Sidechain
1	AA	667	G	Sidechain
1	AA	669	U	Sidechain
1	AA	672	U	Sidechain
1	AA	676	A	Sidechain
1	AA	690	G	Sidechain
1	AA	694	A	Sidechain
1	AA	697	U	Sidechain
1	AA	741	G	Sidechain
1	AA	748	C	Sidechain
1	AA	760	G	Sidechain
1	AA	768	A	Sidechain
1	AA	769	G	Sidechain
1	AA	773	G	Sidechain
1	AA	793	U	Sidechain
1	AA	835	U	Sidechain
1	AA	867	G	Sidechain
1	AA	876	G	Sidechain
1	AA	878	G	Sidechain
1	AA	879	C	Sidechain
1	AA	882	C	Sidechain
1	AA	887	G	Sidechain
1	AA	894	G	Sidechain
1	AA	898	G	Sidechain
1	AA	931	C	Sidechain
1	AA	955	U	Sidechain
1	AA	961	U	Sidechain
1	AA	971	G	Sidechain
1	AA	981	U	Sidechain
2	AB	130	ARG	Sidechain
2	AB	144	ARG	Sidechain
2	AB	178	ARG	Sidechain
2	AB	20	GLU	Sidechain
2	AB	37	ASN	Sidechain
2	AB	50	GLU	Sidechain
2	AB	53	ARG	Sidechain
2	AB	82	ARG	Sidechain
2	AB	94	ASN	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	96	ARG	Sidechain
3	AC	104	GLN	Sidechain
4	AD	107	ARG	Sidechain
4	AD	114	ARG	Sidechain
4	AD	116	GLN	Sidechain
4	AD	13	ARG	Sidechain
4	AD	132	ARG	Sidechain
4	AD	141	ARG	Sidechain
4	AD	145	GLU	Sidechain
4	AD	168	ARG	Sidechain
4	AD	191	ARG	Sidechain
4	AD	49	ARG	Sidechain
4	AD	53	ASP	Sidechain
4	AD	62	GLN	Sidechain
4	AD	66	ARG	Sidechain
4	AD	73	ARG	Sidechain
5	AE	18	ARG	Sidechain
5	AE	5	ASP	Sidechain
5	AE	64	ARG	Sidechain
6	AF	27	GLN	Sidechain
6	AF	3	ARG	Sidechain
6	AF	36	ARG	Sidechain
6	AF	42	GLU	Sidechain
6	AF	74	ASP	Sidechain
7	AG	13	GLN	Sidechain
7	AG	139	GLU	Sidechain
7	AG	149	ARG	Sidechain
7	AG	15	ASP	Sidechain
7	AG	155	ARG	Sidechain
7	AG	32	ARG	Sidechain
7	AG	41	ARG	Sidechain
7	AG	52	GLU	Sidechain
7	AG	64	GLN	Sidechain
7	AG	76	ARG	Sidechain
7	AG	84	ASN	Sidechain
8	AH	122	ARG	Sidechain
8	AH	125	ARG	Sidechain
8	AH	136	GLU	Sidechain
8	AH	18	ARG	Sidechain
8	AH	22	GLU	Sidechain
8	AH	41	ARG	Sidechain
8	AH	70	GLN	Sidechain

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Mol	Chain	Res	Type	Group
8	AH	84	ARG	Sidechain
9	AI	104	ARG	Mainchain
9	AI	120	ARG	Sidechain
9	AI	128	ARG	Sidechain
9	AI	2	GLU	Sidechain
9	AI	29	ASN	Sidechain
9	AI	34	ASN	Sidechain
9	AI	53	VAL	Mainchain
9	AI	66	ARG	Sidechain
9	AI	9	ARG	Sidechain
10	AJ	29	ARG	Sidechain
10	AJ	83	GLU	Sidechain
10	AJ	95	GLU	Sidechain
11	AK	81	ASP	Sidechain
11	AK	93	GLN	Sidechain
11	AK	96	ARG	Sidechain
12	AL	102	ARG	Sidechain
12	AL	16	GLU	Sidechain
12	AL	19	ARG	Sidechain
13	AM	114	ARG	Sidechain
13	AM	14	ARG	Sidechain
13	AM	3	ARG	Sidechain
13	AM	55	ARG	Sidechain
13	AM	58	GLU	Sidechain
13	AM	62	ASN	Sidechain
14	AN	26	ARG	Sidechain
14	AN	35	ARG	Sidechain
14	AN	57	ARG	Sidechain
15	AO	21	ASP	Sidechain
15	AO	79	ARG	Sidechain
16	AP	32	TYR	Sidechain
16	AP	54	GLU	Sidechain
18	AR	72	ARG	Sidechain
20	AT	15	ARG	Sidechain
20	AT	25	ARG	Sidechain
20	AT	79	ARG	Sidechain
20	AT	8	ARG	Sidechain
20	AT	86	ARG	Sidechain
20	AT	9	ASN	Sidechain
20	AT	90	GLN	Sidechain
21	AU	22	ARG	Sidechain
22	AV	29	G	Sidechain

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Mol	Chain	Res	Type	Group
22	AV	4	G	Sidechain
22	AV	46	G	Sidechain
22	AV	8	U	Sidechain
23	AX	12	A	Sidechain
23	AX	17	U	Sidechain
24	AY	13	ARG	Sidechain
24	AY	151	ARG	Sidechain
24	AY	156	ARG	Sidechain
24	AY	182	ARG	Sidechain
24	AY	210	ARG	Sidechain
24	AY	226	ASN	Sidechain
24	AY	295	GLU	Sidechain
24	AY	300	GLU	Sidechain
24	AY	354	ARG	Sidechain
24	AY	357	ARG	Sidechain
24	AY	363	ARG	Sidechain
24	AY	403	GLU	Sidechain
24	AY	406	GLU	Sidechain
24	AY	445	GLU	Sidechain
24	AY	460	GLU	Sidechain
24	AY	465	ARG	Sidechain
24	AY	598	ASP	Sidechain
24	AY	607	ARG	Sidechain
24	AY	637	ARG	Sidechain
25	B0	11	ARG	Sidechain
25	B0	12	ASN	Sidechain
25	B0	82	ARG	Sidechain
26	B1	52	ARG	Sidechain
26	B1	57	GLU	Sidechain
26	B1	76	ARG	Sidechain
27	B2	30	ARG	Sidechain
27	B2	34	GLU	Sidechain
27	B2	43	GLN	Sidechain
27	B2	68	ARG	Sidechain
27	B2	70	GLN	Sidechain
28	B3	18	ASP	Sidechain
28	B3	3	ARG	Sidechain
28	B3	30	ARG	Sidechain
28	B3	55	ARG	Sidechain
29	B4	20	ASN	Sidechain
30	B5	51	TYR	Sidechain
31	B6	20	ASN	Sidechain

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Mol	Chain	Res	Type	Group
31	B6	28	ARG	Sidechain
31	B6	51	GLU	Sidechain
32	B7	23	ARG	Sidechain
32	B7	35	ARG	Sidechain
33	B8	13	ARG	Sidechain
33	B8	30	ARG	Sidechain
33	B8	42	ARG	Sidechain
35	BA	1001	A	Sidechain
35	BA	1034	G	Sidechain
35	BA	1148	A	Sidechain
35	BA	1155	A	Sidechain
35	BA	1156	A	Sidechain
35	BA	1176	G	Sidechain
35	BA	1178	C	Sidechain
35	BA	1183	G	Sidechain
35	BA	1191	G	Sidechain
35	BA	1199	U	Sidechain
35	BA	1215	G	Sidechain
35	BA	123	G	Sidechain
35	BA	1231	G	Sidechain
35	BA	1236	G	Sidechain
35	BA	1241	A	Sidechain
35	BA	1252	G	Sidechain
35	BA	1253	A	Sidechain
35	BA	1255	U	Sidechain
35	BA	1276	A	Sidechain
35	BA	128	C	Sidechain
35	BA	1297	C	Sidechain
35	BA	1301	A	Sidechain
35	BA	1355	G	Sidechain
35	BA	1359	A	Sidechain
35	BA	1368	G	Sidechain
35	BA	1379	A	Sidechain
35	BA	1416	G	Sidechain
35	BA	1436	G	Sidechain
35	BA	147	U	Sidechain
35	BA	1492	G	Sidechain
35	BA	1493	C	Sidechain
35	BA	1496	A	Sidechain
35	BA	155	U	Sidechain
35	BA	1558	A	Sidechain
35	BA	1578	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	1614	A	Sidechain
35	BA	1620	G	Sidechain
35	BA	1622	G	Sidechain
35	BA	1623	G	Sidechain
35	BA	1633	G	Sidechain
35	BA	1638	C	Sidechain
35	BA	1642	G	Sidechain
35	BA	1768	U	Sidechain
35	BA	1772	G	Sidechain
35	BA	1773	A	Sidechain
35	BA	1775	U	Sidechain
35	BA	1776	G	Sidechain
35	BA	178	G	Sidechain
35	BA	1781	C	Sidechain
35	BA	1784	A	Sidechain
35	BA	1810	A	Sidechain
35	BA	1818	U	Sidechain
35	BA	1822	G	Sidechain
35	BA	1827	C	Sidechain
35	BA	1833	U	Sidechain
35	BA	1841	U	Sidechain
35	BA	1919	A	Sidechain
35	BA	1920	C	Sidechain
35	BA	1926	U	Sidechain
35	BA	1929	G	Sidechain
35	BA	1953	A	Sidechain
35	BA	1992	G	Sidechain
35	BA	200	U	Sidechain
35	BA	2000	G	Sidechain
35	BA	2009	G	Sidechain
35	BA	2010	G	Sidechain
35	BA	2031	A	Sidechain
35	BA	2050	C	Sidechain
35	BA	2051	A	Sidechain
35	BA	2052	G	Sidechain
35	BA	2053	G	Sidechain
35	BA	2059	A	Sidechain
35	BA	2070	G	Sidechain
35	BA	2093	G	Sidechain
35	BA	21	A	Sidechain
35	BA	2126	A	Sidechain
35	BA	2133	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	2192	G	Sidechain
35	BA	2229	C	Sidechain
35	BA	2250	G	Sidechain
35	BA	2290	G	Sidechain
35	BA	2310	A	Sidechain
35	BA	2320	A	Sidechain
35	BA	2340	G	Sidechain
35	BA	2344	U	Sidechain
35	BA	2359	C	Sidechain
35	BA	2383	G	Sidechain
35	BA	2387	U	Sidechain
35	BA	2393	A	Sidechain
35	BA	2401	U	Sidechain
35	BA	242	G	Sidechain
35	BA	2434	A	Sidechain
35	BA	2437	U	Sidechain
35	BA	2438	U	Sidechain
35	BA	2464	C	Sidechain
35	BA	2474	C	Sidechain
35	BA	2477	C	Sidechain
35	BA	2494	G	Sidechain
35	BA	2504	U	Sidechain
35	BA	2506	U	Sidechain
35	BA	2508	G	Sidechain
35	BA	2517	C	Sidechain
35	BA	2518	A	Sidechain
35	BA	2550	G	Sidechain
35	BA	2564	A	Sidechain
35	BA	2569	G	Sidechain
35	BA	2588	G	Sidechain
35	BA	2589	A	Sidechain
35	BA	2609	U	Sidechain
35	BA	2620	C	Sidechain
35	BA	2659	G	Sidechain
35	BA	2685	G	Sidechain
35	BA	27	G	Sidechain
35	BA	2708	G	Sidechain
35	BA	271	A	Sidechain
35	BA	271(I)	G	Sidechain
35	BA	2716	U	Sidechain
35	BA	2734	A	Sidechain
35	BA	2746	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	2775	A	Sidechain
35	BA	2779	U	Sidechain
35	BA	283	A	Sidechain
35	BA	2835	A	Sidechain
35	BA	2857	G	Sidechain
35	BA	303	U	Sidechain
35	BA	331	A	Sidechain
35	BA	350	U	Sidechain
35	BA	383	U	Sidechain
35	BA	463	G	Sidechain
35	BA	50	U	Sidechain
35	BA	505	A	Sidechain
35	BA	528	A	Sidechain
35	BA	539	G	Sidechain
35	BA	606	U	Sidechain
35	BA	642	G	Sidechain
35	BA	686	G	Sidechain
35	BA	688	U	Sidechain
35	BA	699	A	Sidechain
35	BA	711	G	Sidechain
35	BA	722	A	Sidechain
35	BA	742	G	Sidechain
35	BA	75	G	Sidechain
35	BA	752	A	Sidechain
35	BA	756	C	Sidechain
35	BA	760	G	Sidechain
35	BA	781	A	Sidechain
35	BA	788	A	Sidechain
35	BA	80	G	Sidechain
35	BA	83	G	Sidechain
35	BA	830	G	Sidechain
35	BA	845	G	Sidechain
35	BA	895	U	Sidechain
35	BA	913	U	Sidechain
35	BA	945	A	Sidechain
35	BA	946	G	Sidechain
35	BA	953	A	Sidechain
35	BA	954	G	Sidechain
35	BA	958	U	Sidechain
35	BA	980	A	Sidechain
35	BA	987	G	Sidechain
35	BA	990	A	Sidechain

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Mol	Chain	Res	Type	Group
36	BB	42	C	Sidechain
36	BB	99	G	Sidechain
37	BC	130	ARG	Sidechain
37	BC	189	ASN	Sidechain
37	BC	211	ARG	Sidechain
37	BC	28	ARG	Sidechain
37	BC	53	ARG	Sidechain
37	BC	7	ARG	Sidechain
37	BC	82	GLU	Sidechain
38	BD	176	ARG	Sidechain
38	BD	217	ARG	Sidechain
38	BD	253	GLN	Sidechain
38	BD	260	ARG	Sidechain
38	BD	262	ARG	Sidechain
38	BD	52	ARG	Sidechain
38	BD	60	ARG	Sidechain
38	BD	88	ARG	Sidechain
39	BE	136	ARG	Sidechain
39	BE	171	GLU	Sidechain
39	BE	179	GLU	Sidechain
39	BE	18	ASP	Sidechain
39	BE	58	ARG	Sidechain
39	BE	76	ARG	Sidechain
40	BF	168	ARG	Sidechain
40	BF	17	ARG	Sidechain
40	BF	191	ARG	Sidechain
40	BF	72	ARG	Sidechain
41	BG	112	PRO	Peptide,Mainchain
41	BG	58	GLN	Sidechain
41	BG	9	ARG	Sidechain
42	BH	101	ARG	Sidechain
42	BH	127	GLU	Sidechain
42	BH	132	ARG	Sidechain
42	BH	34	GLU	Sidechain
42	BH	57	ASP	Sidechain
43	BK	110	GLN	Sidechain
43	BK	119	ASP	Sidechain
43	BK	47	ASN	Sidechain
43	BK	6	ALA	Peptide
43	BK	62	ASP	Sidechain
44	BL	116	GLU	Sidechain
44	BL	73	ARG	Sidechain

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Mol	Chain	Res	Type	Group
44	BL	82	GLU	Sidechain
45	BN	12	ARG	Sidechain
45	BN	136	GLU	Sidechain
45	BN	58	ASP	Sidechain
45	BN	68	GLU	Sidechain
45	BN	88	GLU	Sidechain
46	BO	105	GLU	Sidechain
46	BO	107	ARG	Sidechain
46	BO	13	ASN	Sidechain
46	BO	94	ARG	Sidechain
47	BP	18	ARG	Sidechain
47	BP	7	ARG	Sidechain
47	BP	9	ASN	Sidechain
47	BP	90	ARG	Sidechain
47	BP	92	GLU	Sidechain
47	BP	94	GLU	Sidechain
48	BQ	101	ARG	Sidechain
48	BQ	6	ARG	Sidechain
48	BQ	60	ARG	Sidechain
48	BQ	91	GLU	Sidechain
49	BR	104	ARG	Sidechain
49	BR	59	ASP	Sidechain
49	BR	86	ARG	Sidechain
50	BS	17	ARG	Sidechain
50	BS	23	ARG	Sidechain
50	BS	38	GLN	Sidechain
51	BT	108	ARG	Sidechain
51	BT	115	ARG	Sidechain
51	BT	128	GLU	Sidechain
51	BT	13	ARG	Sidechain
51	BT	29	ARG	Sidechain
51	BT	3	ARG	Sidechain
51	BT	36	GLU	Sidechain
51	BT	43	GLN	Sidechain
51	BT	95	ARG	Sidechain
51	BT	96	ARG	Sidechain
52	BU	11	ARG	Sidechain
52	BU	36	ARG	Sidechain
52	BU	58	ARG	Sidechain
52	BU	59	ARG	Sidechain
53	BV	11	GLN	Sidechain
53	BV	13	ARG	Sidechain

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Mol	Chain	Res	Type	Group
53	BV	83	ARG	Sidechain
54	BW	15	ARG	Sidechain
54	BW	25	ARG	Sidechain
54	BW	40	ASN	Sidechain
54	BW	9	TYR	Sidechain
54	BW	99	ARG	Sidechain
55	BX	68	ARG	Sidechain
56	BY	23	ARG	Sidechain
56	BY	73	ARG	Sidechain
57	BZ	112	ARG	Sidechain
57	BZ	20	ARG	Sidechain
57	BZ	30	ASN	Sidechain
57	BZ	31	ARG	Sidechain
57	BZ	4	ARG	Sidechain
57	BZ	43	GLU	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	16035	1568	0
2	AB	1900	0	1951	276	0
3	AC	1612	0	1677	218	0
4	AD	1703	0	1767	202	0
5	AE	1146	0	1207	156	0
6	AF	843	0	857	103	0
7	AG	1257	0	1296	117	0
8	AH	1116	0	1177	110	0
9	AI	1010	0	1037	156	0
10	AJ	794	0	840	181	0
11	AK	885	0	904	86	0
12	AL	970	0	1057	151	0
13	AM	987	0	1059	150	0
14	AN	492	0	533	59	0
15	AO	734	0	771	79	0
16	AP	700	0	720	96	0
17	AQ	823	0	891	73	0
18	AR	574	0	644	92	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	AS	629	0	652	146	0
20	AT	763	0	861	134	0
21	AU	208	0	221	17	0
22	AV	1640	0	820	92	0
23	AX	230	0	119	17	0
24	AY	5214	0	5288	804	0
25	B0	662	0	688	89	0
26	B1	731	0	808	134	0
27	B2	598	0	653	131	0
28	B3	467	0	523	75	0
29	B4	450	0	449	106	0
30	B5	459	0	480	100	0
31	B6	433	0	461	182	0
32	B7	418	0	467	44	0
33	B8	507	0	576	117	0
34	B9	307	0	338	42	0
35	BA	62474	0	31032	3253	0
36	BB	2551	0	1278	165	0
37	BC	1742	0	1798	195	0
38	BD	2145	0	2234	324	0
39	BE	1563	0	1629	287	0
40	BF	1623	0	1677	305	0
41	BG	1474	0	1535	293	0
42	BH	1268	0	1337	218	0
43	BK	1025	0	1066	191	0
44	BL	477	0	509	18	0
45	BN	1104	0	1180	163	0
46	BO	933	0	996	124	0
47	BP	1114	0	1187	276	0
48	BQ	1122	0	1179	158	0
49	BR	960	0	1021	170	0
50	BS	770	0	832	182	0
51	BT	1141	0	1202	273	0
52	BU	958	0	1015	177	0
53	BV	779	0	852	150	0
54	BW	896	0	953	127	0
55	BX	725	0	778	101	0
56	BY	810	0	901	176	0
57	BZ	1467	0	1492	254	0
58	AY	37	0	46	17	0
59	AY	28	0	12	6	0
All	All	152777	0	105568	12643	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 (12643) 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)
24:AY:252:ASP:CB	24:AY:254:LYS:HE3	1.55	1.36
37:BC:118:PRO:HA	37:BC:121:MET:CG	1.60	1.31
53:BV:18:LEU:HD22	53:BV:19:LYS:N	1.45	1.30
1:AA:1158:C:C5'	2:AB:133:LYS:HE2	1.62	1.28
53:BV:18:LEU:CD2	53:BV:19:LYS:H	1.50	1.25
42:BH:157:TYR:CE1	42:BH:171:LEU:HD22	1.71	1.24
35:BA:1378:A:O2'	35:BA:1379:A:H5"	1.35	1.23
1:AA:509:A:H5'	1:AA:510:A:OP2	1.34	1.22
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.23	1.19
4:AD:18:LYS:HE2	4:AD:20:TYR:CE1	1.78	1.19
35:BA:2262:U:H2'	35:BA:2263:C:H5'	1.26	1.17
38:BD:32:SER:O	38:BD:36:PRO:HG3	1.45	1.16
24:AY:490:PRO:HG3	24:AY:516:PRO:HD2	1.26	1.16
51:BT:53:ARG:HB3	51:BT:53:ARG:HH11	1.09	1.16
42:BH:157:TYR:CE1	42:BH:171:LEU:CD2	2.28	1.16
35:BA:1899:G:N2	35:BA:1902:C:H41	1.42	1.16
35:BA:2473:U:H3'	35:BA:2474:C:H5"	1.23	1.15
24:AY:276:VAL:HA	24:AY:280:LEU:HD23	1.29	1.15
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.10	1.15
41:BG:77:ILE:HG22	41:BG:80:PHE:H	1.04	1.15
35:BA:211:A:H2'	35:BA:212:G:H5"	1.28	1.14
39:BE:24:THR:HG22	39:BE:186:GLY:HA2	1.27	1.14
38:BD:166:GLN:HA	38:BD:166:GLN:HE21	1.12	1.14
41:BG:133:LEU:HD11	41:BG:157:ILE:HD12	1.22	1.14
16:AP:20:VAL:HG21	16:AP:32:TYR:HB2	1.30	1.14
24:AY:157:LEU:H	24:AY:157:LEU:HD23	1.05	1.14
35:BA:2645:G:H3'	35:BA:2646:C:H5'	1.29	1.13
25:B0:11:ARG:HH11	25:B0:11:ARG:HB2	1.01	1.13
4:AD:16:GLY:HA2	4:AD:33:MET:HE1	1.27	1.12
55:BX:12:VAL:HB	55:BX:17:ALA:HB1	1.19	1.13
35:BA:925:C:H2'	35:BA:926:A:H5"	1.31	1.12
11:AK:111:ASP:HA	18:AR:84:LYS:HD2	1.31	1.11
57:BZ:28:MET:HB3	57:BZ:88:PHE:HB2	1.15	1.11
2:AB:44:LEU:H	2:AB:44:LEU:HD12	1.06	1.11
16:AP:25:ARG:HH11	16:AP:25:ARG:HG3	1.13	1.11
38:BD:34:VAL:HG23	38:BD:35:LYS:H	1.11	1.11
42:BH:157:TYR:HE1	42:BH:171:LEU:CD2	1.60	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:996:A:H4'	52:BU:92:ARG:HE	1.00	1.11
49:BR:99:LYS:H	49:BR:99:LYS:HD3	1.09	1.11
2:AB:147:LYS:HE2	2:AB:148:TYR:CE1	1.86	1.10
1:AA:1318:A:H1'	19:AS:37:ARG:HH21	1.16	1.10
38:BD:267:SER:HA	38:BD:270:ILE:HD11	1.26	1.10
39:BE:131:ALA:HB3	39:BE:134:ILE:HD11	1.26	1.10
2:AB:95:GLN:C	2:AB:96:ARG:HD2	1.77	1.10
27:B2:41:ILE:HD11	27:B2:44:LEU:HD12	1.19	1.10
48:BQ:60:ARG:HB2	48:BQ:60:ARG:HH11	1.05	1.09
55:BX:11:PRO:HA	55:BX:28:PHE:HB3	1.25	1.09
57:BZ:69:THR:HG22	57:BZ:90:VAL:HA	1.26	1.09
2:AB:172:ILE:H	2:AB:172:ILE:HD12	0.96	1.09
38:BD:263:ARG:HH11	38:BD:263:ARG:HB2	1.01	1.09
51:BT:65:LYS:HE3	51:BT:66:VAL:N	1.66	1.09
4:AD:18:LYS:HE2	4:AD:20:TYR:HE1	0.99	1.09
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.31	1.09
40:BF:53:THR:HG22	40:BF:56:GLU:HG3	1.19	1.08
51:BT:13:ARG:NH1	51:BT:13:ARG:HA	1.68	1.08
1:AA:1100:C:H2'	1:AA:1101:A:H5"	1.36	1.08
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	1.35	1.08
24:AY:428:LEU:HD13	24:AY:440:VAL:HG11	1.33	1.08
35:BA:612:C:H2'	35:BA:613:G:H5"	1.16	1.08
42:BH:98:LEU:HB2	42:BH:125:VAL:HG21	1.24	1.08
12:AL:41:ARG:HG2	12:AL:42:THR:H	0.93	1.08
37:BC:118:PRO:HA	37:BC:121:MET:HG2	1.11	1.08
50:BS:24:LEU:HB3	50:BS:85:VAL:HG12	1.35	1.08
46:BO:17:ARG:HE	46:BO:47:ILE:HD11	1.15	1.08
35:BA:1747(A):G:C2'	35:BA:1748:G:H5"	1.83	1.08
41:BG:63:ILE:HA	41:BG:143:GLU:HG3	1.35	1.08
10:AJ:6:ILE:HD12	10:AJ:6:ILE:O	1.51	1.07
22:AV:21:A:H61	22:AV:46:G:H2'	1.16	1.07
35:BA:1747(A):G:H2'	35:BA:1748:G:H5"	1.33	1.07
51:BT:38:ASN:C	51:BT:38:ASN:HD22	1.62	1.07
2:AB:118:LEU:HB3	2:AB:142:LEU:HD12	1.30	1.07
51:BT:53:ARG:HB3	51:BT:53:ARG:NH1	1.70	1.07
1:AA:979:C:H3'	1:AA:980:C:H5"	1.26	1.07
23:AX:13:A:H3'	23:AX:14:A:H5"	1.36	1.07
24:AY:35:TYR:OH	24:AY:266:ASN:HB3	1.54	1.07
24:AY:82:ILE:HD12	24:AY:101:LEU:HD22	1.37	1.07
43:BK:109:LYS:HA	43:BK:112:MET:HE3	1.30	1.07
51:BT:65:LYS:HE3	51:BT:66:VAL:H	1.00	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:147:LYS:HE2	2:AB:148:TYR:HE1	1.12	1.07
53:BV:21:ARG:HB3	53:BV:91:TYR:CD2	1.90	1.07
1:AA:979:C:C3'	1:AA:980:C:H5"	1.83	1.07
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.33	1.07
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.19	1.07
26:B1:56:GLN:HA	26:B1:56:GLN:HE21	1.12	1.07
35:BA:1845:G:H2'	35:BA:1846:G:H5"	1.36	1.06
9:AI:79:LEU:HD11	9:AI:83:ARG:HD2	1.26	1.06
26:B1:76:ARG:HH12	26:B1:95:LEU:HD22	1.11	1.06
56:BY:28:LYS:HB3	56:BY:37:VAL:HB	1.34	1.06
27:B2:69:ARG:HH22	35:BA:111:A:H4'	1.13	1.06
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.21	1.05
17:AQ:52:LYS:H	17:AQ:52:LYS:HD2	1.20	1.05
24:AY:84:THR:H	24:AY:85:PRO:HD2	1.20	1.05
31:B6:48:VAL:HG23	31:B6:49:HIS:H	1.14	1.05
42:BH:169:VAL:HG22	42:BH:170:ARG:H	0.89	1.05
20:AT:13:LEU:HD12	20:AT:13:LEU:H	1.18	1.05
24:AY:252:ASP:HB3	24:AY:254:LYS:HE3	1.06	1.05
1:AA:793:U:H3'	1:AA:794:A:H5"	1.30	1.05
3:AC:70:VAL:HG12	3:AC:72:LYS:H	0.91	1.05
35:BA:272(G):C:H2'	35:BA:272(H):C:H5"	1.38	1.05
43:BK:99:ILE:HG23	43:BK:103:GLN:HB2	1.33	1.05
35:BA:1452:A:H3'	35:BA:1453:U:C5'	1.87	1.05
43:BK:77:LEU:HD12	43:BK:107:ILE:HG23	1.36	1.05
35:BA:240:G:H3'	35:BA:241:A:H5"	1.38	1.04
45:BN:46:VAL:HG13	45:BN:47:ALA:H	1.19	1.04
33:B8:48:PHE:O	33:B8:49:VAL:HG13	1.57	1.04
40:BF:8:GLN:HB3	40:BF:126:VAL:HA	1.38	1.04
31:B6:8:LYS:HE3	31:B6:25:LYS:HD3	1.38	1.04
33:B8:13:ARG:HH12	47:BP:59:LEU:HG	1.23	1.04
35:BA:27:G:H22	35:BA:512:G:H2'	1.18	1.04
1:AA:1158:C:H5"	2:AB:133:LYS:CE	1.86	1.04
40:BF:53:THR:HG23	40:BF:55:GLY:H	1.19	1.04
1:AA:1323:G:H2'	1:AA:1324:A:C8	1.93	1.04
24:AY:21:ILE:HD13	24:AY:21:ILE:H	1.22	1.03
42:BH:12:PRO:HB2	42:BH:15:VAL:HG11	1.39	1.03
2:AB:95:GLN:HA	2:AB:96:ARG:HH11	1.18	1.03
57:BZ:151:HIS:HA	57:BZ:171:ILE:HG23	1.41	1.03
40:BF:181:LEU:HB3	40:BF:205:ARG:NH1	1.74	1.03
53:BV:51:VAL:HG12	53:BV:52:VAL:H	0.86	1.03
55:BX:12:VAL:HG23	55:BX:13:LEU:H	1.20	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:3:LYS:HB3	17:AQ:61:GLU:HB3	1.40	1.03
30:B5:44:THR:HG21	49:BR:101:ALA:HB2	1.41	1.03
35:BA:1899:G:N2	35:BA:1902:C:N4	2.07	1.03
56:BY:76:CYS:HB3	56:BY:96:ILE:HD11	1.37	1.03
24:AY:423:LYS:HB3	24:AY:472:VAL:HG22	1.34	1.02
35:BA:903:C:H2'	35:BA:904:C:H5"	1.41	1.02
40:BF:3:GLU:HA	40:BF:24:LEU:HG	1.38	1.02
33:B8:13:ARG:NH1	47:BP:59:LEU:HG	1.75	1.02
35:BA:1503:U:H2'	35:BA:1504:C:H6	1.18	1.02
40:BF:154:VAL:HG22	40:BF:191:ARG:HB3	1.37	1.02
49:BR:84:ALA:HB3	49:BR:85:PRO:HD3	1.38	1.02
6:AF:30:LEU:HD13	6:AF:37:VAL:HG22	1.40	1.02
10:AJ:75:ILE:HG13	10:AJ:76:ASN:H	1.24	1.02
35:BA:272(I):U:O4	35:BA:363(A):A:N1	1.92	1.02
45:BN:65:LYS:HZ3	45:BN:65:LYS:HA	1.21	1.02
28:B3:31:LEU:HD13	28:B3:32:GLN:HG2	1.39	1.02
31:B6:48:VAL:HG23	31:B6:49:HIS:N	1.72	1.02
35:BA:2811:G:OP1	39:BE:60:ASN:HB2	1.59	1.02
35:BA:2876:G:H4'	51:BT:3:ARG:HE	1.22	1.02
51:BT:23:ARG:HG2	51:BT:120:ARG:HH12	1.20	1.02
56:BY:8:LYS:HB2	56:BY:28:LYS:NZ	1.73	1.02
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.42	1.01
49:BR:38:VAL:HB	49:BR:39:PRO:HD3	1.41	1.01
38:BD:131:LEU:HD12	38:BD:131:LEU:N	1.74	1.01
55:BX:35:THR:HG22	55:BX:37:THR:H	1.18	1.01
1:AA:939:G:H5"	7:AG:102:ARG:NH2	1.74	1.01
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.39	1.01
35:BA:1142(A):A:C2'	35:BA:1143:A:H5"	1.89	1.01
35:BA:1503:U:H2'	35:BA:1504:C:C6	1.96	1.01
1:AA:1128:C:H2'	1:AA:1129:C:H5"	1.38	1.01
15:AO:78:TYR:O	15:AO:82:ILE:HG22	1.59	1.01
24:AY:468:ARG:HB3	24:AY:468:ARG:HH11	1.26	1.01
35:BA:2310:A:O2'	35:BA:2311:A:H5'	1.59	1.01
49:BR:113:LEU:HD12	49:BR:114:VAL:H	1.24	1.01
1:AA:1128:C:C2'	1:AA:1129:C:H5"	1.90	1.01
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.40	1.01
8:AH:41:ARG:HH22	8:AH:123:GLU:CD	1.67	1.00
43:BK:106:GLU:HA	43:BK:109:LYS:HD3	1.40	1.00
2:AB:29:ALA:O	2:AB:32:ILE:HG22	1.60	1.00
3:AC:70:VAL:HG12	3:AC:72:LYS:N	1.77	1.00
11:AK:124:LYS:HD2	11:AK:125:PHE:CE1	1.96	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:513:LYS:HB2	24:AY:566:THR:HB	1.43	1.00
24:AY:546:ILE:HG23	24:AY:590:ILE:HG13	1.43	1.00
25:B0:11:ARG:HB2	25:B0:11:ARG:NH1	1.76	1.00
35:BA:631:A:OP1	47:BP:64:LYS:HE2	1.59	1.00
35:BA:965:C:H5'	35:BA:2273:A:H1'	1.42	1.00
35:BA:2584:U:H2'	35:BA:2585:U:H5'	1.39	1.00
53:BV:51:VAL:HG12	53:BV:52:VAL:N	1.64	1.00
5:AE:81:GLU:HG2	5:AE:90:VAL:HG22	1.43	1.00
24:AY:355:LEU:HD12	24:AY:369:LEU:HD13	1.42	1.00
35:BA:1043:C:H2'	35:BA:1044:G:H5"	1.42	1.00
37:BC:118:PRO:CA	37:BC:121:MET:HG2	1.90	1.00
57:BZ:149:SER:HB3	57:BZ:173:ALA:HB2	1.43	1.00
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	1.38	1.00
40:BF:192:LEU:HD21	40:BF:194:MET:HE2	1.41	1.00
42:BH:85:LYS:HZ3	42:BH:87:LEU:HG	1.25	1.00
42:BH:169:VAL:CG2	42:BH:170:ARG:H	1.74	1.00
1:AA:182:U:H5'	1:AA:183:G:OP2	1.62	1.00
45:BN:9:VAL:HG11	45:BN:39:ARG:HH22	1.27	0.99
19:AS:21:GLU:HG3	19:AS:22:LEU:CD2	1.92	0.99
1:AA:1158:C:H5"	2:AB:133:LYS:HE2	0.99	0.99
35:BA:286:C:H6	35:BA:286:C:H5'	1.22	0.99
38:BD:267:SER:CA	38:BD:270:ILE:HD11	1.91	0.99
46:BO:104:ARG:HE	51:BT:33:LYS:HE3	1.25	0.99
25:B0:47:PRO:HG3	25:B0:59:LEU:HD21	1.44	0.99
19:AS:44:MET:N	19:AS:44:MET:SD	2.34	0.99
38:BD:27:THR:HG21	38:BD:83:GLU:HG2	1.43	0.99
51:BT:28:VAL:HG21	51:BT:46:GLU:HG3	1.44	0.99
24:AY:281:PRO:HB2	24:AY:286:ILE:HD11	1.41	0.99
13:AM:97:PRO:HA	13:AM:110:ARG:HD3	1.41	0.99
35:BA:288:C:H2'	35:BA:289:A:H8	1.22	0.99
39:BE:36:ARG:HH11	39:BE:36:ARG:HG2	1.27	0.99
2:AB:124:SER:OG	2:AB:125:PRO:HD2	1.60	0.98
35:BA:154(A):C:H5"	35:BA:155:U:H5"	1.45	0.98
42:BH:169:VAL:HG22	42:BH:170:ARG:N	1.71	0.98
35:BA:1658:C:H2'	35:BA:1659:U:H6	1.27	0.98
35:BA:1058:G:H21	43:BK:126:MET:HE3	1.27	0.98
1:AA:1452:C:H1'	1:AA:1456:G:N2	1.79	0.98
24:AY:85:PRO:HA	24:AY:94:VAL:HG22	1.41	0.98
35:BA:2175:C:H4'	37:BC:219:MET:O	1.64	0.98
35:BA:2138:C:H2'	35:BA:2139:C:H6	1.28	0.98
44:BL:73:ARG:HG2	44:BL:73:ARG:HH11	1.29	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:75:C:O2'	26:B1:30:VAL:HG11	1.63	0.98
35:BA:272(J):C:H3'	35:BA:274:G:H5"	1.46	0.98
40:BF:84:VAL:HG12	40:BF:85:GLY:N	1.76	0.98
48:BQ:60:ARG:HB2	48:BQ:60:ARG:NH1	1.78	0.98
5:AE:101:ILE:HD11	5:AE:119:LEU:HA	1.41	0.98
35:BA:142:A:H1'	35:BA:1408:C:H1'	1.45	0.98
56:BY:10:GLY:HA2	56:BY:27:VAL:HG13	1.46	0.98
41:BG:98:ARG:HG2	41:BG:98:ARG:HH11	1.23	0.97
35:BA:1814:G:H3'	35:BA:1815:A:H5"	1.42	0.97
24:AY:252:ASP:HB2	24:AY:254:LYS:HE3	1.43	0.97
28:B3:17:LYS:NZ	28:B3:20:LYS:HE3	1.78	0.97
38:BD:95:LEU:HD12	38:BD:103:ARG:O	1.63	0.97
1:AA:656:C:H4'	15:AO:62:GLN:HE22	1.26	0.97
35:BA:358:U:H2'	35:BA:359:A:H8	1.28	0.97
20:AT:11:SER:HA	20:AT:13:LEU:HD11	1.46	0.97
23:AX:13:A:C3'	23:AX:14:A:H5"	1.94	0.97
53:BV:28:GLU:HB2	53:BV:31:ALA:HB2	1.46	0.97
41:BG:97:ASP:HB2	41:BG:98:ARG:HH12	1.30	0.97
4:AD:57:ARG:HG2	4:AD:57:ARG:HH11	1.30	0.97
35:BA:1038:C:H3'	35:BA:1039:G:H5"	1.43	0.97
38:BD:35:LYS:HG2	38:BD:63:ARG:HA	1.44	0.97
41:BG:77:ILE:HG22	41:BG:80:PHE:N	1.78	0.97
43:BK:30:HIS:HA	43:BK:59:ILE:HD12	1.44	0.97
35:BA:2572:A:H5'	35:BA:2574:G:H4'	1.46	0.97
40:BF:123:LEU:HD12	40:BF:124:LEU:N	1.79	0.97
24:AY:15:ILE:HD11	24:AY:81:ILE:HG12	1.46	0.97
35:BA:1826:G:H4'	38:BD:242:ARG:HH21	1.23	0.97
36:BB:7:G:H2'	36:BB:8:U:H5"	1.45	0.97
3:AC:83:ARG:O	3:AC:86:VAL:HG22	1.64	0.96
27:B2:47:ASN:HB2	35:BA:95:G:H1'	1.47	0.96
35:BA:2110:G:O2'	35:BA:2120:G:H5'	1.63	0.96
53:BV:51:VAL:CG1	53:BV:52:VAL:H	1.78	0.96
24:AY:555:LEU:HD21	24:AY:599:PRO:HG3	1.44	0.96
30:B5:58:LEU:O	30:B5:58:LEU:HD22	1.64	0.96
35:BA:2012:G:H4'	54:BW:96:ILE:HD11	1.47	0.96
38:BD:263:ARG:HH11	38:BD:263:ARG:CB	1.77	0.96
1:AA:1026:G:H2'	1:AA:1027:C:H5'	1.48	0.96
35:BA:2133:G:H2'	35:BA:2157:G:N2	1.80	0.96
55:BX:8:ILE:H	55:BX:8:ILE:HD12	1.30	0.96
1:AA:1489:G:H2'	1:AA:1490:C:H5"	1.46	0.96
10:AJ:50:ILE:HD13	10:AJ:50:ILE:H	1.30	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2020:A:C2'	35:BA:2021:C:H5"	1.95	0.96
48:BQ:12:GLN:HE21	48:BQ:73:PRO:HD2	1.28	0.96
50:BS:49:VAL:HG12	50:BS:50:SER:H	1.26	0.96
6:AF:37:VAL:HG12	6:AF:38:GLU:H	1.31	0.96
9:AI:114:TYR:HE2	10:AJ:60:ARG:H	0.96	0.96
41:BG:97:ASP:H	41:BG:100:TRP:HD1	1.10	0.96
48:BQ:87:LYS:HG2	48:BQ:88:GLY:H	1.30	0.96
49:BR:63:ARG:HH22	49:BR:77:ARG:HG2	1.29	0.96
43:BK:81:ALA:HB1	43:BK:99:ILE:HD11	1.48	0.96
18:AR:31:LEU:HD23	18:AR:31:LEU:H	1.31	0.95
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.49	0.95
3:AC:72:LYS:HE3	3:AC:72:LYS:HA	1.48	0.95
31:B6:43:CYS:CB	31:B6:44:ARG:HH21	1.78	0.95
35:BA:211:A:C2'	35:BA:212:G:H5"	1.94	0.95
51:BT:13:ARG:HH12	51:BT:15:VAL:HG22	1.28	0.95
5:AE:9:LYS:HB2	5:AE:112:LEU:HD11	1.45	0.95
19:AS:43:GLU:HB2	19:AS:44:MET:SD	2.05	0.95
22:AV:17:C:H6	22:AV:17(A):U:H5	1.03	0.95
35:BA:813:U:H2'	35:BA:814:C:C6	2.01	0.95
37:BC:118:PRO:HA	37:BC:121:MET:HG3	1.48	0.95
46:BO:111:PHE:HB3	46:BO:114:ILE:HD13	1.47	0.95
49:BR:99:LYS:HD3	49:BR:99:LYS:N	1.81	0.95
50:BS:28:VAL:HG12	50:BS:29:PHE:H	1.28	0.95
50:BS:40:ILE:HG22	50:BS:41:ASP:N	1.80	0.95
1:AA:979:C:H3'	1:AA:980:C:C5'	1.96	0.95
35:BA:1058:G:N2	43:BK:126:MET:HE3	1.80	0.95
35:BA:1409:C:H2'	35:BA:1410:G:H8	1.31	0.95
35:BA:2476:A:H2'	35:BA:2477:C:H5"	1.43	0.95
2:AB:172:ILE:HD12	2:AB:172:ILE:N	1.81	0.95
18:AR:37:VAL:HG23	18:AR:38:GLU:H	1.28	0.95
42:BH:157:TYR:HE1	42:BH:171:LEU:HD21	1.31	0.95
35:BA:2296:U:H4'	35:BA:2297:C:OP1	1.65	0.95
38:BD:241:PRO:C	38:BD:242:ARG:HG3	1.92	0.95
12:AL:41:ARG:CG	12:AL:42:THR:H	1.78	0.95
19:AS:21:GLU:HG3	19:AS:22:LEU:HD23	1.46	0.95
35:BA:996:A:H4'	52:BU:92:ARG:NE	1.82	0.95
35:BA:1947:C:C2'	35:BA:1948:G:H5"	1.97	0.95
55:BX:12:VAL:HG12	55:BX:27:THR:O	1.67	0.95
55:BX:24:GLY:O	55:BX:82:GLN:HA	1.65	0.95
55:BX:27:THR:HB	55:BX:80:ILE:HG22	1.49	0.95
22:AV:46:G:H4'	22:AV:47:U:H5	1.32	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BK:17:ALA:CB	43:BK:38:VAL:HG22	1.96	0.94
56:BY:10:GLY:CA	56:BY:27:VAL:HG13	1.97	0.94
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.49	0.94
28:B3:17:LYS:HG2	35:BA:969:U:OP1	1.66	0.94
47:BP:126:VAL:HA	47:BP:145:PRO:HB2	1.48	0.94
24:AY:252:ASP:HB3	24:AY:254:LYS:CE	1.96	0.94
41:BG:16:ARG:HE	41:BG:31:VAL:HG11	1.32	0.94
1:AA:1054:C:O2'	1:AA:1055:A:H5"	1.66	0.94
35:BA:212:G:H5'	35:BA:212:G:H8	1.31	0.94
50:BS:49:VAL:HG12	50:BS:50:SER:N	1.80	0.94
35:BA:27:G:HO2'	35:BA:28:A:H8	1.03	0.94
35:BA:2645:G:H3'	35:BA:2646:C:C5'	1.95	0.94
43:BK:17:ALA:HB3	43:BK:38:VAL:HG22	1.50	0.94
49:BR:10:LEU:HB3	49:BR:17:ARG:HD3	1.47	0.94
11:AK:72:ALA:HB1	11:AK:77:MET:CE	1.98	0.94
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.32	0.94
12:AL:41:ARG:HG2	12:AL:42:THR:N	1.77	0.94
24:AY:84:THR:H	24:AY:85:PRO:CD	1.79	0.94
35:BA:108:U:H2'	35:BA:109:G:C8	2.02	0.94
37:BC:101:ILE:H	37:BC:101:ILE:HD12	1.33	0.94
40:BF:84:VAL:HG12	40:BF:85:GLY:H	1.31	0.94
26:B1:86:SER:HB3	26:B1:89:GLU:HB2	1.47	0.94
33:B8:52:LYS:N	33:B8:53:PRO:HD2	1.83	0.94
41:BG:97:ASP:HB2	41:BG:98:ARG:NH1	1.82	0.94
53:BV:18:LEU:HD22	53:BV:19:LYS:H	0.78	0.94
56:BY:8:LYS:HB2	56:BY:28:LYS:HZ3	1.25	0.94
1:AA:656:C:H4'	15:AO:62:GLN:NE2	1.82	0.93
1:AA:975:A:H4'	1:AA:976:G:H5"	1.50	0.93
1:AA:1053:G:N7	1:AA:1200:C:H5"	1.83	0.93
35:BA:2133:G:H2'	35:BA:2157:G:H22	1.31	0.93
38:BD:176:ARG:HG2	38:BD:176:ARG:HH11	1.30	0.93
40:BF:157:VAL:CG2	40:BF:194:MET:HG2	1.99	0.93
35:BA:1052:C:H3'	35:BA:1052:C:H6	1.31	0.93
35:BA:1779:U:H5	35:BA:1784:A:N7	1.67	0.93
38:BD:263:ARG:HB2	38:BD:263:ARG:NH1	1.83	0.93
35:BA:1142(A):A:H4'	45:BN:25:ARG:HH22	1.33	0.93
35:BA:2389:G:H5"	35:BA:2390:U:H5'	1.51	0.93
35:BA:1697:G:H3'	35:BA:1698:A:H5"	1.51	0.93
40:BF:24:LEU:HB3	40:BF:25:PRO:HD2	1.50	0.93
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.03	0.93
35:BA:1223:G:H3'	35:BA:1224:C:H5"	1.51	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:211:ARG:HH11	37:BC:211:ARG:HG3	1.31	0.93
38:BD:44:ASN:HB3	38:BD:49:ILE:HA	1.49	0.93
57:BZ:151:HIS:HB3	57:BZ:170:THR:HA	1.51	0.93
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	1.98	0.93
35:BA:1020:A:N1	35:BA:1141:U:H2'	1.84	0.93
50:BS:89:ARG:HG3	50:BS:92:TYR:CA	1.99	0.93
3:AC:110:ASN:OD1	3:AC:140:ARG:HD2	1.68	0.93
11:AK:54:ARG:O	11:AK:57:THR:HG22	1.68	0.93
22:AV:17:C:H5"	22:AV:17(A):U:C6	2.03	0.93
52:BU:110:VAL:HG12	52:BU:114:LYS:HD3	1.48	0.93
4:AD:96:LEU:HD22	4:AD:96:LEU:H	1.33	0.92
12:AL:6:THR:HG23	12:AL:9:GLN:HE21	1.32	0.92
38:BD:166:GLN:HA	38:BD:166:GLN:NE2	1.81	0.92
12:AL:83:VAL:HG11	12:AL:100:ILE:HD13	1.50	0.92
35:BA:1658:C:H2'	35:BA:1659:U:C6	2.03	0.92
35:BA:107:C:H2'	35:BA:108:U:H6	1.31	0.92
35:BA:2573:C:O2	35:BA:2573:C:H2'	1.69	0.92
35:BA:2591:C:H2'	35:BA:2592:G:C8	2.04	0.92
45:BN:54:VAL:HB	45:BN:122:VAL:HG22	1.51	0.92
1:AA:1502:A:H2	1:AA:1505:G:H1	1.02	0.92
2:AB:126:GLU:HA	2:AB:129:GLU:OE2	1.68	0.92
3:AC:70:VAL:CG1	3:AC:72:LYS:H	1.82	0.92
39:BE:107:THR:O	39:BE:190:GLY:HA2	1.68	0.92
24:AY:314:PHE:CD1	24:AY:315:LYS:HB2	2.04	0.92
42:BH:137:ASP:HB2	42:BH:140:LYS:HD2	1.52	0.92
45:BN:45:ASN:HD22	45:BN:45:ASN:H	1.17	0.92
33:B8:23:VAL:HG12	33:B8:46:ARG:HH11	1.35	0.92
35:BA:195:A:OP1	47:BP:46:LYS:HE2	1.70	0.92
38:BD:65:ILE:HG22	38:BD:104:TYR:HB3	1.51	0.92
38:BD:166:GLN:HE21	38:BD:166:GLN:CA	1.83	0.92
24:AY:169:GLY:HA3	24:AY:173:THR:O	1.69	0.92
26:B1:76:ARG:NH1	26:B1:95:LEU:HD22	1.84	0.92
26:B1:86:SER:O	26:B1:90:ILE:HG12	1.70	0.92
57:BZ:179:ASP:HB3	57:BZ:182:LYS:HD2	1.50	0.92
35:BA:288:C:H2'	35:BA:289:A:C8	2.05	0.92
49:BR:55:ALA:HA	49:BR:80:PHE:CE1	2.04	0.92
56:BY:14:LEU:HD13	56:BY:24:VAL:HG22	1.50	0.92
3:AC:52:LEU:H	3:AC:52:LEU:HD23	1.33	0.92
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	1.85	0.92
22:AV:17:C:H6	22:AV:17(A):U:C5	1.86	0.92
24:AY:92:ILE:HG12	24:AY:405:PRO:HG2	1.51	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:480:A:OP2	56:BY:46:LYS:HE3	1.68	0.92
46:BO:17:ARG:O	46:BO:18:LYS:HG3	1.69	0.92
51:BT:29:ARG:CG	51:BT:85:LYS:HA	2.00	0.92
24:AY:539:ILE:HA	24:AY:542:VAL:HG12	1.48	0.92
38:BD:176:ARG:HH11	38:BD:176:ARG:CG	1.79	0.92
41:BG:28:VAL:O	41:BG:31:VAL:HG12	1.70	0.92
41:BG:172:LEU:HD23	41:BG:176:LEU:HD11	1.51	0.92
42:BH:43:VAL:HG11	42:BH:52:VAL:HA	1.49	0.92
47:BP:30:THR:HG22	47:BP:31:ALA:H	1.32	0.92
30:B5:2:ALA:HA	35:BA:2015:A:H1'	1.52	0.91
30:B5:41:PRO:HG2	30:B5:44:THR:OG1	1.69	0.91
41:BG:68:PRO:HA	41:BG:92:VAL:HG12	1.51	0.91
1:AA:1502:A:H2	1:AA:1505:G:N1	1.68	0.91
47:BP:40:SER:O	47:BP:41:ARG:HD2	1.71	0.91
35:BA:2105:C:H42	35:BA:2184:G:H1	1.18	0.91
56:BY:7:VAL:HB	56:BY:8:LYS:HD2	1.52	0.91
3:AC:72:LYS:HA	3:AC:72:LYS:CE	2.00	0.91
39:BE:98:PRO:HG3	39:BE:175:VAL:HG12	1.52	0.91
35:BA:2150:U:H2'	35:BA:2151:G:C8	2.06	0.91
1:AA:1238:A:H5'	1:AA:1336:C:N4	1.84	0.91
35:BA:2807:G:H3'	35:BA:2808:U:H5"	1.53	0.91
43:BK:58:THR:HB	43:BK:66:THR:CG2	2.00	0.91
28:B3:56:VAL:HG12	28:B3:57:GLU:N	1.84	0.91
35:BA:1845:G:C2'	35:BA:1846:G:H5"	2.00	0.91
1:AA:625:G:H2'	1:AA:626:U:H6	1.34	0.91
23:AX:15:A:H5'	23:AX:16:A:OP1	1.68	0.91
24:AY:496:LYS:HE2	24:AY:498:ILE:HD11	1.53	0.91
24:AY:517:LEU:HD23	24:AY:521:SER:HB3	1.52	0.91
42:BH:85:LYS:NZ	42:BH:87:LEU:HG	1.85	0.91
20:AT:11:SER:HA	20:AT:13:LEU:CD1	2.01	0.91
31:B6:45:LYS:HG2	35:BA:2371:G:H4'	1.51	0.91
53:BV:40:LEU:HA	53:BV:45:THR:HB	1.52	0.91
22:AV:17:C:H5"	22:AV:17(A):U:H6	1.36	0.91
31:B6:27:LYS:HD2	31:B6:30:THR:HB	1.53	0.91
47:BP:55:ARG:HG2	47:BP:56:SER:H	1.35	0.91
57:BZ:165:VAL:HG12	57:BZ:166:SER:N	1.85	0.91
35:BA:279:C:H2'	35:BA:280:C:H5"	1.53	0.90
39:BE:1:MET:HB3	39:BE:200:GLU:OE2	1.70	0.90
1:AA:1473:A:O2'	1:AA:1474:G:H5'	1.71	0.90
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.69	0.90
18:AR:29:PHE:HD1	18:AR:29:PHE:H	1.18	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:364:C:H2'	35:BA:365:C:H5"	1.52	0.90
1:AA:697:U:H2'	1:AA:698:G:H5'	1.52	0.90
6:AF:43:LEU:H	6:AF:43:LEU:HD12	1.35	0.90
36:BB:82:G:O2'	36:BB:83:G:H5'	1.70	0.90
41:BG:53:LEU:H	41:BG:53:LEU:HD22	1.36	0.90
24:AY:363:ARG:HH11	24:AY:363:ARG:HG3	1.36	0.90
35:BA:1142(A):A:H2'	35:BA:1143:A:H5"	1.53	0.90
38:BD:35:LYS:HD2	38:BD:36:PRO:N	1.86	0.90
50:BS:49:VAL:HG21	50:BS:77:ALA:HB2	1.52	0.90
4:AD:129:ASN:HD21	4:AD:145:GLU:H	1.16	0.90
35:BA:2584:U:C2'	35:BA:2585:U:H5'	2.01	0.90
13:AM:118:ALA:HB3	13:AM:120:LYS:HD3	1.54	0.90
26:B1:4:VAL:HG23	26:B1:10:LYS:O	1.71	0.90
32:B7:28:ARG:HH11	32:B7:28:ARG:HG3	1.37	0.90
35:BA:533:G:H5"	52:BU:24:TYR:CE1	2.05	0.90
35:BA:2138:C:H2'	35:BA:2139:C:C6	2.05	0.90
48:BQ:55:VAL:HG23	57:BZ:178:GLU:HG2	1.52	0.90
24:AY:427:ALA:HB1	24:AY:466:LEU:HD11	1.50	0.90
38:BD:84:TYR:HD2	38:BD:91:ARG:HH22	1.20	0.90
51:BT:65:LYS:CE	51:BT:66:VAL:H	1.84	0.90
22:AV:20:U:H3'	22:AV:21:A:H5'	1.53	0.90
24:AY:555:LEU:HD21	24:AY:599:PRO:CG	2.00	0.90
32:B7:24:THR:HG23	32:B7:27:GLY:H	1.33	0.90
38:BD:134:ARG:HG2	38:BD:187:GLY:O	1.72	0.90
41:BG:59:GLU:HA	41:BG:62:LEU:HD13	1.54	0.90
2:AB:44:LEU:H	2:AB:44:LEU:CD1	1.85	0.90
13:AM:99:ARG:O	13:AM:101:GLN:HG3	1.71	0.90
17:AQ:69:LYS:O	17:AQ:70:ARG:HD2	1.71	0.90
31:B6:14:THR:O	31:B6:49:HIS:HA	1.72	0.90
35:BA:1314:C:H6	35:BA:1314:C:H5'	1.36	0.90
38:BD:70:TRP:CH2	38:BD:150:LYS:HA	2.06	0.90
42:BH:19:VAL:HG12	42:BH:20:ALA:H	1.36	0.90
31:B6:48:VAL:CG2	31:B6:49:HIS:H	1.85	0.89
35:BA:1188:U:O2'	35:BA:1189:A:H5'	1.72	0.89
40:BF:3:GLU:CA	40:BF:24:LEU:HG	2.00	0.89
56:BY:94:LYS:C	56:BY:102:CYS:HB2	1.97	0.89
1:AA:824:C:H2'	1:AA:825:G:H8	1.37	0.89
35:BA:2562:U:H1'	46:BO:23:ARG:HH11	1.36	0.89
36:BB:21:G:H2'	36:BB:21:G:N3	1.85	0.89
40:BF:157:VAL:HG22	40:BF:194:MET:HG2	1.54	0.89
41:BG:90:LEU:HD12	41:BG:91:ARG:H	1.37	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BO:69:ILE:HD13	46:BO:77:ILE:HG23	1.55	0.89
1:AA:720:C:H3'	1:AA:721:G:H5"	1.54	0.89
1:AA:980:C:H5	1:AA:981:U:C2	1.89	0.89
35:BA:612:C:C2'	35:BA:613:G:H5"	2.03	0.89
35:BA:1259:G:O2'	35:BA:1260:G:H5'	1.72	0.89
50:BS:34:HIS:CE1	50:BS:54:LEU:HB3	2.06	0.89
51:BT:113:LYS:C	51:BT:114:LEU:HD23	1.97	0.89
54:BW:29:LEU:HD11	54:BW:51:LEU:HD11	1.54	0.89
24:AY:613:PRO:C	24:AY:615:GLU:H	1.78	0.89
35:BA:27:G:N2	35:BA:512:G:H2'	1.86	0.89
35:BA:1007:C:H4'	45:BN:108:PRO:HD3	1.52	0.89
41:BG:76:SER:CB	41:BG:83:ARG:HB3	2.03	0.89
5:AE:9:LYS:CB	5:AE:112:LEU:HD11	2.02	0.89
12:AL:39:VAL:HB	12:AL:57:LYS:HB2	1.54	0.89
16:AP:14:ASN:N	16:AP:15:PRO:HD3	1.84	0.89
24:AY:496:LYS:HE2	24:AY:498:ILE:CD1	2.03	0.89
51:BT:80:SER:HB3	51:BT:81:PRO:HD3	1.53	0.89
35:BA:1827:C:O2'	35:BA:1828:G:H5'	1.73	0.89
39:BE:24:THR:HG23	39:BE:184:VAL:HG23	1.52	0.89
42:BH:37:VAL:HG12	42:BH:38:SER:N	1.87	0.89
22:AV:61:C:O2'	22:AV:62:C:H5'	1.73	0.89
24:AY:238:THR:HG22	24:AY:241:GLU:HG2	1.52	0.89
29:B4:1:MET:HE2	41:BG:66:GLN:OE1	1.72	0.89
31:B6:43:CYS:HB2	31:B6:44:ARG:HH21	1.37	0.89
35:BA:2762:G:H5'	35:BA:2762:G:C8	2.08	0.89
7:AG:27:ILE:HD11	7:AG:40:ALA:HA	1.54	0.89
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.54	0.89
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.51	0.89
35:BA:2287:A:H62	35:BA:2344:U:H3	1.20	0.89
35:BA:2287:A:N6	35:BA:2344:U:H3	1.70	0.89
40:BF:160:ASN:OD1	40:BF:163:VAL:HG23	1.73	0.89
3:AC:6:HIS:ND1	14:AN:49:HIS:HB3	1.86	0.89
35:BA:2756:U:H4'	35:BA:2757:A:OP1	1.68	0.89
4:AD:121:VAL:HA	4:AD:126:ILE:HD13	1.53	0.88
10:AJ:47:PHE:CZ	14:AN:37:PHE:HE1	1.91	0.88
33:B8:56:GLU:HA	33:B8:59:LYS:NZ	1.87	0.88
35:BA:2439:A:O2'	35:BA:2587:A:H5"	1.73	0.88
35:BA:1827:C:C2'	35:BA:1828:G:H5'	2.03	0.88
51:BT:28:VAL:HG22	51:BT:46:GLU:HA	1.55	0.88
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.09	0.88
39:BE:33:VAL:HG12	39:BE:90:THR:H	1.36	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:42:THR:HG23	10:AJ:68:HIS:HA	1.56	0.88
29:B4:8:LYS:O	29:B4:9:LEU:HB2	1.72	0.88
54:BW:15:ARG:HA	54:BW:18:ARG:HD2	1.56	0.88
1:AA:474:G:H2'	1:AA:475:G:H8	1.38	0.88
35:BA:2313:C:H5'	35:BA:2313:C:H6	1.38	0.88
35:BA:2392:A:H8	47:BP:60:MET:HB3	1.39	0.88
40:BF:7:TYR:HD2	40:BF:16:GLY:HA3	1.39	0.88
41:BG:172:LEU:O	41:BG:176:LEU:HG	1.73	0.88
35:BA:134:C:H2'	35:BA:135:G:H8	1.39	0.88
35:BA:2461:C:H5'	35:BA:2462:U:OP2	1.73	0.88
38:BD:155:LEU:HD12	38:BD:155:LEU:N	1.87	0.88
43:BK:115:LEU:HD13	43:BK:126:MET:SD	2.14	0.88
40:BF:20:LEU:HD23	40:BF:21:ALA:N	1.89	0.88
42:BH:157:TYR:CD1	42:BH:171:LEU:HD22	2.08	0.88
51:BT:27:THR:O	51:BT:28:VAL:HG23	1.73	0.88
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.56	0.87
24:AY:157:LEU:H	24:AY:157:LEU:CD2	1.87	0.87
24:AY:534:ILE:HD12	24:AY:567:LEU:HD11	1.56	0.87
28:B3:56:VAL:HG12	28:B3:57:GLU:H	1.39	0.87
35:BA:2514:U:H2'	35:BA:2515:C:H6	1.39	0.87
57:BZ:166:SER:HB2	57:BZ:167:PRO:C	1.98	0.87
49:BR:2:ARG:HD2	49:BR:5:LYS:HE2	1.53	0.87
51:BT:23:ARG:HB2	51:BT:24:PRO:HD2	1.56	0.87
1:AA:80:G:H3'	1:AA:81:U:H5'	1.54	0.87
24:AY:329:ARG:HD3	24:AY:374:LEU:HD11	1.55	0.87
33:B8:56:GLU:HA	33:B8:59:LYS:HZ1	1.38	0.87
35:BA:395:U:H2'	35:BA:396:G:N7	1.90	0.87
35:BA:903:C:C2'	35:BA:904:C:H5"	2.05	0.87
47:BP:125:VAL:O	47:BP:145:PRO:HD2	1.73	0.87
52:BU:20:LEU:H	52:BU:20:LEU:HD22	1.39	0.87
56:BY:44:ILE:HG22	56:BY:45:VAL:H	1.37	0.87
3:AC:90:GLU:O	3:AC:93:LYS:HB3	1.74	0.87
4:AD:61:LYS:HE2	4:AD:62:GLN:HE21	1.38	0.87
35:BA:676:A:H8	35:BA:2069:G:H21	1.22	0.87
35:BA:1504:C:H2'	35:BA:1505:C:H5"	1.56	0.87
35:BA:2712:U:O2'	35:BA:2712(A):A:H8	1.57	0.87
47:BP:85:LEU:HD23	47:BP:85:LEU:H	1.37	0.87
2:AB:118:LEU:CB	2:AB:142:LEU:HD12	2.05	0.87
4:AD:160:GLN:O	4:AD:163:GLU:HB3	1.74	0.87
20:AT:23:ARG:O	20:AT:27:LYS:HB2	1.74	0.87
32:B7:41:ARG:HH22	35:BA:460:A:P	1.97	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:979:G:H3'	35:BA:980:A:C5'	2.05	0.87
3:AC:79:ARG:HB2	3:AC:79:ARG:HH11	1.37	0.87
42:BH:46:GLU:HG3	42:BH:51:ARG:H	1.39	0.87
19:AS:22:LEU:O	19:AS:26:GLY:HA2	1.75	0.87
34:B9:17:ILE:HG21	34:B9:19:ARG:HH21	1.39	0.87
35:BA:107:C:H2'	35:BA:108:U:C6	2.10	0.87
35:BA:1833:U:H2'	35:BA:1834:U:H6	1.39	0.87
39:BE:26:ILE:HG21	39:BE:196:VAL:HG21	1.56	0.87
42:BH:37:VAL:HG12	42:BH:38:SER:H	1.40	0.87
1:AA:1057:G:H5"	3:AC:154:SER:HB2	1.53	0.87
35:BA:299:A:H5'	35:BA:300:A:OP2	1.74	0.87
35:BA:970:C:H2'	35:BA:971:C:H6	1.39	0.87
35:BA:2577:A:H5'	35:BA:2578:G:H5'	1.54	0.87
45:BN:65:LYS:HA	45:BN:65:LYS:NZ	1.89	0.87
37:BC:23:ILE:HB	37:BC:229:SER:OXT	1.75	0.87
38:BD:35:LYS:HZ3	38:BD:36:PRO:HD3	1.40	0.87
1:AA:939:G:H5"	7:AG:102:ARG:HH22	1.40	0.86
35:BA:2425:A:H5'	35:BA:2427:C:O4'	1.75	0.86
39:BE:111:ARG:HA	49:BR:2:ARG:HB3	1.57	0.86
54:BW:10:VAL:HG23	54:BW:101:SER:O	1.75	0.86
1:AA:1030(D):A:H2'	1:AA:1031:G:H5'	1.56	0.86
22:AV:71:C:O2	22:AV:71:C:H2'	1.75	0.86
35:BA:2131:G:H5'	35:BA:2133:G:H1'	1.58	0.86
41:BG:135:LEU:HD11	41:BG:155:MET:HG2	1.58	0.86
43:BK:93:ARG:HG3	57:BZ:112:ARG:HE	1.37	0.86
1:AA:178:C:O2'	1:AA:179:A:H5'	1.75	0.86
1:AA:509:A:C5'	1:AA:510:A:OP2	2.21	0.86
2:AB:189:ASP:OD1	2:AB:205:ASP:HB3	1.76	0.86
35:BA:1747(A):G:H2'	35:BA:1748:G:C5'	2.06	0.86
35:BA:2076:U:H5'	35:BA:2238:G:H22	1.40	0.86
2:AB:112:VAL:HG22	2:AB:149:LEU:HD13	1.55	0.86
2:AB:223:ILE:HG12	2:AB:226:ARG:CZ	2.05	0.86
7:AG:78:ARG:HH11	7:AG:78:ARG:HG3	1.39	0.86
46:BO:69:ILE:HD12	46:BO:69:ILE:N	1.90	0.86
50:BS:89:ARG:HG2	50:BS:89:ARG:HH11	1.41	0.86
34:B9:18:ARG:HG2	34:B9:18:ARG:O	1.75	0.86
40:BF:187:VAL:HG13	47:BP:5:ASP:O	1.76	0.86
43:BK:77:LEU:HD23	43:BK:77:LEU:H	1.40	0.86
47:BP:101:VAL:HG12	47:BP:106:LEU:HB3	1.58	0.86
1:AA:625:G:H2'	1:AA:626:U:C6	2.11	0.86
35:BA:2262:U:H2'	35:BA:2263:C:C5'	2.04	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:18:LYS:CE	4:AD:20:TYR:HE1	1.85	0.86
25:B0:7:LEU:HD12	48:BQ:85:LYS:HE2	1.58	0.86
27:B2:17:SER:HB2	27:B2:18:PRO:HD2	1.57	0.86
28:B3:6:VAL:HB	28:B3:54:VAL:HG11	1.58	0.86
35:BA:745:G:H5'	35:BA:746:A:OP2	1.76	0.86
35:BA:1876:A:H2'	35:BA:1877:A:C8	2.11	0.86
35:BA:2807:G:H1	35:BA:2893:G:H1	1.24	0.86
47:BP:59:LEU:HA	47:BP:61:ARG:NE	1.91	0.86
1:AA:975:A:H5'	1:AA:975:A:H8	1.40	0.86
9:AI:95:LYS:HZ3	9:AI:96:LEU:HD12	1.40	0.86
35:BA:1223:G:H3'	35:BA:1224:C:C5'	2.05	0.86
10:AJ:92:THR:HG23	10:AJ:93:GLY:H	1.39	0.86
24:AY:157:LEU:HD23	24:AY:157:LEU:N	1.89	0.86
35:BA:154(A):C:C5'	35:BA:155:U:H5"	2.06	0.86
35:BA:2262:U:C2'	35:BA:2263:C:H5'	2.05	0.86
35:BA:2438:U:O3'	35:BA:2439:A:H4'	1.71	0.86
24:AY:121:VAL:HG23	24:AY:122:TRP:H	1.41	0.85
35:BA:272(G):C:C2'	35:BA:272(H):C:H5"	2.05	0.85
48:BQ:75:THR:HG22	48:BQ:76:LYS:N	1.88	0.85
50:BS:89:ARG:HG3	50:BS:92:TYR:HA	1.54	0.85
1:AA:1004:A:H61	1:AA:1034:G:H2'	1.41	0.85
3:AC:5:ILE:O	3:AC:5:ILE:HD13	1.75	0.85
47:BP:98:GLU:HA	47:BP:101:VAL:HG22	1.58	0.85
40:BF:40:GLN:HE22	40:BF:182:ASN:HB2	1.37	0.85
41:BG:87:PRO:O	41:BG:88:ILE:HD12	1.77	0.85
42:BH:98:LEU:CB	42:BH:125:VAL:HG21	2.06	0.85
43:BK:6:ALA:HB3	43:BK:59:ILE:HG22	1.59	0.85
50:BS:70:GLY:C	50:BS:101:LEU:HD23	2.01	0.85
1:AA:1239:A:H2'	1:AA:1298:C:H42	1.42	0.85
7:AG:15:ASP:HB3	7:AG:20:ASP:H	1.41	0.85
24:AY:21:ILE:HD13	24:AY:21:ILE:N	1.90	0.85
1:AA:973:G:H3'	1:AA:974:A:H5"	1.59	0.85
26:B1:18:ILE:HG21	26:B1:20:ARG:HE	1.40	0.85
26:B1:81:LYS:HE2	35:BA:271(H):G:H4'	1.59	0.85
35:BA:1301:A:O2'	35:BA:1302:A:H2'	1.75	0.85
35:BA:1884:A:H2'	35:BA:1885:A:H5"	1.59	0.85
35:BA:2317:C:C2'	35:BA:2318:G:H5'	2.07	0.85
51:BT:13:ARG:HA	51:BT:13:ARG:CZ	2.05	0.85
35:BA:158:U:H2'	35:BA:171:G:O4'	1.76	0.85
35:BA:1658:C:OP1	39:BE:132:HIS:ND1	2.09	0.85
1:AA:1363(A):A:H4'	1:AA:1364:U:H5"	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:505:GLY:HA3	24:AY:576:ASP:CG	2.01	0.85
35:BA:272(H):C:H6	35:BA:272(H):C:H5'	1.39	0.85
35:BA:510:C:H3'	35:BA:510:C:OP1	1.77	0.85
12:AL:75:HIS:CD2	12:AL:77:LEU:HD12	2.12	0.85
35:BA:297:C:H2'	35:BA:298:G:O4'	1.76	0.85
1:AA:1329:A:P	13:AM:28:ALA:HB3	2.17	0.85
4:AD:17:VAL:O	4:AD:17:VAL:HG12	1.76	0.85
24:AY:230:LYS:HE2	24:AY:241:GLU:OE2	1.76	0.85
35:BA:545:C:C3'	35:BA:547:A:H5"	2.06	0.85
47:BP:75:ILE:HD12	47:BP:75:ILE:N	1.91	0.85
49:BR:62:ALA:O	49:BR:66:VAL:HG23	1.77	0.85
50:BS:11:LYS:HG2	50:BS:13:ARG:NH2	1.92	0.85
1:AA:129(A):G:O2'	1:AA:189(F):U:H2'	1.76	0.85
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.11	0.85
9:AI:79:LEU:HD11	9:AI:83:ARG:CD	2.07	0.85
14:AN:29:ARG:HH11	14:AN:29:ARG:HG3	1.42	0.85
24:AY:14:ASN:HB2	24:AY:102:ASP:OD1	1.77	0.85
51:BT:23:ARG:HG2	51:BT:120:ARG:NH1	1.91	0.85
53:BV:19:LYS:HE2	53:BV:19:LYS:HA	1.57	0.85
2:AB:33:TYR:HB2	2:AB:43:ASP:HB2	1.55	0.84
35:BA:1947:C:H2'	35:BA:1948:G:H5"	1.56	0.84
40:BF:192:LEU:CD2	40:BF:194:MET:HE2	2.06	0.84
42:BH:83:TYR:HB3	42:BH:135:GLY:H	1.42	0.84
56:BY:46:LYS:H	56:BY:62:GLU:HB2	1.40	0.84
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.42	0.84
2:AB:168:THR:HG23	2:AB:192:SER:HB3	1.57	0.84
3:AC:35:GLU:O	3:AC:38:ARG:HG2	1.77	0.84
4:AD:4:TYR:O	4:AD:5:ILE:HB	1.75	0.84
10:AJ:40:LEU:N	10:AJ:40:LEU:HD23	1.92	0.84
27:B2:69:ARG:HH22	35:BA:111:A:C4'	1.90	0.84
35:BA:1609:A:H5'	35:BA:1610:A:OP2	1.77	0.84
39:BE:101:ARG:NE	39:BE:171:GLU:HB2	1.93	0.84
42:BH:28:GLY:HA3	42:BH:79:VAL:CG2	2.07	0.84
53:BV:46:VAL:O	53:BV:47:VAL:HG13	1.78	0.84
3:AC:70:VAL:HG12	3:AC:71:ALA:N	1.91	0.84
4:AD:129:ASN:ND2	4:AD:145:GLU:H	1.72	0.84
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.59	0.84
22:AV:56:C:C4	35:BA:2169:A:C2	2.65	0.84
24:AY:119:GLU:O	24:AY:121:VAL:HG22	1.75	0.84
35:BA:894:C:O2'	35:BA:895:U:H5'	1.77	0.84
35:BA:1409:C:H2'	35:BA:1410:G:C8	2.12	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2245:U:H5'	35:BA:2246:G:H5'	1.59	0.84
43:BK:19:PRO:HB3	43:BK:34:ILE:HD12	1.58	0.84
47:BP:91:PHE:HE2	47:BP:99:LEU:HD21	1.42	0.84
11:AK:111:ASP:OD1	18:AR:84:LYS:HE2	1.78	0.84
58:AY:701:FUA:H323	58:AY:701:FUA:H152	1.59	0.84
41:BG:55:LYS:O	41:BG:58:GLN:HG3	1.78	0.84
43:BK:59:ILE:HG12	43:BK:60:TYR:N	1.91	0.84
49:BR:113:LEU:HD12	49:BR:114:VAL:N	1.91	0.84
18:AR:56:THR:HB	18:AR:58:LEU:HD13	1.57	0.84
31:B6:37:ARG:NH1	35:BA:2286:A:N7	2.25	0.84
35:BA:142:A:H8	35:BA:1595:G:H21	1.23	0.84
35:BA:491:G:H2'	35:BA:492:A:H8	1.41	0.84
38:BD:165:ILE:HD13	38:BD:175:LEU:HD21	1.57	0.84
42:BH:30:LYS:HD2	42:BH:81:GLU:HG2	1.59	0.84
43:BK:112:MET:HG3	43:BK:113:PRO:HD3	1.58	0.84
28:B3:29:ARG:HB2	28:B3:29:ARG:HH11	1.41	0.84
35:BA:533:G:H5"	52:BU:24:TYR:CD1	2.12	0.84
35:BA:1285:G:H2'	35:BA:1286:A:H5'	1.60	0.84
38:BD:243:GLY:O	38:BD:244:ARG:HB3	1.77	0.84
1:AA:179:A:H2'	1:AA:180:U:C6	2.13	0.84
3:AC:140:ARG:HH11	3:AC:140:ARG:HG3	1.43	0.84
6:AF:16:GLN:CD	6:AF:16:GLN:H	1.85	0.84
51:BT:108:ARG:CB	51:BT:108:ARG:HH11	1.91	0.84
12:AL:38:THR:HG23	12:AL:57:LYS:HB3	1.59	0.84
26:B1:46:LEU:HB3	26:B1:63:ALA:HA	1.58	0.84
35:BA:2308:G:O6	35:BA:2310:A:H2'	1.77	0.84
42:BH:16:SER:HB2	42:BH:27:LYS:HB2	1.58	0.84
51:BT:55:ASN:N	51:BT:59:THR:HG22	1.92	0.84
2:AB:223:ILE:HG12	2:AB:226:ARG:NH2	1.93	0.83
13:AM:34:LEU:HD13	13:AM:41:PRO:HG3	1.60	0.83
24:AY:17:ILE:O	24:AY:85:PRO:HG2	1.76	0.83
24:AY:215:LYS:O	24:AY:219:VAL:HG23	1.77	0.83
24:AY:513:LYS:CB	24:AY:566:THR:HB	2.07	0.83
35:BA:2796:U:H3'	35:BA:2799:C:H5'	1.60	0.83
36:BB:7:G:C2'	36:BB:8:U:H5"	2.07	0.83
37:BC:77:ALA:HB3	37:BC:95:VAL:HA	1.57	0.83
47:BP:122:PRO:HB3	47:BP:141:ALA:HB1	1.60	0.83
49:BR:100:LEU:H	49:BR:100:LEU:HD22	1.43	0.83
57:BZ:59:LEU:O	57:BZ:66:SER:HA	1.78	0.83
57:BZ:78:LYS:N	57:BZ:78:LYS:HD3	1.93	0.83
1:AA:1505:G:H2'	23:AX:17:U:OP1	1.78	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:16:GLY:HA2	4:AD:33:MET:CE	2.06	0.83
5:AE:91:LEU:HD13	5:AE:120:THR:CG2	2.08	0.83
24:AY:313:ALA:HA	24:AY:328:ILE:HG22	1.57	0.83
30:B5:44:THR:HG22	30:B5:45:VAL:H	1.42	0.83
1:AA:1364:U:H2'	1:AA:1364:U:O2	1.76	0.83
30:B5:40:LYS:NZ	30:B5:46:CYS:H	1.76	0.83
1:AA:390:C:H2'	1:AA:391:G:C8	2.14	0.83
25:B0:11:ARG:HH11	25:B0:11:ARG:CB	1.90	0.83
30:B5:4:HIS:HB3	30:B5:5:PRO:HD3	1.60	0.83
56:BY:95:LYS:HD3	56:BY:100:ALA:HB1	1.61	0.83
24:AY:71:THR:HG21	24:AY:357:ARG:HD2	1.61	0.83
35:BA:272(B):G:H2'	35:BA:272(C):G:H8	1.44	0.83
37:BC:85:LYS:O	37:BC:89:GLU:HG3	1.79	0.83
38:BD:34:VAL:HG23	38:BD:35:LYS:N	1.92	0.83
46:BO:43:VAL:HG23	46:BO:56:ASP:O	1.78	0.83
56:BY:76:CYS:SG	56:BY:77:PRO:HD2	2.17	0.83
27:B2:3:LEU:HD22	27:B2:7:ARG:NH1	1.92	0.83
35:BA:871:U:OP1	48:BQ:5:ARG:HG3	1.79	0.83
40:BF:43:LYS:HA	40:BF:98:SER:HB3	1.60	0.83
17:AQ:59:ILE:HG23	17:AQ:71:PHE:HB3	1.60	0.83
35:BA:226:G:H4'	35:BA:227:A:OP1	1.78	0.83
35:BA:2317:C:H2'	35:BA:2318:G:H5'	1.58	0.83
39:BE:24:THR:HG22	39:BE:186:GLY:CA	2.07	0.83
49:BR:72:ASP:OD2	49:BR:75:LEU:HB2	1.79	0.83
52:BU:44:ASN:HD21	53:BV:75:PHE:HB3	1.44	0.83
2:AB:165:VAL:HG23	2:AB:166:ASP:N	1.91	0.83
5:AE:101:ILE:HD13	5:AE:101:ILE:H	1.43	0.83
11:AK:72:ALA:HB1	11:AK:77:MET:HE2	1.59	0.83
24:AY:25:LYS:HE3	59:AY:702:GDP:O2B	1.77	0.83
38:BD:267:SER:HA	38:BD:270:ILE:CD1	2.06	0.83
41:BG:60:LEU:O	41:BG:63:ILE:HD11	1.79	0.83
51:BT:83:ILE:HG13	51:BT:84:GLN:N	1.93	0.83
53:BV:28:GLU:HB2	53:BV:31:ALA:CB	2.08	0.83
45:BN:133:GLN:CG	45:BN:135:PRO:HD3	2.08	0.83
51:BT:85:LYS:NZ	51:BT:85:LYS:HB3	1.93	0.83
2:AB:95:GLN:HA	2:AB:96:ARG:NH1	1.94	0.83
2:AB:120:ALA:O	2:AB:121:LEU:HD23	1.78	0.83
2:AB:172:ILE:H	2:AB:172:ILE:CD1	1.75	0.83
6:AF:3:ARG:HG3	6:AF:3:ARG:HH11	1.44	0.83
9:AI:95:LYS:HD3	9:AI:96:LEU:N	1.94	0.83
38:BD:131:LEU:HD13	38:BD:136:ILE:HD11	1.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:48:GLN:HE21	39:BE:78:LEU:HD22	1.44	0.83
51:BT:29:ARG:CB	51:BT:85:LYS:HA	2.08	0.83
8:AH:1:MET:HE2	8:AH:1:MET:H2	1.42	0.82
24:AY:423:LYS:HB3	24:AY:472:VAL:CG2	2.09	0.82
35:BA:1541:G:H1'	35:BA:1542:A:C4	2.13	0.82
51:BT:107:ASP:CG	51:BT:108:ARG:H	1.86	0.82
1:AA:20:U:H2'	1:AA:21:G:O4'	1.78	0.82
5:AE:102:ALA:HB2	5:AE:120:THR:OG1	1.79	0.82
24:AY:431:LEU:HD22	24:AY:466:LEU:HD13	1.60	0.82
38:BD:35:LYS:CG	38:BD:63:ARG:HG3	2.09	0.82
40:BF:50:SER:HB2	40:BF:94:PRO:HD3	1.60	0.82
50:BS:59:LYS:HD2	50:BS:61:ASN:HB2	1.59	0.82
13:AM:3:ARG:HG2	13:AM:9:ILE:HD11	1.62	0.82
35:BA:1221(A):C:O2'	35:BA:1222:C:H5'	1.79	0.82
35:BA:1669:A:H2'	35:BA:1670:C:H5'	1.60	0.82
1:AA:750:G:N3	15:AO:23:GLY:HA3	1.93	0.82
22:AV:17:C:C6	22:AV:17(A):U:H5	1.94	0.82
42:BH:17:VAL:HG11	42:BH:50:VAL:HG21	1.59	0.82
55:BX:8:ILE:HD12	55:BX:8:ILE:N	1.93	0.82
1:AA:1318:A:H1'	19:AS:37:ARG:NH2	1.94	0.82
1:AA:1358:U:OP1	14:AN:35:ARG:HG3	1.80	0.82
13:AM:37:THR:HG21	13:AM:56:LEU:HD22	1.61	0.82
24:AY:261:GLY:HA3	24:AY:267:LYS:O	1.79	0.82
39:BE:116:VAL:O	39:BE:117:MET:HB3	1.77	0.82
57:BZ:103:ARG:HH11	57:BZ:103:ARG:HG3	1.45	0.82
1:AA:631:G:H2'	1:AA:632:A:C8	2.14	0.82
3:AC:70:VAL:HG12	3:AC:71:ALA:H	1.44	0.82
20:AT:13:LEU:HD12	20:AT:13:LEU:N	1.94	0.82
30:B5:3:LYS:NZ	30:B5:5:PRO:HD2	1.95	0.82
35:BA:272(H):C:H2'	35:BA:272(I):U:H5"	1.61	0.82
41:BG:133:LEU:CD1	41:BG:157:ILE:HD12	2.08	0.82
19:AS:41:VAL:HG21	19:AS:44:MET:HB2	1.60	0.82
35:BA:279:C:C2'	35:BA:280:C:H5"	2.10	0.82
35:BA:975:C:OP2	35:BA:975:C:H4'	1.77	0.82
41:BG:56:ALA:HA	41:BG:59:GLU:OE1	1.80	0.82
2:AB:44:LEU:HD12	2:AB:44:LEU:N	1.91	0.82
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HD22	1.43	0.82
37:BC:78:ILE:O	37:BC:120:VAL:HG21	1.79	0.82
40:BF:53:THR:HG22	40:BF:56:GLU:CG	2.08	0.82
2:AB:147:LYS:HG2	2:AB:148:TYR:CD1	2.15	0.82
22:AV:53:G:O2'	22:AV:54:U:H5'	1.80	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:27:GLU:HA	25:B0:67:VAL:O	1.80	0.82
26:B1:56:GLN:HA	26:B1:56:GLN:NE2	1.95	0.82
35:BA:2672:G:H2'	35:BA:2673:G:H5"	1.61	0.82
51:BT:55:ASN:H	51:BT:59:THR:HG22	1.43	0.82
57:BZ:42:VAL:HG13	57:BZ:43:GLU:H	1.44	0.82
16:AP:20:VAL:HG21	16:AP:32:TYR:CB	2.09	0.82
26:B1:76:ARG:HH12	26:B1:95:LEU:CD2	1.90	0.82
35:BA:545:C:H3'	35:BA:547:A:H5"	1.60	0.82
35:BA:2312:U:H2'	35:BA:2313:C:H5"	1.62	0.82
35:BA:2666:C:H5'	35:BA:2667:C:OP2	1.80	0.82
35:BA:958:U:H3'	35:BA:958:U:H6	1.44	0.81
38:BD:16:MET:HE1	38:BD:208:LYS:HE2	1.62	0.81
53:BV:49:THR:HB	53:BV:50:PRO:CD	2.10	0.81
57:BZ:3:TYR:CE2	57:BZ:51:ALA:HB2	2.14	0.81
1:AA:662:G:H2'	1:AA:663:A:C8	2.15	0.81
50:BS:28:VAL:HG12	50:BS:29:PHE:N	1.95	0.81
53:BV:15:GLU:HB3	53:BV:16:PRO:HD2	1.62	0.81
54:BW:107:LEU:HD22	54:BW:107:LEU:H	1.43	0.81
56:BY:76:CYS:HB3	56:BY:96:ILE:CD1	2.10	0.81
57:BZ:72:ARG:HG3	57:BZ:72:ARG:HH11	1.43	0.81
3:AC:86:VAL:O	3:AC:89:GLU:HB3	1.81	0.81
9:AI:95:LYS:NZ	9:AI:96:LEU:HD12	1.94	0.81
22:AV:20:U:C3'	22:AV:21:A:H5'	2.10	0.81
34:B9:34:GLN:O	34:B9:35:ARG:HB2	1.80	0.81
35:BA:1390:U:O2'	35:BA:1391:U:H5'	1.79	0.81
35:BA:1540:U:H3'	35:BA:1541:G:H3'	1.62	0.81
35:BA:2132:U:C5	37:BC:6:LYS:HD2	2.16	0.81
42:BH:43:VAL:CG1	42:BH:52:VAL:HA	2.09	0.81
45:BN:129:PRO:O	45:BN:130:HIS:HB3	1.79	0.81
46:BO:120:GLU:CD	46:BO:122:LEU:HD21	2.05	0.81
51:BT:29:ARG:HG2	51:BT:85:LYS:HA	1.62	0.81
53:BV:18:LEU:HD22	53:BV:19:LYS:CA	2.09	0.81
1:AA:627:G:O2'	1:AA:628:G:H5'	1.80	0.81
1:AA:793:U:H3'	1:AA:794:A:C5'	2.10	0.81
35:BA:1242:A:H5'	35:BA:1243:G:OP2	1.79	0.81
36:BB:65:C:N4	36:BB:109:C:H2'	1.96	0.81
41:BG:64:THR:HG23	41:BG:66:GLN:H	1.43	0.81
47:BP:40:SER:C	47:BP:41:ARG:HD2	2.05	0.81
50:BS:96:GLY:O	50:BS:98:VAL:HG23	1.81	0.81
51:BT:57:PHE:C	51:BT:58:ASN:HD22	1.88	0.81
24:AY:451:ILE:O	24:AY:451:ILE:HG23	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:3:LEU:HD22	27:B2:7:ARG:HH12	1.44	0.81
35:BA:666:G:H4'	47:BP:49:ARG:NH2	1.95	0.81
35:BA:1361:G:O2'	35:BA:1362:C:H5'	1.78	0.81
35:BA:2171:A:H1'	35:BA:2172:U:C6	2.16	0.81
10:AJ:96:ILE:HD13	10:AJ:96:ILE:H	1.44	0.81
35:BA:272(B):G:H2'	35:BA:272(C):G:C8	2.16	0.81
35:BA:925:C:C2'	35:BA:926:A:H5"	2.07	0.81
35:BA:1782:C:H2'	35:BA:1783:A:H5'	1.60	0.81
35:BA:2439:A:H2'	35:BA:2439:A:N3	1.92	0.81
1:AA:438:G:H4'	1:AA:439:A:OP1	1.78	0.81
13:AM:108:ARG:HA	13:AM:108:ARG:HH11	1.42	0.81
16:AP:13:HIS:C	16:AP:15:PRO:HD3	2.05	0.81
24:AY:9:LEU:HD21	24:AY:284:LEU:HB2	1.60	0.81
24:AY:228:MET:HE3	24:AY:229:LEU:CD2	2.09	0.81
35:BA:1876:A:H2'	35:BA:1877:A:H8	1.43	0.81
40:BF:155:LEU:HA	40:BF:174:VAL:HB	1.59	0.81
45:BN:55:VAL:HG22	45:BN:126:PRO:HA	1.62	0.81
50:BS:89:ARG:CG	50:BS:92:TYR:HA	2.11	0.81
54:BW:18:ARG:HH11	54:BW:18:ARG:HG2	1.42	0.81
1:AA:299:G:H2'	1:AA:300:A:C8	2.16	0.81
1:AA:1489:G:C2'	1:AA:1490:C:H5"	2.10	0.81
12:AL:34:ARG:HG3	12:AL:105:TYR:HE2	1.44	0.81
24:AY:67:ALA:HB1	24:AY:327:PHE:CZ	2.15	0.81
27:B2:28:LYS:HB3	27:B2:57:ILE:HD13	1.62	0.81
35:BA:1070:A:H5'	35:BA:1072:C:OP2	1.81	0.81
35:BA:2258:C:O2'	35:BA:2426:A:H4'	1.80	0.81
38:BD:158:ALA:HB3	38:BD:161:THR:HG21	1.62	0.81
51:BT:32:TYR:N	51:BT:32:TYR:CD1	2.48	0.81
52:BU:110:VAL:HG12	52:BU:114:LYS:CD	2.10	0.81
57:BZ:69:THR:HG22	57:BZ:90:VAL:CA	2.09	0.81
1:AA:270:A:H2'	1:AA:271:C:C6	2.16	0.81
27:B2:28:LYS:HB3	27:B2:57:ILE:CD1	2.11	0.81
35:BA:1043:C:C2'	35:BA:1044:G:H5"	2.11	0.81
35:BA:1348:G:H2'	35:BA:1349:A:H5"	1.59	0.81
35:BA:1782:C:H1'	35:BA:2609:U:H5'	1.62	0.81
35:BA:2020:A:H2'	35:BA:2021:C:H5"	1.60	0.81
9:AI:114:TYR:HE2	10:AJ:60:ARG:N	1.78	0.81
10:AJ:50:ILE:HD11	14:AN:41:ARG:NH1	1.96	0.81
24:AY:613:PRO:O	24:AY:615:GLU:N	2.14	0.81
35:BA:1452:A:H3'	35:BA:1453:U:H5"	1.63	0.81
35:BA:1884:A:C2'	35:BA:1885:A:H5"	2.11	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BK:100:THR:HA	43:BK:139:VAL:HB	1.61	0.81
52:BU:91:ASP:OD1	52:BU:96:ALA:HB2	1.81	0.81
16:AP:48:TRP:CD1	16:AP:48:TRP:H	1.99	0.80
16:AP:75:ARG:HH11	16:AP:75:ARG:HG3	1.43	0.80
24:AY:137:ASN:HD21	24:AY:263:ALA:H	1.28	0.80
42:BH:53:GLU:OE1	42:BH:53:GLU:HA	1.81	0.80
46:BO:17:ARG:NE	46:BO:47:ILE:HD11	1.96	0.80
54:BW:78:GLU:OE2	54:BW:99:ARG:HD2	1.78	0.80
1:AA:332:G:H2'	1:AA:333:G:H8	1.46	0.80
4:AD:57:ARG:H	4:AD:57:ARG:HD2	1.44	0.80
18:AR:29:PHE:N	18:AR:29:PHE:CD1	2.45	0.80
24:AY:228:MET:HE3	24:AY:229:LEU:HD23	1.62	0.80
35:BA:2097:C:H2'	35:BA:2098:U:C6	2.16	0.80
39:BE:47:VAL:HG12	39:BE:48:GLN:H	1.45	0.80
41:BG:106:LEU:HA	41:BG:110:ALA:CB	2.10	0.80
46:BO:76:ALA:HB3	51:BT:75:ILE:HB	1.63	0.80
48:BQ:29:PHE:HB2	48:BQ:105:GLU:OE2	1.81	0.80
53:BV:39:LEU:CD1	53:BV:51:VAL:HA	2.12	0.80
2:AB:22:LYS:HE2	2:AB:22:LYS:HA	1.61	0.80
3:AC:94:LEU:HD12	3:AC:94:LEU:O	1.80	0.80
5:AE:98:THR:HB	5:AE:117:ASP:HB3	1.63	0.80
13:AM:78:ILE:O	13:AM:82:MET:HG2	1.80	0.80
18:AR:59:SER:H	18:AR:62:GLU:HB2	1.45	0.80
24:AY:504:ARG:O	24:AY:506:GLN:N	2.13	0.80
31:B6:5:VAL:HG23	35:BA:2283:C:H5'	1.60	0.80
35:BA:9:U:H5	35:BA:2629:A:H62	1.29	0.80
35:BA:143(A):C:H4'	55:BX:38:GLU:OE2	1.82	0.80
35:BA:979:G:H3'	35:BA:980:A:H5'	1.63	0.80
35:BA:2444:G:OP2	40:BF:68:LYS:HE2	1.81	0.80
41:BG:86:MET:N	41:BG:87:PRO:HD3	1.97	0.80
41:BG:98:ARG:HG2	41:BG:98:ARG:NH1	1.95	0.80
42:BH:149:ARG:HD3	42:BH:164:TYR:CE1	2.16	0.80
47:BP:16:ARG:HD3	47:BP:18:ARG:H	1.44	0.80
49:BR:21:TYR:HB3	49:BR:47:PHE:CD2	2.17	0.80
51:BT:28:VAL:CG2	51:BT:46:GLU:HG3	2.11	0.80
1:AA:80:G:H3'	1:AA:81:U:C5'	2.12	0.80
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.46	0.80
20:AT:26:ASN:O	20:AT:30:LYS:HB2	1.80	0.80
27:B2:69:ARG:NH2	35:BA:111:A:H4'	1.94	0.80
32:B7:6:GLN:O	35:BA:686:G:H1'	1.81	0.80
33:B8:32:LEU:HB3	33:B8:36:LYS:HZ3	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1012:U:O4	45:BN:28:THR:HG21	1.81	0.80
38:BD:61:LEU:HB3	38:BD:63:ARG:HH12	1.46	0.80
40:BF:192:LEU:HD21	40:BF:194:MET:CE	2.11	0.80
41:BG:53:LEU:HD22	41:BG:53:LEU:N	1.94	0.80
45:BN:133:GLN:HG2	45:BN:135:PRO:HD3	1.64	0.80
1:AA:1296:C:H5'	1:AA:1297:C:OP2	1.81	0.80
4:AD:114:ARG:HH11	4:AD:114:ARG:HG3	1.45	0.80
5:AE:80:ILE:HG22	8:AH:104:ARG:NH2	1.97	0.80
7:AG:120:ILE:HG22	7:AG:124:LEU:HD12	1.62	0.80
10:AJ:9:ARG:HG2	10:AJ:69:ASN:OD1	1.81	0.80
13:AM:78:ILE:HA	13:AM:81:LEU:HD23	1.62	0.80
58:AY:701:FUA:H202	58:AY:701:FUA:H5	1.62	0.80
26:B1:85:LEU:O	26:B1:87:PRO:HD2	1.81	0.80
35:BA:1203:G:H3'	35:BA:1204:A:H5"	1.63	0.80
55:BX:35:THR:HB	55:BX:38:GLU:HB2	1.64	0.80
3:AC:72:LYS:HE3	3:AC:72:LYS:CA	2.11	0.80
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	1.63	0.80
19:AS:40:ILE:HG21	19:AS:66:MET:O	1.82	0.80
24:AY:636:PRO:HG3	43:BK:21:PRO:HB2	1.64	0.80
25:B0:50:ASN:HA	25:B0:62:LEU:HD12	1.63	0.80
35:BA:1125:G:H3'	35:BA:1126:A:H5"	1.64	0.80
35:BA:1657:C:O2'	35:BA:1658:C:H5'	1.82	0.80
35:BA:2146:C:H4'	35:BA:2147:G:C8	2.17	0.80
40:BF:167:ALA:HB1	40:BF:173:VAL:HG11	1.64	0.80
1:AA:1158:C:H6	2:AB:132:LYS:CE	1.94	0.80
16:AP:25:ARG:HG3	16:AP:25:ARG:NH1	1.90	0.80
25:B0:27:GLU:H	25:B0:27:GLU:CD	1.89	0.80
25:B0:40:GLN:NE2	25:B0:43:THR:HA	1.96	0.80
35:BA:624:C:H41	47:BP:107:LYS:HZ2	1.29	0.80
35:BA:733:G:H8	35:BA:733:G:O5'	1.63	0.80
39:BE:68:ALA:HB3	39:BE:69:LYS:HE2	1.63	0.80
50:BS:83:LYS:HG2	50:BS:105:ALA:HB3	1.62	0.80
57:BZ:130:PRO:O	57:BZ:133:ILE:HD11	1.81	0.80
1:AA:598:U:H2'	1:AA:599:C:C6	2.16	0.80
30:B5:20:ARG:HG2	30:B5:23:HIS:CD2	2.16	0.80
35:BA:2742:C:O2'	35:BA:2743:C:H5'	1.82	0.80
53:BV:49:THR:HB	53:BV:50:PRO:HD2	1.64	0.80
9:AI:48:GLU:N	9:AI:49:PRO:HD2	1.97	0.80
24:AY:149:VAL:O	24:AY:152:THR:HG22	1.82	0.80
24:AY:252:ASP:CB	24:AY:254:LYS:CE	2.51	0.80
24:AY:435:ASP:OD1	24:AY:437:THR:HG23	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:33:ASN:HD22	33:B8:33:ASN:H	1.30	0.80
35:BA:1034:G:H8	35:BA:1034:G:OP1	1.64	0.80
35:BA:1452:A:H3'	35:BA:1453:U:H5'	1.60	0.80
1:AA:241:C:O2'	1:AA:242:C:H5'	1.82	0.80
1:AA:539:A:H2'	1:AA:540:G:C8	2.16	0.80
1:AA:1128:C:H2'	1:AA:1129:C:C5'	2.11	0.80
25:B0:43:THR:H	35:BA:2331:G:H4'	1.47	0.80
35:BA:882:G:H2'	35:BA:883:G:C8	2.16	0.80
35:BA:978:G:H1	35:BA:985:C:N4	1.80	0.80
41:BG:171:ALA:O	41:BG:175:LEU:HG	1.82	0.80
57:BZ:4:ARG:HH12	57:BZ:66:SER:HB2	1.47	0.80
12:AL:70:ILE:HG21	12:AL:77:LEU:CD1	2.13	0.79
35:BA:545:C:H2'	35:BA:547:A:H5"	1.63	0.79
35:BA:545:C:C2'	35:BA:547:A:H5"	2.12	0.79
43:BK:57:ILE:HA	43:BK:66:THR:O	1.81	0.79
53:BV:21:ARG:HG2	53:BV:21:ARG:HH11	1.47	0.79
53:BV:62:LEU:HD21	53:BV:95:LEU:HB2	1.64	0.79
1:AA:291:C:O2'	1:AA:292:G:H5'	1.82	0.79
35:BA:1803:A:O3'	38:BD:259:THR:HG21	1.81	0.79
37:BC:211:ARG:HH11	37:BC:211:ARG:CG	1.95	0.79
38:BD:183:ARG:HH11	38:BD:183:ARG:HG2	1.46	0.79
39:BE:38:THR:HB	39:BE:41:LYS:HG2	1.63	0.79
43:BK:7:VAL:HG13	43:BK:7:VAL:O	1.82	0.79
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.63	0.79
24:AY:180:VAL:HG23	24:AY:216:LEU:HD12	1.64	0.79
25:B0:60:PHE:CE2	35:BA:2365:G:H4'	2.18	0.79
26:B1:73:LEU:HD22	26:B1:94:LEU:HD23	1.64	0.79
35:BA:710:G:H2'	35:BA:711:G:H8	1.46	0.79
35:BA:1113:U:H2'	35:BA:1114:G:C8	2.18	0.79
35:BA:1779:U:C5	35:BA:1784:A:N7	2.50	0.79
54:BW:68:ARG:HA	54:BW:110:LYS:HG2	1.65	0.79
4:AD:122:ARG:NH1	4:AD:134:ASP:HB2	1.98	0.79
12:AL:75:HIS:HD2	12:AL:77:LEU:HD12	1.44	0.79
35:BA:1049:C:H2'	35:BA:1050:A:H8	1.48	0.79
51:BT:80:SER:CB	51:BT:81:PRO:HD3	2.12	0.79
5:AE:87:SER:HB3	5:AE:131:ILE:HD13	1.64	0.79
35:BA:861:A:H2'	35:BA:862:G:O4'	1.82	0.79
35:BA:2241:A:H2'	35:BA:2242:G:C8	2.17	0.79
36:BB:91:C:OP1	48:BQ:16:ARG:HG3	1.83	0.79
43:BK:23:VAL:O	43:BK:23:VAL:HG12	1.79	0.79
3:AC:14:ILE:HG13	3:AC:15:THR:N	1.95	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.63	0.79
24:AY:154:GLN:HA	24:AY:158:GLY:HA2	1.65	0.79
35:BA:221:A:H61	35:BA:265:A:H8	1.29	0.79
35:BA:2162:G:H2'	35:BA:2163:C:C6	2.17	0.79
38:BD:71:ASP:HB2	38:BD:103:ARG:HH22	1.47	0.79
39:BE:61:ARG:HG2	39:BE:62:PRO:HD3	1.65	0.79
40:BF:7:TYR:HB3	40:BF:16:GLY:C	2.08	0.79
52:BU:68:ALA:O	52:BU:71:GLN:HB3	1.83	0.79
56:BY:90:LEU:HG	56:BY:91:GLU:HG2	1.64	0.79
6:AF:80:ARG:HH11	6:AF:88:VAL:HB	1.47	0.79
10:AJ:32:ALA:HB2	10:AJ:76:ASN:ND2	1.97	0.79
11:AK:124:LYS:HD2	11:AK:125:PHE:HE1	1.47	0.79
4:AD:108:LEU:HD23	4:AD:110:PHE:CZ	2.18	0.79
24:AY:415:PRO:HA	24:AY:474:ALA:HB2	1.65	0.79
29:B4:10:VAL:HG23	29:B4:11:PRO:HD2	1.63	0.79
35:BA:1171:G:H2'	35:BA:1173:G:H4'	1.62	0.79
41:BG:133:LEU:HD11	41:BG:157:ILE:CD1	2.10	0.79
52:BU:61:TRP:O	52:BU:65:ILE:HG13	1.82	0.79
1:AA:1284:C:H3'	1:AA:1285:A:H5"	1.64	0.79
3:AC:152:ILE:HG22	3:AC:167:TRP:HA	1.65	0.79
10:AJ:6:ILE:HD11	10:AJ:72:VAL:CB	2.13	0.79
10:AJ:63:PHE:HB3	14:AN:58:LYS:HA	1.64	0.79
24:AY:380:LEU:O	24:AY:381:LYS:HD2	1.83	0.79
27:B2:25:VAL:C	27:B2:27:GLU:H	1.89	0.79
27:B2:50:ILE:C	27:B2:52:ASP:H	1.91	0.79
35:BA:2126:A:H4'	35:BA:2127:G:O5'	1.82	0.79
1:AA:1442(B):A:N7	51:BT:118:ARG:HG2	1.98	0.79
27:B2:38:GLN:HA	27:B2:41:ILE:HG23	1.62	0.79
35:BA:1788:C:O2'	35:BA:1789:A:H5'	1.82	0.79
35:BA:1963:U:O2	35:BA:1963:U:H2'	1.81	0.79
1:AA:731:G:OP1	1:AA:766:A:H1'	1.82	0.78
1:AA:1014:A:H4'	19:AS:14:HIS:CE1	2.18	0.78
1:AA:1321:C:H5"	1:AA:1322:C:H5"	1.65	0.78
19:AS:32:LYS:HA	19:AS:50:ALA:HB3	1.63	0.78
28:B3:17:LYS:HZ3	28:B3:20:LYS:HE3	1.46	0.78
35:BA:614(A):U:H4'	35:BA:614(B):G:H5"	1.64	0.78
35:BA:2720:U:H2'	35:BA:2721:A:H8	1.48	0.78
36:BB:66:A:H61	36:BB:108:U:H2'	1.48	0.78
37:BC:31:LYS:HE3	37:BC:179:ALA:O	1.84	0.78
37:BC:101:ILE:H	37:BC:101:ILE:CD1	1.95	0.78
41:BG:90:LEU:HD12	41:BG:91:ARG:N	1.96	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:41:MET:CG	42:BH:43:VAL:HG13	2.13	0.78
51:BT:13:ARG:HA	51:BT:13:ARG:HH11	1.46	0.78
52:BU:95:LEU:HD12	53:BV:11:GLN:HG3	1.64	0.78
56:BY:47:LYS:HG3	56:BY:60:PHE:HE1	1.47	0.78
29:B4:5:ILE:O	29:B4:5:ILE:HG12	1.82	0.78
35:BA:662:G:OP1	47:BP:18:ARG:HD2	1.83	0.78
35:BA:1865:G:H2'	35:BA:1866:C:H5"	1.65	0.78
35:BA:2645:G:C3'	35:BA:2646:C:H5'	2.10	0.78
39:BE:77:ILE:HG22	39:BE:78:LEU:CD1	2.12	0.78
40:BF:53:THR:HG23	40:BF:55:GLY:N	1.98	0.78
50:BS:40:ILE:CG2	50:BS:41:ASP:N	2.45	0.78
4:AD:158:ILE:O	4:AD:162:LEU:HB2	1.83	0.78
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.64	0.78
11:AK:111:ASP:HA	18:AR:84:LYS:CD	2.13	0.78
29:B4:14:ILE:O	29:B4:21:VAL:HG13	1.82	0.78
32:B7:35:ARG:HH11	32:B7:35:ARG:HG2	1.49	0.78
35:BA:739:G:OP2	35:BA:739:G:H8	1.67	0.78
35:BA:1375:C:H2'	35:BA:1376:C:H6	1.47	0.78
36:BB:40:U:O2	36:BB:43:C:H5"	1.83	0.78
38:BD:24:ILE:HD13	38:BD:25:THR:H	1.47	0.78
42:BH:83:TYR:HB3	42:BH:134:SER:HA	1.64	0.78
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.31	0.78
1:AA:943:U:H2'	1:AA:944:G:H5'	1.66	0.78
4:AD:28:SER:HB3	4:AD:29:PRO:HD2	1.66	0.78
24:AY:128:TYR:O	24:AY:129:LYS:HB2	1.83	0.78
35:BA:1946:U:H2'	35:BA:1947:C:C6	2.18	0.78
38:BD:35:LYS:HG3	38:BD:63:ARG:HG3	1.63	0.78
40:BF:106:ARG:HH11	40:BF:106:ARG:HG3	1.48	0.78
54:BW:64:MET:O	54:BW:65:LEU:HB3	1.83	0.78
1:AA:1117:G:O2'	9:AI:104:ARG:HD3	1.83	0.78
35:BA:2393:A:H5"	47:BP:62:LEU:HB3	1.63	0.78
36:BB:48:A:H4'	50:BS:95:HIS:HD2	1.48	0.78
38:BD:83:GLU:HB2	38:BD:92:ILE:HD11	1.65	0.78
50:BS:106:ARG:HB3	50:BS:106:ARG:HH11	1.46	0.78
1:AA:1321:C:H3'	1:AA:1322:C:H5"	1.65	0.78
1:AA:1442:G:H1	1:AA:1461:G:H21	1.30	0.78
10:AJ:55:LYS:CE	10:AJ:55:LYS:H	1.97	0.78
30:B5:56:LYS:HG3	30:B5:57:VAL:H	1.48	0.78
35:BA:841:A:H5'	35:BA:841:A:H8	1.47	0.78
38:BD:172:TYR:HD1	38:BD:186:HIS:HA	1.49	0.78
57:BZ:86:VAL:HG12	57:BZ:87:ASP:H	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:103:C:H3'	1:AA:104:G:H8	1.48	0.78
24:AY:431:LEU:CD2	24:AY:466:LEU:HD13	2.14	0.78
33:B8:62:LEU:HD13	35:BA:242:G:H5"	1.64	0.78
39:BE:78:LEU:O	39:BE:79:ARG:HD2	1.84	0.78
42:BH:157:TYR:CE1	42:BH:171:LEU:HD21	2.10	0.78
47:BP:24:GLY:HA2	47:BP:33:ARG:NH1	1.98	0.78
47:BP:127:ALA:O	47:BP:148:LEU:HD11	1.82	0.78
51:BT:45:PHE:CE2	51:BT:74:ARG:HB2	2.18	0.78
13:AM:68:GLY:H	13:AM:71:ARG:HB3	1.49	0.78
24:AY:514:VAL:HG21	24:AY:593:ALA:CB	2.14	0.78
31:B6:41:PRO:HD2	31:B6:45:LYS:O	1.83	0.78
35:BA:965:C:C5'	35:BA:2273:A:H1'	2.13	0.78
35:BA:1052:C:H3'	35:BA:1052:C:C6	2.17	0.78
50:BS:34:HIS:HB3	50:BS:53:SER:HB3	1.64	0.78
51:BT:55:ASN:H	51:BT:59:THR:CG2	1.97	0.78
1:AA:792:A:O2'	1:AA:794:A:N7	2.16	0.78
24:AY:165:GLN:C	24:AY:166:LEU:HD12	2.09	0.78
35:BA:1052:C:H2'	35:BA:1053:C:C6	2.19	0.78
35:BA:1243:G:H1'	47:BP:8:PRO:HB3	1.66	0.78
35:BA:2186:G:H2'	35:BA:2187:G:H5"	1.66	0.78
41:BG:34:LEU:HD11	41:BG:100:TRP:CH2	2.19	0.78
47:BP:24:GLY:CA	47:BP:33:ARG:NH1	2.46	0.78
1:AA:1133:G:H22	1:AA:1143:G:H1'	1.49	0.78
10:AJ:3:LYS:HZ2	10:AJ:76:ASN:HA	1.47	0.78
13:AM:15:VAL:HG12	13:AM:45:VAL:CG2	2.13	0.78
17:AQ:52:LYS:H	17:AQ:52:LYS:CD	1.97	0.78
58:AY:701:FUA:H211	58:AY:701:FUA:O2	1.83	0.78
35:BA:1080:C:H4'	43:BK:125:ARG:HB3	1.64	0.78
37:BC:190:ILE:O	37:BC:194:ILE:HG12	1.83	0.78
9:AI:53:VAL:C	9:AI:55:ALA:H	1.91	0.77
19:AS:15:LEU:HD13	19:AS:31:ILE:HD11	1.65	0.77
24:AY:490:PRO:HG3	24:AY:516:PRO:CD	2.12	0.77
26:B1:45:ASN:HB2	35:BA:2230:G:H1'	1.64	0.77
29:B4:42:PHE:N	29:B4:42:PHE:CD1	2.49	0.77
30:B5:55:ARG:C	30:B5:55:ARG:HD3	2.09	0.77
33:B8:61:LEU:HD12	33:B8:62:LEU:H	1.49	0.77
45:BN:62:VAL:HG22	45:BN:66:LYS:HG3	1.64	0.77
57:BZ:29:TYR:HB3	57:BZ:34:ASN:HB2	1.64	0.77
1:AA:824:C:H2'	1:AA:825:G:C8	2.19	0.77
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.66	0.77
5:AE:12:LEU:H	5:AE:12:LEU:HD12	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:75:ASN:HD22	20:AT:75:ASN:H	1.30	0.77
24:AY:238:THR:HG23	24:AY:240:GLU:HG2	1.66	0.77
24:AY:428:LEU:CD1	24:AY:440:VAL:HG11	2.14	0.77
25:B0:5:LYS:NZ	25:B0:5:LYS:HB3	1.97	0.77
38:BD:65:ILE:HD13	38:BD:65:ILE:H	1.48	0.77
45:BN:22:THR:O	45:BN:25:ARG:HB2	1.83	0.77
1:AA:176:C:H2'	1:AA:177:C:H6	1.49	0.77
2:AB:107:THR:HA	2:AB:110:GLN:HE21	1.48	0.77
6:AF:37:VAL:HG12	6:AF:38:GLU:N	2.00	0.77
11:AK:72:ALA:HB1	11:AK:77:MET:HE3	1.66	0.77
28:B3:28:LEU:HA	28:B3:33:GLN:OE1	1.84	0.77
36:BB:60:C:H2'	36:BB:61:G:H8	1.48	0.77
41:BG:76:SER:CA	41:BG:83:ARG:HB3	2.15	0.77
42:BH:41:MET:O	42:BH:42:ARG:HB3	1.83	0.77
55:BX:12:VAL:CG2	55:BX:13:LEU:H	1.97	0.77
56:BY:90:LEU:HD12	56:BY:91:GLU:OE2	1.84	0.77
1:AA:1221:G:H4'	19:AS:77:THR:HG21	1.67	0.77
25:B0:60:PHE:HE2	35:BA:2365:G:H4'	1.48	0.77
28:B3:17:LYS:HZ2	28:B3:20:LYS:HE3	1.46	0.77
35:BA:28:A:N6	35:BA:512:G:H1'	1.99	0.77
38:BD:132:PRO:HG3	38:BD:190:TYR:CE1	2.20	0.77
35:BA:954:G:H4'	48:BQ:13:GLN:NE2	1.99	0.77
35:BA:2455:G:H2'	35:BA:2456:C:C6	2.20	0.77
41:BG:106:LEU:HA	41:BG:110:ALA:HB3	1.64	0.77
43:BK:6:ALA:CB	43:BK:59:ILE:HG22	2.14	0.77
43:BK:103:GLN:O	43:BK:106:GLU:HG2	1.85	0.77
53:BV:77:ALA:O	53:BV:79:VAL:HG23	1.85	0.77
8:AH:29:SER:OG	8:AH:32:LYS:HG3	1.85	0.77
18:AR:45:SER:H	18:AR:51:LEU:HG	1.48	0.77
24:AY:637:ARG:HH11	24:AY:637:ARG:HG3	1.49	0.77
35:BA:1345:C:O2'	35:BA:1346:G:H5'	1.84	0.77
35:BA:1607:C:H4'	35:BA:1608:A:O5'	1.84	0.77
39:BE:117:MET:HA	39:BE:122:PHE:H	1.47	0.77
45:BN:46:VAL:HG13	45:BN:47:ALA:N	1.99	0.77
47:BP:41:ARG:HA	47:BP:41:ARG:HH11	1.46	0.77
49:BR:63:ARG:NH2	49:BR:77:ARG:HG2	1.99	0.77
28:B3:9:VAL:HG23	28:B3:10:LYS:H	1.50	0.77
30:B5:55:ARG:O	30:B5:56:LYS:HB2	1.82	0.77
35:BA:16:G:O2'	35:BA:17:G:H5'	1.85	0.77
35:BA:218:A:C2	35:BA:235:U:H4'	2.18	0.77
35:BA:556:G:H2'	35:BA:557:U:C6	2.20	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:654:A:N7	35:BA:654(V):A:H4'	2.00	0.77
35:BA:1012:U:C4	45:BN:28:THR:HG21	2.20	0.77
43:BK:93:ARG:HB2	57:BZ:112:ARG:HH21	1.50	0.77
51:BT:53:ARG:HH11	51:BT:53:ARG:CB	1.94	0.77
10:AJ:8:LEU:CD2	10:AJ:96:ILE:HG22	2.15	0.77
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	1.85	0.77
17:AQ:52:LYS:HD2	17:AQ:52:LYS:N	1.99	0.77
29:B4:41:PRO:C	29:B4:42:PHE:CD1	2.62	0.77
31:B6:9:LEU:CD2	31:B6:26:ASN:HD22	1.97	0.77
35:BA:83:G:HO2'	35:BA:84:A:H8	1.29	0.77
35:BA:276:A:OP1	35:BA:276:A:H4'	1.84	0.77
47:BP:7:ARG:HB3	47:BP:8:PRO:HD3	1.64	0.77
47:BP:30:THR:HG22	47:BP:31:ALA:N	2.00	0.77
1:AA:1325:C:H2'	1:AA:1326:C:H6	1.50	0.77
1:AA:1358:U:P	14:AN:35:ARG:HG3	2.24	0.77
15:AO:80:ALA:HB1	15:AO:84:LYS:HE2	1.65	0.77
24:AY:15:ILE:CD1	24:AY:81:ILE:HG12	2.15	0.77
35:BA:154(A):C:H3'	35:BA:155:U:C5'	2.14	0.77
35:BA:279:C:C3'	35:BA:280:C:H5"	2.15	0.77
52:BU:20:LEU:H	52:BU:20:LEU:CD2	1.98	0.77
52:BU:20:LEU:HD22	52:BU:20:LEU:N	1.98	0.77
52:BU:31:SER:HB3	52:BU:34:LYS:HB2	1.66	0.77
1:AA:269:C:H2'	1:AA:270:A:H8	1.48	0.77
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.20	0.77
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.19	0.77
2:AB:96:ARG:HD2	2:AB:96:ARG:N	1.99	0.77
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	1.97	0.77
11:AK:58:PRO:HA	11:AK:90:GLY:HA3	1.67	0.77
24:AY:604:PRO:C	24:AY:605:ILE:HD12	2.10	0.77
35:BA:759:G:H2'	35:BA:760:G:H8	1.48	0.77
35:BA:955:C:OP2	48:BQ:14:ARG:HD2	1.84	0.77
37:BC:60:ARG:HG3	37:BC:165:ARG:HG3	1.66	0.77
46:BO:104:ARG:NE	51:BT:33:LYS:HE3	2.00	0.77
51:BT:129:ARG:O	51:BT:129:ARG:HG2	1.84	0.77
53:BV:52:VAL:O	53:BV:52:VAL:HG13	1.84	0.77
54:BW:107:LEU:HD22	54:BW:107:LEU:N	1.99	0.77
55:BX:11:PRO:HA	55:BX:28:PHE:CB	2.12	0.77
24:AY:227:ILE:HD11	24:AY:241:GLU:O	1.85	0.76
30:B5:26:THR:HG23	30:B5:26:THR:O	1.86	0.76
35:BA:1138:G:H2'	35:BA:1139:G:O4'	1.85	0.76
35:BA:2248:C:C2'	35:BA:2249:U:H5'	2.14	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2396:G:O2'	35:BA:2397:G:H5'	1.85	0.76
35:BA:2524:G:H8	35:BA:2524:G:H5'	1.50	0.76
39:BE:38:THR:HG22	39:BE:40:GLU:H	1.48	0.76
54:BW:36:LEU:HD11	54:BW:47:VAL:HG12	1.64	0.76
2:AB:223:ILE:HG23	2:AB:226:ARG:NH1	2.00	0.76
24:AY:388:THR:HG21	24:AY:399:LEU:H	1.50	0.76
34:B9:19:ARG:O	34:B9:20:HIS:HB2	1.85	0.76
38:BD:35:LYS:HG2	38:BD:63:ARG:CA	2.15	0.76
41:BG:172:LEU:CD2	41:BG:176:LEU:HD11	2.15	0.76
48:BQ:75:THR:CG2	48:BQ:76:LYS:N	2.47	0.76
57:BZ:24:LEU:HD12	57:BZ:41:LEU:CD2	2.14	0.76
1:AA:243:A:H4'	1:AA:244:U:O5'	1.86	0.76
24:AY:196:ILE:O	24:AY:197:ARG:HB2	1.83	0.76
35:BA:2876:G:H4'	51:BT:3:ARG:NE	1.98	0.76
41:BG:82:LEU:HD11	41:BG:87:PRO:HB3	1.67	0.76
46:BO:114:ILE:H	46:BO:114:ILE:HD12	1.51	0.76
55:BX:35:THR:HG22	55:BX:37:THR:N	1.96	0.76
57:BZ:67:LEU:H	57:BZ:67:LEU:HD12	1.50	0.76
1:AA:867:G:O2'	1:AA:868:C:H5'	1.86	0.76
1:AA:1424:C:H2'	1:AA:1425:U:H6	1.49	0.76
2:AB:75:LYS:HA	2:AB:78:GLN:HG3	1.67	0.76
11:AK:21:ILE:N	11:AK:21:ILE:HD12	1.99	0.76
13:AM:68:GLY:N	13:AM:71:ARG:HB3	2.00	0.76
16:AP:49:LEU:HD22	16:AP:73:LEU:HD22	1.66	0.76
25:B0:26:TYR:HE2	35:BA:857:C:H1'	1.50	0.76
35:BA:1059:G:H2'	35:BA:1060:U:C5	2.21	0.76
48:BQ:27:VAL:HG23	48:BQ:137:TYR:CD2	2.20	0.76
21:AU:23:PRO:C	21:AU:25:LYS:H	1.93	0.76
27:B2:41:ILE:CD1	27:B2:44:LEU:HD12	2.10	0.76
35:BA:695:G:OP1	35:BA:1380:G:H4'	1.86	0.76
35:BA:1721:G:C6	35:BA:1739:U:H5'	2.20	0.76
39:BE:1:MET:HB2	39:BE:83:ASP:O	1.85	0.76
56:BY:14:LEU:HD13	56:BY:24:VAL:CG2	2.15	0.76
18:AR:37:VAL:HG23	18:AR:38:GLU:N	1.99	0.76
23:AX:13:A:H3'	23:AX:14:A:C5'	2.15	0.76
26:B1:76:ARG:HH22	26:B1:95:LEU:HD13	1.51	0.76
35:BA:2286:A:H4'	35:BA:2287:A:H5'	1.66	0.76
43:BK:24:GLY:H	43:BK:25:PRO:HD2	1.51	0.76
49:BR:7:GLY:O	49:BR:8:ARG:HB2	1.83	0.76
50:BS:15:ARG:HB3	50:BS:18:ILE:HD11	1.68	0.76
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.20	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.65	0.76
12:AL:27:LEU:HG	12:AL:62:SER:HB2	1.68	0.76
18:AR:74:ARG:HB3	18:AR:81:PHE:CE1	2.21	0.76
24:AY:72:CYS:SG	24:AY:79:ILE:HB	2.25	0.76
24:AY:406:GLU:HB3	24:AY:407:PRO:HD2	1.68	0.76
35:BA:790:C:H5'	35:BA:791:C:OP2	1.86	0.76
35:BA:1902:C:H4'	38:BD:244:ARG:HB2	1.65	0.76
35:BA:2425:A:H4'	35:BA:2426:A:H5"	1.68	0.76
36:BB:26:A:H2'	36:BB:27:C:C6	2.20	0.76
38:BD:43:ARG:HD2	38:BD:44:ASN:OD1	1.86	0.76
45:BN:2:LYS:HZ1	53:BV:12:TYR:HA	1.50	0.76
47:BP:55:ARG:HG2	47:BP:56:SER:N	1.97	0.76
54:BW:9:TYR:H	54:BW:102:HIS:HD2	1.34	0.76
1:AA:1129:C:O2'	1:AA:1130:A:C8	2.38	0.76
13:AM:121:LYS:HD3	13:AM:121:LYS:N	2.00	0.76
32:B7:23:ARG:C	32:B7:28:ARG:HH12	1.93	0.76
35:BA:914:C:H2'	35:BA:915:C:H5'	1.67	0.76
35:BA:1461:G:O2'	35:BA:1462:C:H5'	1.85	0.76
35:BA:2248:C:H2'	35:BA:2249:U:H5'	1.68	0.76
35:BA:2394:C:OP1	47:BP:63:PRO:HD2	1.84	0.76
35:BA:2521:C:H42	35:BA:2544:G:H1	1.34	0.76
40:BF:53:THR:CG2	40:BF:56:GLU:HG3	2.11	0.76
52:BU:25:TRP:O	52:BU:28:ARG:HB2	1.85	0.76
3:AC:94:LEU:O	3:AC:95:THR:HG23	1.85	0.76
4:AD:30:LYS:C	4:AD:32:ALA:H	1.89	0.76
24:AY:100:VAL:HG13	24:AY:101:LEU:H	1.51	0.76
24:AY:539:ILE:HA	24:AY:542:VAL:CG1	2.15	0.76
35:BA:84:A:H5"	56:BY:9:LYS:HZ3	1.50	0.76
36:BB:103:G:H5'	36:BB:104:U:OP2	1.86	0.76
38:BD:65:ILE:HD13	38:BD:65:ILE:N	2.01	0.76
47:BP:97:PRO:O	47:BP:98:GLU:HB3	1.85	0.76
53:BV:6:LYS:O	53:BV:37:VAL:HG21	1.84	0.76
55:BX:89:ILE:CG2	55:BX:91:ALA:HB3	2.14	0.76
57:BZ:115:GLY:HA2	57:BZ:177:PRO:HD3	1.67	0.76
57:BZ:143:GLY:O	57:BZ:144:LEU:HD13	1.85	0.76
57:BZ:165:VAL:HG12	57:BZ:166:SER:H	1.49	0.76
1:AA:129(A):G:H8	1:AA:129(A):G:H5"	1.51	0.76
1:AA:1160:G:N3	1:AA:1160:G:H2'	2.01	0.76
33:B8:56:GLU:O	33:B8:59:LYS:HE3	1.86	0.76
35:BA:1541:G:H4'	35:BA:1542:A:C5'	2.16	0.76
35:BA:2657:A:H2'	35:BA:2658:C:H5'	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:13:A:O2'	36:BB:14:U:H3'	1.86	0.76
38:BD:176:ARG:HB3	38:BD:176:ARG:NH1	2.00	0.76
43:BK:77:LEU:HD12	43:BK:107:ILE:CG2	2.16	0.76
48:BQ:17:LEU:C	48:BQ:18:LYS:HD2	2.11	0.76
57:BZ:108:PRO:HB3	57:BZ:141:VAL:CG1	2.16	0.76
4:AD:88:VAL:O	4:AD:92:VAL:HG23	1.85	0.75
5:AE:91:LEU:HD13	5:AE:120:THR:HG22	1.68	0.75
24:AY:488:THR:O	24:AY:516:PRO:HG3	1.86	0.75
25:B0:25:ARG:HD2	25:B0:29:GLN:NE2	2.01	0.75
35:BA:548:A:H2'	35:BA:549:G:H5'	1.67	0.75
35:BA:2801(A):A:H4'	35:BA:2802:G:C8	2.21	0.75
37:BC:164:PHE:HB2	37:BC:172:ILE:HD11	1.68	0.75
38:BD:125:ILE:O	38:BD:125:ILE:HG22	1.86	0.75
1:AA:986:A:H1'	19:AS:54:GLY:O	1.85	0.75
9:AI:125:TYR:CE1	9:AI:127:LYS:HB2	2.21	0.75
35:BA:286:C:H5'	35:BA:286:C:C6	2.14	0.75
35:BA:1809:A:H2'	35:BA:1810:A:C8	2.21	0.75
35:BA:2170:A:H5"	37:BC:135:ARG:HH21	1.51	0.75
35:BA:2308:G:N7	35:BA:2310:A:H5'	2.01	0.75
35:BA:2473:U:H3'	35:BA:2474:C:C5'	2.11	0.75
50:BS:40:ILE:CG2	50:BS:41:ASP:H	1.99	0.75
55:BX:18:TYR:C	55:BX:20:GLY:H	1.94	0.75
1:AA:814:A:H2'	1:AA:816:A:H5'	1.66	0.75
6:AF:86:ARG:O	6:AF:87:ARG:HG2	1.87	0.75
10:AJ:82:ILE:O	10:AJ:86:MET:HB2	1.86	0.75
11:AK:33:THR:HG22	11:AK:39:PRO:HA	1.67	0.75
33:B8:13:ARG:HD3	47:BP:61:ARG:O	1.87	0.75
35:BA:83:G:O2'	35:BA:84:A:H8	1.69	0.75
35:BA:491:G:H2'	35:BA:492:A:C8	2.20	0.75
35:BA:645:C:O2	35:BA:645:C:H5"	1.86	0.75
36:BB:87:G:H2'	36:BB:88:C:H3'	1.68	0.75
37:BC:115:VAL:HG12	37:BC:145:THR:HG23	1.67	0.75
39:BE:59:VAL:HG11	39:BE:63:LEU:HG	1.69	0.75
42:BH:105:LEU:CD2	42:BH:113:VAL:HB	2.16	0.75
43:BK:14:ALA:HA	43:BK:41:PHE:CE2	2.21	0.75
47:BP:98:GLU:CA	47:BP:101:VAL:HG22	2.16	0.75
1:AA:773:G:O2'	1:AA:774:G:H5'	1.87	0.75
1:AA:1239:A:H2'	1:AA:1298:C:N4	2.01	0.75
3:AC:14:ILE:HG13	3:AC:15:THR:H	1.51	0.75
28:B3:31:LEU:CD1	28:B3:32:GLN:HG2	2.14	0.75
35:BA:1718:G:H5'	35:BA:1718:G:H8	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:7:G:H5'	50:BS:29:PHE:CE2	2.21	0.75
53:BV:62:LEU:HD22	53:BV:62:LEU:N	2.02	0.75
1:AA:54:C:H2'	1:AA:352:C:H41	1.51	0.75
1:AA:559:A:H4'	1:AA:560:U:H5'	1.66	0.75
7:AG:45:ASP:O	7:AG:49:ILE:HG12	1.87	0.75
11:AK:105:VAL:O	11:AK:105:VAL:HG23	1.84	0.75
12:AL:30:ALA:HB3	12:AL:33:ARG:HH21	1.50	0.75
13:AM:6:GLY:C	13:AM:8:GLU:H	1.94	0.75
13:AM:56:LEU:HD13	13:AM:56:LEU:C	2.11	0.75
35:BA:134:C:H2'	35:BA:135:G:C8	2.21	0.75
49:BR:65:LEU:HD12	49:BR:65:LEU:O	1.86	0.75
1:AA:203:U:H5"	1:AA:204:U:OP1	1.85	0.75
1:AA:1270:C:H2'	1:AA:1271:G:C8	2.22	0.75
19:AS:15:LEU:HD21	19:AS:33:THR:OG1	1.86	0.75
20:AT:82:SER:O	20:AT:86:ARG:HB2	1.86	0.75
24:AY:637:ARG:HG3	24:AY:637:ARG:NH1	1.98	0.75
29:B4:48:ARG:O	29:B4:48:ARG:HG2	1.84	0.75
34:B9:36:GLN:OE1	35:BA:1124:C:H1'	1.86	0.75
35:BA:1709:U:H2'	35:BA:1710:C:C6	2.22	0.75
35:BA:2103:C:H2'	35:BA:2104:G:H5"	1.67	0.75
35:BA:2483:C:H3'	35:BA:2484:G:H5"	1.68	0.75
37:BC:95:VAL:HG12	37:BC:96:GLY:N	2.01	0.75
43:BK:132:ARG:HH11	43:BK:132:ARG:HG3	1.51	0.75
50:BS:101:LEU:HD12	50:BS:101:LEU:O	1.86	0.75
55:BX:8:ILE:H	55:BX:8:ILE:CD1	1.97	0.75
1:AA:148:G:H2'	1:AA:149:A:C8	2.21	0.75
10:AJ:82:ILE:HD13	10:AJ:82:ILE:N	2.00	0.75
35:BA:2723:C:H5"	49:BR:2:ARG:HH11	1.50	0.75
39:BE:57:LYS:O	39:BE:58:ARG:HG3	1.87	0.75
42:BH:44:VAL:O	42:BH:46:GLU:HG2	1.87	0.75
47:BP:23:PRO:HB2	47:BP:33:ARG:CD	2.16	0.75
1:AA:447:G:H2'	1:AA:485:G:N2	2.01	0.75
1:AA:1170:A:H2'	1:AA:1171:G:O4'	1.85	0.75
5:AE:12:LEU:CD1	5:AE:31:LEU:HB3	2.17	0.75
5:AE:76:ILE:CG1	5:AE:77:PRO:HD2	2.15	0.75
11:AK:48:ILE:HG22	11:AK:49:GLY:H	1.52	0.75
27:B2:36:ARG:HA	27:B2:39:ALA:HB3	1.67	0.75
35:BA:492:A:H2'	35:BA:493:G:H5'	1.69	0.75
50:BS:40:ILE:HG22	50:BS:41:ASP:H	1.49	0.75
50:BS:87:PHE:HB2	50:BS:106:ARG:HH21	1.51	0.75
1:AA:622:A:C8	1:AA:623:C:C5	2.74	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.69	0.75
24:AY:139:MET:HE1	24:AY:146:LEU:HB2	1.68	0.75
35:BA:2761:G:H2'	35:BA:2762:G:H5"	1.68	0.75
38:BD:39:LYS:NZ	38:BD:87:ASN:HB3	2.02	0.75
50:BS:59:LYS:CD	50:BS:61:ASN:HB2	2.17	0.75
53:BV:18:LEU:CG	53:BV:19:LYS:H	1.99	0.75
1:AA:353:A:H8	1:AA:353:A:H5'	1.51	0.74
4:AD:187:ARG:NH2	4:AD:193:ASP:OD2	2.19	0.74
5:AE:11:ILE:HG22	5:AE:12:LEU:N	2.02	0.74
20:AT:43:LEU:O	20:AT:46:GLU:N	2.20	0.74
35:BA:492:A:C2'	35:BA:493:G:H5'	2.17	0.74
35:BA:1821:A:H2'	35:BA:1822:G:H8	1.52	0.74
35:BA:2672:G:C2'	35:BA:2673:G:H5"	2.16	0.74
46:BO:120:GLU:OE2	46:BO:122:LEU:HD21	1.85	0.74
1:AA:490:G:H2'	1:AA:491:G:H8	1.52	0.74
7:AG:7:ALA:O	7:AG:8:GLU:HB2	1.85	0.74
13:AM:116:THR:HG21	22:AV:29:G:H4'	1.68	0.74
24:AY:380:LEU:C	24:AY:381:LYS:HD2	2.11	0.74
40:BF:16:GLY:O	40:BF:17:ARG:HG3	1.87	0.74
40:BF:17:ARG:HG3	40:BF:17:ARG:HH11	1.51	0.74
51:BT:20:PRO:O	51:BT:22:PHE:HD2	1.70	0.74
2:AB:51:LEU:HD22	2:AB:55:PHE:HE2	1.50	0.74
8:AH:103:VAL:CG2	8:AH:110:ALA:HB2	2.18	0.74
8:AH:103:VAL:HG21	8:AH:110:ALA:HB2	1.69	0.74
19:AS:41:VAL:O	19:AS:41:VAL:HG23	1.84	0.74
35:BA:739:G:H4'	35:BA:740:U:OP1	1.85	0.74
35:BA:1504:C:C2'	35:BA:1505:C:H5"	2.17	0.74
35:BA:1971:A:C4	38:BD:241:PRO:HD3	2.22	0.74
35:BA:2344:U:H4'	35:BA:2345:G:OP1	1.87	0.74
35:BA:2523:G:C2'	35:BA:2524:G:H5"	2.17	0.74
9:AI:79:LEU:HD13	9:AI:83:ARG:HB2	1.69	0.74
20:AT:50:GLU:HG3	20:AT:51:GLU:N	2.02	0.74
24:AY:18:ALA:HA	24:AY:85:PRO:HG2	1.69	0.74
24:AY:22:ASP:O	59:AY:702:GDP:H5'	1.86	0.74
31:B6:9:LEU:HD22	31:B6:26:ASN:HD22	1.51	0.74
35:BA:548:A:C2'	35:BA:549:G:H5'	2.17	0.74
35:BA:581:C:H2'	35:BA:582:G:C8	2.22	0.74
35:BA:654(E):G:H2'	35:BA:654(F):C:H5'	1.68	0.74
35:BA:1120:G:H2'	35:BA:1121:C:C6	2.23	0.74
35:BA:1452:A:C3'	35:BA:1453:U:C5'	2.65	0.74
35:BA:1818:U:H5"	38:BD:157:ARG:HB2	1.67	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:32:LEU:C	40:BF:32:LEU:HD23	2.12	0.74
48:BQ:56:ARG:HA	48:BQ:56:ARG:HE	1.52	0.74
1:AA:975:A:H5'	1:AA:975:A:C8	2.22	0.74
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.70	0.74
20:AT:57:ARG:NH1	20:AT:102:GLY:HA2	2.03	0.74
35:BA:192:C:H2'	35:BA:193:U:H5'	1.69	0.74
35:BA:406:G:HO2'	35:BA:407:G:H8	1.35	0.74
35:BA:2645:G:H4'	35:BA:2732:G:O2'	1.86	0.74
35:BA:2811:G:O2'	35:BA:2812:G:H5'	1.87	0.74
40:BF:181:LEU:HB3	40:BF:205:ARG:HH11	1.50	0.74
43:BK:71:THR:HB	43:BK:72:PRO:HD2	1.69	0.74
46:BO:24:VAL:HG21	46:BO:30:ALA:HB3	1.69	0.74
47:BP:126:VAL:HG12	47:BP:148:LEU:HD21	1.69	0.74
48:BQ:12:GLN:NE2	48:BQ:73:PRO:HD2	2.02	0.74
57:BZ:107:THR:HG23	57:BZ:111:VAL:HG21	1.68	0.74
1:AA:1298:C:O2	1:AA:1298:C:H2'	1.87	0.74
4:AD:153:ARG:HG2	4:AD:153:ARG:HH11	1.52	0.74
12:AL:76:ASN:CG	12:AL:76:ASN:O	2.30	0.74
35:BA:363(D):G:O2'	35:BA:363(E):U:H5'	1.86	0.74
35:BA:1245:G:H5"	40:BF:34:TRP:HZ2	1.52	0.74
37:BC:71:LYS:HG2	37:BC:72:GLN:H	1.51	0.74
49:BR:28:LEU:HD23	49:BR:28:LEU:C	2.12	0.74
49:BR:78:LYS:O	49:BR:83:ILE:HG12	1.87	0.74
1:AA:309:G:H1'	1:AA:608:A:C2	2.23	0.74
1:AA:1456:G:H2'	1:AA:1457:G:H5'	1.68	0.74
26:B1:71:TYR:HA	26:B1:74:VAL:HG23	1.70	0.74
33:B8:6:THR:CG2	33:B8:63:PRO:HD3	2.17	0.74
33:B8:32:LEU:HB3	33:B8:36:LYS:NZ	2.01	0.74
35:BA:1514:U:H2'	35:BA:1515:G:C8	2.22	0.74
35:BA:2639:A:H2'	35:BA:2640:G:O4'	1.88	0.74
42:BH:66:GLY:HA2	42:BH:69:ARG:HB3	1.69	0.74
47:BP:126:VAL:HA	47:BP:145:PRO:CB	2.18	0.74
49:BR:73:VAL:O	49:BR:76:VAL:HG12	1.87	0.74
57:BZ:56:VAL:HG12	57:BZ:57:ILE:N	2.01	0.74
1:AA:973:G:O4'	10:AJ:55:LYS:HG3	1.87	0.74
1:AA:1037:C:H2'	1:AA:1038:C:C2	2.23	0.74
9:AI:104:ARG:O	9:AI:105:ASP:HB3	1.85	0.74
24:AY:201:ILE:H	24:AY:201:ILE:HD12	1.52	0.74
24:AY:326:THR:O	24:AY:328:ILE:HG23	1.88	0.74
24:AY:628:ARG:HH12	24:AY:680:PRO:HG2	1.53	0.74
30:B5:3:LYS:HE2	35:BA:2613:U:H2'	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B5:27:PRO:HG3	54:BW:23:LEU:HD11	1.70	0.74
38:BD:172:TYR:CD1	38:BD:186:HIS:HA	2.22	0.74
39:BE:36:ARG:HG2	39:BE:36:ARG:NH1	2.02	0.74
40:BF:165:ARG:HB3	40:BF:165:ARG:HH11	1.51	0.74
41:BG:41:GLN:NE2	41:BG:60:LEU:HD21	2.02	0.74
43:BK:41:PHE:CE1	43:BK:45:THR:HG21	2.22	0.74
47:BP:23:PRO:HB2	47:BP:33:ARG:HG3	1.69	0.74
50:BS:98:VAL:C	50:BS:100:ALA:H	1.92	0.74
1:AA:697:U:C2'	1:AA:698:G:H5'	2.18	0.74
2:AB:96:ARG:N	2:AB:96:ARG:CD	2.51	0.74
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.17	0.74
3:AC:70:VAL:O	3:AC:106:VAL:HG23	1.88	0.74
4:AD:173:TRP:HB3	4:AD:187:ARG:NH1	2.03	0.74
24:AY:101:LEU:HD12	24:AY:103:GLY:O	1.87	0.74
24:AY:385:THR:HG21	24:AY:436:PRO:HG3	1.70	0.74
25:B0:5:LYS:HB2	48:BQ:80:GLU:O	1.88	0.74
25:B0:7:LEU:CD1	48:BQ:85:LYS:HE2	2.18	0.74
35:BA:1538:G:H2'	35:BA:1539:G:C8	2.22	0.74
39:BE:63:LEU:O	39:BE:63:LEU:HD23	1.87	0.74
41:BG:98:ARG:HH11	41:BG:98:ARG:H	1.33	0.74
55:BX:27:THR:CB	55:BX:80:ILE:HG22	2.17	0.74
1:AA:1004:A:N6	1:AA:1034:G:H2'	2.02	0.74
7:AG:76:ARG:NH1	7:AG:89:MET:HE2	2.03	0.74
8:AH:17:THR:HB	8:AH:78:GLN:OE1	1.88	0.74
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	1.70	0.74
24:AY:113:GLY:C	24:AY:115:GLU:H	1.95	0.74
24:AY:512:ILE:H	24:AY:512:ILE:HD13	1.52	0.74
32:B7:46:VAL:HG12	32:B7:47:ARG:N	2.02	0.74
35:BA:120:U:O2	35:BA:120:U:H2'	1.87	0.74
35:BA:2262:U:C2'	35:BA:2263:C:C5'	2.65	0.74
35:BA:2272:U:H5"	35:BA:2273:A:OP1	1.86	0.74
51:BT:30:VAL:HG21	51:BT:84:GLN:H	1.53	0.74
1:AA:1132:C:O2'	1:AA:1133:G:H5'	1.88	0.73
1:AA:1158:C:H6	2:AB:132:LYS:HE3	1.53	0.73
7:AG:121:ALA:O	7:AG:125:MET:HG3	1.88	0.73
8:AH:109:ILE:HG12	8:AH:110:ALA:N	2.02	0.73
13:AM:119:GLY:HA2	22:AV:29:G:OP1	1.87	0.73
24:AY:453:GLY:HA3	24:AY:459:LEU:HD11	1.70	0.73
35:BA:2787:C:H1'	39:BE:61:ARG:HG3	1.70	0.73
39:BE:131:ALA:CB	39:BE:134:ILE:HD11	2.13	0.73
42:BH:28:GLY:HA3	42:BH:79:VAL:HG21	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:56:SER:OG	42:BH:58:GLU:HG3	1.88	0.73
45:BN:74:ARG:NH2	45:BN:83:LYS:HD3	2.03	0.73
53:BV:21:ARG:HB3	53:BV:91:TYR:HD2	1.53	0.73
3:AC:46:GLU:O	3:AC:47:LEU:HB2	1.86	0.73
22:AV:39:C:H2'	22:AV:40:C:H6	1.53	0.73
29:B4:22:ILE:CG2	29:B4:24:THR:HG23	2.18	0.73
35:BA:1081:U:H5"	43:BK:122:ALA:HB1	1.70	0.73
35:BA:1558:A:H4'	35:BA:1559:G:O5'	1.88	0.73
35:BA:1578:U:H2'	35:BA:1579:A:H5"	1.69	0.73
35:BA:2298:A:H62	35:BA:2318:G:H8	1.36	0.73
35:BA:2312:U:C2'	35:BA:2313:C:H5"	2.17	0.73
43:BK:59:ILE:HG12	43:BK:60:TYR:H	1.50	0.73
47:BP:146:VAL:HG13	47:BP:147:LEU:N	2.00	0.73
49:BR:10:LEU:HB3	49:BR:17:ARG:CD	2.18	0.73
51:BT:42:ILE:HG13	51:BT:42:ILE:O	1.88	0.73
1:AA:192:U:H2'	1:AA:193:C:C6	2.22	0.73
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.71	0.73
26:B1:81:LYS:C	26:B1:82:LEU:HD12	2.13	0.73
33:B8:50:LEU:HD12	33:B8:51:ALA:H	1.53	0.73
35:BA:2132:U:C4	37:BC:6:LYS:HD2	2.23	0.73
37:BC:90:ALA:HA	37:BC:155:ARG:NH1	2.04	0.73
41:BG:42:GLY:HA2	41:BG:89:GLY:HA2	1.69	0.73
50:BS:74:ALA:HB2	50:BS:101:LEU:CD2	2.19	0.73
1:AA:630:G:H2'	1:AA:631:G:C5'	2.18	0.73
2:AB:111:ARG:HG2	2:AB:111:ARG:HH11	1.53	0.73
6:AF:1:MET:HE1	6:AF:68:PRO:HD3	1.70	0.73
24:AY:276:VAL:CA	24:AY:280:LEU:HD23	2.13	0.73
24:AY:526:VAL:HB	24:AY:566:THR:HA	1.69	0.73
35:BA:1582:C:H2'	35:BA:1583:A:H8	1.54	0.73
39:BE:16:ARG:HD3	39:BE:173:VAL:HG13	1.70	0.73
49:BR:44:LEU:O	49:BR:44:LEU:HD13	1.87	0.73
1:AA:973:G:H1'	10:AJ:55:LYS:NZ	2.04	0.73
1:AA:1119:C:O2'	1:AA:1120:G:H5'	1.88	0.73
2:AB:223:ILE:HA	2:AB:226:ARG:NE	2.02	0.73
3:AC:58:GLU:N	3:AC:65:ALA:HB3	1.99	0.73
8:AH:114:THR:HG21	8:AH:129:VAL:HG23	1.70	0.73
15:AO:31:LEU:H	15:AO:31:LEU:CD2	2.02	0.73
24:AY:21:ILE:O	24:AY:22:ASP:HB2	1.85	0.73
29:B4:3:GLU:HG3	36:BB:43:C:OP1	1.88	0.73
41:BG:9:ARG:HG3	41:BG:13:GLU:HG2	1.70	0.73
47:BP:85:LEU:HD12	47:BP:120:ALA:HB2	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1525:G:H2'	1:AA:1526:G:H8	1.53	0.73
3:AC:55:VAL:O	3:AC:55:VAL:HG12	1.88	0.73
19:AS:21:GLU:CG	19:AS:22:LEU:HD23	2.18	0.73
22:AV:5:G:N2	22:AV:69:C:C2	2.56	0.73
35:BA:1353:A:H2'	35:BA:1354:A:C8	2.24	0.73
35:BA:1434:A:H61	35:BA:1558:A:H62	1.36	0.73
35:BA:2307:G:N2	35:BA:2308:G:H5"	2.03	0.73
35:BA:2789:C:H1'	35:BA:2892:A:C2	2.22	0.73
13:AM:116:THR:HG22	13:AM:117:VAL:N	2.03	0.73
35:BA:666:G:H4'	47:BP:49:ARG:HH21	1.54	0.73
35:BA:848:G:N3	35:BA:933:A:H1'	2.03	0.73
35:BA:1539:G:C2	35:BA:1540:U:H1'	2.24	0.73
35:BA:1948:G:C8	35:BA:1948:G:H5'	2.23	0.73
43:BK:17:ALA:HB3	43:BK:38:VAL:CG2	2.17	0.73
51:BT:28:VAL:HG13	51:BT:46:GLU:HA	1.68	0.73
51:BT:29:ARG:HG2	51:BT:85:LYS:CA	2.18	0.73
55:BX:89:ILE:HG22	55:BX:91:ALA:HB3	1.71	0.73
1:AA:50:A:N6	1:AA:361:G:H4'	2.04	0.73
1:AA:1104:G:O5'	2:AB:111:ARG:HD2	1.88	0.73
1:AA:1231:G:O2'	1:AA:1232:U:H5'	1.89	0.73
4:AD:33:MET:O	4:AD:37:PRO:HG3	1.89	0.73
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.71	0.73
19:AS:78:ARG:HB2	19:AS:81:ARG:HH11	1.51	0.73
24:AY:517:LEU:HB3	24:AY:521:SER:CB	2.19	0.73
28:B3:28:LEU:HD23	28:B3:28:LEU:N	2.03	0.73
33:B8:52:LYS:N	33:B8:53:PRO:CD	2.51	0.73
35:BA:637:A:OP1	47:BP:133:SER:HB3	1.88	0.73
35:BA:654(G):C:H2'	35:BA:654(H):G:H8	1.54	0.73
38:BD:28:GLU:H	38:BD:29:PRO:HD2	1.53	0.73
38:BD:43:ARG:HB3	38:BD:54:ARG:HB2	1.69	0.73
1:AA:579:G:H5'	1:AA:728:A:H1'	1.69	0.73
1:AA:1068:G:OP2	1:AA:1094:G:H5'	1.88	0.73
13:AM:63:THR:HG22	13:AM:64:TRP:H	1.52	0.73
17:AQ:31:LEU:O	17:AQ:31:LEU:HD12	1.88	0.73
22:AV:46:G:O3'	22:AV:47:U:H6	1.70	0.73
22:AV:56:C:N4	35:BA:2169:A:N1	2.37	0.73
28:B3:16:PRO:HB2	28:B3:18:ASP:OD1	1.89	0.73
31:B6:43:CYS:HB2	31:B6:44:ARG:NH2	2.04	0.73
33:B8:54:GLU:O	33:B8:58:ILE:HG12	1.88	0.73
35:BA:358:U:H2'	35:BA:359:A:C8	2.19	0.73
35:BA:1190:G:H5'	47:BP:35:HIS:H	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1223:G:C3'	35:BA:1224:C:H5"	2.16	0.73
35:BA:1452:A:C3'	35:BA:1453:U:H5"	2.18	0.73
39:BE:11:MET:HB2	39:BE:23:VAL:O	1.89	0.73
40:BF:120:GLU:HB3	40:BF:122:LYS:HG2	1.70	0.73
41:BG:34:LEU:HB2	41:BG:99:MET:HE1	1.70	0.73
48:BQ:2:LEU:HG	48:BQ:69:PHE:HE1	1.52	0.73
48:BQ:54:MET:HG2	48:BQ:64:ILE:HD13	1.71	0.73
3:AC:99:VAL:HG23	3:AC:99:VAL:O	1.87	0.73
7:AG:18:TYR:HD2	7:AG:59:LEU:HD13	1.53	0.73
13:AM:27:LYS:HE2	13:AM:31:LYS:HE3	1.71	0.73
29:B4:1:MET:HE2	41:BG:98:ARG:HG3	1.71	0.73
35:BA:84:A:H5"	56:BY:9:LYS:NZ	2.02	0.73
35:BA:108:U:H2'	35:BA:109:G:H8	1.51	0.73
35:BA:1236:G:HO2'	35:BA:1237:A:H8	1.37	0.73
35:BA:2523:G:H2'	35:BA:2524:G:H5"	1.71	0.73
36:BB:115:G:H2'	36:BB:116:G:H8	1.54	0.73
37:BC:101:ILE:HD12	37:BC:101:ILE:N	1.98	0.73
38:BD:84:TYR:HA	38:BD:91:ARG:HH12	1.53	0.73
40:BF:163:VAL:O	40:BF:166:ALA:HB3	1.87	0.73
43:BK:42:ASN:O	43:BK:46:ALA:HB2	1.89	0.73
54:BW:59:VAL:O	54:BW:59:VAL:HG12	1.88	0.73
55:BX:12:VAL:HG23	55:BX:13:LEU:N	1.98	0.73
57:BZ:149:SER:HB3	57:BZ:173:ALA:CB	2.18	0.73
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.04	0.72
3:AC:148:GLY:HA3	3:AC:172:ARG:O	1.89	0.72
11:AK:124:LYS:HD2	11:AK:125:PHE:CD1	2.24	0.72
13:AM:63:THR:HG22	13:AM:64:TRP:N	2.02	0.72
15:AO:82:ILE:HD13	15:AO:82:ILE:C	2.13	0.72
30:B5:2:ALA:CA	35:BA:2015:A:H1'	2.19	0.72
35:BA:2470:G:P	48:BQ:56:ARG:HH12	2.11	0.72
38:BD:117:VAL:HG23	38:BD:129:ASN:HA	1.71	0.72
39:BE:51:PHE:CD1	39:BE:52:LEU:HD12	2.23	0.72
42:BH:149:ARG:HA	42:BH:162:ILE:HG13	1.71	0.72
50:BS:74:ALA:HB2	50:BS:101:LEU:HD22	1.71	0.72
2:AB:54:THR:O	2:AB:58:ILE:HG13	1.89	0.72
26:B1:80:LEU:HD13	26:B1:82:LEU:HD11	1.70	0.72
35:BA:786:C:O2'	35:BA:787:U:H5'	1.90	0.72
35:BA:965:C:H5'	35:BA:2273:A:C1'	2.19	0.72
35:BA:2476:A:C2'	35:BA:2477:C:H5"	2.18	0.72
40:BF:25:PRO:HG3	40:BF:119:ARG:HB2	1.69	0.72
41:BG:45:GLU:O	41:BG:51:ARG:HD3	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:19:VAL:HG12	42:BH:20:ALA:N	2.03	0.72
42:BH:41:MET:HG2	42:BH:43:VAL:HG13	1.70	0.72
48:BQ:55:VAL:CG2	57:BZ:178:GLU:HG2	2.18	0.72
51:BT:115:ARG:HB3	51:BT:115:ARG:HH11	1.52	0.72
1:AA:622:A:C8	1:AA:623:C:C6	2.78	0.72
1:AA:1158:C:H5'	2:AB:133:LYS:HE2	1.67	0.72
1:AA:1381:U:C5	1:AA:1382:C:C5	2.77	0.72
3:AC:58:GLU:O	3:AC:59:ARG:HG3	1.89	0.72
10:AJ:20:ALA:C	10:AJ:22:LYS:H	1.96	0.72
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	2.18	0.72
19:AS:14:HIS:HD2	19:AS:15:LEU:HD23	1.52	0.72
31:B6:11:LEU:O	31:B6:11:LEU:HD13	1.89	0.72
31:B6:54:ILE:CD1	35:BA:2420:C:H5'	2.19	0.72
35:BA:322:A:H3'	40:BF:169:ASN:HD21	1.55	0.72
35:BA:1516:C:H2'	35:BA:1517:G:H5'	1.71	0.72
38:BD:131:LEU:N	38:BD:131:LEU:CD1	2.49	0.72
40:BF:84:VAL:CG1	40:BF:85:GLY:N	2.53	0.72
40:BF:176:LEU:HG	40:BF:177:ALA:O	1.89	0.72
48:BQ:52:VAL:O	48:BQ:55:VAL:HG12	1.88	0.72
56:BY:31:LEU:HB2	56:BY:32:PRO:HA	1.70	0.72
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.90	0.72
19:AS:46:GLY:N	19:AS:62:ILE:HG23	2.04	0.72
24:AY:138:LYS:HD3	24:AY:141:LYS:HE3	1.71	0.72
33:B8:2:PRO:HA	35:BA:591:C:O2	1.88	0.72
35:BA:991:C:H6	35:BA:991:C:H5'	1.55	0.72
35:BA:1348:G:C2'	35:BA:1349:A:H5"	2.19	0.72
35:BA:2415:G:O3'	47:BP:66:GLY:HA3	1.89	0.72
41:BG:111:LEU:HB2	41:BG:112:PRO:HD3	1.69	0.72
45:BN:45:ASN:H	45:BN:45:ASN:ND2	1.87	0.72
49:BR:75:LEU:O	49:BR:75:LEU:HD13	1.88	0.72
51:BT:108:ARG:HH11	51:BT:108:ARG:HB3	1.53	0.72
1:AA:539:A:H2'	1:AA:540:G:H8	1.52	0.72
12:AL:25:PRO:C	12:AL:27:LEU:H	1.95	0.72
24:AY:409:ILE:HD11	24:AY:654:GLY:HA2	1.72	0.72
35:BA:624:C:H41	47:BP:107:LYS:NZ	1.87	0.72
35:BA:2122:U:H2'	35:BA:2123:G:C8	2.23	0.72
35:BA:2518:A:H5"	35:BA:2519:U:OP2	1.89	0.72
49:BR:2:ARG:CD	49:BR:5:LYS:HE2	2.20	0.72
56:BY:55:TYR:N	56:BY:55:TYR:HD1	1.88	0.72
3:AC:82:GLU:O	3:AC:86:VAL:HG13	1.88	0.72
31:B6:40:CYS:HB2	31:B6:46:HIS:CE1	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:978:G:H1	35:BA:985:C:H42	1.38	0.72
35:BA:1378:A:HO2'	35:BA:1379:A:H5"	1.52	0.72
35:BA:2189:U:C2'	35:BA:2190:G:H5"	2.19	0.72
41:BG:76:SER:HA	41:BG:83:ARG:HB3	1.71	0.72
42:BH:85:LYS:C	42:BH:85:LYS:HD3	2.15	0.72
45:BN:9:VAL:HG11	45:BN:39:ARG:NH2	2.03	0.72
47:BP:98:GLU:HA	47:BP:101:VAL:CG2	2.20	0.72
51:BT:83:ILE:HG13	51:BT:84:GLN:H	1.53	0.72
56:BY:88:LYS:HZ3	56:BY:93:GLY:C	1.97	0.72
1:AA:269:C:H2'	1:AA:270:A:C8	2.24	0.72
3:AC:137:ALA:HA	3:AC:140:ARG:NH2	2.03	0.72
5:AE:36:ASP:OD2	5:AE:40:ARG:HB2	1.90	0.72
16:AP:21:VAL:O	16:AP:33:ILE:HB	1.89	0.72
22:AV:47:U:H3'	22:AV:48:C:H5'	1.71	0.72
35:BA:1902:C:H1'	38:BD:244:ARG:HG3	1.71	0.72
39:BE:38:THR:HG23	39:BE:39:PRO:HD2	1.72	0.72
39:BE:60:ASN:OD1	39:BE:62:PRO:HD2	1.88	0.72
41:BG:131:TYR:HB3	41:BG:159:VAL:HG13	1.70	0.72
43:BK:78:ILE:HD11	43:BK:136:VAL:HG11	1.72	0.72
51:BT:80:SER:HB3	51:BT:81:PRO:CD	2.18	0.72
52:BU:53:ARG:HA	52:BU:56:ASP:OD2	1.90	0.72
56:BY:51:VAL:C	56:BY:53:PRO:HD2	2.15	0.72
57:BZ:98:MET:HE2	57:BZ:99:TYR:O	1.90	0.72
1:AA:584:G:H2'	1:AA:585:G:C8	2.25	0.72
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.49	0.72
1:AA:1342:C:O2'	1:AA:1343:G:H5'	1.89	0.72
1:AA:1490:C:H6	1:AA:1490:C:C5'	2.01	0.72
4:AD:8:VAL:HB	4:AD:21:LEU:HD12	1.70	0.72
9:AI:47:LEU:C	9:AI:49:PRO:HD2	2.14	0.72
12:AL:117:ARG:NH2	12:AL:124:LYS:HB2	2.05	0.72
12:AL:119:LYS:O	12:AL:120:TYR:HB2	1.89	0.72
24:AY:85:PRO:HA	24:AY:94:VAL:CG2	2.18	0.72
27:B2:41:ILE:HG13	27:B2:41:ILE:O	1.88	0.72
33:B8:6:THR:HG22	33:B8:63:PRO:HD3	1.71	0.72
41:BG:57:ALA:O	41:BG:68:PRO:HG2	1.88	0.72
47:BP:6:LEU:HB3	47:BP:9:ASN:HD21	1.55	0.72
6:AF:44:GLY:HA2	6:AF:59:TYR:CE1	2.25	0.72
13:AM:15:VAL:HG12	13:AM:45:VAL:HG23	1.70	0.72
34:B9:32:HIS:O	34:B9:34:GLN:HG3	1.90	0.72
35:BA:2313:C:H5'	35:BA:2313:C:C6	2.25	0.72
38:BD:35:LYS:HZ3	38:BD:35:LYS:HB3	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:98:LEU:HB2	42:BH:125:VAL:CG2	2.13	0.72
51:BT:13:ARG:HH12	51:BT:15:VAL:CG2	2.01	0.72
54:BW:20:VAL:HG23	54:BW:21:VAL:N	2.04	0.72
57:BZ:79:ARG:O	57:BZ:80:ARG:HB2	1.88	0.72
1:AA:474:G:H2'	1:AA:475:G:C8	2.24	0.72
1:AA:666:G:H5'	1:AA:726:C:H1'	1.70	0.72
2:AB:147:LYS:HG2	2:AB:148:TYR:CE1	2.24	0.72
13:AM:116:THR:CG2	13:AM:117:VAL:N	2.53	0.72
17:AQ:50:LYS:O	17:AQ:50:LYS:HG3	1.90	0.72
22:AV:21:A:N6	22:AV:46:G:H2'	1.99	0.72
35:BA:2511:U:O3'	39:BE:123:ALA:HB3	1.90	0.72
40:BF:176:LEU:HD11	40:BF:180:GLY:HA3	1.71	0.72
42:BH:12:PRO:HD3	42:BH:49:VAL:HG12	1.72	0.72
57:BZ:56:VAL:HG13	57:BZ:69:THR:O	1.89	0.72
2:AB:178:ARG:HG2	2:AB:178:ARG:HH11	1.55	0.71
3:AC:86:VAL:HG23	3:AC:87:LEU:N	2.05	0.71
28:B3:56:VAL:CG1	28:B3:57:GLU:N	2.53	0.71
35:BA:295:G:O2'	35:BA:296:C:H5'	1.90	0.71
35:BA:2329:G:H2'	35:BA:2330:G:C8	2.25	0.71
39:BE:176:ILE:HG22	39:BE:178:GLU:HB3	1.72	0.71
41:BG:16:ARG:NE	41:BG:31:VAL:HG11	2.04	0.71
46:BO:105:GLU:O	46:BO:109:LYS:HG2	1.90	0.71
55:BX:30:VAL:HG22	55:BX:77:LYS:O	1.90	0.71
1:AA:1275:A:O2'	1:AA:1276:G:H5'	1.90	0.71
1:AA:1442:G:C6	1:AA:1442(B):A:H2	2.08	0.71
7:AG:73:MET:HA	7:AG:91:VAL:HG23	1.72	0.71
25:B0:46:LYS:O	25:B0:78:TYR:HA	1.91	0.71
35:BA:218:A:H2	35:BA:235:U:H4'	1.53	0.71
35:BA:2672:G:C3'	35:BA:2673:G:H5"	2.19	0.71
1:AA:80:G:H5"	1:AA:81:U:H5'	1.73	0.71
2:AB:167:PRO:HG2	2:AB:192:SER:OG	1.90	0.71
9:AI:79:LEU:HD13	9:AI:79:LEU:C	2.15	0.71
14:AN:27:CYS:SG	14:AN:29:ARG:HB2	2.30	0.71
35:BA:200:U:H2'	35:BA:201:C:H5'	1.70	0.71
35:BA:1790:C:H5"	35:BA:1791:A:OP1	1.90	0.71
35:BA:2579:C:H4'	39:BE:134:ILE:HG12	1.70	0.71
57:BZ:18:LEU:O	57:BZ:21:ALA:HB3	1.89	0.71
1:AA:176:C:H2'	1:AA:177:C:C6	2.26	0.71
1:AA:1288:A:H2'	1:AA:1289:A:C8	2.25	0.71
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.25	0.71
20:AT:8:ARG:HH11	20:AT:8:ARG:HG3	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:162:VAL:HG21	24:AY:255:ILE:HD11	1.71	0.71
24:AY:534:ILE:HD11	24:AY:570:GLY:HA3	1.73	0.71
31:B6:43:CYS:HB3	31:B6:44:ARG:HH21	1.55	0.71
35:BA:643:A:O2'	35:BA:644:A:H5'	1.91	0.71
35:BA:1203:G:H3'	35:BA:1204:A:C5'	2.20	0.71
40:BF:78:ILE:HA	40:BF:83:PHE:CD2	2.26	0.71
42:BH:159:GLU:HG3	42:BH:160:LYS:H	1.55	0.71
47:BP:106:LEU:HD21	47:BP:112:LEU:HG	1.72	0.71
1:AA:999:C:H2'	1:AA:1000:U:C6	2.24	0.71
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.05	0.71
2:AB:95:GLN:C	2:AB:96:ARG:CD	2.61	0.71
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.72	0.71
13:AM:90:LEU:O	13:AM:93:ARG:N	2.24	0.71
20:AT:45:GLN:HA	20:AT:91:LEU:HB3	1.71	0.71
24:AY:137:ASN:ND2	24:AY:263:ALA:H	1.87	0.71
29:B4:9:LEU:HD23	41:BG:65:GLY:HA3	1.71	0.71
35:BA:803:U:O2'	35:BA:804:A:H5'	1.91	0.71
35:BA:970:C:H2'	35:BA:971:C:C6	2.25	0.71
35:BA:1053:C:C3'	35:BA:1054:A:H5"	2.21	0.71
35:BA:1644:C:O2	35:BA:1644:C:H2'	1.89	0.71
38:BD:35:LYS:HD2	38:BD:35:LYS:C	2.16	0.71
45:BN:3:THR:HG22	45:BN:4:TYR:H	1.55	0.71
51:BT:115:ARG:HH11	51:BT:115:ARG:CB	2.03	0.71
53:BV:38:LEU:HD12	53:BV:56:SER:HA	1.73	0.71
56:BY:97:ARG:C	56:BY:98:VAL:HG23	2.14	0.71
10:AJ:44:VAL:HG22	10:AJ:66:ARG:HG2	1.72	0.71
19:AS:21:GLU:HG3	19:AS:22:LEU:HD22	1.72	0.71
24:AY:21:ILE:H	24:AY:21:ILE:CD1	2.01	0.71
24:AY:293:THR:HB	24:AY:294:PRO:HD2	1.71	0.71
27:B2:69:ARG:O	27:B2:70:GLN:HB2	1.89	0.71
28:B3:56:VAL:CG1	28:B3:57:GLU:H	2.04	0.71
33:B8:33:ASN:H	33:B8:33:ASN:ND2	1.87	0.71
35:BA:26:G:H1'	35:BA:515:A:H61	1.56	0.71
35:BA:363(B):G:H2'	35:BA:363(C):G:H8	1.55	0.71
35:BA:1294:U:H6	35:BA:1294:U:H5"	1.54	0.71
36:BB:2:C:O5'	36:BB:2:C:H6	1.73	0.71
38:BD:44:ASN:HB2	38:BD:48:ARG:O	1.90	0.71
42:BH:43:VAL:HG11	42:BH:51:ARG:O	1.90	0.71
1:AA:264:U:O2'	17:AQ:64:PRO:HB2	1.89	0.71
1:AA:1054:C:OP2	1:AA:1197:G:OP2	2.08	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)
10:AJ:40:LEU:HB3	10:AJ:41:PRO:HD2	1.73	0.71
35:BA:272(H):C:H2'	35:BA:272(I):U:C5'	2.20	0.71
35:BA:406:G:O2'	35:BA:407:G:H8	1.74	0.71
35:BA:582:G:H2'	35:BA:583:G:H8	1.54	0.71
35:BA:1996:C:H4'	35:BA:1997:G:H5'	1.72	0.71
40:BF:198:ALA:O	40:BF:201:VAL:HG12	1.89	0.71
41:BG:131:TYR:HE2	41:BG:133:LEU:HB3	1.55	0.71
42:BH:144:VAL:HA	42:BH:147:ASN:HB2	1.72	0.71
47:BP:47:ASP:HB3	47:BP:48:PRO:O	1.90	0.71
47:BP:75:ILE:N	47:BP:75:ILE:CD1	2.52	0.71
1:AA:72:C:H2'	1:AA:73:G:C8	2.26	0.71
1:AA:160:A:H1'	1:AA:344:A:C8	2.25	0.71
1:AA:461:A:O2'	1:AA:470:C:H5'	1.90	0.71
1:AA:723:U:H5'	1:AA:724:G:OP2	1.91	0.71
1:AA:999:C:H2'	1:AA:1000:U:C5	2.25	0.71
5:AE:76:ILE:HG13	5:AE:142:LEU:HD13	1.72	0.71
10:AJ:13:HIS:O	10:AJ:17:ASP:HB2	1.89	0.71
12:AL:7:ILE:O	12:AL:11:VAL:HG23	1.90	0.71
12:AL:104:VAL:HG12	12:AL:105:TYR:CD1	2.26	0.71
24:AY:415:PRO:HA	24:AY:474:ALA:CB	2.20	0.71
28:B3:38:GLU:HB3	28:B3:43:ILE:HG13	1.72	0.71
31:B6:33:LYS:HG2	31:B6:34:LEU:H	1.55	0.71
35:BA:389:G:O4'	35:BA:2413:G:H4'	1.89	0.71
35:BA:580:C:H2'	35:BA:581:C:H6	1.55	0.71
35:BA:2147:G:H2'	35:BA:2148:G:O4'	1.90	0.71
35:BA:2732:G:H3'	35:BA:2733:A:H5'	1.71	0.71
37:BC:48:LEU:N	37:BC:48:LEU:HD12	2.06	0.71
38:BD:94:LEU:HD23	38:BD:95:LEU:N	2.06	0.71
1:AA:8:A:N6	4:AD:209:ARG:HB2	2.06	0.71
1:AA:189:G:H2'	1:AA:189(A):C:C6	2.26	0.71
1:AA:473:G:H2'	1:AA:474:G:H8	1.56	0.71
8:AH:5:PRO:O	8:AH:8:ASP:HB3	1.91	0.71
10:AJ:40:LEU:CB	10:AJ:41:PRO:HD2	2.21	0.71
12:AL:33:ARG:CG	12:AL:60:LEU:HD12	2.21	0.71
20:AT:45:GLN:HB2	20:AT:91:LEU:HD13	1.72	0.71
35:BA:1514:U:H2'	35:BA:1515:G:H8	1.56	0.71
38:BD:144:ALA:HB3	38:BD:192:THR:HG23	1.73	0.71
41:BG:56:ALA:HB1	41:BG:153:ARG:CZ	2.20	0.71
51:BT:38:ASN:C	51:BT:38:ASN:ND2	2.36	0.71
54:BW:33:ARG:O	54:BW:37:ARG:HB2	1.91	0.71
27:B2:21:LEU:O	27:B2:24:LEU:HB3	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:195:A:H5”	35:BA:196:A:OP2	1.91	0.71
35:BA:958:U:H3’	35:BA:958:U:C6	2.26	0.71
35:BA:1058:G:N2	35:BA:1081:U:H1’	2.05	0.71
35:BA:2512:C:H2’	35:BA:2513:G:O4’	1.91	0.71
42:BH:149:ARG:HD3	42:BH:164:TYR:HE1	1.55	0.71
43:BK:17:ALA:O	43:BK:35:MET:HE1	1.90	0.71
43:BK:70:LYS:N	43:BK:70:LYS:HE3	2.06	0.71
50:BS:49:VAL:CG1	50:BS:50:SER:H	2.01	0.71
50:BS:49:VAL:CG1	50:BS:50:SER:N	2.54	0.71
53:BV:58:VAL:O	53:BV:97:LYS:HB2	1.91	0.71
55:BX:10:ALA:O	55:BX:28:PHE:HB2	1.91	0.71
55:BX:54:VAL:HG22	55:BX:81:VAL:HG12	1.71	0.71
1:AA:759:A:H2’	1:AA:760:G:H5’	1.72	0.70
1:AA:1238:A:N7	1:AA:1303:C:H1’	2.06	0.70
3:AC:114:PRO:HD3	3:AC:183:ASP:OD1	1.91	0.70
25:B0:60:PHE:HE1	25:B0:62:LEU:HD23	1.55	0.70
35:BA:768:G:H2’	35:BA:769:G:H8	1.56	0.70
35:BA:1711:C:O2’	35:BA:1712:C:H5’	1.91	0.70
35:BA:2198:A:H4’	35:BA:2199:A:OP1	1.89	0.70
35:BA:2329:G:H2’	35:BA:2330:G:H8	1.56	0.70
40:BF:34:TRP:HB2	47:BP:10:PRO:HB2	1.71	0.70
40:BF:157:VAL:HG21	40:BF:194:MET:HG2	1.72	0.70
49:BR:11:ASN:O	49:BR:12:ARG:HB2	1.90	0.70
52:BU:112:ARG:CZ	53:BV:46:VAL:HG21	2.21	0.70
1:AA:192:U:H2’	1:AA:193:C:H6	1.56	0.70
1:AA:1026:G:C2’	1:AA:1027:C:H5’	2.19	0.70
4:AD:108:LEU:O	4:AD:165:MET:HE2	1.89	0.70
4:AD:126:ILE:HD12	4:AD:126:ILE:N	2.06	0.70
10:AJ:6:ILE:HD12	10:AJ:6:ILE:C	2.16	0.70
24:AY:238:THR:HG22	24:AY:241:GLU:CG	2.20	0.70
58:AY:701:FUA:H231	58:AY:701:FUA:H122	1.73	0.70
28:B3:52:HIS:H	28:B3:52:HIS:CD2	2.06	0.70
31:B6:45:LYS:HG2	35:BA:2371:G:C4’	2.20	0.70
35:BA:940:G:H3’	35:BA:941:A:H5”	1.72	0.70
35:BA:1052:C:H6	35:BA:1052:C:C3’	2.04	0.70
38:BD:270:ILE:H	38:BD:270:ILE:HD12	1.56	0.70
39:BE:95:ILE:HD13	39:BE:95:ILE:N	2.07	0.70
42:BH:118:PRO:HG2	42:BH:121:ILE:HD12	1.73	0.70
47:BP:84:ASN:HA	47:BP:115:LEU:O	1.91	0.70
48:BQ:76:LYS:HB3	48:BQ:91:GLU:HG3	1.72	0.70
1:AA:663:A:O2’	1:AA:664:G:H5’	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.26	0.70
4:AD:194:LEU:HB3	4:AD:196:LEU:HD13	1.71	0.70
19:AS:6:LYS:CE	19:AS:6:LYS:H	2.04	0.70
20:AT:49:ALA:HB1	20:AT:99:LEU:HG	1.73	0.70
24:AY:170:ARG:O	24:AY:171:GLU:HG2	1.92	0.70
24:AY:468:ARG:HH11	24:AY:468:ARG:CB	2.04	0.70
24:AY:550:MET:HE3	24:AY:563:ILE:HD11	1.71	0.70
26:B1:88:LYS:O	26:B1:88:LYS:HG2	1.91	0.70
29:B4:19:GLY:O	29:B4:21:VAL:HG23	1.91	0.70
35:BA:2543:G:H5'	35:BA:2543:G:H8	1.55	0.70
35:BA:2585:U:O2'	35:BA:2586:C:H5'	1.92	0.70
52:BU:88:ILE:HG22	53:BV:47:VAL:O	1.90	0.70
52:BU:107:ALA:HA	52:BU:110:VAL:HG23	1.72	0.70
53:BV:79:VAL:O	53:BV:80:GLN:HB2	1.91	0.70
4:AD:187:ARG:CG	4:AD:187:ARG:HH11	2.05	0.70
11:AK:23:ALA:HB1	11:AK:88:GLY:HA3	1.73	0.70
27:B2:14:ARG:HG3	27:B2:14:ARG:HH11	1.56	0.70
30:B5:44:THR:HG22	30:B5:45:VAL:N	2.05	0.70
35:BA:654(S):G:H3'	35:BA:654(T):C:C5'	2.21	0.70
35:BA:2133:G:C2'	35:BA:2157:G:H22	2.03	0.70
51:BT:30:VAL:HG21	51:BT:83:ILE:HG12	1.71	0.70
1:AA:1126:U:O4'	1:AA:1281:U:H1'	1.92	0.70
2:AB:238:LEU:O	2:AB:238:LEU:HG	1.91	0.70
4:AD:24:GLU:O	4:AD:27:TYR:HB2	1.91	0.70
4:AD:152:SER:O	4:AD:155:LEU:HG	1.92	0.70
5:AE:33:VAL:HG12	5:AE:34:VAL:N	2.05	0.70
5:AE:116:THR:HG22	5:AE:117:ASP:OD1	1.90	0.70
13:AM:10:PRO:HG2	13:AM:11:ARG:H	1.56	0.70
22:AV:46:G:H4'	22:AV:47:U:C5	2.23	0.70
35:BA:2195:C:O2'	35:BA:2196:C:H5'	1.91	0.70
36:BB:65:C:H41	36:BB:109:C:H2'	1.56	0.70
38:BD:44:ASN:CB	38:BD:49:ILE:HA	2.19	0.70
38:BD:77:ALA:HB2	38:BD:97:TYR:CD1	2.26	0.70
40:BF:2:LYS:HG3	40:BF:25:PRO:HG2	1.73	0.70
40:BF:106:ARG:HG3	40:BF:106:ARG:NH1	2.05	0.70
41:BG:111:LEU:HA	41:BG:114:ILE:CD1	2.21	0.70
42:BH:170:ARG:O	42:BH:171:LEU:CB	2.40	0.70
54:BW:29:LEU:CD1	54:BW:51:LEU:HD11	2.21	0.70
57:BZ:130:PRO:O	57:BZ:133:ILE:CD1	2.38	0.70
1:AA:979:C:C2'	1:AA:980:C:H5"	2.21	0.70
20:AT:30:LYS:HZ2	20:AT:34:LYS:HE2	1.55	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:60:PHE:HE1	25:B0:62:LEU:CD2	2.04	0.70
35:BA:2259:G:O2'	35:BA:2260:C:H5'	1.92	0.70
35:BA:2572:A:H5'	35:BA:2574:G:C4'	2.22	0.70
37:BC:98:GLU:O	37:BC:101:ILE:HD13	1.92	0.70
38:BD:27:THR:CG2	38:BD:83:GLU:HG2	2.21	0.70
45:BN:1:MET:HE1	45:BN:3:THR:OG1	1.91	0.70
48:BQ:109:VAL:HG12	48:BQ:113:GLN:HB2	1.73	0.70
56:BY:47:LYS:HG3	56:BY:60:PHE:CE1	2.27	0.70
1:AA:339:C:OP2	46:BO:97:ARG:NH1	2.24	0.70
1:AA:998:G:H2'	1:AA:999:C:C2	2.27	0.70
20:AT:49:ALA:CB	20:AT:99:LEU:HG	2.21	0.70
24:AY:35:TYR:HH	24:AY:266:ASN:HB3	1.55	0.70
35:BA:1294:U:H5"	35:BA:1294:U:C6	2.26	0.70
40:BF:40:GLN:NE2	40:BF:182:ASN:HB2	2.06	0.70
43:BK:99:ILE:HD12	43:BK:103:GLN:HB3	1.74	0.70
46:BO:2:ILE:HD11	46:BO:82:ASN:HD22	1.56	0.70
47:BP:62:LEU:H	47:BP:62:LEU:CD2	2.03	0.70
48:BQ:66:ILE:HG13	48:BQ:66:ILE:O	1.91	0.70
1:AA:433:C:O2'	1:AA:434:U:H5'	1.92	0.70
1:AA:1423:G:C5'	46:BO:49:ARG:HH22	2.05	0.70
1:AA:1432:G:OP1	51:BT:107:ASP:HB2	1.92	0.70
2:AB:215:LEU:O	2:AB:218:ALA:HB3	1.91	0.70
24:AY:9:LEU:CD2	24:AY:284:LEU:HB2	2.22	0.70
24:AY:388:THR:CG2	24:AY:399:LEU:HD13	2.22	0.70
31:B6:43:CYS:O	31:B6:44:ARG:HB2	1.91	0.70
35:BA:528:A:H2	35:BA:2043:C:C5'	2.02	0.70
35:BA:1367:A:H2'	35:BA:1368:G:H5'	1.74	0.70
35:BA:1528(A):A:H62	35:BA:1541:G:N2	1.90	0.70
45:BN:45:ASN:HD22	45:BN:45:ASN:N	1.86	0.70
54:BW:14:PRO:HG2	54:BW:78:GLU:HB2	1.73	0.70
1:AA:294:U:H2'	1:AA:295:C:H6	1.56	0.70
7:AG:27:ILE:CD1	7:AG:40:ALA:HA	2.22	0.70
16:AP:77:ALA:HB3	16:AP:79:VAL:HG23	1.73	0.70
19:AS:8:GLY:C	19:AS:9:VAL:HG23	2.15	0.70
35:BA:402:A:C2'	35:BA:403:U:H5'	2.22	0.70
35:BA:903:C:H2'	35:BA:904:C:C5'	2.18	0.70
35:BA:1722:A:O2'	35:BA:1739:U:H5"	1.92	0.70
35:BA:2463:C:O2'	35:BA:2464:C:H5'	1.90	0.70
38:BD:80:ALA:HB3	38:BD:94:LEU:HB3	1.74	0.70
40:BF:157:VAL:HG12	40:BF:176:LEU:HD23	1.74	0.70
43:BK:23:VAL:HG13	43:BK:27:LEU:HD22	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:35:VAL:HG23	48:BQ:101:ARG:O	1.92	0.70
51:BT:33:LYS:HE2	51:BT:43:GLN:OE1	1.92	0.70
1:AA:383:A:H2'	1:AA:384:G:H5'	1.73	0.70
17:AQ:52:LYS:HD3	17:AQ:55:ASP:OD2	1.91	0.70
31:B6:33:LYS:HG2	31:B6:34:LEU:N	2.05	0.70
35:BA:1028:A:N6	35:BA:1125:G:H2'	2.07	0.70
35:BA:1405:U:H2'	35:BA:1406:U:C6	2.27	0.70
35:BA:1542:A:H5'	35:BA:1543:C:OP2	1.92	0.70
35:BA:2103:C:C3'	35:BA:2104:G:H5"	2.21	0.70
35:BA:2636:U:H4'	39:BE:80:GLU:OE1	1.92	0.70
38:BD:24:ILE:HD13	38:BD:25:THR:N	2.06	0.70
39:BE:24:THR:CG2	39:BE:186:GLY:HA2	2.16	0.70
56:BY:4:LYS:O	56:BY:6:HIS:HD2	1.75	0.70
1:AA:973:G:H1'	10:AJ:55:LYS:CE	2.22	0.69
4:AD:196:LEU:C	4:AD:198:VAL:H	1.98	0.69
20:AT:73:HIS:H	20:AT:76:ALA:HB3	1.56	0.69
24:AY:122:TRP:CE3	24:AY:132:ARG:HD2	2.26	0.69
24:AY:272:LEU:O	24:AY:275:ALA:HB3	1.92	0.69
26:B1:45:ASN:C	26:B1:45:ASN:HD22	2.00	0.69
29:B4:9:LEU:HD13	29:B4:26:SER:O	1.92	0.69
31:B6:10:LEU:H	31:B6:10:LEU:CD2	2.04	0.69
35:BA:528:A:H2	35:BA:2043:C:H5'	1.56	0.69
35:BA:1430:C:H2'	35:BA:1431:U:C6	2.27	0.69
35:BA:1541:G:O2'	35:BA:1542:A:H5"	1.92	0.69
35:BA:1668:A:N6	35:BA:1676:A:H61	1.90	0.69
35:BA:2168:G:N2	35:BA:2170:A:H3'	2.06	0.69
35:BA:2442:C:H2'	35:BA:2443:C:H6	1.57	0.69
35:BA:2464:C:HO2'	35:BA:2465:C:H6	1.36	0.69
36:BB:86:G:H2'	36:BB:87:G:C8	2.27	0.69
36:BB:87:G:H3'	36:BB:88:C:H5"	1.74	0.69
42:BH:37:VAL:CG1	42:BH:38:SER:H	2.05	0.69
43:BK:6:ALA:O	43:BK:58:THR:HG23	1.91	0.69
45:BN:102:ALA:O	45:BN:106:MET:HE2	1.90	0.69
46:BO:115:VAL:HG13	46:BO:121:VAL:HG21	1.74	0.69
48:BQ:69:PHE:CD1	48:BQ:70:PRO:HD2	2.27	0.69
49:BR:83:ILE:HA	49:BR:86:ARG:HD3	1.72	0.69
50:BS:78:LEU:HD11	50:BS:103:GLU:HB3	1.74	0.69
51:BT:50:ILE:N	51:BT:50:ILE:HD12	2.06	0.69
56:BY:17:SER:CB	56:BY:71:LYS:HD2	2.21	0.69
57:BZ:141:VAL:HG13	57:BZ:144:LEU:HD23	1.74	0.69
57:BZ:145:GLU:OE1	57:BZ:146:ILE:HD13	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:194:C:H2'	1:AA:195:A:H5"	1.72	0.69
1:AA:560:U:H4'	1:AA:561:U:H5"	1.73	0.69
1:AA:1057:G:H5"	3:AC:154:SER:CB	2.22	0.69
1:AA:1248:A:C2'	1:AA:1249:C:H5'	2.21	0.69
12:AL:28:LYS:HE2	12:AL:33:ARG:HH12	1.58	0.69
12:AL:86:ARG:NH2	12:AL:99:HIS:CD2	2.60	0.69
25:B0:44:ARG:HG2	25:B0:44:ARG:HH11	1.56	0.69
26:B1:26:ARG:HG3	26:B1:27:GLU:H	1.56	0.69
35:BA:1395:A:H4'	35:BA:1397:U:C5	2.27	0.69
35:BA:1819:A:H4'	35:BA:1820:U:H5'	1.74	0.69
35:BA:2762:G:C8	35:BA:2762:G:C5'	2.75	0.69
36:BB:48:A:H4'	50:BS:95:HIS:CD2	2.27	0.69
39:BE:47:VAL:HG12	39:BE:48:GLN:N	2.06	0.69
40:BF:64:ILE:HG22	40:BF:76:GLY:O	1.92	0.69
48:BQ:108:GLY:O	48:BQ:109:VAL:HG23	1.92	0.69
50:BS:66:ALA:O	50:BS:99:LYS:HA	1.91	0.69
54:BW:5:ALA:O	54:BW:6:ILE:HB	1.92	0.69
56:BY:17:SER:HB2	56:BY:71:LYS:HD2	1.73	0.69
1:AA:1116:C:C2'	1:AA:1117:G:H5"	2.23	0.69
2:AB:204:ASN:HD22	2:AB:206:ASP:H	1.37	0.69
8:AH:123:GLU:O	8:AH:127:LEU:HD23	1.92	0.69
16:AP:14:ASN:N	16:AP:15:PRO:CD	2.54	0.69
24:AY:498:ILE:HG22	24:AY:507:TYR:CD2	2.27	0.69
35:BA:364:C:C2'	35:BA:365:C:H5"	2.22	0.69
35:BA:1038:C:C3'	35:BA:1039:G:H5"	2.21	0.69
35:BA:2020:A:O2'	35:BA:2021:C:H5"	1.92	0.69
35:BA:2756:U:H1'	35:BA:2757:A:C8	2.27	0.69
38:BD:226:MET:HB3	38:BD:230:ASP:HB2	1.73	0.69
40:BF:206:ILE:HG22	40:BF:207:GLY:N	2.07	0.69
1:AA:1348:U:H2'	1:AA:1349:A:H8	1.58	0.69
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.07	0.69
7:AG:12:LEU:CD1	7:AG:25:ALA:HB2	2.22	0.69
25:B0:19:LYS:HD3	25:B0:41:ARG:HH22	1.58	0.69
30:B5:4:HIS:CB	30:B5:5:PRO:HD3	2.22	0.69
30:B5:44:THR:CG2	49:BR:101:ALA:HB2	2.20	0.69
35:BA:1748:G:H2'	35:BA:1749:A:O4'	1.92	0.69
35:BA:2068:U:N3	35:BA:2430:A:C2	2.61	0.69
35:BA:2233:U:H2'	35:BA:2234:G:C8	2.26	0.69
41:BG:34:LEU:HA	41:BG:161:THR:HA	1.73	0.69
52:BU:92:ARG:O	52:BU:94:ASN:N	2.26	0.69
54:BW:20:VAL:HG23	54:BW:21:VAL:H	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:7:LYS:O	10:AJ:96:ILE:HA	1.92	0.69
13:AM:66:LEU:O	13:AM:70:LEU:HB3	1.92	0.69
24:AY:201:ILE:H	24:AY:201:ILE:CD1	2.05	0.69
30:B5:2:ALA:N	35:BA:2014:A:HO2'	1.89	0.69
35:BA:1001:A:H2'	35:BA:1002:G:O4'	1.93	0.69
35:BA:1541:G:H4'	35:BA:1542:A:O5'	1.92	0.69
38:BD:145:VAL:HG12	38:BD:146:GLU:N	2.06	0.69
39:BE:47:VAL:HG23	39:BE:84:PHE:O	1.92	0.69
45:BN:43:THR:O	45:BN:46:VAL:HG12	1.91	0.69
51:BT:89:VAL:HB	51:BT:91:ARG:HG3	1.73	0.69
56:BY:49:VAL:O	56:BY:51:VAL:HG23	1.93	0.69
1:AA:159:G:H2'	1:AA:160:A:H5"	1.74	0.69
1:AA:188:C:H2'	1:AA:189:G:H8	1.56	0.69
1:AA:833:U:H2'	1:AA:834:C:C6	2.28	0.69
5:AE:24:ARG:HG3	5:AE:26:PHE:CZ	2.27	0.69
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	1.75	0.69
18:AR:31:LEU:H	18:AR:31:LEU:CD2	2.04	0.69
22:AV:71:C:O2	22:AV:71:C:C2'	2.41	0.69
33:B8:23:VAL:HG12	33:B8:46:ARG:NH1	2.05	0.69
35:BA:322:A:H3'	40:BF:169:ASN:ND2	2.08	0.69
35:BA:654(M):C:HO2'	35:BA:654(N):G:H8	1.37	0.69
35:BA:900:A:H5'	35:BA:900:A:H8	1.56	0.69
36:BB:88:C:H2'	36:BB:89:G:C8	2.26	0.69
40:BF:170:LEU:HD22	40:BF:170:LEU:N	2.07	0.69
40:BF:181:LEU:HB3	40:BF:205:ARG:HH12	1.58	0.69
46:BO:69:ILE:HD13	46:BO:77:ILE:CG2	2.23	0.69
47:BP:115:LEU:HA	47:BP:134:ALA:HB3	1.74	0.69
50:BS:67:ARG:HH21	50:BS:100:ALA:HB3	1.56	0.69
50:BS:90:GLY:C	50:BS:92:TYR:H	2.00	0.69
52:BU:113:ALA:C	52:BU:115:ALA:H	2.00	0.69
53:BV:18:LEU:HD22	53:BV:19:LYS:HA	1.73	0.69
1:AA:512:U:H2'	1:AA:513:C:H6	1.57	0.69
1:AA:624:C:H2'	1:AA:625:G:H8	1.58	0.69
2:AB:153:ARG:C	2:AB:155:LEU:H	2.00	0.69
3:AC:150:LYS:HB2	3:AC:169:ALA:CB	2.23	0.69
24:AY:115:GLU:CD	24:AY:118:SER:HB3	2.18	0.69
24:AY:201:ILE:HD12	24:AY:201:ILE:N	2.07	0.69
24:AY:609:GLU:HA	24:AY:643:ILE:O	1.93	0.69
35:BA:271(Z):C:H1'	35:BA:272(C):G:H1'	1.74	0.69
35:BA:1196:C:O2'	35:BA:1227:G:H4'	1.93	0.69
35:BA:1510:G:O2'	35:BA:1511:C:H5'	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2462:U:H2'	35:BA:2463:C:C6	2.28	0.69
42:BH:37:VAL:CG1	42:BH:38:SER:N	2.56	0.69
45:BN:65:LYS:HB3	45:BN:69:GLN:HG3	1.73	0.69
1:AA:736:C:H2'	1:AA:737:A:C8	2.26	0.69
1:AA:1226:C:H5"	13:AM:103:THR:OG1	1.93	0.69
1:AA:1277:C:H2'	1:AA:1278:U:C5'	2.22	0.69
1:AA:1303:C:N4	1:AA:1304:G:C6	2.61	0.69
4:AD:33:MET:HG3	4:AD:37:PRO:HA	1.75	0.69
4:AD:194:LEU:HB3	4:AD:196:LEU:CD1	2.23	0.69
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HD12	1.74	0.69
10:AJ:61:GLU:OE1	14:AN:45:ARG:HD2	1.92	0.69
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	1.93	0.69
14:AN:23:ARG:HD2	14:AN:28:GLY:O	1.93	0.69
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.58	0.69
16:AP:33:ILE:O	16:AP:34:GLU:HB2	1.91	0.69
24:AY:25:LYS:HZ2	24:AY:86:GLY:HA2	1.57	0.69
24:AY:117:GLN:HE22	24:AY:120:THR:HG23	1.55	0.69
25:B0:43:THR:HG22	35:BA:2331:G:O3'	1.93	0.69
26:B1:41:ARG:NH2	35:BA:1365:A:H5'	2.07	0.69
31:B6:15:GLU:OE2	31:B6:44:ARG:NH2	2.26	0.69
31:B6:18:ARG:HG3	31:B6:19:ARG:H	1.58	0.69
35:BA:402:A:O2'	35:BA:403:U:H5'	1.93	0.69
35:BA:677:A:H4'	35:BA:2070:G:O2'	1.92	0.69
35:BA:1504:C:C3'	35:BA:1505:C:H5"	2.23	0.69
35:BA:2562:U:H1'	46:BO:23:ARG:NH1	2.08	0.69
35:BA:2593:U:H2'	35:BA:2594:C:H6	1.58	0.69
35:BA:2761:G:C2'	35:BA:2762:G:H5"	2.23	0.69
37:BC:101:ILE:O	37:BC:105:LEU:HB2	1.92	0.69
49:BR:9:LYS:C	49:BR:10:LEU:HG	2.16	0.69
52:BU:101:ARG:C	52:BU:102:GLU:HG2	2.17	0.69
55:BX:18:TYR:C	55:BX:20:GLY:N	2.48	0.69
56:BY:55:TYR:N	56:BY:55:TYR:CD1	2.59	0.69
56:BY:105:ALA:C	56:BY:107:ASP:H	1.99	0.69
57:BZ:146:ILE:HD13	57:BZ:146:ILE:H	1.58	0.69
1:AA:487:A:H2'	1:AA:488:C:O4'	1.92	0.69
9:AI:79:LEU:CD1	9:AI:83:ARG:HB2	2.23	0.69
24:AY:355:LEU:HD12	24:AY:369:LEU:CD1	2.22	0.69
24:AY:409:ILE:CD1	24:AY:654:GLY:HA2	2.22	0.69
35:BA:500:G:N2	35:BA:502:A:H3'	2.08	0.69
35:BA:629:G:H5"	35:BA:650:C:O2'	1.93	0.69
35:BA:1573:G:H2'	35:BA:1574:C:H5'	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2820:A:C8	39:BE:191:PRO:HB2	2.27	0.69
35:BA:2852:G:H2'	35:BA:2853:C:C6	2.27	0.69
38:BD:276:LYS:C	38:BD:276:LYS:HD3	2.18	0.69
43:BK:21:PRO:HG3	43:BK:25:PRO:HD3	1.73	0.69
51:BT:28:VAL:CG2	51:BT:46:GLU:HA	2.22	0.69
51:BT:82:LEU:N	51:BT:82:LEU:HD12	2.07	0.69
55:BX:12:VAL:HG12	55:BX:27:THR:HG23	1.75	0.69
1:AA:818:G:O2'	1:AA:819:A:H5'	1.92	0.69
8:AH:50:ARG:HG2	8:AH:50:ARG:HH11	1.57	0.69
12:AL:119:LYS:HB2	12:AL:120:TYR:HD1	1.58	0.69
24:AY:343:ASN:ND2	24:AY:345:THR:H	1.91	0.69
33:B8:61:LEU:C	33:B8:63:PRO:HD2	2.17	0.69
35:BA:1344:G:H1	35:BA:1403:C:H42	1.40	0.69
35:BA:2103:C:H2'	35:BA:2103:C:O2	1.92	0.69
38:BD:34:VAL:C	38:BD:36:PRO:HD2	2.18	0.69
39:BE:77:ILE:HG22	39:BE:78:LEU:HD12	1.74	0.69
43:BK:93:ARG:CG	57:BZ:112:ARG:HE	2.06	0.69
45:BN:17:ASP:CG	45:BN:56:ASN:HB3	2.18	0.69
47:BP:91:PHE:CE2	47:BP:99:LEU:HD21	2.27	0.69
47:BP:125:VAL:O	47:BP:125:VAL:HG13	1.92	0.69
56:BY:79:CYS:SG	56:BY:80:GLY:N	2.65	0.69
5:AE:76:ILE:HG13	5:AE:77:PRO:HD2	1.74	0.68
20:AT:26:ASN:HD22	20:AT:26:ASN:N	1.90	0.68
26:B1:6:GLU:OE1	26:B1:60:PHE:HA	1.92	0.68
31:B6:27:LYS:HB3	31:B6:30:THR:HG22	1.75	0.68
35:BA:395:U:H2'	35:BA:396:G:C8	2.29	0.68
35:BA:710:G:H2'	35:BA:711:G:C8	2.28	0.68
40:BF:165:ARG:HH11	40:BF:165:ARG:CB	2.05	0.68
41:BG:102:PHE:HD2	41:BG:103:LEU:HD23	1.58	0.68
50:BS:28:VAL:CG1	50:BS:29:PHE:H	2.03	0.68
51:BT:54:ARG:HG2	51:BT:54:ARG:HH11	1.56	0.68
1:AA:538:G:O2'	1:AA:539:A:H5'	1.93	0.68
1:AA:1190:G:OP1	3:AC:5:ILE:HD12	1.92	0.68
4:AD:187:ARG:HH11	4:AD:187:ARG:HG2	1.56	0.68
10:AJ:92:THR:HG23	10:AJ:93:GLY:N	2.09	0.68
16:AP:39:TYR:HB2	16:AP:49:LEU:HD13	1.76	0.68
24:AY:84:THR:HG23	58:AY:701:FUA:O3	1.92	0.68
31:B6:7:ILE:O	31:B6:27:LYS:HD3	1.92	0.68
31:B6:17:LYS:HB2	31:B6:44:ARG:HH12	1.57	0.68
35:BA:134:C:O2'	35:BA:135:G:H5'	1.93	0.68
35:BA:1161:C:H2'	35:BA:1162:G:H8	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1815:A:OP2	35:BA:1822:G:H5"	1.93	0.68
35:BA:2039:C:H2'	35:BA:2040:C:C6	2.27	0.68
35:BA:2068:U:N3	35:BA:2430:A:H2	1.91	0.68
35:BA:2392:A:C8	47:BP:60:MET:HB3	2.27	0.68
38:BD:176:ARG:HH11	38:BD:176:ARG:CB	2.06	0.68
40:BF:20:LEU:HD22	40:BF:23:ASP:OD2	1.93	0.68
41:BG:53:LEU:N	41:BG:53:LEU:CD2	2.56	0.68
48:BQ:59:ARG:HA	57:BZ:180:VAL:HG23	1.75	0.68
51:BT:114:LEU:HD23	51:BT:114:LEU:N	2.02	0.68
1:AA:1234:C:O2'	1:AA:1235:U:H5'	1.94	0.68
1:AA:1258:G:O2'	1:AA:1259:C:H5'	1.94	0.68
1:AA:1318:A:H2'	1:AA:1319:A:H5'	1.74	0.68
1:AA:1334:G:H5'	1:AA:1335:C:OP2	1.93	0.68
2:AB:95:GLN:CA	2:AB:96:ARG:HH11	2.02	0.68
5:AE:10:MET:HG2	5:AE:11:ILE:N	2.08	0.68
10:AJ:75:ILE:CG1	10:AJ:76:ASN:H	2.04	0.68
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.25	0.68
24:AY:555:LEU:HD11	24:AY:599:PRO:HB2	1.76	0.68
35:BA:322:A:OP2	40:BF:169:ASN:HB2	1.93	0.68
35:BA:389:G:H1	47:BP:71:VAL:HG12	1.57	0.68
35:BA:2476:A:N1	35:BA:2477:C:C5	2.61	0.68
43:BK:77:LEU:HD23	43:BK:77:LEU:N	2.07	0.68
51:BT:115:ARG:HH11	51:BT:115:ARG:CG	2.04	0.68
53:BV:38:LEU:O	53:BV:39:LEU:HD13	1.94	0.68
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.29	0.68
3:AC:58:GLU:HB2	3:AC:65:ALA:HB2	1.74	0.68
20:AT:26:ASN:HB3	20:AT:71:THR:OG1	1.93	0.68
24:AY:628:ARG:HG2	24:AY:628:ARG:HH11	1.58	0.68
58:AY:701:FUA:H201	58:AY:701:FUA:O1	1.93	0.68
30:B5:40:LYS:HZ1	30:B5:46:CYS:H	1.39	0.68
35:BA:1434:A:N3	35:BA:1434:A:H2'	2.08	0.68
35:BA:1494:A:O2'	35:BA:1495:A:H5"	1.93	0.68
35:BA:1567:A:H2'	38:BD:84:TYR:HE1	1.57	0.68
35:BA:2778:A:H5'	35:BA:2779:U:OP2	1.94	0.68
38:BD:35:LYS:HZ3	38:BD:36:PRO:CD	2.05	0.68
41:BG:60:LEU:C	41:BG:63:ILE:HD11	2.18	0.68
42:BH:106:THR:HG22	42:BH:112:PRO:HB3	1.75	0.68
47:BP:32:THR:HG22	47:BP:37:GLY:HA2	1.76	0.68
50:BS:85:VAL:C	50:BS:106:ARG:HG2	2.17	0.68
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.08	0.68
2:AB:204:ASN:HD22	2:AB:204:ASN:C	1.99	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:1:MET:HE2	8:AH:1:MET:N	2.08	0.68
12:AL:126:LYS:HG3	12:AL:128:ALA:H	1.58	0.68
14:AN:25:VAL:HG23	14:AN:38:GLY:O	1.93	0.68
24:AY:19:ALA:HA	24:AY:121:VAL:HG11	1.74	0.68
26:B1:86:SER:HA	26:B1:89:GLU:OE2	1.93	0.68
31:B6:54:ILE:HD13	35:BA:2420:C:H4'	1.74	0.68
33:B8:25:MET:HB2	47:BP:62:LEU:HD21	1.75	0.68
35:BA:548:A:C3'	35:BA:549:G:H5'	2.24	0.68
35:BA:1217:C:OP2	52:BU:15:LYS:NZ	2.21	0.68
35:BA:1947:C:H2'	35:BA:1948:G:C5'	2.24	0.68
47:BP:95:VAL:HG23	47:BP:125:VAL:HG23	1.75	0.68
51:BT:83:ILE:HG13	51:BT:84:GLN:HG2	1.76	0.68
52:BU:19:LYS:HB3	52:BU:20:LEU:HD22	1.75	0.68
5:AE:15:ARG:HG3	5:AE:28:PHE:CE2	2.29	0.68
9:AI:5:TYR:CE1	9:AI:18:PHE:HE1	2.11	0.68
12:AL:34:ARG:O	12:AL:61:THR:HG23	1.94	0.68
15:AO:31:LEU:H	15:AO:31:LEU:HD23	1.57	0.68
23:AX:11:U:H2'	23:AX:11:U:O2	1.94	0.68
24:AY:65:ILE:HD13	24:AY:65:ILE:H	1.59	0.68
24:AY:416:LYS:HD2	24:AY:417:THR:H	1.57	0.68
24:AY:544:LYS:O	24:AY:548:GLU:HB2	1.93	0.68
25:B0:51:VAL:CG2	25:B0:81:VAL:HG23	2.24	0.68
31:B6:8:LYS:CE	31:B6:25:LYS:HD3	2.19	0.68
35:BA:630:G:H4'	35:BA:640:C:H4'	1.73	0.68
35:BA:751:A:H5'	54:BW:90:ARG:HA	1.75	0.68
51:BT:32:TYR:O	51:BT:33:LYS:HB2	1.92	0.68
51:BT:62:THR:HG22	51:BT:75:ILE:HG13	1.74	0.68
52:BU:34:LYS:HE2	52:BU:34:LYS:HA	1.76	0.68
7:AG:145:ALA:O	7:AG:146:GLU:HB2	1.92	0.68
19:AS:14:HIS:CD2	19:AS:15:LEU:HD23	2.29	0.68
29:B4:42:PHE:N	29:B4:42:PHE:HD1	1.92	0.68
31:B6:12:GLU:HB3	31:B6:23:THR:HG22	1.74	0.68
35:BA:2314:C:O2'	35:BA:2315:G:H5'	1.93	0.68
39:BE:51:PHE:HD1	39:BE:52:LEU:N	1.92	0.68
39:BE:117:MET:O	39:BE:117:MET:HG2	1.92	0.68
46:BO:17:ARG:HE	46:BO:47:ILE:CD1	2.00	0.68
57:BZ:103:ARG:HD2	57:BZ:136:PHE:CD2	2.29	0.68
1:AA:192:U:O4'	20:AT:103:GLY:HA2	1.93	0.68
1:AA:1346:A:H61	1:AA:1374:A:H3'	1.57	0.68
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.15	0.68
24:AY:418:LYS:H	24:AY:418:LYS:CD	2.06	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:495:GLY:O	24:AY:509:HIS:HA	1.94	0.68
35:BA:139:G:C6	35:BA:140:G:H2'	2.29	0.68
35:BA:586:A:H5'	40:BF:89:VAL:HG21	1.76	0.68
35:BA:849:A:C8	35:BA:850:C:C5	2.82	0.68
35:BA:990:A:N6	35:BA:1186:G:H1'	2.07	0.68
35:BA:2801:A:H4'	35:BA:2801(A):A:O4'	1.92	0.68
35:BA:2809:A:H2'	35:BA:2810:A:C8	2.29	0.68
38:BD:35:LYS:NZ	38:BD:36:PRO:HD3	2.09	0.68
39:BE:69:LYS:O	39:BE:70:ALA:C	2.36	0.68
41:BG:85:GLY:C	41:BG:87:PRO:HD3	2.19	0.68
42:BH:68:THR:O	42:BH:72:ILE:HG12	1.94	0.68
47:BP:27:HIS:HD2	47:BP:28:GLY:N	1.92	0.68
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.29	0.68
2:AB:221:LEU:HD13	2:AB:221:LEU:O	1.94	0.68
3:AC:142:MET:HE1	3:AC:171:GLY:HA3	1.75	0.68
9:AI:81:ILE:O	9:AI:85:LEU:HG	1.94	0.68
10:AJ:33:GLN:HB2	10:AJ:75:ILE:HD13	1.75	0.68
26:B1:71:TYR:HA	26:B1:74:VAL:CG2	2.24	0.68
29:B4:56:VAL:O	29:B4:57:GLU:HB2	1.94	0.68
31:B6:15:GLU:HG2	31:B6:16:CYS:O	1.93	0.68
35:BA:1599:C:H2'	35:BA:1600:C:H6	1.58	0.68
35:BA:2720:U:H2'	35:BA:2721:A:C8	2.28	0.68
35:BA:2745:C:H2'	35:BA:2746:U:C6	2.29	0.68
41:BG:114:ILE:HG12	41:BG:140:ILE:HG21	1.74	0.68
42:BH:85:LYS:HE3	42:BH:145:ALA:HB1	1.75	0.68
52:BU:66:ASN:ND2	52:BU:76:TYR:H	1.92	0.68
52:BU:95:LEU:HD13	53:BV:4:ILE:HG23	1.75	0.68
1:AA:390:C:H2'	1:AA:391:G:H8	1.57	0.68
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.75	0.68
1:AA:1248:A:H2'	1:AA:1249:C:H5'	1.76	0.68
1:AA:1292:U:H2'	1:AA:1293:G:C8	2.29	0.68
2:AB:178:ARG:HH11	2:AB:178:ARG:CG	2.07	0.68
4:AD:9:CYS:HB3	4:AD:32:ALA:HB2	1.76	0.68
6:AF:67:MET:HE2	6:AF:72:VAL:HA	1.76	0.68
19:AS:8:GLY:O	19:AS:9:VAL:HG23	1.94	0.68
25:B0:60:PHE:CE1	25:B0:62:LEU:HD23	2.29	0.68
28:B3:57:GLU:HG2	28:B3:58:VAL:N	2.09	0.68
31:B6:6:ARG:O	31:B6:7:ILE:HB	1.94	0.68
33:B8:25:MET:O	33:B8:47:LYS:HG2	1.93	0.68
35:BA:16:G:H2'	35:BA:17:G:H8	1.59	0.68
35:BA:259:G:H1'	35:BA:621:A:O2'	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2502:G:H5”	35:BA:2503:A:H5’	1.74	0.68
39:BE:133:LYS:C	39:BE:134:ILE:HG13	2.17	0.68
40:BF:131:GLY:HA2	40:BF:138:GLU:HB3	1.75	0.68
1:AA:346:G:OP1	51:BT:41:ARG:NH2	2.28	0.67
1:AA:370:C:O2’	1:AA:371:G:H5’	1.94	0.67
1:AA:945:G:C2	1:AA:946:A:C8	2.82	0.67
1:AA:1116:C:H2’	1:AA:1117:G:H5”	1.74	0.67
16:AP:74:LEU:O	16:AP:79:VAL:HG23	1.93	0.67
26:B1:64:ALA:HA	26:B1:67:ILE:HG13	1.76	0.67
32:B7:24:THR:HG23	32:B7:27:GLY:N	2.07	0.67
35:BA:1064:C:H4’	43:BK:89:HIS:HD2	1.58	0.67
35:BA:1948:G:H5’	35:BA:1948:G:H8	1.59	0.67
35:BA:2026:C:N3	35:BA:2027:G:C8	2.62	0.67
35:BA:2196:C:O2’	35:BA:2197:U:H5’	1.94	0.67
37:BC:76:LEU:HD21	37:BC:104:ILE:HD11	1.76	0.67
38:BD:153:ALA:C	38:BD:154:LYS:HG3	2.19	0.67
42:BH:144:VAL:O	42:BH:148:ILE:HG12	1.93	0.67
56:BY:26:LYS:HG2	56:BY:27:VAL:H	1.59	0.67
56:BY:84:ARG:HG2	56:BY:84:ARG:HH11	1.59	0.67
1:AA:35:G:H2’	1:AA:36:C:C6	2.29	0.67
1:AA:201:C:H2’	1:AA:202:U:H5”	1.75	0.67
1:AA:737:A:H2’	1:AA:738:C:C6	2.29	0.67
1:AA:1277:C:H3’	1:AA:1277:C:H6	1.59	0.67
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.76	0.67
3:AC:130:VAL:HG21	3:AC:157:ILE:HG23	1.75	0.67
4:AD:13:ARG:HA	4:AD:33:MET:HE3	1.75	0.67
6:AF:8:ILE:HG23	6:AF:85:VAL:HG13	1.74	0.67
19:AS:33:THR:HG22	19:AS:49:ILE:HG22	1.77	0.67
24:AY:342:TYR:CE2	24:AY:396:ARG:HD2	2.29	0.67
24:AY:418:LYS:H	24:AY:418:LYS:HD3	1.59	0.67
24:AY:613:PRO:C	24:AY:615:GLU:N	2.42	0.67
58:AY:701:FUA:H323	58:AY:701:FUA:C15	2.21	0.67
31:B6:15:GLU:OE2	31:B6:44:ARG:NH1	2.26	0.67
35:BA:177:G:H3’	35:BA:178:G:H8	1.58	0.67
35:BA:532:A:N3	35:BA:532:A:H2’	2.07	0.67
35:BA:817:C:H2’	35:BA:818:G:O4’	1.94	0.67
35:BA:2297:C:O2’	35:BA:2298:A:H5’	1.94	0.67
37:BC:65:LEU:HD13	37:BC:189:ASN:ND2	2.09	0.67
40:BF:161:GLU:O	40:BF:165:ARG:HG3	1.95	0.67
41:BG:180:PHE:O	41:BG:181:ARG:C	2.37	0.67
45:BN:67:LEU:CD2	45:BN:87:LEU:HB3	2.23	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:97:VAL:HG11	48:BQ:103:MET:HE3	1.76	0.67
49:BR:97:VAL:HG13	49:BR:114:VAL:HG22	1.76	0.67
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.27	0.67
1:AA:625:G:H4'	16:AP:16:HIS:CD2	2.28	0.67
1:AA:630:G:C2'	1:AA:631:G:H5"	2.25	0.67
1:AA:1158:C:C6	2:AB:132:LYS:HE3	2.28	0.67
3:AC:65:ALA:O	3:AC:66:VAL:HB	1.94	0.67
9:AI:88:TYR:O	9:AI:89:ASN:HB2	1.94	0.67
13:AM:23:TYR:HB3	13:AM:67:GLU:HB3	1.75	0.67
20:AT:88:VAL:O	20:AT:92:LEU:HG	1.95	0.67
24:AY:653:PHE:CG	24:AY:654:GLY:N	2.62	0.67
33:B8:33:ASN:N	33:B8:36:LYS:HD2	2.09	0.67
35:BA:1035:U:H2'	35:BA:1036:G:H8	1.59	0.67
35:BA:2206:G:N2	35:BA:2207:G:H4'	2.09	0.67
35:BA:2312:U:H2'	35:BA:2313:C:C5'	2.24	0.67
35:BA:2346:A:H1'	35:BA:2383:G:C8	2.29	0.67
35:BA:2855:C:H2'	35:BA:2856:C:C6	2.29	0.67
42:BH:46:GLU:OE1	42:BH:51:ARG:HB2	1.95	0.67
43:BK:21:PRO:HA	43:BK:23:VAL:N	2.08	0.67
48:BQ:43:THR:O	48:BQ:47:ILE:HG13	1.94	0.67
53:BV:81:TYR:C	53:BV:82:ARG:HD2	2.19	0.67
1:AA:539:A:OP2	12:AL:115:LYS:HE3	1.94	0.67
4:AD:13:ARG:HA	4:AD:33:MET:CE	2.25	0.67
5:AE:42:GLY:HA3	5:AE:66:MET:HG2	1.76	0.67
10:AJ:32:ALA:HB3	10:AJ:78:ASN:HD21	1.60	0.67
24:AY:30:GLU:HG3	24:AY:31:ARG:N	2.09	0.67
24:AY:177:ILE:C	24:AY:178:ILE:HD12	2.19	0.67
27:B2:38:GLN:C	27:B2:40:SER:H	2.03	0.67
27:B2:47:ASN:ND2	35:BA:94(A):G:H21	1.92	0.67
31:B6:51:GLU:O	31:B6:52:VAL:HB	1.94	0.67
35:BA:88:G:OP1	35:BA:90:U:H5	1.77	0.67
35:BA:514:A:H2'	35:BA:515:A:C8	2.29	0.67
35:BA:1747(A):G:O2'	35:BA:1748:G:H5"	1.95	0.67
35:BA:2839:G:H1	35:BA:2878:U:H3	1.43	0.67
38:BD:130:ALA:C	38:BD:131:LEU:HD12	2.20	0.67
39:BE:51:PHE:CD1	39:BE:52:LEU:N	2.63	0.67
42:BH:171:LEU:HD23	42:BH:171:LEU:C	2.20	0.67
51:BT:28:VAL:HG22	51:BT:46:GLU:CA	2.23	0.67
1:AA:1320:C:OP1	19:AS:70:LYS:NZ	2.28	0.67
1:AA:1522:U:H2'	1:AA:1523:G:H8	1.58	0.67
10:AJ:8:LEU:HD23	10:AJ:96:ILE:HG22	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:60:LEU:HA	16:AP:64:ALA:HB3	1.75	0.67
19:AS:64:GLU:C	29:B4:48:ARG:HH22	2.02	0.67
35:BA:207:A:H2'	35:BA:208:C:O4'	1.93	0.67
35:BA:320:A:H4'	35:BA:322:A:C8	2.29	0.67
35:BA:756:C:O2'	35:BA:757:U:H5'	1.95	0.67
35:BA:825:C:O2'	35:BA:826:U:H5'	1.94	0.67
37:BC:2:PRO:HB2	37:BC:4:HIS:O	1.95	0.67
39:BE:26:ILE:CG2	39:BE:196:VAL:HG21	2.24	0.67
41:BG:63:ILE:CA	41:BG:143:GLU:HG3	2.20	0.67
41:BG:101:ILE:O	41:BG:104:GLU:HB3	1.94	0.67
43:BK:99:ILE:HG23	43:BK:103:GLN:CB	2.19	0.67
52:BU:79:PHE:CE1	52:BU:83:LEU:HD11	2.30	0.67
53:BV:16:PRO:O	53:BV:96:ILE:O	2.12	0.67
24:AY:539:ILE:CA	24:AY:542:VAL:HG12	2.24	0.67
27:B2:13:ALA:HA	27:B2:16:LEU:CD1	2.24	0.67
30:B5:43:HIS:CD2	35:BA:2815:C:O2'	2.47	0.67
31:B6:6:ARG:HD2	31:B6:6:ARG:N	2.08	0.67
31:B6:11:LEU:HD23	31:B6:51:GLU:HG3	1.76	0.67
35:BA:1068:G:N2	35:BA:1096:A:H5'	2.09	0.67
35:BA:2291:U:H2'	35:BA:2292:C:C6	2.29	0.67
35:BA:2473:U:C3'	35:BA:2474:C:H5"	2.13	0.67
39:BE:101:ARG:NH1	39:BE:169:ASN:HD22	1.93	0.67
41:BG:119:GLY:HA3	41:BG:181:ARG:N	2.10	0.67
51:BT:33:LYS:NZ	51:BT:43:GLN:HE22	1.93	0.67
57:BZ:67:LEU:HD12	57:BZ:67:LEU:N	2.09	0.67
1:AA:101:A:O2'	1:AA:102:G:H5'	1.95	0.67
1:AA:1222:G:O2'	1:AA:1223:C:H5'	1.94	0.67
1:AA:1490:C:H6	1:AA:1490:C:H5'	1.60	0.67
1:AA:1515:C:O2'	1:AA:1516:G:H5'	1.95	0.67
3:AC:46:GLU:HB3	3:AC:83:ARG:HH22	1.60	0.67
6:AF:33:TYR:HA	6:AF:71:ARG:HH21	1.59	0.67
22:AV:6:G:H1	22:AV:67:C:H42	1.43	0.67
24:AY:84:THR:N	24:AY:85:PRO:HD2	2.03	0.67
24:AY:227:ILE:HD13	24:AY:242:LEU:HA	1.77	0.67
26:B1:11:ARG:HB2	26:B1:12:PRO:HD2	1.76	0.67
27:B2:2:LYS:CB	35:BA:97:C:H5"	2.24	0.67
28:B3:54:VAL:HG12	28:B3:55:ARG:N	2.09	0.67
35:BA:654(G):C:H2'	35:BA:654(H):G:C8	2.29	0.67
35:BA:1326:U:H5"	35:BA:2011:U:H1'	1.76	0.67
35:BA:2443:C:O2	35:BA:2443:C:H2'	1.93	0.67
35:BA:2840:C:H5"	49:BR:53:HIS:HD2	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BW:88:ARG:HD3	54:BW:94:ASP:OD2	1.94	0.67
56:BY:8:LYS:HE2	56:BY:72:VAL:HG23	1.77	0.67
1:AA:218:C:H5'	1:AA:470:C:H41	1.60	0.67
1:AA:1030(A):G:H1'	1:AA:1031:G:H1	1.58	0.67
2:AB:7:VAL:O	2:AB:11:LEU:HG	1.94	0.67
2:AB:24:TRP:CH2	2:AB:26:PRO:HA	2.29	0.67
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.76	0.67
8:AH:127:LEU:HB3	8:AH:129:VAL:CG1	2.25	0.67
18:AR:58:LEU:HB3	18:AR:62:GLU:HB3	1.77	0.67
22:AV:3:C:H2'	22:AV:4:G:H5'	1.77	0.67
30:B5:3:LYS:CE	35:BA:2613:U:H2'	2.25	0.67
35:BA:739:G:OP2	35:BA:739:G:C8	2.48	0.67
35:BA:806:C:OP2	47:BP:39:LYS:HD3	1.95	0.67
35:BA:1827:C:H2'	35:BA:1828:G:H5'	1.75	0.67
35:BA:2074:U:H2'	35:BA:2075:U:C6	2.29	0.67
40:BF:106:ARG:HH11	40:BF:106:ARG:CG	2.07	0.67
47:BP:34:GLY:O	47:BP:35:HIS:HB2	1.95	0.67
47:BP:115:LEU:N	47:BP:115:LEU:HD23	2.09	0.67
49:BR:84:ALA:HB3	49:BR:85:PRO:CD	2.19	0.67
57:BZ:67:LEU:HD23	57:BZ:90:VAL:HG11	1.76	0.67
57:BZ:167:PRO:O	57:BZ:168:GLU:HB2	1.94	0.67
1:AA:491:G:H2'	1:AA:492:G:H8	1.58	0.67
3:AC:20:SER:HB3	3:AC:40:ARG:HH22	1.60	0.67
8:AH:109:ILE:HG13	8:AH:120:THR:HB	1.76	0.67
12:AL:20:LYS:HD3	12:AL:20:LYS:H	1.59	0.67
14:AN:29:ARG:HH11	14:AN:29:ARG:CG	2.08	0.67
24:AY:141:LYS:O	24:AY:144:ALA:HB2	1.95	0.67
24:AY:343:ASN:HD22	24:AY:343:ASN:C	2.03	0.67
26:B1:4:VAL:CG2	26:B1:10:LYS:O	2.43	0.67
29:B4:1:MET:HG2	41:BG:98:ARG:NE	2.08	0.67
35:BA:120:U:O2'	35:BA:149:A:C8	2.47	0.67
35:BA:142:A:H5'	35:BA:142(A):C:OP2	1.94	0.67
35:BA:1697:G:H3'	35:BA:1698:A:C5'	2.24	0.67
35:BA:1853:A:H2'	35:BA:1854:A:C8	2.30	0.67
35:BA:2186:G:C2'	35:BA:2187:G:H5"	2.25	0.67
41:BG:144:ILE:HD11	41:BG:149:VAL:HB	1.76	0.67
42:BH:46:GLU:HG3	42:BH:51:ARG:N	2.10	0.67
42:BH:128:PRO:HG2	42:BH:129:THR:HG23	1.77	0.67
43:BK:106:GLU:CA	43:BK:109:LYS:HD3	2.23	0.67
45:BN:133:GLN:HE21	45:BN:135:PRO:CG	2.08	0.67
46:BO:24:VAL:CG2	46:BO:30:ALA:HB3	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:30:ASN:HD22	57:BZ:31:ARG:HG3	1.59	0.67
1:AA:1014:A:H4'	19:AS:14:HIS:ND1	2.10	0.67
4:AD:96:LEU:HD22	4:AD:96:LEU:N	2.10	0.67
5:AE:51:VAL:O	5:AE:55:VAL:HG23	1.96	0.67
8:AH:104:ARG:O	8:AH:105:ARG:C	2.38	0.67
10:AJ:3:LYS:NZ	10:AJ:77:PRO:HD2	2.10	0.67
11:AK:60:ALA:O	11:AK:61:ALA:C	2.36	0.67
12:AL:34:ARG:HG3	12:AL:105:TYR:CE2	2.28	0.67
25:B0:16:SER:HB2	35:BA:2262:U:H5	1.60	0.67
35:BA:1242:A:N1	47:BP:8:PRO:HG2	2.10	0.67
35:BA:2408:U:H2'	35:BA:2409:G:H8	1.60	0.67
37:BC:29:LEU:O	37:BC:32:GLU:HG2	1.94	0.67
40:BF:154:VAL:HG11	40:BF:193:VAL:HG23	1.77	0.67
42:BH:83:TYR:HB3	42:BH:135:GLY:N	2.08	0.67
46:BO:64:ARG:NE	51:BT:70:VAL:HG21	2.09	0.67
47:BP:30:THR:O	47:BP:33:ARG:N	2.22	0.67
57:BZ:84:GLU:O	57:BZ:85:HIS:HB2	1.93	0.67
1:AA:1497:G:O2'	1:AA:1498:U:H5'	1.96	0.66
3:AC:50:ALA:HA	3:AC:72:LYS:HB3	1.77	0.66
22:AV:46:G:O3'	22:AV:47:U:C6	2.47	0.66
24:AY:121:VAL:HG23	24:AY:122:TRP:N	2.09	0.66
24:AY:314:PHE:HD1	24:AY:315:LYS:HB2	1.56	0.66
35:BA:190:A:H2'	35:BA:191:A:C8	2.30	0.66
35:BA:445:C:O2'	35:BA:446:G:H5'	1.94	0.66
35:BA:1052:C:C6	35:BA:1052:C:C3'	2.75	0.66
35:BA:1943:U:O2	35:BA:1943:U:H2'	1.93	0.66
35:BA:2056:G:H2'	35:BA:2056:G:N3	2.09	0.66
35:BA:2762:G:C5'	35:BA:2762:G:H8	2.08	0.66
39:BE:179:GLU:O	39:BE:180:ASN:HB2	1.95	0.66
41:BG:61:ALA:HA	41:BG:64:THR:HG22	1.77	0.66
43:BK:77:LEU:H	43:BK:77:LEU:CD2	1.97	0.66
1:AA:1206:G:H4'	3:AC:192:THR:O	1.93	0.66
1:AA:1319:A:OP1	19:AS:10:PHE:CE1	2.49	0.66
4:AD:26:CYS:HA	4:AD:31:CYS:HA	1.75	0.66
10:AJ:32:ALA:N	10:AJ:78:ASN:ND2	2.43	0.66
17:AQ:63:ARG:HG2	17:AQ:64:PRO:HD2	1.76	0.66
26:B1:57:GLU:HG2	26:B1:58:ILE:H	1.59	0.66
26:B1:59:THR:O	26:B1:91:LYS:HE3	1.94	0.66
31:B6:19:ARG:HG2	35:BA:2400:G:O5'	1.95	0.66
35:BA:1677:A:H2'	35:BA:1678:G:C8	2.31	0.66
35:BA:1780:A:H5'	35:BA:1781:C:OP2	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2023:G:H5'	35:BA:2617:C:H4'	1.78	0.66
43:BK:79:ARG:HD2	43:BK:85:GLU:O	1.94	0.66
47:BP:30:THR:CG2	47:BP:31:ALA:H	2.08	0.66
47:BP:58:THR:O	47:BP:61:ARG:NE	2.19	0.66
1:AA:368:U:P	24:AY:353:ALA:HB1	2.35	0.66
4:AD:57:ARG:HH11	4:AD:57:ARG:CG	2.02	0.66
6:AF:15:ASP:C	6:AF:17:SER:H	2.03	0.66
10:AJ:55:LYS:H	10:AJ:55:LYS:HE3	1.59	0.66
12:AL:92:ASP:O	12:AL:94:PRO:HD3	1.95	0.66
32:B7:4:THR:HB	35:BA:788:A:O2'	1.96	0.66
35:BA:481:G:H2'	35:BA:507:A:N1	2.10	0.66
35:BA:2097:C:H2'	35:BA:2098:U:H6	1.60	0.66
36:BB:112:U:H2'	36:BB:113:G:H8	1.61	0.66
38:BD:158:ALA:O	38:BD:196:VAL:HG11	1.96	0.66
40:BF:154:VAL:HG11	40:BF:193:VAL:CG2	2.26	0.66
42:BH:89:ILE:C	42:BH:89:ILE:HD12	2.21	0.66
45:BN:87:LEU:HD22	45:BN:91:LEU:HG	1.77	0.66
47:BP:96:THR:O	47:BP:99:LEU:HB3	1.96	0.66
50:BS:13:ARG:HG3	50:BS:14:VAL:H	1.60	0.66
50:BS:17:ARG:O	50:BS:20:ARG:HG2	1.95	0.66
56:BY:87:LYS:O	56:BY:88:LYS:HB2	1.95	0.66
57:BZ:115:GLY:H	57:BZ:177:PRO:CG	2.07	0.66
1:AA:398:C:O2'	1:AA:399:G:H5'	1.96	0.66
1:AA:675:A:O2'	1:AA:676:A:H5'	1.95	0.66
10:AJ:4:ILE:HD13	10:AJ:74:ILE:HG13	1.78	0.66
17:AQ:69:LYS:O	17:AQ:70:ARG:CD	2.41	0.66
35:BA:2228:G:H2'	35:BA:2229:C:C6	2.31	0.66
36:BB:54:G:H2'	36:BB:55:U:H6	1.59	0.66
43:BK:134:MET:HG3	43:BK:136:VAL:HG12	1.77	0.66
47:BP:23:PRO:HB2	47:BP:33:ARG:CG	2.25	0.66
51:BT:118:ARG:HA	51:BT:121:ILE:HD12	1.77	0.66
1:AA:980:C:C5	1:AA:981:U:C2	2.80	0.66
1:AA:1130:A:H5'	9:AI:18:PHE:HE2	1.61	0.66
4:AD:57:ARG:HG2	4:AD:57:ARG:NH1	2.08	0.66
12:AL:119:LYS:HB2	12:AL:120:TYR:CD1	2.31	0.66
24:AY:6:GLU:O	24:AY:6:GLU:HG2	1.94	0.66
26:B1:86:SER:CB	26:B1:89:GLU:HB2	2.22	0.66
29:B4:50:VAL:O	29:B4:51:ASP:HB3	1.95	0.66
31:B6:5:VAL:HG12	31:B6:6:ARG:N	2.10	0.66
38:BD:270:ILE:CD1	38:BD:270:ILE:H	2.08	0.66
41:BG:131:TYR:HB3	41:BG:159:VAL:CG1	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:85:LYS:HB3	51:BT:85:LYS:HZ3	1.58	0.66
52:BU:107:ALA:HA	52:BU:110:VAL:CG2	2.25	0.66
1:AA:630:G:H2'	1:AA:631:G:H5"	1.78	0.66
1:AA:1108:G:H5'	3:AC:176:HIS:CD2	2.30	0.66
1:AA:1392:G:N2	1:AA:1502:A:H8	1.93	0.66
2:AB:222:ILE:HB	2:AB:226:ARG:HH21	1.61	0.66
5:AE:64:ARG:CZ	5:AE:64:ARG:HB2	2.26	0.66
10:AJ:30:SER:HA	10:AJ:80:LYS:HE2	1.75	0.66
22:AV:38:A:O2'	22:AV:39:C:H5'	1.94	0.66
29:B4:8:LYS:HD3	29:B4:9:LEU:O	1.95	0.66
35:BA:68:G:H2'	35:BA:69:C:C6	2.30	0.66
35:BA:675:A:OP1	40:BF:63:LYS:HE2	1.95	0.66
35:BA:2260:C:H2'	35:BA:2261:C:H6	1.60	0.66
35:BA:2498:C:O2'	35:BA:2499:C:H5'	1.95	0.66
35:BA:2524:G:H5'	35:BA:2524:G:C8	2.30	0.66
35:BA:2761:G:C3'	35:BA:2762:G:H5"	2.26	0.66
35:BA:2884:U:H2'	35:BA:2885:C:H5'	1.77	0.66
38:BD:35:LYS:HB3	38:BD:35:LYS:NZ	2.10	0.66
41:BG:49:ASP:O	41:BG:50:ALA:HB3	1.94	0.66
41:BG:111:LEU:HA	41:BG:114:ILE:HD11	1.77	0.66
47:BP:23:PRO:O	47:BP:33:ARG:HD2	1.95	0.66
52:BU:92:ARG:NH1	53:BV:11:GLN:O	2.22	0.66
2:AB:109:SER:O	2:AB:112:VAL:HB	1.95	0.66
3:AC:9:GLY:HA2	3:AC:12:LEU:HG	1.77	0.66
10:AJ:67:THR:HG22	10:AJ:67:THR:O	1.95	0.66
12:AL:28:LYS:O	12:AL:29:GLY:C	2.38	0.66
15:AO:11:VAL:O	15:AO:14:GLU:HB3	1.95	0.66
20:AT:30:LYS:NZ	20:AT:34:LYS:HE2	2.10	0.66
24:AY:100:VAL:HG23	24:AY:329:ARG:HG2	1.77	0.66
24:AY:486:THR:HG21	24:AY:602:LEU:HD11	1.78	0.66
24:AY:554:PRO:HG3	24:AY:594:VAL:HG12	1.78	0.66
25:B0:10:THR:HG21	35:BA:2277:G:OP2	1.95	0.66
26:B1:80:LEU:HB3	26:B1:82:LEU:HD11	1.78	0.66
35:BA:1142:U:O5'	35:BA:1142:U:H6	1.79	0.66
35:BA:2131:G:H5'	35:BA:2133:G:C1'	2.25	0.66
35:BA:2408:U:H2'	35:BA:2409:G:C8	2.31	0.66
38:BD:129:ASN:O	38:BD:193:VAL:HG12	1.96	0.66
41:BG:173:LEU:HA	41:BG:176:LEU:HD12	1.78	0.66
42:BH:149:ARG:HA	42:BH:162:ILE:CD1	2.25	0.66
47:BP:79:ARG:O	47:BP:111:ARG:HB2	1.94	0.66
57:BZ:4:ARG:O	57:BZ:5:LEU:HB2	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:42:VAL:HG13	57:BZ:43:GLU:N	2.08	0.66
1:AA:1370:G:C2	1:AA:1371:G:C8	2.84	0.66
4:AD:158:ILE:CG2	4:AD:162:LEU:HD12	2.25	0.66
8:AH:12:ARG:NH1	8:AH:27:PRO:HD3	2.11	0.66
12:AL:18:VAL:HG23	12:AL:19:ARG:N	2.10	0.66
22:AV:75:C:HO2'	26:B1:30:VAL:HG11	1.61	0.66
24:AY:71:THR:HG21	24:AY:357:ARG:CD	2.26	0.66
24:AY:395:PRO:O	24:AY:397:VAL:N	2.28	0.66
35:BA:83:G:N2	35:BA:102:G:H2'	2.11	0.66
35:BA:252:G:OP2	47:BP:50:ARG:NH2	2.28	0.66
35:BA:654(N):G:C2'	35:BA:654(O):G:H5'	2.25	0.66
35:BA:940:G:H5'	35:BA:941:A:OP2	1.94	0.66
35:BA:2150:U:H2'	35:BA:2151:G:H8	1.58	0.66
35:BA:2199:A:H3'	35:BA:2200:C:H6	1.59	0.66
35:BA:2796:U:H3'	35:BA:2799:C:C5'	2.26	0.66
35:BA:2855:C:H2'	35:BA:2856:C:H6	1.61	0.66
41:BG:46:ALA:HB2	41:BG:88:ILE:HG12	1.78	0.66
50:BS:95:HIS:CG	50:BS:96:GLY:H	2.13	0.66
53:BV:24:LYS:HA	53:BV:92:THR:HG23	1.76	0.66
1:AA:1219:U:H2'	1:AA:1220:G:H8	1.61	0.66
1:AA:1489:G:C3'	1:AA:1490:C:H5"	2.26	0.66
2:AB:112:VAL:CG2	2:AB:149:LEU:HD13	2.26	0.66
3:AC:84:ILE:O	3:AC:88:ARG:HG3	1.96	0.66
8:AH:50:ARG:HG2	8:AH:50:ARG:NH1	2.08	0.66
11:AK:17:GLY:O	11:AK:80:VAL:HA	1.96	0.66
14:AN:41:ARG:HG2	14:AN:41:ARG:HH11	1.60	0.66
16:AP:53:VAL:HG23	16:AP:54:GLU:H	1.59	0.66
24:AY:530:VAL:HG22	24:AY:531:GLY:N	2.11	0.66
27:B2:2:LYS:HB2	35:BA:97:C:H5"	1.76	0.66
33:B8:29:LYS:HG2	33:B8:29:LYS:O	1.94	0.66
35:BA:295:G:H2'	35:BA:296:C:H6	1.59	0.66
35:BA:552:G:H5'	35:BA:552:G:H8	1.61	0.66
35:BA:2055:C:H4'	35:BA:2056:G:H5"	1.76	0.66
35:BA:2832:U:H1'	35:BA:2834:G:N3	2.11	0.66
35:BA:2850:A:H5'	35:BA:2868:A:H2	1.59	0.66
36:BB:77:U:O2'	36:BB:78:A:H5'	1.95	0.66
38:BD:142:VAL:HG23	38:BD:192:THR:C	2.20	0.66
42:BH:127:GLU:HB3	42:BH:128:PRO:HD2	1.77	0.66
43:BK:21:PRO:HA	43:BK:23:VAL:H	1.61	0.66
45:BN:23:LEU:CB	45:BN:60:ILE:HG21	2.26	0.66
47:BP:135:LEU:HD13	47:BP:135:LEU:O	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:54:LEU:HD23	49:BR:66:VAL:HG22	1.76	0.66
50:BS:85:VAL:HG23	50:BS:106:ARG:HG3	1.78	0.66
57:BZ:23:LYS:HD3	57:BZ:38:TYR:CE2	2.31	0.66
1:AA:183:G:H2'	1:AA:184:G:C8	2.31	0.66
3:AC:14:ILE:CG1	3:AC:15:THR:N	2.58	0.66
10:AJ:4:ILE:HB	10:AJ:74:ILE:HD11	1.78	0.66
19:AS:6:LYS:HD2	19:AS:7:LYS:N	2.10	0.66
24:AY:221:ALA:C	24:AY:223:PHE:H	2.02	0.66
24:AY:252:ASP:HB2	24:AY:254:LYS:HG2	1.77	0.66
24:AY:252:ASP:O	24:AY:253:LEU:HB2	1.96	0.66
24:AY:265:LYS:O	24:AY:267:LYS:HG3	1.96	0.66
31:B6:11:LEU:HD13	31:B6:11:LEU:C	2.18	0.66
33:B8:50:LEU:C	33:B8:53:PRO:HD2	2.21	0.66
35:BA:510:C:O2'	35:BA:511:U:H5'	1.96	0.66
35:BA:1960:A:H5"	35:BA:1960:A:H8	1.61	0.66
35:BA:2122:U:H2'	35:BA:2123:G:H8	1.60	0.66
35:BA:2205:C:H5'	35:BA:2206:G:OP2	1.96	0.66
35:BA:2461:C:O2	35:BA:2461:C:H2'	1.95	0.66
40:BF:28:ILE:HD13	40:BF:28:ILE:H	1.61	0.66
51:BT:107:ASP:CG	51:BT:108:ARG:N	2.54	0.66
2:AB:121:LEU:HD22	2:AB:126:GLU:HB2	1.77	0.65
2:AB:148:TYR:O	2:AB:149:LEU:HD23	1.96	0.65
16:AP:9:PHE:CE2	16:AP:18:ARG:CZ	2.80	0.65
18:AR:44:LEU:HD11	18:AR:70:ILE:HG21	1.78	0.65
24:AY:82:ILE:HD12	24:AY:101:LEU:CD2	2.22	0.65
33:B8:4:MET:CE	33:B8:61:LEU:HD22	2.26	0.65
35:BA:7:G:O2'	35:BA:8:A:H5'	1.95	0.65
35:BA:302:C:P	56:BY:73:ARG:HH12	2.19	0.65
35:BA:621:A:H2'	35:BA:622:G:H5'	1.77	0.65
35:BA:1782:C:C2'	35:BA:1783:A:H5'	2.25	0.65
35:BA:1831:G:H2'	35:BA:1832:C:C6	2.31	0.65
35:BA:2307:G:H21	35:BA:2308:G:C5'	2.08	0.65
36:BB:26:A:H2'	36:BB:27:C:H6	1.59	0.65
37:BC:215:VAL:HG23	37:BC:225:ILE:HG12	1.76	0.65
47:BP:114:ILE:HD12	47:BP:115:LEU:N	2.11	0.65
48:BQ:108:GLY:O	48:BQ:109:VAL:CG2	2.44	0.65
52:BU:95:LEU:CD1	53:BV:11:GLN:HG3	2.24	0.65
1:AA:1490:C:H5'	1:AA:1490:C:C6	2.30	0.65
3:AC:35:GLU:OE1	3:AC:97:LYS:HE3	1.95	0.65
4:AD:29:PRO:C	4:AD:30:LYS:HG2	2.20	0.65
5:AE:72:GLN:O	5:AE:73:ASN:HB2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:43:LEU:HB3	20:AT:48:LYS:HB2	1.77	0.65
35:BA:544:G:H21	35:BA:547:A:H2'	1.61	0.65
35:BA:582:G:H2'	35:BA:583:G:C8	2.30	0.65
35:BA:1012:U:C5	45:BN:28:THR:HG21	2.31	0.65
35:BA:2051:A:H4'	39:BE:141:ILE:CD1	2.26	0.65
39:BE:81:ILE:O	39:BE:81:ILE:HG22	1.96	0.65
54:BW:68:ARG:CA	54:BW:110:LYS:HG2	2.26	0.65
56:BY:28:LYS:C	56:BY:38:ILE:HG22	2.21	0.65
1:AA:1053:G:N7	1:AA:1200:C:C5'	2.60	0.65
2:AB:223:ILE:HA	2:AB:226:ARG:HB3	1.77	0.65
6:AF:78:GLU:OE1	6:AF:78:GLU:HA	1.96	0.65
24:AY:97:SER:O	24:AY:100:VAL:HG13	1.97	0.65
24:AY:457:LEU:O	24:AY:461:ILE:HG13	1.95	0.65
35:BA:902:C:H2'	35:BA:903:C:C6	2.31	0.65
35:BA:1386:C:H2'	35:BA:1387:C:H6	1.61	0.65
37:BC:127:LYS:O	37:BC:128:LEU:HG	1.96	0.65
39:BE:177:PRO:HG2	39:BE:178:GLU:H	1.60	0.65
47:BP:77:ARG:HB2	47:BP:78:PRO:HD2	1.79	0.65
54:BW:37:ARG:NH1	54:BW:37:ARG:HG3	2.12	0.65
56:BY:67:LEU:HD11	56:BY:71:LYS:HE2	1.79	0.65
1:AA:328:C:O2	1:AA:328:C:H2'	1.95	0.65
2:AB:74:LYS:O	2:AB:75:LYS:C	2.40	0.65
2:AB:137:ARG:C	2:AB:137:ARG:HD3	2.22	0.65
13:AM:51:ALA:O	13:AM:55:ARG:HB3	1.97	0.65
19:AS:64:GLU:HG2	29:B4:48:ARG:NH2	2.11	0.65
24:AY:459:LEU:H	24:AY:459:LEU:HD12	1.61	0.65
35:BA:271(E):U:H2'	35:BA:271(F):C:C6	2.31	0.65
35:BA:962:G:O2'	35:BA:963:U:H5'	1.96	0.65
35:BA:1010:A:H1'	35:BA:1153:C:H1'	1.79	0.65
35:BA:1218:C:H2'	35:BA:1219:G:H8	1.61	0.65
39:BE:63:LEU:O	39:BE:64:LYS:C	2.39	0.65
42:BH:86:GLU:CB	42:BH:132:ARG:HB3	2.27	0.65
45:BN:73:THR:HG23	45:BN:82:LEU:HD11	1.77	0.65
46:BO:2:ILE:CD1	46:BO:82:ASN:HD22	2.09	0.65
51:BT:65:LYS:HA	51:BT:65:LYS:NZ	2.11	0.65
54:BW:68:ARG:O	54:BW:109:GLU:HA	1.97	0.65
55:BX:41:ASN:C	55:BX:43:VAL:H	2.04	0.65
1:AA:66:G:H4'	1:AA:173:U:C5	2.31	0.65
13:AM:68:GLY:H	13:AM:71:ARG:CB	2.08	0.65
24:AY:125:ALA:C	24:AY:127:LYS:H	2.05	0.65
25:B0:48:GLY:HA3	25:B0:80:HIS:HD1	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:11:LEU:HG	31:B6:26:ASN:HD21	1.60	0.65
33:B8:51:ALA:C	33:B8:53:PRO:HD2	2.20	0.65
35:BA:139(A):G:N2	55:BX:44:GLU:OE2	2.30	0.65
35:BA:528:A:C2	35:BA:2043:C:H4'	2.31	0.65
35:BA:1163:G:O2'	35:BA:1164:G:H5'	1.95	0.65
35:BA:1658:C:OP1	39:BE:132:HIS:O	2.15	0.65
40:BF:17:ARG:HG3	40:BF:17:ARG:NH1	2.11	0.65
43:BK:93:ARG:HG3	57:BZ:112:ARG:NE	2.11	0.65
47:BP:112:LEU:HD22	47:BP:113:LYS:N	2.11	0.65
50:BS:95:HIS:CG	50:BS:96:GLY:N	2.65	0.65
1:AA:129(A):G:H5"	1:AA:129(A):G:C8	2.31	0.65
1:AA:773:G:C2'	1:AA:774:G:H5'	2.26	0.65
1:AA:781:A:C3'	1:AA:782:A:H5'	2.26	0.65
1:AA:1189:C:H5"	3:AC:5:ILE:HG21	1.77	0.65
2:AB:140:HIS:O	2:AB:143:GLU:HB2	1.97	0.65
18:AR:37:VAL:C	18:AR:39:VAL:H	2.04	0.65
20:AT:97:ALA:O	20:AT:99:LEU:HD23	1.96	0.65
24:AY:90:PHE:HZ	58:AY:701:FUA:H121	1.60	0.65
24:AY:252:ASP:HB2	24:AY:254:LYS:CE	2.22	0.65
24:AY:652:MET:HG3	24:AY:652:MET:O	1.95	0.65
31:B6:6:ARG:HD2	31:B6:6:ARG:H	1.62	0.65
35:BA:212:G:H5'	35:BA:212:G:C8	2.23	0.65
35:BA:1656:C:H2'	35:BA:1657:C:C6	2.32	0.65
35:BA:2076:U:H5'	35:BA:2238:G:N2	2.11	0.65
35:BA:2103:C:C2'	35:BA:2104:G:H5"	2.25	0.65
35:BA:2346:A:C2	35:BA:2383:G:C2	2.84	0.65
40:BF:116:ASP:OD2	47:BP:5:ASP:HB2	1.97	0.65
42:BH:12:PRO:HB2	42:BH:15:VAL:CG1	2.22	0.65
42:BH:89:ILE:O	42:BH:89:ILE:HG13	1.97	0.65
43:BK:37:PHE:O	43:BK:41:PHE:HB3	1.96	0.65
48:BQ:56:ARG:HA	48:BQ:56:ARG:NE	2.11	0.65
50:BS:98:VAL:HG12	50:BS:100:ALA:H	1.62	0.65
51:BT:92:GLY:C	51:BT:94:ALA:H	2.04	0.65
52:BU:112:ARG:NH2	53:BV:46:VAL:HG11	2.12	0.65
57:BZ:77:ASP:C	57:BZ:78:LYS:HD3	2.21	0.65
1:AA:261:U:O2	1:AA:263:A:C8	2.50	0.65
1:AA:1003:G:C2	1:AA:1004:A:H1'	2.32	0.65
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.50	0.65
2:AB:55:PHE:HA	2:AB:58:ILE:HD12	1.77	0.65
3:AC:142:MET:CE	3:AC:171:GLY:HA3	2.27	0.65
24:AY:343:ASN:HD22	24:AY:344:THR:N	1.94	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:56:GLN:HE21	26:B1:56:GLN:CA	1.96	0.65
31:B6:54:ILE:HD11	35:BA:2420:C:H5'	1.78	0.65
35:BA:139(A):G:H22	55:BX:44:GLU:CD	2.05	0.65
35:BA:624:C:N4	47:BP:107:LYS:HZ2	1.94	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	1.62	0.65
35:BA:1438:U:O2'	35:BA:1439:A:H5'	1.96	0.65
35:BA:2892:A:H62	35:BA:2893:G:N2	1.94	0.65
41:BG:63:ILE:C	41:BG:63:ILE:HD12	2.21	0.65
43:BK:77:LEU:HD13	43:BK:110:GLN:OE1	1.96	0.65
1:AA:197:A:H4'	1:AA:198:G:H5'	1.78	0.65
1:AA:1325:C:H2'	1:AA:1326:C:C6	2.32	0.65
1:AA:1409:C:O2'	1:AA:1410:G:H5'	1.97	0.65
4:AD:25:ARG:HH12	4:AD:30:LYS:HB2	1.62	0.65
4:AD:119:GLN:HG3	4:AD:123:HIS:NE2	2.12	0.65
29:B4:9:LEU:C	29:B4:10:VAL:HG12	2.22	0.65
35:BA:385:C:O2	47:BP:71:VAL:HG21	1.96	0.65
35:BA:803:U:C2'	35:BA:804:A:H5'	2.26	0.65
35:BA:1362:C:O2'	35:BA:1363:C:H5'	1.96	0.65
37:BC:95:VAL:HG12	37:BC:96:GLY:H	1.60	0.65
40:BF:20:LEU:HD23	40:BF:21:ALA:CB	2.27	0.65
42:BH:148:ILE:O	42:BH:151:ILE:HG12	1.97	0.65
48:BQ:39:PRO:HB3	48:BQ:99:PRO:HD3	1.79	0.65
49:BR:45:ARG:HG3	49:BR:46:GLY:H	1.60	0.65
54:BW:82:LEU:N	54:BW:82:LEU:HD12	2.11	0.65
1:AA:159:G:C2'	1:AA:160:A:H5"	2.27	0.65
1:AA:499:A:H4'	1:AA:500:G:OP1	1.95	0.65
1:AA:1513:A:H2'	1:AA:1514:C:H6	1.61	0.65
2:AB:60:ASP:O	2:AB:64:ARG:NH2	2.29	0.65
5:AE:76:ILE:HD11	5:AE:142:LEU:CD2	2.26	0.65
18:AR:69:THR:O	18:AR:72:ARG:HB2	1.96	0.65
24:AY:18:ALA:O	24:AY:19:ALA:HB2	1.96	0.65
24:AY:519:ARG:HH11	24:AY:677:GLN:HB2	1.61	0.65
35:BA:310:A:OP2	56:BY:18:GLY:HA2	1.97	0.65
35:BA:363(B):G:H2'	35:BA:363(C):G:C8	2.32	0.65
35:BA:1820:U:C2	38:BD:202:LYS:HG2	2.32	0.65
35:BA:2189:U:H2'	35:BA:2190:G:H5"	1.78	0.65
35:BA:2573:C:O2	35:BA:2573:C:C2'	2.43	0.65
36:BB:7:G:H5'	50:BS:29:PHE:CD2	2.32	0.65
42:BH:105:LEU:HD23	42:BH:113:VAL:HB	1.77	0.65
47:BP:59:LEU:HA	47:BP:61:ARG:CZ	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BU:76:TYR:O	52:BU:79:PHE:HB3	1.97	0.65
55:BX:35:THR:O	55:BX:39:ILE:HG12	1.96	0.65
57:BZ:78:LYS:N	57:BZ:78:LYS:CD	2.59	0.65
1:AA:368:U:OP1	24:AY:353:ALA:HB1	1.97	0.65
4:AD:13:ARG:O	4:AD:16:GLY:N	2.26	0.65
18:AR:66:LEU:HG	18:AR:70:ILE:HD11	1.79	0.65
25:B0:25:ARG:HD2	25:B0:29:GLN:HE21	1.60	0.65
30:B5:56:LYS:CG	30:B5:57:VAL:H	2.09	0.65
35:BA:271(H):G:H1	35:BA:271(P):C:H42	1.45	0.65
35:BA:811:U:O2'	35:BA:812:C:H5"	1.97	0.65
35:BA:1791:A:C6	35:BA:1829:A:H5'	2.32	0.65
35:BA:2171:A:H1'	35:BA:2172:U:C5	2.32	0.65
35:BA:2347:C:H2'	35:BA:2348:U:C6	2.31	0.65
35:BA:2668:G:O2'	35:BA:2669:G:H5'	1.97	0.65
36:BB:82:G:C2'	36:BB:83:G:H5'	2.27	0.65
38:BD:35:LYS:HG2	38:BD:63:ARG:HG3	1.77	0.65
38:BD:248:SER:HB2	38:BD:249:PRO:HD2	1.79	0.65
40:BF:174:VAL:HG21	40:BF:189:THR:HG21	1.78	0.65
42:BH:159:GLU:HG3	42:BH:160:LYS:N	2.11	0.65
42:BH:159:GLU:OE1	42:BH:159:GLU:HA	1.97	0.65
45:BN:82:LEU:HD23	45:BN:82:LEU:C	2.22	0.65
1:AA:67:C:H2'	1:AA:68:G:C8	2.32	0.64
1:AA:452:A:H4'	16:AP:72:ARG:CZ	2.27	0.64
1:AA:509:A:C2	1:AA:510:A:C2	2.85	0.64
1:AA:865:A:H5'	1:AA:1078:U:O4	1.96	0.64
3:AC:10:PHE:CZ	3:AC:178:LEU:HD11	2.33	0.64
16:AP:1:MET:HE2	16:AP:65:GLN:HG3	1.79	0.64
16:AP:53:VAL:HG23	16:AP:54:GLU:N	2.11	0.64
17:AQ:59:ILE:HG23	17:AQ:71:PHE:CB	2.26	0.64
24:AY:228:MET:O	24:AY:231:TYR:HB3	1.97	0.64
29:B4:14:ILE:N	29:B4:14:ILE:HD12	2.11	0.64
29:B4:21:VAL:O	29:B4:21:VAL:HG12	1.96	0.64
35:BA:6:A:O2'	45:BN:130:HIS:HB2	1.96	0.64
35:BA:565:C:O2'	35:BA:566:U:H5'	1.97	0.64
35:BA:654(M):C:O2'	35:BA:654(N):G:H8	1.80	0.64
35:BA:962:G:H2'	35:BA:963:U:O4'	1.98	0.64
35:BA:1819:A:H4'	35:BA:1820:U:C5'	2.27	0.64
35:BA:1841:U:H2'	35:BA:1842:G:C8	2.32	0.64
40:BF:4:VAL:HG13	40:BF:19:GLU:OE2	1.96	0.64
43:BK:75:SER:O	43:BK:79:ARG:HG3	1.96	0.64
46:BO:69:ILE:HD12	46:BO:69:ILE:H	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:24:LEU:HD12	57:BZ:41:LEU:HD21	1.79	0.64
1:AA:297:G:H4'	1:AA:557:G:H4'	1.79	0.64
1:AA:598:U:H2'	1:AA:599:C:H6	1.62	0.64
1:AA:1038:C:H2'	1:AA:1039:C:C5	2.32	0.64
5:AE:101:ILE:O	5:AE:101:ILE:HG12	1.97	0.64
6:AF:16:GLN:CD	6:AF:16:GLN:N	2.55	0.64
16:AP:25:ARG:HH11	16:AP:25:ARG:CG	1.99	0.64
22:AV:17:C:C6	22:AV:17(A):U:C5	2.76	0.64
24:AY:404:VAL:N	24:AY:405:PRO:HD3	2.12	0.64
24:AY:406:GLU:CB	24:AY:407:PRO:HD2	2.27	0.64
30:B5:3:LYS:HZ2	30:B5:5:PRO:HD2	1.60	0.64
31:B6:50:ARG:HG3	31:B6:51:GLU:O	1.96	0.64
35:BA:259:G:H21	35:BA:621:A:H8	1.44	0.64
35:BA:359:A:H2'	35:BA:360:G:O4'	1.98	0.64
35:BA:365:C:H6	35:BA:365:C:H5'	1.63	0.64
35:BA:671:C:O2'	35:BA:672:C:H5'	1.97	0.64
35:BA:1142(A):A:O2'	35:BA:1143:A:H5"	1.96	0.64
35:BA:1485:G:H1'	35:BA:1505:C:H42	1.63	0.64
35:BA:1654:A:H2	39:BE:113:PHE:CD2	2.14	0.64
35:BA:2840:C:H5"	49:BR:53:HIS:CD2	2.32	0.64
37:BC:29:LEU:HD23	37:BC:29:LEU:C	2.23	0.64
47:BP:108:LYS:HD2	47:BP:108:LYS:N	2.13	0.64
52:BU:84:LYS:C	52:BU:86:ALA:H	2.06	0.64
56:BY:7:VAL:HB	56:BY:8:LYS:CD	2.25	0.64
1:AA:1364:U:O2	1:AA:1364:U:C2'	2.46	0.64
3:AC:94:LEU:O	3:AC:94:LEU:CD1	2.45	0.64
6:AF:37:VAL:CG1	6:AF:38:GLU:H	2.08	0.64
19:AS:9:VAL:HG21	29:B4:53:GLU:HG2	1.80	0.64
20:AT:26:ASN:N	20:AT:26:ASN:ND2	2.46	0.64
31:B6:11:LEU:HG	31:B6:26:ASN:ND2	2.13	0.64
31:B6:16:CYS:O	31:B6:17:LYS:HB2	1.97	0.64
35:BA:139:G:H1	35:BA:142(A):C:H42	1.44	0.64
35:BA:2305:A:C4	41:BG:154:GLY:HA3	2.32	0.64
35:BA:2873:A:H4'	49:BR:8:ARG:NH2	2.13	0.64
36:BB:81:G:H2'	36:BB:82:G:H5'	1.80	0.64
39:BE:51:PHE:N	39:BE:74:PRO:HG3	2.12	0.64
40:BF:4:VAL:HG22	40:BF:19:GLU:OE1	1.97	0.64
40:BF:157:VAL:HG23	40:BF:157:VAL:O	1.96	0.64
41:BG:97:ASP:H	41:BG:100:TRP:CD1	2.03	0.64
46:BO:13:ASN:HD21	46:BO:97:ARG:CG	2.11	0.64
50:BS:59:LYS:HG2	50:BS:60:GLY:N	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:89:VAL:C	51:BT:91:ARG:H	2.04	0.64
51:BT:108:ARG:HG3	51:BT:109:GLU:N	2.11	0.64
52:BU:49:HIS:HA	52:BU:52:ARG:HB2	1.78	0.64
53:BV:15:GLU:CB	53:BV:16:PRO:HD2	2.27	0.64
56:BY:91:GLU:O	56:BY:92:ASN:HB2	1.96	0.64
1:AA:1392:G:N2	1:AA:1502:A:C8	2.66	0.64
2:AB:12:GLU:HA	2:AB:16:HIS:ND1	2.12	0.64
4:AD:17:VAL:O	4:AD:17:VAL:CG1	2.45	0.64
6:AF:4:TYR:CE1	6:AF:92:LYS:HD2	2.32	0.64
10:AJ:47:PHE:CE2	14:AN:37:PHE:CE1	2.86	0.64
13:AM:37:THR:HG21	13:AM:56:LEU:CD2	2.27	0.64
19:AS:41:VAL:O	19:AS:41:VAL:CG2	2.45	0.64
27:B2:64:LEU:HD13	27:B2:64:LEU:C	2.23	0.64
31:B6:8:LYS:NZ	35:BA:2285:C:C5	2.65	0.64
31:B6:10:LEU:HD12	33:B8:34:TRP:HB2	1.78	0.64
33:B8:50:LEU:CD1	33:B8:51:ALA:H	2.10	0.64
35:BA:654(V):A:H3'	35:BA:655:A:H2'	1.78	0.64
35:BA:1814:G:C3'	35:BA:1815:A:H5"	2.22	0.64
39:BE:9:VAL:HG22	39:BE:25:VAL:HB	1.79	0.64
41:BG:71:THR:HG23	41:BG:90:LEU:N	2.11	0.64
42:BH:19:VAL:CG1	42:BH:20:ALA:H	2.10	0.64
42:BH:96:ALA:HB1	42:BH:103:LEU:HD11	1.79	0.64
45:BN:57:ALA:H	45:BN:124:ALA:HA	1.60	0.64
47:BP:101:VAL:HA	47:BP:107:LYS:H	1.62	0.64
53:BV:5:VAL:HG23	53:BV:37:VAL:O	1.97	0.64
4:AD:18:LYS:C	4:AD:19:LEU:HD12	2.22	0.64
7:AG:4:ARG:HD3	7:AG:5:ARG:NH1	2.12	0.64
13:AM:23:TYR:HE1	13:AM:70:LEU:HD22	1.62	0.64
22:AV:3:C:H42	22:AV:70:G:H1	1.45	0.64
30:B5:4:HIS:O	35:BA:2056:G:N2	2.31	0.64
35:BA:58:G:H1	35:BA:69:C:H42	1.45	0.64
35:BA:710:G:H1	35:BA:721:C:H42	1.46	0.64
35:BA:1168:G:H2'	35:BA:1169:G:C8	2.33	0.64
35:BA:1245:G:C5'	40:BF:34:TRP:HZ2	2.11	0.64
35:BA:1682:G:H2'	35:BA:1683:C:C6	2.31	0.64
35:BA:2556:C:H2'	35:BA:2557:G:O4'	1.96	0.64
36:BB:87:G:C3'	36:BB:88:C:H5"	2.28	0.64
47:BP:122:PRO:O	47:BP:123:LEU:HB3	1.97	0.64
48:BQ:110:THR:CG2	48:BQ:113:GLN:HG3	2.27	0.64
56:BY:96:ILE:HD12	56:BY:99:CYS:SG	2.38	0.64
57:BZ:107:THR:HG23	57:BZ:111:VAL:CB	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:283:C:O5’	1:AA:283:C:H6	1.80	0.64
1:AA:318:G:O2’	1:AA:319:G:H5’	1.97	0.64
1:AA:1148:U:H2’	1:AA:1149:C:O4’	1.97	0.64
6:AF:37:VAL:O	6:AF:38:GLU:HG3	1.97	0.64
24:AY:282:SER:O	24:AY:284:LEU:N	2.31	0.64
24:AY:423:LYS:CB	24:AY:472:VAL:HG22	2.19	0.64
26:B1:47:GLN:HG3	35:BA:2091:U:O2’	1.97	0.64
35:BA:2469:A:H2	35:BA:2481:G:H21	1.45	0.64
35:BA:2893:G:H5’	35:BA:2894:G:H5’	1.78	0.64
40:BF:192:LEU:HD21	40:BF:194:MET:HG3	1.77	0.64
52:BU:109:LEU:O	52:BU:110:VAL:C	2.41	0.64
53:BV:28:GLU:CB	53:BV:31:ALA:HB2	2.25	0.64
57:BZ:103:ARG:HG3	57:BZ:103:ARG:NH1	2.11	0.64
4:AD:203:VAL:O	4:AD:206:PHE:HB3	1.98	0.64
7:AG:18:TYR:CD2	7:AG:59:LEU:HD13	2.33	0.64
9:AI:8:GLY:CA	9:AI:79:LEU:HD12	2.28	0.64
9:AI:79:LEU:CD1	9:AI:83:ARG:HD2	2.16	0.64
10:AJ:3:LYS:O	10:AJ:100:THR:HG23	1.98	0.64
10:AJ:30:SER:HG	10:AJ:81:THR:HG22	1.60	0.64
12:AL:18:VAL:O	12:AL:19:ARG:HB3	1.97	0.64
24:AY:357:ARG:HH21	24:AY:373:ASP:CG	2.06	0.64
24:AY:401:SER:O	24:AY:403:GLU:HG3	1.98	0.64
26:B1:81:LYS:NZ	35:BA:271(H):G:O3’	2.29	0.64
26:B1:88:LYS:O	26:B1:92:LYS:HB2	1.98	0.64
30:B5:41:PRO:O	30:B5:44:THR:OG1	2.14	0.64
31:B6:30:THR:HG22	31:B6:32:ASN:ND2	2.12	0.64
35:BA:191:A:H2’	35:BA:192:C:H6	1.63	0.64
35:BA:958:U:C6	35:BA:958:U:C3’	2.81	0.64
35:BA:1204:A:H61	35:BA:1240:U:H2’	1.63	0.64
35:BA:2103:C:N4	35:BA:2186:G:H1	1.96	0.64
36:BB:48:A:H2’	36:BB:49:C:H6	1.62	0.64
36:BB:106:G:H2’	36:BB:107:G:H8	1.62	0.64
42:BH:17:VAL:HG21	42:BH:50:VAL:CG2	2.28	0.64
45:BN:90:MET:HB3	45:BN:98:VAL:HG22	1.79	0.64
47:BP:23:PRO:C	47:BP:33:ARG:CZ	2.70	0.64
48:BQ:27:VAL:HG12	48:BQ:28:ALA:N	2.13	0.64
51:BT:11:GLU:C	51:BT:13:ARG:H	2.05	0.64
1:AA:559:A:H4’	1:AA:560:U:C5’	2.27	0.64
1:AA:1076:C:H5’	1:AA:1077:G:OP2	1.97	0.64
1:AA:1510:U:H2’	1:AA:1511:G:C8	2.32	0.64
3:AC:123:GLN:HB3	3:AC:128:PHE:HD2	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:31:LEU:HD23	18:AR:31:LEU:N	2.10	0.64
26:B1:5:CYS:SG	26:B1:62:VAL:HA	2.38	0.64
31:B6:27:LYS:HB3	31:B6:32:ASN:ND2	2.13	0.64
35:BA:74:A:O2'	35:BA:75:G:OP2	2.15	0.64
35:BA:216:A:H2'	35:BA:217:G:H8	1.61	0.64
35:BA:665:C:H2'	35:BA:666:G:H8	1.62	0.64
35:BA:769:G:H2'	35:BA:770:G:H8	1.63	0.64
35:BA:787:U:OP1	35:BA:1780:A:N6	2.31	0.64
35:BA:1080:C:O2'	35:BA:1081:U:H5'	1.98	0.64
35:BA:1358:G:O2'	35:BA:1359:A:H5"	1.98	0.64
38:BD:84:TYR:HA	38:BD:91:ARG:NH1	2.13	0.64
39:BE:38:THR:CG2	39:BE:39:PRO:HD2	2.27	0.64
39:BE:59:VAL:HG22	39:BE:62:PRO:O	1.98	0.64
41:BG:140:ILE:HD12	41:BG:140:ILE:H	1.63	0.64
45:BN:21:LYS:HD2	45:BN:26:LEU:HB3	1.80	0.64
47:BP:62:LEU:N	47:BP:62:LEU:HD23	2.13	0.64
53:BV:19:LYS:NZ	53:BV:20:LEU:H	1.95	0.64
1:AA:449:C:O2	16:AP:42:ARG:HD2	1.97	0.64
1:AA:636:U:H2'	1:AA:637:G:H8	1.63	0.64
1:AA:1445:C:H2'	1:AA:1446:U:H5'	1.79	0.64
3:AC:70:VAL:CG1	3:AC:71:ALA:N	2.60	0.64
4:AD:158:ILE:HG22	4:AD:162:LEU:HD12	1.80	0.64
4:AD:199:ASN:C	4:AD:199:ASN:OD1	2.39	0.64
9:AI:95:LYS:HD3	9:AI:95:LYS:C	2.23	0.64
15:AO:31:LEU:CD2	15:AO:31:LEU:N	2.59	0.64
19:AS:11:VAL:HG13	19:AS:11:VAL:O	1.96	0.64
26:B1:86:SER:HB2	26:B1:90:ILE:CD1	2.28	0.64
35:BA:267:C:H2'	35:BA:268:C:H6	1.61	0.64
35:BA:286:C:H2'	35:BA:287:C:C6	2.32	0.64
35:BA:296:C:O2'	35:BA:297:C:H5'	1.98	0.64
35:BA:814:C:H2'	35:BA:815:C:C6	2.33	0.64
35:BA:1826:G:H4'	38:BD:242:ARG:NH2	2.06	0.64
35:BA:2462:U:H2'	35:BA:2463:C:H6	1.62	0.64
36:BB:20:C:H2'	36:BB:21:G:H5'	1.79	0.64
39:BE:105:THR:OG1	39:BE:199:ARG:NH2	2.30	0.64
40:BF:114:VAL:HG21	40:BF:202:PHE:CE1	2.32	0.64
41:BG:35:GLU:O	41:BG:36:LYS:HB3	1.97	0.64
46:BO:104:ARG:CZ	51:BT:33:LYS:HD2	2.28	0.64
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.33	0.64
2:AB:27:LYS:HD3	2:AB:195:ASP:OD2	1.98	0.64
9:AI:41:VAL:O	9:AI:41:VAL:HG12	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:108:ILE:N	11:AK:108:ILE:HD12	2.13	0.64
24:AY:491:VAL:HG12	24:AY:492:ASP:N	2.13	0.64
30:B5:43:HIS:HD2	35:BA:2815:C:O2'	1.79	0.64
35:BA:360:G:H2'	35:BA:361:G:H8	1.62	0.64
35:BA:564:C:O2'	35:BA:565:C:H5'	1.97	0.64
35:BA:910:A:C5	48:BQ:13:GLN:HG3	2.33	0.64
35:BA:2892:A:H62	35:BA:2893:G:H21	1.45	0.64
36:BB:54:G:O2'	36:BB:55:U:H5'	1.97	0.64
38:BD:232:PRO:HD2	38:BD:249:PRO:HA	1.80	0.64
39:BE:152:LYS:HG3	39:BE:153:GLY:N	2.11	0.64
45:BN:35:ARG:HB3	45:BN:42:TRP:CH2	2.33	0.64
49:BR:10:LEU:HD22	49:BR:17:ARG:HD3	1.80	0.64
53:BV:35:LEU:HB2	53:BV:57:VAL:HG12	1.80	0.64
1:AA:512:U:H2'	1:AA:513:C:C6	2.33	0.63
1:AA:624:C:H4'	16:AP:10:GLY:C	2.23	0.63
1:AA:756:C:O2'	1:AA:757:U:H5'	1.98	0.63
1:AA:830:G:H2'	1:AA:831:U:H6	1.63	0.63
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.33	0.63
2:AB:233:SER:HB2	2:AB:234:PRO:CD	2.28	0.63
4:AD:5:ILE:HA	4:AD:115:ARG:HH12	1.63	0.63
10:AJ:21:GLN:O	10:AJ:21:GLN:HG2	1.97	0.63
14:AN:8:GLU:O	14:AN:11:LYS:HB2	1.97	0.63
17:AQ:99:SER:C	17:AQ:100:LYS:HG3	2.23	0.63
27:B2:17:SER:CB	27:B2:18:PRO:HD2	2.26	0.63
34:B9:6:SER:HB2	35:BA:2466:C:H5"	1.80	0.63
35:BA:1434:A:H61	35:BA:1558:A:N6	1.96	0.63
35:BA:1721:G:H8	35:BA:1741:A:H62	1.45	0.63
35:BA:2815:C:H2'	35:BA:2816:C:C6	2.33	0.63
35:BA:2820:A:H8	39:BE:191:PRO:CB	2.11	0.63
43:BK:29:GLN:O	43:BK:59:ILE:HD12	1.98	0.63
43:BK:58:THR:HB	43:BK:66:THR:HG22	1.79	0.63
43:BK:58:THR:O	43:BK:66:THR:HG22	1.97	0.63
43:BK:93:ARG:HB2	57:BZ:112:ARG:NH2	2.12	0.63
45:BN:41:ASP:C	52:BU:64:ARG:HH12	2.05	0.63
51:BT:28:VAL:CG1	51:BT:46:GLU:HA	2.28	0.63
1:AA:673:G:H2'	1:AA:674:G:C8	2.33	0.63
1:AA:1065:U:C2'	1:AA:1066:C:OP2	2.45	0.63
1:AA:1301:U:H3'	1:AA:1302:U:H5"	1.79	0.63
2:AB:87:ARG:O	2:AB:87:ARG:HD2	1.97	0.63
2:AB:147:LYS:CE	2:AB:148:TYR:CE1	2.75	0.63
10:AJ:4:ILE:HD12	10:AJ:4:ILE:N	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.33	0.63
15:AO:17:ARG:HD3	15:AO:26:GLU:HG3	1.80	0.63
27:B2:66:GLU:O	27:B2:69:ARG:HG2	1.98	0.63
28:B3:29:ARG:HB2	28:B3:29:ARG:NH1	2.13	0.63
31:B6:15:GLU:OE1	31:B6:44:ARG:NH2	2.32	0.63
35:BA:120:U:H5'	35:BA:121:G:OP1	1.97	0.63
35:BA:946:G:H2'	35:BA:947:G:C8	2.32	0.63
35:BA:2051:A:H4'	39:BE:141:ILE:HD13	1.78	0.63
35:BA:2122:U:H1'	37:BC:167:ASP:OD2	1.99	0.63
35:BA:2762:G:H5'	35:BA:2762:G:H8	1.57	0.63
38:BD:112:GLN:H	38:BD:115:GLN:NE2	1.96	0.63
41:BG:16:ARG:HE	41:BG:31:VAL:CG1	2.10	0.63
42:BH:42:ARG:HH11	42:BH:42:ARG:HG3	1.63	0.63
45:BN:2:LYS:HZ1	53:BV:12:TYR:CA	2.10	0.63
51:BT:132:LYS:H	51:BT:132:LYS:HD3	1.63	0.63
52:BU:39:LEU:O	52:BU:40:PHE:C	2.41	0.63
56:BY:95:LYS:HE2	56:BY:101:LYS:H	1.62	0.63
1:AA:54:C:H2'	1:AA:352:C:N4	2.14	0.63
1:AA:1202:G:C2	14:AN:42:ILE:HG21	2.34	0.63
4:AD:36:ARG:HB3	4:AD:36:ARG:HH11	1.62	0.63
5:AE:12:LEU:H	5:AE:12:LEU:CD1	2.10	0.63
12:AL:6:THR:HG23	12:AL:9:GLN:NE2	2.09	0.63
13:AM:3:ARG:HA	13:AM:9:ILE:HG13	1.80	0.63
26:B1:6:GLU:OE1	26:B1:61:ARG:N	2.30	0.63
35:BA:63:U:OP1	35:BA:63:U:H4'	1.97	0.63
35:BA:271(M):G:H2'	35:BA:271(N):U:H5"	1.80	0.63
35:BA:902:C:H2'	35:BA:903:C:H6	1.63	0.63
35:BA:965:C:C4'	35:BA:2273:A:H1'	2.29	0.63
38:BD:196:VAL:O	38:BD:196:VAL:HG12	1.96	0.63
40:BF:3:GLU:HA	40:BF:24:LEU:CG	2.22	0.63
40:BF:18:ARG:C	40:BF:19:GLU:HG2	2.21	0.63
43:BK:10:LEU:HD12	43:BK:57:ILE:HD13	1.80	0.63
43:BK:17:ALA:HB1	43:BK:38:VAL:HG22	1.75	0.63
47:BP:23:PRO:HB2	47:BP:33:ARG:NE	2.14	0.63
56:BY:86:ARG:HB3	56:BY:88:LYS:NZ	2.14	0.63
1:AA:182:U:H5'	1:AA:183:G:P	2.39	0.63
1:AA:294:U:H2'	1:AA:295:C:C6	2.33	0.63
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.12	0.63
1:AA:1410:G:H2'	1:AA:1411:C:H6	1.63	0.63
5:AE:76:ILE:HD11	5:AE:142:LEU:HD21	1.80	0.63
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:48:THR:HG23	10:AJ:62:HIS:ND1	2.12	0.63
13:AM:108:ARG:HD2	13:AM:108:ARG:N	2.12	0.63
16:AP:1:MET:SD	16:AP:3:LYS:HE3	2.37	0.63
19:AS:24:ALA:O	19:AS:25:LYS:HB2	1.97	0.63
24:AY:9:LEU:C	24:AY:11:ARG:H	2.06	0.63
24:AY:156:ARG:HH22	24:AY:666:ARG:HH11	1.43	0.63
24:AY:606:MET:O	24:AY:646:PHE:HA	1.99	0.63
24:AY:636:PRO:CG	43:BK:21:PRO:HB2	2.29	0.63
35:BA:674:G:H2'	35:BA:804:A:H61	1.62	0.63
35:BA:1787:A:H5"	35:BA:1788:C:OP2	1.98	0.63
36:BB:48:A:H2'	36:BB:49:C:C6	2.34	0.63
38:BD:146:GLU:HG2	38:BD:152:GLY:C	2.23	0.63
38:BD:227:ASN:HB3	38:BD:228:PRO:HD2	1.79	0.63
40:BF:160:ASN:HD21	40:BF:162:LEU:CD1	2.11	0.63
40:BF:185:ASP:HA	40:BF:188:ARG:HG2	1.79	0.63
42:BH:46:GLU:CD	42:BH:51:ARG:HB2	2.24	0.63
48:BQ:12:GLN:HE21	48:BQ:73:PRO:CD	2.08	0.63
50:BS:67:ARG:NH2	50:BS:100:ALA:HB3	2.13	0.63
52:BU:54:LYS:O	52:BU:58:ARG:HG3	1.99	0.63
1:AA:352:C:H4'	1:AA:354:G:OP1	1.98	0.63
1:AA:584:G:H2'	1:AA:585:G:H8	1.62	0.63
1:AA:715:A:H2'	1:AA:716:A:C8	2.33	0.63
1:AA:953:G:H5'	1:AA:965:A:H61	1.63	0.63
2:AB:111:ARG:HG2	2:AB:111:ARG:NH1	2.13	0.63
3:AC:127:ARG:HG2	3:AC:127:ARG:HH11	1.63	0.63
22:AV:38:A:H2'	22:AV:39:C:O4'	1.99	0.63
24:AY:180:VAL:CG2	24:AY:216:LEU:HD12	2.28	0.63
24:AY:231:TYR:HE2	44:BL:80:LEU:HD23	1.63	0.63
24:AY:237:PRO:HB2	24:AY:242:LEU:HG	1.81	0.63
25:B0:34:GLY:HA3	35:BA:2353:G:H1'	1.80	0.63
35:BA:35:G:O2'	35:BA:36:G:H5'	1.99	0.63
35:BA:839:U:H2'	35:BA:840:C:C6	2.33	0.63
35:BA:1068:G:H21	35:BA:1096:A:H5'	1.63	0.63
35:BA:2097:C:O2'	35:BA:2098:U:H5'	1.98	0.63
37:BC:117:THR:HG22	37:BC:147:GLY:O	1.98	0.63
45:BN:120:LEU:CD1	45:BN:122:VAL:HG23	2.28	0.63
49:BR:87:TYR:O	49:BR:89:ASP:N	2.30	0.63
56:BY:12:THR:HG23	56:BY:25:GLY:O	1.99	0.63
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.17	0.63
1:AA:630:G:H2'	1:AA:631:G:H5'	1.80	0.63
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:5:TYR:CD1	9:AI:6:GLY:N	2.67	0.63
24:AY:485:GLU:HG3	24:AY:553:GLY:HA3	1.80	0.63
26:B1:45:ASN:HD22	26:B1:46:LEU:N	1.95	0.63
31:B6:47:THR:HG23	31:B6:48:VAL:H	1.63	0.63
35:BA:64:A:H2'	35:BA:65:C:C6	2.33	0.63
35:BA:572:A:C2	35:BA:2033:A:C2	2.86	0.63
35:BA:1145:C:H2'	35:BA:1146:C:C6	2.33	0.63
35:BA:1291:C:H2'	35:BA:1292:U:C6	2.33	0.63
35:BA:2203:U:H1'	38:BD:151:LYS:HE3	1.80	0.63
38:BD:124:PRO:O	38:BD:126:GLN:HG2	1.98	0.63
38:BD:155:LEU:N	38:BD:155:LEU:CD1	2.61	0.63
45:BN:26:LEU:HD12	45:BN:26:LEU:O	1.99	0.63
45:BN:133:GLN:CG	45:BN:134:ARG:N	2.61	0.63
46:BO:20:MET:HE3	46:BO:44:LYS:HE3	1.79	0.63
46:BO:47:ILE:CG2	46:BO:48:PRO:HD2	2.29	0.63
51:BT:132:LYS:H	51:BT:132:LYS:CD	2.12	0.63
53:BV:87:HIS:NE2	53:BV:89:GLN:HG2	2.14	0.63
56:BY:2:ARG:HD3	56:BY:3:VAL:HG23	1.81	0.63
1:AA:384:G:H2'	1:AA:385:C:C6	2.34	0.63
1:AA:1321:C:C3'	1:AA:1322:C:H5"	2.29	0.63
3:AC:187:ALA:C	3:AC:188:LEU:HD22	2.24	0.63
7:AG:100:ALA:O	7:AG:104:LEU:HD23	1.98	0.63
19:AS:20:LEU:HA	19:AS:23:ASN:HB2	1.80	0.63
24:AY:135:PHE:CD1	24:AY:272:LEU:HD22	2.34	0.63
24:AY:438:PHE:C	24:AY:438:PHE:CD1	2.75	0.63
31:B6:45:LYS:HG2	35:BA:2371:G:H5"	1.81	0.63
35:BA:145:G:H2'	35:BA:146:G:C8	2.34	0.63
35:BA:840:C:H2'	35:BA:841:A:H5"	1.80	0.63
35:BA:848:G:C2	35:BA:933:A:H1'	2.34	0.63
35:BA:889:C:H2'	35:BA:890:A:O4'	1.99	0.63
35:BA:941:A:H4'	47:BP:35:HIS:HE1	1.62	0.63
35:BA:1639:U:O2'	35:BA:1640:C:H5"	1.99	0.63
36:BB:16:G:N2	36:BB:69:G:H1'	2.14	0.63
51:BT:29:ARG:NE	51:BT:30:VAL:HG13	2.13	0.63
52:BU:53:ARG:HG3	52:BU:57:PHE:HE1	1.62	0.63
55:BX:7:VAL:HB	55:BX:8:ILE:HD12	1.80	0.63
1:AA:1284:C:H3'	1:AA:1285:A:C5'	2.27	0.63
1:AA:1368:G:H5'	9:AI:112:LYS:O	1.98	0.63
2:AB:126:GLU:HA	2:AB:129:GLU:CD	2.24	0.63
3:AC:94:LEU:HD12	3:AC:94:LEU:C	2.24	0.63
15:AO:74:ASP:C	15:AO:76:GLU:H	2.07	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:97:SER:HA	24:AY:100:VAL:CG1	2.28	0.63
24:AY:181:LEU:CD1	24:AY:242:LEU:HD13	2.28	0.63
24:AY:286:ILE:N	24:AY:286:ILE:HD12	2.14	0.63
26:B1:90:ILE:O	26:B1:94:LEU:HD12	1.99	0.63
30:B5:2:ALA:HB2	35:BA:2015:A:O4'	1.99	0.63
31:B6:48:VAL:O	31:B6:49:HIS:HB2	1.97	0.63
35:BA:154(A):C:H3'	35:BA:155:U:H5"	1.81	0.63
35:BA:2192:G:C3'	35:BA:2193:G:H5"	2.29	0.63
35:BA:2241:A:H2'	35:BA:2242:G:H8	1.61	0.63
35:BA:2472:G:H3'	35:BA:2475:C:N4	2.14	0.63
38:BD:78:LYS:HG2	38:BD:79:VAL:N	2.13	0.63
44:BL:73:ARG:HG2	44:BL:73:ARG:NH1	2.07	0.63
48:BQ:87:LYS:HG2	48:BQ:88:GLY:N	2.10	0.63
52:BU:72:HIS:HE1	52:BU:107:ALA:HB2	1.64	0.63
1:AA:28:G:O2'	1:AA:296:U:OP1	2.16	0.63
1:AA:275:G:H5"	17:AQ:14:LYS:CB	2.29	0.63
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.34	0.63
10:AJ:63:PHE:HB3	14:AN:58:LYS:CA	2.29	0.63
58:AY:701:FUA:C15	58:AY:701:FUA:C32	2.77	0.63
25:B0:49:LYS:O	25:B0:51:VAL:HG23	1.98	0.63
35:BA:674:G:H1'	40:BF:74:ARG:HD3	1.80	0.63
35:BA:996:A:H2'	35:BA:997:G:H8	1.63	0.63
35:BA:1237:A:O2'	35:BA:1238:G:O4'	2.16	0.63
35:BA:1993:U:C5'	39:BE:128:SER:HB3	2.28	0.63
38:BD:70:TRP:CD1	38:BD:70:TRP:C	2.76	0.63
41:BG:97:ASP:O	41:BG:101:ILE:N	2.31	0.63
52:BU:117:GLN:OE1	52:BU:117:GLN:HA	1.99	0.63
57:BZ:155:LEU:HG	57:BZ:157:LEU:HD21	1.80	0.63
1:AA:72:C:H2'	1:AA:73:G:H8	1.63	0.62
1:AA:115:G:H1'	1:AA:116:A:N7	2.14	0.62
3:AC:179:ARG:NH2	3:AC:206:GLU:OE2	2.31	0.62
24:AY:526:VAL:HB	24:AY:566:THR:HG23	1.81	0.62
26:B1:30:VAL:H	35:BA:2396:G:H4'	1.64	0.62
29:B4:53:GLU:HB3	29:B4:55:ARG:HE	1.64	0.62
35:BA:2050:C:H2'	35:BA:2051:A:O4'	1.98	0.62
37:BC:115:VAL:HG12	37:BC:145:THR:CG2	2.29	0.62
38:BD:10:THR:HG23	38:BD:13:ARG:HB3	1.81	0.62
40:BF:32:LEU:HD23	40:BF:32:LEU:O	1.98	0.62
42:BH:41:MET:O	42:BH:42:ARG:CB	2.47	0.62
42:BH:76:VAL:HG12	42:BH:77:LYS:N	2.13	0.62
46:BO:10:VAL:HG23	46:BO:10:VAL:O	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:44:LEU:HD13	49:BR:44:LEU:C	2.23	0.62
55:BX:57:LEU:HD13	55:BX:57:LEU:N	2.13	0.62
57:BZ:59:LEU:HD11	57:BZ:88:PHE:CD2	2.34	0.62
1:AA:936:C:O2'	1:AA:937:A:H5'	1.99	0.62
1:AA:1005:A:OP1	1:AA:1006:C:N3	2.33	0.62
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.34	0.62
4:AD:61:LYS:HE2	4:AD:62:GLN:NE2	2.12	0.62
4:AD:129:ASN:HD22	4:AD:129:ASN:N	1.96	0.62
9:AI:58:HIS:C	9:AI:59:PHE:CD1	2.77	0.62
10:AJ:3:LYS:NZ	10:AJ:76:ASN:HA	2.13	0.62
24:AY:39:ILE:HG22	24:AY:40:HIS:N	2.14	0.62
27:B2:47:ASN:HD22	35:BA:94(A):G:H21	1.47	0.62
29:B4:31:ILE:HG22	29:B4:31:ILE:O	1.99	0.62
35:BA:303:U:H2'	35:BA:304:G:C8	2.34	0.62
35:BA:363(A):A:H2'	35:BA:363(B):G:H8	1.64	0.62
35:BA:637:A:H2'	47:BP:117:GLU:OE2	1.98	0.62
35:BA:653:A:H5'	35:BA:654:A:OP2	1.99	0.62
35:BA:1133:U:O2	35:BA:1137:G:H5"	1.98	0.62
35:BA:1168:G:H2'	35:BA:1169:G:H8	1.65	0.62
35:BA:1515:G:H2'	35:BA:1516:C:C6	2.34	0.62
35:BA:1713:U:O2'	35:BA:1714:G:H5'	1.99	0.62
35:BA:2794:C:N4	35:BA:2801(A):A:H61	1.96	0.62
35:BA:2846:G:H2'	35:BA:2847:U:O4'	1.99	0.62
36:BB:60:C:H2'	36:BB:61:G:C8	2.33	0.62
36:BB:85:G:O2'	36:BB:86:G:H5'	1.99	0.62
37:BC:124:VAL:HA	37:BC:128:LEU:HD12	1.81	0.62
39:BE:8:LYS:HE2	39:BE:192:ASN:HD22	1.62	0.62
39:BE:36:ARG:NH2	39:BE:88:GLY:H	1.98	0.62
40:BF:9:ILE:HG12	40:BF:14:PRO:C	2.24	0.62
41:BG:102:PHE:CD2	41:BG:103:LEU:HD23	2.33	0.62
42:BH:52:VAL:O	42:BH:52:VAL:HG12	1.98	0.62
46:BO:4:PRO:O	46:BO:5:GLN:HB2	1.96	0.62
54:BW:1:MET:CE	54:BW:2:GLU:H	2.12	0.62
56:BY:2:ARG:HD3	56:BY:2:ARG:C	2.23	0.62
1:AA:368:U:OP2	24:AY:353:ALA:HB2	1.99	0.62
1:AA:665:A:H2'	1:AA:725:G:N2	2.13	0.62
1:AA:1351:U:O4'	7:AG:33:ASP:HB3	1.99	0.62
1:AA:1435:G:H2'	1:AA:1436:U:C5	2.35	0.62
10:AJ:16:LEU:HD23	10:AJ:94:VAL:HG13	1.81	0.62
13:AM:81:LEU:HD12	13:AM:86:CYS:SG	2.40	0.62
20:AT:89:ARG:HD2	20:AT:104:LEU:CD1	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AX:19:U:H2'	23:AX:20:U:C6	2.33	0.62
24:AY:25:LYS:HE3	59:AY:702:GDP:PB	2.38	0.62
33:B8:33:ASN:O	33:B8:34:TRP:HB3	1.98	0.62
35:BA:580:C:H2'	35:BA:581:C:C6	2.34	0.62
35:BA:784:A:H5"	38:BD:227:ASN:ND2	2.14	0.62
35:BA:947:G:H2'	35:BA:948:G:H8	1.63	0.62
35:BA:1218:C:H2'	35:BA:1219:G:C8	2.34	0.62
35:BA:1308:A:H2'	35:BA:1309:G:O4'	1.99	0.62
35:BA:1412:A:O2'	35:BA:1413:G:H5'	1.99	0.62
35:BA:2469:A:H2	35:BA:2481:G:N2	1.96	0.62
38:BD:72:LYS:HB3	38:BD:75:ILE:HB	1.81	0.62
41:BG:35:GLU:HG2	41:BG:36:LYS:HD2	1.81	0.62
41:BG:98:ARG:NH1	41:BG:98:ARG:H	1.97	0.62
55:BX:3:THR:O	55:BX:4:ALA:HB3	2.00	0.62
1:AA:417:C:H2'	1:AA:418:C:C6	2.34	0.62
1:AA:1030(D):A:C2'	1:AA:1031:G:H5'	2.27	0.62
1:AA:1198:G:H2'	1:AA:1199:U:O4'	1.99	0.62
1:AA:1522:U:H6	1:AA:1522:U:O5'	1.83	0.62
3:AC:70:VAL:CG1	3:AC:71:ALA:H	2.13	0.62
6:AF:9:VAL:HB	6:AF:87:ARG:HB2	1.81	0.62
10:AJ:6:ILE:O	10:AJ:71:LEU:HD12	1.99	0.62
12:AL:70:ILE:HD12	12:AL:75:HIS:CD2	2.33	0.62
17:AQ:60:ILE:C	17:AQ:71:PHE:HD2	2.08	0.62
24:AY:446:THR:O	24:AY:448:GLN:HG2	2.00	0.62
30:B5:58:LEU:HD22	30:B5:58:LEU:C	2.24	0.62
31:B6:35:GLU:CB	31:B6:51:GLU:HB2	2.29	0.62
35:BA:559:G:H22	52:BU:49:HIS:CD2	2.18	0.62
35:BA:2186:G:C3'	35:BA:2187:G:H5"	2.30	0.62
39:BE:11:MET:CB	39:BE:24:THR:HA	2.29	0.62
40:BF:38:ARG:O	40:BF:42:ALA:HB2	1.99	0.62
45:BN:15:LEU:HD12	45:BN:136:GLU:HG3	1.80	0.62
48:BQ:3:MET:HB2	48:BQ:4:PRO:HD2	1.80	0.62
52:BU:83:LEU:HD12	52:BU:113:ALA:HB2	1.81	0.62
57:BZ:135:GLU:O	57:BZ:137:ILE:HG12	1.99	0.62
1:AA:368:U:O4'	24:AY:354:ARG:NH2	2.33	0.62
1:AA:992:U:H4'	1:AA:993:G:O5'	2.00	0.62
3:AC:134:ILE:O	3:AC:137:ALA:N	2.32	0.62
5:AE:36:ASP:O	5:AE:37:ARG:HB2	1.99	0.62
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.62	0.62
11:AK:126:ARG:O	11:AK:128:ALA:N	2.33	0.62
13:AM:19:LEU:N	13:AM:19:LEU:HD22	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:6:LYS:H	19:AS:6:LYS:NZ	1.97	0.62
35:BA:657:U:H2'	35:BA:658:C:C6	2.34	0.62
35:BA:1721:G:O6	35:BA:1739:U:H5'	1.99	0.62
35:BA:2472:G:H3'	35:BA:2475:C:H42	1.65	0.62
35:BA:2809:A:OP2	35:BA:2891:G:N1	2.33	0.62
36:BB:67:G:O2'	36:BB:68:C:H5'	1.99	0.62
39:BE:1:MET:HE2	39:BE:1:MET:HA	1.80	0.62
39:BE:38:THR:O	39:BE:42:ASP:HB2	1.98	0.62
43:BK:17:ALA:HB3	43:BK:38:VAL:HG13	1.82	0.62
43:BK:75:SER:C	43:BK:78:ILE:HG22	2.24	0.62
51:BT:88:ILE:HG22	51:BT:89:VAL:HG23	1.82	0.62
52:BU:97:ASP:C	52:BU:99:ALA:H	2.07	0.62
1:AA:475:G:O2'	1:AA:476:G:H5'	1.99	0.62
1:AA:1142:G:C2'	1:AA:1143:G:H5'	2.30	0.62
10:AJ:50:ILE:H	10:AJ:50:ILE:CD1	2.10	0.62
13:AM:70:LEU:HD23	13:AM:70:LEU:C	2.24	0.62
16:AP:9:PHE:HE2	16:AP:18:ARG:CZ	2.11	0.62
19:AS:58:VAL:O	19:AS:60:VAL:HG12	2.00	0.62
24:AY:248:LYS:O	24:AY:248:LYS:HG2	1.99	0.62
35:BA:191:A:O2'	35:BA:192:C:H5'	1.99	0.62
35:BA:319:C:P	40:BF:137:LYS:NZ	2.73	0.62
35:BA:566:U:O2'	35:BA:567:A:H5'	2.00	0.62
35:BA:1073:A:H2'	35:BA:1074:G:H5'	1.80	0.62
35:BA:1494:A:C2'	35:BA:1495:A:H5"	2.30	0.62
35:BA:1656:C:H2'	35:BA:1657:C:H6	1.63	0.62
39:BE:4:ILE:HG13	39:BE:5:LEU:N	2.15	0.62
47:BP:47:ASP:HB3	47:BP:48:PRO:CA	2.28	0.62
50:BS:104:GLY:C	50:BS:106:ARG:H	2.08	0.62
53:BV:19:LYS:HG2	53:BV:94:LEU:HB2	1.80	0.62
57:BZ:156:LYS:O	57:BZ:158:PRO:HD3	1.99	0.62
1:AA:122:G:O2'	1:AA:123:C:H5'	1.98	0.62
1:AA:202:U:H5'	1:AA:203:U:H5	1.64	0.62
1:AA:265:G:H2'	1:AA:267:C:H5	1.65	0.62
1:AA:597:G:H1'	1:AA:644:G:N2	2.14	0.62
1:AA:1008:C:H2'	1:AA:1009:G:H8	1.64	0.62
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.35	0.62
3:AC:11:ARG:O	3:AC:13:GLY:N	2.33	0.62
3:AC:72:LYS:HE3	3:AC:72:LYS:C	2.23	0.62
3:AC:150:LYS:HB2	3:AC:169:ALA:HB2	1.82	0.62
4:AD:64:LEU:HB2	4:AD:198:VAL:HG11	1.82	0.62
18:AR:44:LEU:CD2	18:AR:79:LEU:HD22	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:411:VAL:HG23	24:AY:459:LEU:HD22	1.80	0.62
30:B5:45:VAL:HG22	30:B5:51:TYR:CE2	2.35	0.62
33:B8:48:PHE:O	33:B8:49:VAL:CG1	2.44	0.62
35:BA:144:C:H2'	35:BA:145:G:H8	1.65	0.62
35:BA:878:A:H2'	35:BA:879:G:O4'	2.00	0.62
35:BA:1161:C:H2'	35:BA:1162:G:C8	2.35	0.62
35:BA:1567:A:H5'	38:BD:58:HIS:CD2	2.35	0.62
35:BA:2406:U:C2	47:BP:72:PRO:HB2	2.35	0.62
35:BA:2577:A:C5'	35:BA:2578:G:H5'	2.28	0.62
41:BG:97:ASP:O	41:BG:101:ILE:HB	1.99	0.62
47:BP:85:LEU:CD1	47:BP:120:ALA:HB2	2.29	0.62
50:BS:67:ARG:HB3	50:BS:71:ARG:NH2	2.14	0.62
50:BS:87:PHE:CG	50:BS:88:ASP:N	2.67	0.62
51:BT:57:PHE:O	51:BT:59:THR:HG23	1.98	0.62
52:BU:47:TYR:HA	52:BU:50:ARG:HH11	1.65	0.62
57:BZ:9:TYR:OH	57:BZ:63:ASP:OD2	2.18	0.62
57:BZ:107:THR:HG23	57:BZ:111:VAL:CG2	2.30	0.62
57:BZ:108:PRO:HA	57:BZ:142:SER:HA	1.81	0.62
1:AA:636:U:H2'	1:AA:637:G:C8	2.34	0.62
1:AA:1219:U:H2'	1:AA:1220:G:C8	2.34	0.62
2:AB:31:TYR:HE2	2:AB:200:ILE:HD12	1.64	0.62
2:AB:233:SER:CB	2:AB:234:PRO:CD	2.77	0.62
28:B3:4:LEU:HD11	28:B3:39:ASP:OD1	2.00	0.62
31:B6:15:GLU:CD	31:B6:44:ARG:NH1	2.57	0.62
33:B8:4:MET:O	33:B8:62:LEU:HD12	1.99	0.62
35:BA:145:G:H2'	35:BA:146:G:H8	1.64	0.62
35:BA:483:A:H3'	35:BA:484:C:H6	1.65	0.62
35:BA:528:A:H2	35:BA:2043:C:C4'	2.13	0.62
35:BA:2040:C:H2'	35:BA:2041:U:O4'	2.00	0.62
35:BA:2712:U:HO2'	35:BA:2712(A):A:H8	0.75	0.62
49:BR:7:GLY:O	49:BR:8:ARG:CB	2.46	0.62
50:BS:24:LEU:CB	50:BS:85:VAL:HG12	2.20	0.62
51:BT:24:PRO:HD3	51:BT:52:ILE:HD11	1.81	0.62
1:AA:22:G:O2'	1:AA:23:C:H5'	2.00	0.62
1:AA:1377:A:H2'	7:AG:7:ALA:HB2	1.82	0.62
5:AE:122:GLU:O	5:AE:123:LEU:HD23	1.99	0.62
6:AF:3:ARG:HH11	6:AF:3:ARG:CG	2.13	0.62
11:AK:48:ILE:HG22	11:AK:49:GLY:N	2.14	0.62
12:AL:33:ARG:HG3	12:AL:60:LEU:HD12	1.82	0.62
24:AY:154:GLN:CA	24:AY:158:GLY:HA2	2.29	0.62
24:AY:494:GLU:HG3	24:AY:511:LYS:HE2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B5:3:LYS:HD2	30:B5:5:PRO:HD2	1.79	0.62
32:B7:24:THR:C	32:B7:26:GLY:H	2.08	0.62
35:BA:2348:U:H2'	35:BA:2349:G:H5'	1.81	0.62
40:BF:4:VAL:HA	40:BF:19:GLU:HB3	1.81	0.62
47:BP:17:LYS:O	47:BP:17:LYS:HG2	1.99	0.62
48:BQ:55:VAL:HG13	48:BQ:56:ARG:N	2.15	0.62
50:BS:42:ASP:C	50:BS:44:LYS:H	2.08	0.62
56:BY:28:LYS:HE3	56:BY:30:VAL:HG22	1.82	0.62
57:BZ:145:GLU:O	57:BZ:146:ILE:C	2.43	0.62
2:AB:163:PHE:CD1	2:AB:185:ILE:HG13	2.35	0.62
25:B0:42:GLY:HA3	35:BA:2331:G:O4'	2.00	0.62
29:B4:12:ALA:HB1	29:B4:29:PRO:HA	1.82	0.62
30:B5:25:LEU:HD12	54:BW:19:LEU:HB3	1.80	0.62
30:B5:48:GLU:O	30:B5:49:CYS:HB3	1.98	0.62
31:B6:47:THR:CG2	31:B6:49:HIS:CE1	2.83	0.62
35:BA:428:A:H3'	35:BA:429:A:C8	2.35	0.62
35:BA:545:C:H2'	35:BA:545:C:O2	1.99	0.62
35:BA:622:G:OP2	47:BP:108:LYS:NZ	2.29	0.62
35:BA:1314:C:H5'	35:BA:1314:C:C6	2.27	0.62
35:BA:1649:G:O2'	35:BA:1650:G:H5'	2.00	0.62
38:BD:229:VAL:HG23	38:BD:230:ASP:N	2.15	0.62
40:BF:185:ASP:HA	40:BF:188:ARG:CG	2.30	0.62
45:BN:94:HIS:N	45:BN:95:PRO:CD	2.62	0.62
47:BP:38:GLN:HG3	47:BP:41:ARG:HG3	1.81	0.62
48:BQ:11:LYS:NZ	48:BQ:88:GLY:O	2.33	0.62
52:BU:47:TYR:HA	52:BU:50:ARG:NH1	2.13	0.62
54:BW:1:MET:HB3	54:BW:64:MET:HE3	1.82	0.62
55:BX:12:VAL:HB	55:BX:17:ALA:CB	2.12	0.62
1:AA:219:C:H2'	1:AA:220:G:O4'	1.99	0.61
1:AA:1403:C:O2	1:AA:1403:C:H2'	2.00	0.61
3:AC:127:ARG:HG2	3:AC:127:ARG:NH1	2.15	0.61
12:AL:38:THR:CG2	12:AL:57:LYS:HB3	2.28	0.61
15:AO:43:LEU:CD1	15:AO:56:LEU:HD22	2.30	0.61
24:AY:177:ILE:HG13	24:AY:188:TYR:HE2	1.64	0.61
24:AY:230:LYS:NZ	24:AY:237:PRO:HA	2.14	0.61
24:AY:503:GLY:C	24:AY:505:GLY:H	2.08	0.61
35:BA:176:G:O2'	35:BA:177:G:H5'	2.00	0.61
35:BA:651:G:H2'	35:BA:652:C:H5'	1.81	0.61
35:BA:676:A:H1'	35:BA:2443:C:H1'	1.82	0.61
35:BA:900:A:H5'	35:BA:900:A:C8	2.35	0.61
35:BA:1009:A:H1'	52:BU:59:ARG:NH1	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1516:C:O2'	35:BA:1517:G:H5"	1.98	0.61
35:BA:2039:C:H2'	35:BA:2040:C:H6	1.65	0.61
35:BA:2115:G:N3	35:BA:2117:A:N7	2.48	0.61
35:BA:2247:A:O2'	35:BA:2248:C:H5'	2.00	0.61
38:BD:76:PRO:HG2	38:BD:98:VAL:HG21	1.81	0.61
38:BD:95:LEU:CD1	38:BD:103:ARG:O	2.44	0.61
40:BF:24:LEU:HB3	40:BF:25:PRO:CD	2.29	0.61
46:BO:1:MET:HG3	46:BO:67:LYS:HG2	1.81	0.61
48:BQ:55:VAL:CG1	48:BQ:56:ARG:N	2.62	0.61
49:BR:21:TYR:HB3	49:BR:47:PHE:CE2	2.33	0.61
50:BS:50:SER:O	50:BS:51:ALA:HB2	1.99	0.61
52:BU:55:ARG:HA	52:BU:58:ARG:CG	2.30	0.61
53:BV:19:LYS:CE	53:BV:20:LEU:H	2.12	0.61
1:AA:322:C:H4'	20:AT:23:ARG:HD2	1.82	0.61
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.01	0.61
4:AD:56:VAL:HG12	4:AD:202:LEU:HD13	1.82	0.61
19:AS:9:VAL:HG21	29:B4:53:GLU:CG	2.29	0.61
24:AY:250:THR:O	24:AY:252:ASP:N	2.32	0.61
24:AY:424:LEU:O	24:AY:427:ALA:HB3	2.00	0.61
35:BA:212:G:H8	35:BA:212:G:C5'	2.08	0.61
35:BA:528:A:C2	35:BA:2043:C:H5'	2.34	0.61
35:BA:1717:G:C3'	35:BA:1718:G:H5"	2.30	0.61
35:BA:1819:A:H1'	35:BA:1821:A:C6	2.35	0.61
35:BA:2137:C:O2'	35:BA:2138:C:H5'	2.00	0.61
38:BD:32:SER:O	38:BD:36:PRO:CG	2.36	0.61
40:BF:20:LEU:HB3	40:BF:23:ASP:OD2	2.00	0.61
47:BP:41:ARG:HA	47:BP:41:ARG:NH1	2.15	0.61
48:BQ:21:THR:O	48:BQ:22:LYS:HB3	1.98	0.61
52:BU:82:GLY:HA2	52:BU:117:GLN:HE21	1.65	0.61
53:BV:19:LYS:HE2	53:BV:19:LYS:CA	2.30	0.61
57:BZ:149:SER:CB	57:BZ:173:ALA:HB2	2.25	0.61
1:AA:189:G:H2'	1:AA:189(A):C:H6	1.64	0.61
1:AA:255:G:O6	1:AA:266:G:O6	2.17	0.61
1:AA:1031:G:H2'	1:AA:1032:G:H5'	1.81	0.61
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.80	0.61
20:AT:48:LYS:HB3	20:AT:51:GLU:HG2	1.82	0.61
24:AY:17:ILE:HD12	24:AY:17:ILE:N	2.15	0.61
25:B0:74:ARG:HH11	25:B0:74:ARG:HG3	1.64	0.61
35:BA:30:G:O2'	35:BA:31:C:H5'	1.99	0.61
35:BA:240:G:C3'	35:BA:241:A:H5"	2.23	0.61
35:BA:418:G:H2'	35:BA:419:C:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:768:G:H2'	35:BA:769:G:C8	2.35	0.61
35:BA:877:U:O2'	35:BA:878:A:H5"	2.00	0.61
35:BA:1035:U:H2'	35:BA:1036:G:C8	2.35	0.61
35:BA:1516:C:H2'	35:BA:1517:G:C5'	2.30	0.61
35:BA:1654:A:OP2	49:BR:3:HIS:HB2	2.00	0.61
35:BA:2115:G:C3'	35:BA:2116:G:H5"	2.30	0.61
35:BA:2297:C:C2'	35:BA:2298:A:H5'	2.31	0.61
35:BA:2804:C:H2'	35:BA:2805:G:C8	2.35	0.61
39:BE:70:ALA:O	39:BE:71:GLY:C	2.43	0.61
40:BF:192:LEU:HD23	40:BF:192:LEU:C	2.25	0.61
45:BN:39:ARG:HB2	45:BN:41:ASP:OD1	2.00	0.61
48:BQ:110:THR:HG23	48:BQ:113:GLN:HG3	1.80	0.61
51:BT:106:SER:HA	51:BT:110:ILE:HG12	1.81	0.61
1:AA:60:A:H5"	1:AA:331:G:H22	1.65	0.61
1:AA:1082:G:O2'	1:AA:1083:U:H5'	2.01	0.61
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.82	0.61
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.81	0.61
25:B0:16:SER:OG	35:BA:2261:C:H3'	2.00	0.61
26:B1:64:ALA:C	26:B1:66:HIS:H	2.07	0.61
31:B6:37:ARG:NH2	35:BA:2286:A:N6	2.49	0.61
31:B6:47:THR:HG23	31:B6:48:VAL:N	2.15	0.61
35:BA:203:C:H3'	35:BA:204:A:H5"	1.81	0.61
35:BA:426:C:O2'	35:BA:427:U:H5'	2.01	0.61
35:BA:528:A:H2	35:BA:2043:C:H4'	1.65	0.61
35:BA:614(A):U:H4'	35:BA:614(B):G:C5'	2.30	0.61
35:BA:615:G:OP2	40:BF:40:GLN:NE2	2.29	0.61
35:BA:648:G:H2'	35:BA:649:G:C8	2.35	0.61
35:BA:848:G:H5'	35:BA:849:A:OP2	2.01	0.61
35:BA:850:C:O2'	35:BA:851:U:H5'	2.00	0.61
35:BA:1075:C:H5'	35:BA:1076:C:OP2	2.00	0.61
35:BA:1833:U:H2'	35:BA:1834:U:C6	2.30	0.61
35:BA:1884:A:H2'	35:BA:1885:A:C5'	2.28	0.61
35:BA:2422:A:H4'	35:BA:2423:U:OP1	1.99	0.61
35:BA:2464:C:O2'	35:BA:2465:C:H6	1.82	0.61
37:BC:195:ARG:HH11	37:BC:195:ARG:HG3	1.64	0.61
38:BD:134:ARG:HG3	38:BD:135:PHE:HD1	1.66	0.61
39:BE:101:ARG:HE	39:BE:171:GLU:HB2	1.65	0.61
39:BE:170:LEU:H	39:BE:170:LEU:HD12	1.65	0.61
42:BH:105:LEU:HD21	42:BH:113:VAL:HB	1.81	0.61
47:BP:102:ARG:HG2	47:BP:102:ARG:O	2.00	0.61
47:BP:112:LEU:H	47:BP:128:HIS:CD2	2.18	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:109:VAL:CG1	48:BQ:113:GLN:HB2	2.30	0.61
49:BR:28:LEU:HD22	49:BR:29:LEU:HD12	1.83	0.61
51:BT:54:ARG:HA	51:BT:59:THR:HB	1.82	0.61
1:AA:197:A:N6	1:AA:221:C:H4'	2.16	0.61
1:AA:382:A:H2'	1:AA:383:A:C8	2.35	0.61
1:AA:624:C:H2'	1:AA:625:G:C8	2.36	0.61
1:AA:1268:A:H2'	1:AA:1269:A:C8	2.36	0.61
1:AA:1281:U:H5"	1:AA:1282:C:H5	1.63	0.61
1:AA:1490:C:C5'	1:AA:1490:C:C6	2.83	0.61
3:AC:83:ARG:NH1	3:AC:87:LEU:HD21	2.16	0.61
3:AC:140:ARG:HG3	3:AC:140:ARG:NH1	2.11	0.61
7:AG:22:LEU:O	7:AG:22:LEU:HD23	2.00	0.61
24:AY:122:TRP:C	24:AY:124:GLN:H	2.07	0.61
24:AY:379:GLY:O	24:AY:380:LEU:HB2	2.01	0.61
26:B1:46:LEU:HB2	26:B1:62:VAL:O	1.99	0.61
27:B2:55:ARG:HH11	27:B2:55:ARG:HG3	1.64	0.61
30:B5:4:HIS:HB3	30:B5:5:PRO:CD	2.29	0.61
31:B6:15:GLU:CD	31:B6:44:ARG:NH2	2.58	0.61
35:BA:271(U):G:O2'	35:BA:271(V):G:H5'	2.00	0.61
41:BG:34:LEU:HB2	41:BG:99:MET:CE	2.30	0.61
43:BK:6:ALA:HB1	43:BK:8:VAL:HG23	1.82	0.61
43:BK:57:ILE:H	43:BK:57:ILE:HD12	1.65	0.61
50:BS:12:PHE:C	50:BS:12:PHE:CD1	2.79	0.61
50:BS:62:LYS:O	50:BS:65:VAL:HB	2.00	0.61
1:AA:415:A:H2'	1:AA:416:G:C8	2.35	0.61
1:AA:1217:C:O2	1:AA:1217:C:H2'	1.99	0.61
3:AC:178:LEU:O	3:AC:180:ALA:N	2.33	0.61
7:AG:21:VAL:HG23	7:AG:22:LEU:H	1.64	0.61
19:AS:50:ALA:O	19:AS:51:VAL:C	2.44	0.61
24:AY:525:PHE:N	24:AY:525:PHE:CD1	2.68	0.61
26:B1:4:VAL:HG23	26:B1:10:LYS:C	2.25	0.61
27:B2:48:HIS:CD2	35:BA:96:G:H4'	2.35	0.61
29:B4:22:ILE:CG2	29:B4:23:GLU:N	2.62	0.61
35:BA:686:G:N2	35:BA:788:A:H61	1.98	0.61
35:BA:2415:G:H4'	47:BP:67:MET:N	2.16	0.61
35:BA:2632:A:N3	39:BE:61:ARG:NH1	2.49	0.61
35:BA:2662:A:H2'	35:BA:2663:G:O4'	2.01	0.61
35:BA:2891:G:H4'	35:BA:2892:A:OP1	2.01	0.61
45:BN:67:LEU:HD23	45:BN:87:LEU:HB3	1.82	0.61
48:BQ:76:LYS:HB3	48:BQ:91:GLU:CG	2.29	0.61
50:BS:42:ASP:C	50:BS:43:GLU:HG3	2.25	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:50:ILE:HG13	51:BT:102:ILE:HD11	1.82	0.61
54:BW:17:VAL:O	54:BW:20:VAL:HG22	1.98	0.61
1:AA:662:G:H2'	1:AA:663:A:H8	1.63	0.61
7:AG:78:ARG:HH11	7:AG:78:ARG:CG	2.12	0.61
8:AH:120:THR:HG23	8:AH:123:GLU:OE1	2.00	0.61
11:AK:15:ALA:HA	11:AK:76:GLY:O	2.00	0.61
13:AM:97:PRO:CA	13:AM:110:ARG:HD3	2.24	0.61
17:AQ:45:HIS:CB	17:AQ:65:ILE:HD13	2.31	0.61
19:AS:15:LEU:O	19:AS:19:VAL:HB	2.00	0.61
24:AY:314:PHE:CE1	24:AY:315:LYS:HB2	2.35	0.61
24:AY:509:HIS:C	24:AY:509:HIS:ND1	2.57	0.61
29:B4:50:VAL:O	29:B4:51:ASP:CB	2.49	0.61
35:BA:85:G:H2'	35:BA:86:C:H5'	1.83	0.61
35:BA:288:C:O2'	35:BA:289:A:H5'	2.01	0.61
35:BA:759:G:H2'	35:BA:760:G:C8	2.33	0.61
35:BA:2193:G:H2'	35:BA:2194:G:C5'	2.30	0.61
35:BA:2244:U:O2	35:BA:2434:A:H2'	2.00	0.61
35:BA:2696:U:H2'	35:BA:2697:G:C8	2.35	0.61
38:BD:76:PRO:HG2	38:BD:98:VAL:CG2	2.31	0.61
38:BD:138:VAL:HG23	38:BD:165:ILE:HG22	1.82	0.61
38:BD:146:GLU:HB2	38:BD:189:CYS:HB3	1.82	0.61
39:BE:45:THR:O	39:BE:46:ALA:HB2	2.01	0.61
41:BG:130:ASN:OD1	41:BG:160:VAL:HA	2.01	0.61
41:BG:131:TYR:CE2	41:BG:133:LEU:HB3	2.34	0.61
50:BS:30:ARG:NH2	50:BS:62:LYS:HD2	2.15	0.61
57:BZ:86:VAL:HG12	57:BZ:87:ASP:N	2.15	0.61
1:AA:188:C:H2'	1:AA:189:G:C8	2.36	0.61
1:AA:677:U:H3	1:AA:713:G:H22	1.49	0.61
1:AA:1142:G:H2'	1:AA:1143:G:H5'	1.82	0.61
1:AA:1226:C:N4	13:AM:104:ARG:HD2	2.15	0.61
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.00	0.61
4:AD:80:GLU:OE1	4:AD:80:GLU:HA	1.99	0.61
5:AE:139:LEU:C	5:AE:141:GLN:H	2.09	0.61
6:AF:46:ARG:HH22	18:AR:37:VAL:HG21	1.64	0.61
9:AI:60:ASP:O	9:AI:61:ALA:C	2.43	0.61
12:AL:47:LYS:HB3	12:AL:48:PRO:HD2	1.83	0.61
17:AQ:44:ALA:HA	17:AQ:71:PHE:O	2.00	0.61
22:AV:47:U:H3'	22:AV:48:C:C5'	2.29	0.61
24:AY:35:TYR:HE2	24:AY:269:VAL:HB	1.66	0.61
24:AY:225:GLU:O	24:AY:228:MET:HB3	2.00	0.61
26:B1:80:LEU:HD23	26:B1:81:LYS:H	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:90:ILE:O	26:B1:94:LEU:CD1	2.49	0.61
27:B2:3:LEU:O	27:B2:7:ARG:NH1	2.34	0.61
30:B5:27:PRO:CD	54:BW:23:LEU:HD11	2.31	0.61
35:BA:216:A:H2'	35:BA:217:G:C8	2.36	0.61
35:BA:688:U:H4'	35:BA:1780:A:C2	2.36	0.61
35:BA:723:G:H2'	35:BA:724:U:C6	2.35	0.61
35:BA:833:U:H5"	47:BP:48:PRO:HB3	1.83	0.61
35:BA:1485:G:H5'	35:BA:1485:G:H8	1.65	0.61
35:BA:1794:U:O2'	35:BA:1795:C:H5'	2.00	0.61
35:BA:1947:C:O2'	35:BA:1948:G:H5"	2.01	0.61
35:BA:2746:U:O2'	35:BA:2747:G:H5'	2.00	0.61
38:BD:35:LYS:HD2	38:BD:36:PRO:CA	2.30	0.61
39:BE:50:GLY:HA2	39:BE:78:LEU:HB3	1.83	0.61
47:BP:33:ARG:O	47:BP:34:GLY:C	2.44	0.61
47:BP:62:LEU:CD2	47:BP:62:LEU:N	2.62	0.61
47:BP:67:MET:O	47:BP:68:GLN:HG3	2.01	0.61
51:BT:23:ARG:O	51:BT:25:GLY:N	2.31	0.61
51:BT:89:VAL:CG1	51:BT:91:ARG:HG3	2.31	0.61
54:BW:6:ILE:HG13	54:BW:104:THR:HG23	1.81	0.61
56:BY:42:VAL:O	56:BY:65:ALA:N	2.32	0.61
56:BY:44:ILE:HG22	56:BY:45:VAL:N	2.13	0.61
1:AA:194:C:C2'	1:AA:195:A:H5"	2.31	0.61
1:AA:943:U:C2'	1:AA:944:G:H5'	2.30	0.61
2:AB:22:LYS:HE2	2:AB:22:LYS:CA	2.29	0.61
3:AC:10:PHE:CE1	3:AC:178:LEU:HD11	2.36	0.61
11:AK:21:ILE:N	11:AK:21:ILE:CD1	2.63	0.61
12:AL:90:VAL:O	12:AL:92:ASP:N	2.33	0.61
13:AM:10:PRO:CG	13:AM:18:ALA:HB1	2.31	0.61
18:AR:59:SER:H	18:AR:62:GLU:CB	2.13	0.61
25:B0:14:ARG:HB2	25:B0:14:ARG:NH1	2.15	0.61
26:B1:73:LEU:CD2	26:B1:94:LEU:HD23	2.30	0.61
29:B4:16:CYS:SG	29:B4:17:GLY:N	2.74	0.61
35:BA:52:A:O2'	35:BA:53:A:H5'	2.00	0.61
35:BA:86:C:H4'	35:BA:104:U:O2	2.00	0.61
35:BA:570:G:H2'	35:BA:2030:A:C5	2.36	0.61
35:BA:1061:U:H4'	35:BA:1070:A:H1'	1.81	0.61
35:BA:1718:G:H5'	35:BA:1718:G:C8	2.34	0.61
38:BD:48:ARG:HH11	38:BD:48:ARG:HG3	1.66	0.61
45:BN:35:ARG:O	45:BN:37:LYS:N	2.34	0.61
48:BQ:18:LYS:HD2	48:BQ:18:LYS:N	2.16	0.61
51:BT:62:THR:CG2	51:BT:75:ILE:HG13	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BV:2:PHE:CE1	53:BV:13:ARG:NH1	2.68	0.61
56:BY:8:LYS:HD2	56:BY:8:LYS:N	2.16	0.61
56:BY:27:VAL:HG12	56:BY:29:GLU:H	1.66	0.61
56:BY:28:LYS:O	56:BY:38:ILE:HG22	2.00	0.61
57:BZ:115:GLY:HA2	57:BZ:177:PRO:CD	2.30	0.61
2:AB:168:THR:HG23	2:AB:192:SER:CB	2.27	0.61
3:AC:90:GLU:HA	3:AC:93:LYS:HB3	1.82	0.61
4:AD:170:VAL:HG21	4:AD:176:LEU:HD22	1.83	0.61
6:AF:7:ASN:OD1	6:AF:62:TRP:HD1	1.84	0.61
7:AG:120:ILE:HG22	7:AG:124:LEU:CD1	2.30	0.61
10:AJ:47:PHE:CZ	14:AN:37:PHE:CE1	2.82	0.61
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.82	0.61
15:AO:5:LYS:O	15:AO:9:GLN:HG2	2.01	0.61
19:AS:40:ILE:O	19:AS:40:ILE:HG22	2.01	0.61
24:AY:463:VAL:O	24:AY:467:LYS:HB3	2.00	0.61
26:B1:29:GLY:C	26:B1:31:GLY:H	2.09	0.61
28:B3:15:TYR:HD1	28:B3:15:TYR:H	1.48	0.61
29:B4:2:LYS:HB2	36:BB:40:U:O4	2.00	0.61
35:BA:419:C:H2'	35:BA:420:C:H6	1.66	0.61
35:BA:610:G:N2	35:BA:619:G:H1'	2.16	0.61
35:BA:640:C:C4	35:BA:641:C:N4	2.68	0.61
35:BA:1023:U:H2'	35:BA:1024:G:H5'	1.83	0.61
35:BA:1306:C:H2'	35:BA:1307:A:H8	1.65	0.61
35:BA:1614:A:H2'	35:BA:1615:C:H5'	1.81	0.61
35:BA:1685:C:O2'	35:BA:1686:C:H5'	2.01	0.61
35:BA:1850:G:H5'	35:BA:1851:U:OP2	2.00	0.61
35:BA:2014:A:H4'	54:BW:92:ARG:HH12	1.65	0.61
35:BA:2081:C:H2'	35:BA:2082:A:H8	1.66	0.61
36:BB:40:U:H5"	36:BB:41:U:OP2	2.00	0.61
37:BC:139:PRO:HA	37:BC:145:THR:CG2	2.31	0.61
41:BG:18:GLU:OE1	41:BG:18:GLU:HA	2.01	0.61
43:BK:132:ARG:HG3	43:BK:132:ARG:NH1	2.14	0.61
49:BR:87:TYR:C	49:BR:89:ASP:H	2.09	0.61
52:BU:26:GLY:C	52:BU:28:ARG:H	2.09	0.61
52:BU:49:HIS:C	52:BU:52:ARG:HB2	2.26	0.61
54:BW:68:ARG:HA	54:BW:110:LYS:CG	2.30	0.61
2:AB:48:MET:HA	2:AB:51:LEU:HD12	1.83	0.60
8:AH:127:LEU:HB3	8:AH:129:VAL:HG13	1.81	0.60
10:AJ:18:ALA:C	10:AJ:20:ALA:H	2.08	0.60
10:AJ:78:ASN:HB2	10:AJ:81:THR:HG23	1.83	0.60
24:AY:517:LEU:HB3	24:AY:521:SER:HB2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:292:C:O2'	35:BA:293:U:H5'	2.01	0.60
35:BA:1045:A:N3	35:BA:1047:G:N2	2.49	0.60
35:BA:2870:C:H2'	35:BA:2871:C:O4'	2.00	0.60
38:BD:260:ARG:O	38:BD:260:ARG:HG3	2.00	0.60
38:BD:270:ILE:HD12	38:BD:270:ILE:N	2.16	0.60
40:BF:124:LEU:HD12	40:BF:125:LEU:N	2.16	0.60
42:BH:137:ASP:HB3	42:BH:140:LYS:HB2	1.82	0.60
46:BO:87:ILE:HD13	46:BO:87:ILE:N	2.16	0.60
47:BP:83:VAL:H	47:BP:115:LEU:CD2	2.14	0.60
52:BU:70:ARG:HH11	52:BU:70:ARG:HG3	1.65	0.60
55:BX:12:VAL:CG1	55:BX:27:THR:HG23	2.31	0.60
55:BX:18:TYR:HD1	55:BX:21:PHE:HE2	1.48	0.60
1:AA:1347:G:H3'	9:AI:108:VAL:O	2.00	0.60
3:AC:6:HIS:HD2	3:AC:7:PRO:HD2	1.66	0.60
3:AC:108:ASN:HD22	3:AC:111:LEU:HD12	1.66	0.60
4:AD:30:LYS:C	4:AD:32:ALA:N	2.58	0.60
4:AD:98:GLU:HG2	4:AD:189:PRO:HG3	1.83	0.60
9:AI:114:TYR:HD2	10:AJ:60:ARG:HG3	1.66	0.60
16:AP:7:ALA:O	16:AP:17:TYR:HA	2.00	0.60
24:AY:92:ILE:HG23	24:AY:93:GLU:N	2.16	0.60
24:AY:180:VAL:HG23	24:AY:216:LEU:CD1	2.30	0.60
24:AY:646:PHE:O	24:AY:647:VAL:HG13	2.00	0.60
26:B1:85:LEU:C	26:B1:87:PRO:HD2	2.25	0.60
31:B6:54:ILE:O	31:B6:54:ILE:HD12	2.01	0.60
35:BA:365:C:H5'	35:BA:365:C:C6	2.36	0.60
35:BA:448:U:O4	35:BA:583:G:H1'	2.00	0.60
35:BA:555:U:H2'	35:BA:556:G:C8	2.36	0.60
35:BA:570:G:H2'	35:BA:2030:A:N7	2.16	0.60
35:BA:2629:A:H2'	35:BA:2629:A:N3	2.15	0.60
49:BR:78:LYS:O	49:BR:78:LYS:CG	2.48	0.60
51:BT:28:VAL:HG22	51:BT:47:GLY:N	2.15	0.60
51:BT:99:LEU:HD12	51:BT:99:LEU:O	2.00	0.60
52:BU:112:ARG:HH22	53:BV:46:VAL:HG11	1.64	0.60
57:BZ:29:TYR:CB	57:BZ:34:ASN:HB2	2.31	0.60
1:AA:346:G:H2'	1:AA:347:G:O4'	2.01	0.60
1:AA:1061:G:O2'	1:AA:1062:U:H5'	2.01	0.60
3:AC:43:LEU:HD22	3:AC:47:LEU:HD22	1.82	0.60
7:AG:146:GLU:OE2	7:AG:149:ARG:HD2	2.01	0.60
9:AI:73:GLN:O	9:AI:76:ALA:N	2.35	0.60
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.81	0.60
20:AT:93:GLU:C	20:AT:95:ALA:H	2.08	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:6:ARG:HE	21:AU:15:ARG:NH2	1.99	0.60
24:AY:64:THR:HG23	24:AY:64:THR:O	2.00	0.60
24:AY:75:LYS:O	24:AY:77:HIS:CD2	2.55	0.60
24:AY:170:ARG:C	24:AY:171:GLU:HG2	2.26	0.60
28:B3:44:ARG:O	28:B3:48:GLU:HG2	2.02	0.60
35:BA:49:A:H5"	35:BA:51:G:O4'	2.00	0.60
35:BA:319:C:O2'	35:BA:320:A:H5'	2.02	0.60
35:BA:2591:C:H2'	35:BA:2592:G:H8	1.60	0.60
37:BC:88:GLU:HA	37:BC:95:VAL:HG21	1.83	0.60
38:BD:39:LYS:HZ1	38:BD:87:ASN:HB3	1.64	0.60
39:BE:103:ASP:OD2	39:BE:168:MET:HE2	2.01	0.60
39:BE:110:GLY:O	49:BR:2:ARG:HD3	2.01	0.60
40:BF:9:ILE:HG12	40:BF:14:PRO:HA	1.84	0.60
40:BF:10:PRO:HG2	40:BF:13:SER:OG	2.01	0.60
40:BF:25:PRO:CG	40:BF:119:ARG:HB2	2.32	0.60
47:BP:67:MET:C	47:BP:68:GLN:HG3	2.26	0.60
51:BT:29:ARG:HB3	51:BT:85:LYS:HA	1.83	0.60
56:BY:11:ASP:O	56:BY:27:VAL:HA	2.01	0.60
57:BZ:30:ASN:ND2	57:BZ:31:ARG:HG3	2.16	0.60
1:AA:404:U:H2'	1:AA:405:U:C6	2.36	0.60
3:AC:86:VAL:CG2	3:AC:87:LEU:N	2.64	0.60
5:AE:100:VAL:O	5:AE:100:VAL:HG23	2.01	0.60
9:AI:4:TYR:CE1	9:AI:88:TYR:CD2	2.89	0.60
16:AP:60:LEU:HD23	16:AP:64:ALA:HB3	1.82	0.60
24:AY:12:LEU:O	24:AY:283:PRO:HD3	2.01	0.60
24:AY:314:PHE:CD1	24:AY:314:PHE:C	2.79	0.60
24:AY:507:TYR:CD1	24:AY:507:TYR:C	2.80	0.60
25:B0:43:THR:HG22	35:BA:2331:G:O2'	2.02	0.60
26:B1:86:SER:HA	26:B1:89:GLU:CD	2.26	0.60
35:BA:1043:C:C3'	35:BA:1044:G:H5"	2.32	0.60
35:BA:1845:G:H2'	35:BA:1846:G:C5'	2.22	0.60
35:BA:2593:U:H2'	35:BA:2594:C:C6	2.36	0.60
35:BA:2716:U:O2'	35:BA:2717:G:H5'	2.01	0.60
41:BG:46:ALA:CB	41:BG:88:ILE:HG12	2.32	0.60
43:BK:56:GLU:O	43:BK:67:PHE:HA	2.00	0.60
47:BP:9:ASN:H	47:BP:10:PRO:CD	2.15	0.60
53:BV:40:LEU:CA	53:BV:45:THR:HB	2.30	0.60
57:BZ:119:GLU:O	57:BZ:121:HIS:N	2.34	0.60
57:BZ:171:ILE:HG13	57:BZ:172:ALA:N	2.16	0.60
1:AA:1300:G:O2'	1:AA:1301:U:P	2.59	0.60
1:AA:1379:G:H4'	7:AG:156:TRP:HH2	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.01	0.60
2:AB:153:ARG:C	2:AB:155:LEU:N	2.59	0.60
10:AJ:64:GLU:HG2	14:AN:59:ALA:HB2	1.83	0.60
18:AR:37:VAL:O	18:AR:39:VAL:N	2.34	0.60
18:AR:58:LEU:N	18:AR:58:LEU:HD12	2.16	0.60
19:AS:9:VAL:C	19:AS:10:PHE:CD1	2.80	0.60
20:AT:26:ASN:HA	20:AT:29:LYS:HG2	1.82	0.60
24:AY:416:LYS:CD	24:AY:417:THR:H	2.14	0.60
24:AY:605:ILE:HD12	24:AY:605:ILE:N	2.14	0.60
28:B3:28:LEU:CD2	28:B3:35:ARG:HD2	2.32	0.60
35:BA:274:G:O2'	35:BA:275:G:H5"	2.02	0.60
35:BA:319:C:OP1	40:BF:137:LYS:NZ	2.34	0.60
35:BA:799:G:OP2	35:BA:800:A:H3'	2.02	0.60
35:BA:852:G:H2'	35:BA:853:G:H8	1.66	0.60
35:BA:1305:C:O2'	35:BA:1306:C:H5'	2.00	0.60
35:BA:1578:U:C2'	35:BA:1579:A:H5"	2.31	0.60
35:BA:2287:A:N6	35:BA:2344:U:N3	2.47	0.60
39:BE:8:LYS:HG2	39:BE:192:ASN:HA	1.84	0.60
48:BQ:24:GLY:O	48:BQ:102:VAL:HG23	2.02	0.60
51:BT:89:VAL:CG1	51:BT:91:ARG:CG	2.80	0.60
55:BX:8:ILE:HD11	55:BX:42:ALA:O	2.02	0.60
56:BY:8:LYS:HB2	56:BY:28:LYS:HZ1	1.64	0.60
57:BZ:42:VAL:CG1	57:BZ:43:GLU:H	2.14	0.60
57:BZ:103:ARG:HB2	57:BZ:136:PHE:HB2	1.83	0.60
57:BZ:127:LYS:NZ	57:BZ:127:LYS:HB3	2.17	0.60
1:AA:450:G:H1	1:AA:483:C:H42	1.46	0.60
1:AA:1321:C:C5'	1:AA:1322:C:H5"	2.32	0.60
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.66	0.60
24:AY:97:SER:HA	24:AY:100:VAL:HG12	1.83	0.60
24:AY:215:LYS:HA	24:AY:218:GLU:HB3	1.84	0.60
34:B9:22:ARG:NH2	35:BA:2741:A:OP1	2.35	0.60
35:BA:1484:G:H2'	35:BA:1485:G:H5"	1.84	0.60
35:BA:1494:A:N3	35:BA:1494:A:H5'	2.17	0.60
35:BA:1841:U:H2'	35:BA:1842:G:H8	1.67	0.60
35:BA:1858:G:H2'	35:BA:1883:G:H22	1.67	0.60
42:BH:18:GLU:HB2	42:BH:25:LYS:HB2	1.84	0.60
42:BH:20:ALA:HB1	42:BH:21:PRO:CD	2.32	0.60
51:BT:28:VAL:HG21	51:BT:46:GLU:CG	2.27	0.60
56:BY:31:LEU:HB2	56:BY:32:PRO:CA	2.30	0.60
57:BZ:166:SER:HB2	57:BZ:167:PRO:CA	2.30	0.60
1:AA:376:G:H2'	1:AA:377:G:H8	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:973:G:O4'	10:AJ:55:LYS:HE2	2.01	0.60
13:AM:10:PRO:HG3	13:AM:18:ALA:HB1	1.84	0.60
19:AS:58:VAL:O	19:AS:58:VAL:HG23	2.01	0.60
25:B0:23:VAL:HG13	25:B0:38:VAL:HG22	1.82	0.60
27:B2:33:MET:O	27:B2:37:PHE:HD1	1.85	0.60
31:B6:45:LYS:HG2	35:BA:2371:G:C5'	2.30	0.60
35:BA:947:G:H2'	35:BA:948:G:C8	2.37	0.60
35:BA:1467:C:H5	35:BA:1546:C:H2'	1.66	0.60
35:BA:2021:C:H4'	35:BA:2022:U:OP2	2.01	0.60
35:BA:2344:U:O2'	35:BA:2345:G:H5"	2.02	0.60
35:BA:2373:G:H2'	35:BA:2374:C:C6	2.36	0.60
35:BA:2377:A:H2'	35:BA:2378:A:C8	2.37	0.60
39:BE:145:LYS:O	39:BE:146:THR:C	2.45	0.60
40:BF:199:TRP:O	40:BF:202:PHE:HB3	2.01	0.60
47:BP:132:LYS:O	47:BP:136:GLU:HG2	2.01	0.60
48:BQ:137:TYR:N	48:BQ:137:TYR:CD1	2.69	0.60
51:BT:51:ARG:O	51:BT:61:PHE:HA	2.01	0.60
53:BV:82:ARG:HD2	53:BV:82:ARG:N	2.16	0.60
1:AA:6:G:H2'	5:AE:119:LEU:CD1	2.31	0.60
1:AA:161:A:H2'	1:AA:162:A:C8	2.37	0.60
1:AA:313:A:O2'	1:AA:314:C:H5'	2.02	0.60
1:AA:955:U:H2'	1:AA:956:U:C6	2.37	0.60
1:AA:1017:G:H2'	1:AA:1018:C:C6	2.36	0.60
1:AA:1277:C:H3'	1:AA:1277:C:C6	2.36	0.60
2:AB:21:ARG:HD2	2:AB:39:ILE:HG12	1.84	0.60
2:AB:169:LYS:O	2:AB:169:LYS:HD3	2.02	0.60
4:AD:108:LEU:HG	4:AD:176:LEU:HD13	1.82	0.60
10:AJ:82:ILE:HD13	10:AJ:82:ILE:H	1.66	0.60
16:AP:32:TYR:O	16:AP:32:TYR:HD1	1.84	0.60
31:B6:40:CYS:HB2	31:B6:46:HIS:ND1	2.17	0.60
35:BA:272(G):C:H42	35:BA:363(C):G:H1	1.50	0.60
35:BA:813:U:H2'	35:BA:814:C:C5	2.35	0.60
35:BA:1216:G:N2	35:BA:1234:U:H1'	2.16	0.60
35:BA:1538:G:H2'	35:BA:1539:G:H8	1.64	0.60
35:BA:1865:G:C2'	35:BA:1866:C:H5"	2.32	0.60
35:BA:2681:C:H5	35:BA:2725:A:H62	1.47	0.60
37:BC:4:HIS:ND1	37:BC:8:TYR:HE2	1.99	0.60
54:BW:12:ILE:HG13	54:BW:42:ARG:NH1	2.17	0.60
57:BZ:9:TYR:CD2	57:BZ:35:ARG:NH2	2.70	0.60
1:AA:218:C:H5'	1:AA:470:C:N4	2.17	0.60
1:AA:423:G:H2'	1:AA:424:G:H5'	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:460:G:H5'	1:AA:461:A:OP2	2.02	0.60
1:AA:631:G:H5'	1:AA:631:G:H8	1.66	0.60
1:AA:965:A:C2	1:AA:969:A:C2	2.90	0.60
2:AB:160:ASP:O	2:AB:161:ALA:HB2	2.01	0.60
4:AD:25:ARG:HG2	4:AD:25:ARG:HH11	1.66	0.60
6:AF:2:ARG:HD3	6:AF:92:LYS:HE3	1.82	0.60
10:AJ:33:GLN:N	10:AJ:75:ILE:HD11	2.17	0.60
20:AT:14:LYS:O	20:AT:18:GLN:HG3	2.02	0.60
24:AY:206:LEU:O	24:AY:209:ALA:HB3	2.02	0.60
24:AY:512:ILE:H	24:AY:512:ILE:CD1	2.14	0.60
25:B0:51:VAL:HG22	25:B0:81:VAL:HG23	1.83	0.60
26:B1:18:ILE:HG21	26:B1:20:ARG:NE	2.16	0.60
29:B4:22:ILE:HG22	29:B4:23:GLU:N	2.17	0.60
34:B9:4:ARG:HH12	35:BA:2477:C:N4	1.99	0.60
35:BA:229:A:H3'	35:BA:230:U:H5'	1.84	0.60
35:BA:614(A):U:O2'	35:BA:614(B):G:H5'	2.01	0.60
35:BA:1824:G:OP1	38:BD:52:ARG:HD3	2.01	0.60
35:BA:1935:G:H1'	35:BA:1964:G:N2	2.17	0.60
35:BA:2820:A:H8	39:BE:191:PRO:HB3	1.67	0.60
36:BB:74:U:H2'	36:BB:75:G:H5'	1.84	0.60
39:BE:49:LEU:HD22	39:BE:49:LEU:N	2.17	0.60
42:BH:149:ARG:HA	42:BH:162:ILE:CG1	2.31	0.60
43:BK:13:PRO:HA	43:BK:52:ILE:HA	1.83	0.60
46:BO:34:THR:O	46:BO:35:VAL:C	2.45	0.60
47:BP:85:LEU:HA	47:BP:88:LEU:HB3	1.83	0.60
57:BZ:115:GLY:H	57:BZ:177:PRO:HG3	1.66	0.60
1:AA:163:C:O2'	1:AA:164:U:H5'	2.01	0.60
1:AA:748:C:HO2'	1:AA:749:C:H6	1.50	0.60
2:AB:233:SER:OG	2:AB:234:PRO:HD2	2.02	0.60
4:AD:98:GLU:CG	4:AD:189:PRO:HG3	2.32	0.60
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	2.02	0.60
4:AD:153:ARG:HG2	4:AD:153:ARG:NH1	2.16	0.60
5:AE:60:TYR:HE1	5:AE:64:ARG:HH21	1.46	0.60
12:AL:112:ASP:O	12:AL:114:LYS:HG3	2.01	0.60
19:AS:61:TYR:CD2	19:AS:62:ILE:N	2.66	0.60
24:AY:510:VAL:HG13	24:AY:569:ASP:O	2.01	0.60
30:B5:27:PRO:CG	54:BW:23:LEU:HD11	2.31	0.60
31:B6:17:LYS:HB2	31:B6:44:ARG:NH1	2.16	0.60
33:B8:52:LYS:HE2	35:BA:834:C:H4'	1.82	0.60
35:BA:408:G:O2'	35:BA:409:C:H5'	2.02	0.60
35:BA:1973:G:H2'	35:BA:1974:C:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2488:A:H2'	35:BA:2489:G:C8	2.37	0.60
37:BC:34:ALA:HA	37:BC:40:GLU:OE2	2.01	0.60
37:BC:213:VAL:HG12	37:BC:225:ILE:HD11	1.83	0.60
39:BE:51:PHE:CD1	39:BE:52:LEU:CD1	2.84	0.60
41:BG:98:ARG:HH11	41:BG:98:ARG:CG	2.00	0.60
41:BG:119:GLY:HA3	41:BG:181:ARG:H	1.65	0.60
47:BP:83:VAL:H	47:BP:115:LEU:HD21	1.67	0.60
50:BS:36:TYR:N	50:BS:36:TYR:CD1	2.69	0.60
50:BS:51:ALA:HB3	50:BS:73:LEU:HB2	1.82	0.60
56:BY:84:ARG:CD	56:BY:97:ARG:HH11	2.14	0.60
57:BZ:119:GLU:O	57:BZ:119:GLU:HG3	2.02	0.60
1:AA:301:G:O2'	1:AA:302:G:H5'	2.02	0.59
1:AA:1318:A:C2'	1:AA:1319:A:H5'	2.32	0.59
2:AB:44:LEU:HA	2:AB:47:THR:OG1	2.02	0.59
8:AH:127:LEU:CB	8:AH:129:VAL:HG13	2.32	0.59
13:AM:78:ILE:CA	13:AM:81:LEU:HD23	2.31	0.59
17:AQ:45:HIS:CG	17:AQ:65:ILE:HD13	2.37	0.59
30:B5:33:CYS:SG	30:B5:36:CYS:SG	3.00	0.59
31:B6:16:CYS:SG	31:B6:48:VAL:CG2	2.89	0.59
31:B6:27:LYS:HB3	31:B6:30:THR:CG2	2.32	0.59
35:BA:158:U:H3'	35:BA:158:U:O2	2.02	0.59
35:BA:271(C):C:H2'	35:BA:271(D):G:H8	1.67	0.59
35:BA:311:A:H5'	35:BA:332:A:C2	2.37	0.59
35:BA:322:A:H5'	35:BA:340:A:H1'	1.82	0.59
35:BA:539:G:O2'	35:BA:540:C:H5'	2.03	0.59
35:BA:936:C:H2'	35:BA:937:U:C6	2.37	0.59
35:BA:1036:G:OP1	42:BH:59:ARG:HD2	2.01	0.59
35:BA:1902:C:C1'	38:BD:244:ARG:HG3	2.32	0.59
36:BB:30:C:OP2	50:BS:32:LEU:HD11	2.02	0.59
37:BC:213:VAL:CG1	37:BC:225:ILE:HD11	2.32	0.59
38:BD:96:HIS:CE1	38:BD:102:LYS:HE2	2.37	0.59
42:BH:156:ALA:O	42:BH:158:HIS:CD2	2.55	0.59
43:BK:112:MET:HE2	43:BK:120:LEU:HD21	1.84	0.59
46:BO:105:GLU:O	46:BO:109:LYS:CG	2.49	0.59
47:BP:32:THR:CG2	47:BP:37:GLY:HA2	2.31	0.59
51:BT:57:PHE:O	51:BT:58:ASN:C	2.45	0.59
1:AA:189(A):C:H2'	1:AA:189(B):C:C6	2.37	0.59
1:AA:972:C:H4'	10:AJ:57:LYS:HB2	1.83	0.59
1:AA:1004:A:H61	1:AA:1034:G:C2'	2.12	0.59
1:AA:1321:C:H5"	1:AA:1322:C:C5'	2.32	0.59
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:83:GLU:C	15:AO:85:LEU:H	2.11	0.59
20:AT:48:LYS:HD2	20:AT:51:GLU:OE2	2.02	0.59
24:AY:413:ILE:HG22	24:AY:449:THR:O	2.02	0.59
24:AY:553:GLY:HA2	24:AY:560:VAL:CG2	2.32	0.59
24:AY:679:VAL:HG23	24:AY:684:GLN:NE2	2.16	0.59
26:B1:80:LEU:HB3	26:B1:82:LEU:CD1	2.32	0.59
35:BA:94(A):G:H2'	35:BA:95:G:H5"	1.83	0.59
35:BA:278:A:C2	35:BA:279:C:C2	2.90	0.59
35:BA:294:A:H2'	35:BA:295:G:H5'	1.85	0.59
35:BA:331:A:O2'	35:BA:332:A:OP1	2.19	0.59
35:BA:2696:U:H2'	35:BA:2697:G:H8	1.66	0.59
35:BA:2888:C:H2'	35:BA:2889:C:C6	2.37	0.59
38:BD:65:ILE:N	38:BD:65:ILE:CD1	2.65	0.59
43:BK:100:THR:CA	43:BK:139:VAL:HB	2.32	0.59
43:BK:134:MET:HE2	43:BK:136:VAL:HG11	1.83	0.59
50:BS:36:TYR:O	50:BS:37:ALA:HB2	2.00	0.59
51:BT:14:TYR:N	51:BT:14:TYR:CD1	2.69	0.59
51:BT:50:ILE:CG1	51:BT:102:ILE:HD11	2.32	0.59
51:BT:89:VAL:HG12	51:BT:91:ARG:CG	2.32	0.59
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.35	0.59
2:AB:17:PHE:HD1	2:AB:17:PHE:H	1.51	0.59
6:AF:22:GLU:O	6:AF:26:ILE:HG13	2.02	0.59
9:AI:20:ARG:HH11	9:AI:20:ARG:HG3	1.67	0.59
10:AJ:49:VAL:O	10:AJ:60:ARG:HB3	2.02	0.59
13:AM:35:GLU:HG3	13:AM:36:LYS:N	2.17	0.59
16:AP:75:ARG:HG3	16:AP:75:ARG:NH1	2.13	0.59
17:AQ:12:SER:HB3	17:AQ:20:THR:OG1	2.02	0.59
22:AV:30:G:N2	22:AV:31:G:H1'	2.17	0.59
22:AV:56:C:N4	35:BA:2169:A:C2	2.68	0.59
24:AY:466:LEU:HA	24:AY:470:PHE:CD2	2.37	0.59
24:AY:539:ILE:O	24:AY:542:VAL:HG12	2.01	0.59
27:B2:39:ALA:HA	27:B2:45:SER:HB3	1.82	0.59
35:BA:484:C:OP1	56:BY:50:ARG:HG3	2.01	0.59
35:BA:1493:C:C4	35:BA:2206:G:O2'	2.55	0.59
35:BA:2178:C:H4'	37:BC:47:LYS:HD3	1.83	0.59
35:BA:2305:A:H5"	41:BG:134:GLY:HA3	1.83	0.59
35:BA:2345:G:C5'	35:BA:2346:A:H5'	2.33	0.59
38:BD:11:PRO:C	38:BD:13:ARG:H	2.08	0.59
38:BD:95:LEU:HD12	38:BD:95:LEU:H	1.67	0.59
42:BH:171:LEU:HD23	42:BH:172:LYS:O	2.02	0.59
48:BQ:6:ARG:O	48:BQ:7:MET:HG3	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BU:80:ILE:O	52:BU:84:LYS:HB2	2.03	0.59
53:BV:46:VAL:O	53:BV:47:VAL:CG1	2.48	0.59
54:BW:1:MET:HG3	54:BW:2:GLU:N	2.17	0.59
1:AA:979:C:C3'	1:AA:980:C:C5'	2.67	0.59
1:AA:1211:U:H5'	1:AA:1212:U:OP1	2.02	0.59
1:AA:1392:G:H21	1:AA:1502:A:H8	1.47	0.59
2:AB:7:VAL:C	2:AB:11:LEU:HG	2.28	0.59
2:AB:178:ARG:HG2	2:AB:178:ARG:NH1	2.14	0.59
2:AB:236:TYR:CD2	2:AB:239:VAL:HG21	2.37	0.59
5:AE:9:LYS:HB3	5:AE:112:LEU:HD11	1.83	0.59
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.25	0.59
12:AL:70:ILE:HG21	12:AL:77:LEU:HD12	1.82	0.59
24:AY:238:THR:HG22	24:AY:241:GLU:H	1.66	0.59
25:B0:26:TYR:CE2	35:BA:857:C:H1'	2.37	0.59
26:B1:86:SER:O	26:B1:90:ILE:N	2.35	0.59
27:B2:57:ILE:HG22	27:B2:61:LEU:HD12	1.84	0.59
35:BA:27:G:N2	35:BA:512:G:C2'	2.61	0.59
35:BA:206:U:O2	35:BA:206:U:H2'	2.03	0.59
35:BA:322:A:P	40:BF:169:ASN:HD22	2.25	0.59
35:BA:528:A:C2	35:BA:2043:C:C5'	2.85	0.59
35:BA:653:A:H5'	35:BA:654:A:P	2.42	0.59
35:BA:654(P):C:C2'	35:BA:654(Q):C:H5'	2.31	0.59
35:BA:961:C:N4	35:BA:2031:A:H1'	2.17	0.59
35:BA:2352:A:H2'	35:BA:2353:G:H5'	1.83	0.59
35:BA:2771:C:H2'	35:BA:2772:C:C6	2.37	0.59
36:BB:68:C:H2'	36:BB:69:G:H8	1.67	0.59
38:BD:4:LYS:NZ	38:BD:20:ASP:HA	2.17	0.59
50:BS:89:ARG:HG3	50:BS:92:TYR:CB	2.31	0.59
1:AA:720:C:O5'	1:AA:720:C:H6	1.86	0.59
2:AB:12:GLU:HB3	2:AB:16:HIS:HB2	1.84	0.59
2:AB:204:ASN:HD22	2:AB:205:ASP:N	2.00	0.59
3:AC:90:GLU:C	3:AC:93:LYS:HB3	2.25	0.59
10:AJ:61:GLU:OE2	14:AN:49:HIS:HE1	1.85	0.59
19:AS:29:ARG:N	19:AS:29:ARG:HD2	2.17	0.59
19:AS:31:ILE:HG23	19:AS:49:ILE:HG23	1.84	0.59
24:AY:35:TYR:CE2	24:AY:269:VAL:HB	2.36	0.59
24:AY:176:GLY:HA3	24:AY:187:THR:HA	1.83	0.59
27:B2:38:GLN:NE2	27:B2:44:LEU:HB2	2.18	0.59
28:B3:31:LEU:O	28:B3:32:GLN:HB2	2.02	0.59
34:B9:29:ASN:HD21	34:B9:32:HIS:CG	2.20	0.59
35:BA:301:G:H1'	35:BA:302:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:321:G:C2	35:BA:341:G:H4'	2.37	0.59
35:BA:871:U:H4'	48:BQ:69:PHE:CE2	2.38	0.59
35:BA:975(A):G:O2'	35:BA:976:C:H5'	2.03	0.59
35:BA:1053:C:H2'	35:BA:1054:A:H5"	1.84	0.59
35:BA:1827:C:H2'	35:BA:1828:G:C5'	2.31	0.59
35:BA:2172:U:H1'	35:BA:2173:A:OP1	2.02	0.59
50:BS:13:ARG:CG	50:BS:14:VAL:H	2.15	0.59
50:BS:26:LEU:O	50:BS:88:ASP:HB3	2.02	0.59
53:BV:32:THR:HG23	53:BV:59:ALA:O	2.02	0.59
2:AB:22:LYS:H	2:AB:40:HIS:CE1	2.21	0.59
2:AB:43:ASP:OD2	2:AB:46:LYS:HB2	2.03	0.59
8:AH:27:PRO:HA	8:AH:58:TYR:CD1	2.37	0.59
9:AI:59:PHE:CD1	9:AI:59:PHE:N	2.67	0.59
9:AI:93:ARG:C	9:AI:95:LYS:H	2.09	0.59
15:AO:74:ASP:OD2	15:AO:77:ARG:HG2	2.03	0.59
24:AY:86:GLY:O	24:AY:87:HIS:HB3	2.03	0.59
29:B4:31:ILE:CG2	29:B4:33:VAL:HG23	2.33	0.59
30:B5:3:LYS:NZ	35:BA:2613:U:H2'	2.17	0.59
30:B5:34:PRO:O	30:B5:35:GLU:HB2	2.03	0.59
33:B8:53:PRO:HA	33:B8:56:GLU:HB2	1.84	0.59
35:BA:271(R):G:O2'	35:BA:271(S):G:H5'	2.02	0.59
35:BA:290:G:O2'	35:BA:291:C:H5'	2.02	0.59
35:BA:821:A:H2'	35:BA:946:G:H5"	1.85	0.59
35:BA:2454:G:O2'	35:BA:2455:G:H5'	2.02	0.59
37:BC:202:PRO:HB2	37:BC:205:ALA:HB2	1.85	0.59
42:BH:156:ALA:O	42:BH:158:HIS:HD2	1.85	0.59
47:BP:112:LEU:N	47:BP:128:HIS:HD2	2.01	0.59
48:BQ:79:LEU:HD23	48:BQ:80:GLU:H	1.68	0.59
49:BR:83:ILE:O	49:BR:87:TYR:HE2	1.86	0.59
55:BX:70:LEU:HD23	55:BX:71:GLY:N	2.17	0.59
57:BZ:67:LEU:H	57:BZ:67:LEU:CD1	2.14	0.59
1:AA:311:C:O2'	1:AA:312:C:H5'	2.03	0.59
1:AA:418:C:H2'	1:AA:419:C:C6	2.37	0.59
1:AA:940:C:O2'	1:AA:941:G:H5'	2.03	0.59
2:AB:32:ILE:HG23	2:AB:32:ILE:O	2.01	0.59
7:AG:68:ASN:O	7:AG:138:LYS:HD2	2.02	0.59
17:AQ:18:THR:HG23	17:AQ:69:LYS:HE3	1.85	0.59
24:AY:146:LEU:HD23	24:AY:146:LEU:C	2.27	0.59
24:AY:209:ALA:O	24:AY:210:ARG:C	2.46	0.59
24:AY:227:ILE:HD11	24:AY:241:GLU:C	2.27	0.59
29:B4:3:GLU:HG3	36:BB:43:C:P	2.42	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:143(A):C:O2	35:BA:143(A):C:H2'	2.01	0.59
35:BA:603:A:H4'	35:BA:604:G:O5'	2.02	0.59
35:BA:945:A:O2'	35:BA:946:G:H4'	2.02	0.59
35:BA:1386:C:H2'	35:BA:1387:C:C6	2.37	0.59
35:BA:1654:A:C2	39:BE:113:PHE:CD2	2.90	0.59
35:BA:1678:G:N2	35:BA:1989:G:N2	2.50	0.59
35:BA:1943:U:O2'	35:BA:1944:U:O5'	2.19	0.59
35:BA:2028:U:H2'	35:BA:2029:G:C8	2.38	0.59
37:BC:4:HIS:ND1	37:BC:8:TYR:CE2	2.70	0.59
37:BC:73:VAL:HG11	37:BC:158:LYS:HA	1.84	0.59
38:BD:147:LEU:HD13	38:BD:155:LEU:HD11	1.85	0.59
41:BG:56:ALA:CB	41:BG:153:ARG:NH2	2.66	0.59
42:BH:65:HIS:HE1	42:BH:69:ARG:HH11	1.49	0.59
49:BR:52:ILE:O	49:BR:55:ALA:HB3	2.03	0.59
51:BT:92:GLY:C	51:BT:94:ALA:N	2.56	0.59
52:BU:101:ARG:O	52:BU:102:GLU:HG2	2.03	0.59
56:BY:43:ASN:ND2	56:BY:64:GLU:HG3	2.18	0.59
57:BZ:56:VAL:CG1	57:BZ:57:ILE:N	2.66	0.59
1:AA:1133:G:N2	1:AA:1143:G:H1'	2.17	0.59
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.03	0.59
2:AB:95:GLN:O	2:AB:96:ARG:HD2	2.01	0.59
10:AJ:46:ARG:HG2	10:AJ:64:GLU:HB3	1.85	0.59
35:BA:534:U:O2'	52:BU:49:HIS:CD2	2.56	0.59
35:BA:990:A:C6	35:BA:1186:G:H1'	2.37	0.59
35:BA:1983:C:O2'	35:BA:1984:G:H5'	2.02	0.59
35:BA:2839:G:H2'	35:BA:2840:C:C6	2.38	0.59
35:BA:2880:C:O5'	35:BA:2880:C:H6	1.86	0.59
40:BF:25:PRO:HG3	40:BF:119:ARG:CB	2.32	0.59
46:BO:13:ASN:ND2	46:BO:97:ARG:HG3	2.18	0.59
55:BX:18:TYR:O	55:BX:20:GLY:N	2.36	0.59
1:AA:64:G:N2	1:AA:67:C:C4	2.70	0.59
1:AA:187:C:OP1	20:AT:82:SER:HB2	2.03	0.59
1:AA:1400:C:O5'	1:AA:1400:C:H6	1.86	0.59
3:AC:79:ARG:HH11	3:AC:79:ARG:CB	2.14	0.59
8:AH:104:ARG:O	8:AH:106:GLY:N	2.36	0.59
10:AJ:21:GLN:O	10:AJ:21:GLN:CG	2.50	0.59
10:AJ:53:PRO:HA	14:AN:42:ILE:HD11	1.84	0.59
19:AS:43:GLU:O	19:AS:45:VAL:HG13	2.03	0.59
29:B4:22:ILE:HG22	29:B4:24:THR:HG23	1.85	0.59
35:BA:154(A):C:N4	35:BA:172:C:H42	2.00	0.59
35:BA:779:U:OP1	38:BD:49:ILE:HG23	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2285:C:H5'	35:BA:2288:A:N6	2.18	0.59
35:BA:2295:C:H2'	35:BA:2296:U:C6	2.38	0.59
35:BA:2455:G:H2'	35:BA:2456:C:H6	1.68	0.59
35:BA:2532:G:H2'	35:BA:2533:A:O4'	2.01	0.59
39:BE:27:LEU:HD12	39:BE:180:ASN:O	2.03	0.59
40:BF:8:GLN:CB	40:BF:126:VAL:HA	2.24	0.59
43:BK:93:ARG:HB2	57:BZ:112:ARG:HE	1.67	0.59
48:BQ:116:GLU:O	48:BQ:120:ILE:HG12	2.02	0.59
50:BS:24:LEU:HB3	50:BS:85:VAL:CG1	2.23	0.59
51:BT:10:VAL:O	51:BT:13:ARG:HG2	2.03	0.59
51:BT:50:ILE:N	51:BT:50:ILE:CD1	2.66	0.59
57:BZ:23:LYS:HD3	57:BZ:38:TYR:HE2	1.66	0.59
1:AA:275:G:H5"	17:AQ:14:LYS:HB3	1.85	0.59
1:AA:659:U:O2'	1:AA:660:G:H5'	2.02	0.59
1:AA:1095:U:P	1:AA:1108:G:H1	2.26	0.59
1:AA:1261:A:H2'	1:AA:1262:C:H5'	1.85	0.59
2:AB:51:LEU:CD2	2:AB:55:PHE:HE2	2.15	0.59
2:AB:223:ILE:C	2:AB:225:ALA:H	2.11	0.59
7:AG:89:MET:HE1	7:AG:156:TRP:OXT	2.02	0.59
24:AY:238:THR:CG2	24:AY:241:GLU:H	2.16	0.59
24:AY:346:LYS:O	24:AY:347:GLY:C	2.46	0.59
27:B2:64:LEU:O	27:B2:68:ARG:HB2	2.03	0.59
27:B2:69:ARG:HH22	35:BA:111:A:C5'	2.14	0.59
28:B3:11:SER:HB3	35:BA:988:A:P	2.42	0.59
31:B6:5:VAL:HG12	31:B6:6:ARG:O	2.03	0.59
34:B9:1:MET:O	34:B9:34:GLN:HG2	2.03	0.59
35:BA:252:G:O2'	35:BA:253:C:H5'	2.03	0.59
35:BA:328:U:H4'	56:BY:68:HIS:CD2	2.37	0.59
35:BA:657:U:H2'	35:BA:658:C:H6	1.68	0.59
35:BA:1287:A:H2'	35:BA:1287:A:N3	2.17	0.59
35:BA:1441:G:H2'	35:BA:1442:G:H8	1.68	0.59
35:BA:1654:A:P	49:BR:3:HIS:HB2	2.42	0.59
35:BA:2105:C:N4	35:BA:2184:G:H1	1.97	0.59
35:BA:2543:G:N3	35:BA:2765:A:H2'	2.18	0.59
35:BA:2555:U:H2'	35:BA:2556:C:H5'	1.85	0.59
40:BF:105:VAL:HA	40:BF:108:LYS:HB2	1.84	0.59
41:BG:67:LYS:HD3	41:BG:68:PRO:HD2	1.85	0.59
42:BH:170:ARG:O	42:BH:171:LEU:HB3	2.03	0.59
43:BK:19:PRO:CB	43:BK:34:ILE:HD12	2.32	0.59
49:BR:28:LEU:HD23	49:BR:28:LEU:O	2.03	0.59
51:BT:36:GLU:HG2	51:BT:36:GLU:O	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BU:92:ARG:HD3	52:BU:94:ASN:HB3	1.85	0.59
1:AA:686:U:O2'	1:AA:687:A:H8	1.84	0.58
1:AA:1271:G:H2'	1:AA:1272:G:C8	2.37	0.58
1:AA:1279:A:H5'	1:AA:1280:A:OP1	2.02	0.58
1:AA:1525:G:H2'	1:AA:1526:G:C8	2.38	0.58
2:AB:54:THR:HG22	2:AB:58:ILE:HD11	1.83	0.58
2:AB:208:ILE:O	2:AB:212:GLN:HB2	2.03	0.58
2:AB:215:LEU:O	2:AB:219:VAL:HG23	2.03	0.58
3:AC:133:ALA:O	3:AC:137:ALA:HB2	2.03	0.58
11:AK:34:ASP:HB3	11:AK:40:ILE:HD11	1.84	0.58
13:AM:90:LEU:O	13:AM:92:HIS:N	2.36	0.58
24:AY:90:PHE:HB2	24:AY:454:MET:HE3	1.85	0.58
24:AY:265:LYS:HB3	24:AY:267:LYS:HE3	1.85	0.58
24:AY:266:ASN:C	24:AY:267:LYS:HG3	2.27	0.58
24:AY:406:GLU:CB	24:AY:407:PRO:CD	2.81	0.58
24:AY:453:GLY:HA3	24:AY:459:LEU:CD1	2.32	0.58
26:B1:4:VAL:HG22	26:B1:5:CYS:N	2.18	0.58
35:BA:581:C:H2'	35:BA:582:G:H8	1.63	0.58
35:BA:709:U:H2'	35:BA:710:G:H8	1.67	0.58
35:BA:769:G:O2'	35:BA:770:G:H5'	2.03	0.58
35:BA:938:G:H2'	35:BA:939:G:H8	1.67	0.58
35:BA:1600:C:O2'	35:BA:1601:G:H5'	2.03	0.58
36:BB:95:C:O2'	36:BB:96:U:H5'	2.03	0.58
37:BC:178:LYS:HG2	37:BC:181:PHE:CE1	2.37	0.58
39:BE:2:LYS:CD	39:BE:95:ILE:HG22	2.32	0.58
41:BG:71:THR:HG23	41:BG:89:GLY:C	2.27	0.58
42:BH:156:ALA:C	42:BH:158:HIS:H	2.11	0.58
42:BH:175:LYS:O	42:BH:176:ALA:CB	2.51	0.58
45:BN:23:LEU:HB3	45:BN:60:ILE:HG21	1.84	0.58
45:BN:48:MET:CE	45:BN:48:MET:H	2.16	0.58
46:BO:52:VAL:C	46:BO:53:LYS:HG3	2.28	0.58
47:BP:27:HIS:CD2	47:BP:28:GLY:N	2.71	0.58
47:BP:114:ILE:O	47:BP:130:PHE:HA	2.03	0.58
48:BQ:63:LYS:HZ3	57:BZ:175:VAL:HG21	1.68	0.58
50:BS:34:HIS:HB3	50:BS:53:SER:CB	2.33	0.58
57:BZ:27:VAL:O	57:BZ:27:VAL:HG13	2.02	0.58
57:BZ:142:SER:H	57:BZ:144:LEU:HD23	1.67	0.58
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.11	0.58
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.02	0.58
4:AD:4:TYR:O	4:AD:5:ILE:CB	2.46	0.58
10:AJ:4:ILE:HD11	10:AJ:77:PRO:HB3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:32:ALA:HB3	10:AJ:76:ASN:O	2.03	0.58
12:AL:38:THR:HG23	12:AL:57:LYS:CB	2.31	0.58
24:AY:16:GLY:N	24:AY:101:LEU:HD13	2.18	0.58
24:AY:20:HIS:ND1	24:AY:21:ILE:CD1	2.66	0.58
24:AY:297:GLU:O	24:AY:297:GLU:HG3	2.00	0.58
24:AY:337:SER:HA	24:AY:355:LEU:CD2	2.33	0.58
29:B4:12:ALA:CB	29:B4:29:PRO:HA	2.33	0.58
35:BA:226:G:O2'	35:BA:227:A:C8	2.48	0.58
35:BA:705:A:N1	35:BA:727:A:H1'	2.18	0.58
35:BA:1183:G:O2'	35:BA:1184:G:H5'	2.02	0.58
35:BA:1556:C:H2'	35:BA:1557:C:C6	2.38	0.58
35:BA:2785:C:H1'	39:BE:64:LYS:NZ	2.18	0.58
36:BB:7:G:C3'	36:BB:8:U:H5"	2.32	0.58
36:BB:15:A:H3'	36:BB:16:G:C5'	2.33	0.58
37:BC:135:ARG:HG2	37:BC:135:ARG:HH11	1.67	0.58
39:BE:113:PHE:HE1	39:BE:158:GLY:N	2.01	0.58
41:BG:67:LYS:HD3	41:BG:68:PRO:N	2.18	0.58
42:BH:72:ILE:O	42:BH:75:ALA:N	2.36	0.58
45:BN:23:LEU:HD23	45:BN:23:LEU:O	2.03	0.58
48:BQ:41:TRP:NE1	48:BQ:96:VAL:HG22	2.18	0.58
49:BR:100:LEU:HD22	49:BR:100:LEU:N	2.16	0.58
52:BU:70:ARG:NH2	52:BU:75:ASN:HB2	2.19	0.58
53:BV:46:VAL:HG13	53:BV:47:VAL:N	2.17	0.58
1:AA:368:U:P	24:AY:353:ALA:CB	2.91	0.58
1:AA:830:G:H2'	1:AA:831:U:C6	2.36	0.58
1:AA:932:C:H5"	7:AG:3:ARG:HD2	1.85	0.58
1:AA:1346:A:N1	1:AA:1374:A:H5"	2.19	0.58
1:AA:1404:C:H1'	1:AA:1499:A:N1	2.18	0.58
4:AD:13:ARG:O	4:AD:15:GLU:N	2.36	0.58
9:AI:40:LEU:CD1	9:AI:70:LYS:HG2	2.31	0.58
12:AL:119:LYS:C	12:AL:120:TYR:HD1	2.12	0.58
16:AP:21:VAL:HG11	16:AP:59:TRP:NE1	2.18	0.58
17:AQ:45:HIS:HB2	17:AQ:65:ILE:HD13	1.85	0.58
24:AY:181:LEU:HD23	24:AY:182:ARG:NH1	2.18	0.58
24:AY:186:TYR:HA	24:AY:198:GLU:HA	1.84	0.58
24:AY:223:PHE:CE2	24:AY:249:GLY:HA3	2.38	0.58
33:B8:4:MET:HE1	33:B8:61:LEU:HD22	1.85	0.58
33:B8:42:ARG:HH11	35:BA:2350:C:H5	1.51	0.58
35:BA:907:U:OP1	48:BQ:24:GLY:N	2.31	0.58
35:BA:1145:C:H2'	35:BA:1146:C:H6	1.68	0.58
35:BA:1188:U:C2'	35:BA:1189:A:H5'	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2135:A:H2'	35:BA:2136:C:O4'	2.02	0.58
35:BA:2564:A:OP1	35:BA:2648:C:H4'	2.03	0.58
35:BA:2577:A:H5'	35:BA:2578:G:C5'	2.29	0.58
35:BA:2836:U:C4	35:BA:2883:A:N6	2.71	0.58
35:BA:2888:C:H2'	35:BA:2889:C:H6	1.68	0.58
36:BB:115:G:O4'	50:BS:47:THR:HB	2.03	0.58
38:BD:153:ALA:O	38:BD:154:LYS:HG3	2.04	0.58
39:BE:51:PHE:HD1	39:BE:52:LEU:HD12	1.65	0.58
42:BH:42:ARG:HG3	42:BH:42:ARG:NH1	2.17	0.58
56:BY:84:ARG:HD2	56:BY:97:ARG:HH11	1.67	0.58
57:BZ:24:LEU:HD21	57:BZ:86:VAL:HG23	1.85	0.58
1:AA:160:A:H1'	1:AA:344:A:C5	2.38	0.58
1:AA:332:G:H2'	1:AA:333:G:C8	2.32	0.58
1:AA:542:G:N2	1:AA:543:C:C2	2.71	0.58
1:AA:894:G:H2'	1:AA:895:G:O4'	2.04	0.58
1:AA:960:U:C5	1:AA:1225:A:C8	2.91	0.58
1:AA:1130:A:C2	1:AA:1146:A:C4	2.91	0.58
1:AA:1158:C:C5'	2:AB:133:LYS:CE	2.57	0.58
1:AA:1190:G:H3'	3:AC:3:ASN:HD22	1.68	0.58
1:AA:1404:C:H1'	1:AA:1499:A:C2	2.38	0.58
1:AA:1510:U:O2	1:AA:1526:G:C2	2.56	0.58
2:AB:129:GLU:O	2:AB:130:ARG:HB2	2.03	0.58
3:AC:77:ILE:O	3:AC:84:ILE:HG22	2.03	0.58
5:AE:78:HIS:O	5:AE:93:PRO:HD3	2.03	0.58
24:AY:438:PHE:C	24:AY:438:PHE:HD1	2.10	0.58
35:BA:680:G:H2'	35:BA:681:G:C8	2.39	0.58
35:BA:967:C:O2'	35:BA:968:G:H5'	2.04	0.58
35:BA:1141:U:H5"	45:BN:63:THR:HG23	1.85	0.58
35:BA:1278:A:H5"	49:BR:36:THR:HG22	1.83	0.58
35:BA:2053:G:H1	35:BA:2616:C:H42	1.51	0.58
38:BD:7:LYS:HB3	38:BD:8:PRO:HD2	1.86	0.58
42:BH:171:LEU:CD2	42:BH:171:LEU:C	2.76	0.58
45:BN:89:LYS:O	45:BN:93:THR:HG22	2.03	0.58
52:BU:79:PHE:HE1	52:BU:83:LEU:HD11	1.66	0.58
1:AA:1166:G:H5'	1:AA:1168:A:OP2	2.03	0.58
1:AA:1382:C:H2'	1:AA:1383:C:H6	1.68	0.58
2:AB:95:GLN:HA	2:AB:95:GLN:OE1	2.04	0.58
6:AF:15:ASP:C	6:AF:17:SER:N	2.53	0.58
7:AG:57:GLU:H	7:AG:57:GLU:CD	2.12	0.58
8:AH:41:ARG:HG2	8:AH:41:ARG:O	2.03	0.58
9:AI:24:GLY:HA2	9:AI:59:PHE:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:54:PHE:CG	10:AJ:55:LYS:HE3	2.39	0.58
11:AK:79:SER:OG	11:AK:106:LYS:HD2	2.03	0.58
13:AM:27:LYS:HE2	13:AM:31:LYS:CE	2.33	0.58
24:AY:343:ASN:HD22	24:AY:345:THR:H	1.49	0.58
24:AY:455:GLY:O	24:AY:456:GLU:C	2.44	0.58
24:AY:684:GLN:O	24:AY:688:ILE:HD13	2.03	0.58
27:B2:25:VAL:O	27:B2:27:GLU:N	2.36	0.58
31:B6:6:ARG:C	31:B6:8:LYS:H	2.11	0.58
35:BA:64:A:H2'	35:BA:65:C:H6	1.68	0.58
35:BA:1888:G:C5'	35:BA:1888:G:N3	2.66	0.58
35:BA:2820:A:C8	39:BE:191:PRO:CB	2.86	0.58
36:BB:104:U:H6	36:BB:104:U:H5"	1.67	0.58
37:BC:48:LEU:HD12	37:BC:48:LEU:H	1.67	0.58
37:BC:173:HIS:O	37:BC:174:ALA:HB2	2.03	0.58
37:BC:178:LYS:HG2	37:BC:181:PHE:HE1	1.67	0.58
39:BE:38:THR:HB	39:BE:41:LYS:CG	2.33	0.58
39:BE:69:LYS:HE2	39:BE:69:LYS:H	1.68	0.58
40:BF:109:GLY:HA2	40:BF:112:MET:HB2	1.86	0.58
41:BG:34:LEU:HD13	41:BG:99:MET:HE2	1.85	0.58
43:BK:9:LYS:HE2	43:BK:56:GLU:OE2	2.03	0.58
45:BN:19:GLU:O	45:BN:60:ILE:HA	2.04	0.58
45:BN:22:THR:HA	45:BN:61:ARG:O	2.03	0.58
45:BN:67:LEU:O	45:BN:68:GLU:HB2	2.03	0.58
51:BT:89:VAL:HB	51:BT:91:ARG:HE	1.69	0.58
1:AA:174:C:H2'	1:AA:175:C:H6	1.69	0.58
1:AA:177:C:C2	1:AA:178:C:C5	2.92	0.58
1:AA:178:C:C2'	1:AA:179:A:H5'	2.32	0.58
1:AA:427:U:C4	1:AA:428:G:C6	2.91	0.58
1:AA:743:U:H2'	1:AA:744:C:C6	2.38	0.58
1:AA:976:G:H5'	1:AA:1358:U:O2'	2.04	0.58
1:AA:1239:A:H62	1:AA:1299:A:N6	2.00	0.58
1:AA:1452:C:H1'	1:AA:1456:G:C2	2.38	0.58
12:AL:46:LYS:HZ3	12:AL:94:PRO:HG3	1.69	0.58
12:AL:75:HIS:HD2	12:AL:77:LEU:CD1	2.13	0.58
16:AP:50:LYS:HG2	16:AP:51:VAL:N	2.18	0.58
18:AR:74:ARG:HD3	18:AR:81:PHE:CD1	2.38	0.58
19:AS:43:GLU:CB	19:AS:44:MET:SD	2.88	0.58
22:AV:61:C:H2'	22:AV:62:C:H6	1.68	0.58
24:AY:139:MET:CE	24:AY:146:LEU:HB2	2.33	0.58
24:AY:225:GLU:O	24:AY:228:MET:HE2	2.03	0.58
24:AY:343:ASN:ND2	24:AY:345:THR:N	2.50	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:608:VAL:HG13	24:AY:670:VAL:O	2.04	0.58
25:B0:73:GLY:C	25:B0:75:LEU:H	2.12	0.58
26:B1:81:LYS:CE	35:BA:271(H):G:H4'	2.30	0.58
29:B4:41:PRO:HA	29:B4:42:PHE:CD1	2.39	0.58
35:BA:648:G:H2'	35:BA:649:G:H8	1.69	0.58
35:BA:709:U:H2'	35:BA:710:G:C8	2.37	0.58
35:BA:886:C:H2'	35:BA:887:A:O4'	2.04	0.58
35:BA:1485:G:H5'	35:BA:1485:G:C8	2.38	0.58
36:BB:81:G:H5'	36:BB:81:G:N3	2.17	0.58
38:BD:176:ARG:HG2	38:BD:176:ARG:NH1	2.11	0.58
38:BD:212:SER:O	38:BD:217:ARG:HB2	2.03	0.58
39:BE:197:ILE:HD11	39:BE:199:ARG:HE	1.69	0.58
40:BF:89:VAL:HG12	40:BF:90:PHE:N	2.18	0.58
45:BN:3:THR:HG22	45:BN:4:TYR:N	2.16	0.58
51:BT:27:THR:O	51:BT:28:VAL:CG2	2.48	0.58
54:BW:76:VAL:HG13	54:BW:76:VAL:O	2.04	0.58
56:BY:56:PRO:O	56:BY:57:GLN:HB2	2.04	0.58
56:BY:88:LYS:NZ	56:BY:93:GLY:O	2.36	0.58
56:BY:88:LYS:HE2	56:BY:93:GLY:HA3	1.84	0.58
1:AA:714:G:H8	1:AA:714:G:O5'	1.87	0.58
1:AA:1239:A:C2'	1:AA:1298:C:N4	2.66	0.58
1:AA:1313:U:OP2	19:AS:6:LYS:CB	2.52	0.58
1:AA:1346:A:N6	1:AA:1374:A:H3'	2.19	0.58
12:AL:53:ARG:NH1	12:AL:92:ASP:OD2	2.37	0.58
17:AQ:48:GLU:O	17:AQ:50:LYS:N	2.36	0.58
19:AS:41:VAL:C	19:AS:43:GLU:H	2.10	0.58
22:AV:28:C:O2	22:AV:43:A:C2	2.57	0.58
24:AY:84:THR:N	24:AY:85:PRO:CD	2.53	0.58
24:AY:138:LYS:HD3	24:AY:141:LYS:CE	2.33	0.58
24:AY:530:VAL:HG22	24:AY:531:GLY:H	1.68	0.58
27:B2:69:ARG:CG	27:B2:70:GLN:H	2.17	0.58
32:B7:46:VAL:CG1	32:B7:47:ARG:N	2.65	0.58
33:B8:39:LYS:HE3	35:BA:2365:G:O6	2.02	0.58
33:B8:61:LEU:CD1	33:B8:62:LEU:H	2.17	0.58
35:BA:286:C:H2'	35:BA:287:C:H6	1.68	0.58
35:BA:419:C:H2'	35:BA:420:C:C6	2.38	0.58
35:BA:492:A:H2'	35:BA:493:G:C5'	2.33	0.58
35:BA:729:G:N7	38:BD:208:LYS:HB2	2.19	0.58
35:BA:737:C:C2'	35:BA:738:G:H5'	2.33	0.58
35:BA:1783:A:C2	35:BA:2587:A:C4	2.91	0.58
35:BA:1899:G:N2	35:BA:1902:C:C4	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2163:C:H2'	35:BA:2164:C:H5'	1.85	0.58
35:BA:2695:C:H2'	35:BA:2696:U:C6	2.39	0.58
36:BB:66:A:N6	36:BB:108:U:H2'	2.18	0.58
38:BD:165:ILE:HD13	38:BD:175:LEU:CD2	2.29	0.58
39:BE:128:SER:OG	39:BE:129:HIS:N	2.34	0.58
39:BE:145:LYS:O	39:BE:148:GLY:N	2.37	0.58
39:BE:163:GLU:HG3	39:BE:164:ARG:N	2.17	0.58
40:BF:7:TYR:CD2	40:BF:16:GLY:HA3	2.29	0.58
40:BF:63:LYS:HG3	40:BF:76:GLY:HA2	1.84	0.58
41:BG:67:LYS:HD3	41:BG:68:PRO:CD	2.33	0.58
41:BG:76:SER:HB3	41:BG:83:ARG:HB3	1.85	0.58
45:BN:24:GLY:HA2	45:BN:27:ALA:HB3	1.86	0.58
47:BP:97:PRO:O	47:BP:98:GLU:CB	2.52	0.58
49:BR:53:HIS:ND1	49:BR:53:HIS:O	2.31	0.58
51:BT:89:VAL:CB	51:BT:91:ARG:HG3	2.33	0.58
1:AA:680:C:O2'	1:AA:681:C:H5'	2.03	0.58
1:AA:1360:A:H8	1:AA:1360:A:OP1	1.86	0.58
6:AF:43:LEU:H	6:AF:43:LEU:CD1	2.14	0.58
19:AS:10:PHE:HE2	19:AS:37:ARG:O	1.86	0.58
20:AT:33:ILE:O	20:AT:37:SER:OG	2.18	0.58
20:AT:73:HIS:O	20:AT:74:LYS:C	2.46	0.58
27:B2:57:ILE:O	27:B2:61:LEU:HD12	2.03	0.58
34:B9:27:CYS:SG	34:B9:29:ASN:ND2	2.77	0.58
35:BA:1220:A:H3'	35:BA:1221:C:H5'	1.85	0.58
35:BA:1568:G:OP2	38:BD:63:ARG:NH2	2.31	0.58
42:BH:16:SER:CB	42:BH:27:LYS:HB2	2.31	0.58
42:BH:19:VAL:O	42:BH:20:ALA:HB2	2.03	0.58
42:BH:30:LYS:N	42:BH:30:LYS:HE2	2.19	0.58
42:BH:170:ARG:HG2	42:BH:170:ARG:HH11	1.69	0.58
43:BK:71:THR:OG1	43:BK:111:LYS:NZ	2.37	0.58
47:BP:39:LYS:HE2	47:BP:40:SER:H	1.69	0.58
48:BQ:27:VAL:H	48:BQ:137:TYR:HD2	1.50	0.58
53:BV:62:LEU:HD22	53:BV:62:LEU:H	1.67	0.58
1:AA:424:G:H2'	1:AA:425:G:H8	1.68	0.58
1:AA:1004:A:H5'	1:AA:1025:U:N3	2.18	0.58
1:AA:1296:C:C6	1:AA:1297:C:H5	2.22	0.58
1:AA:1415:G:H2'	1:AA:1416:G:H8	1.68	0.58
2:AB:75:LYS:HG2	2:AB:78:GLN:HE21	1.68	0.58
8:AH:58:TYR:O	8:AH:59:LEU:HD23	2.04	0.58
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.03	0.58
24:AY:418:LYS:HD3	24:AY:418:LYS:N	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:485:GLU:HB2	24:AY:560:VAL:HA	1.84	0.58
24:AY:496:LYS:HE2	24:AY:498:ILE:HD13	1.81	0.58
24:AY:554:PRO:HG3	24:AY:594:VAL:CG1	2.33	0.58
35:BA:246:C:H2'	35:BA:247:G:H5'	1.86	0.58
35:BA:267:C:H2'	35:BA:268:C:C6	2.39	0.58
35:BA:486:C:H4'	54:BW:60:ASN:HD21	1.67	0.58
35:BA:797:C:P	40:BF:62:ARG:HG3	2.44	0.58
35:BA:1943:U:H4'	35:BA:1944:U:OP1	2.03	0.58
35:BA:2202:C:H2'	38:BD:151:LYS:NZ	2.18	0.58
37:BC:140:ASN:H	37:BC:145:THR:HB	1.68	0.58
40:BF:26:ALA:O	40:BF:27:GLU:HG3	2.03	0.58
41:BG:32:PRO:HA	41:BG:162:THR:HB	1.86	0.58
42:BH:41:MET:HG3	42:BH:43:VAL:HG13	1.83	0.58
47:BP:112:LEU:H	47:BP:128:HIS:HD2	1.51	0.58
1:AA:154:C:H2'	1:AA:155:C:C6	2.39	0.58
1:AA:155:C:H2'	1:AA:156:G:H8	1.67	0.58
1:AA:260:G:O2'	1:AA:261:U:H5'	2.03	0.58
1:AA:1065:U:O2'	1:AA:1066:C:P	2.62	0.58
1:AA:1319:A:OP2	19:AS:5:LEU:HD23	2.02	0.58
1:AA:1375:A:H5'	1:AA:1376:U:OP2	2.03	0.58
3:AC:134:ILE:HA	3:AC:137:ALA:HB3	1.86	0.58
5:AE:5:ASP:C	5:AE:6:PHE:CD1	2.82	0.58
7:AG:21:VAL:HG23	7:AG:22:LEU:N	2.18	0.58
7:AG:64:GLN:O	7:AG:67:GLU:HB3	2.04	0.58
8:AH:1:MET:HE3	8:AH:3:THR:HG23	1.85	0.58
8:AH:89:PRO:HA	8:AH:92:ARG:HH11	1.68	0.58
12:AL:119:LYS:CB	12:AL:120:TYR:HD1	2.16	0.58
13:AM:19:LEU:H	13:AM:19:LEU:CD2	2.17	0.58
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.85	0.58
13:AM:116:THR:HG21	22:AV:29:G:C4'	2.33	0.58
15:AO:17:ARG:HD3	15:AO:26:GLU:CG	2.34	0.58
24:AY:8:ASP:HB3	24:AY:11:ARG:HG3	1.86	0.58
24:AY:121:VAL:CG2	24:AY:122:TRP:H	2.16	0.58
25:B0:5:LYS:HB3	25:B0:5:LYS:HZ3	1.67	0.58
26:B1:52:ARG:O	26:B1:53:VAL:HB	2.04	0.58
29:B4:1:MET:N	29:B4:1:MET:HE3	2.17	0.58
34:B9:16:VAL:O	35:BA:1033:U:H5	1.87	0.58
34:B9:29:ASN:O	34:B9:31:LYS:N	2.37	0.58
35:BA:45:C:OP2	35:BA:215:G:H5"	2.04	0.58
35:BA:605:C:H2'	35:BA:606:U:H6	1.68	0.58
35:BA:654(S):G:H3'	35:BA:654(T):C:H5"	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:732:C:O2'	35:BA:733:G:H5'	2.03	0.58
35:BA:1150:C:O2'	35:BA:1151:G:H5'	2.04	0.58
35:BA:1930:G:O2'	35:BA:1931:U:P	2.62	0.58
35:BA:2174:C:H1'	37:BC:219:MET:HE1	1.84	0.58
35:BA:2693:A:H2'	35:BA:2694:G:H8	1.68	0.58
40:BF:160:ASN:HD21	40:BF:162:LEU:HD13	1.69	0.58
40:BF:170:LEU:N	40:BF:170:LEU:CD2	2.67	0.58
41:BG:55:LYS:HA	41:BG:58:GLN:HG3	1.85	0.58
43:BK:14:ALA:HA	43:BK:41:PHE:HE2	1.67	0.58
43:BK:103:GLN:C	43:BK:106:GLU:HG2	2.29	0.58
45:BN:133:GLN:HG3	45:BN:135:PRO:HD3	1.85	0.58
52:BU:33:ARG:C	52:BU:35:ALA:N	2.55	0.58
53:BV:39:LEU:HA	53:BV:47:VAL:HG11	1.85	0.58
57:BZ:101:PRO:HG2	57:BZ:136:PHE:HA	1.86	0.58
3:AC:40:ARG:HG2	3:AC:55:VAL:HG11	1.85	0.57
4:AD:92:VAL:O	4:AD:96:LEU:HD22	2.04	0.57
10:AJ:40:LEU:HD23	10:AJ:40:LEU:H	1.66	0.57
12:AL:45:PRO:HG3	12:AL:53:ARG:HD3	1.86	0.57
24:AY:74:TRP:CD1	24:AY:273:LEU:HB3	2.39	0.57
24:AY:606:MET:HE3	24:AY:671:MET:HG2	1.85	0.57
29:B4:41:PRO:C	29:B4:42:PHE:CG	2.82	0.57
35:BA:2656:U:H2'	35:BA:2657:A:H5"	1.86	0.57
37:BC:132:LEU:HB3	37:BC:138:LEU:N	2.19	0.57
38:BD:176:ARG:NH1	38:BD:176:ARG:CB	2.64	0.57
39:BE:168:MET:CE	39:BE:202:LYS:HE2	2.34	0.57
40:BF:84:VAL:O	40:BF:86:GLY:N	2.31	0.57
40:BF:185:ASP:OD1	40:BF:188:ARG:HD3	2.04	0.57
41:BG:82:LEU:C	41:BG:83:ARG:HG3	2.29	0.57
41:BG:107:LEU:HD23	41:BG:111:LEU:CD1	2.34	0.57
42:BH:98:LEU:HD12	42:BH:102:ALA:O	2.04	0.57
45:BN:17:ASP:OD2	45:BN:56:ASN:HB3	2.03	0.57
46:BO:101:PRO:C	46:BO:102:VAL:CG1	2.77	0.57
47:BP:147:LEU:C	47:BP:148:LEU:HD12	2.28	0.57
50:BS:87:PHE:CD2	50:BS:88:ASP:N	2.72	0.57
51:BT:19:LEU:HD13	51:BT:78:LEU:HD22	1.84	0.57
55:BX:41:ASN:HA	55:BX:44:GLU:HG2	1.86	0.57
56:BY:14:LEU:HD12	56:BY:15:VAL:H	1.67	0.57
56:BY:52:SER:N	56:BY:53:PRO:CD	2.66	0.57
1:AA:191:G:H1'	20:AT:105:SER:HA	1.86	0.57
1:AA:741:G:O2'	1:AA:742:G:H5'	2.03	0.57
1:AA:807:A:H2'	1:AA:808:C:C6	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:833:U:H2'	1:AA:834:C:H6	1.68	0.57
1:AA:1225:A:H5"	1:AA:1226:C:OP2	2.02	0.57
2:AB:220:ASP:O	2:AB:223:ILE:HG13	2.03	0.57
4:AD:104:VAL:HG21	4:AD:140:VAL:HG21	1.86	0.57
7:AG:54:THR:HG22	7:AG:125:MET:HE3	1.84	0.57
7:AG:75:VAL:HG21	7:AG:144:MET:HB3	1.84	0.57
10:AJ:3:LYS:N	10:AJ:75:ILE:O	2.37	0.57
10:AJ:32:ALA:N	10:AJ:78:ASN:HD21	2.02	0.57
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.87	0.57
26:B1:57:GLU:HG2	26:B1:58:ILE:N	2.19	0.57
26:B1:85:LEU:C	26:B1:87:PRO:CD	2.77	0.57
31:B6:11:LEU:C	31:B6:12:GLU:HG3	2.29	0.57
33:B8:23:VAL:CG1	33:B8:46:ARG:HD3	2.34	0.57
35:BA:272(I):U:O2	35:BA:272(I):U:H3'	2.03	0.57
35:BA:967:C:C2'	35:BA:968:G:H5'	2.34	0.57
35:BA:1814:G:H4'	38:BD:51:VAL:HG21	1.86	0.57
35:BA:2230:G:H2'	35:BA:2231:C:H6	1.69	0.57
37:BC:37:LYS:C	37:BC:38:PHE:HD1	2.12	0.57
39:BE:31:CYS:C	39:BE:90:THR:HG23	2.30	0.57
40:BF:123:LEU:HD12	40:BF:123:LEU:C	2.28	0.57
41:BG:46:ALA:HA	41:BG:51:ARG:CB	2.34	0.57
41:BG:164:GLU:O	41:BG:165:THR:HG23	2.04	0.57
42:BH:89:ILE:O	42:BH:89:ILE:CG1	2.52	0.57
43:BK:112:MET:HG3	43:BK:113:PRO:CD	2.33	0.57
46:BO:53:LYS:O	46:BO:54:GLU:C	2.47	0.57
48:BQ:41:TRP:HE1	48:BQ:96:VAL:HG22	1.68	0.57
53:BV:72:VAL:HG23	53:BV:85:LYS:HB2	1.85	0.57
53:BV:98:GLU:HG2	53:BV:99:ILE:N	2.17	0.57
57:BZ:4:ARG:NH1	57:BZ:66:SER:HB2	2.16	0.57
57:BZ:58:VAL:HA	57:BZ:67:LEU:O	2.04	0.57
1:AA:499:A:O2'	1:AA:500:G:C8	2.56	0.57
1:AA:600:C:OP1	8:AH:97:VAL:HG12	2.03	0.57
1:AA:631:G:C2'	1:AA:632:A:C8	2.86	0.57
1:AA:745:C:H2'	1:AA:746:A:C8	2.39	0.57
1:AA:973:G:C1'	10:AJ:55:LYS:CE	2.82	0.57
1:AA:1128:C:C2'	1:AA:1129:C:C5'	2.74	0.57
5:AE:136:MET:O	5:AE:138:ALA:N	2.38	0.57
7:AG:43:PHE:O	7:AG:46:ALA:HB3	2.03	0.57
8:AH:124:ALA:HB1	8:AH:129:VAL:HG22	1.85	0.57
9:AI:126:SER:O	9:AI:128:ARG:N	2.37	0.57
10:AJ:20:ALA:C	10:AJ:22:LYS:N	2.62	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:75:HIS:NE2	12:AL:77:LEU:HB2	2.19	0.57
16:AP:60:LEU:HD21	16:AP:66:PRO:HD3	1.86	0.57
16:AP:74:LEU:HD23	16:AP:79:VAL:HG21	1.86	0.57
19:AS:10:PHE:CZ	19:AS:70:LYS:HE2	2.39	0.57
24:AY:438:PHE:C	24:AY:439:ARG:HG3	2.29	0.57
28:B3:40:THR:OG1	28:B3:43:ILE:HG12	2.04	0.57
34:B9:1:MET:SD	34:B9:1:MET:N	2.74	0.57
34:B9:34:GLN:O	34:B9:35:ARG:CB	2.53	0.57
35:BA:654(N):G:H2’	35:BA:654(O):G:H5’	1.85	0.57
35:BA:1063:G:O2’	43:BK:87:GLY:HA3	2.04	0.57
35:BA:1105:U:H2’	35:BA:1106:G:O4’	2.03	0.57
35:BA:2001:A:H2’	35:BA:2002:G:O4’	2.04	0.57
35:BA:2260:C:H6	35:BA:2260:C:O5’	1.87	0.57
35:BA:2296:U:C4’	35:BA:2297:C:OP1	2.46	0.57
35:BA:2691:C:H6	35:BA:2691:C:H5’	1.69	0.57
35:BA:2713:A:H3’	35:BA:2714:G:H5’	1.85	0.57
40:BF:8:GLN:HG2	40:BF:126:VAL:HG12	1.85	0.57
42:BH:30:LYS:CD	42:BH:81:GLU:HG2	2.32	0.57
46:BO:106:LEU:O	46:BO:107:ARG:C	2.45	0.57
47:BP:102:ARG:HB3	47:BP:102:ARG:NH1	2.19	0.57
49:BR:30:THR:OG1	49:BR:75:LEU:HD21	2.04	0.57
49:BR:76:VAL:O	49:BR:79:LEU:HB3	2.05	0.57
51:BT:28:VAL:O	51:BT:28:VAL:HG12	2.00	0.57
53:BV:15:GLU:HB3	53:BV:16:PRO:CD	2.33	0.57
55:BX:27:THR:HB	55:BX:80:ILE:CG2	2.29	0.57
56:BY:37:VAL:HG23	56:BY:38:ILE:N	2.19	0.57
57:BZ:185:GLU:O	57:BZ:186:GLU:C	2.47	0.57
1:AA:300:A:H2’	1:AA:301:G:H5’	1.86	0.57
1:AA:1250:A:H4’	9:AI:68:GLY:H	1.69	0.57
3:AC:136:GLN:HG3	3:AC:139:GLN:HB3	1.86	0.57
5:AE:76:ILE:HG22	5:AE:118:ILE:HD13	1.86	0.57
12:AL:86:ARG:HG2	12:AL:86:ARG:O	2.03	0.57
24:AY:573:HIS:HD2	24:AY:576:ASP:H	1.52	0.57
30:B5:19:ARG:HA	35:BA:2046:G:H5’	1.85	0.57
33:B8:13:ARG:HB3	47:BP:63:PRO:HB3	1.85	0.57
35:BA:1380:G:O2’	35:BA:1381:G:H5’	2.04	0.57
35:BA:1839:G:H2’	35:BA:1839:G:N3	2.17	0.57
35:BA:2397:G:H2’	35:BA:2398:U:H6	1.68	0.57
35:BA:2840:C:H2’	35:BA:2841:C:C6	2.39	0.57
39:BE:38:THR:HG22	39:BE:40:GLU:N	2.18	0.57
39:BE:183:LEU:N	39:BE:183:LEU:CD1	2.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:125:LEU:HD23	40:BF:125:LEU:H	1.69	0.57
42:BH:89:ILE:HG23	42:BH:129:THR:O	2.05	0.57
45:BN:90:MET:HE1	45:BN:97:ARG:HD2	1.85	0.57
45:BN:133:GLN:HE21	45:BN:135:PRO:HG2	1.70	0.57
46:BO:69:ILE:N	46:BO:69:ILE:CD1	2.64	0.57
46:BO:71:ARG:HB2	46:BO:75:SER:OG	2.03	0.57
47:BP:91:PHE:HZ	47:BP:100:LEU:HD11	1.70	0.57
48:BQ:63:LYS:NZ	57:BZ:175:VAL:HG21	2.20	0.57
50:BS:70:GLY:C	50:BS:72:ALA:N	2.61	0.57
1:AA:505:G:H5'	1:AA:534:U:H2'	1.86	0.57
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.39	0.57
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.04	0.57
24:AY:400:GLU:HG2	24:AY:401:SER:N	2.18	0.57
24:AY:491:VAL:HG11	24:AY:596:LYS:HD3	1.86	0.57
26:B1:53:VAL:CG1	26:B1:54:ALA:N	2.68	0.57
29:B4:1:MET:HE3	29:B4:1:MET:H1	1.70	0.57
35:BA:958:U:H5'	48:BQ:14:ARG:HH11	1.69	0.57
35:BA:1187:G:H5"	53:BV:81:TYR:CE2	2.39	0.57
35:BA:1404:C:O2'	35:BA:1405:U:H5'	2.05	0.57
35:BA:1775:U:H2'	35:BA:1776:G:H5'	1.87	0.57
35:BA:2011:U:H2'	35:BA:2012:G:H5'	1.86	0.57
35:BA:2550:G:C6	35:BA:2551:C:N4	2.72	0.57
35:BA:2815:C:H2'	35:BA:2816:C:H6	1.69	0.57
36:BB:68:C:O2'	36:BB:69:G:H5'	2.03	0.57
39:BE:101:ARG:NH1	39:BE:169:ASN:ND2	2.52	0.57
41:BG:63:ILE:C	41:BG:63:ILE:CD1	2.77	0.57
49:BR:18:LEU:HD23	49:BR:18:LEU:C	2.29	0.57
52:BU:101:ARG:C	52:BU:102:GLU:CG	2.77	0.57
1:AA:630:G:C2'	1:AA:631:G:C5'	2.83	0.57
1:AA:861:G:O2'	1:AA:862:C:H5'	2.04	0.57
1:AA:1226:C:C5	13:AM:104:ARG:HB2	2.40	0.57
1:AA:1354:C:H2'	1:AA:1355:G:H8	1.70	0.57
4:AD:3:ARG:HG2	4:AD:3:ARG:HH11	1.69	0.57
4:AD:129:ASN:HD21	4:AD:145:GLU:N	1.95	0.57
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.40	0.57
18:AR:79:LEU:HD22	18:AR:80:PRO:HD2	1.86	0.57
27:B2:20:GLU:O	27:B2:21:LEU:C	2.47	0.57
29:B4:37:SER:O	29:B4:38:LYS:HB2	2.04	0.57
35:BA:285:C:O2'	35:BA:286:C:H5"	2.05	0.57
35:BA:342:G:O2'	35:BA:343:C:H5'	2.04	0.57
35:BA:481:G:OP2	56:BY:47:LYS:HD3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:493:G:H2'	35:BA:494:G:O4'	2.04	0.57
35:BA:1047:G:HO2'	35:BA:1110:G:H1	1.52	0.57
35:BA:1102:C:H2'	35:BA:1103:A:C8	2.39	0.57
35:BA:2200:C:H42	35:BA:2223:G:H1	1.53	0.57
35:BA:2552:U:H2'	35:BA:2554:U:H5"	1.86	0.57
35:BA:2807:G:H3'	35:BA:2808:U:C5'	2.31	0.57
37:BC:46:ALA:HA	37:BC:212:SER:O	2.04	0.57
39:BE:31:CYS:HB3	39:BE:49:LEU:HB3	1.85	0.57
39:BE:177:PRO:HG2	39:BE:178:GLU:N	2.18	0.57
41:BG:39:ILE:CG1	41:BG:92:VAL:HG22	2.35	0.57
41:BG:91:ARG:HD2	41:BG:92:VAL:N	2.19	0.57
41:BG:133:LEU:C	41:BG:133:LEU:HD12	2.30	0.57
43:BK:10:LEU:HD12	43:BK:57:ILE:CD1	2.35	0.57
45:BN:32:THR:HG23	45:BN:37:LYS:HB3	1.87	0.57
48:BQ:33:GLY:O	48:BQ:131:ILE:HA	2.03	0.57
48:BQ:69:PHE:HD1	48:BQ:70:PRO:HD2	1.67	0.57
49:BR:41:ALA:C	49:BR:43:GLU:H	2.13	0.57
50:BS:93:LYS:O	50:BS:94:TYR:C	2.48	0.57
51:BT:85:LYS:HB3	51:BT:85:LYS:HZ2	1.68	0.57
53:BV:18:LEU:CD2	53:BV:19:LYS:N	2.30	0.57
54:BW:9:TYR:H	54:BW:102:HIS:CD2	2.17	0.57
1:AA:243:A:C2	1:AA:246:A:C8	2.93	0.57
1:AA:1415:G:H2'	1:AA:1416:G:C8	2.40	0.57
1:AA:1456:G:C2'	1:AA:1457:G:H5'	2.34	0.57
3:AC:3:ASN:O	3:AC:4:LYS:HB2	2.04	0.57
3:AC:131:ARG:NH2	3:AC:168:ALA:HB2	2.19	0.57
4:AD:8:VAL:HB	4:AD:21:LEU:CD1	2.34	0.57
13:AM:119:GLY:O	13:AM:120:LYS:HB2	2.03	0.57
17:AQ:12:SER:HB3	17:AQ:20:THR:CB	2.35	0.57
24:AY:125:ALA:C	24:AY:127:LYS:N	2.59	0.57
24:AY:628:ARG:HG2	24:AY:628:ARG:NH1	2.20	0.57
24:AY:679:VAL:CG2	24:AY:684:GLN:NE2	2.68	0.57
26:B1:45:ASN:C	26:B1:45:ASN:ND2	2.61	0.57
29:B4:10:VAL:N	29:B4:26:SER:O	2.38	0.57
29:B4:26:SER:HB3	41:BG:105:LYS:NZ	2.20	0.57
33:B8:23:VAL:HG11	33:B8:46:ARG:HD3	1.86	0.57
35:BA:1638:C:H2'	35:BA:1639:U:O4'	2.05	0.57
35:BA:2787:C:H1'	39:BE:61:ARG:CG	2.33	0.57
36:BB:89:G:C6	36:BB:90:A:C2	2.93	0.57
37:BC:37:LYS:O	37:BC:38:PHE:HB3	2.04	0.57
41:BG:82:LEU:CD1	41:BG:87:PRO:HB3	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:159:GLU:O	42:BH:160:LYS:O	2.22	0.57
42:BH:175:LYS:O	42:BH:176:ALA:HB3	2.04	0.57
46:BO:61:VAL:HG21	46:BO:111:PHE:CE2	2.39	0.57
48:BQ:2:LEU:HG	48:BQ:69:PHE:CE1	2.38	0.57
50:BS:54:LEU:O	50:BS:54:LEU:HD13	2.05	0.57
53:BV:28:GLU:OE1	53:BV:31:ALA:HB2	2.05	0.57
55:BX:56:THR:C	55:BX:57:LEU:CD1	2.78	0.57
57:BZ:3:TYR:CD2	57:BZ:51:ALA:HB2	2.39	0.57
1:AA:8:A:C6	4:AD:209:ARG:HB2	2.39	0.57
1:AA:793:U:C3'	1:AA:794:A:H5"	2.21	0.57
1:AA:1208:C:H2'	1:AA:1209:C:C6	2.40	0.57
9:AI:32:ASP:C	9:AI:32:ASP:OD1	2.47	0.57
9:AI:54:ASP:O	9:AI:56:LEU:N	2.36	0.57
13:AM:11:ARG:O	13:AM:13:LYS:N	2.38	0.57
13:AM:66:LEU:HD12	13:AM:66:LEU:N	2.19	0.57
13:AM:74:VAL:HA	13:AM:77:ASN:HD22	1.69	0.57
15:AO:39:LEU:HD22	15:AO:43:LEU:HG	1.86	0.57
27:B2:57:ILE:O	27:B2:61:LEU:HB2	2.05	0.57
35:BA:1053:C:H3'	35:BA:1054:A:H5"	1.86	0.57
35:BA:1173:G:H5'	35:BA:1174:A:O5'	2.04	0.57
35:BA:2552:U:C2	35:BA:2554:U:H5'	2.39	0.57
41:BG:61:ALA:O	41:BG:65:GLY:N	2.35	0.57
46:BO:103:ALA:O	46:BO:106:LEU:HG	2.04	0.57
48:BQ:25:ASP:HA	48:BQ:100:GLY:O	2.05	0.57
50:BS:70:GLY:C	50:BS:72:ALA:H	2.11	0.57
50:BS:74:ALA:CB	50:BS:101:LEU:HD22	2.34	0.57
51:BT:46:GLU:O	51:BT:65:LYS:HD2	2.04	0.57
52:BU:79:PHE:O	52:BU:83:LEU:HD13	2.04	0.57
57:BZ:100:VAL:CG2	57:BZ:126:VAL:HG22	2.35	0.57
1:AA:552:U:H4'	12:AL:86:ARG:CG	2.35	0.57
1:AA:969:A:N1	1:AA:970:C:C2	2.73	0.57
1:AA:1328:C:H2'	1:AA:1329:A:H8	1.70	0.57
12:AL:17:LYS:HD3	12:AL:18:VAL:HG22	1.87	0.57
13:AM:52:GLU:HA	13:AM:55:ARG:HD3	1.85	0.57
15:AO:54:ARG:HG2	15:AO:58:MET:HE2	1.87	0.57
23:AX:17:U:O2'	23:AX:18:G:H5'	2.04	0.57
24:AY:546:ILE:CG2	24:AY:590:ILE:HG13	2.25	0.57
24:AY:644:ARG:O	24:AY:645:ALA:HB2	2.04	0.57
25:B0:14:ARG:HB2	25:B0:14:ARG:HH11	1.69	0.57
35:BA:784:A:H5"	38:BD:227:ASN:HD21	1.70	0.57
35:BA:1320:C:H2'	35:BA:1329:U:OP2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1505:C:C5	35:BA:1506:C:H1'	2.40	0.57
35:BA:1517:G:H5'	35:BA:1517:G:H8	1.69	0.57
35:BA:2182:G:H2'	35:BA:2183:C:C6	2.39	0.57
35:BA:2801(A):A:H4'	35:BA:2802:G:H8	1.67	0.57
40:BF:154:VAL:HG13	40:BF:191:ARG:O	2.05	0.57
46:BO:47:ILE:O	46:BO:48:PRO:O	2.22	0.57
46:BO:52:VAL:O	46:BO:53:LYS:HG3	2.05	0.57
47:BP:27:HIS:CD2	47:BP:27:HIS:C	2.82	0.57
51:BT:35:LYS:HD3	51:BT:41:ARG:NH1	2.19	0.57
55:BX:12:VAL:HG12	55:BX:27:THR:C	2.29	0.57
57:BZ:175:VAL:HB	57:BZ:176:PRO:HD2	1.87	0.57
1:AA:642:A:C5	1:AA:643:C:C5	2.92	0.57
1:AA:1100:C:C2'	1:AA:1101:A:H5"	2.23	0.57
2:AB:151:GLY:O	2:AB:152:PHE:C	2.48	0.57
3:AC:20:SER:HA	3:AC:57:ILE:O	2.05	0.57
4:AD:121:VAL:CA	4:AD:126:ILE:HD13	2.31	0.57
7:AG:113:GLU:HB2	7:AG:119:ARG:HG2	1.86	0.57
8:AH:26:VAL:HG23	8:AH:27:PRO:HD2	1.86	0.57
9:AI:114:TYR:CD2	10:AJ:60:ARG:HG3	2.40	0.57
19:AS:40:ILE:HG12	19:AS:71:LEU:HD23	1.87	0.57
24:AY:273:LEU:O	24:AY:276:VAL:HB	2.04	0.57
26:B1:43:TYR:N	26:B1:43:TYR:CD1	2.72	0.57
28:B3:29:ARG:HH11	28:B3:29:ARG:CB	2.16	0.57
34:B9:29:ASN:C	34:B9:31:LYS:H	2.13	0.57
35:BA:204:A:H8	35:BA:204:A:OP1	1.87	0.57
35:BA:205:G:O2'	35:BA:206:U:OP2	2.23	0.57
35:BA:234:C:H2'	35:BA:235:U:C6	2.39	0.57
35:BA:271(F):C:O2'	35:BA:271(G):C:H5'	2.05	0.57
35:BA:1053:C:C2'	35:BA:1054:A:H5"	2.35	0.57
35:BA:1064:C:H4'	43:BK:89:HIS:CD2	2.39	0.57
35:BA:1271:G:N2	35:BA:1617:C:H1'	2.19	0.57
35:BA:1291:C:H5'	35:BA:1534:U:O2'	2.04	0.57
35:BA:2103:C:H42	35:BA:2186:G:H1	1.52	0.57
35:BA:2107:C:H42	35:BA:2182:G:H1	1.52	0.57
35:BA:2334:G:C4	50:BS:15:ARG:HD3	2.40	0.57
35:BA:2521:C:O2	35:BA:2521:C:H2'	2.03	0.57
39:BE:8:LYS:O	39:BE:193:GLY:N	2.36	0.57
45:BN:73:THR:CG2	45:BN:82:LEU:HD11	2.34	0.57
45:BN:99:LEU:HD13	45:BN:103:VAL:HG23	1.87	0.57
47:BP:58:THR:C	47:BP:61:ARG:HE	2.12	0.57
50:BS:89:ARG:O	50:BS:92:TYR:HB3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:83:ILE:CG1	51:BT:84:GLN:H	2.18	0.57
57:BZ:143:GLY:C	57:BZ:144:LEU:HD22	2.30	0.57
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.70	0.56
1:AA:1286:A:H2'	1:AA:1287:A:H4'	1.88	0.56
2:AB:233:SER:CB	2:AB:234:PRO:HD2	2.34	0.56
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.68	0.56
6:AF:60:PHE:CE2	18:AR:78:LEU:HD21	2.40	0.56
8:AH:126:LYS:HG2	8:AH:127:LEU:HD22	1.86	0.56
9:AI:4:TYR:HA	9:AI:88:TYR:CE1	2.40	0.56
16:AP:67:THR:HG22	16:AP:68:ASP:N	2.20	0.56
26:B1:3:LYS:HG3	26:B1:4:VAL:H	1.68	0.56
29:B4:2:LYS:CB	36:BB:40:U:O4	2.53	0.56
35:BA:175:G:O2'	35:BA:176:G:H5'	2.05	0.56
35:BA:760:G:C2'	35:BA:761:A:H5'	2.35	0.56
35:BA:1381:G:N2	35:BA:1382:G:H1'	2.21	0.56
35:BA:1591:G:C6	35:BA:1592:C:N4	2.73	0.56
35:BA:1827:C:C2'	35:BA:1828:G:C5'	2.81	0.56
35:BA:2373:G:O2'	35:BA:2374:C:H5'	2.05	0.56
39:BE:48:GLN:NE2	39:BE:78:LEU:HD22	2.19	0.56
39:BE:95:ILE:HD13	39:BE:95:ILE:H	1.69	0.56
41:BG:164:GLU:C	41:BG:165:THR:HG23	2.30	0.56
52:BU:26:GLY:C	52:BU:28:ARG:N	2.61	0.56
54:BW:31:GLU:O	54:BW:35:ILE:HG12	2.05	0.56
56:BY:14:LEU:HD12	56:BY:15:VAL:N	2.20	0.56
1:AA:1347:G:O2'	1:AA:1348:U:OP2	2.23	0.56
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.82	0.56
2:AB:97:TRP:CZ2	2:AB:102:LEU:HD13	2.32	0.56
3:AC:22:TRP:CH2	3:AC:32:LEU:HB2	2.40	0.56
3:AC:206:GLU:O	3:AC:207:VAL:C	2.47	0.56
10:AJ:8:LEU:HB2	10:AJ:70:ARG:O	2.04	0.56
10:AJ:55:LYS:HE3	10:AJ:55:LYS:N	2.20	0.56
11:AK:124:LYS:CD	11:AK:125:PHE:HE1	2.18	0.56
20:AT:63:ILE:O	20:AT:64:ASP:C	2.45	0.56
24:AY:485:GLU:OE1	24:AY:555:LEU:HB2	2.05	0.56
24:AY:514:VAL:HG21	24:AY:593:ALA:HB1	1.86	0.56
30:B5:34:PRO:HG3	35:BA:2885:C:O2'	2.05	0.56
30:B5:48:GLU:O	30:B5:49:CYS:CB	2.51	0.56
31:B6:11:LEU:HD12	31:B6:25:LYS:HA	1.87	0.56
35:BA:772:C:O2'	35:BA:773:U:H5'	2.05	0.56
35:BA:1100:C:O2	35:BA:1100:C:H2'	2.04	0.56
35:BA:2466:C:O2'	35:BA:2467:C:H5'	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:88:C:O2	36:BB:89:G:N7	2.38	0.56
37:BC:174:ALA:HB3	37:BC:193:PHE:CZ	2.40	0.56
38:BD:131:LEU:HD12	38:BD:131:LEU:H	1.65	0.56
39:BE:47:VAL:CG1	39:BE:48:GLN:H	2.18	0.56
39:BE:101:ARG:HH11	39:BE:169:ASN:ND2	2.02	0.56
40:BF:7:TYR:HA	40:BF:125:LEU:HG	1.87	0.56
46:BO:47:ILE:HG22	46:BO:48:PRO:HD2	1.86	0.56
50:BS:98:VAL:CG1	50:BS:100:ALA:HB2	2.35	0.56
51:BT:83:ILE:CG1	51:BT:84:GLN:N	2.67	0.56
53:BV:4:ILE:HA	53:BV:12:TYR:O	2.03	0.56
54:BW:88:ARG:HB3	54:BW:92:ARG:HB3	1.86	0.56
57:BZ:9:TYR:CD2	57:BZ:35:ARG:NH1	2.70	0.56
1:AA:96:U:O2'	1:AA:97:G:H8	1.89	0.56
1:AA:191:G:C4	20:AT:105:SER:HB3	2.39	0.56
1:AA:375:U:H4'	16:AP:17:TYR:CE2	2.40	0.56
1:AA:748:C:O2'	1:AA:749:C:H6	1.87	0.56
1:AA:821:G:O2'	1:AA:822:C:H5'	2.05	0.56
1:AA:953:G:O6	1:AA:1228:C:N4	2.38	0.56
1:AA:1402:C:O2	1:AA:1500:A:N1	2.38	0.56
2:AB:73:THR:O	2:AB:78:GLN:HG2	2.06	0.56
2:AB:80:ILE:H	2:AB:80:ILE:HD12	1.68	0.56
2:AB:98:LEU:O	2:AB:101:MET:HB2	2.05	0.56
3:AC:123:GLN:HB3	3:AC:128:PHE:CD2	2.40	0.56
4:AD:114:ARG:HG3	4:AD:114:ARG:NH1	2.15	0.56
5:AE:60:TYR:CE1	5:AE:64:ARG:NH2	2.62	0.56
8:AH:6:ILE:O	8:AH:9:MET:N	2.38	0.56
8:AH:58:TYR:C	8:AH:59:LEU:HD23	2.31	0.56
19:AS:70:LYS:O	19:AS:71:LEU:C	2.48	0.56
24:AY:160:ARG:HB3	24:AY:254:LYS:O	2.06	0.56
24:AY:238:THR:C	24:AY:240:GLU:H	2.13	0.56
24:AY:606:MET:SD	24:AY:673:PHE:HA	2.45	0.56
25:B0:40:GLN:HE22	25:B0:43:THR:HA	1.65	0.56
31:B6:15:GLU:CD	31:B6:44:ARG:HH12	2.14	0.56
32:B7:33:ARG:NH1	35:BA:467:G:OP1	2.38	0.56
32:B7:35:ARG:HG2	32:B7:35:ARG:NH1	2.16	0.56
33:B8:37:SER:O	33:B8:38:GLY:C	2.47	0.56
34:B9:17:ILE:HG21	34:B9:19:ARG:NH2	2.17	0.56
35:BA:139:G:H2'	35:BA:140:G:N7	2.21	0.56
35:BA:363(A):A:O2'	35:BA:363(B):G:H5'	2.05	0.56
35:BA:733:G:O5'	35:BA:733:G:C8	2.52	0.56
35:BA:1329:U:H5'	35:BA:1330:C:H5	1.68	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2030:A:H4'	35:BA:2031:A:H8	1.69	0.56
35:BA:2223:G:H2'	35:BA:2224:G:H5'	1.86	0.56
35:BA:2655:G:HO2'	35:BA:2664:G:H1	1.54	0.56
38:BD:43:ARG:CD	38:BD:44:ASN:OD1	2.53	0.56
40:BF:46:ARG:HH11	40:BF:46:ARG:HG3	1.69	0.56
41:BG:108:ASN:O	41:BG:109:VAL:HG23	2.05	0.56
43:BK:99:ILE:HD13	43:BK:103:GLN:OE1	2.05	0.56
47:BP:16:ARG:CD	47:BP:18:ARG:H	2.17	0.56
48:BQ:62:GLY:HA2	57:BZ:116:VAL:HG21	1.86	0.56
49:BR:18:LEU:HD21	49:BR:22:ARG:NE	2.21	0.56
49:BR:117:VAL:CG1	49:BR:118:GLU:N	2.69	0.56
50:BS:73:LEU:O	50:BS:73:LEU:HD23	2.06	0.56
50:BS:92:TYR:CG	50:BS:93:LYS:N	2.73	0.56
56:BY:97:ARG:HG2	56:BY:98:VAL:HG23	1.88	0.56
57:BZ:71:VAL:HG13	57:BZ:86:VAL:CG1	2.35	0.56
57:BZ:79:ARG:O	57:BZ:80:ARG:CB	2.53	0.56
1:AA:41:G:H2'	1:AA:42:G:H8	1.71	0.56
1:AA:183:G:H2'	1:AA:184:G:H8	1.70	0.56
1:AA:689:C:P	11:AK:46:GLY:HA3	2.45	0.56
1:AA:1294:G:C2'	1:AA:1295:G:H5'	2.36	0.56
1:AA:1300:G:O2'	1:AA:1301:U:OP2	2.23	0.56
5:AE:33:VAL:CG1	5:AE:34:VAL:N	2.69	0.56
11:AK:59:TYR:O	11:AK:62:GLN:HB3	2.04	0.56
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.05	0.56
20:AT:73:HIS:H	20:AT:76:ALA:CB	2.19	0.56
24:AY:427:ALA:HB1	24:AY:466:LEU:CD1	2.29	0.56
24:AY:539:ILE:O	24:AY:540:PRO:C	2.42	0.56
31:B6:35:GLU:OE1	31:B6:35:GLU:HA	2.06	0.56
35:BA:11:G:H22	35:BA:2628:C:P	2.29	0.56
35:BA:177:G:H3'	35:BA:178:G:C8	2.38	0.56
35:BA:338:G:H2'	35:BA:339:U:C6	2.40	0.56
35:BA:583:G:OP2	52:BU:10:ARG:HD2	2.05	0.56
35:BA:598:G:H5'	47:BP:15:ARG:HB2	1.86	0.56
35:BA:1142(A):A:H2'	35:BA:1143:A:C5'	2.31	0.56
35:BA:1297:C:H2'	35:BA:1298:C:H6	1.70	0.56
35:BA:1336:A:O2'	35:BA:1337:G:H5'	2.05	0.56
35:BA:1345:C:H42	35:BA:1601:G:H1	1.54	0.56
35:BA:2295:C:H2'	35:BA:2296:U:H6	1.69	0.56
37:BC:132:LEU:HB3	37:BC:137:LEU:C	2.31	0.56
40:BF:157:VAL:HG22	40:BF:194:MET:HA	1.87	0.56
41:BG:16:ARG:HH11	41:BG:16:ARG:HG3	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:56:ALA:CA	41:BG:59:GLU:OE1	2.52	0.56
42:BH:40:GLU:O	42:BH:41:MET:HB2	2.06	0.56
51:BT:28:VAL:HG22	51:BT:47:GLY:H	1.70	0.56
54:BW:37:ARG:HG3	54:BW:37:ARG:HH11	1.68	0.56
1:AA:1226:C:H5'	13:AM:96:LEU:HD13	1.87	0.56
1:AA:1308:U:H5"	13:AM:98:VAL:HG23	1.87	0.56
5:AE:6:PHE:CZ	5:AE:66:MET:HE1	2.40	0.56
8:AH:63:LEU:HD22	8:AH:63:LEU:N	2.20	0.56
9:AI:56:LEU:HD23	9:AI:56:LEU:C	2.30	0.56
10:AJ:4:ILE:HB	10:AJ:74:ILE:CG1	2.36	0.56
12:AL:119:LYS:C	12:AL:120:TYR:CD1	2.84	0.56
14:AN:36:PHE:CD1	14:AN:36:PHE:C	2.82	0.56
19:AS:62:ILE:O	19:AS:62:ILE:HG13	2.05	0.56
27:B2:38:GLN:C	27:B2:40:SER:N	2.63	0.56
35:BA:279:C:H3'	35:BA:280:C:H5"	1.84	0.56
35:BA:285:C:H2'	35:BA:286:C:H5'	1.87	0.56
35:BA:389:G:N1	47:BP:71:VAL:HG12	2.21	0.56
35:BA:409:C:O2'	35:BA:410:G:H5'	2.05	0.56
35:BA:883:G:O2'	35:BA:884:C:H5'	2.05	0.56
35:BA:892:G:H2'	35:BA:893:C:H6	1.70	0.56
35:BA:892:G:H2'	35:BA:893:C:C6	2.40	0.56
35:BA:1272:A:OP2	35:BA:1647:G:OP1	2.24	0.56
35:BA:1529:G:C2	35:BA:1541:G:N2	2.73	0.56
35:BA:1567:A:H2'	38:BD:84:TYR:CE1	2.38	0.56
35:BA:1656:C:O2'	35:BA:1657:C:H5'	2.05	0.56
35:BA:2175:C:H1'	37:BC:218:THR:O	2.05	0.56
35:BA:2774:C:H2'	35:BA:2775:A:O4'	2.04	0.56
37:BC:71:LYS:HG2	37:BC:72:GLN:N	2.20	0.56
41:BG:56:ALA:HB2	41:BG:153:ARG:NH2	2.21	0.56
1:AA:189(A):C:H2'	1:AA:189(B):C:H6	1.69	0.56
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.41	0.56
1:AA:812:C:O2'	1:AA:813:U:OP2	2.17	0.56
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.41	0.56
2:AB:95:GLN:HE21	2:AB:147:LYS:HE3	1.70	0.56
2:AB:145:LEU:O	2:AB:149:LEU:HB2	2.05	0.56
4:AD:189:PRO:HB2	4:AD:194:LEU:CD2	2.35	0.56
5:AE:11:ILE:HG22	5:AE:12:LEU:H	1.70	0.56
6:AF:72:VAL:HG13	6:AF:73:ASN:N	2.19	0.56
11:AK:33:THR:HA	11:AK:40:ILE:HG12	1.87	0.56
12:AL:117:ARG:HH22	12:AL:124:LYS:HB2	1.69	0.56
15:AO:31:LEU:N	15:AO:31:LEU:HD22	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:651:GLU:OE1	24:AY:651:GLU:HA	2.06	0.56
24:AY:681:LYS:HA	24:AY:684:GLN:HB2	1.88	0.56
27:B2:24:LEU:O	27:B2:27:GLU:HB2	2.05	0.56
28:B3:54:VAL:CG1	28:B3:55:ARG:N	2.69	0.56
30:B5:36:CYS:SG	30:B5:49:CYS:HB3	2.46	0.56
32:B7:19:ARG:HD3	35:BA:125:G:H5'	1.88	0.56
35:BA:1141:U:H6	45:BN:63:THR:HG21	1.71	0.56
35:BA:1495:A:H2'	35:BA:1496:A:N3	2.21	0.56
35:BA:1654:A:C2	39:BE:113:PHE:HD2	2.24	0.56
35:BA:2712:U:H1'	35:BA:2712(A):A:C8	2.41	0.56
35:BA:2754:U:H2'	35:BA:2755:C:H5'	1.88	0.56
37:BC:185:LYS:HA	37:BC:185:LYS:HE3	1.87	0.56
38:BD:183:ARG:HD2	38:BD:270:ILE:HG23	1.87	0.56
41:BG:77:ILE:C	41:BG:79:ASN:N	2.61	0.56
41:BG:135:LEU:HD11	41:BG:155:MET:CG	2.34	0.56
47:BP:75:ILE:CD1	47:BP:75:ILE:H	2.17	0.56
49:BR:97:VAL:O	49:BR:98:LEU:HD23	2.05	0.56
50:BS:99:LYS:O	50:BS:101:LEU:N	2.39	0.56
1:AA:27:G:H8	1:AA:27:G:O5'	1.89	0.56
1:AA:501:C:OP1	12:AL:117:ARG:NH2	2.36	0.56
4:AD:58:LEU:HD23	4:AD:62:GLN:HG2	1.87	0.56
19:AS:42:PRO:O	29:B4:49:PHE:HZ	1.89	0.56
19:AS:64:GLU:O	29:B4:48:ARG:NH2	2.38	0.56
20:AT:104:LEU:HD23	20:AT:104:LEU:C	2.30	0.56
24:AY:67:ALA:HB1	24:AY:327:PHE:HZ	1.64	0.56
24:AY:181:LEU:HD11	24:AY:242:LEU:HD13	1.86	0.56
31:B6:16:CYS:C	31:B6:18:ARG:N	2.57	0.56
33:B8:50:LEU:HG	33:B8:51:ALA:N	2.21	0.56
35:BA:143:G:H4'	55:BX:35:THR:HG21	1.88	0.56
35:BA:333:G:H2'	35:BA:333:G:N3	2.21	0.56
35:BA:708:C:H42	35:BA:723:G:H1	1.53	0.56
35:BA:904:C:H5'	35:BA:904:C:H6	1.70	0.56
35:BA:1169:G:C2	35:BA:1181:C:N3	2.74	0.56
35:BA:1400:G:H2'	35:BA:1401:G:C8	2.40	0.56
35:BA:2134:A:H1'	35:BA:2158:A:C2	2.41	0.56
38:BD:186:HIS:HD2	38:BD:188:GLU:H	1.54	0.56
40:BF:114:VAL:HG21	40:BF:202:PHE:CZ	2.40	0.56
41:BG:34:LEU:HD13	41:BG:99:MET:CE	2.34	0.56
42:BH:40:GLU:HG3	42:BH:64:LEU:HD12	1.88	0.56
42:BH:86:GLU:HB2	42:BH:132:ARG:HB3	1.87	0.56
47:BP:7:ARG:O	47:BP:10:PRO:HD2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:108:LYS:C	47:BP:110:TYR:H	2.14	0.56
51:BT:118:ARG:HA	51:BT:121:ILE:HB	1.86	0.56
55:BX:12:VAL:CG1	55:BX:27:THR:O	2.46	0.56
56:BY:61:ILE:HG12	56:BY:62:GLU:N	2.18	0.56
1:AA:254:G:O2'	1:AA:255:G:H5'	2.05	0.56
1:AA:759:A:C2'	1:AA:760:G:H5'	2.35	0.56
1:AA:1015:A:H2'	1:AA:1016:A:O4'	2.06	0.56
1:AA:1296:C:C5'	1:AA:1297:C:OP2	2.51	0.56
12:AL:24:VAL:O	12:AL:24:VAL:HG12	2.05	0.56
13:AM:77:ASN:O	13:AM:80:ARG:N	2.37	0.56
17:AQ:45:HIS:HB2	17:AQ:65:ILE:CD1	2.35	0.56
24:AY:630:GLN:HG2	24:AY:630:GLN:O	2.06	0.56
24:AY:659:LEU:C	24:AY:661:SER:H	2.14	0.56
24:AY:679:VAL:HB	24:AY:683:VAL:HB	1.86	0.56
25:B0:7:LEU:HD22	48:BQ:81:VAL:HG23	1.86	0.56
26:B1:58:ILE:HG23	26:B1:58:ILE:O	2.06	0.56
27:B2:33:MET:HE3	27:B2:37:PHE:CE1	2.41	0.56
29:B4:1:MET:CE	41:BG:66:GLN:OE1	2.51	0.56
29:B4:53:GLU:OE1	29:B4:55:ARG:HD3	2.05	0.56
30:B5:7:PRO:HA	35:BA:2615:U:C2	2.41	0.56
31:B6:7:ILE:HG23	31:B6:29:ASN:HD22	1.69	0.56
35:BA:184:C:H2'	35:BA:185:U:C6	2.40	0.56
35:BA:271(C):C:H2'	35:BA:271(D):G:C8	2.40	0.56
35:BA:676:A:H2	35:BA:802:A:H61	1.53	0.56
35:BA:781:A:C8	38:BD:219:PRO:HG3	2.40	0.56
35:BA:1661:G:O2'	35:BA:1662:C:H5'	2.05	0.56
35:BA:1717:G:H2'	35:BA:1718:G:H5"	1.87	0.56
36:BB:65:C:O5'	36:BB:65:C:H6	1.88	0.56
39:BE:14:ILE:HG13	39:BE:21:VAL:HG22	1.88	0.56
39:BE:81:ILE:O	39:BE:81:ILE:CG2	2.54	0.56
40:BF:148:LEU:HD23	40:BF:191:ARG:NH1	2.21	0.56
41:BG:109:VAL:C	41:BG:112:PRO:HD2	2.30	0.56
43:BK:78:ILE:HD11	43:BK:136:VAL:CG1	2.36	0.56
43:BK:95:LYS:HG2	43:BK:137:GLU:HB3	1.88	0.56
47:BP:48:PRO:O	47:BP:50:ARG:N	2.39	0.56
50:BS:59:LYS:HG2	50:BS:60:GLY:H	1.71	0.56
50:BS:65:VAL:O	50:BS:69:VAL:HG12	2.05	0.56
53:BV:69:LYS:HE3	53:BV:71:LEU:HD21	1.86	0.56
1:AA:93:G:O2'	1:AA:96:U:H5'	2.06	0.56
1:AA:316:G:C6	1:AA:338:A:C6	2.94	0.56
1:AA:370:C:H2'	1:AA:371:G:H8	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:627:G:C2'	1:AA:628:G:H5'	2.36	0.56
3:AC:34:LEU:HD22	3:AC:38:ARG:HD2	1.88	0.56
9:AI:18:PHE:O	9:AI:61:ALA:HA	2.05	0.56
12:AL:25:PRO:C	12:AL:27:LEU:N	2.64	0.56
12:AL:105:TYR:CD1	12:AL:105:TYR:N	2.72	0.56
17:AQ:24:GLU:O	17:AQ:25:ARG:HB3	2.06	0.56
18:AR:87:ARG:HB3	18:AR:87:ARG:NH1	2.21	0.56
24:AY:498:ILE:HG22	24:AY:507:TYR:CG	2.40	0.56
27:B2:29:LYS:O	27:B2:30:ARG:C	2.48	0.56
27:B2:55:ARG:O	27:B2:58:ALA:HB3	2.06	0.56
27:B2:55:ARG:O	27:B2:59:ARG:HG2	2.06	0.56
31:B6:37:ARG:O	31:B6:48:VAL:O	2.22	0.56
33:B8:50:LEU:O	33:B8:51:ALA:HB3	2.06	0.56
35:BA:178:G:O2'	35:BA:179:G:H5'	2.06	0.56
35:BA:274:G:N3	35:BA:274:G:H2'	2.20	0.56
35:BA:425:G:H2'	35:BA:426:C:H6	1.71	0.56
35:BA:1036:G:OP2	42:BH:59:ARG:NH1	2.38	0.56
35:BA:1332:G:N2	35:BA:1609:A:H3'	2.21	0.56
35:BA:2299:G:O2'	35:BA:2300:G:H5'	2.04	0.56
35:BA:2681:C:H2'	35:BA:2681:C:O2	2.03	0.56
35:BA:2884:U:C2'	35:BA:2885:C:H5'	2.36	0.56
39:BE:111:ARG:HD2	39:BE:160:TYR:HE2	1.70	0.56
42:BH:105:LEU:HD23	42:BH:105:LEU:H	1.71	0.56
42:BH:156:ALA:O	42:BH:158:HIS:N	2.38	0.56
45:BN:35:ARG:O	45:BN:37:LYS:HB2	2.05	0.56
45:BN:125:GLY:CA	45:BN:126:PRO:O	2.54	0.56
50:BS:59:LYS:HD3	50:BS:61:ASN:HD22	1.70	0.56
56:BY:46:LYS:HB2	56:BY:62:GLU:HB2	1.88	0.56
1:AA:50:A:N6	1:AA:361:G:C4'	2.69	0.56
1:AA:1227:A:H2'	13:AM:117:VAL:HG21	1.88	0.56
1:AA:1231:G:C2'	1:AA:1232:U:H5'	2.35	0.56
3:AC:86:VAL:O	3:AC:90:GLU:HG2	2.04	0.56
10:AJ:47:PHE:CE2	14:AN:37:PHE:HE1	2.19	0.56
18:AR:87:ARG:CB	18:AR:87:ARG:HH11	2.19	0.56
20:AT:13:LEU:O	20:AT:16:HIS:N	2.39	0.56
24:AY:390:VAL:HG23	24:AY:391:GLY:O	2.06	0.56
26:B1:73:LEU:O	26:B1:73:LEU:HD23	2.06	0.56
35:BA:548:A:H2'	35:BA:548:A:N3	2.21	0.56
35:BA:654(A):G:C2'	35:BA:654(B):C:H5'	2.35	0.56
35:BA:1494:A:H2'	35:BA:1495:A:H5"	1.87	0.56
35:BA:1668:A:H61	35:BA:1676:A:H61	1.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1709:U:H3	35:BA:1749:A:H61	1.54	0.56
35:BA:2208:A:H1'	35:BA:2219:G:C4	2.41	0.56
35:BA:2590:A:H5"	38:BD:239:ARG:HE	1.70	0.56
35:BA:2646:C:OP2	35:BA:2732:G:H2'	2.05	0.56
35:BA:2745:C:C4	35:BA:2746:U:C4	2.94	0.56
38:BD:70:TRP:HH2	38:BD:150:LYS:HA	1.63	0.56
38:BD:81:ALA:HA	38:BD:113:VAL:CG2	2.36	0.56
39:BE:69:LYS:HE2	39:BE:69:LYS:N	2.21	0.56
40:BF:74:ARG:HG3	40:BF:74:ARG:O	2.05	0.56
40:BF:110:LEU:CD1	40:BF:206:ILE:HD11	2.36	0.56
42:BH:35:VAL:HG12	42:BH:37:VAL:HG23	1.88	0.56
42:BH:98:LEU:HD22	42:BH:125:VAL:HG23	1.88	0.56
45:BN:67:LEU:HB3	45:BN:88:GLU:CG	2.36	0.56
46:BO:22:ILE:HG12	46:BO:41:ALA:HA	1.87	0.56
46:BO:64:ARG:HH21	46:BO:100:GLY:HA3	1.71	0.56
47:BP:9:ASN:N	47:BP:10:PRO:CD	2.67	0.56
51:BT:30:VAL:HG21	51:BT:83:ILE:CG1	2.36	0.56
51:BT:118:ARG:HA	51:BT:121:ILE:CG1	2.36	0.56
1:AA:483:C:H3'	1:AA:484:G:H5"	1.88	0.55
1:AA:826:C:H2'	1:AA:827:U:H6	1.70	0.55
1:AA:1165:C:C4	1:AA:1166:G:N7	2.74	0.55
1:AA:1517:G:C2'	1:AA:1518:A:H5'	2.36	0.55
2:AB:152:PHE:C	2:AB:152:PHE:CD1	2.84	0.55
2:AB:153:ARG:H	2:AB:155:LEU:H	1.54	0.55
13:AM:99:ARG:O	13:AM:100:GLY:C	2.49	0.55
14:AN:15:LYS:O	14:AN:16:PHE:C	2.47	0.55
17:AQ:12:SER:HB3	17:AQ:20:THR:HB	1.88	0.55
19:AS:11:VAL:HG23	19:AS:38:SER:HB2	1.87	0.55
19:AS:65:ASN:HA	29:B4:48:ARG:HH22	1.71	0.55
24:AY:31:ARG:HG2	24:AY:31:ARG:HH11	1.71	0.55
24:AY:176:GLY:CA	24:AY:187:THR:HA	2.36	0.55
24:AY:406:GLU:HB3	24:AY:407:PRO:CD	2.35	0.55
24:AY:635:GLU:H	24:AY:635:GLU:CD	2.14	0.55
35:BA:841:A:H5'	35:BA:841:A:C8	2.35	0.55
35:BA:2097:C:O5'	35:BA:2097:C:H6	1.89	0.55
35:BA:2514:U:H2'	35:BA:2515:C:C6	2.30	0.55
35:BA:2753:A:O2'	35:BA:2754:U:H5'	2.06	0.55
37:BC:150:ILE:O	37:BC:154:ILE:HG13	2.06	0.55
38:BD:139:GLY:H	38:BD:165:ILE:HB	1.71	0.55
40:BF:133:ASN:H	40:BF:162:LEU:HD23	1.71	0.55
41:BG:127:GLY:C	41:BG:128:ARG:HG2	2.30	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:76:LYS:CB	48:BQ:91:GLU:HG3	2.36	0.55
50:BS:29:PHE:CD1	50:BS:29:PHE:C	2.84	0.55
51:BT:7:ILE:O	51:BT:10:VAL:HB	2.05	0.55
55:BX:26:TYR:OH	55:BX:88:LYS:HB2	2.06	0.55
55:BX:41:ASN:O	55:BX:43:VAL:N	2.38	0.55
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.41	0.55
1:AA:1442:G:C5	1:AA:1442(B):A:H2	2.23	0.55
2:AB:126:GLU:O	2:AB:129:GLU:OE1	2.23	0.55
2:AB:223:ILE:HG12	2:AB:226:ARG:NH1	2.21	0.55
3:AC:182:ILE:HG23	3:AC:202:ILE:O	2.07	0.55
4:AD:11:LEU:O	4:AD:12:CYS:C	2.50	0.55
6:AF:80:ARG:HH11	6:AF:80:ARG:HG3	1.70	0.55
22:AV:72:A:H2'	22:AV:73:A:C8	2.41	0.55
24:AY:282:SER:O	24:AY:286:ILE:HD13	2.07	0.55
26:B1:19:GLN:HB3	26:B1:35:THR:HG22	1.86	0.55
27:B2:3:LEU:HB2	35:BA:98:G:OP1	2.06	0.55
28:B3:17:LYS:NZ	28:B3:20:LYS:CE	2.64	0.55
31:B6:5:VAL:HG22	35:BA:2283:C:OP1	2.06	0.55
35:BA:78:A:H2'	35:BA:79:G:H8	1.71	0.55
35:BA:914:C:C2'	35:BA:915:C:H5'	2.36	0.55
35:BA:958:U:OP2	48:BQ:14:ARG:NH1	2.40	0.55
35:BA:1185:C:H5'	35:BA:1186:G:P	2.46	0.55
35:BA:1274:A:N3	35:BA:1297:C:H1'	2.21	0.55
35:BA:2260:C:H2'	35:BA:2261:C:C6	2.41	0.55
35:BA:2749:A:N1	35:BA:2750:A:N6	2.52	0.55
36:BB:106:G:O2'	36:BB:107:G:H5'	2.06	0.55
38:BD:123:ALA:HB3	38:BD:131:LEU:HG	1.88	0.55
41:BG:164:GLU:O	41:BG:165:THR:CG2	2.54	0.55
42:BH:83:TYR:HA	42:BH:135:GLY:O	2.05	0.55
48:BQ:35:VAL:O	48:BQ:129:THR:HG22	2.06	0.55
50:BS:85:VAL:HG23	50:BS:106:ARG:CG	2.36	0.55
51:BT:23:ARG:CG	51:BT:120:ARG:NH1	2.67	0.55
52:BU:88:ILE:HG13	52:BU:88:ILE:O	2.05	0.55
1:AA:119:A:O2'	1:AA:120:A:OP2	2.21	0.55
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.07	0.55
1:AA:1305:G:OP1	21:AU:2:GLY:N	2.39	0.55
1:AA:1485:U:O2'	1:AA:1486:G:H5'	2.07	0.55
3:AC:119:ARG:O	3:AC:123:GLN:HG3	2.05	0.55
4:AD:57:ARG:HB3	4:AD:206:PHE:HB2	1.89	0.55
4:AD:192:GLU:O	4:AD:193:ASP:C	2.45	0.55
19:AS:53:ASN:C	19:AS:55:LYS:H	2.14	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:86:ARG:HH11	20:AT:86:ARG:HG3	1.69	0.55
24:AY:282:SER:C	24:AY:284:LEU:H	2.14	0.55
24:AY:348:ARG:CZ	24:AY:382:GLU:HG3	2.36	0.55
24:AY:478:LYS:O	24:AY:480:GLN:NE2	2.40	0.55
27:B2:3:LEU:HD22	27:B2:7:ARG:CZ	2.35	0.55
34:B9:6:SER:CB	35:BA:2466:C:H5"	2.36	0.55
35:BA:1335:U:OP1	55:BX:65:ARG:NH2	2.39	0.55
35:BA:1453:U:H2'	35:BA:1455:G:N7	2.21	0.55
35:BA:1582:C:H2'	35:BA:1583:A:C8	2.37	0.55
35:BA:1774:C:O2	38:BD:11:PRO:HB2	2.06	0.55
35:BA:2088:G:C6	35:BA:2089:U:C4	2.95	0.55
35:BA:2220:G:H2'	35:BA:2221:G:H8	1.71	0.55
35:BA:2393:A:O2'	35:BA:2394:C:H5'	2.06	0.55
35:BA:2406:U:N3	47:BP:72:PRO:HB2	2.21	0.55
35:BA:2428:G:H5'	35:BA:2429:G:OP1	2.06	0.55
35:BA:2617:C:C2'	35:BA:2618:G:H5'	2.37	0.55
35:BA:2631:G:N2	39:BE:61:ARG:HH12	2.04	0.55
37:BC:84:ILE:HG12	37:BC:96:GLY:O	2.06	0.55
38:BD:241:PRO:C	38:BD:242:ARG:CG	2.64	0.55
39:BE:111:ARG:HA	49:BR:2:ARG:CB	2.33	0.55
41:BG:100:TRP:O	41:BG:101:ILE:C	2.48	0.55
42:BH:97:ARG:O	42:BH:97:ARG:HG2	2.05	0.55
50:BS:14:VAL:O	50:BS:15:ARG:C	2.49	0.55
56:BY:86:ARG:HB3	56:BY:88:LYS:HZ1	1.69	0.55
57:BZ:115:GLY:CA	57:BZ:177:PRO:HD3	2.37	0.55
1:AA:402:G:O2'	1:AA:403:C:H5'	2.07	0.55
1:AA:1238:A:H62	1:AA:1301:U:H3	1.54	0.55
1:AA:1305:G:N2	1:AA:1331:G:O2'	2.33	0.55
2:AB:213:LEU:HD23	2:AB:213:LEU:C	2.32	0.55
8:AH:44:PHE:C	8:AH:45:ILE:HG23	2.30	0.55
13:AM:116:THR:CG2	13:AM:117:VAL:H	2.18	0.55
18:AR:59:SER:N	18:AR:62:GLU:HB2	2.19	0.55
24:AY:176:GLY:HA3	24:AY:186:TYR:O	2.06	0.55
24:AY:276:VAL:HG12	24:AY:277:VAL:N	2.22	0.55
24:AY:334:THR:HG21	24:AY:370:LYS:HG2	1.88	0.55
24:AY:342:TYR:HE2	24:AY:396:ARG:HD2	1.69	0.55
24:AY:343:ASN:HD21	24:AY:345:THR:CB	2.19	0.55
24:AY:468:ARG:C	24:AY:470:PHE:H	2.13	0.55
24:AY:519:ARG:HH22	24:AY:678:GLU:HB3	1.71	0.55
58:AY:701:FUA:O2	58:AY:701:FUA:C21	2.52	0.55
27:B2:40:SER:C	27:B2:42:GLY:H	2.13	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B7:12:ARG:HH11	32:B7:12:ARG:HG3	1.71	0.55
35:BA:336:C:C4	35:BA:337:C:C5	2.94	0.55
35:BA:1209:G:H21	35:BA:1210:A:H62	1.54	0.55
35:BA:1301:A:H2'	35:BA:1302:A:H3'	1.88	0.55
35:BA:1435:G:H5'	35:BA:1436:G:OP2	2.06	0.55
35:BA:1888:G:N3	35:BA:1888:G:H5'	2.22	0.55
35:BA:2157:G:OP2	35:BA:2157:G:H8	1.89	0.55
35:BA:2230:G:H2'	35:BA:2231:C:C6	2.42	0.55
38:BD:158:ALA:HB3	38:BD:161:THR:CG2	2.34	0.55
39:BE:95:ILE:N	39:BE:95:ILE:CD1	2.68	0.55
40:BF:113:ALA:HB1	40:BF:186:ILE:HG21	1.87	0.55
41:BG:106:LEU:HA	41:BG:110:ALA:HB2	1.87	0.55
41:BG:145:THR:HG23	41:BG:148:MET:HB2	1.88	0.55
45:BN:26:LEU:HD12	45:BN:26:LEU:C	2.31	0.55
52:BU:26:GLY:O	52:BU:28:ARG:N	2.39	0.55
52:BU:70:ARG:HA	52:BU:74:LEU:O	2.06	0.55
56:BY:97:ARG:O	56:BY:98:VAL:HG23	2.07	0.55
57:BZ:72:ARG:HG3	57:BZ:72:ARG:NH1	2.13	0.55
1:AA:100:C:H2'	1:AA:101:A:C8	2.42	0.55
1:AA:429:U:H4'	1:AA:430:A:O5'	2.06	0.55
1:AA:444:C:H42	1:AA:490:G:H1	1.55	0.55
1:AA:617:G:N1	1:AA:618:C:C4	2.74	0.55
1:AA:973:G:C1'	10:AJ:55:LYS:HE2	2.36	0.55
1:AA:1160:G:O6	1:AA:1181:G:O6	2.24	0.55
2:AB:41:ILE:O	2:AB:41:ILE:HG22	2.06	0.55
4:AD:9:CYS:SG	4:AD:31:CYS:O	2.55	0.55
4:AD:70:ILE:O	4:AD:70:ILE:HG12	2.05	0.55
6:AF:80:ARG:HG3	6:AF:80:ARG:NH1	2.22	0.55
11:AK:95:ILE:O	11:AK:98:LEU:HB2	2.07	0.55
12:AL:41:ARG:HB3	12:AL:41:ARG:HH11	1.71	0.55
12:AL:119:LYS:CB	12:AL:120:TYR:CD1	2.90	0.55
15:AO:53:HIS:O	15:AO:56:LEU:HB3	2.06	0.55
18:AR:37:VAL:CG2	18:AR:38:GLU:H	2.12	0.55
20:AT:30:LYS:HZ2	20:AT:34:LYS:CE	2.20	0.55
21:AU:3:LYS:HB3	21:AU:14:TRP:CD1	2.41	0.55
24:AY:238:THR:HG23	24:AY:240:GLU:H	1.71	0.55
24:AY:281:PRO:HB2	24:AY:286:ILE:CD1	2.26	0.55
24:AY:343:ASN:HD21	24:AY:345:THR:HB	1.72	0.55
31:B6:38:LYS:HD3	35:BA:2344:U:OP1	2.06	0.55
33:B8:25:MET:HG3	47:BP:64:LYS:HB2	1.88	0.55
33:B8:62:LEU:N	33:B8:63:PRO:HD2	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:272(D):G:H1	35:BA:364:C:H42	1.53	0.55
35:BA:286:C:H6	35:BA:286:C:C5'	2.08	0.55
35:BA:637:A:OP2	47:BP:115:LEU:HB2	2.06	0.55
35:BA:654(E):G:C2'	35:BA:654(F):C:H5'	2.37	0.55
35:BA:917:A:H2'	35:BA:918:A:O4'	2.06	0.55
35:BA:925:C:C4	35:BA:926:A:N7	2.75	0.55
35:BA:1019:U:H3	35:BA:1142(A):A:N6	2.04	0.55
35:BA:1808:U:H2'	35:BA:1809:A:O4'	2.06	0.55
35:BA:2282:G:H4'	35:BA:2283:C:O5'	2.05	0.55
35:BA:2298:A:N6	35:BA:2318:G:H8	2.03	0.55
35:BA:2590:A:OP2	38:BD:238:GLY:HA2	2.06	0.55
35:BA:2870:C:O2'	35:BA:2871:C:H5'	2.06	0.55
39:BE:4:ILE:CG1	39:BE:5:LEU:N	2.68	0.55
40:BF:139:PHE:HB2	40:BF:166:ALA:HB1	1.88	0.55
41:BG:99:MET:O	41:BG:100:TRP:C	2.50	0.55
45:BN:120:LEU:HD11	45:BN:122:VAL:HG23	1.88	0.55
47:BP:9:ASN:H	47:BP:10:PRO:HD2	1.72	0.55
47:BP:12:ALA:HB1	47:BP:16:ARG:HB3	1.88	0.55
47:BP:146:VAL:O	47:BP:148:LEU:CD1	2.55	0.55
50:BS:95:HIS:O	50:BS:96:GLY:C	2.48	0.55
51:BT:6:LEU:O	51:BT:9:LEU:N	2.40	0.55
51:BT:29:ARG:HD2	51:BT:30:VAL:H	1.71	0.55
53:BV:49:THR:O	53:BV:50:PRO:C	2.48	0.55
55:BX:65:ARG:HG2	55:BX:66:LEU:N	2.22	0.55
1:AA:60:A:H5"	1:AA:331:G:N2	2.22	0.55
1:AA:300:A:H2'	1:AA:301:G:O4'	2.07	0.55
1:AA:631:G:H5'	1:AA:631:G:C8	2.41	0.55
1:AA:925:G:H5'	1:AA:926:G:OP1	2.06	0.55
1:AA:936:C:H2'	1:AA:937:A:O4'	2.06	0.55
1:AA:1271:G:H2'	1:AA:1272:G:H8	1.72	0.55
1:AA:1277:C:C6	1:AA:1277:C:C3'	2.89	0.55
1:AA:1388:C:H2'	1:AA:1389:C:H6	1.72	0.55
2:AB:101:MET:C	2:AB:102:LEU:HD12	2.32	0.55
10:AJ:27:ALA:HB2	10:AJ:85:LEU:HD11	1.88	0.55
11:AK:58:PRO:HA	11:AK:90:GLY:CA	2.35	0.55
12:AL:8:ASN:O	12:AL:12:ARG:HG3	2.05	0.55
13:AM:90:LEU:O	13:AM:91:ARG:C	2.49	0.55
19:AS:12:ASP:OD2	19:AS:35:SER:HB2	2.07	0.55
22:AV:3:C:N4	22:AV:70:G:H1	2.03	0.55
24:AY:230:LYS:HB2	24:AY:230:LYS:HZ2	1.70	0.55
35:BA:64:A:H2'	35:BA:65:C:O4'	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:453:C:H4'	35:BA:472:A:N6	2.22	0.55
35:BA:1109:C:H5'	35:BA:1110:G:OP2	2.07	0.55
35:BA:1428:C:N4	35:BA:1569:A:H3'	2.22	0.55
35:BA:1485:G:N3	35:BA:1505:C:N3	2.55	0.55
35:BA:1893:C:H2'	35:BA:1894:C:H5'	1.89	0.55
35:BA:1921:G:O2'	35:BA:1922:G:H5'	2.06	0.55
35:BA:1946:U:H2'	35:BA:1947:C:H6	1.71	0.55
35:BA:1963:U:O2	35:BA:1963:U:C2'	2.54	0.55
35:BA:2276:G:O2'	35:BA:2277:G:H5'	2.06	0.55
41:BG:31:VAL:CG2	41:BG:32:PRO:HD2	2.37	0.55
41:BG:173:LEU:HA	41:BG:176:LEU:CD1	2.36	0.55
43:BK:71:THR:CB	43:BK:72:PRO:HD2	2.37	0.55
46:BO:60:ALA:HA	46:BO:87:ILE:HD13	1.88	0.55
47:BP:57:THR:OG1	47:BP:59:LEU:HB3	2.06	0.55
49:BR:18:LEU:HD21	49:BR:22:ARG:CZ	2.36	0.55
51:BT:50:ILE:HG23	51:BT:99:LEU:O	2.07	0.55
51:BT:98:LYS:HB3	51:BT:100:TYR:HE1	1.70	0.55
55:BX:44:GLU:HB2	55:BX:49:VAL:O	2.07	0.55
1:AA:753:A:H4'	1:AA:754:C:H5"	1.89	0.55
1:AA:1008:C:O5'	1:AA:1008:C:H6	1.89	0.55
1:AA:1329:A:OP1	13:AM:28:ALA:HB3	2.06	0.55
11:AK:109:VAL:HG13	18:AR:85:LEU:O	2.06	0.55
16:AP:8:ARG:HB3	16:AP:28:ARG:HH12	1.72	0.55
19:AS:53:ASN:O	19:AS:55:LYS:N	2.39	0.55
22:AV:35:A:O2'	22:AV:36:U:H5'	2.06	0.55
24:AY:162:VAL:CG2	24:AY:255:ILE:HD11	2.37	0.55
24:AY:228:MET:O	24:AY:232:LEU:HD22	2.07	0.55
24:AY:506:GLN:OE1	24:AY:506:GLN:HA	2.06	0.55
35:BA:79:G:O2'	35:BA:80:G:H5'	2.07	0.55
35:BA:198:C:H42	35:BA:248:G:H1	1.55	0.55
35:BA:941:A:H4'	47:BP:35:HIS:CE1	2.42	0.55
35:BA:1491:G:H2'	35:BA:1491:G:N3	2.21	0.55
35:BA:1542:A:H8	35:BA:1542:A:H3'	1.71	0.55
35:BA:1846:G:H5'	35:BA:1846:G:H8	1.71	0.55
35:BA:2236:C:H2'	35:BA:2237:G:O4'	2.07	0.55
35:BA:2439:A:N3	35:BA:2439:A:C2'	2.69	0.55
35:BA:2602:A:H4'	35:BA:2603:G:C5'	2.36	0.55
45:BN:99:LEU:O	45:BN:102:ALA:HB3	2.06	0.55
46:BO:4:PRO:O	46:BO:5:GLN:CB	2.54	0.55
50:BS:11:LYS:HG2	50:BS:13:ARG:HH21	1.66	0.55
50:BS:67:ARG:HB3	50:BS:71:ARG:HH22	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BW:14:PRO:CG	54:BW:78:GLU:HB2	2.36	0.55
55:BX:63:LYS:HB3	55:BX:72:LYS:HG2	1.88	0.55
57:BZ:53:ILE:HG22	57:BZ:71:VAL:HB	1.88	0.55
1:AA:1190:G:H3'	3:AC:3:ASN:ND2	2.22	0.55
1:AA:1225:A:H3'	1:AA:1226:C:C6	2.41	0.55
2:AB:86:GLU:C	2:AB:88:ALA:H	2.13	0.55
5:AE:80:ILE:HG22	8:AH:104:ARG:HH21	1.69	0.55
5:AE:80:ILE:HD11	5:AE:138:ALA:HB1	1.88	0.55
8:AH:50:ARG:HH11	8:AH:50:ARG:CG	2.17	0.55
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG22	1.89	0.55
24:AY:518:PRO:HD2	24:AY:521:SER:OG	2.07	0.55
24:AY:633:GLY:HA3	24:AY:644:ARG:NH1	2.22	0.55
24:AY:634:MET:HA	24:AY:642:VAL:O	2.07	0.55
24:AY:637:ARG:O	24:AY:638:GLY:C	2.48	0.55
26:B1:25:LYS:HB3	35:BA:388:G:H5'	1.88	0.55
27:B2:38:GLN:HE21	27:B2:44:LEU:HB2	1.72	0.55
35:BA:221:A:H4'	35:BA:222:A:O5'	2.07	0.55
35:BA:514:A:H2'	35:BA:515:A:H8	1.69	0.55
35:BA:529:A:H4'	35:BA:530:G:O5'	2.07	0.55
35:BA:996:A:O3'	52:BU:92:ARG:HG2	2.07	0.55
35:BA:1175:U:H4'	35:BA:1176:G:H5'	1.88	0.55
35:BA:1268:A:H2'	35:BA:1269:A:O4'	2.07	0.55
35:BA:1378:A:H4'	35:BA:1379:A:OP1	2.06	0.55
35:BA:1799:G:N2	35:BA:1818:U:H2'	2.22	0.55
37:BC:101:ILE:HG13	37:BC:128:LEU:HD11	1.88	0.55
37:BC:115:VAL:CG1	37:BC:145:THR:HG23	2.35	0.55
40:BF:160:ASN:HD21	40:BF:162:LEU:HB2	1.72	0.55
41:BG:95:ARG:O	41:BG:96:ARG:O	2.25	0.55
41:BG:173:LEU:O	41:BG:178:PHE:HD1	1.89	0.55
43:BK:120:LEU:HA	43:BK:123:ALA:HB3	1.89	0.55
48:BQ:108:GLY:C	48:BQ:109:VAL:HG23	2.31	0.55
48:BQ:135:ASP:CG	57:BZ:49:ARG:NH1	2.65	0.55
50:BS:31:SER:HB3	50:BS:34:HIS:O	2.07	0.55
51:BT:33:LYS:HZ1	51:BT:43:GLN:HE22	1.55	0.55
57:BZ:9:TYR:CE2	57:BZ:35:ARG:NH1	2.69	0.55
1:AA:353:A:H5'	1:AA:353:A:C8	2.37	0.55
1:AA:642:A:H2'	1:AA:643:C:H6	1.72	0.55
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.87	0.55
1:AA:893:C:H2'	1:AA:894:G:H8	1.72	0.55
1:AA:954:G:H2'	1:AA:955:U:C6	2.41	0.55
7:AG:12:LEU:HD13	7:AG:25:ALA:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:66:C:H2'	22:AV:67:C:C6	2.42	0.55
24:AY:111:SER:O	24:AY:113:GLY:N	2.39	0.55
24:AY:367:GLU:O	24:AY:367:GLU:HG2	2.06	0.55
35:BA:187:G:N3	35:BA:1365:A:H2	2.04	0.55
35:BA:208:C:H2'	35:BA:209:C:H6	1.71	0.55
35:BA:478:A:C6	35:BA:480:A:C6	2.95	0.55
35:BA:1238:G:O2'	35:BA:1239:G:H5'	2.05	0.55
35:BA:2736:G:O2'	35:BA:2737:G:H5'	2.07	0.55
37:BC:84:ILE:O	37:BC:88:GLU:HG3	2.05	0.55
39:BE:152:LYS:HG3	39:BE:153:GLY:H	1.71	0.55
41:BG:97:ASP:O	41:BG:101:ILE:CB	2.55	0.55
42:BH:136:ILE:HD12	42:BH:136:ILE:N	2.21	0.55
45:BN:22:THR:HB	45:BN:25:ARG:HB2	1.88	0.55
45:BN:23:LEU:HB2	45:BN:60:ILE:HG21	1.88	0.55
49:BR:55:ALA:HB2	49:BR:79:LEU:HD11	1.89	0.55
50:BS:49:VAL:HG21	50:BS:77:ALA:CB	2.30	0.55
51:BT:33:LYS:HE2	51:BT:43:GLN:CD	2.32	0.55
53:BV:2:PHE:O	53:BV:14:VAL:O	2.25	0.55
56:BY:13:VAL:HG22	56:BY:14:LEU:H	1.70	0.55
1:AA:324:G:N2	1:AA:326:G:H3'	2.21	0.55
1:AA:356:A:H1'	1:AA:368:U:O2'	2.06	0.55
1:AA:637:G:O2'	1:AA:638:G:H5'	2.07	0.55
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.42	0.55
8:AH:114:THR:HG21	8:AH:129:VAL:CG2	2.36	0.55
9:AI:4:TYR:CE2	9:AI:88:TYR:HB2	2.41	0.55
10:AJ:50:ILE:HD13	10:AJ:50:ILE:N	2.13	0.55
13:AM:120:LYS:N	13:AM:120:LYS:HD2	2.22	0.55
24:AY:12:LEU:HB3	24:AY:283:PRO:HG2	1.88	0.55
24:AY:359:HIS:O	24:AY:361:ASN:N	2.40	0.55
24:AY:414:GLU:O	24:AY:474:ALA:HB1	2.07	0.55
25:B0:24:LYS:O	25:B0:25:ARG:HD3	2.07	0.55
26:B1:58:ILE:HD11	26:B1:91:LYS:HA	1.89	0.55
35:BA:1047:G:HO2'	35:BA:1110:G:N2	2.04	0.55
35:BA:1093:G:H21	35:BA:1098:A:H62	1.54	0.55
35:BA:1152:C:OP2	35:BA:1152:C:H6	1.90	0.55
35:BA:1171:G:N2	35:BA:1179:C:N3	2.55	0.55
35:BA:1423:G:O5'	35:BA:1423:G:H8	1.90	0.55
35:BA:2167:U:H2'	35:BA:2168:G:O4'	2.07	0.55
35:BA:2732:G:H5"	35:BA:2733:A:C8	2.41	0.55
35:BA:2747:G:O2'	42:BH:67:LEU:HD12	2.07	0.55
37:BC:102:GLN:O	37:BC:105:LEU:HB3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:57:LYS:C	39:BE:58:ARG:HG3	2.32	0.55
41:BG:106:LEU:CA	41:BG:110:ALA:HB3	2.37	0.55
45:BN:133:GLN:O	45:BN:134:ARG:HB3	2.05	0.55
50:BS:12:PHE:O	50:BS:12:PHE:HD1	1.90	0.55
50:BS:59:LYS:HD2	50:BS:61:ASN:CB	2.35	0.55
51:BT:89:VAL:C	51:BT:91:ARG:N	2.64	0.55
51:BT:100:TYR:N	51:BT:100:TYR:CD1	2.74	0.55
51:BT:117:ASP:O	51:BT:118:ARG:C	2.50	0.55
53:BV:58:VAL:O	53:BV:58:VAL:HG12	2.07	0.55
57:BZ:108:PRO:HB3	57:BZ:141:VAL:HG12	1.89	0.55
57:BZ:152:ALA:HA	57:BZ:167:PRO:HB2	1.88	0.55
1:AA:328:C:O2'	1:AA:329:A:OP2	2.24	0.54
1:AA:447:G:H8	1:AA:447:G:O5'	1.91	0.54
1:AA:1301:U:H3'	1:AA:1302:U:C5'	2.37	0.54
2:AB:53:ARG:O	2:AB:53:ARG:HG2	2.07	0.54
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.87	0.54
9:AI:58:HIS:C	9:AI:59:PHE:HD1	2.15	0.54
10:AJ:50:ILE:HD11	14:AN:41:ARG:CZ	2.37	0.54
15:AO:39:LEU:CD1	15:AO:56:LEU:HB2	2.37	0.54
24:AY:250:THR:O	24:AY:253:LEU:N	2.22	0.54
24:AY:606:MET:CE	24:AY:671:MET:HE3	2.38	0.54
26:B1:26:ARG:HG3	26:B1:27:GLU:N	2.21	0.54
30:B5:19:ARG:HA	35:BA:2046:G:C5'	2.37	0.54
35:BA:302:C:OP2	56:BY:73:ARG:NH1	2.39	0.54
35:BA:338:G:O2'	35:BA:339:U:H5'	2.06	0.54
35:BA:345:A:H2'	35:BA:345:A:N3	2.21	0.54
35:BA:739:G:HO2'	35:BA:740:U:H6	1.55	0.54
35:BA:1555:G:N3	35:BA:1555:G:H2'	2.21	0.54
35:BA:1568:G:P	38:BD:63:ARG:HH22	2.30	0.54
35:BA:2163:C:C2'	35:BA:2164:C:H5'	2.37	0.54
35:BA:2223:G:C2'	35:BA:2224:G:H5'	2.37	0.54
35:BA:2388:A:H5'	35:BA:2389:G:OP2	2.07	0.54
37:BC:118:PRO:HB2	37:BC:148:PHE:CZ	2.42	0.54
42:BH:43:VAL:CG1	42:BH:51:ARG:O	2.54	0.54
42:BH:83:TYR:CB	42:BH:134:SER:HA	2.34	0.54
43:BK:3:LYS:HD3	43:BK:29:GLN:HG2	1.87	0.54
45:BN:133:GLN:HG2	45:BN:134:ARG:N	2.21	0.54
47:BP:50:ARG:O	47:BP:57:THR:HG22	2.07	0.54
48:BQ:55:VAL:CG1	48:BQ:56:ARG:H	2.20	0.54
51:BT:55:ASN:O	51:BT:55:ASN:ND2	2.40	0.54
54:BW:44:ALA:O	54:BW:47:VAL:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:95:LYS:HD3	56:BY:100:ALA:CB	2.34	0.54
1:AA:1051:C:H2'	1:AA:1052:U:O4'	2.07	0.54
1:AA:1158:C:H4'	2:AB:133:LYS:HD3	1.88	0.54
1:AA:1318:A:O3'	19:AS:10:PHE:CD2	2.60	0.54
1:AA:1493:A:O2'	1:AA:1494:G:OP1	2.25	0.54
2:AB:19:HIS:O	2:AB:20:GLU:O	2.26	0.54
2:AB:200:ILE:O	2:AB:201:ILE:HD13	2.06	0.54
6:AF:4:TYR:HE1	6:AF:92:LYS:HD2	1.71	0.54
12:AL:7:ILE:HG22	12:AL:8:ASN:N	2.21	0.54
14:AN:13:THR:HG22	14:AN:13:THR:O	2.06	0.54
16:AP:67:THR:HG22	16:AP:68:ASP:H	1.72	0.54
18:AR:58:LEU:N	18:AR:58:LEU:CD1	2.70	0.54
20:AT:33:ILE:HD13	20:AT:63:ILE:CG1	2.37	0.54
24:AY:16:GLY:N	24:AY:101:LEU:CD1	2.70	0.54
24:AY:92:ILE:HG12	24:AY:405:PRO:CG	2.32	0.54
24:AY:120:THR:HB	24:AY:124:GLN:OE1	2.08	0.54
24:AY:128:TYR:CE2	24:AY:130:VAL:HG23	2.42	0.54
25:B0:16:SER:HB2	35:BA:2262:U:C5	2.41	0.54
27:B2:2:LYS:HD2	27:B2:5:GLU:OE1	2.07	0.54
33:B8:51:ALA:N	33:B8:53:PRO:HD2	2.22	0.54
35:BA:381:G:O2'	35:BA:382:G:H5'	2.08	0.54
35:BA:414:C:H6	35:BA:414:C:H5"	1.72	0.54
35:BA:545:C:H3'	35:BA:547:A:C5'	2.35	0.54
35:BA:764:A:C5	38:BD:209:ALA:HB1	2.42	0.54
35:BA:796:C:H2'	35:BA:797:C:C6	2.42	0.54
35:BA:1301:A:O2'	35:BA:1302:A:O5'	2.24	0.54
35:BA:2057:A:C2'	35:BA:2058:A:H5'	2.37	0.54
35:BA:2656:U:C2'	35:BA:2657:A:H5"	2.36	0.54
35:BA:2681:C:H6	35:BA:2683:C:H41	1.55	0.54
35:BA:2818:G:O2'	35:BA:2837:G:H5'	2.07	0.54
36:BB:15:A:H3'	36:BB:16:G:H5'	1.87	0.54
37:BC:118:PRO:C	37:BC:121:MET:HG2	2.32	0.54
40:BF:100:THR:O	40:BF:100:THR:HG22	2.07	0.54
40:BF:185:ASP:HA	40:BF:188:ARG:CD	2.37	0.54
41:BG:107:LEU:HD23	41:BG:111:LEU:HD12	1.88	0.54
49:BR:38:VAL:HB	49:BR:39:PRO:CD	2.26	0.54
50:BS:79:ALA:C	50:BS:81:GLY:N	2.65	0.54
50:BS:89:ARG:HG3	50:BS:92:TYR:N	2.21	0.54
50:BS:96:GLY:O	50:BS:98:VAL:N	2.38	0.54
50:BS:98:VAL:HG12	50:BS:100:ALA:N	2.21	0.54
51:BT:91:ARG:O	51:BT:117:ASP:CB	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BV:38:LEU:O	53:BV:51:VAL:HG13	2.07	0.54
57:BZ:137:ILE:CG2	57:BZ:155:LEU:HD12	2.37	0.54
1:AA:174:C:O2'	1:AA:175:C:H5'	2.07	0.54
1:AA:300:A:C2'	1:AA:301:G:H5'	2.37	0.54
1:AA:603:U:H2'	1:AA:604:G:C8	2.42	0.54
1:AA:956:U:H2'	1:AA:957:U:H6	1.72	0.54
2:AB:20:GLU:HB2	2:AB:190:THR:OG1	2.07	0.54
2:AB:63:MET:HG3	2:AB:63:MET:O	2.06	0.54
4:AD:108:LEU:HD23	4:AD:110:PHE:CE2	2.43	0.54
10:AJ:61:GLU:HG3	14:AN:58:LYS:NZ	2.22	0.54
17:AQ:27:PHE:CE1	17:AQ:36:ILE:HD11	2.42	0.54
19:AS:31:ILE:HG21	19:AS:49:ILE:HG12	1.89	0.54
22:AV:31:G:H3'	22:AV:32:C:C6	2.43	0.54
24:AY:9:LEU:C	24:AY:9:LEU:HD23	2.32	0.54
24:AY:100:VAL:HG13	24:AY:101:LEU:N	2.22	0.54
24:AY:530:VAL:HG13	24:AY:531:GLY:H	1.72	0.54
58:AY:701:FUA:O1	58:AY:701:FUA:C1	2.55	0.54
27:B2:69:ARG:HG3	27:B2:70:GLN:N	2.22	0.54
30:B5:3:LYS:HG2	35:BA:747:U:O4	2.08	0.54
35:BA:211:A:C3'	35:BA:212:G:H5"	2.38	0.54
35:BA:298:G:O5'	35:BA:298:G:H8	1.91	0.54
35:BA:347:A:H2'	35:BA:348:G:C8	2.43	0.54
35:BA:1079:C:H1'	43:BK:132:ARG:HH22	1.72	0.54
35:BA:1270:C:H5"	35:BA:1271:G:H5'	1.89	0.54
35:BA:1389:G:H2'	35:BA:1390:U:C6	2.43	0.54
35:BA:1567:A:C5'	38:BD:58:HIS:CD2	2.90	0.54
35:BA:1902:C:H2'	35:BA:1903:G:O4'	2.06	0.54
35:BA:2193:G:C2'	35:BA:2194:G:H5'	2.37	0.54
35:BA:2415:G:H4'	47:BP:66:GLY:C	2.32	0.54
38:BD:39:LYS:HZ2	38:BD:87:ASN:HB3	1.71	0.54
41:BG:33:ARG:HD3	41:BG:33:ARG:N	2.22	0.54
50:BS:20:ARG:HG2	50:BS:20:ARG:HH11	1.72	0.54
50:BS:64:GLU:H	50:BS:64:GLU:CD	2.14	0.54
57:BZ:107:THR:HG23	57:BZ:111:VAL:HG11	1.87	0.54
1:AA:1347:G:O2'	1:AA:1348:U:P	2.64	0.54
4:AD:18:LYS:O	4:AD:19:LEU:HD12	2.08	0.54
5:AE:136:MET:O	5:AE:137:GLU:C	2.51	0.54
9:AI:26:VAL:HG22	9:AI:61:ALA:HB3	1.90	0.54
24:AY:14:ASN:ND2	24:AY:80:ASN:HD22	2.05	0.54
24:AY:210:ARG:O	24:AY:213:HIS:N	2.39	0.54
24:AY:485:GLU:HB2	24:AY:560:VAL:HG22	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:200:U:C2'	35:BA:201:C:H5'	2.38	0.54
35:BA:675:A:H4'	40:BF:67:GLN:OE1	2.08	0.54
35:BA:676:A:C8	35:BA:2443:C:H1'	2.41	0.54
35:BA:811:U:O2'	35:BA:1250:G:H2'	2.07	0.54
35:BA:1043:C:H2'	35:BA:1044:G:C5'	2.28	0.54
35:BA:1159:U:H6	35:BA:1159:U:H5"	1.72	0.54
35:BA:1516:C:C2'	35:BA:1517:G:C5'	2.86	0.54
35:BA:1599:C:H2'	35:BA:1600:C:C6	2.40	0.54
35:BA:1759:A:H5'	35:BA:2715:C:H1'	1.90	0.54
35:BA:2732:G:H3'	35:BA:2733:A:C5'	2.38	0.54
35:BA:2754:U:H2'	35:BA:2756:U:OP1	2.06	0.54
35:BA:2880:C:N4	35:BA:2881:C:H41	2.04	0.54
39:BE:152:LYS:O	39:BE:153:GLY:C	2.50	0.54
40:BF:10:PRO:HG2	40:BF:11:VAL:H	1.73	0.54
41:BG:77:ILE:HG21	41:BG:80:PHE:HB2	1.90	0.54
45:BN:57:ALA:N	45:BN:124:ALA:HA	2.22	0.54
50:BS:98:VAL:C	50:BS:100:ALA:N	2.60	0.54
52:BU:53:ARG:O	52:BU:54:LYS:C	2.50	0.54
53:BV:98:GLU:OE2	53:BV:100:ARG:HB3	2.08	0.54
1:AA:416:G:H2'	1:AA:417:C:C6	2.42	0.54
1:AA:626:U:O2	1:AA:626:U:H2'	2.07	0.54
1:AA:691:G:H2'	1:AA:692:U:C6	2.42	0.54
1:AA:1270:C:H4'	1:AA:1313:U:O2'	2.08	0.54
4:AD:122:ARG:HH11	4:AD:134:ASP:HB2	1.71	0.54
10:AJ:33:GLN:H	10:AJ:75:ILE:HD11	1.72	0.54
11:AK:122:LYS:O	11:AK:124:LYS:N	2.41	0.54
15:AO:3:ILE:O	15:AO:3:ILE:HG13	2.07	0.54
18:AR:33:ASP:C	18:AR:35:ARG:H	2.16	0.54
18:AR:36:ASN:O	18:AR:37:VAL:C	2.50	0.54
24:AY:277:VAL:HG13	24:AY:278:ASP:N	2.23	0.54
26:B1:29:GLY:C	26:B1:31:GLY:N	2.66	0.54
26:B1:76:ARG:CZ	26:B1:95:LEU:HD22	2.37	0.54
29:B4:39:CYS:O	29:B4:40:HIS:HB2	2.06	0.54
31:B6:5:VAL:CG1	31:B6:6:ARG:N	2.70	0.54
31:B6:29:ASN:CG	31:B6:30:THR:N	2.66	0.54
35:BA:567:A:N1	35:BA:571:A:H8	2.05	0.54
35:BA:1221:C:H2'	35:BA:1221(A):C:C6	2.42	0.54
35:BA:1998:G:OP2	39:BE:136:ARG:NH2	2.41	0.54
35:BA:2121:G:H5'	35:BA:2122:U:OP2	2.07	0.54
35:BA:2347:C:H2'	35:BA:2348:U:C5	2.42	0.54
35:BA:2397:G:H2'	35:BA:2398:U:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2415:G:H2'	35:BA:2416:C:C6	2.42	0.54
36:BB:49:C:H2'	36:BB:50:G:C8	2.43	0.54
36:BB:106:G:H5"	57:BZ:31:ARG:HB3	1.89	0.54
37:BC:88:GLU:CA	37:BC:95:VAL:HG21	2.37	0.54
37:BC:212:SER:HG	37:BC:214:TYR:HE1	1.56	0.54
38:BD:72:LYS:HE2	38:BD:101:GLU:OE1	2.08	0.54
39:BE:52:LEU:O	39:BE:53:PRO:C	2.49	0.54
43:BK:106:GLU:HG3	43:BK:107:ILE:N	2.23	0.54
49:BR:2:ARG:HB2	49:BR:5:LYS:HZ3	1.72	0.54
49:BR:113:LEU:CD1	49:BR:114:VAL:H	2.09	0.54
53:BV:35:LEU:HB2	53:BV:57:VAL:CG1	2.38	0.54
1:AA:151:A:C2'	1:AA:152:A:H5'	2.38	0.54
1:AA:191:G:N3	20:AT:105:SER:HB3	2.23	0.54
1:AA:383:A:C2'	1:AA:384:G:H5'	2.36	0.54
1:AA:769:G:O2'	1:AA:770:C:H5'	2.07	0.54
1:AA:1161:C:O2'	1:AA:1162:C:H5'	2.07	0.54
4:AD:26:CYS:O	4:AD:31:CYS:HB2	2.08	0.54
5:AE:90:VAL:C	5:AE:91:LEU:HD22	2.33	0.54
7:AG:144:MET:O	7:AG:147:ALA:HB3	2.07	0.54
9:AI:4:TYR:CE2	9:AI:59:PHE:HE2	2.25	0.54
13:AM:19:LEU:N	13:AM:19:LEU:CD2	2.70	0.54
16:AP:14:ASN:CG	16:AP:14:ASN:O	2.46	0.54
24:AY:150:ILE:C	24:AY:152:THR:H	2.14	0.54
24:AY:411:VAL:HG23	24:AY:459:LEU:CD2	2.37	0.54
35:BA:272(H):C:H6	35:BA:272(H):C:C5'	2.15	0.54
35:BA:291:C:H2'	35:BA:292:C:C6	2.42	0.54
35:BA:751:A:C5'	54:BW:90:ARG:HA	2.38	0.54
35:BA:948:G:H1	35:BA:969:U:H3	1.56	0.54
35:BA:1164:G:H1	35:BA:1185:C:H42	1.54	0.54
35:BA:1195:G:O2'	35:BA:1196:C:H5'	2.08	0.54
35:BA:1993:U:H4'	39:BE:128:SER:OG	2.07	0.54
35:BA:2115:G:H3'	35:BA:2116:G:C5'	2.38	0.54
35:BA:2537:U:H2'	35:BA:2538:C:C6	2.43	0.54
35:BA:2787:C:H1'	39:BE:61:ARG:HD3	1.89	0.54
36:BB:81:G:C2	36:BB:82:G:N7	2.75	0.54
37:BC:42:VAL:O	37:BC:176:VAL:HG22	2.08	0.54
39:BE:30:PRO:O	39:BE:32:PRO:HD3	2.07	0.54
40:BF:7:TYR:OH	40:BF:10:PRO:HG3	2.08	0.54
40:BF:32:LEU:C	40:BF:32:LEU:CD2	2.79	0.54
40:BF:32:LEU:O	40:BF:36:VAL:HG23	2.08	0.54
45:BN:95:PRO:HA	45:BN:98:VAL:HG23	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:66:GLY:O	47:BP:67:MET:HB3	2.07	0.54
47:BP:85:LEU:H	47:BP:85:LEU:CD2	2.15	0.54
49:BR:99:LYS:N	49:BR:99:LYS:CD	2.56	0.54
57:BZ:109:ALA:C	57:BZ:111:VAL:H	2.13	0.54
1:AA:437:U:H2'	1:AA:438:G:O4'	2.08	0.54
2:AB:162:ILE:HG22	2:AB:182:ILE:HG21	1.89	0.54
6:AF:80:ARG:NH1	6:AF:88:VAL:HB	2.21	0.54
10:AJ:32:ALA:HB1	10:AJ:75:ILE:HG13	1.88	0.54
12:AL:98:TYR:N	12:AL:98:TYR:CD1	2.76	0.54
24:AY:97:SER:O	24:AY:101:LEU:HD23	2.06	0.54
24:AY:168:ILE:HD11	24:AY:178:ILE:HD11	1.89	0.54
24:AY:298:VAL:HG13	24:AY:299:VAL:N	2.22	0.54
24:AY:337:SER:HB2	24:AY:355:LEU:HD23	1.90	0.54
25:B0:78:TYR:N	25:B0:78:TYR:CD1	2.74	0.54
30:B5:44:THR:CG2	30:B5:45:VAL:H	2.18	0.54
31:B6:54:ILE:HD13	35:BA:2420:C:C4'	2.36	0.54
35:BA:621:A:H2'	35:BA:622:G:C5'	2.38	0.54
35:BA:737:C:O2'	35:BA:738:G:H5'	2.08	0.54
35:BA:1059:G:H2'	35:BA:1060:U:C6	2.42	0.54
35:BA:1146:C:O2	35:BA:1146:C:H2'	2.08	0.54
35:BA:1212:G:O2'	35:BA:1236:G:N2	2.40	0.54
35:BA:1331:A:C2'	35:BA:1332:G:H5"	2.38	0.54
35:BA:2759:G:O2'	35:BA:2760:C:H5'	2.08	0.54
35:BA:2861:G:H2'	35:BA:2862:G:H8	1.72	0.54
36:BB:20:C:O2'	36:BB:21:G:H5"	2.07	0.54
37:BC:130:ARG:HG3	37:BC:130:ARG:O	2.07	0.54
37:BC:138:LEU:HD13	37:BC:138:LEU:C	2.33	0.54
39:BE:93:VAL:C	39:BE:95:ILE:N	2.63	0.54
41:BG:111:LEU:HA	41:BG:114:ILE:HD12	1.90	0.54
43:BK:109:LYS:HA	43:BK:112:MET:CE	2.21	0.54
43:BK:109:LYS:O	43:BK:112:MET:HG2	2.07	0.54
45:BN:33:LEU:HD23	45:BN:52:VAL:HG21	1.90	0.54
47:BP:80:TYR:CE1	47:BP:111:ARG:HG2	2.43	0.54
49:BR:72:ASP:CG	49:BR:75:LEU:H	2.16	0.54
51:BT:13:ARG:NH1	51:BT:15:VAL:HG22	2.11	0.54
1:AA:490:G:H2'	1:AA:491:G:C8	2.38	0.54
1:AA:1281:U:H5'	1:AA:1282:C:OP2	2.06	0.54
2:AB:22:LYS:H	2:AB:40:HIS:HE1	1.54	0.54
2:AB:87:ARG:NH1	2:AB:223:ILE:HD11	2.23	0.54
2:AB:185:ILE:HG22	2:AB:199:TYR:CB	2.23	0.54
2:AB:239:VAL:O	2:AB:240:GLN:CB	2.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:91:VAL:HG12	6:AF:92:LYS:N	2.23	0.54
9:AI:90:PRO:HG2	9:AI:91:ASP:H	1.72	0.54
19:AS:51:VAL:O	19:AS:58:VAL:HG22	2.07	0.54
20:AT:47:GLY:C	20:AT:49:ALA:H	2.15	0.54
24:AY:277:VAL:HG13	24:AY:278:ASP:H	1.73	0.54
25:B0:72:ARG:HH11	25:B0:75:LEU:HD13	1.73	0.54
27:B2:41:ILE:HD11	27:B2:44:LEU:CD1	2.13	0.54
35:BA:285:C:H2'	35:BA:286:C:C5'	2.37	0.54
35:BA:654(C):G:H2'	35:BA:654(D):G:C8	2.43	0.54
35:BA:769:G:H4'	35:BA:1379:A:N1	2.23	0.54
35:BA:1336:A:H2'	35:BA:1337:G:C8	2.43	0.54
35:BA:1525:G:H2'	35:BA:1526:G:C8	2.42	0.54
35:BA:2248:C:H2'	35:BA:2249:U:C5'	2.36	0.54
36:BB:86:G:C6	36:BB:92:C:N3	2.75	0.54
38:BD:241:PRO:O	38:BD:242:ARG:CB	2.53	0.54
40:BF:65:TRP:HZ3	40:BF:75:HIS:HD2	1.56	0.54
40:BF:167:ALA:CB	40:BF:173:VAL:HG11	2.36	0.54
41:BG:16:ARG:O	41:BG:20:ILE:HG13	2.08	0.54
41:BG:63:ILE:HD12	41:BG:64:THR:N	2.23	0.54
42:BH:44:VAL:O	42:BH:50:VAL:HG13	2.08	0.54
46:BO:20:MET:O	46:BO:41:ALA:HB1	2.07	0.54
47:BP:17:LYS:C	47:BP:19:VAL:H	2.14	0.54
48:BQ:42:ILE:HG22	48:BQ:43:THR:O	2.07	0.54
48:BQ:97:VAL:HG21	48:BQ:103:MET:HE3	1.90	0.54
53:BV:1:MET:HE1	53:BV:43:GLU:HG2	1.88	0.54
54:BW:6:ILE:HG22	54:BW:6:ILE:O	2.07	0.54
1:AA:155:C:H2'	1:AA:156:G:C8	2.42	0.54
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.38	0.54
1:AA:1057:G:N2	1:AA:1204:A:H1'	2.23	0.54
1:AA:1061:G:C2'	1:AA:1062:U:H5'	2.37	0.54
1:AA:1095:U:OP1	1:AA:1108:G:N2	2.36	0.54
2:AB:12:GLU:HA	2:AB:16:HIS:CG	2.43	0.54
4:AD:57:ARG:CG	4:AD:57:ARG:NH1	2.64	0.54
5:AE:51:VAL:HB	5:AE:52:PRO:CD	2.35	0.54
18:AR:36:ASN:OD1	18:AR:39:VAL:HB	2.08	0.54
20:AT:75:ASN:H	20:AT:75:ASN:ND2	1.97	0.54
22:AV:22:G:O2'	22:AV:23:C:H5'	2.07	0.54
24:AY:21:ILE:CG2	24:AY:88:VAL:HG13	2.38	0.54
24:AY:115:GLU:OE2	24:AY:118:SER:HB3	2.07	0.54
24:AY:154:GLN:C	24:AY:158:GLY:HA2	2.33	0.54
24:AY:447:GLY:O	24:AY:448:GLN:C	2.51	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:9:LEU:CD2	41:BG:65:GLY:HA3	2.36	0.54
35:BA:144:C:H2'	35:BA:145:G:C8	2.42	0.54
35:BA:196:A:H2'	35:BA:2068:U:H5	1.73	0.54
35:BA:307:G:H21	35:BA:330:A:N6	2.06	0.54
35:BA:614(C):A:C2	40:BF:179:GLU:HB3	2.42	0.54
35:BA:652:C:O2'	35:BA:653:A:O5'	2.26	0.54
35:BA:848:G:C4	35:BA:933:A:H8	2.26	0.54
35:BA:1045:A:O2'	35:BA:1047:G:C5	2.61	0.54
35:BA:1223:G:H5'	35:BA:1224:C:OP2	2.07	0.54
35:BA:1487:G:H2'	35:BA:1487:G:N3	2.22	0.54
35:BA:1747(A):G:C2'	35:BA:1748:G:C5'	2.70	0.54
35:BA:1835:G:H1'	35:BA:1931:U:O2	2.08	0.54
35:BA:2228:G:H2'	35:BA:2229:C:H6	1.71	0.54
39:BE:9:VAL:CG2	39:BE:10:GLY:N	2.70	0.54
43:BK:106:GLU:HA	43:BK:109:LYS:CD	2.25	0.54
47:BP:24:GLY:CA	47:BP:33:ARG:HH12	2.20	0.54
54:BW:20:VAL:CG2	54:BW:21:VAL:H	2.20	0.54
57:BZ:3:TYR:HD2	57:BZ:47:VAL:HG13	1.72	0.54
1:AA:417:C:H2'	1:AA:418:C:H6	1.71	0.54
1:AA:1117:G:H5'	1:AA:1117:G:H8	1.72	0.54
1:AA:1260:C:O5'	1:AA:1284:C:H4'	2.08	0.54
1:AA:1409:C:H2'	1:AA:1410:G:H8	1.72	0.54
2:AB:95:GLN:OE1	2:AB:96:ARG:NH1	2.41	0.54
4:AD:36:ARG:HH11	4:AD:36:ARG:CB	2.21	0.54
7:AG:47:CYS:O	7:AG:50:ILE:HB	2.08	0.54
12:AL:75:HIS:CD2	12:AL:77:LEU:CD1	2.88	0.54
16:AP:74:LEU:CD2	16:AP:79:VAL:HG21	2.38	0.54
25:B0:43:THR:CG2	35:BA:2331:G:O3'	2.56	0.54
29:B4:10:VAL:HG23	29:B4:11:PRO:CD	2.36	0.54
31:B6:30:THR:O	31:B6:32:ASN:N	2.41	0.54
35:BA:121:G:N2	35:BA:122:G:H1'	2.23	0.54
35:BA:295:G:OP1	56:BY:2:ARG:NH2	2.40	0.54
35:BA:299:A:C5'	35:BA:300:A:OP2	2.52	0.54
35:BA:651:G:C2'	35:BA:652:C:H5'	2.38	0.54
35:BA:654(S):G:C5	35:BA:654(T):C:H1'	2.43	0.54
35:BA:1717:G:C2'	35:BA:1718:G:H5"	2.38	0.54
35:BA:1993:U:H4'	39:BE:128:SER:HB3	1.90	0.54
35:BA:2579:C:C4'	39:BE:134:ILE:HG12	2.38	0.54
35:BA:2605:U:H2'	35:BA:2606:C:C6	2.43	0.54
35:BA:2673:G:H5'	35:BA:2673:G:H8	1.73	0.54
38:BD:92:ILE:HA	38:BD:107:ALA:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:167:VAL:HG13	39:BE:170:LEU:HD11	1.90	0.54
39:BE:176:ILE:CG2	39:BE:178:GLU:HB3	2.38	0.54
39:BE:188:VAL:O	39:BE:189:PRO:O	2.26	0.54
47:BP:91:PHE:HE2	47:BP:99:LEU:CD2	2.18	0.54
49:BR:21:TYR:HB3	49:BR:47:PHE:HD2	1.71	0.54
51:BT:30:VAL:HG22	51:BT:84:GLN:O	2.07	0.54
57:BZ:127:LYS:O	57:BZ:128:VAL:HB	2.07	0.54
1:AA:104:G:OP1	20:AT:21:LYS:NZ	2.33	0.53
1:AA:221:C:H5'	1:AA:222:U:OP2	2.08	0.53
1:AA:796:C:C6	1:AA:796:C:H5"	2.43	0.53
1:AA:827:U:H2'	1:AA:870:U:O4	2.08	0.53
1:AA:881:G:P	12:AL:12:ARG:HH22	2.31	0.53
1:AA:1047:G:H5"	14:AN:4:LYS:HD3	1.90	0.53
1:AA:1275:A:C2'	1:AA:1276:G:H5'	2.38	0.53
3:AC:95:THR:O	3:AC:97:LYS:N	2.41	0.53
3:AC:120:VAL:O	3:AC:121:ALA:C	2.51	0.53
6:AF:37:VAL:HG12	6:AF:38:GLU:O	2.07	0.53
12:AL:27:LEU:O	12:AL:29:GLY:N	2.41	0.53
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.72	0.53
19:AS:39:THR:CG2	19:AS:40:ILE:N	2.71	0.53
22:AV:3:C:C2'	22:AV:4:G:H5'	2.37	0.53
24:AY:445:GLU:OE1	24:AY:445:GLU:HA	2.07	0.53
28:B3:45:GLY:HA3	35:BA:851:U:O2'	2.09	0.53
33:B8:7:HIS:HB2	33:B8:59:LYS:HB3	1.90	0.53
35:BA:90:U:O2	35:BA:90:U:H3'	2.08	0.53
35:BA:483:A:H3'	35:BA:484:C:C6	2.43	0.53
35:BA:769:G:H2'	35:BA:770:G:C8	2.41	0.53
35:BA:946:G:H2'	35:BA:947:G:H8	1.73	0.53
35:BA:1227:G:O2'	35:BA:1228:G:H5'	2.08	0.53
35:BA:1336:A:OP2	55:BX:64:LYS:HE3	2.07	0.53
35:BA:2076:U:H5	35:BA:2596:U:C2	2.26	0.53
35:BA:2574:G:H2'	35:BA:2575:C:C6	2.43	0.53
35:BA:2591:C:OP2	38:BD:239:ARG:HB3	2.07	0.53
36:BB:91:C:OP2	48:BQ:16:ARG:HD2	2.09	0.53
39:BE:103:ASP:CG	39:BE:201:THR:HA	2.33	0.53
40:BF:17:ARG:NH1	40:BF:17:ARG:CG	2.69	0.53
41:BG:138:GLN:HG3	41:BG:144:ILE:CD1	2.39	0.53
42:BH:85:LYS:HD3	42:BH:85:LYS:O	2.08	0.53
43:BK:30:HIS:CE1	43:BK:59:ILE:HB	2.43	0.53
47:BP:144:GLU:N	47:BP:145:PRO:HD3	2.22	0.53
49:BR:96:ARG:O	49:BR:114:VAL:HA	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:106:SER:O	51:BT:107:ASP:HB3	2.08	0.53
54:BW:20:VAL:CG2	54:BW:21:VAL:N	2.71	0.53
57:BZ:9:TYR:HB3	57:BZ:35:ARG:NH2	2.23	0.53
57:BZ:158:PRO:HB3	57:BZ:159:PRO:HD2	1.90	0.53
1:AA:489:C:H2'	1:AA:490:G:H8	1.73	0.53
1:AA:579:G:C5'	1:AA:728:A:H1'	2.37	0.53
1:AA:665:A:H2'	1:AA:732:C:O2	2.09	0.53
1:AA:1308:U:H5"	13:AM:98:VAL:CG2	2.37	0.53
2:AB:204:ASN:ND2	2:AB:207:ALA:H	2.06	0.53
3:AC:20:SER:HB3	3:AC:40:ARG:NH2	2.22	0.53
3:AC:131:ARG:HH22	3:AC:168:ALA:HB2	1.73	0.53
4:AD:74:GLN:HA	4:AD:77:ASN:HD22	1.74	0.53
5:AE:101:ILE:H	5:AE:101:ILE:CD1	2.19	0.53
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.27	0.53
24:AY:171:GLU:HG3	24:AY:172:ASP:H	1.74	0.53
24:AY:464:ASP:O	24:AY:468:ARG:HB2	2.07	0.53
26:B1:18:ILE:CG2	26:B1:20:ARG:HE	2.17	0.53
27:B2:18:PRO:HG2	27:B2:19:VAL:HG23	1.90	0.53
31:B6:5:VAL:CG2	35:BA:2283:C:H5'	2.35	0.53
31:B6:28:ARG:O	31:B6:32:ASN:HB2	2.08	0.53
31:B6:38:LYS:O	31:B6:39:TYR:HD1	1.91	0.53
35:BA:880:G:H2'	35:BA:881:G:H8	1.74	0.53
35:BA:1114:G:H2'	35:BA:1115:G:H5'	1.89	0.53
35:BA:1142:U:O5'	35:BA:1142:U:C6	2.61	0.53
35:BA:1164:G:H2'	35:BA:1165:U:C6	2.44	0.53
35:BA:1660:C:H5'	35:BA:2712(A):A:H61	1.73	0.53
35:BA:1775:U:H2'	35:BA:1776:G:C5'	2.37	0.53
35:BA:2016:U:O2'	35:BA:2017:U:H5'	2.07	0.53
35:BA:2531:A:OP1	42:BH:177:GLY:C	2.52	0.53
35:BA:2884:U:H2'	35:BA:2885:C:C5'	2.37	0.53
48:BQ:75:THR:CG2	48:BQ:76:LYS:H	2.19	0.53
52:BU:8:VAL:HG23	52:BU:11:ARG:HH21	1.74	0.53
52:BU:53:ARG:HG3	52:BU:57:PHE:CE1	2.41	0.53
57:BZ:128:VAL:CG2	57:BZ:132:ASN:HB2	2.39	0.53
1:AA:296:U:H2'	1:AA:297:G:C8	2.44	0.53
1:AA:957:U:H2'	1:AA:959:A:OP2	2.08	0.53
3:AC:150:LYS:HB2	3:AC:169:ALA:HB1	1.89	0.53
5:AE:26:PHE:N	5:AE:26:PHE:CD1	2.76	0.53
11:AK:85:ARG:HG2	11:AK:111:ASP:O	2.08	0.53
20:AT:8:ARG:HH11	20:AT:8:ARG:CG	2.20	0.53
24:AY:21:ILE:HG21	24:AY:88:VAL:HG13	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:115:GLU:OE2	24:AY:118:SER:CB	2.56	0.53
24:AY:485:GLU:O	24:AY:486:THR:HB	2.08	0.53
27:B2:24:LEU:HD23	27:B2:24:LEU:C	2.33	0.53
27:B2:57:ILE:HG22	27:B2:61:LEU:CD1	2.39	0.53
31:B6:8:LYS:NZ	35:BA:2285:C:H5	2.06	0.53
33:B8:32:LEU:CB	33:B8:36:LYS:NZ	2.71	0.53
33:B8:62:LEU:CD1	35:BA:242:G:H5"	2.35	0.53
35:BA:221:A:N6	35:BA:265:A:H8	2.00	0.53
35:BA:272(I):U:H5	35:BA:363(A):A:H2	1.56	0.53
35:BA:566:U:O4	53:BV:78:LYS:HE3	2.09	0.53
35:BA:1024:G:C8	35:BA:1025:G:H2'	2.43	0.53
35:BA:1059:G:H4'	43:BK:115:LEU:HD23	1.89	0.53
35:BA:1169:G:N2	35:BA:1181:C:N3	2.55	0.53
35:BA:1205:U:C5	40:BF:171:PRO:HA	2.42	0.53
35:BA:1858:G:H2'	35:BA:1883:G:N2	2.24	0.53
35:BA:2395:C:C2	35:BA:2396:G:C8	2.97	0.53
37:BC:84:ILE:O	37:BC:95:VAL:HG11	2.08	0.53
37:BC:126:SER:C	37:BC:128:LEU:H	2.15	0.53
38:BD:35:LYS:CG	38:BD:63:ARG:HA	2.29	0.53
40:BF:198:ALA:C	40:BF:201:VAL:HG12	2.33	0.53
40:BF:201:VAL:HA	40:BF:204:ASN:HD22	1.73	0.53
41:BG:42:GLY:O	41:BG:44:GLY:N	2.42	0.53
50:BS:79:ALA:C	50:BS:81:GLY:H	2.15	0.53
51:BT:70:VAL:HG12	51:BT:71:GLY:N	2.24	0.53
55:BX:18:TYR:CD1	55:BX:21:PHE:HE2	2.25	0.53
56:BY:75:ILE:O	56:BY:76:CYS:HB2	2.08	0.53
57:BZ:151:HIS:CB	57:BZ:170:THR:HA	2.32	0.53
1:AA:658:G:C6	1:AA:749:C:N4	2.76	0.53
1:AA:674:G:O4'	18:AR:81:PHE:CE2	2.61	0.53
7:AG:4:ARG:HD3	7:AG:5:ARG:HH12	1.71	0.53
12:AL:30:ALA:CB	12:AL:33:ARG:HH21	2.20	0.53
12:AL:60:LEU:HD22	12:AL:60:LEU:N	2.23	0.53
16:AP:5:ARG:HE	16:AP:22:THR:CG2	2.21	0.53
16:AP:67:THR:HB	16:AP:70:ALA:HB2	1.89	0.53
19:AS:8:GLY:O	19:AS:9:VAL:CG2	2.56	0.53
20:AT:16:HIS:O	20:AT:17:ARG:C	2.50	0.53
22:AV:4:G:O2'	22:AV:5:G:P	2.66	0.53
24:AY:134:ALA:HB3	24:AY:258:VAL:HG22	1.91	0.53
24:AY:486:THR:HG21	24:AY:602:LEU:CD1	2.39	0.53
58:AY:701:FUA:O1	58:AY:701:FUA:H12	2.08	0.53
32:B7:4:THR:O	35:BA:687:C:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:26:LYS:HE2	33:B8:47:LYS:HD2	1.90	0.53
35:BA:582:G:C6	35:BA:1259:G:N1	2.76	0.53
35:BA:643:A:H2'	35:BA:644:A:O4'	2.08	0.53
35:BA:781:A:H2'	35:BA:1777:U:O2'	2.09	0.53
35:BA:811:U:O2	35:BA:1251:C:C6	2.62	0.53
35:BA:811:U:O2	35:BA:1251:C:C5	2.62	0.53
35:BA:1142(A):A:C5	35:BA:1144:G:C5	2.97	0.53
35:BA:1149:G:H2'	35:BA:1150:C:C6	2.44	0.53
35:BA:1252:G:N3	52:BU:33:ARG:HD2	2.23	0.53
35:BA:1577:C:H2'	35:BA:1578:U:O4'	2.08	0.53
35:BA:1993:U:H4'	39:BE:128:SER:CB	2.39	0.53
35:BA:2078:C:C4	35:BA:2079:U:C4	2.97	0.53
35:BA:2306:C:H5"	35:BA:2307:G:O4'	2.07	0.53
35:BA:2617:C:H2'	35:BA:2618:G:H5'	1.91	0.53
43:BK:14:ALA:HA	43:BK:41:PHE:CZ	2.43	0.53
45:BN:96:GLU:O	45:BN:100:GLU:HG3	2.08	0.53
45:BN:128:HIS:HE1	45:BN:134:ARG:HH11	1.56	0.53
47:BP:19:VAL:HG23	47:BP:19:VAL:O	2.09	0.53
1:AA:329:A:H3'	1:AA:330:C:C5'	2.38	0.53
1:AA:541:G:O2'	1:AA:542:G:H5'	2.07	0.53
1:AA:878:G:OP1	8:AH:90:GLY:HA3	2.09	0.53
1:AA:923:A:H5"	5:AE:21:ALA:HB2	1.91	0.53
1:AA:1424:C:H2'	1:AA:1425:U:C6	2.38	0.53
2:AB:75:LYS:HA	2:AB:78:GLN:CG	2.38	0.53
4:AD:129:ASN:HD22	4:AD:129:ASN:H	1.55	0.53
12:AL:119:LYS:O	12:AL:120:TYR:CB	2.52	0.53
20:AT:30:LYS:HG3	20:AT:34:LYS:HE3	1.91	0.53
20:AT:80:ARG:HH11	20:AT:80:ARG:HG2	1.73	0.53
24:AY:128:TYR:HE2	24:AY:130:VAL:HG23	1.74	0.53
24:AY:567:LEU:HG	24:AY:567:LEU:O	2.07	0.53
26:B1:76:ARG:HH22	26:B1:95:LEU:CD1	2.21	0.53
35:BA:487:C:H1'	54:BW:53:SER:HA	1.90	0.53
35:BA:797:C:H2'	35:BA:798:G:H8	1.72	0.53
35:BA:1080:C:H4'	43:BK:125:ARG:CB	2.36	0.53
35:BA:1099:G:H2'	35:BA:1100:C:O4'	2.08	0.53
35:BA:1345:C:C2'	35:BA:1346:G:H5'	2.38	0.53
35:BA:1854:A:H8	35:BA:1854:A:O5'	1.92	0.53
35:BA:2000:G:O2'	35:BA:2001:A:H5'	2.07	0.53
35:BA:2189:U:H2'	35:BA:2190:G:C5'	2.37	0.53
35:BA:2224:G:H4'	35:BA:2226:C:C2	2.44	0.53
35:BA:2705:A:H2'	35:BA:2706:G:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2749:A:C6	35:BA:2750:A:N6	2.77	0.53
37:BC:149:ASN:H	37:BC:149:ASN:HD22	1.55	0.53
40:BF:117:ARG:NH2	47:BP:5:ASP:N	2.56	0.53
43:BK:76:TYR:HB3	43:BK:77:LEU:HD23	1.89	0.53
48:BQ:48:GLU:O	48:BQ:52:VAL:HG23	2.09	0.53
50:BS:12:PHE:O	50:BS:14:VAL:HG23	2.08	0.53
50:BS:74:ALA:HB1	50:BS:103:GLU:CB	2.39	0.53
51:BT:13:ARG:HA	51:BT:13:ARG:NE	2.24	0.53
53:BV:99:ILE:N	53:BV:99:ILE:HD13	2.23	0.53
1:AA:972:C:H4'	10:AJ:57:LYS:CB	2.39	0.53
3:AC:156:ARG:HB2	3:AC:196:LEU:HD21	1.91	0.53
4:AD:14:ARG:HG3	4:AD:15:GLU:N	2.23	0.53
8:AH:7:ALA:HB2	8:AH:85:ARG:HD3	1.89	0.53
8:AH:112:LEU:N	8:AH:112:LEU:HD23	2.23	0.53
13:AM:49:THR:C	13:AM:51:ALA:H	2.16	0.53
19:AS:48:THR:HG22	19:AS:61:TYR:HA	1.90	0.53
24:AY:553:GLY:HA2	24:AY:560:VAL:HG23	1.91	0.53
27:B2:29:LYS:O	27:B2:31:GLU:N	2.42	0.53
28:B3:9:VAL:HG11	28:B3:55:ARG:HD3	1.89	0.53
32:B7:16:HIS:ND1	35:BA:684:G:OP1	2.40	0.53
35:BA:15:G:O2'	35:BA:16:G:H5'	2.08	0.53
35:BA:41:C:H2'	35:BA:42:G:O4'	2.08	0.53
35:BA:85:G:C2'	35:BA:86:C:H5'	2.37	0.53
35:BA:492:A:O2'	35:BA:493:G:H5'	2.09	0.53
35:BA:644:A:C2	35:BA:2369:A:H1'	2.43	0.53
35:BA:1334:G:O3'	55:BX:65:ARG:NH2	2.41	0.53
35:BA:2461:C:O2	35:BA:2461:C:C2'	2.57	0.53
38:BD:210:GLY:O	38:BD:211:ARG:CB	2.57	0.53
41:BG:59:GLU:O	41:BG:63:ILE:HG13	2.08	0.53
43:BK:23:VAL:O	43:BK:23:VAL:CG1	2.51	0.53
43:BK:88:ALA:O	43:BK:90:LYS:N	2.40	0.53
47:BP:47:ASP:HB3	47:BP:48:PRO:C	2.34	0.53
49:BR:4:LEU:O	49:BR:4:LEU:HD13	2.09	0.53
50:BS:13:ARG:O	50:BS:14:VAL:HB	2.07	0.53
50:BS:68:GLN:C	50:BS:70:GLY:N	2.62	0.53
51:BT:89:VAL:HG12	51:BT:91:ARG:HG3	1.89	0.53
52:BU:51:LYS:HA	52:BU:54:LYS:HE2	1.91	0.53
55:BX:14:SER:H	55:BX:17:ALA:HB3	1.73	0.53
1:AA:201:C:C2'	1:AA:202:U:H5"	2.39	0.53
1:AA:999:C:H3'	1:AA:999:C:H6	1.74	0.53
1:AA:1254:C:H2'	1:AA:1255:G:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1312:G:O2'	1:AA:1313:U:H5'	2.08	0.53
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.44	0.53
1:AA:1479:C:H2'	1:AA:1480:G:H8	1.73	0.53
3:AC:99:VAL:O	3:AC:99:VAL:CG2	2.56	0.53
3:AC:154:SER:O	3:AC:165:THR:HA	2.09	0.53
8:AH:34:GLU:HB3	8:AH:118:VAL:HG21	1.91	0.53
10:AJ:3:LYS:HZ2	10:AJ:77:PRO:HD2	1.73	0.53
12:AL:7:ILE:CG2	12:AL:8:ASN:N	2.71	0.53
12:AL:20:LYS:HD3	12:AL:20:LYS:N	2.24	0.53
19:AS:5:LEU:HG	19:AS:10:PHE:HD1	1.72	0.53
29:B4:2:LYS:HG2	36:BB:44:G:OP2	2.09	0.53
35:BA:1278:A:H2'	35:BA:1279:G:C8	2.43	0.53
35:BA:1415:U:H3	35:BA:1587:A:H61	1.57	0.53
35:BA:1469:A:H2'	35:BA:1470:G:O4'	2.08	0.53
35:BA:1948:G:O2'	35:BA:1949:G:H5'	2.08	0.53
35:BA:2131:G:C8	35:BA:2133:G:N2	2.77	0.53
35:BA:2506:U:H4'	35:BA:2507:C:OP1	2.07	0.53
35:BA:2647:U:H2'	35:BA:2648:C:C6	2.44	0.53
38:BD:4:LYS:HZ2	38:BD:20:ASP:HA	1.74	0.53
38:BD:43:ARG:NH1	38:BD:49:ILE:HG22	2.23	0.53
38:BD:241:PRO:O	38:BD:242:ARG:HB2	2.08	0.53
40:BF:10:PRO:HD2	40:BF:13:SER:O	2.09	0.53
41:BG:38:VAL:HG22	41:BG:93:THR:HG23	1.90	0.53
43:BK:69:THR:C	43:BK:70:LYS:HE3	2.34	0.53
43:BK:99:ILE:HD12	43:BK:103:GLN:CB	2.38	0.53
46:BO:13:ASN:ND2	46:BO:97:ARG:CG	2.71	0.53
49:BR:97:VAL:HA	49:BR:113:LEU:O	2.09	0.53
51:BT:108:ARG:HH11	51:BT:108:ARG:HB2	1.70	0.53
54:BW:12:ILE:CG1	54:BW:42:ARG:NH1	2.72	0.53
56:BY:84:ARG:HD2	56:BY:97:ARG:HD2	1.90	0.53
1:AA:513:C:O2'	1:AA:514:C:H5'	2.08	0.53
1:AA:607:A:H2'	1:AA:608:A:O4'	2.09	0.53
1:AA:948:C:H2'	1:AA:949:A:H8	1.73	0.53
5:AE:79:GLU:HB3	5:AE:92:LYS:HA	1.89	0.53
6:AF:45:LEU:O	6:AF:46:ARG:HG3	2.08	0.53
6:AF:47:ARG:HH11	6:AF:47:ARG:HG2	1.74	0.53
7:AG:88:PRO:O	7:AG:88:PRO:HG2	2.08	0.53
9:AI:40:LEU:C	9:AI:42:ARG:H	2.17	0.53
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.52	0.53
12:AL:97:ARG:C	12:AL:98:TYR:CD1	2.87	0.53
24:AY:624:LEU:HD11	24:AY:655:TYR:OH	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:67:LYS:O	27:B2:70:GLN:HG3	2.08	0.53
28:B3:57:GLU:CG	28:B3:58:VAL:N	2.72	0.53
29:B4:5:ILE:O	29:B4:5:ILE:CG1	2.53	0.53
35:BA:17:G:H4'	52:BU:25:TRP:CH2	2.44	0.53
35:BA:832:G:OP1	47:BP:40:SER:HB3	2.08	0.53
35:BA:1133:U:O2	35:BA:1137:G:C5'	2.57	0.53
35:BA:1161:C:H1'	53:BV:8:GLY:O	2.09	0.53
35:BA:1799:G:H8	38:BD:181:GLU:OE1	1.91	0.53
35:BA:1821:A:H2'	35:BA:1822:G:C8	2.39	0.53
35:BA:2188:C:H2'	35:BA:2189:U:C6	2.44	0.53
35:BA:2779:U:H1'	35:BA:2781:A:C6	2.44	0.53
35:BA:2816:C:O2	35:BA:2883:A:O2'	2.25	0.53
37:BC:34:ALA:HB1	37:BC:40:GLU:HB2	1.90	0.53
40:BF:65:TRP:CZ3	40:BF:75:HIS:HD2	2.27	0.53
45:BN:99:LEU:HD13	45:BN:103:VAL:CG2	2.38	0.53
49:BR:9:LYS:O	49:BR:10:LEU:HD23	2.08	0.53
49:BR:10:LEU:HD22	49:BR:17:ARG:CD	2.39	0.53
56:BY:99:CYS:SG	56:BY:99:CYS:O	2.66	0.53
57:BZ:137:ILE:HG22	57:BZ:155:LEU:HD12	1.90	0.53
1:AA:624:C:O2'	1:AA:625:G:H5'	2.09	0.53
1:AA:770:C:O2'	1:AA:771:G:H5'	2.09	0.53
1:AA:1158:C:C6	2:AB:132:LYS:CE	2.84	0.53
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.44	0.53
1:AA:1440:C:H2'	1:AA:1441:G:H5'	1.91	0.53
7:AG:52:GLU:O	7:AG:53:LYS:C	2.50	0.53
14:AN:24:CYS:SG	14:AN:25:VAL:N	2.82	0.53
18:AR:69:THR:O	18:AR:72:ARG:N	2.42	0.53
19:AS:5:LEU:HG	19:AS:10:PHE:CD1	2.44	0.53
20:AT:63:ILE:C	20:AT:65:LYS:N	2.66	0.53
26:B1:51:VAL:HG22	26:B1:52:ARG:N	2.24	0.53
27:B2:3:LEU:HD12	35:BA:98:G:H5"	1.89	0.53
27:B2:33:MET:HG2	27:B2:37:PHE:CE1	2.44	0.53
27:B2:48:HIS:ND1	35:BA:95:G:O2'	2.41	0.53
28:B3:31:LEU:HD13	28:B3:32:GLN:CG	2.27	0.53
30:B5:44:THR:O	30:B5:51:TYR:HE2	1.92	0.53
35:BA:271(H):G:H1	35:BA:271(P):C:N4	2.06	0.53
35:BA:271(J):C:O2	35:BA:271(J):C:H2'	2.09	0.53
35:BA:848:G:O6	35:BA:928:G:H2'	2.07	0.53
35:BA:851:U:H2'	35:BA:852:G:H8	1.73	0.53
35:BA:1064:C:H5'	43:BK:87:GLY:H	1.74	0.53
35:BA:1323:U:OP1	54:BW:84:ARG:NE	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1516:C:C2’	35:BA:1517:G:H5”	2.39	0.53
35:BA:2103:C:H3’	35:BA:2104:G:H5”	1.91	0.53
35:BA:2240:C:O2’	35:BA:2241:A:H5’	2.08	0.53
36:BB:40:U:H3’	36:BB:41:U:H5”	1.89	0.53
39:BE:101:ARG:HH11	39:BE:169:ASN:HD22	1.55	0.53
39:BE:101:ARG:HD2	39:BE:169:ASN:O	2.09	0.53
39:BE:183:LEU:N	39:BE:183:LEU:HD12	2.23	0.53
40:BF:124:LEU:HD12	40:BF:125:LEU:H	1.72	0.53
43:BK:10:LEU:CD1	43:BK:57:ILE:HD13	2.39	0.53
43:BK:93:ARG:CB	57:BZ:112:ARG:HE	2.21	0.53
43:BK:95:LYS:N	43:BK:95:LYS:HD2	2.24	0.53
44:BL:73:ARG:HG3	44:BL:74:GLY:N	2.23	0.53
48:BQ:30:GLY:HA2	48:BQ:107:ALA:HB2	1.89	0.53
51:BT:35:LYS:HZ3	51:BT:41:ARG:HD2	1.73	0.53
57:BZ:14:LYS:C	57:BZ:16:SER:N	2.64	0.53
1:AA:296:U:H2’	1:AA:297:G:H8	1.74	0.53
1:AA:523:A:N1	12:AL:92:ASP:HB2	2.24	0.53
1:AA:1237:C:H5”	1:AA:1238:A:C8	2.44	0.53
1:AA:1305:G:H5’	21:AU:4:GLY:HA3	1.91	0.53
1:AA:1347:G:N2	1:AA:1373:G:H2’	2.23	0.53
7:AG:133:GLY:O	7:AG:136:LYS:HB2	2.08	0.53
11:AK:59:TYR:CE2	11:AK:63:LEU:HD11	2.44	0.53
12:AL:105:TYR:C	12:AL:107:ALA:H	2.16	0.53
18:AR:63:GLN:OE1	18:AR:63:GLN:HA	2.09	0.53
24:AY:25:LYS:NZ	24:AY:86:GLY:HA2	2.24	0.53
24:AY:124:GLN:HA	24:AY:127:LYS:HD2	1.91	0.53
24:AY:250:THR:C	24:AY:252:ASP:H	2.17	0.53
24:AY:512:ILE:HD12	24:AY:589:ALA:HB1	1.90	0.53
24:AY:603:GLU:C	24:AY:676:TYR:HD1	2.17	0.53
25:B0:73:GLY:O	25:B0:75:LEU:N	2.36	0.53
26:B1:26:ARG:HG3	26:B1:27:GLU:HG3	1.90	0.53
35:BA:186:G:O2’	35:BA:187:G:H5’	2.09	0.53
35:BA:975:C:OP2	35:BA:975:C:C4’	2.54	0.53
35:BA:1826:G:H2’	35:BA:1827:C:H6	1.74	0.53
35:BA:2189:U:C3’	35:BA:2190:G:H5”	2.37	0.53
35:BA:2531:A:H4’	42:BH:157:TYR:CD2	2.44	0.53
37:BC:43:GLU:HG3	37:BC:216:THR:HG23	1.91	0.53
39:BE:201:THR:C	39:BE:202:LYS:HD2	2.34	0.53
40:BF:170:LEU:HB2	40:BF:173:VAL:HB	1.91	0.53
45:BN:60:ILE:HG22	45:BN:61:ARG:N	2.24	0.53
45:BN:65:LYS:CB	45:BN:69:GLN:HG3	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:128:HIS:CE1	45:BN:134:ARG:HH11	2.27	0.53
48:BQ:60:ARG:NH1	48:BQ:60:ARG:CB	2.63	0.53
51:BT:54:ARG:HH11	51:BT:54:ARG:CG	2.22	0.53
53:BV:32:THR:HG22	53:BV:33:VAL:N	2.24	0.53
54:BW:44:ALA:O	54:BW:45:TYR:C	2.51	0.53
57:BZ:144:LEU:HD11	57:BZ:150:LEU:HD22	1.91	0.53
1:AA:738:C:H5”	6:AF:69:GLU:HB2	1.90	0.52
1:AA:1118:C:H1’	1:AA:1179:A:C4	2.45	0.52
2:AB:55:PHE:HD1	2:AB:221:LEU:HG	1.74	0.52
2:AB:83:MET:HG3	2:AB:234:PRO:HG3	1.91	0.52
2:AB:239:VAL:O	2:AB:239:VAL:HG12	2.09	0.52
9:AI:3:GLN:NE2	9:AI:20:ARG:HH21	2.07	0.52
9:AI:83:ARG:O	9:AI:86:VAL:HG12	2.09	0.52
12:AL:64:TYR:N	12:AL:64:TYR:CD1	2.77	0.52
12:AL:113:ARG:HD2	12:AL:115:LYS:H	1.74	0.52
24:AY:14:ASN:HB2	24:AY:102:ASP:CG	2.33	0.52
24:AY:601:ILE:HG21	24:AY:687:LEU:HD12	1.90	0.52
24:AY:633:GLY:HA3	24:AY:644:ARG:HH11	1.73	0.52
25:B0:27:GLU:CD	35:BA:856:C:H4’	2.34	0.52
30:B5:30:LEU:HD23	30:B5:41:PRO:N	2.24	0.52
30:B5:55:ARG:HH12	49:BR:33:ARG:HG2	1.73	0.52
35:BA:484:C:O2’	35:BA:485:C:H5’	2.09	0.52
35:BA:654(T):C:N3	35:BA:654(U):A:C2	2.77	0.52
35:BA:1057:A:H2’	35:BA:1058:G:C8	2.44	0.52
35:BA:1259:G:C2’	35:BA:1260:G:H5’	2.39	0.52
35:BA:1260:G:H2’	35:BA:1261:C:C6	2.43	0.52
35:BA:1899:G:N2	35:BA:1902:C:C5	2.78	0.52
35:BA:2282:G:O2’	35:BA:2283:C:OP2	2.25	0.52
35:BA:2626:C:H2’	35:BA:2627:G:O4’	2.09	0.52
36:BB:30:C:OP2	50:BS:32:LEU:HD21	2.09	0.52
38:BD:35:LYS:N	38:BD:36:PRO:HD2	2.22	0.52
38:BD:77:ALA:CB	38:BD:97:TYR:HA	2.39	0.52
39:BE:52:LEU:O	39:BE:74:PRO:HA	2.09	0.52
39:BE:68:ALA:CB	39:BE:69:LYS:HE2	2.38	0.52
41:BG:82:LEU:C	41:BG:82:LEU:HD23	2.35	0.52
41:BG:157:ILE:HG22	41:BG:158:ALA:N	2.23	0.52
42:BH:12:PRO:HD3	42:BH:49:VAL:CG1	2.39	0.52
42:BH:159:GLU:CG	42:BH:160:LYS:H	2.10	0.52
43:BK:59:ILE:O	43:BK:60:TYR:CD1	2.61	0.52
45:BN:115:ARG:HA	45:BN:118:LYS:HE2	1.91	0.52
52:BU:55:ARG:HA	52:BU:58:ARG:HG3	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:346:G:P	51:BT:41:ARG:NH2	2.83	0.52
1:AA:452:A:O2'	1:AA:453:A:H8	1.92	0.52
1:AA:812:C:O2'	1:AA:813:U:P	2.67	0.52
1:AA:814:A:H2'	1:AA:816:A:C5'	2.39	0.52
1:AA:1198:G:C6	1:AA:1199:U:N3	2.78	0.52
1:AA:1346:A:H1'	1:AA:1348:U:C5	2.44	0.52
2:AB:119:GLU:C	2:AB:121:LEU:H	2.17	0.52
5:AE:41:VAL:HG13	5:AE:113:ALA:HA	1.91	0.52
6:AF:62:TRP:CE2	18:AR:35:ARG:NH2	2.78	0.52
7:AG:80:VAL:HG23	7:AG:81:GLY:H	1.74	0.52
8:AH:26:VAL:C	8:AH:58:TYR:HD1	2.16	0.52
16:AP:4:ILE:HG13	16:AP:64:ALA:HB1	1.91	0.52
24:AY:8:ASP:O	24:AY:9:LEU:HB3	2.10	0.52
24:AY:76:ASP:O	24:AY:77:HIS:CG	2.63	0.52
24:AY:227:ILE:O	24:AY:227:ILE:HG22	2.10	0.52
24:AY:605:ILE:N	24:AY:605:ILE:CD1	2.72	0.52
24:AY:632:LEU:HD12	24:AY:645:ALA:HA	1.91	0.52
25:B0:52:GLY:HA3	25:B0:62:LEU:HD21	1.90	0.52
28:B3:19:GLN:O	28:B3:22:ALA:HB3	2.09	0.52
28:B3:40:THR:O	28:B3:44:ARG:HG3	2.10	0.52
31:B6:42:TRP:CE3	31:B6:42:TRP:HA	2.43	0.52
33:B8:28:GLY:H	35:BA:2393:A:P	2.32	0.52
33:B8:62:LEU:N	33:B8:63:PRO:CD	2.70	0.52
35:BA:894:C:C2'	35:BA:895:U:H5'	2.39	0.52
35:BA:918:A:H1'	36:BB:80:U:O2'	2.10	0.52
35:BA:2336:A:N3	35:BA:2385:C:H1'	2.23	0.52
35:BA:2337:G:H2'	35:BA:2338:G:H8	1.74	0.52
35:BA:2777:G:H5"	35:BA:2778:A:H5"	1.90	0.52
35:BA:2832:U:H1'	35:BA:2834:G:C2	2.44	0.52
36:BB:53:A:H2'	36:BB:53:A:N3	2.25	0.52
36:BB:61:G:O2'	36:BB:62:C:H5'	2.09	0.52
38:BD:24:ILE:O	38:BD:25:THR:O	2.27	0.52
38:BD:43:ARG:CB	38:BD:54:ARG:HB2	2.39	0.52
43:BK:15:GLY:HA2	43:BK:42:ASN:HD21	1.75	0.52
49:BR:97:VAL:HG13	49:BR:114:VAL:CG2	2.39	0.52
51:BT:33:LYS:HE2	51:BT:43:GLN:NE2	2.25	0.52
52:BU:113:ALA:C	52:BU:115:ALA:N	2.67	0.52
55:BX:71:GLY:C	55:BX:72:LYS:HG3	2.34	0.52
57:BZ:28:MET:HB3	57:BZ:88:PHE:CB	2.11	0.52
1:AA:160:A:N6	1:AA:161:A:C2	2.78	0.52
1:AA:165:C:O2'	1:AA:166:G:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:728:A:H2'	1:AA:729:A:C8	2.44	0.52
1:AA:793:U:C3'	1:AA:794:A:C5'	2.85	0.52
1:AA:829:G:O2'	1:AA:830:G:H5'	2.09	0.52
1:AA:1082:G:C2'	1:AA:1083:U:H5'	2.39	0.52
6:AF:21:LEU:O	6:AF:24:GLU:HB3	2.09	0.52
8:AH:96:GLY:O	8:AH:99:GLU:N	2.39	0.52
9:AI:35:GLU:HA	9:AI:38:GLN:HB2	1.90	0.52
10:AJ:12:ASP:OD2	10:AJ:15:THR:HG23	2.08	0.52
10:AJ:92:THR:CG2	10:AJ:93:GLY:H	2.19	0.52
12:AL:64:TYR:N	12:AL:64:TYR:HD1	2.07	0.52
16:AP:19:ILE:N	16:AP:37:GLY:O	2.42	0.52
17:AQ:80:GLY:O	17:AQ:81:ARG:HD2	2.09	0.52
22:AV:20:U:C3'	22:AV:21:A:C5'	2.85	0.52
22:AV:38:A:C2'	22:AV:39:C:H5'	2.39	0.52
22:AV:61:C:H2'	22:AV:62:C:C6	2.45	0.52
24:AY:20:HIS:O	24:AY:23:ALA:HB2	2.10	0.52
24:AY:97:SER:O	24:AY:100:VAL:CG1	2.58	0.52
24:AY:114:VAL:O	24:AY:114:VAL:HG13	2.10	0.52
24:AY:137:ASN:C	24:AY:137:ASN:HD22	2.16	0.52
28:B3:40:THR:HG23	28:B3:43:ILE:CG1	2.39	0.52
29:B4:34:GLU:CD	29:B4:34:GLU:H	2.17	0.52
35:BA:31:C:H2'	35:BA:32:C:O4'	2.10	0.52
35:BA:272(H):C:H3'	35:BA:272(H):C:C6	2.44	0.52
35:BA:307:G:N2	35:BA:310:A:O5'	2.43	0.52
35:BA:338:G:H2'	35:BA:339:U:H6	1.74	0.52
35:BA:650:C:C3'	35:BA:651:G:H5"	2.40	0.52
35:BA:1331:A:O2'	35:BA:1332:G:H8	1.93	0.52
35:BA:1416:G:HO2'	35:BA:1417:C:H5	1.54	0.52
35:BA:1584:C:H3'	35:BA:1584:C:O2	2.09	0.52
35:BA:1688:U:O2	35:BA:1700:A:H5"	2.09	0.52
35:BA:1971:A:N3	38:BD:241:PRO:HD3	2.24	0.52
35:BA:2011:U:C2'	35:BA:2012:G:H5'	2.39	0.52
35:BA:2832:U:H1'	35:BA:2834:G:C4	2.44	0.52
36:BB:105:A:H2'	36:BB:106:G:O4'	2.09	0.52
37:BC:93:ASP:O	37:BC:94:TYR:CD1	2.62	0.52
38:BD:183:ARG:HG2	38:BD:183:ARG:NH1	2.13	0.52
39:BE:11:MET:HB3	39:BE:24:THR:HA	1.90	0.52
41:BG:51:ARG:HA	41:BG:51:ARG:HE	1.73	0.52
42:BH:88:LEU:HD23	42:BH:164:TYR:O	2.09	0.52
42:BH:171:LEU:CD2	42:BH:172:LYS:O	2.56	0.52
45:BN:35:ARG:HB3	45:BN:42:TRP:CZ3	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:84:ALA:CB	49:BR:85:PRO:HD3	2.24	0.52
51:BT:51:ARG:HG3	51:BT:98:LYS:HE3	1.91	0.52
56:BY:95:LYS:CE	56:BY:101:LYS:H	2.22	0.52
57:BZ:67:LEU:HD23	57:BZ:90:VAL:CG1	2.38	0.52
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.45	0.52
2:AB:87:ARG:HH12	2:AB:223:ILE:HD11	1.74	0.52
2:AB:97:TRP:CZ3	2:AB:173:ALA:HA	2.45	0.52
3:AC:164:ARG:C	3:AC:165:THR:HG22	2.33	0.52
4:AD:149:ALA:O	4:AD:153:ARG:HG3	2.09	0.52
5:AE:87:SER:HB3	5:AE:131:ILE:CD1	2.35	0.52
5:AE:152:ARG:HB3	8:AH:43:GLY:HA3	1.90	0.52
6:AF:67:MET:HE1	6:AF:75:LEU:HD22	1.90	0.52
9:AI:82:ALA:HA	9:AI:85:LEU:HD11	1.92	0.52
13:AM:20:THR:C	13:AM:22:ILE:H	2.16	0.52
21:AU:6:ARG:HH21	21:AU:15:ARG:NH2	2.07	0.52
22:AV:75:C:H3'	22:AV:75:C:H6	1.74	0.52
24:AY:309:LEU:O	24:AY:390:VAL:HA	2.09	0.52
32:B7:45:ALA:O	32:B7:46:VAL:HG23	2.10	0.52
35:BA:422:A:H2'	35:BA:423:A:C8	2.45	0.52
35:BA:1411:C:N4	35:BA:1412:A:N6	2.57	0.52
35:BA:1887:C:C3'	35:BA:1888:G:H5"	2.39	0.52
35:BA:2102:U:H2'	35:BA:2103:C:C6	2.44	0.52
35:BA:2116:G:N7	35:BA:2117:A:C5	2.78	0.52
35:BA:2667:C:H2'	35:BA:2668:G:H8	1.74	0.52
35:BA:2892:A:N6	35:BA:2893:G:H21	2.08	0.52
37:BC:65:LEU:HD11	37:BC:162:ILE:HD13	1.91	0.52
37:BC:114:VAL:O	37:BC:139:PRO:HG3	2.10	0.52
39:BE:2:LYS:HA	39:BE:84:PHE:CE1	2.43	0.52
39:BE:108:SER:O	39:BE:162:ALA:HA	2.10	0.52
40:BF:28:ILE:HG21	40:BF:116:ASP:HB2	1.91	0.52
40:BF:40:GLN:OE1	40:BF:184:TYR:HB2	2.10	0.52
41:BG:61:ALA:HB1	41:BG:66:GLN:O	2.10	0.52
41:BG:91:ARG:HD2	41:BG:91:ARG:C	2.34	0.52
43:BK:50:ASP:O	43:BK:51:ALA:O	2.27	0.52
45:BN:46:VAL:O	45:BN:47:ALA:CB	2.57	0.52
51:BT:129:ARG:O	51:BT:129:ARG:CG	2.57	0.52
57:BZ:11:GLU:H	57:BZ:11:GLU:CD	2.17	0.52
57:BZ:77:ASP:O	57:BZ:79:ARG:N	2.43	0.52
1:AA:405:U:H3'	1:AA:406:G:H5'	1.92	0.52
1:AA:415:A:H2'	1:AA:416:G:H8	1.74	0.52
1:AA:781:A:C2'	1:AA:782:A:H5'	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1033:G:H8	1:AA:1034:G:C8	2.27	0.52
1:AA:1422:G:H4'	46:BO:49:ARG:HH12	1.74	0.52
2:AB:17:PHE:N	2:AB:17:PHE:CD1	2.74	0.52
3:AC:90:GLU:CA	3:AC:93:LYS:HB3	2.39	0.52
5:AE:144:THR:O	5:AE:145:LYS:C	2.51	0.52
6:AF:96:PRO:HB3	18:AR:30:ASP:OD1	2.10	0.52
7:AG:79:ARG:HH11	7:AG:79:ARG:HG3	1.73	0.52
7:AG:134:ALA:O	7:AG:137:LYS:N	2.39	0.52
10:AJ:32:ALA:CB	10:AJ:78:ASN:HD21	2.23	0.52
13:AM:54:VAL:C	13:AM:56:LEU:N	2.67	0.52
16:AP:44:THR:O	16:AP:45:THR:HB	2.07	0.52
24:AY:92:ILE:C	24:AY:92:ILE:HD13	2.35	0.52
24:AY:259:PHE:C	24:AY:260:LEU:HD13	2.35	0.52
27:B2:29:LYS:O	27:B2:32:LEU:N	2.42	0.52
35:BA:302:C:H2'	35:BA:303:U:H6	1.75	0.52
35:BA:391:G:O2'	35:BA:392:C:H5'	2.10	0.52
35:BA:1473:G:H2'	35:BA:1474:C:O4'	2.10	0.52
35:BA:1902:C:H4'	38:BD:244:ARG:CB	2.35	0.52
35:BA:2664:G:C2'	35:BA:2665:A:O5'	2.57	0.52
40:BF:41:LEU:HD23	40:BF:44:ARG:HE	1.74	0.52
43:BK:41:PHE:C	43:BK:43:ALA:H	2.18	0.52
46:BO:23:ARG:HG2	46:BO:40:VAL:CG2	2.40	0.52
50:BS:93:LYS:O	50:BS:95:HIS:N	2.42	0.52
56:BY:105:ALA:C	56:BY:107:ASP:N	2.66	0.52
1:AA:261:U:O2	1:AA:263:A:H8	1.93	0.52
1:AA:323:U:H5'	20:AT:23:ARG:HB2	1.91	0.52
1:AA:1328:C:H2'	1:AA:1329:A:C8	2.44	0.52
2:AB:11:LEU:HD11	2:AB:217:ARG:NH2	2.24	0.52
3:AC:90:GLU:HA	3:AC:93:LYS:CB	2.40	0.52
5:AE:79:GLU:HB3	5:AE:93:PRO:HD2	1.91	0.52
13:AM:52:GLU:O	13:AM:53:VAL:C	2.53	0.52
18:AR:68:LYS:O	18:AR:69:THR:C	2.52	0.52
20:AT:50:GLU:CG	20:AT:51:GLU:N	2.71	0.52
22:AV:74:C:H2'	22:AV:74:C:O2	2.09	0.52
24:AY:137:ASN:ND2	24:AY:137:ASN:C	2.68	0.52
24:AY:519:ARG:NH1	24:AY:677:GLN:HB2	2.23	0.52
24:AY:659:LEU:C	24:AY:661:SER:N	2.67	0.52
31:B6:9:LEU:CD2	31:B6:26:ASN:ND2	2.72	0.52
31:B6:27:LYS:NZ	35:BA:2285:C:OP1	2.39	0.52
33:B8:33:ASN:HA	33:B8:36:LYS:HG3	1.90	0.52
35:BA:654(P):C:H2'	35:BA:654(Q):C:H5'	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:685:A:H5'	35:BA:774:A:H61	1.74	0.52
35:BA:729:G:OP2	38:BD:13:ARG:NH1	2.42	0.52
35:BA:871:U:O2	35:BA:871:U:H2'	2.08	0.52
35:BA:1141:U:H5"	45:BN:63:THR:CG2	2.39	0.52
35:BA:1288:U:H4'	35:BA:1289:C:OP2	2.09	0.52
35:BA:1910:G:O2'	35:BA:1911:U:H5'	2.10	0.52
35:BA:2130:U:OP1	37:BC:6:LYS:HB2	2.09	0.52
35:BA:2262:U:C2'	35:BA:2263:C:H5"	2.40	0.52
35:BA:2578:G:N2	35:BA:2579:C:C2	2.77	0.52
35:BA:2713:A:C3'	35:BA:2714:G:H5'	2.40	0.52
37:BC:149:ASN:HD22	37:BC:149:ASN:N	2.08	0.52
37:BC:200:HIS:O	37:BC:202:PRO:HD3	2.10	0.52
38:BD:91:ARG:NH1	38:BD:91:ARG:HG2	2.22	0.52
39:BE:168:MET:HE1	39:BE:202:LYS:HE2	1.92	0.52
40:BF:133:ASN:O	40:BF:134:GLY:C	2.48	0.52
41:BG:120:LEU:HD22	41:BG:133:LEU:HD23	1.91	0.52
43:BK:115:LEU:HB3	43:BK:126:MET:HE1	1.92	0.52
48:BQ:56:ARG:HH21	57:BZ:180:VAL:HG21	1.75	0.52
50:BS:64:GLU:O	50:BS:67:ARG:HB2	2.09	0.52
51:BT:33:LYS:CE	51:BT:43:GLN:HE22	2.23	0.52
51:BT:102:ILE:HG22	51:BT:110:ILE:CD1	2.39	0.52
56:BY:84:ARG:HE	56:BY:97:ARG:NH1	2.07	0.52
57:BZ:47:VAL:O	57:BZ:51:ALA:HB3	2.09	0.52
1:AA:489:C:H2'	1:AA:490:G:C8	2.45	0.52
1:AA:1003:G:O2'	1:AA:1004:A:O3'	2.26	0.52
1:AA:1030(C):G:H2'	1:AA:1030(D):A:C8	2.44	0.52
1:AA:1042:G:C2'	1:AA:1043:C:H5'	2.40	0.52
1:AA:1148:U:O3'	9:AI:14:VAL:HG11	2.10	0.52
1:AA:1318:A:C1'	19:AS:37:ARG:HH21	2.05	0.52
4:AD:61:LYS:CE	4:AD:62:GLN:HE21	2.17	0.52
4:AD:200:GLU:CD	4:AD:200:GLU:H	2.17	0.52
10:AJ:42:THR:HG23	10:AJ:68:HIS:CA	2.35	0.52
15:AO:9:GLN:HB3	15:AO:13:GLN:NE2	2.24	0.52
15:AO:39:LEU:HD13	15:AO:56:LEU:HD13	1.92	0.52
16:AP:33:ILE:O	16:AP:33:ILE:HG22	2.08	0.52
24:AY:122:TRP:C	24:AY:124:GLN:N	2.67	0.52
24:AY:162:VAL:O	24:AY:164:MET:HG2	2.10	0.52
24:AY:289:ILE:O	24:AY:301:ILE:HG12	2.10	0.52
24:AY:610:VAL:HG12	24:AY:669:PHE:HB3	1.91	0.52
25:B0:40:GLN:NE2	25:B0:43:THR:CA	2.71	0.52
26:B1:76:ARG:NH2	26:B1:95:LEU:HD13	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:32:LEU:HG	27:B2:53:LEU:HD13	1.92	0.52
30:B5:56:LYS:HG3	30:B5:57:VAL:N	2.21	0.52
33:B8:56:GLU:O	33:B8:59:LYS:CE	2.56	0.52
35:BA:212:G:C8	35:BA:212:G:C5'	2.90	0.52
35:BA:661:C:H4'	47:BP:18:ARG:HG2	1.92	0.52
35:BA:960:A:H2'	35:BA:962:G:H5"	1.91	0.52
35:BA:1225:G:H2'	35:BA:1226:A:C8	2.45	0.52
35:BA:1286:A:O2'	35:BA:1287:A:H5'	2.10	0.52
35:BA:1524:G:O5'	35:BA:1524:G:H8	1.92	0.52
35:BA:2052:G:H4'	39:BE:143:ASN:O	2.09	0.52
35:BA:2291:U:O2'	35:BA:2292:C:H5'	2.09	0.52
35:BA:2688:U:H1'	35:BA:2721:A:N6	2.24	0.52
35:BA:2713:A:H3'	35:BA:2714:G:C5'	2.39	0.52
36:BB:21:G:O2'	36:BB:22:U:P	2.68	0.52
39:BE:51:PHE:CE1	39:BE:52:LEU:HD12	2.45	0.52
39:BE:111:ARG:HG3	49:BR:2:ARG:HG2	1.90	0.52
40:BF:81:PRO:C	40:BF:83:PHE:H	2.18	0.52
41:BG:133:LEU:HD12	41:BG:157:ILE:HB	1.90	0.52
42:BH:124:GLU:CB	42:BH:132:ARG:HG3	2.39	0.52
42:BH:124:GLU:HB2	42:BH:132:ARG:HG3	1.91	0.52
45:BN:65:LYS:NZ	45:BN:65:LYS:CA	2.67	0.52
48:BQ:12:GLN:NE2	48:BQ:72:LYS:HA	2.24	0.52
48:BQ:136:ALA:C	48:BQ:138:ASP:H	2.16	0.52
51:BT:56:GLY:O	51:BT:59:THR:HG23	2.08	0.52
51:BT:91:ARG:O	51:BT:117:ASP:HB2	2.09	0.52
55:BX:26:TYR:HD2	55:BX:92:LEU:HD12	1.75	0.52
56:BY:84:ARG:HG2	56:BY:84:ARG:NH1	2.25	0.52
57:BZ:145:GLU:OE1	57:BZ:145:GLU:HA	2.09	0.52
57:BZ:154:ASP:N	57:BZ:154:ASP:OD1	2.43	0.52
1:AA:117:G:H2'	1:AA:118:U:O4'	2.10	0.52
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.44	0.52
1:AA:1348:U:H2'	1:AA:1349:A:C8	2.40	0.52
1:AA:1520:G:H2'	1:AA:1521:G:H8	1.74	0.52
4:AD:108:LEU:CD2	4:AD:110:PHE:CZ	2.92	0.52
4:AD:159:ARG:O	4:AD:160:GLN:C	2.52	0.52
7:AG:118:VAL:O	7:AG:121:ALA:HB3	2.10	0.52
7:AG:137:LYS:HE2	7:AG:141:VAL:HG23	1.91	0.52
9:AI:4:TYR:CD2	9:AI:88:TYR:HB2	2.44	0.52
9:AI:63:ILE:HD13	9:AI:77:ILE:HD13	1.91	0.52
13:AM:119:GLY:C	13:AM:121:LYS:H	2.18	0.52
15:AO:10:LYS:HD2	15:AO:10:LYS:C	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:25:THR:O	18:AR:25:THR:HG22	2.10	0.52
19:AS:15:LEU:HD21	19:AS:33:THR:CB	2.40	0.52
24:AY:216:LEU:HD23	24:AY:216:LEU:C	2.35	0.52
24:AY:335:LEU:HD11	24:AY:352:VAL:HG11	1.92	0.52
35:BA:71:A:N3	35:BA:73:A:N6	2.58	0.52
35:BA:285:C:C2'	35:BA:286:C:H5"	2.40	0.52
35:BA:402:A:H2'	35:BA:403:U:H5'	1.91	0.52
35:BA:1226:A:H2'	35:BA:1227:G:H5'	1.91	0.52
35:BA:1529:G:C6	35:BA:1541:G:N1	2.78	0.52
35:BA:1563:G:O2'	35:BA:1564:C:H5'	2.10	0.52
35:BA:1718:G:H8	35:BA:1718:G:C5'	2.19	0.52
35:BA:2838:G:C1'	49:BR:45:ARG:HH11	2.22	0.52
36:BB:118:G:C2	36:BB:119:G:N7	2.78	0.52
37:BC:28:ARG:HH12	37:BC:183:PRO:HB2	1.75	0.52
39:BE:32:PRO:N	39:BE:90:THR:HG23	2.25	0.52
40:BF:6:VAL:H	40:BF:125:LEU:HD21	1.75	0.52
41:BG:102:PHE:C	41:BG:104:GLU:N	2.68	0.52
47:BP:47:ASP:HB3	47:BP:48:PRO:HA	1.91	0.52
50:BS:52:SER:HB2	50:BS:55:ALA:HB3	1.90	0.52
52:BU:14:HIS:HD2	52:BU:17:ILE:HD12	1.74	0.52
52:BU:76:TYR:CD1	52:BU:76:TYR:C	2.88	0.52
54:BW:25:ARG:NH2	54:BW:74:ALA:O	2.43	0.52
55:BX:10:ALA:HB1	55:BX:11:PRO:HD2	1.90	0.52
56:BY:95:LYS:CD	56:BY:101:LYS:H	2.22	0.52
1:AA:38:G:C2	1:AA:397:A:C2	2.97	0.52
1:AA:160:A:H1'	1:AA:344:A:N7	2.24	0.52
1:AA:375:U:C2	1:AA:376:G:C8	2.97	0.52
1:AA:458:C:O2	1:AA:458:C:H2'	2.09	0.52
1:AA:622:A:N7	1:AA:623:C:C5	2.77	0.52
1:AA:719:C:H1'	18:AR:49:LYS:HB3	1.92	0.52
1:AA:800:G:H8	1:AA:800:G:O5'	1.93	0.52
1:AA:1506:U:O2'	1:AA:1507:A:H5'	2.10	0.52
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.88	0.52
2:AB:21:ARG:O	2:AB:22:LYS:HB2	2.09	0.52
2:AB:60:ASP:O	2:AB:64:ARG:NE	2.43	0.52
3:AC:52:LEU:HD12	3:AC:55:VAL:CG2	2.39	0.52
4:AD:68:TYR:N	4:AD:68:TYR:CD1	2.76	0.52
4:AD:78:LEU:O	4:AD:81:GLU:HB3	2.09	0.52
7:AG:149:ARG:O	7:AG:152:ALA:HB2	2.09	0.52
8:AH:6:ILE:HD12	8:AH:6:ILE:N	2.23	0.52
10:AJ:27:ALA:CB	10:AJ:85:LEU:HD11	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:121:PRO:HB2	11:AK:126:ARG:HB2	1.92	0.52
15:AO:11:VAL:O	15:AO:14:GLU:CB	2.58	0.52
18:AR:56:THR:CB	18:AR:58:LEU:HD13	2.37	0.52
24:AY:92:ILE:HG23	24:AY:93:GLU:H	1.75	0.52
24:AY:410:ASP:HA	24:AY:459:LEU:HD21	1.92	0.52
26:B1:83:GLU:O	26:B1:84:GLY:O	2.27	0.52
30:B5:52:TYR:O	30:B5:53:ALA:HB2	2.10	0.52
35:BA:83:G:O2'	35:BA:84:A:OP2	2.28	0.52
35:BA:519:U:H5"	54:BW:25:ARG:NH2	2.25	0.52
35:BA:654(H):G:H2'	35:BA:654(I):C:H4'	1.92	0.52
35:BA:654(N):G:C3'	35:BA:654(O):G:H5'	2.40	0.52
35:BA:1573:G:C2'	35:BA:1574:C:H5'	2.39	0.52
35:BA:1796:U:OP1	38:BD:276:LYS:HE3	2.09	0.52
35:BA:2202:C:H2'	38:BD:151:LYS:HZ1	1.74	0.52
35:BA:2380:C:H2'	35:BA:2381:C:H6	1.75	0.52
35:BA:2460:U:O2	35:BA:2460:U:H2'	2.10	0.52
36:BB:79:C:H2'	36:BB:80:U:O4'	2.10	0.52
37:BC:34:ALA:CB	37:BC:179:ALA:HB2	2.39	0.52
40:BF:206:ILE:HG22	40:BF:207:GLY:H	1.73	0.52
1:AA:63:C:O2'	1:AA:380:G:H4'	2.09	0.52
1:AA:187:C:H5"	20:AT:86:ARG:NH1	2.25	0.52
1:AA:189(H):G:O5'	1:AA:189(H):G:H8	1.93	0.52
1:AA:344:A:H5"	1:AA:345:C:OP2	2.09	0.52
1:AA:807:A:C5	1:AA:808:C:C4	2.98	0.52
1:AA:946:A:N6	1:AA:1236:A:N6	2.58	0.52
1:AA:1263:C:H2'	1:AA:1264:C:C6	2.45	0.52
1:AA:1264:C:H42	1:AA:1271:G:H1	1.57	0.52
1:AA:1298:C:O2	1:AA:1298:C:C2'	2.57	0.52
1:AA:1424:C:O2'	1:AA:1425:U:H5'	2.10	0.52
3:AC:154:SER:OG	3:AC:196:LEU:HD13	2.10	0.52
4:AD:200:GLU:O	4:AD:201:GLN:C	2.53	0.52
6:AF:24:GLU:OE2	6:AF:28:ARG:NH1	2.43	0.52
7:AG:120:ILE:O	7:AG:124:LEU:HB2	2.10	0.52
8:AH:112:LEU:HA	8:AH:134:ILE:HG12	1.92	0.52
9:AI:79:LEU:HD13	9:AI:83:ARG:CB	2.39	0.52
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.10	0.52
24:AY:66:THR:O	24:AY:67:ALA:HB3	2.10	0.52
24:AY:605:ILE:HD11	24:AY:677:GLN:HG2	1.92	0.52
25:B0:40:GLN:HE22	25:B0:43:THR:C	2.17	0.52
29:B4:8:LYS:O	29:B4:9:LEU:CB	2.49	0.52
31:B6:40:CYS:CB	31:B6:46:HIS:CE1	2.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:10:ALA:O	33:B8:14:VAL:HG12	2.10	0.52
34:B9:16:VAL:HA	34:B9:25:VAL:HG22	1.90	0.52
35:BA:72:U:O2'	35:BA:73:A:H5'	2.10	0.52
35:BA:191:A:H2'	35:BA:192:C:C6	2.44	0.52
35:BA:336:C:H5'	35:BA:337:C:OP2	2.10	0.52
35:BA:619:G:H3'	35:BA:620:G:H21	1.74	0.52
35:BA:883:G:H2'	35:BA:884:C:O4'	2.10	0.52
35:BA:1095:A:H2'	35:BA:1096:A:C8	2.45	0.52
35:BA:1797:C:H4'	38:BD:257:LEU:O	2.10	0.52
35:BA:2305:A:O2'	41:BG:136:ARG:HG2	2.09	0.52
39:BE:34:VAL:O	39:BE:34:VAL:HG22	2.09	0.52
44:BL:110:LEU:CB	44:BL:117:VAL:HG21	2.40	0.52
47:BP:115:LEU:HD23	47:BP:115:LEU:H	1.73	0.52
50:BS:70:GLY:O	50:BS:72:ALA:N	2.43	0.52
52:BU:62:ILE:HG23	52:BU:76:TYR:CE2	2.46	0.52
52:BU:115:ALA:C	52:BU:117:GLN:N	2.66	0.52
55:BX:70:LEU:HD23	55:BX:70:LEU:C	2.35	0.52
55:BX:87:GLN:O	55:BX:88:LYS:HB3	2.10	0.52
56:BY:102:CYS:SG	56:BY:103:GLY:N	2.83	0.52
57:BZ:175:VAL:HB	57:BZ:176:PRO:CD	2.41	0.52
1:AA:765:G:H22	1:AA:812:C:HO2'	1.57	0.51
1:AA:1004:A:H5'	1:AA:1025:U:C4	2.45	0.51
1:AA:1030:C:N4	1:AA:1032:G:C2	2.78	0.51
1:AA:1060:C:H4'	10:AJ:52:GLY:N	2.24	0.51
1:AA:1074:G:O2'	1:AA:1075:C:H5'	2.09	0.51
1:AA:1353:G:H2'	1:AA:1354:C:H6	1.75	0.51
2:AB:21:ARG:HD2	2:AB:39:ILE:CG1	2.40	0.51
2:AB:168:THR:CG2	2:AB:192:SER:HB3	2.37	0.51
5:AE:11:ILE:HD12	5:AE:31:LEU:CD1	2.41	0.51
6:AF:45:LEU:O	6:AF:46:ARG:CG	2.57	0.51
7:AG:139:GLU:O	7:AG:143:ARG:HG3	2.10	0.51
9:AI:36:TYR:CD2	9:AI:37:PHE:CE1	2.97	0.51
9:AI:96:LEU:O	9:AI:99:LEU:O	2.29	0.51
17:AQ:3:LYS:CB	17:AQ:61:GLU:HB3	2.28	0.51
23:AX:13:A:C2'	23:AX:14:A:H5"	2.40	0.51
35:BA:28:A:H62	35:BA:512:G:H1'	1.73	0.51
35:BA:537:C:O5'	35:BA:537:C:H6	1.92	0.51
35:BA:771:G:O2'	35:BA:1355:G:H4'	2.10	0.51
35:BA:856:C:H2'	35:BA:857:C:C6	2.44	0.51
35:BA:943:U:OP2	47:BP:38:GLN:OE1	2.28	0.51
35:BA:954:G:H5"	48:BQ:13:GLN:HB3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1226:A:C2'	35:BA:1227:G:H5'	2.41	0.51
35:BA:1528:A:O2'	35:BA:1528(A):A:O5'	2.28	0.51
35:BA:1599:C:H6	35:BA:1599:C:O5'	1.93	0.51
35:BA:1666:G:O2'	35:BA:1667:G:H5'	2.09	0.51
35:BA:1831:G:C6	35:BA:1832:C:N4	2.79	0.51
35:BA:2206:G:H21	35:BA:2207:G:H4'	1.75	0.51
40:BF:20:LEU:CD2	40:BF:21:ALA:HB3	2.40	0.51
41:BG:120:LEU:HD22	41:BG:133:LEU:CD2	2.40	0.51
44:BL:117:VAL:HG12	44:BL:118:GLU:N	2.25	0.51
45:BN:46:VAL:HG13	45:BN:48:MET:HE2	1.91	0.51
45:BN:55:VAL:HG21	45:BN:127:ASP:N	2.25	0.51
49:BR:61:HIS:O	49:BR:62:ALA:C	2.52	0.51
50:BS:73:LEU:HD23	50:BS:73:LEU:C	2.34	0.51
51:BT:117:ASP:OD1	51:BT:119:LYS:HB3	2.10	0.51
52:BU:57:PHE:C	52:BU:59:ARG:N	2.65	0.51
1:AA:103:C:H3'	1:AA:104:G:C8	2.37	0.51
1:AA:204:U:O2'	1:AA:216:G:OP2	2.27	0.51
1:AA:642:A:C6	1:AA:643:C:C4	2.98	0.51
1:AA:1022:G:C6	1:AA:1023:G:N7	2.78	0.51
2:AB:165:VAL:CG2	2:AB:166:ASP:N	2.64	0.51
4:AD:125:HIS:C	4:AD:126:ILE:HD12	2.36	0.51
10:AJ:4:ILE:HB	10:AJ:74:ILE:CD1	2.40	0.51
10:AJ:23:ILE:HG23	10:AJ:85:LEU:HD22	1.91	0.51
13:AM:68:GLY:CA	13:AM:71:ARG:HB3	2.40	0.51
19:AS:33:THR:HG22	19:AS:49:ILE:CG2	2.40	0.51
24:AY:117:GLN:NE2	24:AY:120:THR:HG23	2.23	0.51
24:AY:170:ARG:NH2	24:AY:208:GLN:HE22	2.08	0.51
25:B0:48:GLY:HA3	25:B0:80:HIS:ND1	2.25	0.51
26:B1:7:ILE:HD12	26:B1:7:ILE:N	2.25	0.51
26:B1:66:HIS:C	26:B1:68:PRO:HD2	2.36	0.51
29:B4:41:PRO:HA	29:B4:42:PHE:CE1	2.45	0.51
30:B5:3:LYS:HZ1	35:BA:2613:U:C2'	2.23	0.51
30:B5:25:LEU:CD1	54:BW:19:LEU:HB3	2.40	0.51
35:BA:112:U:H2'	35:BA:113:G:H5'	1.91	0.51
35:BA:1140:C:O2'	35:BA:1143:A:H2'	2.10	0.51
35:BA:1812:A:H2'	35:BA:1813:G:H8	1.75	0.51
35:BA:1887:C:H2'	35:BA:1888:G:H5"	1.92	0.51
35:BA:2018:G:H21	52:BU:34:LYS:NZ	2.07	0.51
35:BA:2055:C:H5'	35:BA:2056:G:C5'	2.41	0.51
35:BA:2312:U:H4'	41:BG:71:THR:OG1	2.10	0.51
37:BC:127:LYS:C	37:BC:128:LEU:HG	2.35	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:164:PHE:HB2	37:BC:172:ILE:CD1	2.38	0.51
38:BD:134:ARG:HG2	38:BD:187:GLY:C	2.36	0.51
41:BG:98:ARG:O	41:BG:102:PHE:HB2	2.11	0.51
43:BK:15:GLY:H	43:BK:41:PHE:HE2	1.59	0.51
43:BK:76:TYR:HD2	43:BK:77:LEU:HD23	1.75	0.51
50:BS:74:ALA:HB2	50:BS:101:LEU:HD21	1.92	0.51
56:BY:25:GLY:HA3	56:BY:39:VAL:CG1	2.40	0.51
57:BZ:72:ARG:HH11	57:BZ:72:ARG:CG	2.12	0.51
1:AA:473:G:H2'	1:AA:474:G:C8	2.41	0.51
1:AA:866:C:O5'	1:AA:866:C:H6	1.93	0.51
1:AA:892:A:C6	1:AA:893:C:C4	2.98	0.51
1:AA:1128:C:O2'	1:AA:1129:C:H5"	2.10	0.51
4:AD:10:ARG:O	4:AD:13:ARG:HB2	2.11	0.51
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.68	0.51
4:AD:31:CYS:O	4:AD:32:ALA:HB3	2.09	0.51
6:AF:2:ARG:HD2	6:AF:69:GLU:HB3	1.92	0.51
7:AG:146:GLU:HA	7:AG:149:ARG:HB2	1.93	0.51
8:AH:87:SER:HB2	8:AH:93:VAL:HB	1.91	0.51
12:AL:47:LYS:HD2	12:AL:48:PRO:HD3	1.91	0.51
16:AP:8:ARG:HB3	16:AP:28:ARG:NH1	2.26	0.51
18:AR:60:ALA:O	18:AR:61:LYS:C	2.53	0.51
22:AV:76:A:H1'	35:BA:2421:G:N2	2.25	0.51
24:AY:293:THR:HA	24:AY:397:VAL:HG12	1.93	0.51
24:AY:457:LEU:O	24:AY:460:GLU:HB3	2.10	0.51
27:B2:69:ARG:CG	27:B2:70:GLN:N	2.73	0.51
35:BA:29:U:O2'	35:BA:30:G:H5'	2.09	0.51
35:BA:272(H):C:C6	35:BA:272(H):C:C3'	2.93	0.51
35:BA:537:C:H2'	35:BA:538:G:H8	1.74	0.51
35:BA:585:G:H2'	35:BA:1251:C:H42	1.75	0.51
35:BA:1081:U:H4'	43:BK:117:THR:HG21	1.91	0.51
35:BA:1210:A:H5"	35:BA:1212:G:O4'	2.10	0.51
35:BA:1450(A):C:H2'	35:BA:1451:C:C6	2.45	0.51
35:BA:1467:C:C5	35:BA:1546:C:H2'	2.45	0.51
35:BA:1710:C:H2'	35:BA:1711:C:C6	2.46	0.51
35:BA:2064:C:H1'	35:BA:2450:A:C6	2.45	0.51
35:BA:2147:G:H2'	35:BA:2148:G:C5'	2.40	0.51
35:BA:2393:A:H5'	47:BP:60:MET:O	2.10	0.51
35:BA:2464:C:O2'	35:BA:2465:C:O5'	2.27	0.51
39:BE:15:PHE:CE2	51:BT:80:SER:HB2	2.46	0.51
39:BE:113:PHE:CE1	39:BE:158:GLY:HA2	2.44	0.51
41:BG:73:ALA:H	41:BG:87:PRO:HG2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:7:ARG:HA	47:BP:7:ARG:CZ	2.40	0.51
47:BP:65:ARG:O	47:BP:68:GLN:OE1	2.28	0.51
47:BP:90:ARG:HG2	47:BP:91:PHE:N	2.24	0.51
47:BP:105:LEU:N	47:BP:105:LEU:HD12	2.25	0.51
49:BR:53:HIS:HD1	49:BR:53:HIS:C	2.17	0.51
53:BV:21:ARG:CB	53:BV:91:TYR:CD2	2.80	0.51
54:BW:5:ALA:HB2	54:BW:54:ALA:HB2	1.92	0.51
54:BW:66:GLU:HG3	54:BW:69:LEU:HD12	1.91	0.51
54:BW:79:GLY:C	54:BW:100:THR:HG23	2.35	0.51
56:BY:3:VAL:O	56:BY:3:VAL:HG12	2.11	0.51
57:BZ:99:TYR:CE1	57:BZ:125:LEU:HD13	2.45	0.51
1:AA:59:A:H2'	1:AA:59:A:N3	2.25	0.51
1:AA:114:U:H2'	1:AA:115:G:C8	2.45	0.51
1:AA:182:U:H3'	1:AA:183:G:C5'	2.41	0.51
1:AA:423:G:C2'	1:AA:424:G:H5'	2.40	0.51
1:AA:740:U:H2'	1:AA:741:G:H8	1.75	0.51
1:AA:979:C:H2'	1:AA:980:C:H5"	1.91	0.51
1:AA:1027:C:N4	1:AA:1032:G:O6	2.43	0.51
1:AA:1349:A:OP2	9:AI:118:LYS:NZ	2.44	0.51
1:AA:1458:G:C6	1:AA:1459:C:C4	2.99	0.51
4:AD:57:ARG:HD2	4:AD:57:ARG:N	2.19	0.51
5:AE:29:GLY:HA2	5:AE:46:GLY:O	2.10	0.51
8:AH:60:ARG:HG2	8:AH:62:TYR:CE1	2.44	0.51
10:AJ:96:ILE:HD13	10:AJ:96:ILE:N	2.21	0.51
24:AY:18:ALA:O	24:AY:19:ALA:CB	2.55	0.51
24:AY:288:PRO:HG2	24:AY:300:GLU:OE1	2.10	0.51
24:AY:534:ILE:HD11	24:AY:569:ASP:O	2.11	0.51
27:B2:38:GLN:HA	27:B2:41:ILE:CG2	2.36	0.51
28:B3:15:TYR:HD2	28:B3:19:GLN:HE22	1.58	0.51
31:B6:12:GLU:HG2	31:B6:23:THR:HB	1.91	0.51
35:BA:205:G:O2'	35:BA:206:U:P	2.67	0.51
35:BA:729:G:O2'	35:BA:763:G:H4'	2.10	0.51
35:BA:1192:G:H2'	35:BA:1193:G:O4'	2.11	0.51
35:BA:1270:C:H5"	35:BA:1271:G:C5'	2.41	0.51
35:BA:1610:A:H4'	35:BA:1611:C:OP2	2.11	0.51
35:BA:1704:G:O2'	35:BA:1705:G:H5'	2.09	0.51
35:BA:1748:G:H5'	35:BA:1748:G:H8	1.75	0.51
35:BA:2055:C:H2'	35:BA:2504:U:H4'	1.92	0.51
35:BA:2103:C:O2	35:BA:2103:C:C2'	2.55	0.51
35:BA:2364:C:O2'	35:BA:2365:G:H5'	2.09	0.51
35:BA:2543:G:C2	35:BA:2765:A:H2'	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:138:LEU:HD13	37:BC:139:PRO:O	2.10	0.51
39:BE:3:GLY:C	39:BE:4:ILE:HG22	2.35	0.51
39:BE:54:GLN:O	39:BE:55:ASN:CG	2.54	0.51
41:BG:86:MET:N	41:BG:87:PRO:CD	2.73	0.51
41:BG:159:VAL:O	41:BG:159:VAL:HG22	2.08	0.51
42:BH:89:ILE:HD12	42:BH:89:ILE:O	2.10	0.51
43:BK:24:GLY:N	43:BK:25:PRO:HD2	2.24	0.51
45:BN:23:LEU:HD23	45:BN:23:LEU:C	2.36	0.51
47:BP:89:ALA:HB1	47:BP:121:LYS:HD2	1.93	0.51
50:BS:78:LEU:CD1	50:BS:103:GLU:HB3	2.40	0.51
52:BU:47:TYR:O	52:BU:51:LYS:HG2	2.11	0.51
54:BW:51:LEU:C	54:BW:51:LEU:HD13	2.34	0.51
56:BY:32:PRO:O	56:BY:35:TYR:N	2.39	0.51
1:AA:57:G:H2'	1:AA:58:C:C6	2.46	0.51
1:AA:1300:G:H1'	1:AA:1301:U:H5	1.76	0.51
4:AD:35:ARG:C	4:AD:37:PRO:HD3	2.36	0.51
10:AJ:100:THR:O	10:AJ:100:THR:HG22	2.10	0.51
12:AL:28:LYS:HE2	12:AL:33:ARG:NH1	2.24	0.51
12:AL:37:CYS:HB3	12:AL:79:GLU:O	2.11	0.51
12:AL:51:ALA:O	12:AL:52:LEU:HD23	2.10	0.51
16:AP:50:LYS:O	16:AP:51:VAL:HG23	2.11	0.51
17:AQ:76:LEU:HD12	17:AQ:77:VAL:N	2.25	0.51
18:AR:44:LEU:HD22	18:AR:79:LEU:HD22	1.93	0.51
24:AY:678:GLU:CG	24:AY:679:VAL:N	2.74	0.51
26:B1:76:ARG:HH22	26:B1:95:LEU:CB	2.23	0.51
30:B5:27:PRO:HA	54:BW:23:LEU:HD21	1.93	0.51
35:BA:20:C:O2'	35:BA:21:A:H5'	2.11	0.51
35:BA:475:U:O5'	35:BA:475:U:H6	1.93	0.51
35:BA:650:C:H2'	35:BA:651:G:H5"	1.93	0.51
35:BA:665:C:H2'	35:BA:666:G:C8	2.44	0.51
35:BA:676:A:H8	35:BA:2069:G:N2	2.01	0.51
35:BA:912:C:O2'	35:BA:913:U:H5'	2.11	0.51
35:BA:1682:G:H2'	35:BA:1683:C:H6	1.74	0.51
35:BA:1843:C:H2'	35:BA:1844:C:H6	1.75	0.51
35:BA:1902:C:C4'	38:BD:244:ARG:HB2	2.39	0.51
35:BA:2019:A:O3'	52:BU:27:LEU:HD12	2.10	0.51
37:BC:185:LYS:O	37:BC:186:LEU:C	2.54	0.51
38:BD:213:ARG:C	38:BD:215:LEU:H	2.17	0.51
39:BE:61:ARG:HG2	39:BE:62:PRO:CD	2.39	0.51
39:BE:76:ARG:O	39:BE:77:ILE:C	2.53	0.51
41:BG:46:ALA:C	41:BG:51:ARG:HG3	2.36	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:23:PRO:O	47:BP:29:LYS:O	2.29	0.51
48:BQ:39:PRO:O	48:BQ:40:ALA:HB2	2.10	0.51
49:BR:9:LYS:O	49:BR:10:LEU:HG	2.11	0.51
49:BR:104:ARG:HG3	49:BR:111:LEU:HD21	1.92	0.51
51:BT:35:LYS:HD3	51:BT:41:ARG:HH11	1.75	0.51
52:BU:55:ARG:HA	52:BU:58:ARG:CD	2.41	0.51
1:AA:34:C:H1'	12:AL:32:PHE:CZ	2.46	0.51
1:AA:217:C:O2'	1:AA:470:C:N4	2.44	0.51
1:AA:520:A:N1	1:AA:536:C:H1'	2.26	0.51
4:AD:20:TYR:HD1	4:AD:26:CYS:HB3	1.75	0.51
4:AD:88:VAL:O	4:AD:88:VAL:HG12	2.09	0.51
13:AM:35:GLU:CG	13:AM:36:LYS:N	2.73	0.51
15:AO:29:VAL:HG11	15:AO:67:LEU:HD21	1.92	0.51
19:AS:15:LEU:O	19:AS:19:VAL:N	2.43	0.51
24:AY:226:ASN:C	24:AY:228:MET:H	2.17	0.51
24:AY:252:ASP:N	24:AY:252:ASP:OD1	2.44	0.51
24:AY:259:PHE:N	24:AY:259:PHE:CD1	2.79	0.51
24:AY:389:LEU:HD12	24:AY:389:LEU:N	2.25	0.51
24:AY:428:LEU:HD23	24:AY:428:LEU:N	2.26	0.51
24:AY:606:MET:HE2	24:AY:671:MET:HE3	1.93	0.51
25:B0:19:LYS:O	25:B0:21:LEU:N	2.43	0.51
25:B0:60:PHE:C	25:B0:60:PHE:CD1	2.88	0.51
34:B9:20:HIS:O	34:B9:22:ARG:HG3	2.10	0.51
35:BA:143:G:H2'	35:BA:143(A):C:H6	1.75	0.51
35:BA:259:G:N2	35:BA:621:A:H8	2.07	0.51
35:BA:710:G:H1	35:BA:721:C:N4	2.07	0.51
35:BA:1301:A:O2'	35:BA:1302:A:C2'	2.54	0.51
35:BA:1558:A:O2'	35:BA:1559:G:OP2	2.29	0.51
35:BA:1629:U:H2'	35:BA:1630:G:C8	2.45	0.51
35:BA:1722:A:C2	35:BA:1740:G:C8	2.99	0.51
35:BA:1812:A:O2'	35:BA:1813:G:H5'	2.11	0.51
35:BA:1842:G:H2'	35:BA:1843:C:C6	2.46	0.51
35:BA:2305:A:H2'	35:BA:2306:C:O4'	2.11	0.51
35:BA:2468:G:C4	35:BA:2481:G:N2	2.78	0.51
35:BA:2810:A:H2'	39:BE:61:ARG:NH2	2.26	0.51
38:BD:275:LYS:O	38:BD:275:LYS:HD2	2.10	0.51
40:BF:20:LEU:CD2	40:BF:21:ALA:CB	2.88	0.51
40:BF:20:LEU:O	40:BF:24:LEU:HD23	2.10	0.51
40:BF:157:VAL:CG2	40:BF:157:VAL:O	2.58	0.51
43:BK:17:ALA:HB3	43:BK:38:VAL:CG1	2.40	0.51
46:BO:71:ARG:HB3	46:BO:72:PRO:HD2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:66:VAL:HA	51:BT:71:GLY:HA2	1.92	0.51
51:BT:120:ARG:HA	51:BT:123:GLN:HG2	1.92	0.51
51:BT:132:LYS:HG2	51:BT:133:GLU:HG3	1.93	0.51
53:BV:19:LYS:HE2	53:BV:20:LEU:H	1.76	0.51
53:BV:19:LYS:HB3	53:BV:94:LEU:O	2.10	0.51
56:BY:77:PRO:O	56:BY:78:ALA:HB2	2.09	0.51
57:BZ:24:LEU:HD12	57:BZ:41:LEU:HD23	1.92	0.51
57:BZ:81:ARG:HG3	57:BZ:81:ARG:O	2.11	0.51
1:AA:170:U:O2'	1:AA:171:A:H5'	2.10	0.51
1:AA:987:G:O2'	1:AA:988:G:H5'	2.10	0.51
1:AA:1267:C:C5	1:AA:1268:A:C5	2.99	0.51
1:AA:1423:G:H5"	46:BO:49:ARG:HH22	1.75	0.51
4:AD:155:LEU:O	4:AD:156:GLU:C	2.54	0.51
5:AE:82:VAL:CG2	5:AE:138:ALA:HA	2.38	0.51
7:AG:108:ALA:O	7:AG:111:ARG:HB2	2.10	0.51
19:AS:19:VAL:HG12	19:AS:20:LEU:N	2.25	0.51
20:AT:50:GLU:HB2	20:AT:100:ILE:HB	1.92	0.51
24:AY:218:GLU:O	24:AY:221:ALA:HB3	2.11	0.51
24:AY:251:ILE:O	24:AY:251:ILE:HG22	2.10	0.51
24:AY:606:MET:HG3	24:AY:649:LEU:HD21	1.92	0.51
24:AY:614:GLU:HA	24:AY:617:MET:HE3	1.93	0.51
27:B2:13:ALA:HA	27:B2:16:LEU:HD11	1.92	0.51
28:B3:8:LEU:HD22	28:B3:31:LEU:HD23	1.93	0.51
29:B4:1:MET:N	29:B4:1:MET:SD	2.73	0.51
35:BA:657:U:C2	35:BA:658:C:C5	2.98	0.51
35:BA:809:G:O2'	35:BA:810:U:H5'	2.10	0.51
35:BA:813:U:H2'	35:BA:814:C:H6	1.70	0.51
35:BA:2098:U:H6	35:BA:2098:U:O5'	1.94	0.51
35:BA:2516:G:O2'	35:BA:2517:C:H5'	2.11	0.51
35:BA:2723:C:H5"	49:BR:2:ARG:NH1	2.23	0.51
35:BA:2795:G:H2'	35:BA:2795:G:N3	2.26	0.51
36:BB:42:C:O2	41:BG:93:THR:N	2.37	0.51
37:BC:115:VAL:HA	37:BC:145:THR:HG22	1.93	0.51
37:BC:184:GLU:H	37:BC:184:GLU:CD	2.19	0.51
39:BE:2:LYS:HG2	39:BE:95:ILE:HG22	1.93	0.51
45:BN:58:ASP:HB3	45:BN:95:PRO:HB2	1.92	0.51
47:BP:146:VAL:HG13	47:BP:147:LEU:H	1.74	0.51
49:BR:33:ARG:HG3	49:BR:115:GLU:HG3	1.92	0.51
57:BZ:25:PRO:O	57:BZ:85:HIS:HA	2.11	0.51
1:AA:40:C:H2'	1:AA:41:G:C8	2.46	0.51
1:AA:383:A:H2'	1:AA:384:G:C5'	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:392:G:H2'	1:AA:393:A:H8	1.75	0.51
1:AA:965:A:C2	1:AA:969:A:N1	2.79	0.51
1:AA:1270:C:H2'	1:AA:1271:G:H8	1.73	0.51
2:AB:189:ASP:OD2	2:AB:205:ASP:OD1	2.28	0.51
6:AF:51:PRO:HA	6:AF:55:ASP:O	2.11	0.51
10:AJ:42:THR:CG2	10:AJ:68:HIS:HA	2.36	0.51
12:AL:33:ARG:HG2	12:AL:60:LEU:HD12	1.93	0.51
13:AM:86:CYS:HA	19:AS:73:GLU:O	2.11	0.51
15:AO:17:ARG:HG3	15:AO:17:ARG:NH1	2.25	0.51
24:AY:20:HIS:CG	24:AY:117:GLN:HB3	2.45	0.51
24:AY:117:GLN:HE22	24:AY:119:GLU:HG3	1.75	0.51
24:AY:337:SER:HA	24:AY:355:LEU:HD23	1.92	0.51
24:AY:343:ASN:HD22	24:AY:345:THR:N	2.06	0.51
24:AY:525:PHE:H	24:AY:525:PHE:HD1	1.52	0.51
24:AY:631:ILE:HG23	24:AY:632:LEU:N	2.26	0.51
28:B3:4:LEU:O	28:B3:36:VAL:HA	2.11	0.51
30:B5:33:CYS:O	30:B5:34:PRO:C	2.52	0.51
31:B6:33:LYS:CG	31:B6:34:LEU:H	2.17	0.51
33:B8:50:LEU:CG	33:B8:51:ALA:N	2.74	0.51
35:BA:455:C:N3	35:BA:473:G:H5'	2.26	0.51
35:BA:460:A:C2	35:BA:470:A:C4	2.99	0.51
35:BA:467:G:O2'	35:BA:468:G:H5'	2.10	0.51
35:BA:653:A:C5'	35:BA:654:A:OP2	2.59	0.51
35:BA:1233:C:H2'	35:BA:1234:U:H6	1.76	0.51
35:BA:1263:U:C4	35:BA:1264:G:C6	2.99	0.51
35:BA:1436:G:H1'	35:BA:1477:A:O2'	2.10	0.51
35:BA:2151:G:O2'	35:BA:2152:G:H5'	2.11	0.51
35:BA:2504:U:H6	35:BA:2504:U:O5'	1.93	0.51
35:BA:2665:A:H2'	35:BA:2666:C:O4'	2.11	0.51
36:BB:8:U:O2'	50:BS:40:ILE:HD13	2.11	0.51
39:BE:82:ARG:HG3	39:BE:83:ASP:H	1.75	0.51
40:BF:93:LYS:HD2	40:BF:94:PRO:HD2	1.92	0.51
40:BF:99:TYR:HE2	40:BF:101:LEU:HD13	1.75	0.51
40:BF:168:ARG:HG3	40:BF:175:THR:HB	1.92	0.51
41:BG:6:ALA:O	41:BG:7:LEU:C	2.53	0.51
41:BG:162:THR:O	41:BG:163:ALA:C	2.52	0.51
51:BT:106:SER:HB2	51:BT:110:ILE:HG13	1.93	0.51
52:BU:83:LEU:HG	52:BU:88:ILE:HD11	1.91	0.51
57:BZ:4:ARG:HH12	57:BZ:66:SER:CB	2.20	0.51
57:BZ:14:LYS:C	57:BZ:16:SER:H	2.18	0.51
1:AA:123:C:OP1	1:AA:311:C:O2'	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:164:U:H2'	1:AA:165:C:C6	2.46	0.51
1:AA:452:A:C4	1:AA:453:A:C8	2.99	0.51
1:AA:1171:G:H2'	1:AA:1172:C:H6	1.76	0.51
1:AA:1175:G:O6	1:AA:1176:A:N6	2.44	0.51
1:AA:1236:A:H2'	1:AA:1237:C:C5	2.46	0.51
1:AA:1310:G:C2'	1:AA:1311:G:H5'	2.41	0.51
1:AA:1351:U:O2'	1:AA:1352:C:H5'	2.10	0.51
3:AC:159:GLY:HA2	3:AC:193:TYR:CE2	2.46	0.51
15:AO:33:THR:HG23	15:AO:63:ARG:HH12	1.76	0.51
16:AP:53:VAL:O	16:AP:54:GLU:C	2.49	0.51
17:AQ:48:GLU:O	17:AQ:49:GLU:C	2.53	0.51
19:AS:27:GLU:O	19:AS:28:LYS:O	2.29	0.51
19:AS:47:HIS:O	19:AS:49:ILE:HG13	2.11	0.51
22:AV:14:A:H1'	22:AV:22:G:N2	2.26	0.51
24:AY:312:LEU:HD11	24:AY:401:SER:OG	2.10	0.51
24:AY:363:ARG:HG3	24:AY:363:ARG:NH1	2.14	0.51
24:AY:434:GLU:O	24:AY:434:GLU:HG2	2.11	0.51
29:B4:7:PRO:O	29:B4:8:LYS:HB3	2.11	0.51
30:B5:3:LYS:HD2	30:B5:5:PRO:CD	2.41	0.51
31:B6:43:CYS:CB	31:B6:44:ARG:NH2	2.60	0.51
32:B7:17:GLY:HA2	32:B7:43:THR:HG21	1.92	0.51
32:B7:46:VAL:HG12	32:B7:47:ARG:H	1.72	0.51
35:BA:271(S):G:H2'	35:BA:271(T):C:O4'	2.10	0.51
35:BA:601:C:O2'	35:BA:605:C:H5"	2.11	0.51
35:BA:687:C:H2'	35:BA:688:U:O4'	2.10	0.51
35:BA:747:U:O2'	54:BW:88:ARG:HG3	2.11	0.51
35:BA:958:U:H5'	48:BQ:14:ARG:NH1	2.25	0.51
35:BA:1020:A:O2'	35:BA:1021:A:P	2.69	0.51
35:BA:1343:G:N3	35:BA:1384:A:H2	2.08	0.51
35:BA:1362:C:H2'	35:BA:1363:C:C6	2.46	0.51
35:BA:1539:G:N3	35:BA:1540:U:H1'	2.25	0.51
35:BA:1635:G:H2'	35:BA:1636:C:C6	2.46	0.51
35:BA:2071:A:OP2	35:BA:2071:A:H8	1.93	0.51
35:BA:2115:G:H3'	35:BA:2116:G:H5"	1.91	0.51
35:BA:2652:C:C4	35:BA:2653:U:C4	2.99	0.51
35:BA:2657:A:O2'	42:BH:160:LYS:HE3	2.10	0.51
35:BA:2839:G:H2'	35:BA:2840:C:H6	1.75	0.51
35:BA:2851:A:C5	35:BA:2852:G:C5	2.99	0.51
38:BD:134:ARG:NE	38:BD:135:PHE:CE1	2.79	0.51
38:BD:239:ARG:HH11	38:BD:239:ARG:HG2	1.74	0.51
40:BF:93:LYS:HB3	40:BF:94:PRO:HD2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:11:ASN:OD1	49:BR:12:ARG:N	2.40	0.51
51:BT:118:ARG:HA	51:BT:121:ILE:CD1	2.41	0.51
52:BU:111:GLU:O	52:BU:115:ALA:HB2	2.11	0.51
57:BZ:80:ARG:O	57:BZ:81:ARG:O	2.29	0.51
1:AA:329:A:H3'	1:AA:330:C:H5'	1.93	0.51
1:AA:642:A:H2'	1:AA:643:C:C6	2.46	0.51
1:AA:1061:G:H2'	1:AA:1062:U:H5'	1.92	0.51
1:AA:1124:G:H5'	10:AJ:35:SER:HB2	1.92	0.51
1:AA:1174:G:O2'	1:AA:1175:G:H5'	2.10	0.51
1:AA:1325:C:H4'	21:AU:17:THR:HG21	1.91	0.51
2:AB:207:ALA:O	2:AB:208:ILE:C	2.54	0.51
4:AD:18:LYS:HG3	4:AD:31:CYS:SG	2.51	0.51
4:AD:78:LEU:HD21	4:AD:96:LEU:CB	2.41	0.51
5:AE:50:GLU:O	5:AE:51:VAL:C	2.49	0.51
7:AG:78:ARG:HG3	7:AG:79:ARG:N	2.26	0.51
15:AO:76:GLU:C	15:AO:78:TYR:N	2.68	0.51
16:AP:67:THR:N	16:AP:70:ALA:HB3	2.26	0.51
24:AY:20:HIS:ND1	24:AY:21:ILE:HD13	2.25	0.51
25:B0:27:GLU:CD	25:B0:27:GLU:N	2.62	0.51
25:B0:51:VAL:HG21	25:B0:79:VAL:O	2.11	0.51
28:B3:10:LYS:HB3	28:B3:53:LEU:HD23	1.93	0.51
31:B6:15:GLU:CD	31:B6:44:ARG:HH22	2.16	0.51
31:B6:15:GLU:N	31:B6:49:HIS:CD2	2.79	0.51
31:B6:45:LYS:HD3	35:BA:2371:G:O3'	2.11	0.51
35:BA:83:G:N2	35:BA:103:A:OP2	2.43	0.51
35:BA:319:C:P	40:BF:137:LYS:HZ1	2.34	0.51
35:BA:1040:C:H42	35:BA:1115:G:H1	1.58	0.51
35:BA:1385:G:H4'	35:BA:1386:C:OP1	2.11	0.51
35:BA:1492:G:H1	35:BA:1498:C:H42	1.58	0.51
35:BA:1909:C:O2'	35:BA:1910:G:H5'	2.10	0.51
35:BA:2155:G:C2'	35:BA:2156:G:H5'	2.41	0.51
35:BA:2840:C:O2'	35:BA:2841:C:H5'	2.10	0.51
36:BB:87:G:O3'	36:BB:88:C:C6	2.64	0.51
36:BB:115:G:H2'	36:BB:116:G:C8	2.41	0.51
41:BG:100:TRP:CD1	41:BG:100:TRP:H	2.28	0.51
42:BH:17:VAL:O	42:BH:45:VAL:HG22	2.11	0.51
42:BH:66:GLY:HA2	42:BH:69:ARG:CB	2.39	0.51
46:BO:7:TYR:C	46:BO:8:LEU:HD22	2.36	0.51
46:BO:90:GLN:O	46:BO:92:GLU:HG3	2.11	0.51
47:BP:91:PHE:HD1	47:BP:91:PHE:H	1.58	0.51
49:BR:9:LYS:O	49:BR:10:LEU:CG	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:11:GLU:O	51:BT:13:ARG:N	2.40	0.51
52:BU:70:ARG:HG3	52:BU:70:ARG:NH1	2.25	0.51
52:BU:83:LEU:CD1	52:BU:113:ALA:HB2	2.40	0.51
53:BV:89:GLN:OE1	53:BV:89:GLN:HA	2.10	0.51
55:BX:29:TRP:HA	55:BX:78:LYS:HA	1.92	0.51
55:BX:90:GLU:HA	55:BX:93:GLU:HG2	1.93	0.51
1:AA:78:G:H1	1:AA:91:C:H42	1.59	0.50
1:AA:393:A:H5'	1:AA:483:C:O2'	2.11	0.50
1:AA:763:G:H2'	1:AA:764:C:H6	1.76	0.50
1:AA:999:C:C6	1:AA:999:C:O5'	2.65	0.50
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.11	0.50
2:AB:51:LEU:HD23	2:AB:201:ILE:HD12	1.93	0.50
3:AC:50:ALA:O	3:AC:70:VAL:HG13	2.10	0.50
5:AE:139:LEU:C	5:AE:141:GLN:N	2.66	0.50
8:AH:112:LEU:N	8:AH:112:LEU:CD2	2.73	0.50
8:AH:120:THR:O	8:AH:121:ASP:C	2.51	0.50
10:AJ:4:ILE:HD12	10:AJ:4:ILE:H	1.77	0.50
11:AK:18:ARG:HH21	11:AK:37:GLY:N	2.09	0.50
12:AL:39:VAL:CB	12:AL:57:LYS:HB2	2.35	0.50
13:AM:15:VAL:O	13:AM:19:LEU:HD23	2.10	0.50
14:AN:16:PHE:CD1	14:AN:16:PHE:N	2.74	0.50
16:AP:75:ARG:O	16:AP:78:GLY:N	2.44	0.50
18:AR:26:LEU:HD21	18:AR:42:ARG:HD2	1.93	0.50
19:AS:78:ARG:HB2	19:AS:81:ARG:NH1	2.21	0.50
22:AV:74:C:N4	26:B1:23:LYS:HE3	2.26	0.50
24:AY:71:THR:HA	24:AY:79:ILE:O	2.11	0.50
24:AY:156:ARG:HH22	24:AY:666:ARG:NH1	2.09	0.50
24:AY:221:ALA:C	24:AY:223:PHE:N	2.69	0.50
24:AY:227:ILE:CD1	24:AY:242:LEU:HA	2.41	0.50
24:AY:282:SER:C	24:AY:284:LEU:N	2.68	0.50
24:AY:634:MET:O	24:AY:634:MET:HG2	2.10	0.50
28:B3:19:GLN:HE22	28:B3:52:HIS:HE1	1.60	0.50
31:B6:17:LYS:CB	31:B6:44:ARG:NH1	2.74	0.50
33:B8:36:LYS:O	33:B8:37:SER:C	2.53	0.50
35:BA:29:U:C2'	35:BA:30:G:H5'	2.41	0.50
35:BA:698:C:H4'	35:BA:735:A:C2	2.46	0.50
35:BA:752:A:O2'	35:BA:753:C:OP2	2.20	0.50
35:BA:816:C:O2'	35:BA:817:C:H5'	2.10	0.50
35:BA:909:A:O2'	35:BA:910:A:H5'	2.11	0.50
35:BA:1011:G:O2'	35:BA:1013:C:H5"	2.11	0.50
35:BA:1052:C:O2'	35:BA:1053:C:O5'	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1091:G:H1	35:BA:1100:C:H42	1.59	0.50
35:BA:1355:G:O2'	35:BA:1356:G:H5'	2.11	0.50
35:BA:1432:C:H2'	35:BA:1433:U:O4'	2.11	0.50
36:BB:91:C:O2'	36:BB:92:C:H5'	2.10	0.50
38:BD:117:VAL:CG2	38:BD:118:VAL:N	2.74	0.50
40:BF:52:LYS:HD3	40:BF:56:GLU:O	2.11	0.50
40:BF:140:LEU:O	40:BF:143:ALA:HB3	2.11	0.50
40:BF:179:GLU:C	40:BF:181:LEU:H	2.19	0.50
41:BG:82:LEU:HD21	41:BG:87:PRO:CB	2.41	0.50
42:BH:41:MET:SD	42:BH:53:GLU:C	2.94	0.50
42:BH:70:THR:C	42:BH:72:ILE:N	2.63	0.50
45:BN:134:ARG:HG3	45:BN:134:ARG:O	2.10	0.50
51:BT:33:LYS:NZ	51:BT:43:GLN:NE2	2.59	0.50
51:BT:55:ASN:O	51:BT:55:ASN:CG	2.54	0.50
53:BV:62:LEU:N	53:BV:62:LEU:CD2	2.70	0.50
54:BW:25:ARG:HB2	54:BW:25:ARG:HH11	1.76	0.50
57:BZ:74:VAL:HG22	57:BZ:86:VAL:HG13	1.93	0.50
57:BZ:109:ALA:C	57:BZ:111:VAL:N	2.64	0.50
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.12	0.50
1:AA:422:C:OP2	1:AA:422:C:H6	1.95	0.50
1:AA:622:A:N7	1:AA:623:C:C6	2.79	0.50
1:AA:674:G:H21	11:AK:116:HIS:HB2	1.76	0.50
1:AA:967:C:O5'	1:AA:967:C:H6	1.94	0.50
1:AA:1238:A:H2'	1:AA:1238:A:N3	2.25	0.50
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.46	0.50
9:AI:5:TYR:CD1	9:AI:18:PHE:CE1	2.99	0.50
9:AI:79:LEU:C	9:AI:79:LEU:CD1	2.84	0.50
9:AI:84:ALA:C	9:AI:86:VAL:H	2.18	0.50
14:AN:32:SER:O	14:AN:40:CYS:HA	2.11	0.50
24:AY:432:ALA:HA	24:AY:438:PHE:CZ	2.45	0.50
30:B5:3:LYS:HZ3	30:B5:5:PRO:HD2	1.74	0.50
31:B6:16:CYS:SG	31:B6:48:VAL:HG21	2.50	0.50
31:B6:35:GLU:HB3	31:B6:51:GLU:HB2	1.92	0.50
31:B6:35:GLU:HG3	31:B6:36:LEU:N	2.26	0.50
31:B6:54:ILE:HD13	35:BA:2420:C:H5'	1.90	0.50
35:BA:271(K):U:H3'	35:BA:271(L):U:H5"	1.93	0.50
35:BA:325:G:O2'	35:BA:326:G:H5'	2.10	0.50
35:BA:451:C:N4	35:BA:454:A:H5'	2.27	0.50
35:BA:786:C:C2'	35:BA:787:U:H5'	2.40	0.50
35:BA:1202:C:H2'	35:BA:1203:G:H5'	1.93	0.50
35:BA:1607:C:H5'	35:BA:1608:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2154:G:H21	35:BA:2155:G:H1'	1.75	0.50
35:BA:2199:A:H3'	35:BA:2200:C:C6	2.44	0.50
35:BA:2389:G:H5"	35:BA:2390:U:C5'	2.32	0.50
35:BA:2543:G:O2'	35:BA:2544:G:H5'	2.12	0.50
36:BB:63:G:C2	36:BB:64:C:C2	2.99	0.50
37:BC:95:VAL:CG1	37:BC:96:GLY:N	2.71	0.50
37:BC:117:THR:HG22	37:BC:148:PHE:HA	1.92	0.50
37:BC:185:LYS:HE3	37:BC:185:LYS:CA	2.40	0.50
38:BD:77:ALA:HB2	38:BD:97:TYR:HA	1.93	0.50
41:BG:41:GLN:NE2	41:BG:60:LEU:CD2	2.74	0.50
41:BG:55:LYS:CA	41:BG:58:GLN:HG3	2.41	0.50
41:BG:56:ALA:HB1	41:BG:153:ARG:NE	2.26	0.50
42:BH:40:GLU:HG3	42:BH:64:LEU:CD1	2.41	0.50
42:BH:107:VAL:O	42:BH:107:VAL:HG23	2.10	0.50
42:BH:138:LYS:C	42:BH:140:LYS:N	2.64	0.50
47:BP:23:PRO:CB	47:BP:33:ARG:HG3	2.39	0.50
51:BT:6:LEU:O	51:BT:7:ILE:C	2.54	0.50
51:BT:11:GLU:H	51:BT:11:GLU:CD	2.18	0.50
52:BU:21:ALA:O	52:BU:22:LYS:C	2.53	0.50
54:BW:47:VAL:HG12	54:BW:47:VAL:O	2.10	0.50
55:BX:29:TRP:CH2	55:BX:76:ARG:NH2	2.79	0.50
55:BX:63:LYS:CB	55:BX:72:LYS:HG2	2.41	0.50
57:BZ:5:LEU:HD13	57:BZ:59:LEU:CD2	2.41	0.50
57:BZ:9:TYR:HB3	57:BZ:35:ARG:HH22	1.76	0.50
57:BZ:141:VAL:HG12	57:BZ:142:SER:N	2.26	0.50
1:AA:625:G:C4	1:AA:626:U:C5	3.00	0.50
1:AA:1226:C:H5"	13:AM:103:THR:CB	2.40	0.50
1:AA:1226:C:H41	13:AM:104:ARG:HD2	1.77	0.50
1:AA:1345:U:OP1	9:AI:120:ARG:NH1	2.42	0.50
1:AA:1479:C:O2'	1:AA:1480:G:H5'	2.11	0.50
7:AG:22:LEU:HD22	7:AG:62:PHE:CE2	2.46	0.50
9:AI:70:LYS:O	9:AI:74:ILE:HG13	2.11	0.50
9:AI:117:HIS:O	9:AI:118:LYS:HG3	2.11	0.50
12:AL:27:LEU:CG	12:AL:62:SER:HB2	2.40	0.50
12:AL:69:TYR:O	12:AL:71:PRO:HD3	2.11	0.50
24:AY:85:PRO:HG3	24:AY:94:VAL:HG13	1.93	0.50
24:AY:100:VAL:HG22	24:AY:101:LEU:N	2.26	0.50
24:AY:187:THR:OG1	24:AY:188:TYR:N	2.44	0.50
24:AY:227:ILE:HG23	24:AY:237:PRO:HG2	1.94	0.50
24:AY:230:LYS:HZ3	24:AY:237:PRO:HA	1.75	0.50
27:B2:7:ARG:HH11	27:B2:7:ARG:HG3	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:8:LYS:O	27:B2:12:GLU:N	2.26	0.50
27:B2:18:PRO:HG2	27:B2:19:VAL:H	1.75	0.50
27:B2:69:ARG:HG3	27:B2:70:GLN:H	1.76	0.50
30:B5:27:PRO:HG3	54:BW:23:LEU:CD1	2.40	0.50
32:B7:46:VAL:CG1	32:B7:47:ARG:H	2.24	0.50
35:BA:844:C:H2'	35:BA:845:G:O4'	2.10	0.50
35:BA:1144:G:C6	35:BA:1145:C:C4	2.99	0.50
35:BA:2073:C:H42	35:BA:2436:G:H1	1.60	0.50
35:BA:2154:G:N2	35:BA:2155:G:H1'	2.26	0.50
35:BA:2742:C:C2'	35:BA:2743:C:H5'	2.41	0.50
35:BA:2837:G:H2'	35:BA:2838:G:H8	1.75	0.50
37:BC:156:GLU:CD	37:BC:161:ARG:HD3	2.36	0.50
38:BD:213:ARG:C	38:BD:215:LEU:N	2.69	0.50
39:BE:2:LYS:HD3	39:BE:95:ILE:HG22	1.94	0.50
40:BF:206:ILE:CG2	40:BF:207:GLY:H	2.24	0.50
45:BN:125:GLY:HA3	45:BN:126:PRO:O	2.10	0.50
46:BO:52:VAL:HG12	46:BO:53:LYS:N	2.25	0.50
47:BP:101:VAL:HB	47:BP:107:LYS:HA	1.92	0.50
47:BP:105:LEU:O	47:BP:106:LEU:HB2	2.11	0.50
47:BP:143:GLY:C	47:BP:145:PRO:HD3	2.36	0.50
49:BR:21:TYR:OH	49:BR:43:GLU:HG2	2.11	0.50
51:BT:23:ARG:HB2	51:BT:24:PRO:CD	2.36	0.50
51:BT:27:THR:OG1	51:BT:28:VAL:N	2.43	0.50
54:BW:80:PRO:O	54:BW:100:THR:HG21	2.12	0.50
57:BZ:155:LEU:HG	57:BZ:157:LEU:CD2	2.40	0.50
1:AA:61:G:H2'	1:AA:62:U:O4'	2.12	0.50
1:AA:177:C:N3	1:AA:178:C:C5	2.79	0.50
1:AA:204:U:HO2'	1:AA:216:G:P	2.34	0.50
1:AA:596:C:O5'	1:AA:596:C:H6	1.94	0.50
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.12	0.50
2:AB:80:ILE:HD12	2:AB:80:ILE:N	2.26	0.50
4:AD:119:GLN:HG3	4:AD:123:HIS:CD2	2.46	0.50
6:AF:24:GLU:O	6:AF:27:GLN:HB2	2.11	0.50
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	1.94	0.50
15:AO:27:VAL:O	15:AO:31:LEU:HD23	2.11	0.50
15:AO:74:ASP:O	15:AO:76:GLU:N	2.44	0.50
19:AS:39:THR:HG22	19:AS:40:ILE:N	2.27	0.50
19:AS:41:VAL:O	19:AS:43:GLU:N	2.45	0.50
20:AT:11:SER:HA	20:AT:13:LEU:HD12	1.92	0.50
22:AV:73:A:H8	22:AV:73:A:O5'	1.94	0.50
24:AY:17:ILE:N	24:AY:17:ILE:CD1	2.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:236:GLU:HG3	24:AY:236:GLU:O	2.12	0.50
24:AY:460:GLU:O	24:AY:463:VAL:HB	2.12	0.50
24:AY:519:ARG:NH2	24:AY:678:GLU:CB	2.74	0.50
24:AY:519:ARG:NH2	24:AY:678:GLU:HB3	2.26	0.50
24:AY:603:GLU:O	24:AY:676:TYR:HA	2.11	0.50
27:B2:59:ARG:O	27:B2:60:LEU:C	2.53	0.50
28:B3:1:MET:HB3	28:B3:2:PRO:HD2	1.93	0.50
35:BA:295:G:H2'	35:BA:296:C:C6	2.43	0.50
35:BA:300:A:P	56:BY:97:ARG:HE	2.34	0.50
35:BA:610:G:H22	35:BA:619:G:H1'	1.76	0.50
35:BA:641:C:H2'	35:BA:642:G:O4'	2.11	0.50
35:BA:692:C:H2'	35:BA:693:C:H6	1.75	0.50
35:BA:827:U:H4'	35:BA:828:U:O2	2.12	0.50
35:BA:999:U:H5"	35:BA:1154:G:O6	2.12	0.50
35:BA:1022:G:N2	35:BA:1142(A):A:H2	2.10	0.50
35:BA:1109:C:O2	35:BA:1109:C:C2'	2.60	0.50
35:BA:1127:A:H2'	35:BA:1128:A:H5"	1.93	0.50
35:BA:1298:C:H1'	35:BA:1302:A:C4	2.46	0.50
35:BA:1465:G:H2'	35:BA:1466:G:H8	1.76	0.50
35:BA:1801:G:H3'	35:BA:1802:A:H5'	1.94	0.50
35:BA:2111:C:C2	35:BA:2147:G:N2	2.80	0.50
35:BA:2128:C:OP1	37:BC:37:LYS:N	2.40	0.50
35:BA:2363:C:H6	35:BA:2363:C:O5'	1.94	0.50
35:BA:2876:G:C4'	51:BT:3:ARG:HE	2.10	0.50
36:BB:54:G:H2'	36:BB:55:U:C6	2.45	0.50
37:BC:71:LYS:CG	37:BC:72:GLN:H	2.12	0.50
37:BC:202:PRO:O	37:BC:205:ALA:HB3	2.11	0.50
38:BD:48:ARG:HG3	38:BD:48:ARG:NH1	2.27	0.50
38:BD:81:ALA:HA	38:BD:113:VAL:HG22	1.92	0.50
38:BD:218:ARG:HH11	38:BD:218:ARG:HG3	1.76	0.50
40:BF:28:ILE:H	40:BF:28:ILE:CD1	2.24	0.50
40:BF:174:VAL:HG21	40:BF:189:THR:CG2	2.42	0.50
43:BK:15:GLY:N	43:BK:41:PHE:HE2	2.09	0.50
45:BN:18:ALA:HB1	45:BN:21:LYS:HB2	1.94	0.50
45:BN:125:GLY:HA3	45:BN:126:PRO:C	2.37	0.50
46:BO:26:LYS:HB3	46:BO:30:ALA:HB2	1.93	0.50
50:BS:30:ARG:HH22	50:BS:62:LYS:HD2	1.76	0.50
55:BX:18:TYR:HA	55:BX:21:PHE:CD2	2.47	0.50
57:BZ:23:LYS:CD	57:BZ:38:TYR:HE2	2.22	0.50
1:AA:368:U:OP1	24:AY:353:ALA:CB	2.59	0.50
1:AA:721:G:H8	1:AA:721:G:OP1	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:753:A:H4'	1:AA:754:C:C5'	2.42	0.50
1:AA:836:G:C6	1:AA:851:G:C6	2.99	0.50
1:AA:891:U:H2'	1:AA:892:A:H8	1.76	0.50
1:AA:940:C:H2'	1:AA:941:G:H8	1.77	0.50
1:AA:992:U:H1'	1:AA:993:G:C2	2.46	0.50
1:AA:1047:G:C2'	1:AA:1048:G:H5'	2.41	0.50
1:AA:1109:C:C2'	1:AA:1110:A:H5'	2.41	0.50
1:AA:1346:A:N6	1:AA:1375:A:OP2	2.40	0.50
1:AA:1445:C:C2'	1:AA:1446:U:H5'	2.42	0.50
3:AC:73:PRO:O	3:AC:76:VAL:HG22	2.12	0.50
3:AC:136:GLN:HA	3:AC:139:GLN:HB2	1.93	0.50
4:AD:170:VAL:HG21	4:AD:176:LEU:CD2	2.41	0.50
7:AG:79:ARG:O	7:AG:80:VAL:HG13	2.11	0.50
10:AJ:29:ARG:HH12	10:AJ:84:GLN:HE22	1.60	0.50
11:AK:122:LYS:O	11:AK:123:LYS:C	2.53	0.50
17:AQ:7:THR:O	17:AQ:23:VAL:HG13	2.11	0.50
18:AR:76:LEU:C	18:AR:78:LEU:H	2.17	0.50
22:AV:49:G:H1	22:AV:65:C:H42	1.60	0.50
24:AY:191:ASP:N	24:AY:191:ASP:OD1	2.43	0.50
24:AY:498:ILE:HG13	24:AY:498:ILE:O	2.12	0.50
24:AY:610:VAL:HG11	24:AY:659:LEU:HD21	1.93	0.50
31:B6:54:ILE:HD13	35:BA:2420:C:C5'	2.40	0.50
33:B8:49:VAL:O	33:B8:49:VAL:HG23	2.11	0.50
35:BA:92:A:H2'	35:BA:93:G:C8	2.46	0.50
35:BA:291:C:H2'	35:BA:292:C:H6	1.77	0.50
35:BA:619:G:H3'	35:BA:620:G:N2	2.26	0.50
35:BA:821:A:O2'	35:BA:945:A:H3'	2.12	0.50
35:BA:1221:C:H2'	35:BA:1221:C:O2	2.10	0.50
35:BA:1528:A:H2'	35:BA:1528:A:N3	2.26	0.50
35:BA:2128:C:OP1	37:BC:37:LYS:HB2	2.11	0.50
35:BA:2580:U:H5'	39:BE:131:ALA:HB2	1.93	0.50
35:BA:2791:C:H5	35:BA:2801(A):A:H62	1.60	0.50
37:BC:77:ALA:C	37:BC:78:ILE:HG13	2.36	0.50
41:BG:102:PHE:O	41:BG:104:GLU:N	2.45	0.50
43:BK:104:VAL:HG13	43:BK:105:LEU:N	2.26	0.50
45:BN:2:LYS:NZ	53:BV:12:TYR:HA	2.25	0.50
47:BP:95:VAL:CG2	47:BP:125:VAL:HG23	2.42	0.50
48:BQ:53:ALA:HA	48:BQ:56:ARG:HB2	1.92	0.50
52:BU:37:GLU:O	52:BU:40:PHE:HB2	2.12	0.50
54:BW:10:VAL:HG23	54:BW:101:SER:C	2.35	0.50
57:BZ:14:LYS:O	57:BZ:16:SER:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:69:THR:HA	57:BZ:89:PHE:O	2.12	0.50
1:AA:697:U:H2'	1:AA:698:G:C5'	2.34	0.50
1:AA:1332:A:O2'	1:AA:1333:A:H5'	2.11	0.50
4:AD:28:SER:O	4:AD:30:LYS:N	2.45	0.50
4:AD:196:LEU:C	4:AD:198:VAL:N	2.65	0.50
5:AE:5:ASP:C	5:AE:6:PHE:CG	2.90	0.50
5:AE:20:GLN:HE21	5:AE:20:GLN:C	2.19	0.50
6:AF:61:LEU:O	6:AF:62:TRP:HB2	2.11	0.50
7:AG:91:VAL:HG12	7:AG:92:SER:N	2.26	0.50
9:AI:5:TYR:HD1	9:AI:17:VAL:O	1.94	0.50
15:AO:18:PHE:CD1	15:AO:18:PHE:C	2.89	0.50
24:AY:285:ASP:C	24:AY:286:ILE:HD12	2.37	0.50
24:AY:491:VAL:HG12	24:AY:492:ASP:H	1.76	0.50
24:AY:524:GLU:HG2	24:AY:564:LYS:HG3	1.92	0.50
24:AY:529:ILE:HD11	24:AY:567:LEU:HD11	1.93	0.50
25:B0:49:LYS:HE3	25:B0:80:HIS:CG	2.47	0.50
33:B8:50:LEU:HD12	33:B8:51:ALA:N	2.25	0.50
34:B9:4:ARG:NH1	35:BA:2477:C:N4	2.60	0.50
35:BA:247:G:C8	35:BA:249:C:C6	3.00	0.50
35:BA:797:C:OP1	40:BF:62:ARG:HG3	2.12	0.50
35:BA:1073:A:C2'	35:BA:1074:G:H5'	2.42	0.50
35:BA:1265:A:H5'	35:BA:1267:U:H1'	1.92	0.50
35:BA:1285:G:H2'	35:BA:1286:A:C5'	2.39	0.50
35:BA:1541:G:H4'	35:BA:1542:A:O4'	2.12	0.50
35:BA:1754:C:OP1	51:BT:96:ARG:NH1	2.44	0.50
35:BA:1813:G:H1'	38:BD:50:THR:OG1	2.12	0.50
35:BA:2015:A:H2'	35:BA:2016:U:O4'	2.12	0.50
35:BA:2157:G:OP2	35:BA:2157:G:C8	2.65	0.50
35:BA:2248:C:H3'	35:BA:2249:U:C6	2.46	0.50
35:BA:2317:C:O2'	35:BA:2318:G:H5'	2.12	0.50
35:BA:2740:A:H2'	35:BA:2741:A:C8	2.47	0.50
36:BB:38:C:O2	36:BB:48:A:H1'	2.11	0.50
37:BC:37:LYS:C	37:BC:38:PHE:CD1	2.89	0.50
39:BE:177:PRO:CG	39:BE:178:GLU:H	2.24	0.50
48:BQ:8:LYS:HB2	48:BQ:9:TYR:CD1	2.47	0.50
48:BQ:65:PHE:CD1	48:BQ:65:PHE:N	2.80	0.50
49:BR:38:VAL:CB	49:BR:39:PRO:HD3	2.26	0.50
52:BU:33:ARG:C	52:BU:35:ALA:H	2.19	0.50
1:AA:403:C:H2'	1:AA:404:U:C6	2.46	0.50
1:AA:923:A:H2'	1:AA:924:C:H6	1.77	0.50
1:AA:1495:U:H2'	1:AA:1496:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:189:ASP:O	2:AB:191:ASP:N	2.44	0.50
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.37	0.50
6:AF:68:PRO:HG2	6:AF:71:ARG:HB2	1.93	0.50
12:AL:6:THR:CG2	12:AL:9:GLN:HE21	2.16	0.50
12:AL:27:LEU:HD21	12:AL:64:TYR:CE1	2.47	0.50
12:AL:75:HIS:ND1	12:AL:75:HIS:C	2.70	0.50
19:AS:51:VAL:HG21	19:AS:71:LEU:HB3	1.94	0.50
24:AY:359:HIS:CD2	24:AY:364:GLU:HB2	2.47	0.50
24:AY:413:ILE:HG23	24:AY:413:ILE:O	2.11	0.50
24:AY:518:PRO:O	24:AY:520:GLY:N	2.45	0.50
25:B0:5:LYS:HB3	25:B0:5:LYS:HZ2	1.77	0.50
26:B1:64:ALA:C	26:B1:66:HIS:N	2.65	0.50
29:B4:1:MET:CE	41:BG:98:ARG:HG3	2.38	0.50
31:B6:47:THR:HG23	31:B6:49:HIS:CE1	2.46	0.50
35:BA:34:C:H5	35:BA:454:A:HO2'	1.57	0.50
35:BA:193:U:H2'	35:BA:194:G:H8	1.76	0.50
35:BA:751:A:H8	35:BA:751:A:O5'	1.95	0.50
35:BA:881:G:C2'	35:BA:882:G:H5'	2.41	0.50
35:BA:1015:G:H2'	35:BA:1016:G:H8	1.76	0.50
35:BA:1542:A:H3'	35:BA:1542:A:C8	2.45	0.50
35:BA:2121:G:O2'	37:BC:168:LYS:HG2	2.11	0.50
35:BA:2750:A:H2'	35:BA:2752:C:N4	2.27	0.50
35:BA:2767:C:H2'	35:BA:2768:C:H6	1.76	0.50
35:BA:2784:C:H1'	39:BE:37:ARG:HH12	1.77	0.50
35:BA:2885:C:H2'	35:BA:2886:G:O5'	2.12	0.50
38:BD:79:VAL:O	38:BD:113:VAL:HG13	2.11	0.50
38:BD:142:VAL:CG2	38:BD:192:THR:C	2.84	0.50
39:BE:13:ARG:HA	39:BE:22:PRO:HA	1.92	0.50
40:BF:9:ILE:HG12	40:BF:15:SER:N	2.27	0.50
40:BF:59:TYR:HE2	40:BF:85:GLY:O	1.94	0.50
41:BG:7:LEU:O	41:BG:11:TYR:N	2.37	0.50
41:BG:99:MET:O	41:BG:102:PHE:HB3	2.12	0.50
41:BG:100:TRP:O	41:BG:104:GLU:HB2	2.11	0.50
42:BH:63:SER:O	42:BH:65:HIS:O	2.30	0.50
46:BO:104:ARG:HH21	51:BT:33:LYS:CE	2.25	0.50
47:BP:98:GLU:C	47:BP:101:VAL:HG22	2.35	0.50
50:BS:36:TYR:N	50:BS:36:TYR:HD1	2.10	0.50
53:BV:68:LYS:HG3	53:BV:69:LYS:H	1.76	0.50
54:BW:72:LYS:HD3	54:BW:106:ILE:HD12	1.93	0.50
56:BY:15:VAL:O	56:BY:22:GLY:N	2.44	0.50
1:AA:45:U:H2'	1:AA:46:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:877:C:O2'	1:AA:878:G:H5'	2.12	0.50
1:AA:1413:A:H2'	1:AA:1414:U:O4'	2.12	0.50
1:AA:1458:G:OP1	20:AT:35:THR:HG21	2.12	0.50
2:AB:11:LEU:HB3	2:AB:213:LEU:HD11	1.93	0.50
2:AB:189:ASP:C	2:AB:191:ASP:H	2.18	0.50
3:AC:105:GLU:C	3:AC:106:VAL:HG23	2.37	0.50
4:AD:28:SER:HB3	4:AD:29:PRO:CD	2.39	0.50
6:AF:33:TYR:HB2	6:AF:75:LEU:HD13	1.94	0.50
7:AG:38:LEU:O	7:AG:41:ARG:HB2	2.12	0.50
20:AT:103:GLY:O	20:AT:104:LEU:C	2.54	0.50
22:AV:39:C:H2'	22:AV:40:C:C6	2.41	0.50
24:AY:170:ARG:HH22	24:AY:208:GLN:HE22	1.60	0.50
24:AY:202:PRO:O	24:AY:203:GLU:C	2.54	0.50
24:AY:680:PRO:O	24:AY:682:GLN:N	2.41	0.50
28:B3:40:THR:HG23	28:B3:43:ILE:HG12	1.92	0.50
29:B4:1:MET:SD	41:BG:98:ARG:HG3	2.52	0.50
30:B5:36:CYS:SG	30:B5:49:CYS:CB	3.00	0.50
30:B5:58:LEU:HD13	30:B5:59:GLU:N	2.27	0.50
31:B6:10:LEU:HB3	33:B8:34:TRP:HD1	1.77	0.50
32:B7:41:ARG:NH2	35:BA:460:A:OP1	2.44	0.50
35:BA:85:G:N3	35:BA:103:A:C2	2.80	0.50
35:BA:272(H):C:C2'	35:BA:272(I):U:H5"	2.35	0.50
35:BA:319:C:P	40:BF:137:LYS:HZ3	2.35	0.50
35:BA:977:G:H2'	35:BA:978:G:H8	1.77	0.50
35:BA:1198:U:O2	35:BA:1198:U:H2'	2.12	0.50
35:BA:1502:C:H2'	35:BA:1503:U:C6	2.47	0.50
35:BA:1925:C:O2'	35:BA:1926:U:H5'	2.12	0.50
35:BA:2057:A:H2'	35:BA:2058:A:O4'	2.12	0.50
35:BA:2348:U:C2'	35:BA:2349:G:H5'	2.42	0.50
35:BA:2373:G:H2'	35:BA:2374:C:H6	1.74	0.50
35:BA:2419:U:O2'	35:BA:2420:C:H5'	2.11	0.50
35:BA:2450:A:O2'	35:BA:2451:A:H5'	2.11	0.50
35:BA:2476:A:C2	35:BA:2477:C:C6	3.00	0.50
35:BA:2631:G:N2	39:BE:61:ARG:NH1	2.60	0.50
35:BA:2895:U:H3'	35:BA:2895:U:H6	1.76	0.50
38:BD:35:LYS:HG3	38:BD:63:ARG:CG	2.39	0.50
39:BE:95:ILE:H	39:BE:95:ILE:CD1	2.16	0.50
42:BH:148:ILE:O	42:BH:162:ILE:HD11	2.11	0.50
50:BS:89:ARG:HG2	50:BS:89:ARG:NH1	2.12	0.50
51:BT:29:ARG:HD3	51:BT:86:ILE:HG22	1.93	0.50
53:BV:39:LEU:HD13	53:BV:51:VAL:HA	1.91	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:8:LYS:HD2	56:BY:8:LYS:H	1.75	0.50
56:BY:17:SER:OG	56:BY:18:GLY:N	2.44	0.50
57:BZ:10:ARG:NH2	57:BZ:26:GLY:O	2.44	0.50
1:AA:78:G:C2	1:AA:79:G:H1'	2.47	0.50
1:AA:109:A:C6	1:AA:326:G:C6	3.00	0.50
1:AA:312:C:H2'	1:AA:313:A:C8	2.47	0.50
1:AA:376:G:OP1	16:AP:6:LEU:HB2	2.12	0.50
1:AA:391:G:H8	1:AA:391:G:O5'	1.94	0.50
1:AA:674:G:O4'	18:AR:81:PHE:HE2	1.94	0.50
1:AA:1117:G:HO2'	9:AI:104:ARG:HD3	1.74	0.50
1:AA:1202:G:C2'	1:AA:1203:C:H5'	2.42	0.50
1:AA:1244:C:O2'	1:AA:1245:A:H5'	2.12	0.50
1:AA:1378:C:O2	7:AG:76:ARG:NH2	2.45	0.50
2:AB:121:LEU:O	2:AB:127:ILE:HG12	2.12	0.50
2:AB:239:VAL:O	2:AB:240:GLN:HB2	2.11	0.50
3:AC:159:GLY:HA2	3:AC:193:TYR:CD2	2.47	0.50
4:AD:67:ILE:HB	4:AD:68:TYR:HD1	1.77	0.50
9:AI:11:LYS:C	9:AI:13:ALA:H	2.20	0.50
11:AK:108:ILE:N	11:AK:108:ILE:CD1	2.73	0.50
12:AL:39:VAL:C	12:AL:40:VAL:CG2	2.84	0.50
13:AM:15:VAL:HA	13:AM:18:ALA:HB3	1.94	0.50
15:AO:6:GLU:O	15:AO:9:GLN:HB2	2.12	0.50
16:AP:71:ARG:O	16:AP:72:ARG:C	2.54	0.50
18:AR:29:PHE:CD1	18:AR:29:PHE:O	2.65	0.50
24:AY:74:TRP:NE1	24:AY:273:LEU:HB3	2.27	0.50
24:AY:210:ARG:O	24:AY:214:GLU:HG2	2.12	0.50
26:B1:41:ARG:HH22	35:BA:1365:A:H5'	1.76	0.50
27:B2:28:LYS:HB3	27:B2:57:ILE:HD11	1.94	0.50
28:B3:9:VAL:HG23	28:B3:10:LYS:N	2.21	0.50
29:B4:39:CYS:O	29:B4:40:HIS:CB	2.59	0.50
35:BA:37:C:O2	35:BA:37:C:H2'	2.11	0.50
35:BA:190:A:H3'	35:BA:204:A:H61	1.76	0.50
35:BA:1328:G:H2'	35:BA:1330:C:C4	2.46	0.50
35:BA:1380:G:H2'	35:BA:1381:G:H8	1.77	0.50
35:BA:1495:A:H2'	35:BA:1496:A:C2	2.47	0.50
35:BA:1668:A:N3	35:BA:1670:C:C4	2.79	0.50
35:BA:2552:U:O2	35:BA:2554:U:H5'	2.12	0.50
38:BD:93:ALA:HB2	38:BD:107:ALA:HB2	1.94	0.50
38:BD:267:SER:C	38:BD:269:PHE:H	2.19	0.50
39:BE:166:THR:HG22	39:BE:166:THR:O	2.12	0.50
39:BE:188:VAL:HG23	39:BE:189:PRO:HD2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:195:ASP:CG	40:BF:196:LEU:H	2.20	0.50
41:BG:73:ALA:HB3	41:BG:87:PRO:HG3	1.94	0.50
43:BK:37:PHE:C	43:BK:39:LYS:H	2.20	0.50
45:BN:43:THR:O	45:BN:46:VAL:CG1	2.57	0.50
45:BN:87:LEU:O	45:BN:88:GLU:C	2.54	0.50
47:BP:25:SER:O	47:BP:30:THR:OG1	2.27	0.50
51:BT:57:PHE:C	51:BT:58:ASN:ND2	2.65	0.50
52:BU:113:ALA:O	52:BU:115:ALA:N	2.45	0.50
54:BW:79:GLY:C	54:BW:100:THR:CG2	2.84	0.50
55:BX:10:ALA:HB1	55:BX:11:PRO:CD	2.42	0.50
56:BY:29:GLU:HB2	56:BY:38:ILE:HG21	1.94	0.50
56:BY:39:VAL:HG12	56:BY:40:GLU:N	2.26	0.50
57:BZ:107:THR:CG2	57:BZ:111:VAL:HG11	2.42	0.50
1:AA:154:C:O2'	1:AA:155:C:H5'	2.12	0.49
1:AA:403:C:H2'	1:AA:404:U:H6	1.77	0.49
1:AA:745:C:H2'	1:AA:746:A:H8	1.76	0.49
1:AA:961:U:O2'	1:AA:962:C:H5'	2.11	0.49
1:AA:1007:C:C5	1:AA:1008:C:N4	2.80	0.49
1:AA:1131:G:C6	1:AA:1132:C:N4	2.80	0.49
1:AA:1298:C:C5	7:AG:114:ARG:HD3	2.47	0.49
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.77	0.49
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.76	0.49
1:AA:1523:G:OP1	11:AK:123:LYS:HD3	2.12	0.49
2:AB:70:PHE:O	2:AB:92:TYR:HA	2.10	0.49
2:AB:189:ASP:OD1	2:AB:205:ASP:CB	2.56	0.49
3:AC:16:ARG:HG3	3:AC:17:ASP:N	2.26	0.49
4:AD:25:ARG:HH11	4:AD:25:ARG:CG	2.25	0.49
4:AD:62:GLN:O	4:AD:66:ARG:HB2	2.12	0.49
6:AF:26:ILE:O	6:AF:26:ILE:HG22	2.12	0.49
10:AJ:6:ILE:C	10:AJ:6:ILE:CD1	2.84	0.49
10:AJ:42:THR:HG23	10:AJ:67:THR:O	2.12	0.49
12:AL:18:VAL:CG2	12:AL:19:ARG:H	2.04	0.49
12:AL:83:VAL:HG13	12:AL:107:ALA:HB2	1.94	0.49
13:AM:3:ARG:CA	13:AM:9:ILE:HG13	2.42	0.49
13:AM:49:THR:C	13:AM:51:ALA:N	2.68	0.49
14:AN:29:ARG:CG	14:AN:29:ARG:NH1	2.74	0.49
16:AP:25:ARG:NH1	16:AP:25:ARG:CG	2.66	0.49
24:AY:71:THR:HG22	24:AY:80:ASN:OD1	2.12	0.49
24:AY:75:LYS:O	24:AY:77:HIS:HD2	1.93	0.49
24:AY:92:ILE:CG2	24:AY:93:GLU:H	2.25	0.49
24:AY:289:ILE:CD1	24:AY:331:TYR:CZ	2.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:51:VAL:HG22	25:B0:81:VAL:CG2	2.42	0.49
26:B1:71:TYR:CA	26:B1:74:VAL:HG23	2.42	0.49
29:B4:14:ILE:HG22	29:B4:15:ILE:N	2.27	0.49
30:B5:3:LYS:NZ	35:BA:2613:U:C2'	2.75	0.49
30:B5:30:LEU:HD23	30:B5:40:LYS:C	2.37	0.49
35:BA:106:C:O2'	56:BY:2:ARG:NH2	2.45	0.49
35:BA:272(J):C:C3'	35:BA:274:G:H5"	2.29	0.49
35:BA:614(B):G:N3	40:BF:44:ARG:HD2	2.26	0.49
35:BA:764:A:N3	38:BD:213:ARG:NH1	2.59	0.49
35:BA:2467:C:H2'	35:BA:2468:G:O4'	2.12	0.49
35:BA:2531:A:H5"	42:BH:157:TYR:CZ	2.47	0.49
36:BB:81:G:O6	36:BB:96:U:O2	2.30	0.49
37:BC:7:ARG:O	37:BC:11:LEU:HG	2.11	0.49
38:BD:91:ARG:HG2	38:BD:91:ARG:HH11	1.76	0.49
38:BD:155:LEU:HD23	38:BD:177:LEU:HD22	1.94	0.49
39:BE:103:ASP:OD2	39:BE:201:THR:HA	2.12	0.49
41:BG:109:VAL:O	41:BG:112:PRO:HD2	2.12	0.49
47:BP:9:ASN:N	47:BP:10:PRO:HD2	2.27	0.49
47:BP:17:LYS:C	47:BP:19:VAL:N	2.67	0.49
47:BP:102:ARG:HB3	47:BP:102:ARG:CZ	2.42	0.49
51:BT:49:VAL:O	51:BT:49:VAL:HG22	2.12	0.49
52:BU:90:VAL:HG21	53:BV:47:VAL:HG21	1.94	0.49
52:BU:92:ARG:NH1	53:BV:11:GLN:HG3	2.28	0.49
1:AA:40:C:H2'	1:AA:41:G:H8	1.77	0.49
1:AA:203:U:C5'	1:AA:204:U:OP1	2.58	0.49
1:AA:448:A:C4	1:AA:487:A:C2	3.00	0.49
1:AA:573:A:C2	1:AA:574:A:C2	3.00	0.49
1:AA:622:A:H2'	1:AA:623:C:H5'	1.94	0.49
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.48	0.49
1:AA:1430:C:C2	1:AA:1471:G:N2	2.80	0.49
2:AB:8:LYS:HD3	2:AB:217:ARG:HH12	1.77	0.49
2:AB:172:ILE:N	2:AB:172:ILE:CD1	2.54	0.49
2:AB:223:ILE:HA	2:AB:226:ARG:CZ	2.41	0.49
2:AB:235:SER:OG	2:AB:236:TYR:N	2.45	0.49
3:AC:58:GLU:H	3:AC:65:ALA:CB	2.08	0.49
3:AC:60:ALA:O	3:AC:61:ALA:HB2	2.12	0.49
4:AD:138:TYR:CD1	4:AD:138:TYR:C	2.90	0.49
5:AE:20:GLN:NE2	5:AE:21:ALA:O	2.45	0.49
5:AE:128:PRO:O	5:AE:129:ILE:C	2.53	0.49
6:AF:67:MET:CE	6:AF:72:VAL:HA	2.41	0.49
9:AI:90:PRO:HG2	9:AI:91:ASP:N	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:89:ARG:HD2	20:AT:104:LEU:CG	2.43	0.49
20:AT:89:ARG:HA	20:AT:92:LEU:HD12	1.94	0.49
22:AV:72:A:C6	22:AV:73:A:C6	3.00	0.49
24:AY:215:LYS:O	24:AY:219:VAL:N	2.44	0.49
24:AY:513:LYS:N	24:AY:566:THR:O	2.45	0.49
24:AY:519:ARG:HD3	24:AY:677:GLN:HA	1.94	0.49
24:AY:549:ALA:HB2	24:AY:587:SER:OG	2.12	0.49
25:B0:36:ILE:O	25:B0:36:ILE:HG13	2.11	0.49
27:B2:2:LYS:HB3	35:BA:97:C:H5"	1.93	0.49
27:B2:37:PHE:O	27:B2:41:ILE:HG23	2.12	0.49
28:B3:27:GLY:C	28:B3:28:LEU:HD23	2.37	0.49
33:B8:33:ASN:HA	33:B8:36:LYS:HD2	1.93	0.49
35:BA:69:C:O2	35:BA:69:C:H2'	2.12	0.49
35:BA:88:G:H2'	35:BA:88:G:N3	2.27	0.49
35:BA:284:U:H2'	35:BA:285:C:C6	2.48	0.49
35:BA:284:U:H2'	35:BA:285:C:H6	1.77	0.49
35:BA:573:G:O2'	35:BA:574:C:H3'	2.12	0.49
35:BA:979:G:H2'	35:BA:982:C:N4	2.27	0.49
35:BA:1093:G:O2'	35:BA:1094:U:H5'	2.12	0.49
35:BA:1196:C:H2'	35:BA:1197:G:O4'	2.13	0.49
35:BA:1783:A:N1	35:BA:2587:A:N3	2.60	0.49
35:BA:2229:C:O2'	35:BA:2230:G:H5'	2.12	0.49
35:BA:2322:A:O2'	35:BA:2323:G:H5'	2.12	0.49
35:BA:2733:A:H2'	35:BA:2734:A:O4'	2.12	0.49
38:BD:43:ARG:HB3	38:BD:54:ARG:CB	2.40	0.49
38:BD:213:ARG:O	38:BD:215:LEU:N	2.45	0.49
42:BH:83:TYR:HB3	42:BH:134:SER:CA	2.40	0.49
42:BH:85:LYS:CE	42:BH:87:LEU:HG	2.41	0.49
47:BP:16:ARG:NE	47:BP:18:ARG:HB2	2.27	0.49
47:BP:38:GLN:HG3	47:BP:39:LYS:H	1.76	0.49
50:BS:28:VAL:HG13	50:BS:36:TYR:O	2.12	0.49
50:BS:56:LEU:C	50:BS:58:LEU:H	2.20	0.49
50:BS:66:ALA:HB1	50:BS:97:ARG:O	2.13	0.49
52:BU:59:ARG:O	52:BU:62:ILE:N	2.45	0.49
53:BV:2:PHE:O	53:BV:3:ALA:HB3	2.12	0.49
57:BZ:82:ARG:O	57:BZ:83:PRO:C	2.55	0.49
57:BZ:141:VAL:O	57:BZ:142:SER:HB3	2.12	0.49
1:AA:859:A:H2'	1:AA:860:A:O4'	2.12	0.49
2:AB:152:PHE:C	2:AB:152:PHE:HD1	2.20	0.49
2:AB:223:ILE:O	2:AB:226:ARG:N	2.45	0.49
3:AC:136:GLN:O	3:AC:137:ALA:C	2.51	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:142:MET:HE1	3:AC:148:GLY:HA2	1.94	0.49
5:AE:101:ILE:HD13	5:AE:118:ILE:O	2.12	0.49
14:AN:37:PHE:CE2	14:AN:53:LEU:HD22	2.48	0.49
15:AO:10:LYS:HG3	15:AO:11:VAL:N	2.27	0.49
19:AS:10:PHE:CE2	19:AS:37:ARG:O	2.64	0.49
19:AS:29:ARG:O	19:AS:31:ILE:HG22	2.12	0.49
22:AV:27:U:O5'	22:AV:27:U:H6	1.96	0.49
22:AV:32:C:H6	22:AV:32:C:O5'	1.96	0.49
24:AY:20:HIS:N	24:AY:121:VAL:HG11	2.28	0.49
24:AY:39:ILE:HG22	24:AY:41:LYS:N	2.27	0.49
24:AY:227:ILE:HG23	24:AY:237:PRO:CG	2.42	0.49
24:AY:264:LEU:O	24:AY:264:LEU:HD23	2.12	0.49
25:B0:49:LYS:H	25:B0:80:HIS:HD1	1.60	0.49
27:B2:50:ILE:O	27:B2:52:ASP:N	2.44	0.49
28:B3:3:ARG:O	28:B3:4:LEU:HD23	2.13	0.49
31:B6:42:TRP:CH2	35:BA:643:A:N7	2.80	0.49
33:B8:50:LEU:C	33:B8:53:PRO:CD	2.84	0.49
34:B9:31:LYS:HE2	35:BA:2478:A:H5'	1.94	0.49
35:BA:203:C:C3'	35:BA:204:A:H5"	2.42	0.49
35:BA:443:A:H3'	40:BF:45:ARG:HH21	1.77	0.49
35:BA:548:A:C3'	35:BA:549:G:C5'	2.90	0.49
35:BA:1006:C:O2'	45:BN:106:MET:HB3	2.11	0.49
35:BA:1101:U:H2'	35:BA:1102:C:C6	2.47	0.49
35:BA:1335:U:O2'	35:BA:1336:A:H5'	2.12	0.49
35:BA:1539:G:H2'	35:BA:1540:U:O4'	2.12	0.49
35:BA:1666:G:C2'	35:BA:1667:G:H5'	2.43	0.49
35:BA:2037:G:H2'	35:BA:2038:G:C8	2.47	0.49
35:BA:2847:U:OP1	51:BT:98:LYS:HD3	2.12	0.49
36:BB:8:U:H6	36:BB:8:U:H5'	1.78	0.49
36:BB:49:C:OP1	50:BS:96:GLY:HA3	2.13	0.49
39:BE:23:VAL:HA	39:BE:184:VAL:O	2.13	0.49
41:BG:63:ILE:CD1	41:BG:64:THR:HB	2.42	0.49
41:BG:135:LEU:CD1	41:BG:155:MET:HG2	2.36	0.49
45:BN:35:ARG:O	45:BN:36:GLY:C	2.55	0.49
49:BR:7:GLY:C	49:BR:8:ARG:NE	2.70	0.49
49:BR:83:ILE:O	49:BR:87:TYR:CE2	2.65	0.49
49:BR:99:LYS:H	49:BR:99:LYS:CD	1.86	0.49
53:BV:54:GLY:O	53:BV:55:ALA:HB2	2.11	0.49
56:BY:27:VAL:HG12	56:BY:29:GLU:OE1	2.12	0.49
1:AA:1138:G:C6	1:AA:1140:C:C2	3.00	0.49
1:AA:1522:U:H2'	1:AA:1523:G:C8	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:46:GLU:O	3:AC:47:LEU:CB	2.52	0.49
6:AF:33:TYR:HA	6:AF:71:ARG:NH2	2.26	0.49
6:AF:97:PHE:CD2	18:AR:65:ILE:CD1	2.96	0.49
7:AG:79:ARG:O	7:AG:79:ARG:HD2	2.12	0.49
8:AH:35:ILE:HG23	8:AH:111:ILE:HD13	1.95	0.49
10:AJ:50:ILE:HD11	14:AN:41:ARG:HH11	1.77	0.49
20:AT:13:LEU:H	20:AT:13:LEU:CD1	1.90	0.49
24:AY:165:GLN:HA	24:AY:178:ILE:O	2.12	0.49
26:B1:86:SER:C	26:B1:90:ILE:HG12	2.36	0.49
35:BA:579:G:H4'	35:BA:2017:U:H2'	1.93	0.49
35:BA:779:U:H2'	35:BA:780:G:C8	2.47	0.49
35:BA:841:A:C2	35:BA:842:G:C4	3.01	0.49
35:BA:1204:A:N6	35:BA:1240:U:H2'	2.27	0.49
35:BA:1512:U:H2'	35:BA:1513:C:C6	2.48	0.49
35:BA:1692:U:H2'	35:BA:1694:C:C4	2.48	0.49
35:BA:2002:G:OP1	49:BR:17:ARG:NH2	2.45	0.49
35:BA:2009:G:H1'	49:BR:107:ASP:O	2.12	0.49
35:BA:2033:A:O2'	35:BA:2034:U:P	2.70	0.49
35:BA:2134:A:H2'	35:BA:2134:A:N3	2.26	0.49
39:BE:9:VAL:HG13	39:BE:25:VAL:O	2.12	0.49
39:BE:15:PHE:CZ	51:BT:80:SER:HB2	2.47	0.49
41:BG:91:ARG:C	41:BG:91:ARG:CD	2.85	0.49
42:BH:94:TYR:O	42:BH:95:ARG:HB3	2.11	0.49
43:BK:92:GLY:O	43:BK:95:LYS:HE3	2.11	0.49
45:BN:48:MET:H	45:BN:48:MET:HE3	1.75	0.49
46:BO:9:GLU:OE1	46:BO:9:GLU:HA	2.12	0.49
47:BP:112:LEU:HD13	47:BP:112:LEU:C	2.38	0.49
53:BV:62:LEU:H	53:BV:62:LEU:CD2	2.25	0.49
57:BZ:105:VAL:HG13	57:BZ:105:VAL:O	2.11	0.49
1:AA:60:A:C5'	1:AA:331:G:H22	2.25	0.49
1:AA:67:C:H2'	1:AA:68:G:H8	1.78	0.49
1:AA:164:U:H2'	1:AA:165:C:H6	1.76	0.49
1:AA:434:U:H2'	1:AA:435:C:C6	2.47	0.49
1:AA:738:C:O5'	1:AA:738:C:H6	1.94	0.49
1:AA:1298:C:H5"	7:AG:114:ARG:HH22	1.76	0.49
2:AB:194:PRO:HG2	2:AB:195:ASP:H	1.77	0.49
3:AC:83:ARG:C	3:AC:85:ARG:N	2.63	0.49
5:AE:34:VAL:HG11	5:AE:62:ALA:HB1	1.94	0.49
5:AE:149:GLU:O	5:AE:153:LYS:HE2	2.11	0.49
7:AG:78:ARG:HG3	7:AG:79:ARG:H	1.76	0.49
9:AI:88:TYR:O	9:AI:89:ASN:CB	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:84:VAL:HG22	11:AK:110:ASP:HA	1.93	0.49
12:AL:27:LEU:HD21	12:AL:64:TYR:CZ	2.47	0.49
12:AL:37:CYS:O	12:AL:38:THR:HB	2.12	0.49
12:AL:46:LYS:NZ	12:AL:94:PRO:HG3	2.28	0.49
12:AL:117:ARG:HB3	12:AL:122:THR:HB	1.94	0.49
22:AV:70:G:C5	22:AV:71:C:C5	3.01	0.49
24:AY:36:THR:OG1	24:AY:72:CYS:HB2	2.12	0.49
30:B5:27:PRO:HD3	54:BW:23:LEU:HD11	1.93	0.49
35:BA:90:U:O2	35:BA:90:U:C2'	2.58	0.49
35:BA:152:G:H1	35:BA:174:C:H42	1.60	0.49
35:BA:565:C:H4'	35:BA:1253:A:N1	2.27	0.49
35:BA:608:A:H2'	35:BA:609:A:C8	2.47	0.49
35:BA:696:G:C2	35:BA:767:U:O2	2.65	0.49
35:BA:840:C:C2'	35:BA:841:A:H5"	2.42	0.49
35:BA:841:A:H2'	35:BA:842:G:O4'	2.11	0.49
35:BA:1028:A:H61	35:BA:1125:G:H2'	1.76	0.49
35:BA:1128:A:C8	35:BA:2518:A:N6	2.80	0.49
35:BA:1197:G:C4	35:BA:1198:U:C5	3.01	0.49
35:BA:1441:G:O2'	35:BA:1442:G:H5'	2.12	0.49
35:BA:1682:G:O2'	35:BA:1683:C:H5'	2.12	0.49
35:BA:1996:C:OP1	46:BO:31:LYS:HE2	2.13	0.49
35:BA:2009:G:O2'	35:BA:2010:G:H5'	2.13	0.49
35:BA:2010:G:H2'	35:BA:2011:U:H6	1.77	0.49
35:BA:2128:C:O2'	35:BA:2174:C:H4'	2.13	0.49
35:BA:2262:U:O2'	35:BA:2263:C:H5"	2.11	0.49
35:BA:2286:A:H4'	35:BA:2287:A:C5'	2.38	0.49
36:BB:18:G:H2'	36:BB:19:G:H8	1.77	0.49
36:BB:87:G:H1	36:BB:91:C:H42	1.59	0.49
37:BC:79:ALA:HB1	37:BC:83:LYS:HB2	1.92	0.49
38:BD:37:LEU:O	38:BD:38:LYS:C	2.56	0.49
38:BD:134:ARG:HG3	38:BD:135:PHE:CD1	2.45	0.49
38:BD:227:ASN:O	38:BD:230:ASP:N	2.45	0.49
40:BF:187:VAL:HG12	47:BP:7:ARG:NH2	2.27	0.49
41:BG:82:LEU:HG	41:BG:83:ARG:N	2.28	0.49
42:BH:86:GLU:HB3	42:BH:132:ARG:HB3	1.93	0.49
43:BK:75:SER:HA	43:BK:78:ILE:CG2	2.43	0.49
44:BL:58:LEU:HD23	44:BL:58:LEU:C	2.38	0.49
46:BO:17:ARG:O	46:BO:18:LYS:CG	2.52	0.49
47:BP:47:ASP:HB2	47:BP:51:PHE:HB2	1.95	0.49
47:BP:80:TYR:CD1	47:BP:111:ARG:HB3	2.48	0.49
47:BP:136:GLU:C	47:BP:138:LEU:H	2.19	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:146:VAL:O	47:BP:148:LEU:HD12	2.12	0.49
50:BS:84:GLN:O	50:BS:84:GLN:HG3	2.12	0.49
52:BU:85:LYS:O	52:BU:85:LYS:HG2	2.11	0.49
56:BY:94:LYS:HG3	56:BY:102:CYS:SG	2.53	0.49
57:BZ:115:GLY:N	57:BZ:177:PRO:CG	2.73	0.49
1:AA:424:G:O2'	1:AA:425:G:H5'	2.13	0.49
1:AA:595:G:H2'	1:AA:641:U:O4	2.13	0.49
1:AA:674:G:O2'	1:AA:675:A:H5'	2.12	0.49
1:AA:738:C:H2'	1:AA:739:C:H6	1.78	0.49
1:AA:1065:U:O2'	1:AA:1066:C:OP2	2.30	0.49
1:AA:1221:G:H4'	19:AS:77:THR:CG2	2.40	0.49
1:AA:1342:C:H1'	9:AI:124:GLN:HG3	1.94	0.49
1:AA:1353:G:H2'	1:AA:1354:C:C6	2.48	0.49
8:AH:6:ILE:C	8:AH:8:ASP:N	2.67	0.49
9:AI:59:PHE:N	9:AI:59:PHE:HD1	2.08	0.49
11:AK:69:ALA:O	11:AK:70:LYS:C	2.56	0.49
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.95	0.49
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.93	0.49
24:AY:16:GLY:C	24:AY:17:ILE:HD12	2.38	0.49
24:AY:120:THR:C	24:AY:124:GLN:CD	2.80	0.49
24:AY:238:THR:C	24:AY:240:GLU:N	2.67	0.49
26:B1:12:PRO:CG	35:BA:1365:A:H5'	2.43	0.49
26:B1:32:LYS:C	26:B1:33:LYS:HG3	2.36	0.49
27:B2:22:GLU:O	27:B2:23:LYS:C	2.54	0.49
28:B3:43:ILE:HD11	35:BA:927:G:O2'	2.13	0.49
29:B4:1:MET:HG2	41:BG:98:ARG:CD	2.42	0.49
29:B4:1:MET:SD	41:BG:98:ARG:CG	3.01	0.49
30:B5:36:CYS:SG	30:B5:48:GLU:O	2.71	0.49
32:B7:36:GLN:C	32:B7:38:GLY:N	2.69	0.49
35:BA:268:C:H2'	35:BA:268:C:O2	2.13	0.49
35:BA:496:G:H2'	35:BA:497:A:O4'	2.13	0.49
35:BA:618:C:H2'	35:BA:619:G:O4'	2.12	0.49
35:BA:692:C:H2'	35:BA:693:C:C6	2.47	0.49
35:BA:786:C:HO2'	35:BA:787:U:H5'	1.78	0.49
35:BA:809:G:H2'	35:BA:810:U:O4'	2.12	0.49
35:BA:967:C:H2'	35:BA:968:G:H5'	1.95	0.49
35:BA:1344:G:H5'	35:BA:1384:A:N1	2.28	0.49
35:BA:1429:G:H2'	35:BA:1430:C:C6	2.47	0.49
35:BA:1820:U:H3	38:BD:199:ALA:HA	1.76	0.49
35:BA:1930:G:O2'	35:BA:1931:U:H6	1.96	0.49
35:BA:2072:G:C2	35:BA:2073:C:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2072:G:C2	35:BA:2438:U:O2	2.66	0.49
35:BA:2137:C:H2'	35:BA:2138:C:C6	2.47	0.49
35:BA:2291:U:H2'	35:BA:2292:C:H6	1.76	0.49
35:BA:2312:U:H4'	41:BG:71:THR:HG1	1.77	0.49
35:BA:2312:U:OP1	41:BG:73:ALA:HA	2.13	0.49
38:BD:94:LEU:HD23	38:BD:95:LEU:H	1.77	0.49
38:BD:108:PRO:HB3	38:BD:143:HIS:CE1	2.48	0.49
39:BE:4:ILE:HG13	39:BE:5:LEU:H	1.77	0.49
39:BE:27:LEU:HD12	39:BE:181:LEU:HD13	1.93	0.49
40:BF:2:LYS:CG	40:BF:25:PRO:HG2	2.42	0.49
40:BF:7:TYR:CD1	40:BF:8:GLN:N	2.80	0.49
40:BF:152:GLU:O	40:BF:154:VAL:HG23	2.12	0.49
40:BF:158:THR:HG23	40:BF:160:ASN:H	1.78	0.49
43:BK:78:ILE:HD13	43:BK:134:MET:SD	2.52	0.49
45:BN:62:VAL:HG13	45:BN:62:VAL:O	2.12	0.49
47:BP:135:LEU:HD13	47:BP:135:LEU:C	2.37	0.49
49:BR:7:GLY:HA3	49:BR:8:ARG:NH2	2.28	0.49
50:BS:17:ARG:C	50:BS:19:LYS:H	2.21	0.49
52:BU:109:LEU:O	52:BU:112:ARG:HB2	2.12	0.49
52:BU:115:ALA:C	52:BU:117:GLN:H	2.20	0.49
54:BW:26:GLY:HA2	54:BW:71:VAL:O	2.12	0.49
55:BX:29:TRP:CZ2	55:BX:76:ARG:NH2	2.79	0.49
56:BY:66:PRO:O	56:BY:67:LEU:HB3	2.12	0.49
1:AA:193:C:C2	1:AA:194:C:C5	3.00	0.49
1:AA:336:C:O2'	1:AA:337:C:H5'	2.13	0.49
1:AA:664:G:H22	1:AA:741:G:H1	1.58	0.49
1:AA:1348:U:H4'	9:AI:120:ARG:HG3	1.95	0.49
3:AC:83:ARG:HD2	3:AC:87:LEU:HD11	1.94	0.49
12:AL:113:ARG:HG2	12:AL:113:ARG:NH1	2.26	0.49
17:AQ:10:VAL:HG12	17:AQ:12:SER:O	2.13	0.49
20:AT:53:LEU:HD12	20:AT:100:ILE:HG22	1.95	0.49
23:AX:15:A:H5'	23:AX:16:A:P	2.51	0.49
24:AY:15:ILE:C	24:AY:101:LEU:HD13	2.38	0.49
24:AY:177:ILE:O	24:AY:178:ILE:HD12	2.11	0.49
24:AY:678:GLU:HG2	24:AY:679:VAL:N	2.26	0.49
30:B5:19:ARG:HG3	35:BA:2046:G:H5"	1.94	0.49
31:B6:10:LEU:H	31:B6:10:LEU:HD22	1.75	0.49
31:B6:38:LYS:HB3	35:BA:2344:U:H5'	1.95	0.49
34:B9:27:CYS:SG	34:B9:28:GLU:N	2.86	0.49
35:BA:1019:U:N3	35:BA:1142(A):A:N6	2.60	0.49
35:BA:1362:C:H2'	35:BA:1363:C:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1624:G:O2'	35:BA:1625:C:H5'	2.13	0.49
35:BA:1932:A:H2'	35:BA:1933:G:O4'	2.13	0.49
35:BA:2030:A:H5"	35:BA:2031:A:OP1	2.11	0.49
35:BA:2140:C:O2	35:BA:2140:C:H2'	2.13	0.49
35:BA:2523:G:C3'	35:BA:2524:G:H5"	2.42	0.49
36:BB:20:C:H2'	36:BB:21:G:C5'	2.42	0.49
40:BF:156:LEU:HD21	40:BF:163:VAL:HG12	1.95	0.49
43:BK:81:ALA:O	43:BK:82:ALA:HB2	2.11	0.49
49:BR:117:VAL:HG12	49:BR:118:GLU:N	2.27	0.49
51:BT:100:TYR:HD1	51:BT:100:TYR:H	1.59	0.49
54:BW:47:VAL:O	54:BW:47:VAL:CG1	2.61	0.49
56:BY:17:SER:HB3	56:BY:71:LYS:HB3	1.93	0.49
57:BZ:54:HIS:HE1	57:BZ:123:ASP:OD2	1.95	0.49
57:BZ:128:VAL:HG21	57:BZ:132:ASN:HB2	1.94	0.49
1:AA:37:U:H2'	1:AA:38:G:H5'	1.95	0.49
1:AA:402:G:C6	1:AA:403:C:C4	3.01	0.49
1:AA:427:U:O4	1:AA:428:G:C6	2.66	0.49
1:AA:444:C:O2	1:AA:444:C:H2'	2.13	0.49
1:AA:545:C:O2'	1:AA:546:G:H5'	2.12	0.49
1:AA:687:A:N6	1:AA:703:G:H1'	2.27	0.49
1:AA:1107:C:H2'	1:AA:1108:G:O5'	2.13	0.49
1:AA:1163:C:H2'	1:AA:1164:G:H8	1.78	0.49
1:AA:1313:U:OP2	19:AS:6:LYS:HB2	2.11	0.49
4:AD:163:GLU:C	4:AD:165:MET:H	2.21	0.49
9:AI:79:LEU:O	9:AI:82:ALA:N	2.45	0.49
10:AJ:6:ILE:HG13	10:AJ:72:VAL:O	2.13	0.49
12:AL:78:GLN:O	12:AL:79:GLU:C	2.56	0.49
15:AO:76:GLU:C	15:AO:78:TYR:H	2.21	0.49
18:AR:76:LEU:C	18:AR:78:LEU:N	2.65	0.49
19:AS:10:PHE:HZ	19:AS:70:LYS:CE	2.26	0.49
22:AV:41:C:H2'	22:AV:42:G:O4'	2.12	0.49
22:AV:56:C:C4	35:BA:2169:A:N1	2.79	0.49
24:AY:92:ILE:CG2	24:AY:93:GLU:N	2.75	0.49
24:AY:655:TYR:CZ	24:AY:659:LEU:HD23	2.48	0.49
26:B1:86:SER:HB2	26:B1:90:ILE:HD11	1.93	0.49
27:B2:14:ARG:HG3	27:B2:14:ARG:NH1	2.23	0.49
29:B4:36:CYS:SG	29:B4:37:SER:N	2.85	0.49
35:BA:271(Z):C:H1'	35:BA:272(C):G:C1'	2.41	0.49
35:BA:1115:G:H5'	35:BA:1115:G:H8	1.76	0.49
35:BA:1669:A:C2'	35:BA:1670:C:H5'	2.38	0.49
35:BA:2203:U:H5'	35:BA:2205:C:P	2.52	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2688:U:H1'	35:BA:2721:A:H61	1.78	0.49
35:BA:2825:C:H2'	35:BA:2826:A:O4'	2.13	0.49
36:BB:35:U:O2	36:BB:35:U:H2'	2.11	0.49
37:BC:26:ALA:O	37:BC:30:VAL:HG23	2.13	0.49
40:BF:25:PRO:CB	40:BF:119:ARG:HB2	2.42	0.49
46:BO:60:ALA:HA	46:BO:87:ILE:CD1	2.42	0.49
47:BP:85:LEU:HD23	47:BP:115:LEU:O	2.12	0.49
49:BR:72:ASP:CG	49:BR:75:LEU:HB2	2.36	0.49
50:BS:99:LYS:O	50:BS:101:LEU:HG	2.13	0.49
51:BT:24:PRO:HB3	51:BT:99:LEU:HD21	1.94	0.49
51:BT:55:ASN:HD22	51:BT:58:ASN:ND2	2.10	0.49
55:BX:56:THR:C	55:BX:57:LEU:HD13	2.37	0.49
56:BY:76:CYS:SG	56:BY:77:PRO:CD	2.98	0.49
57:BZ:153:SER:HB2	57:BZ:167:PRO:HB3	1.93	0.49
1:AA:99:U:H2'	1:AA:100:C:C6	2.48	0.49
1:AA:950:U:H2'	1:AA:951:G:H8	1.77	0.49
1:AA:972:C:H2'	10:AJ:55:LYS:HG2	1.94	0.49
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.47	0.49
2:AB:214:ILE:O	2:AB:218:ALA:HB2	2.13	0.49
5:AE:101:ILE:CD1	5:AE:119:LEU:HA	2.29	0.49
7:AG:4:ARG:HB3	7:AG:5:ARG:NH1	2.27	0.49
7:AG:6:ARG:O	7:AG:7:ALA:C	2.55	0.49
8:AH:111:ILE:HG22	8:AH:112:LEU:N	2.28	0.49
9:AI:5:TYR:CG	9:AI:6:GLY:N	2.81	0.49
9:AI:126:SER:O	9:AI:128:ARG:HD2	2.13	0.49
14:AN:37:PHE:HE2	14:AN:53:LEU:HD22	1.77	0.49
24:AY:4:LYS:HE2	24:AY:4:LYS:HB2	1.62	0.49
24:AY:141:LYS:O	24:AY:144:ALA:CB	2.61	0.49
24:AY:343:ASN:ND2	24:AY:345:THR:HB	2.28	0.49
28:B3:31:LEU:HD13	28:B3:31:LEU:C	2.38	0.49
32:B7:26:GLY:O	32:B7:30:VAL:HG23	2.13	0.49
33:B8:42:ARG:C	33:B8:44:LYS:H	2.20	0.49
35:BA:271(B):C:O2'	35:BA:271(C):C:H5'	2.13	0.49
35:BA:428:A:H3'	35:BA:429:A:H8	1.78	0.49
35:BA:1090:U:O2	35:BA:1102:C:H1'	2.13	0.49
35:BA:1782:C:H1'	35:BA:2609:U:C5'	2.39	0.49
38:BD:267:SER:C	38:BD:270:ILE:HD11	2.36	0.49
39:BE:110:GLY:HA2	39:BE:162:ALA:H	1.78	0.49
40:BF:46:ARG:HG3	40:BF:46:ARG:NH1	2.28	0.49
40:BF:62:ARG:HH21	40:BF:64:ILE:HA	1.77	0.49
48:BQ:21:THR:HG22	48:BQ:23:GLY:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BS:20:ARG:HG2	50:BS:20:ARG:NH1	2.28	0.49
50:BS:41:ASP:O	50:BS:45:GLY:HA2	2.13	0.49
50:BS:89:ARG:HG2	50:BS:92:TYR:HA	1.93	0.49
51:BT:80:SER:CB	51:BT:81:PRO:CD	2.76	0.49
51:BT:108:ARG:HA	51:BT:111:ARG:NH1	2.27	0.49
55:BX:57:LEU:N	55:BX:57:LEU:CD1	2.76	0.49
56:BY:95:LYS:HG2	56:BY:101:LYS:N	2.27	0.49
57:BZ:84:GLU:O	57:BZ:85:HIS:CB	2.58	0.49
57:BZ:107:THR:HG23	57:BZ:111:VAL:CG1	2.43	0.49
1:AA:399:G:H2'	1:AA:400:C:C6	2.47	0.49
1:AA:439:A:N6	1:AA:496:A:H1'	2.27	0.49
1:AA:1222:G:C2'	1:AA:1223:C:H5'	2.41	0.49
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.47	0.49
1:AA:1423:G:H5'	46:BO:49:ARG:HH22	1.75	0.49
1:AA:1481:U:H2'	1:AA:1482:G:C8	2.48	0.49
2:AB:42:ILE:CD1	2:AB:202:PRO:HB2	2.25	0.49
2:AB:137:ARG:C	2:AB:137:ARG:CD	2.85	0.49
5:AE:127:ASN:O	5:AE:131:ILE:HG12	2.13	0.49
8:AH:32:LYS:C	8:AH:34:GLU:N	2.70	0.49
10:AJ:91:PRO:HB2	10:AJ:94:VAL:HB	1.95	0.49
11:AK:77:MET:C	11:AK:78:GLN:HG3	2.38	0.49
19:AS:35:SER:C	19:AS:37:ARG:N	2.69	0.49
19:AS:72:GLY:O	19:AS:74:PHE:N	2.46	0.49
33:B8:61:LEU:H	33:B8:61:LEU:HG	1.28	0.49
35:BA:260:G:H1'	35:BA:621:A:H1'	1.94	0.49
35:BA:637:A:OP1	47:BP:133:SER:CB	2.59	0.49
35:BA:764:A:C5	38:BD:209:ALA:CB	2.95	0.49
35:BA:1012:U:H3	45:BN:25:ARG:HE	1.60	0.49
35:BA:1175:U:P	35:BA:1176:G:H5"	2.53	0.49
35:BA:1819:A:H2'	38:BD:179:SER:OG	2.13	0.49
35:BA:1973:G:H2'	35:BA:1974:C:H6	1.78	0.49
35:BA:2026:C:C4	35:BA:2027:G:C8	3.00	0.49
35:BA:2402:C:P	35:BA:2402:C:O4'	2.70	0.49
35:BA:2616:C:O2	35:BA:2616:C:H2'	2.12	0.49
35:BA:2735:G:H2'	35:BA:2736:G:H8	1.78	0.49
35:BA:2859:G:C6	35:BA:2860:A:N6	2.81	0.49
37:BC:225:ILE:C	37:BC:225:ILE:HD12	2.37	0.49
38:BD:91:ARG:O	38:BD:107:ALA:HB3	2.13	0.49
39:BE:96:PHE:O	39:BE:175:VAL:HG11	2.13	0.49
40:BF:81:PRO:O	40:BF:83:PHE:N	2.45	0.49
41:BG:152:LEU:O	41:BG:152:LEU:HD23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BK:36:GLU:HG3	43:BK:36:GLU:O	2.12	0.49
48:BQ:1:MET:HE1	48:BQ:45:GLN:N	2.27	0.49
51:BT:126:ALA:C	51:BT:128:GLU:H	2.21	0.49
52:BU:50:ARG:HH21	53:BV:70:ILE:CG2	2.25	0.49
1:AA:41:G:O2'	1:AA:42:G:H5'	2.13	0.48
1:AA:80:G:C3'	1:AA:81:U:H5'	2.34	0.48
1:AA:509:A:H3'	1:AA:510:A:C8	2.48	0.48
1:AA:511:C:N3	1:AA:541:G:N2	2.61	0.48
1:AA:955:U:H2'	1:AA:956:U:H6	1.75	0.48
1:AA:981:U:O5'	1:AA:981:U:H6	1.95	0.48
1:AA:994:A:C2	1:AA:995:C:C5	3.01	0.48
1:AA:1129:C:C5	1:AA:1139:G:C5	3.01	0.48
2:AB:169:LYS:O	2:AB:169:LYS:CD	2.61	0.48
2:AB:207:ALA:O	2:AB:211:ILE:HG13	2.13	0.48
2:AB:220:ASP:O	2:AB:223:ILE:N	2.44	0.48
4:AD:173:TRP:O	4:AD:174:LEU:HD23	2.11	0.48
5:AE:9:LYS:NZ	5:AE:111:GLU:OE1	2.46	0.48
5:AE:31:LEU:CD2	5:AE:43:LEU:HD11	2.43	0.48
13:AM:99:ARG:HB2	13:AM:101:GLN:HE21	1.77	0.48
15:AO:24:SER:O	15:AO:25:THR:C	2.54	0.48
18:AR:44:LEU:O	18:AR:45:SER:C	2.56	0.48
19:AS:19:VAL:HG12	19:AS:20:LEU:CD2	2.43	0.48
20:AT:84:LEU:C	20:AT:84:LEU:HD12	2.38	0.48
20:AT:84:LEU:C	20:AT:86:ARG:H	2.21	0.48
24:AY:122:TRP:CZ2	24:AY:159:ALA:HB2	2.47	0.48
24:AY:225:GLU:H	24:AY:225:GLU:CD	2.21	0.48
24:AY:341:VAL:HG23	24:AY:350:GLU:HB2	1.95	0.48
24:AY:555:LEU:CD1	24:AY:599:PRO:HB2	2.42	0.48
27:B2:22:GLU:C	27:B2:24:LEU:N	2.70	0.48
31:B6:10:LEU:H	31:B6:10:LEU:HD23	1.74	0.48
32:B7:28:ARG:HG3	32:B7:28:ARG:NH1	2.10	0.48
35:BA:112:U:C2'	35:BA:113:G:H5'	2.44	0.48
35:BA:234:C:H2'	35:BA:235:U:H6	1.78	0.48
35:BA:551:G:H2'	35:BA:552:G:H5'	1.95	0.48
35:BA:614(B):G:H1'	40:BF:44:ARG:HD2	1.95	0.48
35:BA:775:G:O6	35:BA:787:U:H2'	2.12	0.48
35:BA:1582:C:O2'	35:BA:1583:A:H5'	2.12	0.48
35:BA:1930:G:O2'	35:BA:1931:U:C6	2.65	0.48
35:BA:2057:A:O2'	35:BA:2058:A:H5'	2.12	0.48
35:BA:2093:G:C6	35:BA:2225:A:C8	3.01	0.48
37:BC:212:SER:OG	37:BC:214:TYR:HE1	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:11:PRO:C	38:BD:13:ARG:N	2.71	0.48
39:BE:111:ARG:HD2	39:BE:160:TYR:CE2	2.47	0.48
39:BE:116:VAL:O	39:BE:117:MET:CB	2.55	0.48
40:BF:24:LEU:CB	40:BF:25:PRO:HD2	2.31	0.48
41:BG:14:GLU:C	41:BG:17:PRO:HD2	2.37	0.48
41:BG:116:ASP:O	41:BG:117:PHE:HB3	2.12	0.48
43:BK:58:THR:HB	43:BK:66:THR:HG23	1.92	0.48
43:BK:71:THR:HB	43:BK:72:PRO:CD	2.38	0.48
51:BT:11:GLU:C	51:BT:13:ARG:N	2.66	0.48
51:BT:16:ARG:HD2	51:BT:18:ASP:OD1	2.13	0.48
51:BT:128:GLU:O	51:BT:130:ALA:N	2.45	0.48
52:BU:90:VAL:HG12	52:BU:91:ASP:N	2.28	0.48
53:BV:39:LEU:O	53:BV:40:LEU:HB2	2.13	0.48
56:BY:38:ILE:HA	56:BY:38:ILE:HD12	1.75	0.48
57:BZ:15:PRO:HA	57:BZ:18:LEU:HD13	1.95	0.48
1:AA:252:U:C4	1:AA:253:U:O4	2.66	0.48
1:AA:363:A:H5'	12:AL:34:ARG:HB2	1.95	0.48
1:AA:368:U:C5'	24:AY:354:ARG:NH2	2.77	0.48
1:AA:389:A:H2'	1:AA:390:C:H5'	1.95	0.48
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.47	0.48
1:AA:1191:A:P	3:AC:3:ASN:HD21	2.36	0.48
1:AA:1195:C:H2'	1:AA:1197:G:O4'	2.13	0.48
1:AA:1298:C:O2'	1:AA:1299:A:C2	2.66	0.48
1:AA:1489:G:H2'	1:AA:1490:C:C5'	2.32	0.48
2:AB:58:ILE:O	2:AB:61:LEU:HB3	2.13	0.48
2:AB:100:GLY:C	2:AB:102:LEU:N	2.71	0.48
2:AB:112:VAL:HG22	2:AB:149:LEU:CD1	2.37	0.48
3:AC:113:ALA:HB3	3:AC:183:ASP:OD1	2.12	0.48
4:AD:129:ASN:ND2	4:AD:129:ASN:N	2.56	0.48
5:AE:36:ASP:O	5:AE:37:ARG:CB	2.61	0.48
9:AI:112:LYS:HD3	9:AI:112:LYS:C	2.38	0.48
9:AI:125:TYR:OH	9:AI:127:LYS:HG3	2.12	0.48
10:AJ:40:LEU:CB	10:AJ:41:PRO:CD	2.90	0.48
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.94	0.48
16:AP:27:LYS:HG2	16:AP:30:GLY:HA3	1.95	0.48
17:AQ:67:LYS:O	17:AQ:69:LYS:N	2.40	0.48
23:AX:13:A:C3'	23:AX:14:A:C5'	2.80	0.48
24:AY:121:VAL:CA	24:AY:124:GLN:NE2	2.77	0.48
24:AY:191:ASP:O	24:AY:266:ASN:ND2	2.46	0.48
24:AY:252:ASP:HB2	24:AY:254:LYS:CG	2.42	0.48
26:B1:48:LYS:NZ	35:BA:1363:C:OP1	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:53:VAL:HG12	26:B1:54:ALA:N	2.27	0.48
27:B2:63:VAL:HA	27:B2:66:GLU:HG2	1.95	0.48
28:B3:46:ASN:O	28:B3:47:VAL:C	2.56	0.48
31:B6:9:LEU:HD12	31:B6:28:ARG:HG3	1.95	0.48
33:B8:5:LYS:HG2	35:BA:242:G:C8	2.49	0.48
35:BA:83:G:H22	35:BA:102:G:H2'	1.76	0.48
35:BA:173:G:N3	35:BA:173:G:H2'	2.27	0.48
35:BA:760:G:H2'	35:BA:761:A:H5'	1.94	0.48
35:BA:775:G:C4	35:BA:794:G:C8	3.02	0.48
35:BA:992:C:H2'	35:BA:993:G:H8	1.78	0.48
35:BA:1285:G:C2'	35:BA:1286:A:H5'	2.38	0.48
35:BA:1438:U:H6	35:BA:1438:U:O5'	1.96	0.48
35:BA:1451:C:H4'	35:BA:1452:A:C8	2.48	0.48
35:BA:1614:A:N1	54:BW:91:GLY:HA2	2.28	0.48
36:BB:79:C:O5'	36:BB:79:C:H6	1.97	0.48
37:BC:149:ASN:HD21	37:BC:153:ILE:HD11	1.78	0.48
38:BD:142:VAL:HG23	38:BD:193:VAL:N	2.28	0.48
39:BE:186:GLY:O	39:BE:187:ALA:HB3	2.12	0.48
40:BF:11:VAL:CG1	40:BF:12:LEU:H	2.22	0.48
41:BG:58:GLN:C	41:BG:60:LEU:N	2.69	0.48
42:BH:153:LYS:HG3	42:BH:154:PRO:HD2	1.93	0.48
45:BN:14:VAL:HG11	45:BN:137:LYS:HD2	1.95	0.48
45:BN:42:TRP:CZ3	45:BN:48:MET:HE1	2.48	0.48
45:BN:97:ARG:O	45:BN:98:VAL:C	2.53	0.48
46:BO:37:ASP:O	46:BO:62:VAL:HG23	2.13	0.48
46:BO:111:PHE:O	46:BO:115:VAL:HG23	2.13	0.48
47:BP:38:GLN:HG3	47:BP:41:ARG:CG	2.43	0.48
49:BR:78:LYS:O	49:BR:78:LYS:HG2	2.13	0.48
49:BR:106:GLY:O	49:BR:107:ASP:HB3	2.13	0.48
51:BT:89:VAL:HG12	51:BT:91:ARG:HG2	1.94	0.48
52:BU:49:HIS:CA	52:BU:52:ARG:HB2	2.41	0.48
55:BX:22:ALA:HB3	55:BX:23:GLU:OE2	2.13	0.48
56:BY:15:VAL:O	56:BY:22:GLY:HA2	2.12	0.48
1:AA:15:G:H4'	5:AE:24:ARG:HH12	1.78	0.48
1:AA:335:C:O2'	1:AA:336:C:H5'	2.14	0.48
1:AA:678:U:H2'	1:AA:679:C:C6	2.49	0.48
1:AA:796:C:N4	1:AA:797:C:N4	2.62	0.48
1:AA:1226:C:OP2	13:AM:103:THR:OG1	2.28	0.48
1:AA:1529:G:H4'	1:AA:1530:G:OP2	2.12	0.48
5:AE:20:GLN:O	5:AE:21:ALA:C	2.57	0.48
5:AE:76:ILE:HG13	5:AE:142:LEU:CD1	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:27:THR:CG2	9:AI:30:GLY:HA2	2.43	0.48
14:AN:26:ARG:HD3	14:AN:43:CYS:HB3	1.96	0.48
24:AY:486:THR:HG23	24:AY:600:VAL:HG13	1.95	0.48
24:AY:504:ARG:O	24:AY:505:GLY:C	2.56	0.48
58:AY:701:FUA:O1	58:AY:701:FUA:C20	2.61	0.48
32:B7:5:TRP:CH2	35:BA:686:G:N7	2.81	0.48
35:BA:274:G:N3	35:BA:274:G:C2'	2.75	0.48
35:BA:281:G:N2	35:BA:358:U:C5	2.82	0.48
35:BA:320:A:H2'	40:BF:136:THR:OG1	2.12	0.48
35:BA:545:C:C2'	35:BA:545:C:O2	2.61	0.48
35:BA:717:G:H2'	35:BA:718:A:O4'	2.13	0.48
35:BA:1015:G:H2'	35:BA:1016:G:C8	2.49	0.48
35:BA:1232:G:H2'	35:BA:1233:C:H6	1.76	0.48
35:BA:1512:U:H2'	35:BA:1513:C:H6	1.78	0.48
35:BA:1593:G:H2'	35:BA:1594:G:C8	2.48	0.48
35:BA:1614:A:H62	54:BW:93:ALA:HB2	1.78	0.48
39:BE:77:ILE:C	39:BE:78:LEU:HG	2.38	0.48
42:BH:45:VAL:O	42:BH:47:GLU:N	2.46	0.48
45:BN:45:ASN:ND2	45:BN:45:ASN:N	2.51	0.48
45:BN:94:HIS:N	45:BN:95:PRO:HD3	2.29	0.48
48:BQ:65:PHE:N	48:BQ:65:PHE:HD1	2.11	0.48
50:BS:74:ALA:CB	50:BS:103:GLU:HG3	2.43	0.48
51:BT:65:LYS:HA	51:BT:65:LYS:HZ2	1.77	0.48
52:BU:50:ARG:C	52:BU:52:ARG:N	2.68	0.48
53:BV:72:VAL:HG23	53:BV:72:VAL:O	2.14	0.48
56:BY:51:VAL:C	56:BY:53:PRO:CD	2.86	0.48
56:BY:54:LYS:C	56:BY:55:TYR:HD1	2.20	0.48
1:AA:41:G:H2'	1:AA:42:G:C8	2.47	0.48
1:AA:322:C:H6	1:AA:322:C:O5'	1.95	0.48
1:AA:923:A:H2'	1:AA:924:C:C6	2.48	0.48
1:AA:955:U:O2'	1:AA:956:U:H5'	2.12	0.48
1:AA:981:U:H2'	1:AA:982:U:C5	2.48	0.48
1:AA:1084:G:OP1	1:AA:1086:U:C4	2.66	0.48
1:AA:1121:U:C4	1:AA:1122:U:C4	3.02	0.48
2:AB:162:ILE:HD11	2:AB:164:VAL:CG2	2.44	0.48
4:AD:107:ARG:HD2	4:AD:173:TRP:CZ2	2.48	0.48
6:AF:89:MET:HE1	18:AR:76:LEU:HD22	1.94	0.48
8:AH:51:VAL:HG11	8:AH:60:ARG:HB2	1.95	0.48
11:AK:30:VAL:HG23	11:AK:68:ALA:HB2	1.95	0.48
11:AK:72:ALA:CB	11:AK:77:MET:HE3	2.42	0.48
12:AL:39:VAL:C	12:AL:40:VAL:HG23	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:16:ASP:N	13:AM:16:ASP:OD1	2.45	0.48
14:AN:12:ARG:C	14:AN:14:PRO:HD3	2.38	0.48
17:AQ:60:ILE:C	17:AQ:71:PHE:CD2	2.89	0.48
19:AS:8:GLY:C	19:AS:9:VAL:CG2	2.84	0.48
20:AT:33:ILE:HD13	20:AT:63:ILE:HG12	1.96	0.48
31:B6:7:ILE:HA	31:B6:28:ARG:HD3	1.95	0.48
31:B6:27:LYS:CD	31:B6:30:THR:HB	2.34	0.48
32:B7:3:ARG:NH1	35:BA:789:A:C2	2.81	0.48
34:B9:29:ASN:C	34:B9:31:LYS:N	2.70	0.48
35:BA:71:A:H4'	35:BA:72:U:H5"	1.95	0.48
35:BA:455:C:N3	35:BA:472:A:H2'	2.28	0.48
35:BA:848:G:N9	35:BA:933:A:H8	2.11	0.48
35:BA:856:C:H2'	35:BA:857:C:H6	1.78	0.48
35:BA:899:A:H8	35:BA:899:A:O5'	1.96	0.48
35:BA:1196:C:O2'	35:BA:1197:G:H5'	2.13	0.48
35:BA:1248:G:OP2	40:BF:92:PRO:HB3	2.13	0.48
35:BA:1751:C:O2'	35:BA:1752:C:H5'	2.13	0.48
35:BA:2193:G:H2'	35:BA:2194:G:H5'	1.95	0.48
41:BG:41:GLN:HB2	41:BG:90:LEU:HB3	1.95	0.48
41:BG:58:GLN:C	41:BG:60:LEU:H	2.21	0.48
41:BG:78:SER:HA	41:BG:83:ARG:HE	1.77	0.48
42:BH:44:VAL:HG12	42:BH:45:VAL:H	1.79	0.48
42:BH:66:GLY:CA	42:BH:69:ARG:HB3	2.42	0.48
43:BK:108:ALA:O	43:BK:112:MET:HB3	2.14	0.48
44:BL:108:LYS:HG3	44:BL:109:ALA:N	2.28	0.48
45:BN:97:ARG:O	45:BN:101:HIS:HB2	2.14	0.48
46:BO:2:ILE:HB	46:BO:33:ALA:O	2.14	0.48
47:BP:112:LEU:HD22	47:BP:112:LEU:C	2.38	0.48
49:BR:10:LEU:CD2	49:BR:17:ARG:HD3	2.43	0.48
51:BT:49:VAL:C	51:BT:50:ILE:HD12	2.38	0.48
55:BX:61:GLY:HA3	55:BX:73:ARG:O	2.12	0.48
56:BY:17:SER:HB3	56:BY:71:LYS:HD2	1.94	0.48
56:BY:55:TYR:O	56:BY:56:PRO:C	2.55	0.48
57:BZ:9:TYR:HE1	57:BZ:61:LEU:HD13	1.78	0.48
1:AA:423:G:H2'	1:AA:424:G:C5'	2.43	0.48
1:AA:815:A:C2	1:AA:1529:G:C2	3.00	0.48
1:AA:1248:A:C4	1:AA:1249:C:C5	3.02	0.48
2:AB:31:TYR:O	2:AB:42:ILE:HG13	2.14	0.48
3:AC:5:ILE:HG12	3:AC:10:PHE:HB2	1.95	0.48
3:AC:140:ARG:O	3:AC:144:SER:N	2.44	0.48
4:AD:122:ARG:HH12	4:AD:134:ASP:HB2	1.73	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:126:ILE:N	4:AD:126:ILE:CD1	2.76	0.48
6:AF:30:LEU:HD13	6:AF:37:VAL:CG2	2.28	0.48
10:AJ:22:LYS:NZ	10:AJ:88:LEU:HD23	2.29	0.48
10:AJ:81:THR:OG1	10:AJ:82:ILE:HD13	2.14	0.48
20:AT:43:LEU:HD22	20:AT:48:LYS:HG3	1.95	0.48
24:AY:18:ALA:HA	24:AY:85:PRO:CG	2.42	0.48
24:AY:120:THR:O	24:AY:121:VAL:C	2.56	0.48
24:AY:156:ARG:NH2	24:AY:666:ARG:NH1	2.62	0.48
24:AY:207:ASP:C	24:AY:207:ASP:OD1	2.56	0.48
24:AY:293:THR:CB	24:AY:294:PRO:HD2	2.43	0.48
24:AY:312:LEU:O	24:AY:328:ILE:HB	2.13	0.48
26:B1:5:CYS:O	26:B1:9:GLY:HA2	2.14	0.48
26:B1:18:ILE:CD1	26:B1:37:ILE:HG12	2.43	0.48
27:B2:58:ALA:O	27:B2:59:ARG:C	2.57	0.48
30:B5:39:MET:HB2	54:BW:34:ASN:ND2	2.28	0.48
30:B5:44:THR:CG2	30:B5:45:VAL:N	2.76	0.48
32:B7:45:ALA:C	32:B7:46:VAL:HG23	2.38	0.48
33:B8:58:ILE:CG2	47:BP:49:ARG:HD3	2.44	0.48
35:BA:80:G:H4'	35:BA:346:A:C8	2.49	0.48
35:BA:271(P):C:H2'	35:BA:271(Q):G:O4'	2.14	0.48
35:BA:360:G:O2'	35:BA:361:G:H5'	2.13	0.48
35:BA:960:A:C8	35:BA:962:G:C8	3.01	0.48
35:BA:1348:G:C3'	35:BA:1349:A:H5"	2.42	0.48
35:BA:1494:A:O2'	35:BA:1495:A:OP1	2.28	0.48
35:BA:1506:C:O2	35:BA:1506:C:H2'	2.14	0.48
35:BA:1623:G:H2'	35:BA:1624:G:H8	1.78	0.48
35:BA:1943:U:O2'	35:BA:1944:U:H3'	2.13	0.48
35:BA:2307:G:H3'	35:BA:2308:G:C5'	2.43	0.48
35:BA:2521:C:N4	35:BA:2544:G:H1	2.05	0.48
36:BB:39:A:C2	36:BB:44:G:C2	3.01	0.48
37:BC:29:LEU:C	37:BC:29:LEU:CD2	2.86	0.48
37:BC:223:VAL:HG12	37:BC:225:ILE:HG23	1.94	0.48
38:BD:73:VAL:O	38:BD:75:ILE:HG12	2.12	0.48
40:BF:44:ARG:HG3	40:BF:44:ARG:O	2.13	0.48
43:BK:59:ILE:CG1	43:BK:60:TYR:N	2.71	0.48
47:BP:47:ASP:OD2	47:BP:50:ARG:NH1	2.45	0.48
51:BT:14:TYR:N	51:BT:14:TYR:HD1	2.11	0.48
52:BU:109:LEU:O	52:BU:112:ARG:N	2.45	0.48
54:BW:10:VAL:O	54:BW:11:ARG:CB	2.60	0.48
54:BW:10:VAL:O	54:BW:11:ARG:HB2	2.13	0.48
56:BY:9:LYS:O	56:BY:28:LYS:HE2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:52:SER:N	56:BY:53:PRO:HD2	2.27	0.48
1:AA:260:G:H2'	1:AA:261:U:C6	2.48	0.48
1:AA:368:U:C5'	24:AY:354:ARG:HH21	2.27	0.48
1:AA:519:C:H2'	1:AA:520:A:O4'	2.14	0.48
1:AA:1118:C:H42	1:AA:1155:G:H1	1.60	0.48
1:AA:1227:A:N3	13:AM:117:VAL:HG11	2.29	0.48
1:AA:1466:C:H2'	1:AA:1467:G:O4'	2.13	0.48
2:AB:60:ASP:C	2:AB:64:ARG:HH21	2.21	0.48
2:AB:92:TYR:C	2:AB:92:TYR:CD1	2.91	0.48
2:AB:102:LEU:O	2:AB:105:PHE:HB2	2.14	0.48
2:AB:181:PHE:N	2:AB:181:PHE:CD1	2.82	0.48
3:AC:29:TYR:C	3:AC:29:TYR:CD1	2.91	0.48
3:AC:84:ILE:HD11	3:AC:88:ARG:HH21	1.78	0.48
13:AM:19:LEU:O	13:AM:20:THR:C	2.56	0.48
13:AM:56:LEU:C	13:AM:56:LEU:CD1	2.84	0.48
18:AR:26:LEU:CD2	18:AR:42:ARG:NH1	2.77	0.48
19:AS:13:ASP:C	19:AS:15:LEU:H	2.22	0.48
22:AV:29:G:O2'	22:AV:30:G:H5'	2.13	0.48
24:AY:138:LYS:HD3	24:AY:141:LYS:HZ1	1.79	0.48
24:AY:230:LYS:NZ	24:AY:230:LYS:HB2	2.29	0.48
24:AY:309:LEU:HD12	24:AY:310:ALA:N	2.28	0.48
24:AY:485:GLU:CD	24:AY:555:LEU:HB2	2.39	0.48
29:B4:53:GLU:HB3	29:B4:55:ARG:NE	2.29	0.48
30:B5:19:ARG:HD2	35:BA:1266:G:OP1	2.13	0.48
32:B7:8:ASN:HD22	32:B7:9:ARG:N	2.11	0.48
33:B8:6:THR:HG21	33:B8:63:PRO:HD3	1.95	0.48
35:BA:17:G:H2'	35:BA:18:C:C6	2.48	0.48
35:BA:690:G:H2'	35:BA:691:C:C6	2.47	0.48
35:BA:2140:C:H1'	35:BA:2152:G:N2	2.29	0.48
35:BA:2468:G:C4	35:BA:2481:G:C2	3.01	0.48
35:BA:2481:G:O2'	35:BA:2482:G:P	2.71	0.48
36:BB:21:G:O2'	36:BB:22:U:C5'	2.61	0.48
36:BB:95:C:C2'	36:BB:96:U:H5'	2.44	0.48
38:BD:276:LYS:HD3	38:BD:276:LYS:O	2.13	0.48
42:BH:76:VAL:O	42:BH:79:VAL:HG22	2.12	0.48
43:BK:8:VAL:HB	43:BK:57:ILE:O	2.14	0.48
43:BK:55:VAL:HG21	43:BK:67:PHE:HD2	1.78	0.48
47:BP:71:VAL:O	47:BP:71:VAL:HG22	2.12	0.48
49:BR:33:ARG:CG	49:BR:115:GLU:HG3	2.44	0.48
52:BU:56:ASP:O	52:BU:59:ARG:HB2	2.14	0.48
56:BY:84:ARG:HB2	56:BY:97:ARG:HB2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:151:A:H2'	1:AA:152:A:H5'	1.96	0.48
1:AA:491:G:C4	1:AA:492:G:C8	3.02	0.48
1:AA:537:G:H2'	1:AA:538:G:C8	2.48	0.48
1:AA:986:A:H2'	1:AA:987:G:C8	2.48	0.48
1:AA:1325:C:C2	1:AA:1326:C:C5	3.02	0.48
3:AC:83:ARG:C	3:AC:85:ARG:H	2.20	0.48
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.94	0.48
5:AE:146:ALA:C	5:AE:148:VAL:H	2.21	0.48
11:AK:23:ALA:O	11:AK:86:GLY:HA3	2.13	0.48
14:AN:41:ARG:HD2	14:AN:41:ARG:C	2.39	0.48
14:AN:60:SER:O	14:AN:61:TRP:HB3	2.13	0.48
24:AY:78:ARG:HH11	24:AY:78:ARG:HG3	1.79	0.48
24:AY:150:ILE:O	24:AY:154:GLN:HG2	2.14	0.48
24:AY:471:LYS:O	24:AY:471:LYS:HG2	2.14	0.48
24:AY:523:PHE:CE1	24:AY:550:MET:SD	3.07	0.48
24:AY:548:GLU:O	24:AY:551:GLN:HG2	2.14	0.48
24:AY:662:LYS:NZ	42:BH:175:LYS:HE3	2.29	0.48
58:AY:701:FUA:H231	58:AY:701:FUA:C12	2.41	0.48
26:B1:4:VAL:HA	26:B1:10:LYS:O	2.13	0.48
26:B1:41:ARG:HH22	35:BA:1365:A:C5'	2.27	0.48
27:B2:61:LEU:HA	27:B2:64:LEU:HB3	1.96	0.48
29:B4:9:LEU:CD1	29:B4:10:VAL:H	2.27	0.48
31:B6:43:CYS:O	31:B6:44:ARG:CB	2.60	0.48
34:B9:11:CYS:O	34:B9:11:CYS:SG	2.71	0.48
35:BA:11:G:H2'	35:BA:12:U:C6	2.47	0.48
35:BA:18:C:O2'	52:BU:23:GLY:HA2	2.14	0.48
35:BA:52:A:C2'	35:BA:53:A:H5'	2.44	0.48
35:BA:302:C:O2'	35:BA:303:U:H5'	2.14	0.48
35:BA:329:G:H22	56:BY:19:LYS:HE3	1.79	0.48
35:BA:637:A:C6	35:BA:652:C:H4'	2.48	0.48
35:BA:677:A:O2'	35:BA:678:C:H5'	2.13	0.48
35:BA:706:A:H2'	35:BA:707:G:O4'	2.13	0.48
35:BA:814:C:N3	35:BA:1193:G:O6	2.47	0.48
35:BA:860:U:H5	35:BA:917:A:N7	2.11	0.48
35:BA:881:G:H2'	35:BA:882:G:H5'	1.95	0.48
35:BA:1141:U:H1'	35:BA:1142(A):A:C2	2.49	0.48
35:BA:1174:A:H5'	35:BA:1175:U:H5"	1.95	0.48
35:BA:1203:G:H4'	47:BP:7:ARG:HD2	1.96	0.48
35:BA:1258:C:O4'	40:BF:84:VAL:HG21	2.14	0.48
35:BA:1317:A:H2'	35:BA:1318:C:C6	2.48	0.48
35:BA:1771:C:H2'	35:BA:1772:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2193:G:O2'	35:BA:2194:G:H5'	2.13	0.48
36:BB:114:C:H2'	36:BB:115:G:C8	2.48	0.48
38:BD:245:PRO:O	38:BD:245:PRO:HG2	2.13	0.48
39:BE:93:VAL:C	39:BE:95:ILE:H	2.20	0.48
39:BE:94:GLU:OE1	39:BE:177:PRO:HB3	2.13	0.48
40:BF:185:ASP:HA	40:BF:188:ARG:HD3	1.96	0.48
42:BH:70:THR:HG22	42:BH:74:ASN:ND2	2.28	0.48
45:BN:21:LYS:HB3	45:BN:26:LEU:HD23	1.96	0.48
53:BV:32:THR:OG1	53:BV:60:GLU:HG3	2.13	0.48
53:BV:39:LEU:HD12	53:BV:50:PRO:O	2.14	0.48
1:AA:108:G:H5'	1:AA:109:A:H5"	1.95	0.48
1:AA:152:A:H2'	1:AA:153:C:H5'	1.94	0.48
1:AA:189(A):C:O2'	1:AA:189(B):C:H5'	2.14	0.48
1:AA:256:U:OP1	17:AQ:17:LYS:NZ	2.41	0.48
1:AA:304:U:H2'	1:AA:305:G:C8	2.48	0.48
1:AA:448:A:P	1:AA:485:G:H22	2.36	0.48
1:AA:1248:A:H2'	1:AA:1249:C:H6	1.79	0.48
1:AA:1263:C:H2'	1:AA:1264:C:H6	1.78	0.48
2:AB:117:GLU:O	2:AB:120:ALA:HB3	2.14	0.48
2:AB:129:GLU:O	2:AB:130:ARG:CB	2.61	0.48
2:AB:178:ARG:HD2	8:AH:71:GLY:C	2.39	0.48
3:AC:10:PHE:CZ	3:AC:178:LEU:CD1	2.97	0.48
3:AC:43:LEU:O	3:AC:47:LEU:HB2	2.14	0.48
4:AD:120:LEU:O	4:AD:121:VAL:C	2.53	0.48
5:AE:101:ILE:O	5:AE:101:ILE:CG1	2.62	0.48
7:AG:64:GLN:CG	7:AG:128:ALA:HB1	2.43	0.48
8:AH:9:MET:O	8:AH:13:ILE:HG12	2.14	0.48
9:AI:37:PHE:HB3	9:AI:43:ALA:HB2	1.95	0.48
11:AK:13:GLN:HG2	11:AK:75:TYR:O	2.14	0.48
12:AL:89:ARG:HA	12:AL:97:ARG:HA	1.96	0.48
16:AP:18:ARG:HD2	16:AP:32:TYR:HE2	1.79	0.48
19:AS:6:LYS:HD2	19:AS:6:LYS:C	2.38	0.48
24:AY:9:LEU:O	24:AY:11:ARG:N	2.47	0.48
24:AY:238:THR:CG2	24:AY:241:GLU:HG2	2.35	0.48
24:AY:359:HIS:C	24:AY:361:ASN:H	2.22	0.48
27:B2:16:LEU:O	27:B2:20:GLU:HB3	2.13	0.48
27:B2:50:ILE:C	27:B2:52:ASP:N	2.62	0.48
35:BA:52:A:C6	35:BA:118:A:C2	3.02	0.48
35:BA:67:U:H2'	35:BA:68:G:H8	1.78	0.48
35:BA:812:C:C2	35:BA:813:U:C5	3.02	0.48
35:BA:1080:C:H2'	35:BA:1081:U:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1216:G:C5	35:BA:1217:C:C5	3.01	0.48
35:BA:1416:G:O2'	35:BA:1417:C:H5	1.96	0.48
35:BA:1692:U:H2'	35:BA:1694:C:C5	2.49	0.48
35:BA:1820:U:O2	38:BD:201:HIS:HB3	2.13	0.48
35:BA:2008:C:H2'	35:BA:2009:G:H8	1.79	0.48
35:BA:2190:G:H5'	35:BA:2190:G:C8	2.48	0.48
35:BA:2394:C:P	47:BP:63:PRO:HD2	2.53	0.48
35:BA:2482:G:C2	35:BA:2483:C:H1'	2.49	0.48
35:BA:2579:C:O3'	39:BE:131:ALA:HB2	2.14	0.48
35:BA:2617:C:H2'	35:BA:2618:G:C5'	2.44	0.48
35:BA:2873:A:C4'	49:BR:8:ARG:NH2	2.77	0.48
38:BD:175:LEU:HD23	38:BD:175:LEU:HA	1.62	0.48
38:BD:200:ASP:O	38:BD:201:HIS:C	2.53	0.48
40:BF:9:ILE:HG23	40:BF:13:SER:O	2.14	0.48
45:BN:58:ASP:C	45:BN:60:ILE:H	2.21	0.48
47:BP:24:GLY:HA3	47:BP:33:ARG:HH12	1.78	0.48
57:BZ:26:GLY:C	57:BZ:27:VAL:HG12	2.38	0.48
1:AA:410:G:C2	1:AA:429:U:C2	3.02	0.48
1:AA:644:G:C5	1:AA:645:C:C5	3.02	0.48
1:AA:781:A:H3'	1:AA:782:A:H5'	1.94	0.48
1:AA:802:A:H3'	1:AA:803:G:H8	1.77	0.48
1:AA:1058:G:H2'	1:AA:1059:C:C6	2.49	0.48
1:AA:1073:U:O2'	1:AA:1074:G:H5'	2.13	0.48
1:AA:1293:G:O2'	1:AA:1294:G:H5'	2.13	0.48
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.48	0.48
2:AB:31:TYR:CE2	2:AB:200:ILE:HD12	2.46	0.48
2:AB:112:VAL:C	2:AB:114:ARG:N	2.71	0.48
5:AE:31:LEU:HD22	5:AE:43:LEU:HD11	1.96	0.48
5:AE:76:ILE:HG12	5:AE:77:PRO:HD2	1.94	0.48
7:AG:111:ARG:NH1	7:AG:113:GLU:OE2	2.46	0.48
12:AL:28:LYS:C	12:AL:30:ALA:N	2.70	0.48
19:AS:6:LYS:H	19:AS:6:LYS:HZ2	1.61	0.48
22:AV:28:C:H2'	22:AV:29:G:C8	2.49	0.48
23:AX:11:U:O2	23:AX:11:U:C2'	2.62	0.48
24:AY:92:ILE:HG21	24:AY:454:MET:HE1	1.95	0.48
24:AY:238:THR:HG22	24:AY:241:GLU:CB	2.43	0.48
26:B1:18:ILE:CG2	26:B1:20:ARG:NE	2.77	0.48
27:B2:64:LEU:O	27:B2:64:LEU:HD22	2.14	0.48
31:B6:35:GLU:O	31:B6:36:LEU:HB2	2.13	0.48
35:BA:109:G:O2'	35:BA:110:G:H5'	2.14	0.48
35:BA:312:G:H5'	35:BA:331:A:H2'	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:484:C:H2'	35:BA:485:C:C6	2.49	0.48
35:BA:622:G:O2'	35:BA:623:G:H5'	2.14	0.48
35:BA:692:C:N3	35:BA:771:G:C2	2.81	0.48
35:BA:1023:U:C2'	35:BA:1024:G:H5'	2.44	0.48
35:BA:1051:G:C4	35:BA:1052:C:N4	2.82	0.48
35:BA:1314:C:OP1	35:BA:1315:C:OP2	2.32	0.48
35:BA:1999:C:H4'	35:BA:2723:C:O2	2.14	0.48
35:BA:2190:G:O2'	35:BA:2191:G:H5'	2.14	0.48
35:BA:2376:A:O2'	50:BS:108:GLY:HA2	2.14	0.48
35:BA:2820:A:O3'	49:BR:5:LYS:HE3	2.14	0.48
38:BD:211:ARG:O	38:BD:215:LEU:HG	2.14	0.48
39:BE:1:MET:HE2	39:BE:1:MET:CA	2.43	0.48
40:BF:139:PHE:O	40:BF:140:LEU:C	2.57	0.48
41:BG:40:ASN:ND2	41:BG:90:LEU:O	2.47	0.48
42:BH:103:LEU:HB2	42:BH:123:PHE:CD2	2.48	0.48
43:BK:7:VAL:O	43:BK:7:VAL:HG22	2.14	0.48
44:BL:73:ARG:HH11	44:BL:73:ARG:CG	2.06	0.48
45:BN:58:ASP:O	45:BN:59:LYS:HB2	2.14	0.48
46:BO:91:LEU:HD22	46:BO:91:LEU:N	2.29	0.48
49:BR:100:LEU:HD22	49:BR:112:ALA:HA	1.96	0.48
54:BW:14:PRO:O	54:BW:15:ARG:C	2.55	0.48
56:BY:62:GLU:HG2	56:BY:63:LYS:H	1.77	0.48
1:AA:148:G:H2'	1:AA:149:A:H8	1.74	0.48
1:AA:160:A:H1'	1:AA:344:A:C4	2.49	0.48
1:AA:264:U:H4'	17:AQ:63:ARG:HD3	1.94	0.48
1:AA:692:U:OP1	11:AK:124:LYS:HE2	2.14	0.48
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	2.14	0.48
1:AA:1500:A:O2'	1:AA:1501:C:H5'	2.12	0.48
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.13	0.48
2:AB:112:VAL:C	2:AB:114:ARG:H	2.21	0.48
2:AB:223:ILE:HG12	2:AB:226:ARG:HH22	1.78	0.48
3:AC:43:LEU:C	3:AC:45:LYS:H	2.21	0.48
3:AC:105:GLU:HG2	3:AC:106:VAL:H	1.79	0.48
9:AI:4:TYR:CE2	9:AI:88:TYR:CB	2.97	0.48
12:AL:8:ASN:ND2	17:AQ:34:LYS:HE2	2.29	0.48
15:AO:78:TYR:O	15:AO:79:ARG:C	2.57	0.48
15:AO:80:ALA:O	15:AO:81:LEU:C	2.57	0.48
22:AV:19:G:C5	22:AV:57:A:C2	3.02	0.48
24:AY:84:THR:O	24:AY:85:PRO:C	2.56	0.48
24:AY:331:TYR:O	24:AY:371:ALA:HB1	2.14	0.48
24:AY:614:GLU:HA	24:AY:617:MET:HB2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:7:ARG:NH1	27:B2:7:ARG:HG3	2.29	0.48
27:B2:47:ASN:CB	35:BA:95:G:H1'	2.32	0.48
31:B6:31:PRO:O	31:B6:32:ASN:OD1	2.31	0.48
35:BA:68:G:H2'	35:BA:69:C:H6	1.74	0.48
35:BA:214:G:H1'	35:BA:216:A:O2'	2.14	0.48
35:BA:754:C:H2'	35:BA:755:C:C6	2.48	0.48
35:BA:852:G:H2'	35:BA:853:G:C8	2.48	0.48
35:BA:1173:G:H4'	35:BA:1174:A:OP2	2.14	0.48
35:BA:2026:C:N4	35:BA:2027:G:N7	2.61	0.48
35:BA:2298:A:H2'	35:BA:2299:G:O4'	2.13	0.48
35:BA:2306:C:H5	35:BA:2307:G:H1'	1.77	0.48
35:BA:2341:G:H2'	35:BA:2342:C:C6	2.49	0.48
35:BA:2712:U:O2'	35:BA:2712(A):A:O5'	2.32	0.48
35:BA:2767:C:H2'	35:BA:2768:C:C6	2.48	0.48
39:BE:36:ARG:HH21	39:BE:88:GLY:H	1.60	0.48
41:BG:77:ILE:CG2	41:BG:80:PHE:H	1.97	0.48
47:BP:90:ARG:CG	47:BP:91:PHE:N	2.72	0.48
47:BP:146:VAL:O	47:BP:148:LEU:HG	2.14	0.48
48:BQ:32:TYR:O	48:BQ:105:GLU:HB2	2.14	0.48
48:BQ:35:VAL:HG23	48:BQ:101:ARG:C	2.38	0.48
49:BR:113:LEU:CD1	49:BR:114:VAL:N	2.69	0.48
50:BS:89:ARG:CG	50:BS:92:TYR:CA	2.78	0.48
51:BT:89:VAL:CG1	51:BT:91:ARG:HG2	2.44	0.48
52:BU:52:ARG:O	52:BU:53:ARG:C	2.57	0.48
53:BV:19:LYS:HG2	53:BV:94:LEU:CB	2.44	0.48
57:BZ:41:LEU:O	57:BZ:44:PHE:N	2.43	0.48
57:BZ:54:HIS:O	57:BZ:98:MET:HE1	2.14	0.48
57:BZ:171:ILE:C	57:BZ:171:ILE:HD12	2.39	0.48
1:AA:193:C:H2'	1:AA:194:C:C6	2.48	0.47
1:AA:445:G:H2'	1:AA:446:G:H8	1.79	0.47
1:AA:585:G:C5	1:AA:586:C:C5	3.02	0.47
1:AA:707:C:O2'	1:AA:708:C:H5'	2.14	0.47
1:AA:779:C:H2'	1:AA:780:A:O4'	2.14	0.47
1:AA:1042:G:H2'	1:AA:1043:C:H5'	1.96	0.47
1:AA:1064:G:H21	1:AA:1190:G:H2'	1.77	0.47
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.95	0.47
2:AB:35:GLU:O	2:AB:35:GLU:HG2	2.13	0.47
3:AC:86:VAL:HG23	3:AC:87:LEU:HD23	1.96	0.47
5:AE:76:ILE:HG12	5:AE:77:PRO:CD	2.44	0.47
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.13	0.47
8:AH:41:ARG:NH2	8:AH:123:GLU:CD	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:6:THR:H	12:AL:9:GLN:NE2	2.11	0.47
12:AL:46:LYS:HB2	12:AL:92:ASP:O	2.13	0.47
12:AL:110:VAL:HG21	12:AL:120:TYR:HD2	1.79	0.47
15:AO:61:GLY:O	15:AO:65:ARG:HD2	2.15	0.47
17:AQ:47:PRO:HG2	17:AQ:48:GLU:OE2	2.14	0.47
17:AQ:53:LEU:HD23	17:AQ:85:VAL:HG21	1.95	0.47
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.47	0.47
22:AV:74:C:O4'	26:B1:22:GLY:HA2	2.14	0.47
24:AY:87:HIS:NE2	24:AY:120:THR:OG1	2.47	0.47
24:AY:219:VAL:C	24:AY:221:ALA:N	2.71	0.47
24:AY:312:LEU:HD23	24:AY:313:ALA:H	1.79	0.47
24:AY:370:LYS:O	24:AY:371:ALA:C	2.56	0.47
24:AY:526:VAL:N	24:AY:565:VAL:O	2.47	0.47
26:B1:64:ALA:HA	26:B1:67:ILE:CG1	2.43	0.47
31:B6:18:ARG:CG	31:B6:19:ARG:H	2.27	0.47
35:BA:286:C:O2'	35:BA:287:C:H5'	2.13	0.47
35:BA:302:C:H2'	35:BA:303:U:C6	2.48	0.47
35:BA:737:C:H2'	35:BA:738:G:H5'	1.96	0.47
35:BA:841:A:C6	35:BA:842:G:C5	3.02	0.47
35:BA:955:C:OP1	48:BQ:87:LYS:HE2	2.14	0.47
35:BA:1948:G:C8	35:BA:1948:G:C5'	2.96	0.47
35:BA:2020:A:H2'	35:BA:2021:C:C5'	2.38	0.47
35:BA:2033:A:O2'	35:BA:2034:U:O5'	2.30	0.47
35:BA:2274:A:H8	35:BA:2274:A:O5'	1.97	0.47
35:BA:2747:G:H21	35:BA:2757:A:H62	1.62	0.47
38:BD:34:VAL:CG2	38:BD:35:LYS:H	1.87	0.47
41:BG:90:LEU:CD1	41:BG:91:ARG:N	2.71	0.47
42:BH:154:PRO:O	42:BH:156:ALA:N	2.47	0.47
44:BL:54:PHE:CE1	44:BL:100:LYS:HB2	2.49	0.47
51:BT:90:GLN:O	51:BT:91:ARG:C	2.57	0.47
52:BU:15:LYS:HA	52:BU:18:LEU:HD12	1.96	0.47
52:BU:16:LYS:O	52:BU:20:LEU:CD2	2.62	0.47
57:BZ:24:LEU:CD2	57:BZ:86:VAL:HG23	2.44	0.47
57:BZ:63:ASP:OD2	57:BZ:65:GLN:NE2	2.46	0.47
1:AA:176:C:C2	1:AA:177:C:C5	3.02	0.47
1:AA:300:A:H2'	1:AA:301:G:C5'	2.44	0.47
1:AA:409:G:H1	1:AA:433:C:H42	1.60	0.47
1:AA:439:A:H2'	1:AA:441:A:H5'	1.96	0.47
1:AA:923:A:C5'	5:AE:21:ALA:HB2	2.43	0.47
1:AA:1237:C:OP1	1:AA:1238:A:H1'	2.13	0.47
2:AB:28:PHE:CE1	2:AB:31:TYR:HB2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:19:LEU:O	6:AF:19:LEU:HD23	2.14	0.47
7:AG:40:ALA:O	7:AG:41:ARG:C	2.54	0.47
7:AG:72:ARG:HG3	7:AG:73:MET:HG3	1.96	0.47
9:AI:5:TYR:CD1	9:AI:18:PHE:HE1	2.33	0.47
15:AO:9:GLN:O	15:AO:10:LYS:C	2.57	0.47
18:AR:29:PHE:HD1	18:AR:29:PHE:N	1.86	0.47
18:AR:66:LEU:HG	18:AR:70:ILE:CD1	2.44	0.47
20:AT:42:GLN:HA	20:AT:42:GLN:HE21	1.78	0.47
20:AT:57:ARG:NH1	20:AT:102:GLY:CA	2.75	0.47
20:AT:61:SER:O	20:AT:63:ILE:N	2.47	0.47
24:AY:156:ARG:NH2	24:AY:666:ARG:HH11	2.12	0.47
24:AY:289:ILE:HD12	24:AY:331:TYR:CZ	2.49	0.47
24:AY:486:THR:HG22	24:AY:602:LEU:HG	1.96	0.47
28:B3:8:LEU:HD22	28:B3:31:LEU:CD2	2.45	0.47
29:B4:1:MET:HG2	41:BG:98:ARG:HE	1.75	0.47
29:B4:1:MET:CE	29:B4:1:MET:H3	2.27	0.47
31:B6:42:TRP:HA	31:B6:42:TRP:HE3	1.78	0.47
35:BA:83:G:O2'	35:BA:84:A:C8	2.58	0.47
35:BA:271(Q):G:H2'	35:BA:271(R):G:O4'	2.14	0.47
35:BA:346:A:H2'	35:BA:346:A:N3	2.29	0.47
35:BA:658:C:H2'	35:BA:659:C:C6	2.49	0.47
35:BA:825:C:H2'	35:BA:826:U:O4'	2.13	0.47
35:BA:861:A:C2	35:BA:917:A:C4	3.02	0.47
35:BA:1164:G:H1	35:BA:1185:C:N4	2.11	0.47
35:BA:1344:G:O2'	35:BA:1385:G:H2'	2.14	0.47
35:BA:1357:U:H2'	35:BA:1358:G:O4'	2.14	0.47
35:BA:2478:A:H2'	35:BA:2479:G:O4'	2.14	0.47
35:BA:2849:U:O4	51:BT:23:ARG:NH2	2.48	0.47
38:BD:261:LYS:NZ	38:BD:263:ARG:HH12	2.11	0.47
39:BE:101:ARG:HG3	39:BE:169:ASN:ND2	2.29	0.47
40:BF:121:GLY:C	40:BF:123:LEU:H	2.21	0.47
40:BF:195:ASP:OD1	40:BF:196:LEU:N	2.43	0.47
42:BH:86:GLU:HA	42:BH:132:ARG:HA	1.96	0.47
45:BN:82:LEU:HD21	45:BN:84:LYS:HG2	1.96	0.47
46:BO:101:PRO:C	46:BO:102:VAL:HG13	2.38	0.47
49:BR:63:ARG:O	49:BR:67:LEU:HD23	2.13	0.47
49:BR:87:TYR:C	49:BR:89:ASP:N	2.72	0.47
51:BT:120:ARG:O	51:BT:124:ASP:OD1	2.32	0.47
1:AA:177:C:H2'	1:AA:178:C:H6	1.79	0.47
1:AA:557:G:H2'	1:AA:558:G:O4'	2.14	0.47
1:AA:1002:G:C8	1:AA:1003:G:N7	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:86:GLU:C	2:AB:88:ALA:N	2.72	0.47
10:AJ:18:ALA:O	10:AJ:20:ALA:N	2.42	0.47
10:AJ:54:PHE:CD1	10:AJ:55:LYS:NZ	2.75	0.47
10:AJ:98:ILE:O	10:AJ:98:ILE:CG2	2.61	0.47
11:AK:41:THR:HG23	11:AK:41:THR:O	2.13	0.47
12:AL:11:VAL:HG21	17:AQ:34:LYS:HD3	1.97	0.47
12:AL:81:SER:O	12:AL:83:VAL:HG23	2.14	0.47
15:AO:38:ARG:HH11	15:AO:38:ARG:HG2	1.78	0.47
15:AO:57:LEU:N	15:AO:57:LEU:HD23	2.29	0.47
16:AP:42:ARG:HB2	16:AP:44:THR:HG23	1.97	0.47
24:AY:25:LYS:HB2	59:AY:702:GDP:O2B	2.14	0.47
24:AY:357:ARG:HH11	24:AY:357:ARG:HG3	1.79	0.47
25:B0:40:GLN:HE22	25:B0:43:THR:CA	2.27	0.47
27:B2:38:GLN:O	27:B2:41:ILE:HG12	2.14	0.47
29:B4:27:THR:O	29:B4:28:LYS:HB3	2.14	0.47
33:B8:58:ILE:HG22	33:B8:58:ILE:O	2.13	0.47
35:BA:42:G:H5'	35:BA:43:A:OP2	2.14	0.47
35:BA:877:U:C2'	35:BA:878:A:H5"	2.45	0.47
35:BA:992:C:H2'	35:BA:993:G:C8	2.49	0.47
35:BA:1266:G:O2'	35:BA:2012:G:O6	2.28	0.47
35:BA:1270:C:H5"	35:BA:1271:G:O5'	2.14	0.47
35:BA:1335:U:H2'	35:BA:1336:A:H8	1.80	0.47
35:BA:1398:C:H2'	35:BA:1399:C:H6	1.78	0.47
35:BA:1523:U:H2'	35:BA:1524:G:C8	2.50	0.47
35:BA:1803:A:C8	35:BA:1804:C:C5	3.02	0.47
35:BA:1891:G:O5'	35:BA:1891:G:H8	1.95	0.47
35:BA:2328:A:H2'	35:BA:2329:G:C8	2.49	0.47
35:BA:2603:G:O2'	35:BA:2604:U:H5'	2.14	0.47
36:BB:68:C:H2'	36:BB:69:G:O4'	2.14	0.47
37:BC:57:GLN:O	37:BC:57:GLN:HG2	2.14	0.47
38:BD:145:VAL:CG1	38:BD:146:GLU:N	2.76	0.47
39:BE:47:VAL:CG1	39:BE:48:GLN:N	2.76	0.47
39:BE:138:PRO:HG2	39:BE:139:GLY:N	2.29	0.47
40:BF:20:LEU:HD13	40:BF:203:GLN:OE1	2.15	0.47
42:BH:169:VAL:CG2	42:BH:170:ARG:N	2.45	0.47
43:BK:61:ALA:C	43:BK:63:ARG:H	2.22	0.47
48:BQ:29:PHE:HB3	48:BQ:65:PHE:CE2	2.49	0.47
48:BQ:71:ASP:O	48:BQ:73:PRO:HD3	2.15	0.47
51:BT:112:ARG:C	51:BT:115:ARG:HD3	2.39	0.47
53:BV:38:LEU:HD23	53:BV:39:LEU:N	2.29	0.47
53:BV:47:VAL:O	53:BV:49:THR:O	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BW:45:TYR:CD1	54:BW:46:PHE:N	2.83	0.47
56:BY:68:HIS:ND1	56:BY:69:ALA:N	2.62	0.47
56:BY:83:THR:O	56:BY:83:THR:OG1	2.32	0.47
57:BZ:127:LYS:O	57:BZ:128:VAL:CB	2.62	0.47
1:AA:676:A:H1'	11:AK:115:PRO:HB3	1.97	0.47
1:AA:1033:G:C8	1:AA:1034:G:C8	3.03	0.47
2:AB:54:THR:OG1	2:AB:199:TYR:HB3	2.14	0.47
3:AC:29:TYR:C	3:AC:29:TYR:HD1	2.22	0.47
5:AE:76:ILE:HD11	5:AE:142:LEU:HD22	1.97	0.47
8:AH:103:VAL:HG12	8:AH:108:GLY:HA3	1.94	0.47
13:AM:81:LEU:H	13:AM:81:LEU:HD22	1.78	0.47
15:AO:43:LEU:C	15:AO:45:VAL:H	2.22	0.47
17:AQ:9:VAL:HG11	17:AQ:84:LEU:HD12	1.96	0.47
18:AR:51:LEU:HA	18:AR:52:PRO:HD3	1.58	0.47
22:AV:4:G:O2'	22:AV:5:G:C8	2.68	0.47
24:AY:165:GLN:HB2	24:AY:260:LEU:HD11	1.96	0.47
24:AY:178:ILE:HD12	24:AY:178:ILE:N	2.27	0.47
24:AY:655:TYR:O	24:AY:656:ALA:C	2.58	0.47
25:B0:14:ARG:NH1	35:BA:2279:G:O6	2.47	0.47
30:B5:26:THR:O	30:B5:26:THR:CG2	2.60	0.47
30:B5:45:VAL:HG22	30:B5:51:TYR:CD2	2.49	0.47
31:B6:42:TRP:HH2	35:BA:643:A:N7	2.13	0.47
35:BA:483:A:C2	35:BA:484:C:H1'	2.50	0.47
35:BA:495:G:H1'	54:BW:57:ASN:OD1	2.15	0.47
35:BA:577:G:C6	35:BA:578:A:C6	3.02	0.47
35:BA:1290:C:O5'	35:BA:1290:C:H6	1.97	0.47
35:BA:1344:G:C2	35:BA:1404:C:C2	3.02	0.47
35:BA:1376:C:O2	35:BA:1376:C:H2'	2.14	0.47
35:BA:1799:G:H22	35:BA:1818:U:H2'	1.79	0.47
35:BA:1998:G:O2'	35:BA:1999:C:H5'	2.14	0.47
35:BA:2048:G:C2	35:BA:2621:A:C2	3.03	0.47
35:BA:2050:C:O2'	35:BA:2051:A:H5'	2.14	0.47
35:BA:2134:A:H1'	35:BA:2158:A:H2	1.79	0.47
35:BA:2647:U:H2'	35:BA:2648:C:H6	1.79	0.47
37:BC:29:LEU:O	37:BC:32:GLU:CG	2.61	0.47
38:BD:28:GLU:HB2	38:BD:29:PRO:CD	2.45	0.47
41:BG:43:LEU:HB3	41:BG:45:GLU:HG2	1.97	0.47
41:BG:63:ILE:HA	41:BG:143:GLU:CG	2.26	0.47
41:BG:102:PHE:O	41:BG:103:LEU:C	2.57	0.47
48:BQ:56:ARG:NE	48:BQ:56:ARG:CA	2.76	0.47
52:BU:66:ASN:ND2	52:BU:76:TYR:HB2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BV:4:ILE:O	53:BV:39:LEU:HD23	2.14	0.47
53:BV:46:VAL:C	53:BV:47:VAL:HG13	2.40	0.47
54:BW:70:TYR:HB3	54:BW:110:LYS:HZ1	1.79	0.47
54:BW:88:ARG:CB	54:BW:92:ARG:HB3	2.44	0.47
57:BZ:29:TYR:O	57:BZ:30:ASN:HB3	2.14	0.47
1:AA:354:G:C2	1:AA:355:C:C6	3.03	0.47
1:AA:646:U:H2'	1:AA:647:C:C6	2.50	0.47
1:AA:718:G:C8	11:AK:116:HIS:HB3	2.49	0.47
1:AA:790:A:H8	1:AA:790:A:O5'	1.97	0.47
1:AA:1142:G:H2'	1:AA:1143:G:C5'	2.43	0.47
1:AA:1350:A:C5	1:AA:1351:U:C4	3.02	0.47
1:AA:1375:A:N3	1:AA:1375:A:H2'	2.28	0.47
2:AB:19:HIS:HD2	2:AB:189:ASP:OD2	1.97	0.47
2:AB:100:GLY:C	2:AB:102:LEU:H	2.21	0.47
3:AC:139:GLN:O	3:AC:140:ARG:C	2.56	0.47
4:AD:133:VAL:HG12	4:AD:134:ASP:N	2.28	0.47
4:AD:140:VAL:HG12	4:AD:141:ARG:O	2.14	0.47
5:AE:12:LEU:CD1	5:AE:12:LEU:N	2.73	0.47
7:AG:17:VAL:HG21	7:AG:44:TYR:CZ	2.50	0.47
10:AJ:34:VAL:HG13	10:AJ:73:ASP:O	2.14	0.47
11:AK:21:ILE:HG13	11:AK:30:VAL:HG12	1.96	0.47
14:AN:32:SER:HB3	14:AN:41:ARG:HB3	1.96	0.47
19:AS:40:ILE:CG1	19:AS:71:LEU:HD23	2.43	0.47
20:AT:50:GLU:HB3	20:AT:99:LEU:HD12	1.96	0.47
20:AT:74:LYS:HB2	20:AT:75:ASN:H	1.45	0.47
24:AY:15:ILE:HD12	24:AY:81:ILE:HA	1.96	0.47
24:AY:98:MET:HE1	24:AY:125:ALA:HA	1.96	0.47
24:AY:150:ILE:C	24:AY:152:THR:N	2.71	0.47
24:AY:327:PHE:C	24:AY:328:ILE:HG23	2.39	0.47
24:AY:404:VAL:O	24:AY:404:VAL:HG12	2.15	0.47
24:AY:636:PRO:HA	24:AY:641:GLN:HG3	1.97	0.47
27:B2:13:ALA:C	27:B2:15:LYS:N	2.72	0.47
32:B7:19:ARG:HG2	32:B7:19:ARG:NH1	2.30	0.47
33:B8:7:HIS:HB3	33:B8:10:ALA:HB3	1.96	0.47
33:B8:33:ASN:CA	33:B8:36:LYS:HD2	2.43	0.47
33:B8:62:LEU:HD13	35:BA:242:G:C5'	2.40	0.47
35:BA:271(F):C:C2'	35:BA:271(G):C:H5'	2.45	0.47
35:BA:693:C:H2'	35:BA:694:U:C6	2.50	0.47
35:BA:1267:U:H2'	35:BA:1268:A:H8	1.80	0.47
35:BA:1541:G:H4'	35:BA:1542:A:C4'	2.44	0.47
35:BA:1600:C:C2'	35:BA:1601:G:H5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1658:C:C2	35:BA:1659:U:C5	3.03	0.47
35:BA:1675:C:O2	39:BE:129:HIS:HA	2.13	0.47
35:BA:2126:A:C4'	35:BA:2127:G:O5'	2.58	0.47
35:BA:2180:U:H2'	35:BA:2181:G:O4'	2.15	0.47
35:BA:2194:G:H8	35:BA:2194:G:O5'	1.97	0.47
35:BA:2688:U:H5	35:BA:2720:U:OP2	1.97	0.47
35:BA:2884:U:H2'	35:BA:2885:C:O4'	2.15	0.47
36:BB:15:A:H1'	36:BB:110:G:C5	2.50	0.47
36:BB:48:A:O2'	36:BB:49:C:H5'	2.15	0.47
36:BB:64:C:O2'	36:BB:65:C:H5'	2.15	0.47
36:BB:112:U:H2'	36:BB:113:G:C8	2.46	0.47
37:BC:120:VAL:O	37:BC:124:VAL:HG23	2.14	0.47
38:BD:71:ASP:HB2	38:BD:103:ARG:NH2	2.23	0.47
38:BD:145:VAL:O	38:BD:153:ALA:HA	2.15	0.47
38:BD:218:ARG:HB3	38:BD:219:PRO:HD2	1.97	0.47
40:BF:123:LEU:HD13	40:BF:192:LEU:HD22	1.96	0.47
43:BK:41:PHE:C	43:BK:43:ALA:N	2.72	0.47
48:BQ:134:ARG:NH2	57:BZ:122:ARG:NE	2.62	0.47
50:BS:15:ARG:O	50:BS:18:ILE:HG13	2.15	0.47
50:BS:88:ASP:CG	50:BS:89:ARG:N	2.71	0.47
53:BV:19:LYS:HG3	53:BV:20:LEU:N	2.28	0.47
56:BY:73:ARG:O	56:BY:74:PRO:O	2.33	0.47
1:AA:532:A:C2'	1:AA:533:A:OP1	2.63	0.47
1:AA:950:U:H2'	1:AA:951:G:C8	2.50	0.47
1:AA:1037:C:C5	1:AA:1038:C:N4	2.82	0.47
1:AA:1109:C:H2'	1:AA:1110:A:H5'	1.96	0.47
1:AA:1158:C:H3'	1:AA:1158:C:O2	2.14	0.47
1:AA:1440:C:C2'	1:AA:1441:G:H5'	2.43	0.47
1:AA:1494:G:H2'	1:AA:1494:G:N3	2.29	0.47
2:AB:151:GLY:O	2:AB:153:ARG:HB3	2.15	0.47
3:AC:5:ILE:HD13	3:AC:5:ILE:C	2.40	0.47
4:AD:98:GLU:CB	4:AD:189:PRO:HG3	2.44	0.47
4:AD:159:ARG:HH11	4:AD:159:ARG:HG3	1.78	0.47
4:AD:173:TRP:CB	4:AD:187:ARG:NH1	2.76	0.47
5:AE:51:VAL:O	5:AE:52:PRO:C	2.56	0.47
5:AE:101:ILE:HD13	5:AE:101:ILE:N	2.18	0.47
5:AE:152:ARG:HA	8:AH:64:LYS:HZ2	1.79	0.47
8:AH:9:MET:HE1	8:AH:35:ILE:HB	1.95	0.47
8:AH:64:LYS:HD2	8:AH:79:VAL:HG21	1.97	0.47
8:AH:93:VAL:O	8:AH:132:GLU:HA	2.15	0.47
9:AI:79:LEU:O	9:AI:80:GLY:C	2.58	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:71:LEU:HD12	10:AJ:72:VAL:H	1.79	0.47
16:AP:61:SER:C	16:AP:62:VAL:HG13	2.40	0.47
17:AQ:94:ASN:O	17:AQ:95:TYR:C	2.57	0.47
24:AY:33:LEU:HD12	24:AY:33:LEU:N	2.29	0.47
24:AY:69:VAL:HG23	24:AY:82:ILE:HG12	1.97	0.47
24:AY:410:ASP:C	24:AY:411:VAL:HG23	2.39	0.47
25:B0:40:GLN:HE21	25:B0:43:THR:HA	1.75	0.47
27:B2:28:LYS:CB	27:B2:57:ILE:HD13	2.38	0.47
33:B8:50:LEU:CG	33:B8:51:ALA:H	2.28	0.47
35:BA:123:G:C6	35:BA:124:G:C5	3.02	0.47
35:BA:271(E):U:H2'	35:BA:271(F):C:H6	1.77	0.47
35:BA:318:C:O5'	35:BA:318:C:H6	1.98	0.47
35:BA:389:G:O4'	35:BA:2413:G:C4'	2.59	0.47
35:BA:483:A:C2	35:BA:484:C:C1'	2.98	0.47
35:BA:533:G:H1	35:BA:560:C:H42	1.61	0.47
35:BA:863:A:O2'	36:BB:101:G:H1'	2.14	0.47
35:BA:1034:G:C6	35:BA:1035:U:N3	2.83	0.47
35:BA:1169:G:H1	35:BA:1180:C:H42	1.61	0.47
35:BA:1236:G:O2'	35:BA:1237:A:H8	1.94	0.47
35:BA:1465:G:C4	35:BA:1466:G:C8	3.03	0.47
35:BA:1604:C:O2'	35:BA:1610:A:N1	2.48	0.47
35:BA:1668:A:H61	35:BA:1676:A:N6	2.12	0.47
35:BA:1814:G:H8	35:BA:1814:G:O5'	1.97	0.47
35:BA:2751:G:OP1	35:BA:2751:G:N2	2.47	0.47
35:BA:2810:A:O2'	39:BE:61:ARG:HB2	2.15	0.47
37:BC:84:ILE:HG23	37:BC:95:VAL:HG12	1.96	0.47
39:BE:38:THR:CB	39:BE:41:LYS:HG2	2.42	0.47
40:BF:22:ALA:C	40:BF:24:LEU:N	2.67	0.47
41:BG:133:LEU:CD1	41:BG:157:ILE:HB	2.44	0.47
43:BK:8:VAL:HG12	43:BK:10:LEU:HG	1.96	0.47
43:BK:134:MET:HE2	43:BK:136:VAL:CG1	2.43	0.47
47:BP:6:LEU:HB3	47:BP:9:ASN:ND2	2.27	0.47
50:BS:28:VAL:CG1	50:BS:29:PHE:N	2.65	0.47
50:BS:101:LEU:C	50:BS:101:LEU:CD1	2.88	0.47
52:BU:44:ASN:ND2	53:BV:75:PHE:HB3	2.22	0.47
53:BV:21:ARG:HG2	53:BV:21:ARG:NH1	2.23	0.47
56:BY:81:LYS:NZ	56:BY:98:VAL:O	2.47	0.47
1:AA:37:U:O2'	1:AA:500:G:H4'	2.15	0.47
1:AA:111:G:O6	1:AA:330:C:N4	2.48	0.47
1:AA:117:G:H8	1:AA:117:G:O5'	1.98	0.47
1:AA:122:G:N1	1:AA:123:C:C2	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:267:C:H2'	1:AA:268:C:H6	1.80	0.47
1:AA:363:A:OP1	12:AL:33:ARG:HD3	2.15	0.47
1:AA:473:G:H5'	16:AP:81:ARG:HG3	1.95	0.47
1:AA:820:U:H4'	1:AA:821:G:OP2	2.15	0.47
1:AA:1310:G:C2	1:AA:1328:C:N3	2.82	0.47
1:AA:1360:A:H2'	1:AA:1361:G:C8	2.50	0.47
1:AA:1361:G:H5'	1:AA:1362:C:OP2	2.15	0.47
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.48	0.47
2:AB:21:ARG:NH2	2:AB:38:GLY:HA3	2.30	0.47
2:AB:124:SER:CB	2:AB:125:PRO:HD2	2.44	0.47
2:AB:193:ASP:O	2:AB:194:PRO:C	2.58	0.47
3:AC:92:ALA:C	3:AC:94:LEU:N	2.70	0.47
3:AC:151:VAL:O	3:AC:152:ILE:HG23	2.14	0.47
5:AE:76:ILE:CG2	5:AE:118:ILE:HD13	2.44	0.47
6:AF:26:ILE:O	6:AF:26:ILE:CG2	2.62	0.47
7:AG:134:ALA:O	7:AG:137:LYS:HB2	2.15	0.47
7:AG:137:LYS:HA	7:AG:137:LYS:HE3	1.97	0.47
10:AJ:55:LYS:H	10:AJ:55:LYS:HE2	1.77	0.47
10:AJ:62:HIS:H	10:AJ:62:HIS:CD2	2.33	0.47
12:AL:115:LYS:O	12:AL:117:ARG:HG3	2.14	0.47
13:AM:23:TYR:HE1	13:AM:70:LEU:CD2	2.27	0.47
13:AM:58:GLU:O	13:AM:62:ASN:HB2	2.15	0.47
13:AM:91:ARG:HH21	19:AS:81:ARG:NH2	2.13	0.47
16:AP:74:LEU:O	16:AP:79:VAL:CG2	2.61	0.47
19:AS:72:GLY:C	19:AS:74:PHE:H	2.21	0.47
20:AT:30:LYS:HZ1	20:AT:80:ARG:NH2	2.11	0.47
22:AV:2:G:C6	22:AV:72:A:C2	3.03	0.47
24:AY:119:GLU:O	24:AY:120:THR:OG1	2.33	0.47
24:AY:337:SER:CA	24:AY:355:LEU:HD23	2.45	0.47
24:AY:339:SER:O	24:AY:340:TYR:CD1	2.68	0.47
24:AY:408:VAL:HG23	24:AY:409:ILE:N	2.28	0.47
24:AY:415:PRO:O	24:AY:420:ASP:HB2	2.14	0.47
24:AY:451:ILE:O	24:AY:451:ILE:CG2	2.56	0.47
24:AY:539:ILE:C	24:AY:542:VAL:HG12	2.39	0.47
24:AY:550:MET:CE	24:AY:563:ILE:HD11	2.43	0.47
25:B0:78:TYR:N	25:B0:78:TYR:HD1	2.12	0.47
26:B1:83:GLU:CD	26:B1:83:GLU:N	2.73	0.47
27:B2:20:GLU:O	27:B2:23:LYS:N	2.47	0.47
27:B2:53:LEU:O	27:B2:53:LEU:HD23	2.15	0.47
28:B3:36:VAL:O	28:B3:37:LEU:HD23	2.15	0.47
29:B4:25:TYR:CD1	29:B4:25:TYR:N	2.81	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:15:GLU:OE2	31:B6:44:ARG:CZ	2.62	0.47
35:BA:11:G:H2'	35:BA:12:U:H6	1.79	0.47
35:BA:58:G:O2'	35:BA:59:U:H5'	2.14	0.47
35:BA:285:C:C2'	35:BA:286:C:C5'	2.93	0.47
35:BA:312:G:H2'	35:BA:313:C:O4'	2.15	0.47
35:BA:418:G:H2'	35:BA:419:C:H6	1.77	0.47
35:BA:425:G:C2	35:BA:426:C:C5	3.02	0.47
35:BA:483:A:H4'	56:BY:49:VAL:HA	1.97	0.47
35:BA:626:U:C2	47:BP:105:LEU:HG	2.50	0.47
35:BA:663:G:C6	35:BA:664:C:C4	3.03	0.47
35:BA:1141:U:H6	45:BN:63:THR:CG2	2.27	0.47
35:BA:1268:A:O2'	35:BA:1269:A:H5'	2.14	0.47
35:BA:1296:G:H8	35:BA:1296:G:O5'	1.97	0.47
35:BA:1453:U:H2'	35:BA:1455:G:C8	2.49	0.47
35:BA:1484:G:C2'	35:BA:1485:G:H5"	2.45	0.47
35:BA:1577:C:H2'	35:BA:1578:U:C6	2.50	0.47
35:BA:1638:C:H1'	35:BA:2698:U:O2'	2.14	0.47
35:BA:1658:C:O5'	35:BA:1658:C:H6	1.98	0.47
35:BA:1664:A:OP1	35:BA:1665:A:OP2	2.32	0.47
35:BA:1907:G:O2'	35:BA:1908:C:H5'	2.15	0.47
35:BA:2055:C:H5'	35:BA:2056:G:O5'	2.15	0.47
35:BA:2081:C:H2'	35:BA:2082:A:C8	2.46	0.47
35:BA:2155:G:O2'	35:BA:2156:G:H5'	2.15	0.47
35:BA:2572:A:C5'	35:BA:2574:G:H4'	2.32	0.47
35:BA:2672:G:H3'	35:BA:2673:G:H5"	1.92	0.47
35:BA:2771:C:H2'	35:BA:2772:C:H6	1.78	0.47
36:BB:21:G:O6	36:BB:63:G:C6	2.67	0.47
36:BB:51:G:N2	36:BB:52:A:N3	2.62	0.47
37:BC:79:ALA:O	37:BC:120:VAL:HG11	2.14	0.47
37:BC:226:ASN:HA	37:BC:227:PRO:HD2	1.76	0.47
38:BD:67:PHE:CE2	38:BD:157:ARG:NH2	2.83	0.47
38:BD:218:ARG:HG3	38:BD:218:ARG:NH1	2.30	0.47
39:BE:101:ARG:CZ	39:BE:171:GLU:HB2	2.43	0.47
39:BE:120:TRP:CE3	39:BE:155:LYS:HE3	2.50	0.47
40:BF:3:GLU:CB	40:BF:24:LEU:HG	2.44	0.47
40:BF:31:HIS:O	40:BF:32:LEU:C	2.55	0.47
40:BF:41:LEU:HD21	40:BF:44:ARG:HH21	1.80	0.47
41:BG:109:VAL:O	41:BG:110:ALA:C	2.56	0.47
41:BG:119:GLY:O	41:BG:181:ARG:HB2	2.14	0.47
41:BG:138:GLN:O	41:BG:144:ILE:HD13	2.14	0.47
42:BH:89:ILE:O	42:BH:89:ILE:CD1	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:49:GLY:CA	45:BN:119:ARG:HH12	2.27	0.47
49:BR:55:ALA:HA	49:BR:80:PHE:HE1	1.69	0.47
51:BT:10:VAL:C	51:BT:12:SER:N	2.72	0.47
51:BT:29:ARG:HG2	51:BT:86:ILE:N	2.30	0.47
51:BT:87:ASP:OD1	51:BT:87:ASP:N	2.41	0.47
51:BT:108:ARG:HA	51:BT:111:ARG:HH11	1.80	0.47
53:BV:69:LYS:HE3	53:BV:71:LEU:CD2	2.44	0.47
54:BW:1:MET:CE	54:BW:62:HIS:HD2	2.27	0.47
56:BY:77:PRO:HB2	56:BY:99:CYS:SG	2.55	0.47
56:BY:97:ARG:O	56:BY:98:VAL:CB	2.63	0.47
57:BZ:17:ALA:O	57:BZ:21:ALA:HB2	2.15	0.47
1:AA:509:A:N1	1:AA:510:A:C2	2.83	0.47
1:AA:956:U:O2’	1:AA:957:U:H5’	2.15	0.47
1:AA:1005:A:H3’	1:AA:1006:C:C5’	2.45	0.47
1:AA:1006:C:H2’	1:AA:1007:C:C6	2.49	0.47
1:AA:1037:C:H2’	1:AA:1038:C:N1	2.30	0.47
1:AA:1237:C:H6	1:AA:1237:C:O5’	1.97	0.47
1:AA:1468:A:H2’	1:AA:1469:G:O4’	2.14	0.47
5:AE:150:ARG:O	5:AE:150:ARG:HG2	2.14	0.47
6:AF:62:TRP:O	6:AF:63:TYR:CG	2.68	0.47
8:AH:11:THR:HA	8:AH:14:ARG:NH1	2.29	0.47
15:AO:26:GLU:CG	15:AO:77:ARG:NH1	2.78	0.47
15:AO:39:LEU:HD22	15:AO:43:LEU:CD1	2.45	0.47
16:AP:5:ARG:HE	16:AP:22:THR:HG21	1.78	0.47
18:AR:79:LEU:CD2	18:AR:80:PRO:HD2	2.43	0.47
22:AV:74:C:H3’	22:AV:74:C:OP2	2.15	0.47
24:AY:19:ALA:HA	24:AY:121:VAL:CG1	2.42	0.47
24:AY:166:LEU:HD21	24:AY:212:TYR:CD2	2.50	0.47
24:AY:211:GLU:HG3	24:AY:212:TYR:N	2.30	0.47
24:AY:499:ARG:HH12	35:BA:1913:A:P	2.38	0.47
24:AY:617:MET:HE1	24:AY:641:GLN:CD	2.40	0.47
24:AY:625:ASN:C	24:AY:627:ARG:H	2.23	0.47
26:B1:60:PHE:C	26:B1:62:VAL:H	2.23	0.47
27:B2:59:ARG:HG2	27:B2:59:ARG:H	1.31	0.47
31:B6:35:GLU:HB2	31:B6:51:GLU:HB2	1.96	0.47
35:BA:42:G:H2’	35:BA:42:G:N3	2.30	0.47
35:BA:118:A:N3	35:BA:178:G:H1’	2.30	0.47
35:BA:212:G:O2’	35:BA:213:A:H5’	2.15	0.47
35:BA:512:G:C2’	35:BA:513:A:OP2	2.63	0.47
35:BA:545:C:C3’	35:BA:547:A:C5’	2.86	0.47
35:BA:614(A):U:H5”	35:BA:614(B):G:OP1	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:648:G:O2'	35:BA:649:G:H5'	2.15	0.47
35:BA:911:A:H2'	48:BQ:9:TYR:OH	2.15	0.47
35:BA:1176:G:O2'	35:BA:1178:C:C6	2.64	0.47
35:BA:1472:A:O2'	35:BA:1473:G:H5'	2.15	0.47
35:BA:1497:U:C2	35:BA:1578:U:OP1	2.68	0.47
35:BA:1742:G:H2'	35:BA:1743:C:O4'	2.15	0.47
35:BA:2070:G:H2'	35:BA:2071:A:C8	2.50	0.47
35:BA:2086:U:H2'	35:BA:2087:G:C8	2.50	0.47
35:BA:2170:A:H5"	37:BC:135:ARG:NH2	2.24	0.47
35:BA:2174:C:O2'	35:BA:2175:C:H5'	2.15	0.47
35:BA:2307:G:H3'	35:BA:2307:G:N3	2.30	0.47
35:BA:2754:U:C2'	35:BA:2755:C:H5'	2.45	0.47
35:BA:2872:G:C2	35:BA:2873:A:N6	2.83	0.47
35:BA:2875:C:O2'	51:BT:5:ALA:HB3	2.15	0.47
36:BB:85:G:O2'	36:BB:86:G:C5'	2.63	0.47
38:BD:177:LEU:O	38:BD:179:SER:N	2.48	0.47
40:BF:75:HIS:HE1	40:BF:82:ILE:HD11	1.80	0.47
42:BH:12:PRO:O	42:BH:15:VAL:HG22	2.14	0.47
42:BH:122:THR:HG22	42:BH:123:PHE:N	2.29	0.47
46:BO:88:ASN:C	46:BO:90:GLN:H	2.21	0.47
48:BQ:135:ASP:O	48:BQ:138:ASP:OD2	2.32	0.47
50:BS:27:SER:C	50:BS:28:VAL:HG23	2.39	0.47
50:BS:31:SER:HB3	50:BS:34:HIS:C	2.40	0.47
51:BT:28:VAL:HG13	51:BT:46:GLU:CA	2.41	0.47
51:BT:82:LEU:N	51:BT:82:LEU:CD1	2.74	0.47
53:BV:17:GLY:O	53:BV:18:LEU:HB3	2.14	0.47
54:BW:107:LEU:H	54:BW:107:LEU:CD2	2.20	0.47
56:BY:10:GLY:C	56:BY:27:VAL:HG13	2.38	0.47
1:AA:25:C:H2'	1:AA:26:A:C8	2.50	0.47
1:AA:106:C:C2'	1:AA:107:G:H5'	2.45	0.47
1:AA:190:U:O2'	1:AA:191:G:H5'	2.15	0.47
1:AA:318:G:C2	1:AA:336:C:N3	2.83	0.47
1:AA:509:A:H2'	1:AA:509:A:N3	2.30	0.47
1:AA:1118:C:OP1	9:AI:104:ARG:NH1	2.47	0.47
1:AA:1140:C:O2'	1:AA:1141:C:H5'	2.15	0.47
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.50	0.47
1:AA:1300:G:C2'	1:AA:1301:U:OP2	2.63	0.47
1:AA:1318:A:C1'	19:AS:37:ARG:NH2	2.72	0.47
3:AC:134:ILE:O	3:AC:135:LYS:C	2.58	0.47
4:AD:31:CYS:O	4:AD:32:ALA:CB	2.63	0.47
5:AE:105:VAL:N	5:AE:106:PRO:HD2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:16:GLN:HA	6:AF:19:LEU:HB3	1.95	0.47
8:AH:121:ASP:O	8:AH:122:ARG:C	2.55	0.47
9:AI:74:ILE:O	9:AI:74:ILE:HG22	2.14	0.47
15:AO:74:ASP:C	15:AO:76:GLU:N	2.71	0.47
24:AY:108:PHE:N	24:AY:135:PHE:O	2.40	0.47
24:AY:122:TRP:O	24:AY:124:GLN:N	2.47	0.47
24:AY:199:ILE:HD12	24:AY:199:ILE:O	2.15	0.47
24:AY:250:THR:C	24:AY:252:ASP:N	2.72	0.47
24:AY:434:GLU:O	24:AY:435:ASP:HB2	2.14	0.47
24:AY:495:GLY:O	24:AY:510:VAL:N	2.43	0.47
24:AY:622:GLY:O	24:AY:623:ASP:C	2.57	0.47
24:AY:655:TYR:HD2	24:AY:669:PHE:CE2	2.33	0.47
25:B0:60:PHE:C	25:B0:60:PHE:HD1	2.23	0.47
26:B1:59:THR:O	26:B1:91:LYS:CE	2.62	0.47
27:B2:59:ARG:O	27:B2:62:THR:N	2.47	0.47
29:B4:41:PRO:CA	29:B4:42:PHE:CD1	2.98	0.47
31:B6:35:GLU:HG3	31:B6:36:LEU:H	1.80	0.47
35:BA:41:C:H2'	35:BA:42:G:C1'	2.45	0.47
35:BA:55:G:H2'	35:BA:56:A:H8	1.79	0.47
35:BA:85:G:OP1	56:BY:30:VAL:HB	2.15	0.47
35:BA:94:C:H5'	35:BA:94(A):G:OP2	2.14	0.47
35:BA:120:U:O2	35:BA:120:U:C2'	2.58	0.47
35:BA:350:U:H2'	35:BA:351:G:O4'	2.15	0.47
35:BA:468:G:H2'	35:BA:469:G:O4'	2.15	0.47
35:BA:532:A:N3	35:BA:532:A:C2'	2.78	0.47
35:BA:589:C:O2'	35:BA:590:A:H5'	2.15	0.47
35:BA:954:G:O2'	35:BA:955:C:H5'	2.15	0.47
35:BA:1314:C:N3	35:BA:1339:G:C2	2.83	0.47
35:BA:1493:C:H4'	35:BA:1494:A:OP1	2.14	0.47
35:BA:1709:U:H3	35:BA:1749:A:N6	2.12	0.47
35:BA:2320:A:C2	35:BA:2333:A:C8	3.03	0.47
35:BA:2693:A:H2'	35:BA:2694:G:C8	2.49	0.47
35:BA:2840:C:H2'	35:BA:2841:C:H6	1.78	0.47
35:BA:2889:C:H2'	35:BA:2891:G:C8	2.50	0.47
36:BB:87:G:H2'	36:BB:88:C:H5"	1.97	0.47
38:BD:213:ARG:HD2	38:BD:213:ARG:HA	1.40	0.47
39:BE:27:LEU:CD1	39:BE:181:LEU:HD13	2.45	0.47
40:BF:24:LEU:N	40:BF:24:LEU:HD22	2.30	0.47
40:BF:81:PRO:C	40:BF:83:PHE:N	2.73	0.47
41:BG:45:GLU:OE1	41:BG:45:GLU:CA	2.63	0.47
41:BG:166:ASP:O	41:BG:167:GLU:C	2.56	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:36:PRO:HG2	42:BH:36:PRO:O	2.15	0.47
42:BH:127:GLU:HB3	42:BH:128:PRO:CD	2.42	0.47
47:BP:16:ARG:HD3	47:BP:18:ARG:N	2.23	0.47
54:BW:45:TYR:C	54:BW:45:TYR:CD1	2.92	0.47
56:BY:74:PRO:O	56:BY:80:GLY:HA2	2.15	0.47
1:AA:52:G:H2'	1:AA:53:A:O4'	2.14	0.47
1:AA:59:A:H3'	1:AA:331:G:H22	1.80	0.47
1:AA:542:G:H5'	4:AD:41:GLY:HA2	1.96	0.47
1:AA:803:G:C6	1:AA:804:U:C4	3.03	0.47
1:AA:867:G:H2'	1:AA:868:C:H6	1.79	0.47
1:AA:957:U:O2	1:AA:959:A:H8	1.98	0.47
1:AA:1164:G:O2'	1:AA:1165:C:H5'	2.14	0.47
4:AD:61:LYS:CE	4:AD:62:GLN:NE2	2.77	0.47
4:AD:152:SER:O	4:AD:154:ASN:N	2.48	0.47
5:AE:6:PHE:CD1	5:AE:6:PHE:N	2.83	0.47
7:AG:23:VAL:HG13	7:AG:43:PHE:CE2	2.50	0.47
8:AH:112:LEU:HD23	8:AH:112:LEU:O	2.14	0.47
9:AI:95:LYS:C	9:AI:95:LYS:CD	2.88	0.47
12:AL:105:TYR:O	12:AL:107:ALA:N	2.48	0.47
17:AQ:52:LYS:CD	17:AQ:52:LYS:N	2.67	0.47
22:AV:2:G:N1	22:AV:3:C:C4	2.83	0.47
24:AY:117:GLN:NE2	24:AY:119:GLU:HG3	2.30	0.47
24:AY:231:TYR:CE2	44:BL:80:LEU:HD23	2.46	0.47
24:AY:647:VAL:HG21	24:AY:652:MET:SD	2.55	0.47
33:B8:8:LYS:HE3	35:BA:245:G:O6	2.15	0.47
34:B9:1:MET:SD	35:BA:2478:A:OP2	2.73	0.47
35:BA:392:C:O5'	35:BA:392:C:H6	1.97	0.47
35:BA:613:G:H5'	35:BA:613:G:H8	1.80	0.47
35:BA:674:G:C1'	40:BF:74:ARG:HD3	2.43	0.47
35:BA:868:U:C4	35:BA:869:G:N7	2.82	0.47
35:BA:1197:G:H2'	35:BA:1198:U:H6	1.79	0.47
35:BA:1374:G:H2'	35:BA:1375:C:C6	2.50	0.47
35:BA:1541:G:OP2	35:BA:1542:A:OP1	2.32	0.47
35:BA:1669:A:O3'	35:BA:2549:G:H5'	2.14	0.47
35:BA:2051:A:C4'	39:BE:141:ILE:HD13	2.45	0.47
35:BA:2395:C:H2'	35:BA:2396:G:H8	1.79	0.47
35:BA:2579:C:O5'	35:BA:2579:C:H6	1.97	0.47
35:BA:2859:G:H2'	35:BA:2860:A:C8	2.49	0.47
37:BC:140:ASN:HB3	37:BC:143:ALA:HB3	1.97	0.47
40:BF:62:ARG:NH2	40:BF:64:ILE:HA	2.31	0.47
41:BG:67:LYS:CD	41:BG:68:PRO:HD2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:67:LEU:HB3	45:BN:88:GLU:HG2	1.97	0.47
46:BO:13:ASN:HD21	46:BO:97:ARG:HG2	1.79	0.47
47:BP:83:VAL:HG11	47:BP:112:LEU:HD21	1.97	0.47
47:BP:136:GLU:O	47:BP:139:LYS:HB3	2.15	0.47
49:BR:82:GLU:C	49:BR:84:ALA:H	2.22	0.47
52:BU:49:HIS:O	52:BU:52:ARG:HB2	2.15	0.47
54:BW:4:LYS:HA	54:BW:106:ILE:HG22	1.96	0.47
54:BW:20:VAL:O	54:BW:23:LEU:N	2.46	0.47
56:BY:7:VAL:HB	56:BY:8:LYS:CE	2.45	0.47
1:AA:46:G:H2'	1:AA:366:C:C5	2.51	0.46
1:AA:315:A:O2'	1:AA:316:G:P	2.73	0.46
1:AA:526:C:C5	1:AA:527:G:H1'	2.50	0.46
1:AA:1003:G:N2	1:AA:1004:A:H1'	2.30	0.46
1:AA:1423:G:H5"	46:BO:49:ARG:NH2	2.30	0.46
2:AB:178:ARG:HA	2:AB:178:ARG:HD3	1.68	0.46
2:AB:222:ILE:O	2:AB:226:ARG:HB2	2.15	0.46
12:AL:41:ARG:HH11	12:AL:41:ARG:CB	2.27	0.46
14:AN:47:LEU:O	14:AN:50:LYS:N	2.48	0.46
16:AP:2:VAL:O	16:AP:2:VAL:HG22	2.15	0.46
16:AP:52:ASP:C	16:AP:52:ASP:OD1	2.55	0.46
16:AP:74:LEU:O	16:AP:77:ALA:HB3	2.15	0.46
18:AR:50:ILE:HD11	18:AR:74:ARG:CZ	2.45	0.46
19:AS:65:ASN:O	19:AS:67:VAL:HG23	2.15	0.46
20:AT:39:LYS:HE2	20:AT:55:ILE:HG13	1.97	0.46
22:AV:65:C:H2'	22:AV:66:C:H5'	1.97	0.46
24:AY:91:THR:O	24:AY:93:GLU:N	2.48	0.46
24:AY:394:ALA:HB1	24:AY:395:PRO:CD	2.44	0.46
29:B4:25:TYR:O	41:BG:105:LYS:NZ	2.48	0.46
31:B6:39:TYR:OH	35:BA:2347:C:OP1	2.21	0.46
33:B8:50:LEU:O	33:B8:52:LYS:N	2.41	0.46
35:BA:272(G):C:C3'	35:BA:272(H):C:H5"	2.43	0.46
35:BA:398:G:H2'	35:BA:399:G:C8	2.50	0.46
35:BA:519:U:O2'	35:BA:520:G:H5'	2.15	0.46
35:BA:654(A):G:H2'	35:BA:654(B):C:O4'	2.15	0.46
35:BA:803:U:H2'	35:BA:804:A:H5'	1.95	0.46
35:BA:823:G:C6	35:BA:824:A:N6	2.83	0.46
35:BA:1114:G:OP2	35:BA:1114:G:H8	1.99	0.46
35:BA:1142(A):A:C5	35:BA:1144:G:N7	2.83	0.46
35:BA:1232:G:H2'	35:BA:1233:C:C6	2.49	0.46
35:BA:1245:G:H5"	40:BF:34:TRP:CZ2	2.42	0.46
35:BA:1275:A:C4	49:BR:16:HIS:ND1	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1344:G:H5'	35:BA:1384:A:C6	2.50	0.46
35:BA:1423:G:H2'	35:BA:1424:G:O4'	2.15	0.46
35:BA:1830:C:H6	35:BA:1830:C:O5'	1.97	0.46
35:BA:2177:C:O2	37:BC:173:HIS:HE1	1.98	0.46
35:BA:2400:G:N2	35:BA:2417:C:C2	2.83	0.46
35:BA:2469:A:O3'	48:BQ:56:ARG:NH1	2.48	0.46
35:BA:2852:G:H2'	35:BA:2853:C:H6	1.76	0.46
36:BB:89:G:N1	36:BB:90:A:C2	2.83	0.46
37:BC:139:PRO:HA	37:BC:145:THR:HB	1.98	0.46
38:BD:35:LYS:CG	38:BD:63:ARG:CG	2.88	0.46
38:BD:267:SER:HA	38:BD:270:ILE:CG1	2.43	0.46
39:BE:32:PRO:CA	39:BE:90:THR:HG23	2.45	0.46
39:BE:34:VAL:O	39:BE:35:GLN:HB2	2.15	0.46
40:BF:199:TRP:O	40:BF:199:TRP:CE3	2.68	0.46
41:BG:7:LEU:O	41:BG:8:LYS:C	2.58	0.46
41:BG:87:PRO:O	41:BG:88:ILE:CD1	2.57	0.46
41:BG:165:THR:O	41:BG:166:ASP:C	2.57	0.46
43:BK:131:ALA:HA	43:BK:136:VAL:HG13	1.96	0.46
46:BO:3:GLN:HB2	46:BO:4:PRO:HD2	1.96	0.46
52:BU:91:ASP:O	52:BU:95:LEU:HB2	2.14	0.46
55:BX:41:ASN:C	55:BX:43:VAL:N	2.72	0.46
55:BX:84:ALA:O	55:BX:85:PRO:C	2.57	0.46
57:BZ:41:LEU:O	57:BZ:44:PHE:HB3	2.15	0.46
57:BZ:115:GLY:CA	57:BZ:177:PRO:HG3	2.45	0.46
57:BZ:120:ILE:HG22	57:BZ:120:ILE:O	2.14	0.46
1:AA:602:A:H2'	1:AA:603:U:H6	1.81	0.46
1:AA:1292:U:H2'	1:AA:1293:G:H8	1.78	0.46
1:AA:1368:G:OP2	9:AI:112:LYS:HD3	2.16	0.46
4:AD:110:PHE:N	4:AD:110:PHE:CD1	2.81	0.46
5:AE:139:LEU:O	5:AE:141:GLN:N	2.48	0.46
6:AF:35:ALA:HA	6:AF:67:MET:HB3	1.97	0.46
9:AI:8:GLY:HA2	9:AI:79:LEU:HD12	1.97	0.46
9:AI:60:ASP:O	9:AI:61:ALA:O	2.34	0.46
10:AJ:5:ARG:HA	10:AJ:73:ASP:OD1	2.16	0.46
12:AL:39:VAL:O	12:AL:40:VAL:HG22	2.15	0.46
13:AM:64:TRP:H	13:AM:64:TRP:CD1	2.33	0.46
16:AP:59:TRP:HA	16:AP:59:TRP:CE3	2.50	0.46
19:AS:72:GLY:C	19:AS:74:PHE:N	2.72	0.46
22:AV:69:C:O2'	22:AV:70:G:H5'	2.15	0.46
24:AY:9:LEU:C	24:AY:11:ARG:N	2.68	0.46
24:AY:89:ASP:OD2	24:AY:457:LEU:HD12	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:99:ARG:NE	24:AY:128:TYR:HB2	2.29	0.46
24:AY:230:LYS:HE2	24:AY:241:GLU:CD	2.39	0.46
24:AY:438:PHE:HB2	24:AY:452:SER:O	2.15	0.46
24:AY:688:ILE:N	24:AY:688:ILE:HD12	2.30	0.46
27:B2:10:LEU:O	27:B2:11:GLU:C	2.56	0.46
27:B2:21:LEU:O	27:B2:24:LEU:CB	2.59	0.46
30:B5:30:LEU:HA	30:B5:41:PRO:HA	1.97	0.46
31:B6:8:LYS:HA	31:B6:27:LYS:HA	1.98	0.46
35:BA:117:G:C6	35:BA:119:A:C6	3.04	0.46
35:BA:139(A):G:N2	55:BX:44:GLU:CD	2.72	0.46
35:BA:184:C:H2'	35:BA:185:U:H6	1.81	0.46
35:BA:246:C:C2'	35:BA:247:G:H5'	2.44	0.46
35:BA:654(S):G:H3'	35:BA:654(T):C:C4'	2.46	0.46
35:BA:705:A:C2	35:BA:727:A:H1'	2.51	0.46
35:BA:769:G:H4'	35:BA:1379:A:C6	2.49	0.46
35:BA:820:A:C2	35:BA:943:U:H4'	2.49	0.46
35:BA:990:A:OP2	35:BA:991:C:OP2	2.34	0.46
35:BA:1012:U:O4	45:BN:28:THR:CG2	2.57	0.46
35:BA:1271:G:N2	35:BA:1617:C:C1'	2.77	0.46
35:BA:1434:A:N3	35:BA:1434:A:C2'	2.77	0.46
35:BA:1464:C:O2	35:BA:1464:C:H2'	2.16	0.46
35:BA:1570:A:H2'	35:BA:1571:A:C8	2.50	0.46
35:BA:1638:C:O2	35:BA:2698:U:O2'	2.33	0.46
35:BA:1751:C:O2'	35:BA:2861:G:H4'	2.15	0.46
35:BA:2483:C:H5'	35:BA:2484:G:OP2	2.15	0.46
36:BB:114:C:H4'	50:BS:46:VAL:HG13	1.97	0.46
37:BC:95:VAL:CG1	37:BC:96:GLY:H	2.26	0.46
37:BC:104:ILE:HG23	37:BC:108:TRP:O	2.15	0.46
39:BE:32:PRO:HB3	39:BE:69:LYS:HB3	1.97	0.46
39:BE:43:GLY:O	39:BE:44:TYR:HB3	2.15	0.46
40:BF:165:ARG:CB	40:BF:165:ARG:NH1	2.76	0.46
42:BH:29:PRO:HD2	42:BH:79:VAL:O	2.16	0.46
43:BK:9:LYS:C	43:BK:10:LEU:O	2.59	0.46
46:BO:14:THR:HG21	46:BO:86:ILE:HD13	1.97	0.46
46:BO:44:LYS:HD3	46:BO:44:LYS:HA	1.75	0.46
46:BO:77:ILE:HD11	51:BT:72:VAL:HG11	1.97	0.46
47:BP:41:ARG:HH11	47:BP:41:ARG:CA	2.22	0.46
47:BP:100:LEU:HA	47:BP:103:ALA:HB3	1.96	0.46
48:BQ:21:THR:OG1	48:BQ:99:PRO:O	2.34	0.46
49:BR:26:LYS:HE2	49:BR:71:GLN:H	1.80	0.46
49:BR:75:LEU:HD13	49:BR:75:LEU:C	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:100:LEU:N	49:BR:100:LEU:HD13	2.31	0.46
50:BS:68:GLN:C	50:BS:70:GLY:H	2.23	0.46
54:BW:110:LYS:HB3	54:BW:111:HIS:H	1.48	0.46
56:BY:13:VAL:HG23	56:BY:74:PRO:HA	1.96	0.46
56:BY:49:VAL:C	56:BY:51:VAL:H	2.23	0.46
57:BZ:127:LYS:HB3	57:BZ:127:LYS:HZ3	1.79	0.46
57:BZ:127:LYS:HG2	57:BZ:162:GLU:HG3	1.97	0.46
1:AA:9:G:H5'	5:AE:122:GLU:OE2	2.15	0.46
1:AA:265:G:O2'	1:AA:266:G:H5'	2.15	0.46
1:AA:972:C:O2'	10:AJ:55:LYS:HB3	2.15	0.46
1:AA:974:A:H8	1:AA:974:A:OP1	1.99	0.46
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.49	0.46
4:AD:61:LYS:HD3	4:AD:206:PHE:CE2	2.51	0.46
5:AE:124:GLY:O	5:AE:125:SER:C	2.56	0.46
16:AP:18:ARG:HD3	16:AP:35:LYS:HD2	1.97	0.46
16:AP:61:SER:O	16:AP:62:VAL:HG13	2.16	0.46
18:AR:44:LEU:HD11	18:AR:70:ILE:CG2	2.43	0.46
24:AY:39:ILE:CG2	24:AY:41:LYS:HG3	2.45	0.46
24:AY:230:LYS:CD	24:AY:235:GLU:OE1	2.64	0.46
24:AY:290:LYS:HD3	24:AY:298:VAL:HG22	1.97	0.46
24:AY:486:THR:OG1	24:AY:487:ILE:N	2.48	0.46
24:AY:505:GLY:HA3	24:AY:576:ASP:CB	2.45	0.46
27:B2:69:ARG:HH22	35:BA:111:A:H5"	1.81	0.46
31:B6:45:LYS:HE3	35:BA:2371:G:H5"	1.96	0.46
32:B7:48:LYS:NZ	35:BA:125:G:H21	2.13	0.46
35:BA:41:C:N4	35:BA:437:G:H1	2.12	0.46
35:BA:271(K):U:H3'	35:BA:271(L):U:C5'	2.46	0.46
35:BA:299:A:H1'	35:BA:322:A:N6	2.30	0.46
35:BA:745:G:H21	35:BA:750:A:N6	2.13	0.46
35:BA:960:A:H2'	35:BA:962:G:C5'	2.46	0.46
35:BA:1061:U:H3	43:BK:11:GLN:HG2	1.80	0.46
35:BA:1263:U:H2'	35:BA:1264:G:C8	2.51	0.46
35:BA:1750:G:O2'	35:BA:1751:C:H5'	2.14	0.46
35:BA:1788:C:C2'	35:BA:1789:A:H5'	2.44	0.46
35:BA:1789:A:H2'	35:BA:1790:C:O4'	2.16	0.46
35:BA:1865:G:H2'	35:BA:1866:C:C5'	2.41	0.46
35:BA:2062:A:N3	35:BA:2062:A:O4'	2.48	0.46
35:BA:2836:U:H2'	35:BA:2837:G:C8	2.50	0.46
38:BD:85:ASP:HB2	38:BD:92:ILE:HD12	1.97	0.46
40:BF:25:PRO:HB3	40:BF:119:ARG:HB2	1.96	0.46
42:BH:94:TYR:O	42:BH:95:ARG:CB	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BL:110:LEU:HB3	44:BL:117:VAL:CG2	2.45	0.46
46:BO:64:ARG:O	46:BO:82:ASN:HA	2.14	0.46
46:BO:113:LYS:O	46:BO:117:LEU:HD12	2.16	0.46
49:BR:4:LEU:C	49:BR:6:SER:N	2.70	0.46
49:BR:117:VAL:O	49:BR:118:GLU:HB2	2.14	0.46
53:BV:22:VAL:O	53:BV:22:VAL:HG23	2.15	0.46
54:BW:1:MET:HE3	54:BW:2:GLU:H	1.79	0.46
57:BZ:151:HIS:CA	57:BZ:171:ILE:HG23	2.29	0.46
1:AA:92:C:H3'	1:AA:93:G:C8	2.50	0.46
1:AA:477:A:O2'	1:AA:479:C:H5'	2.15	0.46
1:AA:652:U:C2	1:AA:752:G:N2	2.84	0.46
1:AA:681:C:O5'	1:AA:681:C:H6	1.98	0.46
1:AA:817:C:C5	1:AA:819:A:H1'	2.50	0.46
1:AA:940:C:H2'	1:AA:941:G:C8	2.50	0.46
1:AA:1026:G:C3'	1:AA:1027:C:H5'	2.44	0.46
1:AA:1144:G:N2	1:AA:1146:A:H62	2.14	0.46
1:AA:1284:C:O5'	1:AA:1284:C:H6	1.98	0.46
1:AA:1332:A:H2'	1:AA:1333:A:H8	1.80	0.46
2:AB:121:LEU:HD21	2:AB:126:GLU:OE2	2.16	0.46
2:AB:142:LEU:CD2	2:AB:146:GLN:NE2	2.78	0.46
2:AB:223:ILE:O	2:AB:226:ARG:HB3	2.16	0.46
4:AD:22:LYS:NZ	4:AD:22:LYS:HB3	2.31	0.46
4:AD:54:TYR:O	4:AD:55:ALA:C	2.58	0.46
5:AE:75:THR:HG23	5:AE:76:ILE:O	2.16	0.46
5:AE:100:VAL:O	5:AE:100:VAL:CG2	2.62	0.46
8:AH:35:ILE:HG22	8:AH:39:LEU:HD21	1.98	0.46
8:AH:44:PHE:C	8:AH:45:ILE:CG2	2.88	0.46
9:AI:111:ARG:O	9:AI:113:LYS:HD2	2.15	0.46
13:AM:70:LEU:O	13:AM:73:GLU:HB3	2.15	0.46
20:AT:40:ALA:O	20:AT:41:ILE:C	2.59	0.46
22:AV:71:C:N3	22:AV:72:A:C8	2.83	0.46
24:AY:24:GLY:O	24:AY:25:LYS:C	2.58	0.46
24:AY:409:ILE:HD12	24:AY:654:GLY:HA2	1.97	0.46
27:B2:6:VAL:HG13	27:B2:59:ARG:NH1	2.30	0.46
29:B4:31:ILE:HG23	29:B4:33:VAL:HG23	1.95	0.46
31:B6:8:LYS:O	31:B6:9:LEU:HD13	2.16	0.46
31:B6:11:LEU:HB3	31:B6:26:ASN:HD21	1.81	0.46
33:B8:13:ARG:NH2	35:BA:250:G:OP2	2.48	0.46
33:B8:31:HIS:HE1	35:BA:2392:A:OP2	1.98	0.46
33:B8:61:LEU:C	33:B8:63:PRO:CD	2.87	0.46
35:BA:474:G:H4'	35:BA:475:U:OP1	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:503:A:O2'	35:BA:504:U:O5'	2.30	0.46
35:BA:650:C:H3'	35:BA:651:G:H5"	1.97	0.46
35:BA:662:G:OP1	47:BP:18:ARG:CD	2.61	0.46
35:BA:911:A:N1	35:BA:2277:G:O2'	2.46	0.46
35:BA:1335:U:P	55:BX:65:ARG:NH2	2.88	0.46
35:BA:1448:G:N3	35:BA:1528(A):A:H2	2.13	0.46
35:BA:1858:G:HO2'	35:BA:1859:A:H8	1.61	0.46
35:BA:1887:C:H3'	35:BA:1888:G:H5"	1.96	0.46
35:BA:1978:A:C5	35:BA:1979:C:C5	3.04	0.46
35:BA:2056:G:C5	35:BA:2577:A:C4	3.04	0.46
35:BA:2395:C:H2'	35:BA:2396:G:C8	2.50	0.46
35:BA:2543:G:H2'	35:BA:2544:G:C8	2.50	0.46
35:BA:2582:G:H2'	35:BA:2582:G:N3	2.30	0.46
35:BA:2787:C:C2	39:BE:61:ARG:HD3	2.50	0.46
35:BA:2887:U:H2'	35:BA:2888:C:C6	2.51	0.46
36:BB:74:U:C2'	36:BB:75:G:H5'	2.46	0.46
36:BB:91:C:OP1	48:BQ:16:ARG:CG	2.60	0.46
37:BC:23:ILE:CB	37:BC:229:SER:OXT	2.55	0.46
38:BD:37:LEU:HD23	38:BD:37:LEU:HA	1.59	0.46
40:BF:66:PRO:O	40:BF:67:GLN:HB3	2.15	0.46
40:BF:153:SER:HA	40:BF:172:TRP:O	2.15	0.46
40:BF:192:LEU:CD2	40:BF:194:MET:HG3	2.43	0.46
41:BG:54:GLU:O	41:BG:57:ALA:HB3	2.14	0.46
42:BH:94:TYR:CD2	42:BH:107:VAL:HG12	2.50	0.46
43:BK:9:LYS:O	43:BK:10:LEU:O	2.33	0.46
47:BP:122:PRO:HA	47:BP:141:ALA:O	2.16	0.46
47:BP:146:VAL:CG1	47:BP:147:LEU:N	2.69	0.46
48:BQ:25:ASP:OD1	48:BQ:26:TYR:HD1	1.98	0.46
48:BQ:30:GLY:CA	48:BQ:107:ALA:HB2	2.46	0.46
48:BQ:51:ARG:O	48:BQ:54:MET:HB3	2.14	0.46
52:BU:46:ALA:O	52:BU:47:TYR:C	2.58	0.46
53:BV:39:LEU:N	53:BV:39:LEU:HD22	2.31	0.46
1:AA:19:C:O2'	1:AA:20:U:H5'	2.15	0.46
1:AA:36:C:H4'	12:AL:122:THR:O	2.16	0.46
1:AA:328:C:C2'	1:AA:329:A:OP2	2.63	0.46
1:AA:432:A:C8	1:AA:433:C:C5	3.04	0.46
1:AA:680:C:O5'	1:AA:680:C:H6	1.99	0.46
1:AA:853:G:O2'	1:AA:854:G:H5'	2.15	0.46
1:AA:883:C:O2'	1:AA:884:U:H5'	2.15	0.46
1:AA:936:C:C2'	1:AA:937:A:H5'	2.44	0.46
1:AA:994:A:N7	1:AA:1216:G:H4'	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1227:A:C2'	13:AM:117:VAL:HG21	2.45	0.46
1:AA:1239:A:C2'	1:AA:1298:C:H42	2.19	0.46
1:AA:1296:C:C6	1:AA:1297:C:C5	3.02	0.46
1:AA:1316:G:O2'	14:AN:18:VAL:HG11	2.16	0.46
1:AA:1347:G:C6	9:AI:107:ARG:NH2	2.84	0.46
1:AA:1370:G:C2	1:AA:1371:G:N7	2.84	0.46
1:AA:1378:C:OP1	7:AG:7:ALA:CB	2.63	0.46
1:AA:1430:C:H2'	1:AA:1431:C:C6	2.51	0.46
2:AB:73:THR:HG23	2:AB:170:GLU:OE2	2.15	0.46
3:AC:53:ALA:O	3:AC:54:ARG:HG3	2.16	0.46
4:AD:192:GLU:H	4:AD:192:GLU:CD	2.22	0.46
5:AE:40:ARG:HG2	5:AE:40:ARG:HH11	1.80	0.46
8:AH:100:ILE:HD13	8:AH:112:LEU:HD11	1.97	0.46
8:AH:109:ILE:HG12	8:AH:110:ALA:H	1.79	0.46
13:AM:11:ARG:HG2	13:AM:12:ASN:H	1.80	0.46
13:AM:19:LEU:HD22	13:AM:19:LEU:H	1.78	0.46
13:AM:56:LEU:HD13	13:AM:60:VAL:HG23	1.97	0.46
13:AM:121:LYS:HD3	13:AM:121:LYS:H	1.77	0.46
22:AV:75:C:C3'	22:AV:75:C:C6	2.98	0.46
24:AY:99:ARG:HA	24:AY:128:TYR:CZ	2.51	0.46
24:AY:238:THR:HG23	24:AY:240:GLU:CG	2.39	0.46
24:AY:607:ARG:O	24:AY:671:MET:HA	2.14	0.46
28:B3:12:PRO:O	28:B3:13:ILE:C	2.55	0.46
35:BA:182:A:C2	35:BA:183:C:C2	3.04	0.46
35:BA:294:A:C2'	35:BA:295:G:H5'	2.44	0.46
35:BA:608:A:C6	35:BA:609:A:C6	3.04	0.46
35:BA:654(P):C:C5	35:BA:654(Q):C:C5	3.03	0.46
35:BA:876:C:H2'	35:BA:877:U:O4'	2.16	0.46
35:BA:1290:C:H2'	35:BA:1291:C:C6	2.50	0.46
35:BA:1493:C:H2'	35:BA:1493:C:O2	2.15	0.46
35:BA:1509(B):A:H2'	35:BA:1510:G:C8	2.51	0.46
35:BA:2008:C:H2'	35:BA:2009:G:C8	2.50	0.46
35:BA:2181:G:H8	35:BA:2181:G:O5'	1.98	0.46
35:BA:2425:A:H5"	35:BA:2426:A:H3'	1.98	0.46
35:BA:2734:A:H2'	35:BA:2735:G:H5'	1.97	0.46
35:BA:2801:A:N3	35:BA:2801:A:H2'	2.31	0.46
35:BA:2893:G:H5'	35:BA:2894:G:C5'	2.46	0.46
37:BC:72:GLN:HB3	37:BC:74:ARG:HH12	1.79	0.46
37:BC:74:ARG:H	37:BC:112:ASP:HB2	1.80	0.46
38:BD:70:TRP:C	38:BD:70:TRP:HD1	2.24	0.46
38:BD:248:SER:CB	38:BD:249:PRO:HD2	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:160:ASN:CG	40:BF:163:VAL:HG23	2.39	0.46
47:BP:47:ASP:CB	47:BP:51:PHE:HB2	2.46	0.46
48:BQ:17:LEU:O	48:BQ:18:LYS:HD2	2.14	0.46
49:BR:79:LEU:O	49:BR:79:LEU:HD22	2.15	0.46
50:BS:83:LYS:HE2	50:BS:83:LYS:HB3	1.66	0.46
51:BT:55:ASN:H	51:BT:59:THR:HG21	1.80	0.46
52:BU:8:VAL:CG2	52:BU:12:ARG:HE	2.28	0.46
53:BV:64:HIS:ND1	53:BV:92:THR:HG22	2.30	0.46
57:BZ:20:ARG:HG3	57:BZ:21:ALA:N	2.31	0.46
57:BZ:108:PRO:HG2	57:BZ:111:VAL:HG23	1.96	0.46
1:AA:55:A:H1'	24:AY:321:TYR:HA	1.97	0.46
1:AA:132:C:H5'	1:AA:262:A:H1'	1.97	0.46
1:AA:436:C:O2'	1:AA:437:U:P	2.74	0.46
1:AA:473:G:O2'	1:AA:474:G:H5'	2.16	0.46
1:AA:748:C:O2'	1:AA:749:C:O5'	2.34	0.46
1:AA:961:U:OP2	1:AA:1223:C:H4'	2.15	0.46
1:AA:1303:C:C2'	1:AA:1304:G:H5'	2.45	0.46
1:AA:1327:C:OP2	21:AU:12:LYS:NZ	2.47	0.46
2:AB:88:ALA:HB2	2:AB:219:VAL:CG1	2.46	0.46
4:AD:106:TYR:CE1	4:AD:113:SER:HA	2.51	0.46
5:AE:15:ARG:HG3	5:AE:28:PHE:CZ	2.50	0.46
5:AE:107:ARG:HG2	5:AE:108:ALA:N	2.29	0.46
6:AF:7:ASN:OD1	6:AF:62:TRP:CD1	2.67	0.46
9:AI:114:TYR:HD1	9:AI:114:TYR:H	1.64	0.46
10:AJ:51:ARG:H	10:AJ:60:ARG:HA	1.81	0.46
11:AK:79:SER:CB	11:AK:106:LYS:HD2	2.46	0.46
12:AL:41:ARG:HD2	12:AL:43:VAL:HG12	1.98	0.46
13:AM:54:VAL:O	13:AM:56:LEU:N	2.48	0.46
19:AS:31:ILE:HG23	19:AS:31:ILE:O	2.16	0.46
19:AS:41:VAL:C	19:AS:43:GLU:N	2.74	0.46
20:AT:62:LEU:HA	20:AT:65:LYS:HB2	1.98	0.46
24:AY:157:LEU:CD2	24:AY:157:LEU:N	2.61	0.46
25:B0:11:ARG:NH1	25:B0:11:ARG:CB	2.62	0.46
27:B2:46:GLN:OE1	27:B2:46:GLN:HA	2.14	0.46
31:B6:17:LYS:O	31:B6:20:ASN:ND2	2.49	0.46
31:B6:38:LYS:HB3	35:BA:2344:U:C5'	2.46	0.46
31:B6:47:THR:HG23	31:B6:49:HIS:ND1	2.31	0.46
32:B7:45:ALA:O	32:B7:46:VAL:CG2	2.64	0.46
35:BA:28:A:H1'	35:BA:513:A:C2	2.51	0.46
35:BA:643:A:C2'	35:BA:644:A:H5'	2.45	0.46
35:BA:979:G:N2	35:BA:985:C:N4	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1278:A:H1'	49:BR:27:SER:OG	2.16	0.46
35:BA:1683:C:O2'	35:BA:1684:C:H5'	2.16	0.46
35:BA:1749:A:N6	35:BA:1750:G:C5	2.83	0.46
35:BA:2055:C:H5'	35:BA:2056:G:H5"	1.97	0.46
35:BA:2245:U:H5'	35:BA:2246:G:C5'	2.37	0.46
35:BA:2343:C:H2'	35:BA:2344:U:C6	2.51	0.46
35:BA:2428:G:H4'	35:BA:2429:G:O5'	2.15	0.46
35:BA:2454:G:C2'	35:BA:2455:G:H5'	2.46	0.46
35:BA:2617:C:O2'	35:BA:2618:G:H5'	2.16	0.46
35:BA:2627:G:H2'	35:BA:2628:C:C6	2.51	0.46
37:BC:78:ILE:HG21	37:BC:124:VAL:CG2	2.45	0.46
38:BD:148:GLU:C	38:BD:151:LYS:HG3	2.40	0.46
39:BE:62:PRO:C	39:BE:64:LYS:N	2.70	0.46
40:BF:74:ARG:O	40:BF:74:ARG:CG	2.64	0.46
41:BG:46:ALA:HA	41:BG:51:ARG:HB3	1.98	0.46
41:BG:119:GLY:CA	41:BG:181:ARG:H	2.28	0.46
41:BG:138:GLN:OE1	41:BG:153:ARG:HG2	2.16	0.46
47:BP:16:ARG:HD3	47:BP:16:ARG:C	2.40	0.46
48:BQ:110:THR:HG22	48:BQ:113:GLN:OE1	2.15	0.46
52:BU:12:ARG:O	52:BU:13:LYS:C	2.58	0.46
53:BV:38:LEU:HD12	53:BV:56:SER:CA	2.41	0.46
55:BX:56:THR:OG1	55:BX:57:LEU:N	2.47	0.46
1:AA:250:A:H4'	1:AA:251:G:O5'	2.15	0.46
1:AA:414:A:H2'	1:AA:415:A:O4'	2.16	0.46
1:AA:436:C:O2'	1:AA:437:U:C6	2.66	0.46
1:AA:514:C:H2'	1:AA:515:G:H8	1.80	0.46
1:AA:522:C:N4	12:AL:53:ARG:HH22	2.06	0.46
1:AA:961:U:O2	1:AA:983:A:H2'	2.16	0.46
1:AA:1004:A:H5'	1:AA:1025:U:H3	1.81	0.46
1:AA:1010:G:N1	1:AA:1020:U:H1'	2.31	0.46
1:AA:1125:U:H2'	1:AA:1126:U:H2'	1.98	0.46
1:AA:1237:C:H5"	1:AA:1238:A:O4'	2.16	0.46
1:AA:1253:G:C2	1:AA:1254:C:C2	3.04	0.46
1:AA:1459:C:H2'	1:AA:1460:A:H8	1.80	0.46
4:AD:43:HIS:HB3	4:AD:46:LYS:HD3	1.98	0.46
5:AE:136:MET:C	5:AE:138:ALA:N	2.74	0.46
6:AF:1:MET:HE2	6:AF:68:PRO:CA	2.46	0.46
6:AF:22:GLU:C	6:AF:24:GLU:H	2.24	0.46
8:AH:86:ILE:HG13	8:AH:133:LEU:HD22	1.98	0.46
9:AI:49:PRO:O	9:AI:52:ALA:HB3	2.15	0.46
10:AJ:27:ALA:CA	10:AJ:85:LEU:HD11	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:18:VAL:CG2	14:AN:19:ARG:N	2.78	0.46
19:AS:6:LYS:CE	19:AS:6:LYS:N	2.78	0.46
20:AT:25:ARG:HH11	20:AT:25:ARG:HG3	1.81	0.46
20:AT:49:ALA:HB3	20:AT:99:LEU:HG	1.94	0.46
22:AV:52:G:C2	22:AV:53:G:C8	3.03	0.46
27:B2:13:ALA:C	27:B2:15:LYS:H	2.23	0.46
27:B2:38:GLN:CA	27:B2:41:ILE:HG12	2.46	0.46
35:BA:365:C:H6	35:BA:365:C:C5'	2.28	0.46
35:BA:511:U:H5	35:BA:512:G:C5	2.34	0.46
35:BA:581:C:C2	35:BA:582:G:N7	2.84	0.46
35:BA:645:C:O2	35:BA:645:C:C5'	2.59	0.46
35:BA:880:G:O2'	35:BA:881:G:H5'	2.16	0.46
35:BA:918:A:H5"	36:BB:98:G:O2'	2.16	0.46
35:BA:936:C:H2'	35:BA:937:U:H6	1.80	0.46
35:BA:1005:C:N3	35:BA:1143:A:C2	2.84	0.46
35:BA:1097:U:H2'	35:BA:1098:A:H5'	1.97	0.46
35:BA:1186:G:H2'	35:BA:1187:G:C5'	2.45	0.46
35:BA:1237:A:O2'	35:BA:1238:G:P	2.74	0.46
35:BA:2037:G:C6	35:BA:2038:G:C6	3.03	0.46
35:BA:2056:G:N2	35:BA:2057:A:N9	2.64	0.46
35:BA:2073:C:N4	35:BA:2436:G:H1	2.12	0.46
35:BA:2116:G:N7	35:BA:2117:A:C6	2.84	0.46
35:BA:2118:U:OP1	35:BA:2148:G:H4'	2.16	0.46
35:BA:2297:C:H2'	35:BA:2298:A:C5'	2.45	0.46
36:BB:34:U:O4	36:BB:44:G:H2'	2.15	0.46
37:BC:126:SER:O	37:BC:128:LEU:N	2.49	0.46
38:BD:196:VAL:O	38:BD:196:VAL:CG1	2.60	0.46
40:BF:24:LEU:O	40:BF:26:ALA:N	2.46	0.46
46:BO:4:PRO:HA	46:BO:21:CYS:SG	2.56	0.46
46:BO:77:ILE:HD11	51:BT:72:VAL:CG1	2.46	0.46
47:BP:85:LEU:HD23	47:BP:85:LEU:N	2.18	0.46
49:BR:111:LEU:N	49:BR:111:LEU:HD23	2.31	0.46
50:BS:15:ARG:HB3	50:BS:18:ILE:CD1	2.43	0.46
53:BV:47:VAL:HB	53:BV:50:PRO:O	2.15	0.46
53:BV:66:ARG:CZ	53:BV:88:ARG:HH21	2.28	0.46
54:BW:12:ILE:O	54:BW:12:ILE:HG23	2.15	0.46
57:BZ:8:TYR:CD1	57:BZ:8:TYR:N	2.83	0.46
57:BZ:126:VAL:HG23	57:BZ:127:LYS:N	2.28	0.46
1:AA:161:A:H2'	1:AA:162:A:H8	1.80	0.46
1:AA:182:U:H3'	1:AA:183:G:H5'	1.97	0.46
1:AA:502:G:OP1	12:AL:118:SER:CB	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:533:A:OP1	1:AA:533:A:H3'	2.16	0.46
1:AA:560:U:H4'	1:AA:561:U:C5'	2.45	0.46
1:AA:722:A:H3'	1:AA:722:A:N3	2.31	0.46
1:AA:812:C:HO2'	1:AA:813:U:P	2.32	0.46
1:AA:1294:G:H2'	1:AA:1295:G:H5'	1.97	0.46
1:AA:1347:G:C2'	1:AA:1348:U:OP2	2.64	0.46
1:AA:1378:C:OP1	7:AG:7:ALA:HB3	2.16	0.46
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.51	0.46
1:AA:1423:G:H2'	1:AA:1424:C:C6	2.51	0.46
2:AB:223:ILE:HG23	2:AB:226:ARG:CZ	2.45	0.46
3:AC:156:ARG:O	3:AC:159:GLY:N	2.44	0.46
4:AD:163:GLU:C	4:AD:165:MET:N	2.71	0.46
5:AE:76:ILE:CD1	5:AE:142:LEU:HD21	2.46	0.46
7:AG:146:GLU:O	7:AG:147:ALA:C	2.58	0.46
8:AH:6:ILE:O	8:AH:7:ALA:C	2.58	0.46
12:AL:58:VAL:O	12:AL:65:GLU:HA	2.16	0.46
16:AP:9:PHE:CE2	16:AP:18:ARG:NE	2.84	0.46
18:AR:53:ARG:HH21	18:AR:59:SER:HA	1.80	0.46
18:AR:66:LEU:O	18:AR:67:ALA:C	2.57	0.46
24:AY:64:THR:C	24:AY:66:THR:H	2.23	0.46
24:AY:553:GLY:H	24:AY:557:GLY:C	2.24	0.46
30:B5:51:TYR:HD1	30:B5:52:TYR:H	1.63	0.46
31:B6:12:GLU:HG2	31:B6:23:THR:CG2	2.45	0.46
34:B9:4:ARG:NH1	35:BA:2477:C:C4	2.77	0.46
35:BA:25:U:H2'	35:BA:26:G:O4'	2.16	0.46
35:BA:83:G:C2'	35:BA:84:A:OP2	2.63	0.46
35:BA:84:A:H5'	56:BY:9:LYS:HB3	1.97	0.46
35:BA:750:A:C3'	35:BA:751:A:H5"	2.46	0.46
35:BA:1022:G:N2	35:BA:1024:G:N2	2.64	0.46
35:BA:1079:C:C1'	43:BK:132:ARG:HH22	2.28	0.46
35:BA:1115:G:H2'	35:BA:1116:C:C6	2.51	0.46
35:BA:1326:U:O2'	35:BA:1327:C:H5'	2.15	0.46
35:BA:1390:U:H3	35:BA:1395:A:H62	1.64	0.46
35:BA:1951:U:H2'	35:BA:1953:A:OP2	2.15	0.46
35:BA:2052:G:OP1	39:BE:141:ILE:HG12	2.16	0.46
35:BA:2078:C:C1'	35:BA:2434:A:H1'	2.46	0.46
35:BA:2189:U:C3'	35:BA:2190:G:C5'	2.93	0.46
35:BA:2392:A:H2	35:BA:2424:C:H42	1.63	0.46
35:BA:2713:A:C3'	35:BA:2714:G:C5'	2.93	0.46
39:BE:25:VAL:HG22	39:BE:183:LEU:HG	1.98	0.46
42:BH:17:VAL:HB	42:BH:45:VAL:HG13	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:65:HIS:HE1	42:BH:69:ARG:NH1	2.13	0.46
43:BK:57:ILE:HD12	43:BK:57:ILE:N	2.30	0.46
43:BK:78:ILE:CD1	43:BK:136:VAL:HG11	2.45	0.46
44:BL:110:LEU:HB3	44:BL:117:VAL:HG21	1.96	0.46
45:BN:22:THR:O	45:BN:23:LEU:C	2.59	0.46
46:BO:104:ARG:NH2	51:BT:33:LYS:HD2	2.30	0.46
46:BO:114:ILE:O	46:BO:117:LEU:N	2.36	0.46
47:BP:16:ARG:NH1	47:BP:16:ARG:HB2	2.31	0.46
48:BQ:27:VAL:HG11	48:BQ:134:ARG:HD3	1.98	0.46
49:BR:44:LEU:C	49:BR:44:LEU:CD1	2.89	0.46
51:BT:16:ARG:HG3	51:BT:16:ARG:HH11	1.81	0.46
51:BT:24:PRO:HA	51:BT:49:VAL:HG22	1.97	0.46
52:BU:12:ARG:HB3	52:BU:16:LYS:HE3	1.97	0.46
54:BW:70:TYR:HB3	54:BW:110:LYS:NZ	2.31	0.46
57:BZ:99:TYR:HE1	57:BZ:125:LEU:HD13	1.79	0.46
1:AA:10:A:H2'	1:AA:11:G:H8	1.79	0.46
1:AA:147:G:C2	1:AA:148:G:C8	3.03	0.46
1:AA:226:G:O2'	1:AA:227:G:H5'	2.16	0.46
1:AA:450:G:H1	1:AA:483:C:N4	2.12	0.46
1:AA:481:G:HO2'	1:AA:483:C:H41	1.62	0.46
1:AA:715:A:H2'	1:AA:716:A:H8	1.81	0.46
1:AA:943:U:H2'	1:AA:944:G:C5'	2.43	0.46
1:AA:961:U:H2'	1:AA:962:C:C5'	2.46	0.46
1:AA:999:C:H3'	1:AA:999:C:C6	2.51	0.46
1:AA:1021:G:H2'	1:AA:1022:G:O5'	2.16	0.46
1:AA:1081:G:O2'	1:AA:1082:G:H5'	2.15	0.46
1:AA:1221:G:P	19:AS:36:ARG:HD3	2.55	0.46
1:AA:1368:G:C5'	9:AI:112:LYS:O	2.63	0.46
1:AA:1518:A:H2'	1:AA:1519:A:O4'	2.15	0.46
2:AB:11:LEU:O	2:AB:12:GLU:O	2.34	0.46
5:AE:135:THR:O	5:AE:138:ALA:HB3	2.16	0.46
6:AF:33:TYR:O	6:AF:34:GLY:C	2.58	0.46
8:AH:103:VAL:HG23	8:AH:110:ALA:HB2	1.93	0.46
9:AI:93:ARG:C	9:AI:95:LYS:N	2.74	0.46
10:AJ:63:PHE:HA	14:AN:59:ALA:CB	2.46	0.46
13:AM:63:THR:CG2	13:AM:64:TRP:H	2.17	0.46
13:AM:70:LEU:HD23	13:AM:71:ARG:N	2.31	0.46
16:AP:19:ILE:HG12	16:AP:37:GLY:C	2.41	0.46
17:AQ:60:ILE:HG22	17:AQ:72:ARG:O	2.16	0.46
24:AY:73:PHE:CE1	24:AY:78:ARG:HB2	2.50	0.46
24:AY:166:LEU:HD12	24:AY:166:LEU:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:513:LYS:HD2	24:AY:568:TYR:CD2	2.51	0.46
24:AY:524:GLU:O	24:AY:565:VAL:N	2.31	0.46
31:B6:41:PRO:O	31:B6:42:TRP:C	2.58	0.46
33:B8:29:LYS:HD2	33:B8:44:LYS:HG2	1.98	0.46
33:B8:48:PHE:HB3	33:B8:49:VAL:H	1.45	0.46
35:BA:532:A:N1	35:BA:2020:A:H1'	2.30	0.46
35:BA:810:U:OP1	35:BA:1253:A:N7	2.49	0.46
35:BA:1109:C:O2	35:BA:1109:C:H2'	2.16	0.46
35:BA:1186:G:H2'	35:BA:1187:G:H5'	1.98	0.46
35:BA:1210:A:O2'	35:BA:1211:U:P	2.74	0.46
35:BA:1219:G:C2	35:BA:1221:C:N4	2.84	0.46
35:BA:1301:A:C8	35:BA:1303:G:C8	3.03	0.46
35:BA:1799:G:H5'	35:BA:1819:A:N6	2.31	0.46
35:BA:1902:C:O2'	38:BD:244:ARG:NE	2.40	0.46
35:BA:2378:A:H2'	35:BA:2379:G:O4'	2.15	0.46
35:BA:2594:C:C2'	35:BA:2595:G:H5'	2.46	0.46
35:BA:2785:C:O2'	35:BA:2786:U:H5'	2.16	0.46
36:BB:4:C:H2'	36:BB:5:C:C6	2.50	0.46
36:BB:13:A:O2'	36:BB:15:A:H5"	2.16	0.46
36:BB:94:C:H2'	36:BB:95:C:H6	1.81	0.46
39:BE:32:PRO:HA	39:BE:90:THR:HG23	1.98	0.46
40:BF:107:LYS:O	40:BF:110:LEU:N	2.44	0.46
41:BG:145:THR:OG1	41:BG:146:TYR:N	2.48	0.46
43:BK:4:VAL:HG12	43:BK:5:VAL:H	1.80	0.46
43:BK:30:HIS:CG	43:BK:59:ILE:HB	2.51	0.46
47:BP:106:LEU:N	47:BP:106:LEU:HD12	2.30	0.46
47:BP:112:LEU:N	47:BP:128:HIS:CD2	2.80	0.46
50:BS:52:SER:O	50:BS:69:VAL:HG23	2.16	0.46
51:BT:76:PHE:HA	51:BT:77:PRO:HD3	1.63	0.46
53:BV:32:THR:CG2	53:BV:33:VAL:N	2.79	0.46
54:BW:82:LEU:N	54:BW:82:LEU:CD1	2.79	0.46
57:BZ:41:LEU:HD23	57:BZ:41:LEU:HA	1.70	0.46
57:BZ:119:GLU:C	57:BZ:121:HIS:H	2.24	0.46
1:AA:202:U:H5'	1:AA:203:U:C5	2.49	0.46
1:AA:756:C:H2'	1:AA:757:U:O4'	2.16	0.46
1:AA:781:A:H4'	1:AA:1522:U:O2'	2.16	0.46
1:AA:837:G:O2'	1:AA:838:G:H5'	2.16	0.46
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.29	0.46
1:AA:1002:G:H22	1:AA:1039:C:H2'	1.81	0.46
1:AA:1163:C:H2'	1:AA:1164:G:C8	2.50	0.46
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1321:C:C5’	1:AA:1322:C:C5’	2.93	0.46
1:AA:1411:C:C2’	1:AA:1412:C:H5’	2.46	0.46
1:AA:1495:U:H2’	1:AA:1496:C:C6	2.51	0.46
1:AA:1517:G:O2’	1:AA:1518:A:H5’	2.16	0.46
2:AB:223:ILE:C	2:AB:225:ALA:N	2.73	0.46
3:AC:28:GLN:O	3:AC:29:TYR:C	2.59	0.46
5:AE:6:PHE:HB3	5:AE:35:GLY:O	2.15	0.46
5:AE:42:GLY:CA	5:AE:66:MET:HG2	2.44	0.46
5:AE:82:VAL:HG21	5:AE:138:ALA:CA	2.39	0.46
6:AF:60:PHE:CD1	6:AF:60:PHE:N	2.84	0.46
9:AI:5:TYR:CE1	9:AI:18:PHE:CE1	2.98	0.46
11:AK:15:ALA:HB1	11:AK:78:GLN:HG3	1.97	0.46
11:AK:126:ARG:HG2	11:AK:126:ARG:HH11	1.81	0.46
13:AM:112:GLY:O	13:AM:113:PRO:C	2.58	0.46
17:AQ:53:LEU:CD2	17:AQ:85:VAL:HG21	2.46	0.46
17:AQ:57:VAL:HG23	17:AQ:58:GLU:N	2.30	0.46
26:B1:3:LYS:HE3	35:BA:1364:G:C8	2.51	0.46
26:B1:52:ARG:NH2	35:BA:2218:U:O2’	2.45	0.46
31:B6:27:LYS:O	31:B6:28:ARG:C	2.58	0.46
32:B7:24:THR:C	32:B7:26:GLY:N	2.73	0.46
33:B8:53:PRO:HG2	33:B8:54:GLU:N	2.30	0.46
35:BA:13:A:H1’	35:BA:15:G:N7	2.31	0.46
35:BA:303:U:H2’	35:BA:304:G:H8	1.78	0.46
35:BA:685:A:C6	35:BA:774:A:C2	3.04	0.46
35:BA:833:U:O2	47:BP:55:ARG:NH2	2.48	0.46
35:BA:898:C:H2’	35:BA:899:A:O4’	2.16	0.46
35:BA:971:C:O2	35:BA:971:C:H2’	2.16	0.46
35:BA:1332:G:H22	35:BA:1609:A:H3’	1.81	0.46
35:BA:1651:G:C2	35:BA:2007:C:C2	3.04	0.46
35:BA:1668:A:H2	35:BA:1670:C:N3	2.14	0.46
35:BA:1819:A:H1’	35:BA:1821:A:C5	2.51	0.46
35:BA:2258:C:H3’	35:BA:2259:G:H8	1.80	0.46
35:BA:2306:C:C5	35:BA:2307:G:O2’	2.65	0.46
35:BA:2656:U:N3	35:BA:2665:A:H2	2.14	0.46
35:BA:2701:C:O5’	35:BA:2701:C:H6	1.99	0.46
37:BC:60:ARG:HG2	37:BC:61:GLY:H	1.81	0.46
37:BC:155:ARG:O	37:BC:159:ALA:HB2	2.16	0.46
37:BC:164:PHE:O	37:BC:165:ARG:HB2	2.16	0.46
38:BD:161:THR:O	38:BD:162:SER:HB3	2.16	0.46
40:BF:192:LEU:HD21	40:BF:194:MET:CG	2.43	0.46
42:BH:40:GLU:O	42:BH:41:MET:CB	2.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:41:MET:SD	42:BH:53:GLU:HB2	2.55	0.46
46:BO:17:ARG:HB2	46:BO:45:GLU:HG3	1.96	0.46
47:BP:102:ARG:NH1	47:BP:102:ARG:CB	2.79	0.46
51:BT:50:ILE:HA	51:BT:99:LEU:CD1	2.46	0.46
56:BY:32:PRO:C	56:BY:35:TYR:H	2.22	0.46
56:BY:38:ILE:HG23	56:BY:39:VAL:N	2.30	0.46
56:BY:51:VAL:O	56:BY:52:SER:C	2.58	0.46
57:BZ:118:GLN:C	57:BZ:120:ILE:H	2.24	0.46
1:AA:312:C:H2'	1:AA:313:A:H8	1.80	0.45
1:AA:472:A:H3'	1:AA:473:G:C8	2.52	0.45
1:AA:474:G:N3	1:AA:475:G:C8	2.84	0.45
1:AA:642:A:C5	1:AA:643:C:C4	3.04	0.45
1:AA:675:A:C2'	1:AA:676:A:H5'	2.46	0.45
1:AA:851:G:H2'	1:AA:852:G:H8	1.81	0.45
1:AA:961:U:C2'	1:AA:962:C:H5'	2.46	0.45
1:AA:999:C:H2'	1:AA:1000:U:C4	2.50	0.45
1:AA:1115:C:H1'	14:AN:61:TRP:O	2.15	0.45
1:AA:1124:G:C5'	10:AJ:35:SER:HB2	2.45	0.45
1:AA:1198:G:O2'	1:AA:1199:U:H5'	2.15	0.45
1:AA:1254:C:H2'	1:AA:1255:G:H8	1.81	0.45
1:AA:1347:G:H2'	1:AA:1373:G:O6	2.16	0.45
1:AA:1363(A):A:C4'	1:AA:1364:U:H5"	2.38	0.45
2:AB:87:ARG:NH2	2:AB:219:VAL:HB	2.31	0.45
3:AC:35:GLU:OE2	3:AC:59:ARG:NH1	2.49	0.45
3:AC:132:ARG:O	3:AC:133:ALA:C	2.59	0.45
5:AE:81:GLU:HA	5:AE:89:ILE:O	2.16	0.45
7:AG:140:ASP:O	7:AG:144:MET:HG2	2.15	0.45
10:AJ:81:THR:C	10:AJ:83:GLU:N	2.72	0.45
16:AP:48:TRP:CD1	16:AP:48:TRP:N	2.74	0.45
19:AS:29:ARG:HB3	19:AS:47:HIS:HA	1.98	0.45
22:AV:75:C:H3'	22:AV:75:C:C6	2.51	0.45
24:AY:145:ASP:OD2	24:AY:148:LEU:HB2	2.16	0.45
24:AY:261:GLY:CA	24:AY:267:LYS:O	2.58	0.45
24:AY:286:ILE:N	24:AY:286:ILE:CD1	2.78	0.45
24:AY:290:LYS:HD3	24:AY:298:VAL:CG2	2.46	0.45
24:AY:329:ARG:HG3	24:AY:331:TYR:CZ	2.51	0.45
24:AY:583:LYS:O	24:AY:587:SER:HB2	2.16	0.45
24:AY:597:GLY:O	24:AY:598:ASP:O	2.34	0.45
28:B3:15:TYR:O	28:B3:20:LYS:HE2	2.16	0.45
30:B5:2:ALA:N	35:BA:2015:A:N3	2.63	0.45
35:BA:156:U:H5"	35:BA:156:U:O2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:518:G:H4'	54:BW:18:ARG:NH1	2.31	0.45
35:BA:588:U:H1'	40:BF:90:PHE:CG	2.51	0.45
35:BA:945:A:C2	35:BA:2448:A:N1	2.83	0.45
35:BA:1499:C:C2'	35:BA:1500:G:H5'	2.46	0.45
35:BA:1567:A:C5'	38:BD:58:HIS:HD2	2.30	0.45
35:BA:1947:C:H2'	35:BA:1948:G:H8	1.81	0.45
35:BA:2297:C:H2'	35:BA:2298:A:H5'	1.97	0.45
35:BA:2573:C:OP1	35:BA:2574:G:OP1	2.33	0.45
35:BA:2697:G:C6	35:BA:2711:A:N1	2.84	0.45
35:BA:2758:A:C2'	35:BA:2759:G:H5'	2.46	0.45
36:BB:104:U:H6	36:BB:104:U:C5'	2.29	0.45
36:BB:118:G:C2	36:BB:119:G:C8	3.04	0.45
38:BD:206:LEU:HD13	38:BD:212:SER:OG	2.16	0.45
39:BE:170:LEU:HD12	39:BE:170:LEU:N	2.31	0.45
40:BF:11:VAL:HG12	40:BF:12:LEU:N	2.32	0.45
40:BF:110:LEU:HD12	40:BF:206:ILE:HD11	1.96	0.45
40:BF:111:ALA:O	40:BF:112:MET:C	2.59	0.45
40:BF:123:LEU:HD12	40:BF:124:LEU:H	1.73	0.45
42:BH:136:ILE:HD12	42:BH:136:ILE:H	1.81	0.45
42:BH:158:HIS:CD2	42:BH:158:HIS:N	2.83	0.45
47:BP:45:LEU:HG	47:BP:46:LYS:H	1.80	0.45
47:BP:83:VAL:HG13	47:BP:114:ILE:HA	1.97	0.45
51:BT:65:LYS:CE	51:BT:66:VAL:N	2.56	0.45
51:BT:65:LYS:O	51:BT:72:VAL:N	2.33	0.45
51:BT:93:ARG:HA	51:BT:93:ARG:HD2	1.71	0.45
52:BU:90:VAL:O	52:BU:91:ASP:C	2.58	0.45
52:BU:90:VAL:O	52:BU:92:ARG:N	2.50	0.45
53:BV:40:LEU:HD13	53:BV:46:VAL:H	1.81	0.45
56:BY:61:ILE:CG1	56:BY:62:GLU:N	2.79	0.45
57:BZ:142:SER:C	57:BZ:144:LEU:H	2.24	0.45
57:BZ:144:LEU:HD22	57:BZ:144:LEU:N	2.32	0.45
1:AA:9:G:OP1	5:AE:122:GLU:HG3	2.16	0.45
1:AA:238:G:P	17:AQ:25:ARG:HH22	2.39	0.45
1:AA:282:A:H3'	1:AA:283:C:C6	2.52	0.45
1:AA:311:C:C2	1:AA:312:C:C6	3.05	0.45
1:AA:457:C:C4	1:AA:458:C:C5	3.04	0.45
1:AA:472:A:H1'	16:AP:82:GLN:OE1	2.17	0.45
1:AA:660:G:H2'	1:AA:661:G:O4'	2.16	0.45
1:AA:828:A:H2'	1:AA:829:G:O5'	2.15	0.45
1:AA:893:C:O2'	1:AA:894:G:H5'	2.16	0.45
1:AA:1159:U:C5	1:AA:1182:G:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.51	0.45
1:AA:1202:G:H2'	1:AA:1203:C:C5'	2.45	0.45
1:AA:1202:G:H2'	1:AA:1203:C:H5'	1.97	0.45
1:AA:1333:A:C2	1:AA:1334:G:H1'	2.50	0.45
2:AB:92:TYR:C	2:AB:93:VAL:CG2	2.89	0.45
4:AD:14:ARG:C	4:AD:16:GLY:N	2.71	0.45
5:AE:107:ARG:HG3	5:AE:111:GLU:HG3	1.97	0.45
8:AH:12:ARG:NH1	8:AH:26:VAL:HA	2.32	0.45
12:AL:111:LYS:HG2	12:AL:112:ASP:OD1	2.16	0.45
13:AM:81:LEU:HB3	13:AM:89:GLY:HA2	1.98	0.45
18:AR:31:LEU:CD2	18:AR:31:LEU:N	2.76	0.45
24:AY:17:ILE:HG22	24:AY:25:LYS:HG2	1.96	0.45
24:AY:111:SER:O	24:AY:112:GLN:C	2.59	0.45
24:AY:647:VAL:HA	24:AY:648:PRO:HD3	1.69	0.45
27:B2:12:GLU:O	27:B2:15:LYS:HG3	2.16	0.45
30:B5:50:GLY:HA2	30:B5:56:LYS:HB3	1.99	0.45
31:B6:15:GLU:HB2	31:B6:49:HIS:CE1	2.51	0.45
31:B6:25:LYS:O	35:BA:2286:A:N1	2.48	0.45
32:B7:36:GLN:C	32:B7:38:GLY:H	2.24	0.45
33:B8:30:ARG:NH1	35:BA:2419:U:O4	2.49	0.45
35:BA:157:U:H5'	35:BA:158:U:OP2	2.16	0.45
35:BA:614(B):G:H5"	35:BA:614(C):A:OP1	2.16	0.45
35:BA:782:A:C2	38:BD:226:MET:HG2	2.51	0.45
35:BA:1147:C:H2'	35:BA:1148:A:H8	1.81	0.45
35:BA:1325:G:OP2	35:BA:1616:A:H2'	2.16	0.45
35:BA:1363:C:H2'	35:BA:1364:G:H8	1.79	0.45
35:BA:1794:U:H2'	35:BA:1795:C:C6	2.51	0.45
35:BA:1829:A:N3	38:BD:15:PHE:HZ	2.13	0.45
35:BA:2105:C:H2'	35:BA:2106:G:H5'	1.98	0.45
35:BA:2837:G:C6	35:BA:2838:G:N7	2.84	0.45
36:BB:29:A:C2	36:BB:56:G:C2	3.04	0.45
36:BB:68:C:H2'	36:BB:69:G:C8	2.49	0.45
36:BB:105:A:P	57:BZ:72:ARG:HH12	2.40	0.45
36:BB:117:G:O2'	36:BB:118:G:H5'	2.17	0.45
37:BC:29:LEU:O	37:BC:30:VAL:C	2.59	0.45
38:BD:134:ARG:HD3	38:BD:188:GLU:OE2	2.16	0.45
39:BE:21:VAL:O	39:BE:21:VAL:CG2	2.63	0.45
39:BE:77:ILE:HG22	39:BE:78:LEU:HG	1.98	0.45
39:BE:93:VAL:O	39:BE:95:ILE:N	2.49	0.45
41:BG:81:LYS:O	41:BG:82:LEU:C	2.58	0.45
42:BH:59:ARG:O	42:BH:60:ARG:C	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BK:109:LYS:CA	43:BK:112:MET:HE3	2.23	0.45
45:BN:126:PRO:O	45:BN:127:ASP:HB2	2.16	0.45
46:BO:18:LYS:HB2	46:BO:45:GLU:HG2	1.98	0.45
50:BS:101:LEU:HD12	50:BS:101:LEU:C	2.41	0.45
51:BT:31:SER:OG	51:BT:32:TYR:N	2.44	0.45
51:BT:118:ARG:O	51:BT:122:ASP:N	2.39	0.45
54:BW:13:SER:HB3	54:BW:16:LYS:HG3	1.98	0.45
55:BX:7:VAL:CG1	55:BX:39:ILE:HD13	2.47	0.45
56:BY:43:ASN:HA	56:BY:64:GLU:HA	1.96	0.45
57:BZ:48:PHE:O	57:BZ:49:ARG:C	2.60	0.45
1:AA:222:U:H2'	1:AA:223:U:C6	2.51	0.45
1:AA:346:G:N2	1:AA:347:G:C5	2.84	0.45
1:AA:649:G:H2'	1:AA:650:G:O4'	2.16	0.45
1:AA:885:G:H2'	1:AA:886:G:H8	1.81	0.45
1:AA:1011:G:O2'	1:AA:1012:U:H5'	2.16	0.45
1:AA:1226:C:H5'	13:AM:96:LEU:CD1	2.46	0.45
1:AA:1234:C:H4'	1:AA:1364:U:H1'	1.97	0.45
1:AA:1345:U:O2	1:AA:1375:A:N6	2.49	0.45
3:AC:40:ARG:HH11	3:AC:40:ARG:HG3	1.80	0.45
3:AC:149:ALA:HA	3:AC:201:TYR:O	2.17	0.45
3:AC:167:TRP:CG	3:AC:168:ALA:H	2.34	0.45
4:AD:57:ARG:HG3	4:AD:202:LEU:HD22	1.97	0.45
5:AE:76:ILE:CG1	5:AE:77:PRO:CD	2.93	0.45
12:AL:104:VAL:HG12	12:AL:105:TYR:CE1	2.50	0.45
15:AO:27:VAL:O	15:AO:28:GLN:C	2.58	0.45
18:AR:29:PHE:HD1	18:AR:29:PHE:O	1.99	0.45
19:AS:65:ASN:CA	29:B4:48:ARG:HH22	2.29	0.45
19:AS:79:THR:HG22	19:AS:80:TYR:N	2.30	0.45
20:AT:48:LYS:HB3	20:AT:51:GLU:CG	2.46	0.45
20:AT:87:LYS:HD2	20:AT:87:LYS:HA	1.79	0.45
24:AY:257:PRO:HB2	24:AY:259:PHE:HE1	1.81	0.45
25:B0:27:GLU:HG3	25:B0:68:GLU:HA	1.98	0.45
29:B4:2:LYS:HG2	36:BB:44:G:P	2.56	0.45
31:B6:5:VAL:CG2	35:BA:2283:C:OP1	2.65	0.45
35:BA:67:U:C2	35:BA:68:G:C8	3.04	0.45
35:BA:194:G:H2'	35:BA:195:A:O4'	2.17	0.45
35:BA:685:A:C5	35:BA:774:A:C2	3.04	0.45
35:BA:807:U:OP2	47:BP:39:LYS:HG3	2.16	0.45
35:BA:943:U:OP2	47:BP:38:GLN:CD	2.59	0.45
35:BA:1047:G:O2'	35:BA:1110:G:N2	2.48	0.45
35:BA:1186:G:C2'	35:BA:1187:G:H5'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1770:G:C2'	35:BA:1771:C:H5'	2.47	0.45
35:BA:1814:G:C4'	38:BD:51:VAL:HG21	2.47	0.45
37:BC:80:LYS:HB2	37:BC:120:VAL:HG13	1.97	0.45
38:BD:9:TYR:C	38:BD:10:THR:HG22	2.41	0.45
39:BE:144:ARG:HB3	39:BE:145:LYS:H	1.59	0.45
40:BF:181:LEU:O	40:BF:205:ARG:NH1	2.49	0.45
41:BG:62:LEU:N	41:BG:62:LEU:HD12	2.31	0.45
41:BG:111:LEU:N	41:BG:112:PRO:CD	2.80	0.45
45:BN:55:VAL:CG2	45:BN:127:ASP:N	2.80	0.45
45:BN:120:LEU:HD13	45:BN:121:LYS:N	2.31	0.45
49:BR:54:LEU:CD2	49:BR:66:VAL:HG22	2.46	0.45
51:BT:70:VAL:HG12	51:BT:71:GLY:H	1.80	0.45
52:BU:13:LYS:O	52:BU:16:LYS:HB2	2.16	0.45
53:BV:41:GLY:N	53:BV:45:THR:OG1	2.49	0.45
53:BV:51:VAL:CG1	53:BV:52:VAL:N	2.43	0.45
57:BZ:129:SER:C	57:BZ:131:ARG:H	2.24	0.45
1:AA:129(A):G:C6	1:AA:189(E):U:H4'	2.52	0.45
1:AA:262:A:C6	1:AA:263:A:C6	3.05	0.45
1:AA:1313:U:P	19:AS:6:LYS:HG3	2.57	0.45
1:AA:1511:G:C2'	1:AA:1512:U:H5'	2.46	0.45
2:AB:229:VAL:HG12	2:AB:230:VAL:N	2.31	0.45
6:AF:50:TYR:HB2	6:AF:51:PRO:HD2	1.99	0.45
6:AF:87:ARG:HG2	6:AF:87:ARG:HH11	1.82	0.45
7:AG:79:ARG:HG3	7:AG:79:ARG:NH1	2.30	0.45
10:AJ:27:ALA:HA	10:AJ:85:LEU:HD11	1.98	0.45
10:AJ:79:ARG:HG2	10:AJ:79:ARG:NH1	2.30	0.45
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.31	0.45
12:AL:39:VAL:O	12:AL:40:VAL:CG2	2.63	0.45
19:AS:6:LYS:HB3	19:AS:6:LYS:HE3	1.85	0.45
19:AS:31:ILE:CG2	19:AS:49:ILE:HG12	2.47	0.45
22:AV:2:G:C6	22:AV:3:C:N4	2.85	0.45
24:AY:415:PRO:CB	24:AY:421:GLN:HA	2.47	0.45
27:B2:55:ARG:HG3	27:B2:55:ARG:NH1	2.30	0.45
28:B3:46:ASN:O	28:B3:49:LYS:N	2.48	0.45
35:BA:154(A):C:C3'	35:BA:155:U:H5"	2.47	0.45
35:BA:186:G:C2	35:BA:211:A:C2	3.04	0.45
35:BA:301:G:C4	35:BA:302:C:C4	3.05	0.45
35:BA:620:G:H4'	35:BA:621:A:C5'	2.47	0.45
35:BA:1049:C:H2'	35:BA:1050:A:C8	2.37	0.45
35:BA:1102:C:H2'	35:BA:1103:A:H8	1.79	0.45
35:BA:1146:C:O2	35:BA:1146:C:C2'	2.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1319:G:C2	35:BA:1334:G:C6	3.04	0.45
35:BA:1418:G:H8	35:BA:1418:G:O5'	2.00	0.45
35:BA:1446:C:H2'	35:BA:1447:G:H8	1.81	0.45
35:BA:1755:A:P	51:BT:113:LYS:NZ	2.90	0.45
35:BA:1835:G:N3	35:BA:1835:G:H2'	2.30	0.45
35:BA:1882:C:H2'	35:BA:1883:G:O4'	2.16	0.45
35:BA:2248:C:O2'	35:BA:2249:U:H5'	2.17	0.45
35:BA:2376:A:H2'	35:BA:2377:A:O4'	2.16	0.45
35:BA:2657:A:H3'	35:BA:2658:C:H6	1.81	0.45
35:BA:2810:A:H2'	39:BE:61:ARG:HH21	1.80	0.45
37:BC:88:GLU:N	37:BC:95:VAL:HG21	2.32	0.45
41:BG:15:VAL:HG21	41:BG:176:LEU:HD23	1.99	0.45
41:BG:68:PRO:CA	41:BG:92:VAL:HG12	2.34	0.45
41:BG:77:ILE:CG2	41:BG:80:PHE:HB2	2.46	0.45
42:BH:19:VAL:CG1	42:BH:20:ALA:N	2.72	0.45
45:BN:39:ARG:C	45:BN:41:ASP:H	2.24	0.45
45:BN:91:LEU:HD23	45:BN:98:VAL:HG21	1.98	0.45
45:BN:133:GLN:HG3	45:BN:134:ARG:H	1.82	0.45
46:BO:52:VAL:CG1	46:BO:53:LYS:N	2.79	0.45
49:BR:18:LEU:HD23	49:BR:19:ALA:N	2.32	0.45
51:BT:75:ILE:N	51:BT:75:ILE:HD12	2.31	0.45
52:BU:17:ILE:C	52:BU:19:LYS:N	2.75	0.45
52:BU:91:ASP:O	52:BU:92:ARG:HB3	2.16	0.45
54:BW:13:SER:HA	54:BW:14:PRO:HD3	1.86	0.45
54:BW:14:PRO:HG2	54:BW:78:GLU:CB	2.44	0.45
55:BX:12:VAL:O	55:BX:13:LEU:HB2	2.17	0.45
56:BY:31:LEU:CB	56:BY:32:PRO:CA	2.92	0.45
56:BY:84:ARG:NE	56:BY:97:ARG:NH1	2.64	0.45
56:BY:88:LYS:N	56:BY:88:LYS:HD2	2.32	0.45
57:BZ:13:GLU:C	57:BZ:14:LYS:HG3	2.41	0.45
57:BZ:111:VAL:O	57:BZ:112:ARG:HB2	2.16	0.45
57:BZ:158:PRO:HB3	57:BZ:159:PRO:CD	2.46	0.45
1:AA:66:G:C4'	1:AA:173:U:C5	2.99	0.45
1:AA:409:G:H5'	4:AD:25:ARG:HB2	1.98	0.45
1:AA:651:C:H2'	1:AA:652:U:C6	2.51	0.45
1:AA:691:G:O6	11:AK:55:LYS:HE2	2.16	0.45
1:AA:781:A:H3'	1:AA:782:A:C5'	2.47	0.45
1:AA:1015:A:C5	1:AA:1016:A:C5	3.04	0.45
1:AA:1153:C:H2'	1:AA:1154:G:O4'	2.15	0.45
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.52	0.45
2:AB:75:LYS:HG2	2:AB:78:GLN:NE2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:11:ARG:HH11	3:AC:11:ARG:HG2	1.81	0.45
7:AG:73:MET:CA	7:AG:91:VAL:HG23	2.44	0.45
9:AI:53:VAL:C	9:AI:55:ALA:N	2.61	0.45
12:AL:123:LYS:O	12:AL:125:PRO:HD3	2.17	0.45
15:AO:17:ARG:NH1	15:AO:77:ARG:NH1	2.64	0.45
19:AS:41:VAL:CG2	19:AS:44:MET:O	2.64	0.45
20:AT:33:ILE:HD13	20:AT:63:ILE:HG13	1.98	0.45
20:AT:63:ILE:O	20:AT:65:LYS:N	2.50	0.45
20:AT:73:HIS:O	20:AT:76:ALA:CB	2.65	0.45
21:AU:12:LYS:HB3	21:AU:22:ARG:HD2	1.98	0.45
24:AY:20:HIS:CE1	24:AY:21:ILE:HG12	2.51	0.45
24:AY:74:TRP:O	24:AY:75:LYS:O	2.35	0.45
24:AY:87:HIS:NE2	24:AY:120:THR:HG21	2.32	0.45
24:AY:395:PRO:O	24:AY:397:VAL:HG13	2.17	0.45
24:AY:545:GLY:CA	24:AY:583:LYS:HG2	2.46	0.45
32:B7:15:THR:HG22	32:B7:16:HIS:CG	2.51	0.45
32:B7:43:THR:CG2	32:B7:44:PRO:HD2	2.47	0.45
34:B9:15:LYS:N	34:B9:26:ILE:O	2.46	0.45
34:B9:19:ARG:CB	35:BA:2756:U:H5'	2.47	0.45
35:BA:503:A:O2'	35:BA:504:U:P	2.75	0.45
35:BA:540:C:O5'	35:BA:540:C:H6	2.00	0.45
35:BA:1062:G:H21	43:BK:133:SER:HA	1.82	0.45
35:BA:1267:U:H2'	35:BA:1268:A:C8	2.51	0.45
35:BA:1279:G:O5'	35:BA:1279:G:H8	1.99	0.45
35:BA:1298:C:O2	35:BA:1298:C:H2'	2.16	0.45
35:BA:1328:G:H2'	35:BA:1330:C:C5	2.52	0.45
35:BA:1912:A:C2	35:BA:1919:A:C6	3.05	0.45
35:BA:2003:G:C6	35:BA:2004:G:C5	3.05	0.45
35:BA:2248:C:H2'	35:BA:2249:U:O4'	2.17	0.45
35:BA:2586:C:O2'	35:BA:2587:A:H5'	2.17	0.45
35:BA:2845:G:O2'	35:BA:2846:G:H5'	2.16	0.45
37:BC:186:LEU:O	37:BC:187:ALA:C	2.59	0.45
39:BE:77:ILE:HG22	39:BE:78:LEU:CG	2.46	0.45
39:BE:116:VAL:HG22	39:BE:122:PHE:CG	2.52	0.45
39:BE:161:GLY:O	39:BE:162:ALA:C	2.57	0.45
40:BF:179:GLU:O	40:BF:181:LEU:N	2.48	0.45
41:BG:55:LYS:C	41:BG:58:GLN:HG3	2.40	0.45
41:BG:76:SER:OG	41:BG:83:ARG:HB3	2.16	0.45
41:BG:180:PHE:O	41:BG:182:LYS:N	2.49	0.45
43:BK:2:LYS:HB2	43:BK:2:LYS:NZ	2.32	0.45
47:BP:55:ARG:CG	47:BP:56:SER:N	2.76	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:93:GLY:O	47:BP:123:LEU:HB2	2.16	0.45
48:BQ:42:ILE:HG23	48:BQ:46:GLN:HB3	1.98	0.45
48:BQ:110:THR:HG23	48:BQ:113:GLN:CG	2.47	0.45
50:BS:12:PHE:CD1	50:BS:12:PHE:O	2.68	0.45
51:BT:125:ARG:O	51:BT:128:GLU:HB3	2.17	0.45
51:BT:132:LYS:HG2	51:BT:133:GLU:H	1.81	0.45
52:BU:106:PHE:O	52:BU:109:LEU:N	2.44	0.45
54:BW:41:LYS:C	54:BW:43:GLY:N	2.72	0.45
55:BX:65:ARG:CG	55:BX:66:LEU:N	2.79	0.45
56:BY:88:LYS:HE2	56:BY:93:GLY:CA	2.46	0.45
1:AA:265:G:H2'	1:AA:267:C:C5	2.48	0.45
1:AA:389:A:H2'	1:AA:390:C:C5'	2.47	0.45
1:AA:758:G:H2'	1:AA:759:A:OP2	2.16	0.45
1:AA:763:G:H2'	1:AA:764:C:C6	2.51	0.45
1:AA:802:A:H3'	1:AA:803:G:C8	2.51	0.45
1:AA:1068:G:N2	1:AA:1191:A:N3	2.61	0.45
1:AA:1152:A:H5"	10:AJ:13:HIS:CD2	2.52	0.45
1:AA:1170:A:C2'	1:AA:1171:G:H5'	2.47	0.45
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.52	0.45
2:AB:114:ARG:HH11	2:AB:118:LEU:HD21	1.80	0.45
4:AD:86:LYS:HD3	4:AD:86:LYS:HA	1.60	0.45
4:AD:96:LEU:H	4:AD:96:LEU:CD2	2.16	0.45
4:AD:107:ARG:HD2	4:AD:173:TRP:HZ2	1.81	0.45
5:AE:41:VAL:HG13	5:AE:113:ALA:CA	2.46	0.45
6:AF:3:ARG:CG	6:AF:3:ARG:NH1	2.75	0.45
7:AG:79:ARG:HD2	7:AG:79:ARG:C	2.42	0.45
7:AG:137:LYS:HA	7:AG:137:LYS:CE	2.47	0.45
10:AJ:6:ILE:HG22	10:AJ:98:ILE:CD1	2.46	0.45
10:AJ:31:GLY:O	10:AJ:32:ALA:C	2.60	0.45
10:AJ:79:ARG:HA	10:AJ:79:ARG:HD3	1.54	0.45
13:AM:64:TRP:N	13:AM:64:TRP:CD1	2.85	0.45
15:AO:43:LEU:C	15:AO:45:VAL:N	2.74	0.45
16:AP:80:PHE:O	16:AP:81:ARG:C	2.60	0.45
18:AR:30:ASP:C	18:AR:32:ARG:H	2.24	0.45
19:AS:12:ASP:H	19:AS:38:SER:HB3	1.82	0.45
20:AT:30:LYS:O	20:AT:34:LYS:HG3	2.16	0.45
20:AT:75:ASN:O	20:AT:79:ARG:N	2.35	0.45
22:AV:14:A:N3	22:AV:14:A:H2'	2.29	0.45
22:AV:76:A:H4'	22:AV:76:A:OP1	2.17	0.45
24:AY:25:LYS:HZ2	24:AY:86:GLY:CA	2.29	0.45
24:AY:334:THR:HG23	24:AY:369:LEU:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:356:LEU:C	24:AY:356:LEU:HD23	2.42	0.45
24:AY:410:ASP:C	24:AY:411:VAL:CG2	2.89	0.45
24:AY:620:VAL:O	24:AY:624:LEU:HD13	2.16	0.45
24:AY:635:GLU:HA	24:AY:636:PRO:HD2	1.70	0.45
24:AY:661:SER:C	24:AY:663:THR:H	2.24	0.45
28:B3:44:ARG:O	28:B3:45:GLY:C	2.60	0.45
31:B6:11:LEU:CD2	31:B6:51:GLU:HG3	2.44	0.45
31:B6:15:GLU:HG3	31:B6:47:THR:HG21	1.98	0.45
32:B7:19:ARG:HG2	32:B7:19:ARG:HH11	1.82	0.45
33:B8:30:ARG:O	33:B8:31:HIS:HB3	2.16	0.45
35:BA:336:C:H4'	56:BY:7:VAL:HG21	1.99	0.45
35:BA:363(A):A:H2'	35:BA:363(B):G:C8	2.49	0.45
35:BA:1362:C:C2'	35:BA:1363:C:H5'	2.47	0.45
35:BA:1394:U:C4	35:BA:1395:A:C6	3.04	0.45
35:BA:1623:G:C2	35:BA:1624:G:N7	2.85	0.45
35:BA:1843:C:H2'	35:BA:1844:C:C6	2.52	0.45
35:BA:2020:A:N1	35:BA:2022:U:C2	2.85	0.45
35:BA:2511:U:C4	35:BA:2512:C:C4	3.04	0.45
35:BA:2748:A:H2	42:BH:63:SER:OG	1.99	0.45
35:BA:2886:G:H2'	35:BA:2887:U:C6	2.51	0.45
36:BB:92:C:H2'	36:BB:93:G:H8	1.81	0.45
37:BC:101:ILE:HG22	37:BC:105:LEU:HD22	1.97	0.45
38:BD:83:GLU:HB2	38:BD:92:ILE:CD1	2.41	0.45
39:BE:1:MET:HE2	39:BE:1:MET:N	2.31	0.45
40:BF:167:ALA:HB1	40:BF:173:VAL:CG1	2.41	0.45
42:BH:66:GLY:O	42:BH:67:LEU:C	2.58	0.45
45:BN:133:GLN:CG	45:BN:134:ARG:H	2.29	0.45
46:BO:103:ALA:HB1	46:BO:105:GLU:OE1	2.16	0.45
47:BP:123:LEU:HD12	47:BP:124:LYS:O	2.15	0.45
49:BR:12:ARG:HD3	49:BR:16:HIS:CD2	2.51	0.45
50:BS:88:ASP:CG	50:BS:89:ARG:H	2.24	0.45
51:BT:38:ASN:ND2	51:BT:40:THR:H	2.14	0.45
53:BV:38:LEU:H	53:BV:51:VAL:HG13	1.82	0.45
54:BW:21:VAL:HG23	54:BW:47:VAL:HG21	1.97	0.45
1:AA:328:C:OP1	1:AA:328:C:H4'	2.17	0.45
1:AA:431:A:H2'	1:AA:432:A:H5'	1.98	0.45
1:AA:818:G:HO2'	1:AA:820:U:H6	1.63	0.45
1:AA:1098:C:O2'	1:AA:1099:G:H5'	2.17	0.45
1:AA:1133:G:C4	1:AA:1142:G:N2	2.84	0.45
1:AA:1134:G:C2'	1:AA:1135:U:H5'	2.46	0.45
1:AA:1239:A:O2'	1:AA:1298:C:N4	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1320:C:N4	19:AS:36:ARG:HG3	2.31	0.45
1:AA:1354:C:H2'	1:AA:1355:G:C8	2.51	0.45
2:AB:219:VAL:O	2:AB:220:ASP:C	2.58	0.45
3:AC:113:ALA:HB3	3:AC:114:PRO:CD	2.41	0.45
4:AD:61:LYS:HG3	4:AD:203:VAL:HG13	1.98	0.45
4:AD:180:GLY:C	4:AD:181:MET:HG3	2.40	0.45
4:AD:191:ARG:NH1	4:AD:191:ARG:O	2.49	0.45
5:AE:28:PHE:O	5:AE:47:LYS:HA	2.17	0.45
5:AE:77:PRO:HG2	5:AE:78:HIS:H	1.81	0.45
5:AE:92:LYS:HA	5:AE:93:PRO:HD2	1.74	0.45
6:AF:10:LEU:HD12	6:AF:59:TYR:HD2	1.82	0.45
6:AF:32:ASN:HD22	6:AF:32:ASN:HA	1.61	0.45
9:AI:9:ARG:HA	9:AI:13:ALA:O	2.16	0.45
10:AJ:32:ALA:H	10:AJ:78:ASN:CG	2.25	0.45
17:AQ:22:LEU:HD13	17:AQ:41:LYS:CG	2.47	0.45
19:AS:65:ASN:HA	29:B4:48:ARG:NH2	2.31	0.45
24:AY:273:LEU:HA	24:AY:276:VAL:HG23	1.99	0.45
24:AY:289:ILE:O	24:AY:301:ILE:N	2.47	0.45
24:AY:435:ASP:HB2	58:AY:701:FUA:H183	1.99	0.45
30:B5:2:ALA:CA	35:BA:2015:A:C1'	2.93	0.45
30:B5:25:LEU:HD12	54:BW:19:LEU:CB	2.47	0.45
30:B5:40:LYS:HZ1	30:B5:46:CYS:N	2.09	0.45
30:B5:58:LEU:C	30:B5:58:LEU:HD13	2.41	0.45
33:B8:28:GLY:HA2	33:B8:32:LEU:HD21	1.97	0.45
35:BA:444:C:H2'	35:BA:445:C:C6	2.52	0.45
35:BA:621:A:C2'	35:BA:622:G:H5'	2.46	0.45
35:BA:781:A:H2	35:BA:1776:G:N3	2.15	0.45
35:BA:991:C:H5'	35:BA:991:C:C6	2.43	0.45
35:BA:1272:A:OP1	35:BA:1272:A:H4'	2.16	0.45
35:BA:1689:A:N6	35:BA:1698:A:H2	2.15	0.45
35:BA:1767:C:H2'	35:BA:1768:U:O4'	2.15	0.45
35:BA:1775:U:C2'	35:BA:1776:G:H5'	2.46	0.45
35:BA:1794:U:H2'	35:BA:1795:C:H6	1.82	0.45
35:BA:1960:A:H5"	35:BA:1960:A:C8	2.48	0.45
35:BA:2163:C:C3'	35:BA:2164:C:H5'	2.46	0.45
36:BB:41:U:O4	41:BG:70:VAL:O	2.34	0.45
37:BC:54:ARG:O	37:BC:55:SER:C	2.60	0.45
39:BE:68:ALA:HB3	39:BE:69:LYS:CE	2.42	0.45
39:BE:197:ILE:O	39:BE:197:ILE:CG1	2.64	0.45
40:BF:38:ARG:O	40:BF:42:ALA:CB	2.64	0.45
40:BF:167:ALA:HA	40:BF:170:LEU:HD23	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BK:100:THR:OG1	43:BK:103:GLN:HG3	2.16	0.45
45:BN:13:TRP:N	45:BN:13:TRP:CD1	2.83	0.45
46:BO:12:ASP:C	46:BO:14:THR:H	2.25	0.45
47:BP:71:VAL:O	47:BP:71:VAL:CG2	2.65	0.45
47:BP:83:VAL:HG13	47:BP:83:VAL:O	2.17	0.45
48:BQ:19:GLY:HA3	57:BZ:79:ARG:HH12	1.81	0.45
48:BQ:66:ILE:HG22	48:BQ:104:PHE:HD2	1.81	0.45
49:BR:13:HIS:ND1	49:BR:13:HIS:C	2.74	0.45
49:BR:63:ARG:HA	49:BR:80:PHE:CZ	2.52	0.45
51:BT:91:ARG:O	51:BT:117:ASP:HB3	2.16	0.45
51:BT:98:LYS:HB3	51:BT:100:TYR:CE1	2.50	0.45
52:BU:53:ARG:O	52:BU:56:ASP:N	2.41	0.45
53:BV:2:PHE:HB3	53:BV:3:ALA:H	1.41	0.45
54:BW:50:VAL:HG13	54:BW:105:VAL:HG21	1.98	0.45
55:BX:28:PHE:CE2	55:BX:92:LEU:HD11	2.52	0.45
56:BY:50:ARG:HG3	56:BY:50:ARG:H	1.64	0.45
56:BY:105:ALA:O	56:BY:106:LEU:HB2	2.15	0.45
1:AA:585:G:C6	1:AA:586:C:C4	3.05	0.45
1:AA:954:G:H2'	1:AA:955:U:O4'	2.16	0.45
3:AC:32:LEU:HB3	3:AC:59:ARG:HH22	1.82	0.45
3:AC:87:LEU:C	3:AC:89:GLU:N	2.70	0.45
3:AC:92:ALA:C	3:AC:94:LEU:H	2.25	0.45
9:AI:26:VAL:HG13	9:AI:61:ALA:O	2.17	0.45
10:AJ:8:LEU:HD13	10:AJ:20:ALA:HB2	1.99	0.45
17:AQ:83:ASP:N	17:AQ:83:ASP:OD1	2.50	0.45
18:AR:45:SER:OG	18:AR:46:GLU:N	2.50	0.45
20:AT:25:ARG:HG3	20:AT:25:ARG:NH1	2.31	0.45
28:B3:15:TYR:N	28:B3:15:TYR:CD1	2.82	0.45
31:B6:9:LEU:HD22	31:B6:26:ASN:ND2	2.26	0.45
31:B6:27:LYS:HG3	31:B6:30:THR:HG21	1.98	0.45
31:B6:52:VAL:HG22	31:B6:53:LYS:N	2.32	0.45
33:B8:25:MET:HG3	47:BP:64:LYS:CB	2.46	0.45
35:BA:634:C:H2'	35:BA:635:C:C6	2.52	0.45
35:BA:725:G:C6	35:BA:726:G:N1	2.85	0.45
35:BA:729:G:C5	38:BD:208:LYS:HB2	2.52	0.45
35:BA:826:U:OP1	35:BA:2428:G:H5"	2.16	0.45
35:BA:1069:A:O2'	35:BA:1070:A:H5"	2.17	0.45
35:BA:1301:A:H4'	35:BA:1302:A:OP1	2.16	0.45
35:BA:1771:C:O2'	35:BA:1786:A:H8	2.00	0.45
35:BA:2219:G:O2'	35:BA:2220:G:H5'	2.17	0.45
35:BA:2345:G:H5'	35:BA:2346:A:H5'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2470:G:P	48:BQ:56:ARG:NH1	2.84	0.45
35:BA:2488:A:H2'	35:BA:2489:G:H8	1.82	0.45
35:BA:2838:G:O2'	35:BA:2839:G:H5'	2.16	0.45
37:BC:100:ILE:C	37:BC:102:GLN:H	2.25	0.45
37:BC:126:SER:C	37:BC:128:LEU:N	2.75	0.45
39:BE:49:LEU:O	39:BE:78:LEU:CB	2.65	0.45
40:BF:5:ALA:HB3	40:BF:18:ARG:O	2.16	0.45
41:BG:16:ARG:HG3	41:BG:16:ARG:NH1	2.29	0.45
41:BG:81:LYS:HB3	41:BG:82:LEU:H	1.54	0.45
41:BG:168:GLU:O	41:BG:169:ALA:C	2.59	0.45
48:BQ:9:TYR:CD1	48:BQ:9:TYR:N	2.83	0.45
51:BT:99:LEU:O	51:BT:99:LEU:CD1	2.65	0.45
52:BU:29:SER:OG	52:BU:30:LYS:HE2	2.15	0.45
53:BV:66:ARG:NH1	53:BV:88:ARG:HE	2.15	0.45
56:BY:49:VAL:HG12	56:BY:50:ARG:N	2.31	0.45
57:BZ:77:ASP:O	57:BZ:77:ASP:CG	2.60	0.45
57:BZ:109:ALA:HB3	57:BZ:144:LEU:O	2.17	0.45
57:BZ:179:ASP:HB3	57:BZ:182:LYS:CD	2.34	0.45
1:AA:275:G:C5'	17:AQ:14:LYS:HB3	2.46	0.45
1:AA:316:G:C2	1:AA:338:A:C2	3.05	0.45
1:AA:541:G:H2'	1:AA:542:G:H8	1.81	0.45
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.32	0.45
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.31	0.45
1:AA:1478:C:O2'	1:AA:1479:C:H5'	2.17	0.45
3:AC:52:LEU:HD23	3:AC:52:LEU:N	2.15	0.45
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.17	0.45
4:AD:58:LEU:HD23	4:AD:58:LEU:O	2.17	0.45
5:AE:148:VAL:HG21	8:AH:107:LEU:HD22	1.99	0.45
8:AH:121:ASP:CG	8:AH:122:ARG:H	2.25	0.45
10:AJ:8:LEU:HD21	10:AJ:96:ILE:HG22	1.97	0.45
10:AJ:43:ARG:HA	10:AJ:43:ARG:HD2	1.85	0.45
11:AK:30:VAL:HG23	11:AK:30:VAL:O	2.16	0.45
15:AO:38:ARG:O	15:AO:39:LEU:C	2.58	0.45
15:AO:54:ARG:O	15:AO:55:GLY:C	2.60	0.45
18:AR:45:SER:HA	18:AR:51:LEU:HD21	1.98	0.45
20:AT:23:ARG:O	20:AT:26:ASN:ND2	2.49	0.45
20:AT:58:LYS:O	20:AT:59:ALA:C	2.59	0.45
22:AV:11:A:H2'	22:AV:12:G:O4'	2.17	0.45
24:AY:327:PHE:HA	24:AY:375:GLY:O	2.17	0.45
24:AY:543:GLN:C	24:AY:545:GLY:N	2.74	0.45
24:AY:584:ILE:O	24:AY:588:MET:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:617:MET:O	24:AY:618:GLY:C	2.60	0.45
25:B0:49:LYS:HD2	25:B0:80:HIS:HB3	1.98	0.45
31:B6:22:ALA:C	31:B6:23:THR:HG23	2.42	0.45
35:BA:230:U:O2'	35:BA:231:C:H5'	2.17	0.45
35:BA:272(J):C:N4	35:BA:363:G:H22	2.15	0.45
35:BA:392:C:H5"	35:BA:409:C:H5"	1.99	0.45
35:BA:406:G:O2'	35:BA:407:G:P	2.75	0.45
35:BA:525:U:O2'	35:BA:526:A:H5"	2.17	0.45
35:BA:752:A:N7	35:BA:1781:C:C6	2.85	0.45
35:BA:1074:G:H2'	35:BA:1075:C:C6	2.52	0.45
35:BA:1142(A):A:C6	35:BA:1144:G:C5	3.04	0.45
35:BA:1188:U:H4'	53:BV:79:VAL:HG12	1.97	0.45
35:BA:1215:G:H8	35:BA:1215:G:O5'	1.99	0.45
35:BA:1430:C:H6	35:BA:1430:C:O5'	2.00	0.45
35:BA:2102:U:C2	35:BA:2187:G:O6	2.69	0.45
35:BA:2192:G:C2'	35:BA:2193:G:H5"	2.47	0.45
36:BB:85:G:C6	36:BB:93:G:C6	3.05	0.45
37:BC:4:HIS:HB3	37:BC:8:TYR:HD2	1.80	0.45
37:BC:100:ILE:O	37:BC:102:GLN:N	2.50	0.45
39:BE:51:PHE:O	39:BE:53:PRO:HD3	2.16	0.45
39:BE:111:ARG:CZ	49:BR:2:ARG:HH21	2.28	0.45
39:BE:182:LEU:C	39:BE:183:LEU:HD12	2.42	0.45
40:BF:39:TRP:CG	40:BF:101:LEU:HD22	2.52	0.45
40:BF:126:VAL:HG23	40:BF:127:GLU:N	2.32	0.45
40:BF:142:TRP:O	40:BF:145:GLU:HB2	2.17	0.45
42:BH:81:GLU:HB3	42:BH:83:TYR:CE1	2.51	0.45
42:BH:156:ALA:C	42:BH:158:HIS:N	2.75	0.45
42:BH:173:PRO:O	42:BH:175:LYS:N	2.50	0.45
43:BK:55:VAL:HG13	43:BK:57:ILE:HD11	1.99	0.45
46:BO:12:ASP:OD2	46:BO:85:VAL:HG13	2.17	0.45
50:BS:70:GLY:CA	50:BS:101:LEU:HD23	2.47	0.45
55:BX:35:THR:C	55:BX:37:THR:H	2.24	0.45
57:BZ:17:ALA:HA	57:BZ:20:ARG:CD	2.46	0.45
57:BZ:100:VAL:CG2	57:BZ:126:VAL:CG2	2.95	0.45
1:AA:298:A:H2'	1:AA:299:G:O4'	2.17	0.45
1:AA:325:A:N6	1:AA:326:G:N1	2.65	0.45
1:AA:891:U:H2'	1:AA:892:A:C8	2.51	0.45
1:AA:939:G:H5"	7:AG:102:ARG:CZ	2.43	0.45
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.45	0.45
1:AA:1094:G:O2'	1:AA:1095:U:OP2	2.35	0.45
1:AA:1314:C:H2'	1:AA:1315:U:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1323:G:H4'	1:AA:1363:C:N3	2.32	0.45
2:AB:61:LEU:O	2:AB:61:LEU:HD12	2.17	0.45
3:AC:93:LYS:O	3:AC:93:LYS:HG2	2.17	0.45
3:AC:150:LYS:C	3:AC:151:VAL:HG23	2.42	0.45
3:AC:169:ALA:O	3:AC:170:GLN:HB2	2.17	0.45
7:AG:22:LEU:HD22	7:AG:62:PHE:HE2	1.82	0.45
11:AK:92:GLU:HB3	11:AK:96:ARG:HH11	1.82	0.45
13:AM:81:LEU:HD22	13:AM:81:LEU:N	2.31	0.45
16:AP:23:ASP:OD1	16:AP:24:ALA:N	2.50	0.45
19:AS:15:LEU:HD21	19:AS:33:THR:HB	1.99	0.45
20:AT:84:LEU:C	20:AT:84:LEU:CD1	2.89	0.45
24:AY:112:GLN:O	24:AY:115:GLU:HB3	2.17	0.45
26:B1:45:ASN:CB	35:BA:2230:G:H1'	2.40	0.45
29:B4:19:GLY:O	29:B4:20:ASN:C	2.60	0.45
31:B6:15:GLU:CB	31:B6:47:THR:HG21	2.47	0.45
34:B9:10:ILE:O	34:B9:11:CYS:HB3	2.17	0.45
35:BA:250:G:H2'	35:BA:251:A:C8	2.52	0.45
35:BA:272(J):C:H3'	35:BA:274:G:C5'	2.34	0.45
35:BA:307:G:O5'	35:BA:307:G:H8	2.00	0.45
35:BA:979:G:H2'	35:BA:982:C:H41	1.82	0.45
35:BA:1028:A:C2	35:BA:2487:G:H1'	2.51	0.45
35:BA:1105:U:O5'	35:BA:1105:U:H6	2.00	0.45
35:BA:1125:G:C6	35:BA:1126:A:N6	2.85	0.45
35:BA:1448:G:O2'	35:BA:1528(A):A:N1	2.42	0.45
35:BA:1680:U:H2'	35:BA:1681:G:O4'	2.17	0.45
35:BA:1686:C:H2'	35:BA:1687:G:O4'	2.17	0.45
35:BA:1908:C:H2'	35:BA:1909:C:H6	1.80	0.45
35:BA:2113:U:H2'	35:BA:2114:A:H8	1.82	0.45
35:BA:2496:C:OP1	48:BQ:83:MET:HG2	2.17	0.45
35:BA:2551:C:H2'	35:BA:2552:U:C6	2.52	0.45
36:BB:36:C:H2'	36:BB:37:C:C6	2.52	0.45
38:BD:16:MET:HE3	38:BD:208:LYS:HG2	1.98	0.45
40:BF:89:VAL:HG12	40:BF:90:PHE:H	1.80	0.45
41:BG:172:LEU:HD23	41:BG:176:LEU:CD1	2.34	0.45
42:BH:13:LYS:C	42:BH:15:VAL:H	2.25	0.45
45:BN:54:VAL:CB	45:BN:122:VAL:HG22	2.34	0.45
45:BN:133:GLN:O	45:BN:134:ARG:CB	2.65	0.45
47:BP:99:LEU:HA	47:BP:102:ARG:HH22	1.81	0.45
48:BQ:21:THR:HG23	48:BQ:101:ARG:HB2	1.99	0.45
48:BQ:26:TYR:CE2	48:BQ:140:ALA:HB3	2.52	0.45
48:BQ:79:LEU:HD23	48:BQ:80:GLU:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:18:LEU:C	49:BR:20:LEU:N	2.73	0.45
49:BR:41:ALA:O	49:BR:43:GLU:N	2.49	0.45
50:BS:102:ALA:HB3	50:BS:103:GLU:H	1.49	0.45
51:BT:58:ASN:ND2	51:BT:58:ASN:N	2.64	0.45
52:BU:99:ALA:HB2	52:BU:106:PHE:CE1	2.52	0.45
53:BV:39:LEU:HD11	53:BV:51:VAL:HA	1.97	0.45
57:BZ:9:TYR:CG	57:BZ:35:ARG:NH2	2.85	0.45
1:AA:51:A:H4'	1:AA:52:G:C5'	2.47	0.44
1:AA:781:A:C3'	1:AA:782:A:C5'	2.95	0.44
1:AA:999:C:C6	1:AA:999:C:C3'	3.00	0.44
1:AA:1144:G:N2	1:AA:1145:C:C2	2.85	0.44
1:AA:1158:C:C6	2:AB:132:LYS:HD3	2.52	0.44
1:AA:1243:C:H42	1:AA:1294:G:H1	1.65	0.44
1:AA:1286:A:H5'	21:AU:25:LYS:HD2	1.99	0.44
2:AB:208:ILE:H	2:AB:208:ILE:HG13	1.28	0.44
5:AE:133:TYR:O	5:AE:134:ALA:C	2.59	0.44
7:AG:78:ARG:CG	7:AG:78:ARG:NH1	2.74	0.44
9:AI:125:TYR:HD1	9:AI:126:SER:N	2.14	0.44
17:AQ:45:HIS:CB	17:AQ:65:ILE:CD1	2.94	0.44
18:AR:66:LEU:CG	18:AR:70:ILE:HD11	2.44	0.44
19:AS:24:ALA:O	19:AS:25:LYS:CB	2.64	0.44
24:AY:149:VAL:O	24:AY:152:THR:N	2.49	0.44
24:AY:165:GLN:NE2	24:AY:260:LEU:HD22	2.32	0.44
24:AY:229:LEU:O	24:AY:231:TYR:N	2.50	0.44
24:AY:286:ILE:HG23	24:AY:287:PRO:HD2	1.99	0.44
27:B2:9:GLN:O	27:B2:13:ALA:N	2.50	0.44
33:B8:59:LYS:HE3	33:B8:59:LYS:HB2	1.67	0.44
34:B9:17:ILE:HG22	34:B9:18:ARG:N	2.33	0.44
35:BA:55:G:H1	35:BA:115:C:N4	2.15	0.44
35:BA:223:A:C4	35:BA:422:A:C8	3.05	0.44
35:BA:279:C:H2'	35:BA:280:C:C5'	2.36	0.44
35:BA:606:U:C5'	35:BA:607:U:OP2	2.65	0.44
35:BA:624:C:N4	47:BP:107:LYS:NZ	2.56	0.44
35:BA:723:G:C6	35:BA:724:U:C4	3.04	0.44
35:BA:852:G:O2'	35:BA:853:G:H5'	2.17	0.44
35:BA:953:A:H2'	35:BA:954:G:H8	1.81	0.44
35:BA:1829:A:H2'	35:BA:1830:C:O4'	2.17	0.44
35:BA:1943:U:O2	35:BA:1943:U:C2'	2.63	0.44
35:BA:2020:A:C6	35:BA:2022:U:N3	2.85	0.44
35:BA:2056:G:C2	35:BA:2057:A:C8	3.05	0.44
35:BA:2102:U:H2'	35:BA:2103:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2443:C:H5'	40:BF:68:LYS:HD3	1.99	0.44
35:BA:2555:U:C5	35:BA:2556:C:C6	3.04	0.44
35:BA:2667:C:H2'	35:BA:2668:G:C8	2.51	0.44
35:BA:2837:G:C4	35:BA:2838:G:C8	3.06	0.44
38:BD:85:ASP:OD1	38:BD:85:ASP:C	2.60	0.44
38:BD:133:LEU:O	38:BD:135:PHE:N	2.51	0.44
38:BD:210:GLY:O	38:BD:211:ARG:HB3	2.17	0.44
38:BD:227:ASN:HB3	38:BD:228:PRO:CD	2.47	0.44
40:BF:135:LYS:CB	40:BF:138:GLU:OE2	2.65	0.44
42:BH:84:SER:OG	42:BH:85:LYS:N	2.49	0.44
46:BO:20:MET:HG2	46:BO:21:CYS:N	2.31	0.44
50:BS:68:GLN:O	50:BS:70:GLY:N	2.50	0.44
50:BS:106:ARG:HH11	50:BS:106:ARG:CB	2.24	0.44
52:BU:58:ARG:O	52:BU:62:ILE:HD12	2.16	0.44
56:BY:9:LYS:HD3	56:BY:94:LYS:HE2	1.98	0.44
56:BY:96:ILE:HG22	56:BY:97:ARG:N	2.31	0.44
1:AA:22:G:H2'	1:AA:23:C:C6	2.52	0.44
1:AA:60:A:C5'	1:AA:331:G:N2	2.80	0.44
1:AA:288:A:H2'	1:AA:289:G:H4'	1.99	0.44
1:AA:411:A:C6	1:AA:429:U:C4	3.06	0.44
1:AA:439:A:C4	1:AA:496:A:C2	3.05	0.44
1:AA:865:A:H2'	1:AA:866:C:C6	2.52	0.44
1:AA:1126:U:O4	10:AJ:7:LYS:HE2	2.17	0.44
1:AA:1334:G:C5'	1:AA:1335:C:OP2	2.64	0.44
1:AA:1397:C:H6	1:AA:1397:C:H3'	1.81	0.44
3:AC:43:LEU:C	3:AC:45:LYS:N	2.74	0.44
3:AC:100:ALA:O	3:AC:101:LEU:C	2.60	0.44
3:AC:181:ASN:HD21	3:AC:204:LEU:HD12	1.82	0.44
5:AE:28:PHE:CD2	5:AE:51:VAL:HG22	2.51	0.44
8:AH:126:LYS:O	8:AH:126:LYS:CG	2.62	0.44
9:AI:7:THR:O	9:AI:83:ARG:HD2	2.18	0.44
12:AL:41:ARG:CB	12:AL:41:ARG:NH1	2.80	0.44
15:AO:83:GLU:C	15:AO:85:LEU:N	2.73	0.44
20:AT:22:ARG:O	20:AT:23:ARG:C	2.58	0.44
24:AY:87:HIS:O	24:AY:88:VAL:C	2.60	0.44
24:AY:512:ILE:CD1	24:AY:512:ILE:N	2.78	0.44
24:AY:514:VAL:HG21	24:AY:593:ALA:HB2	1.99	0.44
27:B2:48:HIS:CE1	27:B2:49:LYS:HG2	2.52	0.44
29:B4:39:CYS:SG	29:B4:42:PHE:HE2	2.40	0.44
30:B5:2:ALA:O	30:B5:3:LYS:HB3	2.18	0.44
30:B5:55:ARG:HH22	49:BR:33:ARG:HD2	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:15:GLU:CD	31:B6:44:ARG:CZ	2.90	0.44
31:B6:39:TYR:HB3	31:B6:49:HIS:CE1	2.52	0.44
35:BA:51:G:N3	35:BA:119:A:C2	2.86	0.44
35:BA:187:G:N3	35:BA:1365:A:C2	2.85	0.44
35:BA:374:A:C2'	35:BA:375:C:H5'	2.47	0.44
35:BA:430:G:H2'	35:BA:431:U:H5'	2.00	0.44
35:BA:503:A:H4'	35:BA:504:U:C5'	2.47	0.44
35:BA:510:C:OP1	35:BA:511:U:OP2	2.35	0.44
35:BA:664:C:O2'	35:BA:665:C:H5'	2.17	0.44
35:BA:849:A:H3'	35:BA:850:C:C6	2.52	0.44
35:BA:1009:A:H1'	52:BU:59:ARG:HH11	1.83	0.44
35:BA:1040:C:H2'	35:BA:1041:C:C6	2.53	0.44
35:BA:1124:C:H2'	35:BA:1125:G:O4'	2.16	0.44
35:BA:1329:U:H5'	35:BA:1330:C:C5	2.51	0.44
35:BA:1571:A:H8	35:BA:1571:A:O5'	1.99	0.44
35:BA:1899:G:C2'	35:BA:1900:A:OP2	2.65	0.44
35:BA:2352:A:C2'	35:BA:2353:G:H5'	2.46	0.44
35:BA:2876:G:C5'	51:BT:3:ARG:HA	2.47	0.44
37:BC:60:ARG:HG3	37:BC:165:ARG:CG	2.43	0.44
37:BC:62:THR:HG22	37:BC:163:GLU:HG3	1.98	0.44
39:BE:98:PRO:CG	39:BE:175:VAL:HG12	2.33	0.44
40:BF:31:HIS:O	40:BF:34:TRP:HB3	2.17	0.44
40:BF:152:GLU:O	40:BF:153:SER:C	2.60	0.44
43:BK:37:PHE:C	43:BK:39:LYS:N	2.74	0.44
45:BN:16:ILE:O	45:BN:54:VAL:HA	2.17	0.44
48:BQ:70:PRO:HA	48:BQ:95:ALA:HB2	1.99	0.44
49:BR:53:HIS:ND1	49:BR:53:HIS:C	2.75	0.44
53:BV:25:LEU:H	53:BV:92:THR:HG21	1.82	0.44
56:BY:54:LYS:HG2	56:BY:55:TYR:CE1	2.52	0.44
57:BZ:33:LEU:HD12	57:BZ:33:LEU:HA	1.82	0.44
1:AA:159:G:C3'	1:AA:160:A:H5"	2.44	0.44
1:AA:220:G:N2	1:AA:221:C:H1'	2.32	0.44
1:AA:392:G:H2'	1:AA:393:A:C8	2.53	0.44
1:AA:663:A:C2'	1:AA:664:G:H5'	2.47	0.44
2:AB:207:ALA:C	2:AB:209:ARG:N	2.75	0.44
3:AC:155:GLY:O	3:AC:156:ARG:CB	2.65	0.44
4:AD:13:ARG:C	4:AD:16:GLY:H	2.22	0.44
4:AD:100:ARG:HH22	4:AD:137:SER:HB3	1.81	0.44
8:AH:54:ASP:O	8:AH:56:LYS:HG3	2.17	0.44
8:AH:74:PRO:O	8:AH:75:ARG:C	2.60	0.44
8:AH:114:THR:HG22	8:AH:130:GLY:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:106:ASN:HB3	13:AM:107:ALA:H	1.30	0.44
20:AT:73:HIS:O	20:AT:76:ALA:N	2.50	0.44
20:AT:78:ALA:HA	20:AT:81:LYS:HD3	1.99	0.44
22:AV:2:G:C2	22:AV:3:C:C4	3.05	0.44
24:AY:74:TRP:CH2	24:AY:270:GLN:HG2	2.52	0.44
24:AY:238:THR:O	24:AY:242:LEU:HB2	2.17	0.44
24:AY:580:MET:HE3	24:AY:584:ILE:CG1	2.46	0.44
27:B2:3:LEU:HD22	27:B2:7:ARG:NH2	2.32	0.44
29:B4:8:LYS:CD	29:B4:9:LEU:O	2.64	0.44
30:B5:40:LYS:HD3	30:B5:44:THR:HB	1.99	0.44
31:B6:11:LEU:HD22	31:B6:12:GLU:N	2.32	0.44
31:B6:28:ARG:NH1	31:B6:28:ARG:HB3	2.31	0.44
34:B9:22:ARG:HB2	34:B9:24:TYR:HE1	1.83	0.44
35:BA:27:G:H2'	35:BA:28:A:OP2	2.17	0.44
35:BA:231:C:O2'	35:BA:232:G:H5'	2.18	0.44
35:BA:445:C:O2	35:BA:449:A:H2	2.00	0.44
35:BA:886:C:O2'	35:BA:887:A:H4'	2.17	0.44
35:BA:910:A:C6	48:BQ:13:GLN:HG3	2.52	0.44
35:BA:926:A:C2	35:BA:927:G:C4	3.06	0.44
35:BA:1047:G:N2	35:BA:1110:G:H1'	2.33	0.44
35:BA:1064:C:C5'	43:BK:87:GLY:H	2.31	0.44
35:BA:1461:G:H2'	35:BA:1462:C:H6	1.81	0.44
35:BA:1578:U:H2'	35:BA:1578:U:O2	2.16	0.44
35:BA:1640:C:H2'	35:BA:1641:A:O4'	2.17	0.44
35:BA:1750:G:H2'	35:BA:1751:C:H6	1.82	0.44
35:BA:1897:G:H2'	35:BA:1898:U:O4'	2.18	0.44
35:BA:2069:G:O2'	35:BA:2070:G:H5'	2.16	0.44
35:BA:2381:C:H2'	35:BA:2381:C:O2	2.18	0.44
35:BA:2459:A:C4	35:BA:2460:U:C6	3.06	0.44
35:BA:2514:U:C2	35:BA:2515:C:C5	3.05	0.44
35:BA:2628:C:O2'	35:BA:2781:A:H2'	2.17	0.44
35:BA:2704:C:C5	35:BA:2705:A:N7	2.86	0.44
35:BA:2812:G:N2	35:BA:2889:C:C2	2.86	0.44
35:BA:2837:G:C5	35:BA:2838:G:N7	2.85	0.44
36:BB:71:C:N3	36:BB:106:G:N2	2.63	0.44
38:BD:91:ARG:HH11	38:BD:91:ARG:CG	2.29	0.44
44:BL:81:LYS:O	44:BL:82:GLU:C	2.59	0.44
46:BO:66:LYS:HD3	46:BO:80:ASP:O	2.17	0.44
46:BO:112:MET:O	46:BO:113:LYS:C	2.60	0.44
49:BR:10:LEU:HB3	49:BR:17:ARG:NE	2.32	0.44
50:BS:85:VAL:HB	50:BS:86:ALA:H	1.56	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BS:98:VAL:O	50:BS:100:ALA:N	2.50	0.44
51:BT:29:ARG:HE	51:BT:84:GLN:HG3	1.83	0.44
52:BU:83:LEU:CD1	52:BU:83:LEU:H	2.31	0.44
52:BU:98:LEU:O	52:BU:106:PHE:HB2	2.17	0.44
54:BW:66:GLU:C	54:BW:68:ARG:H	2.26	0.44
55:BX:18:TYR:HA	55:BX:21:PHE:CE2	2.53	0.44
55:BX:92:LEU:C	55:BX:94:GLY:N	2.73	0.44
1:AA:6:G:H2'	5:AE:119:LEU:HD11	1.98	0.44
1:AA:56:U:O2'	1:AA:57:G:H5'	2.17	0.44
1:AA:59:A:H3'	1:AA:331:G:N2	2.33	0.44
1:AA:356:A:H2'	1:AA:357:G:H8	1.83	0.44
1:AA:446:G:N2	1:AA:447:G:H1'	2.32	0.44
1:AA:538:G:H2'	1:AA:539:A:C8	2.52	0.44
1:AA:614:A:C2	1:AA:627:G:C2	3.05	0.44
1:AA:707:C:H2'	1:AA:708:C:C6	2.52	0.44
1:AA:980:C:H3'	1:AA:980:C:H6	1.82	0.44
1:AA:1089:G:C6	1:AA:1090:U:C4	3.06	0.44
1:AA:1103:C:C5'	2:AB:98:LEU:HD13	2.47	0.44
1:AA:1108:G:OP1	3:AC:176:HIS:HD2	2.00	0.44
1:AA:1110:A:H8	1:AA:1110:A:O5'	2.00	0.44
1:AA:1217:C:O2	1:AA:1217:C:C2'	2.61	0.44
1:AA:1228:C:C5	1:AA:1229:A:N7	2.86	0.44
1:AA:1422:G:H4'	46:BO:49:ARG:NH1	2.32	0.44
2:AB:17:PHE:O	2:AB:18:GLY:C	2.61	0.44
2:AB:215:LEU:HD13	2:AB:215:LEU:HA	1.76	0.44
7:AG:137:LYS:O	7:AG:138:LYS:C	2.59	0.44
10:AJ:81:THR:C	10:AJ:83:GLU:H	2.25	0.44
12:AL:113:ARG:HG2	12:AL:113:ARG:HH11	1.81	0.44
16:AP:9:PHE:CD2	16:AP:18:ARG:CZ	3.00	0.44
17:AQ:25:ARG:O	17:AQ:25:ARG:HG3	2.16	0.44
19:AS:42:PRO:O	29:B4:49:PHE:CZ	2.68	0.44
24:AY:39:ILE:HG22	24:AY:41:LYS:H	1.83	0.44
24:AY:180:VAL:HG23	24:AY:181:LEU:H	1.82	0.44
24:AY:312:LEU:HD22	24:AY:313:ALA:O	2.18	0.44
24:AY:492:ASP:OD2	24:AY:513:LYS:HG3	2.17	0.44
35:BA:65:C:H5'	55:BX:71:GLY:HA3	2.00	0.44
35:BA:408:G:C2'	35:BA:409:C:H5'	2.48	0.44
35:BA:443:A:OP1	40:BF:46:ARG:HB2	2.17	0.44
35:BA:463:G:C2	35:BA:467:G:C6	3.05	0.44
35:BA:614(C):A:N3	35:BA:615:G:H1'	2.32	0.44
35:BA:667:U:H2'	35:BA:668:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:783:A:H2'	35:BA:784:A:O5'	2.17	0.44
35:BA:786:C:O5'	35:BA:786:C:H6	2.01	0.44
35:BA:830:G:H1'	35:BA:2448:A:C6	2.51	0.44
35:BA:860:U:O2	35:BA:860:U:O4'	2.36	0.44
35:BA:1305:C:N3	35:BA:1624:G:C6	2.84	0.44
35:BA:1431:U:O5'	35:BA:1431:U:H6	1.99	0.44
35:BA:1584:C:O2	35:BA:1584:C:C3'	2.65	0.44
35:BA:1683:C:H2'	35:BA:1684:C:H6	1.82	0.44
35:BA:1782:C:O5'	35:BA:1782:C:H6	2.00	0.44
35:BA:1829:A:N3	38:BD:15:PHE:CZ	2.86	0.44
35:BA:2192:G:H2'	35:BA:2193:G:H5"	1.99	0.44
35:BA:2285:C:H4'	35:BA:2288:A:N7	2.33	0.44
35:BA:2326:C:O5'	35:BA:2326:C:H6	2.01	0.44
35:BA:2348:U:H2'	35:BA:2349:G:C5'	2.47	0.44
35:BA:2533:A:N6	35:BA:2534:A:C6	2.85	0.44
35:BA:2626:C:O2'	35:BA:2627:G:H5'	2.18	0.44
35:BA:2895:U:C3'	35:BA:2895:U:C6	2.99	0.44
37:BC:133:GLY:C	37:BC:135:ARG:H	2.25	0.44
38:BD:257:LEU:O	38:BD:258:LYS:C	2.60	0.44
39:BE:2:LYS:HG2	39:BE:95:ILE:CG2	2.47	0.44
39:BE:45:THR:O	39:BE:46:ALA:CB	2.65	0.44
39:BE:120:TRP:O	39:BE:121:ASN:C	2.59	0.44
40:BF:206:ILE:CG2	40:BF:207:GLY:N	2.68	0.44
42:BH:17:VAL:O	42:BH:45:VAL:CG2	2.65	0.44
42:BH:121:ILE:HD11	42:BH:140:LYS:HB3	2.00	0.44
43:BK:41:PHE:O	43:BK:43:ALA:N	2.51	0.44
46:BO:104:ARG:NH2	51:BT:33:LYS:CE	2.81	0.44
49:BR:54:LEU:HD23	49:BR:66:VAL:CG2	2.44	0.44
49:BR:83:ILE:O	49:BR:83:ILE:HG22	2.16	0.44
49:BR:101:ALA:O	49:BR:102:GLU:HB2	2.17	0.44
50:BS:70:GLY:C	50:BS:101:LEU:CD2	2.83	0.44
52:BU:59:ARG:O	52:BU:60:LEU:C	2.60	0.44
56:BY:12:THR:HG22	56:BY:13:VAL:N	2.32	0.44
56:BY:13:VAL:HG22	56:BY:73:ARG:O	2.17	0.44
1:AA:414:A:N6	1:AA:431:A:N3	2.65	0.44
1:AA:913:A:H4'	1:AA:914:A:H4'	1.99	0.44
1:AA:1179:A:O3'	9:AI:103:THR:HA	2.17	0.44
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	2.15	0.44
1:AA:1484:C:H2'	1:AA:1485:U:O4'	2.18	0.44
2:AB:118:LEU:HD13	2:AB:142:LEU:HB2	2.00	0.44
3:AC:52:LEU:H	3:AC:52:LEU:CD2	2.14	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:72:ARG:HB3	7:AG:142:GLU:OE1	2.16	0.44
9:AI:73:GLN:C	9:AI:75:ASP:N	2.75	0.44
15:AO:7:GLU:O	15:AO:11:VAL:HG23	2.17	0.44
16:AP:57:ARG:O	16:AP:58:TYR:C	2.60	0.44
18:AR:65:ILE:H	18:AR:65:ILE:HG12	1.59	0.44
19:AS:65:ASN:HA	29:B4:48:ARG:HH12	1.82	0.44
22:AV:26:G:H2'	22:AV:27:U:C6	2.53	0.44
24:AY:89:ASP:HB2	24:AY:90:PHE:H	1.52	0.44
24:AY:146:LEU:O	24:AY:147:TRP:C	2.61	0.44
25:B0:19:LYS:HD3	25:B0:41:ARG:NH2	2.28	0.44
29:B4:43:TYR:CD2	29:B4:44:THR:HG23	2.52	0.44
31:B6:30:THR:O	31:B6:31:PRO:C	2.59	0.44
34:B9:29:ASN:ND2	34:B9:32:HIS:CG	2.85	0.44
35:BA:214:G:H2'	35:BA:215:G:O4'	2.17	0.44
35:BA:272(J):C:H5'	35:BA:274:G:OP2	2.16	0.44
35:BA:511:U:C5	35:BA:512:G:C4	3.06	0.44
35:BA:709:U:O2'	35:BA:710:G:H5'	2.18	0.44
35:BA:745:G:H21	35:BA:750:A:H61	1.66	0.44
35:BA:1092:C:O2'	35:BA:1093:G:H5'	2.18	0.44
35:BA:1193:G:OP1	47:BP:17:LYS:NZ	2.50	0.44
35:BA:1343:G:H1	35:BA:1404:C:H42	1.65	0.44
35:BA:1416:G:O2'	35:BA:1417:C:C5	2.67	0.44
35:BA:1609:A:H1'	35:BA:1616:A:H1'	1.98	0.44
35:BA:2223:G:H2'	35:BA:2224:G:C5'	2.48	0.44
35:BA:2246:G:H1'	35:BA:2426:A:C2	2.53	0.44
35:BA:2308:G:H2'	35:BA:2309:A:C8	2.52	0.44
35:BA:2393:A:H2'	35:BA:2394:C:C6	2.52	0.44
35:BA:2807:G:C3'	35:BA:2808:U:H5"	2.37	0.44
36:BB:7:G:C5'	50:BS:29:PHE:CD2	3.00	0.44
37:BC:211:ARG:CG	37:BC:211:ARG:NH1	2.66	0.44
40:BF:99:TYR:CE2	40:BF:101:LEU:HD13	2.51	0.44
41:BG:63:ILE:HD12	41:BG:64:THR:HB	2.00	0.44
41:BG:119:GLY:C	41:BG:181:ARG:H	2.25	0.44
51:BT:90:GLN:HG2	51:BT:120:ARG:NH2	2.32	0.44
51:BT:112:ARG:O	51:BT:112:ARG:HG3	2.16	0.44
51:BT:116:ALA:HB1	51:BT:121:ILE:HD11	1.99	0.44
52:BU:50:ARG:O	52:BU:52:ARG:N	2.50	0.44
52:BU:80:ILE:O	52:BU:80:ILE:HG22	2.18	0.44
53:BV:35:LEU:C	53:BV:37:VAL:N	2.75	0.44
55:BX:92:LEU:O	55:BX:94:GLY:N	2.51	0.44
57:BZ:165:VAL:CG1	57:BZ:166:SER:H	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:25:C:H5'	1:AA:524:G:H1'	1.98	0.44
1:AA:141:A:H1'	1:AA:182:U:C2	2.53	0.44
1:AA:143:A:H2	1:AA:220:G:H1	1.66	0.44
1:AA:238:G:C6	1:AA:239:U:C4	3.06	0.44
1:AA:274:A:H4'	1:AA:275:G:OP1	2.17	0.44
1:AA:334:C:C4	1:AA:335:C:N4	2.85	0.44
1:AA:524:G:H2'	1:AA:525:C:C6	2.52	0.44
1:AA:773:G:H2'	1:AA:774:G:H5'	2.00	0.44
1:AA:797:C:OP1	11:AK:124:LYS:HE3	2.17	0.44
1:AA:1121:U:C4	1:AA:1122:U:O4	2.70	0.44
1:AA:1229:A:H2'	1:AA:1230:C:C6	2.53	0.44
1:AA:1254:C:O4'	1:AA:1356:G:H5"	2.18	0.44
1:AA:1329:A:H5"	13:AM:26:GLY:N	2.32	0.44
1:AA:1527:C:H6	1:AA:1527:C:O5'	2.01	0.44
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.25	0.44
3:AC:12:LEU:O	3:AC:13:GLY:C	2.60	0.44
11:AK:95:ILE:O	11:AK:96:ARG:C	2.60	0.44
13:AM:19:LEU:HA	13:AM:22:ILE:HD13	2.00	0.44
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.61	0.44
20:AT:26:ASN:ND2	20:AT:26:ASN:H	2.13	0.44
20:AT:74:LYS:HB2	20:AT:75:ASN:HD22	1.81	0.44
24:AY:229:LEU:C	24:AY:231:TYR:N	2.74	0.44
24:AY:507:TYR:C	24:AY:507:TYR:HD1	2.25	0.44
25:B0:19:LYS:CD	25:B0:41:ARG:HH22	2.29	0.44
26:B1:86:SER:O	26:B1:87:PRO:C	2.58	0.44
26:B1:87:PRO:HG2	26:B1:88:LYS:H	1.82	0.44
27:B2:46:GLN:OE1	35:BA:95:G:H4'	2.17	0.44
29:B4:48:ARG:O	29:B4:49:PHE:CD1	2.71	0.44
33:B8:53:PRO:HG2	33:B8:54:GLU:H	1.83	0.44
35:BA:198:C:H2'	35:BA:199:A:H5"	1.98	0.44
35:BA:272(E):G:H2'	35:BA:272(F):C:O4'	2.17	0.44
35:BA:294:A:N6	35:BA:345:A:H1'	2.32	0.44
35:BA:301:G:C4	35:BA:302:C:C5	3.06	0.44
35:BA:363(E):U:O2'	35:BA:363(F):A:O4'	2.36	0.44
35:BA:381:G:H2'	35:BA:382:G:H8	1.81	0.44
35:BA:773:U:H5'	38:BD:47:GLY:HA2	1.99	0.44
35:BA:1156:A:C2'	35:BA:1157:G:OP1	2.65	0.44
35:BA:1314:C:H6	35:BA:1314:C:C5'	2.19	0.44
35:BA:1602:U:H3'	35:BA:1603:A:H5'	1.99	0.44
35:BA:1881:C:O2'	35:BA:1882:C:H5'	2.17	0.44
35:BA:1891:G:H2'	35:BA:1892:C:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2307:G:C2	35:BA:2308:G:H5”	2.52	0.44
35:BA:2688:U:O2	35:BA:2688:U:H3’	2.18	0.44
35:BA:2779:U:H5’	35:BA:2780:G:O5’	2.18	0.44
35:BA:2845:G:O5’	35:BA:2845:G:H8	2.01	0.44
37:BC:2:PRO:CB	37:BC:4:HIS:O	2.64	0.44
37:BC:180:SER:O	37:BC:181:PHE:C	2.60	0.44
38:BD:209:ALA:C	38:BD:210:GLY:O	2.56	0.44
39:BE:23:VAL:HA	39:BE:186:GLY:H	1.81	0.44
39:BE:30:PRO:HD3	39:BE:180:ASN:ND2	2.33	0.44
39:BE:144:ARG:O	39:BE:145:LYS:O	2.35	0.44
40:BF:11:VAL:HG12	40:BF:12:LEU:H	1.83	0.44
40:BF:16:GLY:O	40:BF:17:ARG:CG	2.63	0.44
41:BG:77:ILE:HG22	41:BG:80:PHE:CA	2.43	0.44
41:BG:87:PRO:C	41:BG:88:ILE:HD12	2.39	0.44
43:BK:3:LYS:HB3	43:BK:29:GLN:HB3	1.99	0.44
43:BK:3:LYS:HB3	43:BK:3:LYS:HE3	1.83	0.44
43:BK:100:THR:HG22	43:BK:139:VAL:HB	2.00	0.44
46:BO:60:ALA:C	46:BO:87:ILE:HD11	2.42	0.44
49:BR:13:HIS:O	49:BR:14:SER:C	2.61	0.44
49:BR:41:ALA:C	49:BR:43:GLU:N	2.68	0.44
50:BS:71:ARG:HH11	50:BS:71:ARG:HG3	1.81	0.44
51:BT:52:ILE:HG21	51:BT:52:ILE:HD13	1.72	0.44
51:BT:118:ARG:O	51:BT:119:LYS:C	2.59	0.44
55:BX:14:SER:O	55:BX:15:GLU:C	2.59	0.44
1:AA:631:G:H2’	1:AA:632:A:N7	2.33	0.44
1:AA:666:G:C2	1:AA:667:G:C8	3.06	0.44
1:AA:1361:G:C5’	1:AA:1362:C:OP2	2.66	0.44
1:AA:1525:G:O2’	1:AA:1526:G:H5’	2.17	0.44
3:AC:173:VAL:N	3:AC:174:PRO:HD3	2.32	0.44
4:AD:50:ARG:HA	4:AD:51:PRO:HD3	1.81	0.44
6:AF:12:PRO:HA	6:AF:45:LEU:HD11	1.99	0.44
6:AF:80:ARG:HH11	6:AF:80:ARG:CG	2.31	0.44
8:AH:20:TYR:CE1	8:AH:76:PRO:HG2	2.53	0.44
10:AJ:56:HIS:O	10:AJ:58:ASP:N	2.51	0.44
13:AM:49:THR:HB	13:AM:52:GLU:HG3	1.98	0.44
15:AO:26:GLU:HG3	15:AO:77:ARG:NH1	2.32	0.44
15:AO:82:ILE:HD13	15:AO:82:ILE:O	2.16	0.44
20:AT:36:LEU:HD21	20:AT:55:ILE:HG23	1.98	0.44
20:AT:50:GLU:C	20:AT:52:ALA:N	2.73	0.44
24:AY:89:ASP:CG	24:AY:457:LEU:HD12	2.42	0.44
24:AY:486:THR:CG2	24:AY:602:LEU:HG	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:56:VAL:O	29:B4:56:VAL:HG12	2.17	0.44
30:B5:42:PRO:C	30:B5:43:HIS:CD2	2.96	0.44
31:B6:9:LEU:HD21	31:B6:26:ASN:HD22	1.76	0.44
31:B6:15:GLU:HB2	31:B6:47:THR:HG21	1.99	0.44
31:B6:41:PRO:O	31:B6:41:PRO:HG2	2.18	0.44
33:B8:51:ALA:HA	33:B8:54:GLU:OE1	2.17	0.44
35:BA:30:G:C5	35:BA:31:C:C4	3.06	0.44
35:BA:192:C:C2'	35:BA:193:U:H5'	2.46	0.44
35:BA:271(E):U:H3	35:BA:271(S):G:H1	1.65	0.44
35:BA:451:C:H41	35:BA:453:C:H3'	1.83	0.44
35:BA:466:A:C2	35:BA:796:C:O4'	2.71	0.44
35:BA:625:G:O2'	35:BA:626:U:H5'	2.17	0.44
35:BA:869:G:H1'	48:BQ:8:LYS:HD2	2.00	0.44
35:BA:915:C:H2'	35:BA:916:G:H8	1.82	0.44
35:BA:993:G:OP1	52:BU:50:ARG:HD2	2.18	0.44
35:BA:1248:G:C4	52:BU:3:ARG:HD2	2.53	0.44
35:BA:1387:C:H4'	35:BA:1469:A:H5'	2.00	0.44
35:BA:1544:A:O2'	35:BA:1545:A:H5'	2.18	0.44
35:BA:1630:G:C2	35:BA:1637:A:C2	3.06	0.44
35:BA:1820:U:O2	38:BD:202:LYS:HG2	2.18	0.44
35:BA:2313:C:O2'	35:BA:2314:C:H5'	2.18	0.44
35:BA:2317:C:H2'	35:BA:2318:G:C5'	2.37	0.44
35:BA:2378:A:N1	50:BS:19:LYS:HE3	2.33	0.44
36:BB:73:A:C4	36:BB:105:A:C2	3.05	0.44
37:BC:30:VAL:O	37:BC:33:LEU:HB2	2.18	0.44
38:BD:28:GLU:HB2	38:BD:29:PRO:HD3	2.00	0.44
38:BD:35:LYS:HD2	38:BD:36:PRO:HA	2.00	0.44
39:BE:77:ILE:HB	39:BE:78:LEU:H	1.62	0.44
48:BQ:32:TYR:N	48:BQ:32:TYR:CD1	2.86	0.44
50:BS:35:ILE:H	50:BS:53:SER:HB2	1.83	0.44
51:BT:2:ASN:O	51:BT:4:GLY:N	2.50	0.44
51:BT:118:ARG:HA	51:BT:121:ILE:CB	2.48	0.44
52:BU:52:ARG:O	52:BU:55:ARG:HG2	2.16	0.44
54:BW:41:LYS:C	54:BW:43:GLY:H	2.26	0.44
56:BY:46:LYS:H	56:BY:62:GLU:CB	2.22	0.44
57:BZ:72:ARG:HD3	57:BZ:72:ARG:HA	1.60	0.44
57:BZ:77:ASP:CA	57:BZ:78:LYS:HD3	2.47	0.44
1:AA:1004:A:C6	1:AA:1034:G:H2'	2.53	0.44
1:AA:1054:C:O2	1:AA:1054:C:C2'	2.66	0.44
1:AA:1152:A:OP1	10:AJ:68:HIS:HD2	2.01	0.44
1:AA:1216:G:H2'	1:AA:1217:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:15:THR:HG23	3:AC:181:ASN:HA	1.96	0.44
3:AC:188:LEU:HD22	3:AC:188:LEU:N	2.33	0.44
4:AD:163:GLU:OE1	4:AD:163:GLU:HA	2.18	0.44
10:AJ:30:SER:O	10:AJ:81:THR:HG23	2.18	0.44
10:AJ:91:PRO:O	10:AJ:91:PRO:HG2	2.17	0.44
11:AK:31:THR:OG1	11:AK:42:TRP:HB3	2.18	0.44
19:AS:10:PHE:CD1	19:AS:10:PHE:N	2.85	0.44
19:AS:10:PHE:HZ	19:AS:70:LYS:NZ	2.16	0.44
19:AS:52:TYR:HB2	19:AS:57:HIS:CE1	2.53	0.44
24:AY:203:GLU:O	24:AY:204:GLU:O	2.36	0.44
24:AY:665:GLY:C	24:AY:667:GLY:H	2.26	0.44
31:B6:8:LYS:C	31:B6:9:LEU:HD13	2.42	0.44
31:B6:15:GLU:OE2	31:B6:20:ASN:ND2	2.51	0.44
33:B8:49:VAL:O	33:B8:53:PRO:HD3	2.18	0.44
35:BA:404:C:H1'	35:BA:406:G:C8	2.52	0.44
35:BA:496:G:C6	35:BA:497:A:C4	3.06	0.44
35:BA:544:G:C2	35:BA:549:G:N1	2.86	0.44
35:BA:614:U:H2'	35:BA:614(A):U:O4'	2.18	0.44
35:BA:949:C:H2'	35:BA:950:G:H8	1.82	0.44
35:BA:980:A:C4	35:BA:1136:G:O4'	2.71	0.44
35:BA:1175:U:H2'	35:BA:1177:A:C2	2.53	0.44
35:BA:1242:A:C6	47:BP:8:PRO:HG2	2.53	0.44
35:BA:1441:G:H2'	35:BA:1442:G:C8	2.49	0.44
35:BA:1494:A:O2'	35:BA:1495:A:H3'	2.18	0.44
35:BA:1530:C:H2'	35:BA:1531:C:C6	2.52	0.44
35:BA:1719:G:O2'	35:BA:1720:U:H5'	2.17	0.44
35:BA:1949:G:H2'	35:BA:1950:G:C8	2.53	0.44
35:BA:2345:G:N7	35:BA:2372:G:C2	2.86	0.44
35:BA:2704:C:H2'	35:BA:2705:A:O4'	2.17	0.44
37:BC:79:ALA:C	37:BC:120:VAL:HG11	2.43	0.44
38:BD:45:ASN:HB2	38:BD:46:GLN:OE1	2.18	0.44
39:BE:31:CYS:O	39:BE:91:VAL:N	2.45	0.44
40:BF:83:PHE:O	40:BF:84:VAL:C	2.60	0.44
46:BO:79:PHE:HB3	51:BT:70:VAL:HG11	2.00	0.44
47:BP:91:PHE:HZ	47:BP:100:LEU:CD1	2.30	0.44
48:BQ:84:GLY:O	48:BQ:85:LYS:HB2	2.18	0.44
50:BS:65:VAL:C	50:BS:67:ARG:H	2.24	0.44
50:BS:89:ARG:HG3	50:BS:92:TYR:HB3	1.99	0.44
51:BT:62:THR:HA	51:BT:74:ARG:O	2.17	0.44
54:BW:50:VAL:HG13	54:BW:51:LEU:N	2.32	0.44
1:AA:51:A:H4'	1:AA:52:G:H5'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:91:C:C5	1:AA:92:C:C4	3.06	0.44
1:AA:143:A:N1	1:AA:220:G:O6	2.51	0.44
1:AA:253:U:H2'	1:AA:254:G:H8	1.83	0.44
1:AA:254:G:O2'	17:AQ:16:GLN:O	2.36	0.44
1:AA:265:G:N2	1:AA:267:C:O4'	2.51	0.44
1:AA:939:G:C6	1:AA:940:C:N4	2.86	0.44
1:AA:1248:A:C5	1:AA:1249:C:C5	3.06	0.44
1:AA:1502:A:H2	1:AA:1505:G:C2	2.35	0.44
3:AC:25:GLY:C	3:AC:27:LYS:H	2.25	0.44
3:AC:136:GLN:HG3	3:AC:139:GLN:CB	2.48	0.44
5:AE:18:ARG:NH2	5:AE:25:ARG:HG2	2.32	0.44
6:AF:36:ARG:CZ	6:AF:36:ARG:HB3	2.48	0.44
6:AF:67:MET:SD	6:AF:75:LEU:HD22	2.58	0.44
8:AH:53:VAL:O	8:AH:54:ASP:HB2	2.18	0.44
8:AH:72:PRO:O	8:AH:73:ASP:C	2.60	0.44
9:AI:2:GLU:HG2	9:AI:3:GLN:N	2.32	0.44
9:AI:27:THR:HG21	9:AI:30:GLY:HA2	2.00	0.44
9:AI:33:PHE:C	9:AI:35:GLU:H	2.26	0.44
12:AL:80:HIS:O	12:AL:81:SER:HB2	2.17	0.44
14:AN:19:ARG:O	14:AN:20:ALA:C	2.61	0.44
16:AP:60:LEU:HA	16:AP:60:LEU:HD23	1.73	0.44
20:AT:86:ARG:HG3	20:AT:86:ARG:NH1	2.32	0.44
24:AY:120:THR:O	24:AY:124:GLN:CD	2.60	0.44
24:AY:509:HIS:ND1	24:AY:509:HIS:O	2.47	0.44
24:AY:680:PRO:HB2	24:AY:682:GLN:HG2	1.98	0.44
27:B2:30:ARG:HB2	55:BX:5:TYR:CE2	2.51	0.44
29:B4:1:MET:HG3	41:BG:66:GLN:HG3	1.99	0.44
35:BA:66:C:C5	35:BA:67:U:C5	3.06	0.44
35:BA:82:G:N1	35:BA:103:A:OP2	2.50	0.44
35:BA:185:U:C2	35:BA:212:G:N2	2.85	0.44
35:BA:239:U:H1'	35:BA:259:G:N2	2.32	0.44
35:BA:389:G:C6	47:BP:70:GLN:HG3	2.53	0.44
35:BA:484:C:OP1	56:BY:49:VAL:HG13	2.17	0.44
35:BA:527:C:O2	35:BA:527:C:O4'	2.33	0.44
35:BA:654(P):C:H2'	35:BA:654(Q):C:C5'	2.48	0.44
35:BA:760:G:C2	35:BA:761:A:H1'	2.53	0.44
35:BA:973:A:O4'	35:BA:1188:U:C6	2.71	0.44
35:BA:984:A:H2'	35:BA:985:C:OP1	2.18	0.44
35:BA:1048:A:H2'	35:BA:1048:A:N3	2.32	0.44
35:BA:1216:G:C4	35:BA:1217:C:C5	3.06	0.44
35:BA:1218:C:C2	35:BA:1219:G:N7	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1623:G:C2	35:BA:1624:G:C8	3.05	0.44
35:BA:1627:G:O2'	35:BA:1628:G:H5'	2.18	0.44
35:BA:1885:A:H8	35:BA:1885:A:H5'	1.83	0.44
35:BA:2022:U:H2'	35:BA:2616:C:O2'	2.17	0.44
35:BA:2026:C:C4	35:BA:2027:G:N7	2.86	0.44
35:BA:2088:G:C5	35:BA:2089:U:C4	3.06	0.44
35:BA:2148:G:O2'	35:BA:2149:G:H5'	2.17	0.44
35:BA:2154:G:C2	35:BA:2155:G:C4	3.05	0.44
35:BA:2283:C:C4	35:BA:2389:G:C5	3.05	0.44
35:BA:2291:U:OP1	35:BA:2380:C:O2'	2.36	0.44
35:BA:2306:C:C5	35:BA:2307:G:H1'	2.53	0.44
35:BA:2380:C:C4	35:BA:2381:C:C5	3.06	0.44
35:BA:2722:G:O2'	49:BR:5:LYS:HB2	2.18	0.44
35:BA:2735:G:H2'	35:BA:2736:G:C8	2.53	0.44
35:BA:2889:C:H2'	35:BA:2891:G:O4'	2.18	0.44
37:BC:203:GLU:C	37:BC:205:ALA:H	2.26	0.44
38:BD:30:GLU:HG3	38:BD:63:ARG:CZ	2.48	0.44
38:BD:97:TYR:C	38:BD:99:ASP:N	2.74	0.44
39:BE:23:VAL:HG12	39:BE:184:VAL:O	2.17	0.44
39:BE:110:GLY:HA2	39:BE:162:ALA:N	2.32	0.44
40:BF:7:TYR:HD2	40:BF:16:GLY:CA	2.18	0.44
41:BG:40:ASN:ND2	41:BG:41:GLN:H	2.16	0.44
41:BG:85:GLY:C	41:BG:87:PRO:CD	2.89	0.44
42:BH:173:PRO:HG2	42:BH:174:GLY:H	1.82	0.44
46:BO:114:ILE:HD12	46:BO:114:ILE:N	2.25	0.44
49:BR:51:LEU:HD23	49:BR:70:LEU:CD1	2.48	0.44
49:BR:84:ALA:C	49:BR:86:ARG:N	2.76	0.44
51:BT:16:ARG:HG3	51:BT:16:ARG:NH1	2.33	0.44
51:BT:89:VAL:CB	51:BT:91:ARG:HE	2.31	0.44
52:BU:104:GLN:H	52:BU:104:GLN:HG3	1.47	0.44
53:BV:15:GLU:O	53:BV:96:ILE:HG21	2.18	0.44
54:BW:96:ILE:O	54:BW:96:ILE:HG23	2.17	0.44
57:BZ:45:ASP:O	57:BZ:49:ARG:HB2	2.18	0.44
57:BZ:129:SER:C	57:BZ:131:ARG:N	2.74	0.44
57:BZ:145:GLU:OE1	57:BZ:146:ILE:CD1	2.64	0.44
1:AA:261:U:H2'	1:AA:263:A:OP2	2.17	0.43
1:AA:394:G:H2'	1:AA:395:C:C6	2.52	0.43
1:AA:922:G:H4'	5:AE:20:GLN:HA	2.00	0.43
1:AA:1416:G:H2'	1:AA:1417:G:O4'	2.18	0.43
2:AB:175:ARG:O	2:AB:176:GLU:C	2.58	0.43
7:AG:18:TYR:HE2	7:AG:59:LEU:HB2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	2.00	0.43
10:AJ:51:ARG:HG3	10:AJ:60:ARG:O	2.18	0.43
23:AX:16:A:H2'	23:AX:17:U:O4'	2.18	0.43
24:AY:65:ILE:O	24:AY:65:ILE:HG12	2.18	0.43
24:AY:607:ARG:HB2	24:AY:672:PHE:HB2	2.00	0.43
24:AY:679:VAL:HA	24:AY:680:PRO:HD3	1.76	0.43
27:B2:24:LEU:HD22	27:B2:60:LEU:HD13	2.00	0.43
27:B2:38:GLN:HA	27:B2:41:ILE:HG12	2.00	0.43
29:B4:10:VAL:HG22	29:B4:11:PRO:O	2.18	0.43
31:B6:11:LEU:HG	31:B6:26:ASN:CG	2.42	0.43
32:B7:19:ARG:HA	32:B7:22:MET:HB2	2.00	0.43
33:B8:33:ASN:O	33:B8:34:TRP:CB	2.65	0.43
33:B8:60:LEU:HA	33:B8:60:LEU:HD23	1.80	0.43
35:BA:143(A):C:O2	35:BA:143(A):C:C2'	2.64	0.43
35:BA:154(A):C:H42	35:BA:172:C:N4	2.16	0.43
35:BA:496:G:C2	35:BA:497:A:H1'	2.53	0.43
35:BA:542:C:H2'	35:BA:543:C:C6	2.53	0.43
35:BA:552:G:H5'	35:BA:552:G:C8	2.48	0.43
35:BA:613:G:C2	35:BA:614:U:C6	3.05	0.43
35:BA:724:U:H6	35:BA:724:U:O5'	2.00	0.43
35:BA:796:C:H2'	35:BA:797:C:H6	1.83	0.43
35:BA:1189:A:C2	35:BA:1190:G:H1'	2.53	0.43
35:BA:1531:C:H2'	35:BA:1532:C:H6	1.82	0.43
35:BA:1668:A:C2	35:BA:1670:C:C4	3.06	0.43
35:BA:1771:C:H1'	35:BA:1786:A:C8	2.53	0.43
35:BA:1788:C:H2'	35:BA:1789:A:O4'	2.17	0.43
35:BA:1943:U:C4	35:BA:1945:G:H1'	2.53	0.43
35:BA:2096:U:H2'	35:BA:2097:C:C6	2.53	0.43
35:BA:2514:U:N3	35:BA:2515:C:C5	2.86	0.43
37:BC:117:THR:O	37:BC:120:VAL:HG22	2.17	0.43
38:BD:27:THR:O	38:BD:27:THR:HG23	2.17	0.43
38:BD:110:GLY:O	38:BD:111:LEU:C	2.56	0.43
38:BD:124:PRO:O	38:BD:129:ASN:ND2	2.51	0.43
38:BD:136:ILE:HA	38:BD:137:PRO:HD3	1.80	0.43
39:BE:113:PHE:CE1	39:BE:158:GLY:CA	3.01	0.43
40:BF:29:ASN:HB3	40:BF:32:LEU:HB3	2.00	0.43
40:BF:107:LYS:O	40:BF:108:LYS:C	2.61	0.43
40:BF:125:LEU:N	40:BF:125:LEU:HD23	2.32	0.43
40:BF:133:ASN:N	40:BF:162:LEU:HD23	2.33	0.43
40:BF:183:VAL:O	40:BF:187:VAL:HG23	2.18	0.43
42:BH:149:ARG:HA	42:BH:162:ILE:HD11	1.98	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BK:39:LYS:O	43:BK:43:ALA:HB2	2.18	0.43
43:BK:120:LEU:O	43:BK:124:ALA:CB	2.66	0.43
50:BS:101:LEU:O	50:BS:101:LEU:CD1	2.62	0.43
52:BU:34:LYS:HA	52:BU:34:LYS:CE	2.44	0.43
53:BV:47:VAL:O	53:BV:48:GLY:C	2.61	0.43
55:BX:53:LYS:HD2	55:BX:55:ASN:ND2	2.33	0.43
1:AA:9:G:C6	1:AA:26:A:N6	2.86	0.43
1:AA:157:G:C2	1:AA:165:C:C2	3.06	0.43
1:AA:342:C:C4	1:AA:343:U:C4	3.06	0.43
1:AA:1144:G:H21	1:AA:1146:A:H62	1.65	0.43
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.53	0.43
1:AA:1296:C:C5	1:AA:1297:C:C5	3.06	0.43
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.83	0.43
1:AA:1381:U:C5	1:AA:1382:C:C4	3.07	0.43
1:AA:1442(A):G:H2'	51:BT:118:ARG:HH11	1.82	0.43
2:AB:165:VAL:CG2	2:AB:166:ASP:H	2.04	0.43
3:AC:8:ILE:C	3:AC:10:PHE:N	2.76	0.43
3:AC:10:PHE:O	3:AC:10:PHE:CD1	2.71	0.43
9:AI:52:ALA:O	9:AI:53:VAL:HG13	2.18	0.43
10:AJ:79:ARG:HG2	10:AJ:79:ARG:HH11	1.84	0.43
17:AQ:43:LEU:HA	17:AQ:43:LEU:HD23	1.71	0.43
18:AR:26:LEU:HD21	18:AR:42:ARG:NH1	2.33	0.43
19:AS:37:ARG:H	19:AS:37:ARG:HG3	1.34	0.43
20:AT:50:GLU:C	20:AT:52:ALA:H	2.26	0.43
20:AT:61:SER:C	20:AT:63:ILE:N	2.74	0.43
22:AV:70:G:H2'	22:AV:71:C:H6	1.83	0.43
24:AY:216:LEU:C	24:AY:216:LEU:CD2	2.92	0.43
24:AY:355:LEU:CD2	24:AY:355:LEU:N	2.80	0.43
26:B1:11:ARG:HB3	26:B1:11:ARG:HH11	1.84	0.43
30:B5:7:PRO:HA	35:BA:2615:U:N1	2.33	0.43
33:B8:26:LYS:HA	33:B8:26:LYS:HD3	1.61	0.43
33:B8:61:LEU:N	33:B8:63:PRO:HD2	2.33	0.43
35:BA:32:C:H5'	35:BA:33:U:OP2	2.18	0.43
35:BA:35:G:H2'	35:BA:36:G:H8	1.82	0.43
35:BA:149:A:H8	35:BA:149:A:O5'	2.01	0.43
35:BA:252:G:P	47:BP:50:ARG:NH2	2.90	0.43
35:BA:252:G:P	47:BP:50:ARG:HH21	2.40	0.43
35:BA:674:G:H1'	40:BF:74:ARG:CD	2.46	0.43
35:BA:1050:A:C5	35:BA:1051:G:H1'	2.52	0.43
35:BA:1063:G:O2'	35:BA:1064:C:H5'	2.18	0.43
35:BA:1441:G:H4'	35:BA:1627:G:O3'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1518:U:H2'	35:BA:1519:G:O4'	2.17	0.43
35:BA:1719:G:C5	35:BA:1720:U:C5	3.06	0.43
35:BA:2345:G:O2'	35:BA:2381:C:H2'	2.18	0.43
35:BA:2577:A:C5'	35:BA:2578:G:C5'	2.91	0.43
35:BA:2701:C:H2'	35:BA:2702:U:H2'	1.99	0.43
35:BA:2822:G:OP2	39:BE:110:GLY:O	2.36	0.43
37:BC:174:ALA:HB3	37:BC:193:PHE:CE1	2.53	0.43
38:BD:145:VAL:HG13	38:BD:191:ALA:HB2	1.99	0.43
39:BE:2:LYS:CG	39:BE:95:ILE:HG22	2.47	0.43
39:BE:36:ARG:HH21	39:BE:88:GLY:CA	2.31	0.43
40:BF:50:SER:CB	40:BF:94:PRO:HD3	2.41	0.43
46:BO:24:VAL:O	46:BO:24:VAL:HG23	2.16	0.43
49:BR:33:ARG:HA	49:BR:114:VAL:O	2.18	0.43
50:BS:106:ARG:O	50:BS:107:GLU:HB2	2.18	0.43
52:BU:82:GLY:C	52:BU:84:LYS:N	2.74	0.43
54:BW:31:GLU:O	54:BW:32:ALA:C	2.61	0.43
54:BW:45:TYR:CE1	54:BW:46:PHE:CD1	3.06	0.43
55:BX:18:TYR:HD1	55:BX:21:PHE:CE2	2.31	0.43
55:BX:77:LYS:O	55:BX:77:LYS:HG2	2.18	0.43
57:BZ:5:LEU:HD13	57:BZ:59:LEU:HD23	2.01	0.43
1:AA:47:C:C6	1:AA:365:U:H2'	2.53	0.43
1:AA:189(H):G:O5'	1:AA:189(H):G:C8	2.71	0.43
1:AA:316:G:H2'	1:AA:316:G:N3	2.34	0.43
1:AA:399:G:H2'	1:AA:400:C:O4'	2.18	0.43
1:AA:542:G:H5'	4:AD:41:GLY:CA	2.48	0.43
1:AA:571:U:O5'	1:AA:571:U:H6	2.01	0.43
1:AA:645:C:H2'	1:AA:646:U:C6	2.53	0.43
1:AA:703:G:O2'	1:AA:704:A:OP2	2.33	0.43
1:AA:781:A:H2'	1:AA:782:A:H5'	1.99	0.43
1:AA:999:C:H6	1:AA:999:C:O5'	2.00	0.43
2:AB:32:ILE:O	2:AB:32:ILE:CG2	2.66	0.43
2:AB:68:ILE:HG22	2:AB:70:PHE:CD1	2.53	0.43
3:AC:43:LEU:O	3:AC:45:LYS:N	2.51	0.43
3:AC:77:ILE:HA	3:AC:84:ILE:CG2	2.49	0.43
3:AC:141:VAL:HG12	3:AC:146:ALA:HB3	1.99	0.43
4:AD:17:VAL:O	4:AD:18:LYS:O	2.36	0.43
4:AD:52:SER:O	4:AD:56:VAL:HG23	2.18	0.43
4:AD:73:ARG:HD2	4:AD:77:ASN:HD21	1.82	0.43
9:AI:99:LEU:CB	9:AI:101:PHE:CE1	3.02	0.43
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	2.19	0.43
11:AK:105:VAL:O	11:AK:105:VAL:CG2	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:110:VAL:CG2	12:AL:120:TYR:HB3	2.48	0.43
13:AM:54:VAL:HG12	13:AM:58:GLU:CG	2.48	0.43
20:AT:74:LYS:HD3	20:AT:74:LYS:H	1.82	0.43
23:AX:19:U:H2'	23:AX:20:U:C5	2.52	0.43
24:AY:408:VAL:HG22	24:AY:454:MET:HA	1.99	0.43
24:AY:530:VAL:HG13	24:AY:531:GLY:N	2.33	0.43
24:AY:656:ALA:C	24:AY:658:ASP:H	2.25	0.43
30:B5:2:ALA:HB2	35:BA:2015:A:C4'	2.48	0.43
31:B6:11:LEU:HD23	31:B6:51:GLU:CG	2.45	0.43
35:BA:6:A:H2'	35:BA:6:A:N3	2.34	0.43
35:BA:654(P):C:O2'	35:BA:654(Q):C:H5'	2.18	0.43
35:BA:748:G:C8	54:BW:89:ALA:HB1	2.53	0.43
35:BA:756:C:C2'	35:BA:757:U:H5'	2.48	0.43
35:BA:953:A:H2'	35:BA:954:G:C8	2.54	0.43
35:BA:969:U:H5'	35:BA:970:C:OP2	2.19	0.43
35:BA:1058:G:H21	43:BK:126:MET:CE	2.14	0.43
35:BA:1116:C:H2'	35:BA:1117:G:H8	1.83	0.43
35:BA:1229:G:C6	35:BA:1230:C:N3	2.86	0.43
35:BA:1351:C:H2'	35:BA:1352:U:O4'	2.18	0.43
35:BA:1683:C:H2'	35:BA:1684:C:C6	2.53	0.43
35:BA:1741:A:H2'	35:BA:1742:G:O4'	2.19	0.43
35:BA:1826:G:H2'	35:BA:1827:C:C6	2.53	0.43
35:BA:1917:U:O2'	35:BA:1918:A:H5'	2.18	0.43
35:BA:1992:G:N2	35:BA:1996:C:O2'	2.52	0.43
35:BA:2328:A:H8	35:BA:2328:A:O5'	2.00	0.43
35:BA:2745:C:H4'	42:BH:142:GLY:O	2.18	0.43
39:BE:38:THR:C	39:BE:40:GLU:H	2.26	0.43
39:BE:107:THR:O	39:BE:107:THR:HG22	2.18	0.43
40:BF:116:ASP:OD1	40:BF:119:ARG:NH2	2.51	0.43
41:BG:42:GLY:O	41:BG:43:LEU:HB2	2.17	0.43
41:BG:73:ALA:H	41:BG:87:PRO:CG	2.31	0.43
42:BH:20:ALA:HB1	42:BH:21:PRO:HD2	2.00	0.43
46:BO:60:ALA:HB1	46:BO:84:ALA:HB1	2.01	0.43
46:BO:104:ARG:C	46:BO:106:LEU:N	2.76	0.43
48:BQ:4:PRO:HG2	48:BQ:7:MET:HE2	2.00	0.43
48:BQ:120:ILE:O	48:BQ:121:ALA:C	2.60	0.43
50:BS:18:ILE:C	50:BS:20:ARG:H	2.26	0.43
51:BT:29:ARG:HG2	51:BT:85:LYS:C	2.43	0.43
51:BT:48:ILE:HD12	51:BT:48:ILE:N	2.33	0.43
51:BT:84:GLN:O	51:BT:85:LYS:HG3	2.18	0.43
52:BU:5:LYS:O	52:BU:6:THR:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BU:33:ARG:O	52:BU:34:LYS:C	2.59	0.43
52:BU:71:GLN:O	52:BU:71:GLN:HG2	2.17	0.43
52:BU:117:GLN:OE1	52:BU:117:GLN:CA	2.63	0.43
53:BV:31:ALA:C	53:BV:61:VAL:HG12	2.43	0.43
54:BW:4:LYS:CG	54:BW:5:ALA:H	2.31	0.43
55:BX:10:ALA:O	55:BX:28:PHE:CB	2.64	0.43
56:BY:2:ARG:C	56:BY:2:ARG:CD	2.92	0.43
57:BZ:27:VAL:N	57:BZ:37:VAL:HG22	2.34	0.43
1:AA:382:A:C2	1:AA:383:A:C5	3.07	0.43
1:AA:525:C:O5'	1:AA:525:C:H6	2.01	0.43
1:AA:828:A:C2'	1:AA:829:G:O5'	2.67	0.43
1:AA:946:A:H3'	1:AA:947:G:H8	1.84	0.43
1:AA:1208:C:H2'	1:AA:1209:C:H6	1.82	0.43
1:AA:1442(B):A:C2	51:BT:118:ARG:NH2	2.86	0.43
2:AB:7:VAL:O	2:AB:11:LEU:CG	2.62	0.43
3:AC:30:ARG:HD2	14:AN:38:GLY:HA3	1.99	0.43
3:AC:138:VAL:O	3:AC:139:GLN:C	2.62	0.43
3:AC:146:ALA:O	3:AC:148:GLY:N	2.46	0.43
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.18	0.43
6:AF:97:PHE:HD2	18:AR:65:ILE:HD12	1.84	0.43
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.48	0.43
11:AK:66:LEU:HD22	11:AK:101:SER:HB2	2.01	0.43
12:AL:76:ASN:OD1	12:AL:108:ALA:HB3	2.18	0.43
13:AM:23:TYR:CD1	13:AM:23:TYR:C	2.97	0.43
13:AM:49:THR:O	13:AM:53:VAL:HG23	2.18	0.43
16:AP:38:TYR:O	16:AP:49:LEU:HD12	2.19	0.43
17:AQ:37:LYS:O	17:AQ:38:ARG:NE	2.46	0.43
20:AT:39:LYS:O	20:AT:43:LEU:HG	2.18	0.43
20:AT:82:SER:O	20:AT:86:ARG:HD2	2.18	0.43
24:AY:92:ILE:HD13	24:AY:92:ILE:O	2.17	0.43
24:AY:160:ARG:O	24:AY:255:ILE:HA	2.18	0.43
24:AY:459:LEU:O	24:AY:463:VAL:HG23	2.18	0.43
24:AY:497:PHE:CE1	24:AY:584:ILE:HG21	2.53	0.43
58:AY:701:FUA:H212	58:AY:701:FUA:H72	1.76	0.43
25:B0:32:ARG:O	25:B0:35:ASN:OD1	2.35	0.43
25:B0:40:GLN:NE2	25:B0:44:ARG:N	2.66	0.43
25:B0:51:VAL:HG12	25:B0:59:LEU:HD22	2.00	0.43
31:B6:11:LEU:C	31:B6:11:LEU:CD1	2.87	0.43
33:B8:57:ARG:C	33:B8:59:LYS:H	2.26	0.43
35:BA:408:G:O5'	35:BA:408:G:H8	2.01	0.43
35:BA:436:C:H2'	35:BA:437:G:H8	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:602:G:C2	35:BA:656:G:C6	3.06	0.43
35:BA:639:U:O2'	35:BA:640:C:H5'	2.17	0.43
35:BA:733:G:O6	35:BA:761:A:C8	2.71	0.43
35:BA:748:G:O6	35:BA:751:A:H4'	2.18	0.43
35:BA:821:A:H5"	35:BA:822:U:C6	2.53	0.43
35:BA:900:A:C5	35:BA:901:A:C8	3.06	0.43
35:BA:1057:A:H2'	35:BA:1058:G:H8	1.82	0.43
35:BA:1229:G:C5	35:BA:1230:C:C4	3.06	0.43
35:BA:1334:G:O2'	35:BA:1335:U:H5'	2.19	0.43
35:BA:1500:G:C6	35:BA:1501:C:C4	3.07	0.43
35:BA:1771:C:HO2'	35:BA:1786:A:H8	1.64	0.43
35:BA:1879:C:O5'	35:BA:1879:C:H6	2.01	0.43
35:BA:2769:C:O2'	35:BA:2770:G:H5'	2.18	0.43
35:BA:2787:C:H1'	39:BE:61:ARG:CD	2.48	0.43
35:BA:2868:A:N6	35:BA:2869:G:C6	2.87	0.43
36:BB:21:G:C6	36:BB:63:G:C6	3.07	0.43
37:BC:46:ALA:O	37:BC:48:LEU:HD12	2.18	0.43
37:BC:102:GLN:O	37:BC:105:LEU:N	2.51	0.43
38:BD:77:ALA:O	38:BD:116:GLN:HG3	2.18	0.43
39:BE:51:PHE:HD1	39:BE:52:LEU:CD1	2.25	0.43
39:BE:64:LYS:C	39:BE:66:HIS:H	2.25	0.43
41:BG:81:LYS:O	41:BG:83:ARG:HG3	2.18	0.43
41:BG:111:LEU:O	41:BG:114:ILE:HG13	2.18	0.43
43:BK:76:TYR:C	43:BK:78:ILE:N	2.74	0.43
45:BN:46:VAL:CG1	45:BN:47:ALA:H	2.05	0.43
45:BN:134:ARG:O	45:BN:136:GLU:N	2.50	0.43
47:BP:35:HIS:O	47:BP:36:LYS:HB2	2.18	0.43
47:BP:105:LEU:HB3	47:BP:106:LEU:H	1.54	0.43
48:BQ:108:GLY:C	48:BQ:109:VAL:CG2	2.91	0.43
51:BT:29:ARG:HD2	51:BT:29:ARG:HA	1.69	0.43
52:BU:96:ALA:C	52:BU:98:LEU:H	2.25	0.43
56:BY:62:GLU:CG	56:BY:63:LYS:H	2.31	0.43
57:BZ:71:VAL:HG13	57:BZ:86:VAL:HG11	2.00	0.43
1:AA:142:G:N3	1:AA:196:A:H2	2.16	0.43
1:AA:302:G:H2'	1:AA:303:A:O4'	2.19	0.43
1:AA:341:C:C2	1:AA:349:A:C2	3.06	0.43
1:AA:451:A:O4'	1:AA:452:A:C8	2.72	0.43
1:AA:740:U:O2'	1:AA:741:G:H5'	2.18	0.43
1:AA:861:G:H2'	1:AA:862:C:C6	2.54	0.43
1:AA:928:G:H2'	1:AA:929:G:C8	2.54	0.43
1:AA:1046:A:H3'	1:AA:1047:G:H8	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1230:C:O5'	1:AA:1230:C:H6	2.02	0.43
1:AA:1237:C:H3'	1:AA:1336:C:N4	2.34	0.43
1:AA:1442:G:C5	1:AA:1442(B):A:C2	3.06	0.43
1:AA:1459:C:H2'	1:AA:1460:A:C8	2.53	0.43
2:AB:44:LEU:CD1	2:AB:44:LEU:N	2.63	0.43
2:AB:60:ASP:O	2:AB:64:ARG:CZ	2.66	0.43
5:AE:8:GLU:HA	5:AE:34:VAL:HA	2.01	0.43
7:AG:18:TYR:CE2	7:AG:59:LEU:HB2	2.54	0.43
7:AG:116:ALA:O	7:AG:120:ILE:HG12	2.19	0.43
8:AH:56:LYS:HA	8:AH:57:PRO:HD2	1.67	0.43
8:AH:63:LEU:N	8:AH:63:LEU:CD2	2.81	0.43
8:AH:92:ARG:H	8:AH:92:ARG:HG2	1.50	0.43
8:AH:119:LEU:HB3	8:AH:123:GLU:HB3	1.99	0.43
9:AI:95:LYS:C	9:AI:98:PRO:HD2	2.44	0.43
17:AQ:29:HIS:CG	17:AQ:30:PRO:HD2	2.53	0.43
18:AR:50:ILE:HD11	18:AR:74:ARG:NH2	2.33	0.43
22:AV:53:G:C2'	22:AV:54:U:H5'	2.48	0.43
24:AY:39:ILE:CG2	24:AY:40:HIS:N	2.75	0.43
24:AY:122:TRP:O	24:AY:125:ALA:N	2.35	0.43
24:AY:409:ILE:HD11	24:AY:654:GLY:CA	2.45	0.43
24:AY:442:THR:HG23	24:AY:447:GLY:O	2.17	0.43
24:AY:468:ARG:C	24:AY:470:PHE:N	2.75	0.43
29:B4:27:THR:O	29:B4:27:THR:HG23	2.17	0.43
30:B5:35:GLU:O	30:B5:36:CYS:CB	2.66	0.43
33:B8:26:LYS:CE	33:B8:47:LYS:HD2	2.48	0.43
35:BA:84:A:H2	35:BA:98:G:H21	1.63	0.43
35:BA:96:G:N3	35:BA:96:G:H2'	2.34	0.43
35:BA:140:G:N3	35:BA:142:A:N1	2.66	0.43
35:BA:233:A:C2'	35:BA:234:C:H5'	2.48	0.43
35:BA:268:C:C3'	35:BA:269:U:H5'	2.49	0.43
35:BA:511:U:C5	35:BA:512:G:C5	3.06	0.43
35:BA:613:G:H5'	35:BA:613:G:C8	2.54	0.43
35:BA:802:A:C5	35:BA:803:U:C4	3.06	0.43
35:BA:942:G:O2'	35:BA:1189:A:N3	2.44	0.43
35:BA:1092:C:H2'	35:BA:1093:G:H8	1.82	0.43
35:BA:1118:C:H6	35:BA:1118:C:O5'	2.01	0.43
35:BA:1201:C:O2'	35:BA:1202:C:H5'	2.19	0.43
35:BA:1642:G:H2'	35:BA:1643:G:O4'	2.19	0.43
35:BA:1881:C:H2'	35:BA:1882:C:H6	1.83	0.43
35:BA:1942:C:H3'	35:BA:1943:U:H5"	2.00	0.43
35:BA:2019:A:H2'	35:BA:2020:A:O5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2334:G:H1'	50:BS:18:ILE:CD1	2.49	0.43
35:BA:2720:U:H2'	35:BA:2721:A:O4'	2.18	0.43
36:BB:40:U:H3'	36:BB:41:U:C5'	2.48	0.43
37:BC:76:LEU:HB3	37:BC:114:VAL:HA	2.01	0.43
38:BD:61:LEU:O	38:BD:63:ARG:NH1	2.52	0.43
38:BD:267:SER:C	38:BD:269:PHE:N	2.77	0.43
40:BF:160:ASN:C	40:BF:160:ASN:ND2	2.71	0.43
41:BG:82:LEU:HD23	41:BG:82:LEU:O	2.19	0.43
41:BG:169:ALA:O	41:BG:170:ARG:C	2.59	0.43
42:BH:169:VAL:HG13	42:BH:170:ARG:N	2.33	0.43
43:BK:132:ARG:NH1	43:BK:132:ARG:CG	2.79	0.43
45:BN:99:LEU:HD13	45:BN:99:LEU:C	2.43	0.43
45:BN:119:ARG:HH11	45:BN:119:ARG:HG3	1.84	0.43
45:BN:127:ASP:O	45:BN:129:PRO:HD2	2.19	0.43
46:BO:17:ARG:HH21	46:BO:47:ILE:CD1	2.31	0.43
48:BQ:90:VAL:HG12	48:BQ:91:GLU:N	2.32	0.43
52:BU:57:PHE:O	52:BU:58:ARG:C	2.62	0.43
52:BU:92:ARG:HB3	53:BV:11:GLN:NE2	2.34	0.43
1:AA:495:A:H4'	1:AA:496:A:OP1	2.19	0.43
1:AA:836:G:C5	1:AA:851:G:C6	3.07	0.43
1:AA:967:C:H5'	9:AI:127:LYS:HA	2.01	0.43
1:AA:1061:G:H2'	1:AA:1062:U:C5'	2.48	0.43
1:AA:1090:U:C4'	1:AA:1170:A:H2	2.32	0.43
1:AA:1321:C:C4	1:AA:1322:C:C4	3.07	0.43
3:AC:32:LEU:O	3:AC:35:GLU:HB3	2.19	0.43
3:AC:43:LEU:HD22	3:AC:47:LEU:CD2	2.49	0.43
4:AD:3:ARG:HG2	4:AD:118:ARG:HD3	2.00	0.43
4:AD:89:THR:O	4:AD:90:GLY:C	2.58	0.43
7:AG:91:VAL:HG12	7:AG:92:SER:H	1.84	0.43
9:AI:90:PRO:CG	9:AI:91:ASP:H	2.32	0.43
10:AJ:5:ARG:HG3	10:AJ:71:LEU:HD11	1.99	0.43
10:AJ:42:THR:HG23	10:AJ:67:THR:C	2.43	0.43
11:AK:32:ILE:HG21	11:AK:77:MET:HE3	2.00	0.43
11:AK:56:GLY:O	11:AK:57:THR:C	2.60	0.43
15:AO:33:THR:HG23	15:AO:63:ARG:NH1	2.33	0.43
15:AO:57:LEU:O	15:AO:58:MET:C	2.60	0.43
18:AR:85:LEU:HD12	18:AR:86:VAL:H	1.83	0.43
24:AY:71:THR:HB	24:AY:78:ARG:HH11	1.83	0.43
24:AY:171:GLU:O	24:AY:172:ASP:C	2.61	0.43
24:AY:402:ILE:HD12	24:AY:402:ILE:N	2.34	0.43
24:AY:485:GLU:OE2	24:AY:555:LEU:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:578:SER:O	24:AY:579:GLU:C	2.61	0.43
26:B1:12:PRO:HB2	26:B1:41:ARG:HH21	1.83	0.43
26:B1:26:ARG:CD	26:B1:27:GLU:HG3	2.49	0.43
26:B1:84:GLY:O	26:B1:86:SER:N	2.51	0.43
27:B2:69:ARG:HH12	35:BA:111:A:H5'	1.83	0.43
29:B4:14:ILE:HD13	29:B4:22:ILE:HB	2.01	0.43
35:BA:130:C:O3'	35:BA:1349:A:H1'	2.18	0.43
35:BA:271(V):G:H2'	35:BA:271(W):G:O4'	2.18	0.43
35:BA:398:G:H2'	35:BA:399:G:H8	1.82	0.43
35:BA:438:G:H2'	35:BA:440:G:C8	2.54	0.43
35:BA:583:G:H2'	35:BA:584:C:H6	1.82	0.43
35:BA:701:G:N1	35:BA:732:C:C4	2.87	0.43
35:BA:965:C:H4'	35:BA:2273:A:H1'	2.01	0.43
35:BA:979:G:C2	35:BA:982:C:C4	3.06	0.43
35:BA:996:A:H2'	35:BA:997:G:C8	2.50	0.43
35:BA:1024:G:OP2	35:BA:1026:U:OP1	2.36	0.43
35:BA:1398:C:H2'	35:BA:1399:C:C6	2.53	0.43
35:BA:1542:A:C8	35:BA:1542:A:C3'	3.01	0.43
35:BA:2161:C:O2'	35:BA:2162:G:H5'	2.19	0.43
35:BA:2375:G:N2	35:BA:2377:A:H3'	2.34	0.43
35:BA:2482:G:C6	35:BA:2483:C:C2	3.07	0.43
35:BA:2810:A:H2'	35:BA:2811:G:O4'	2.19	0.43
36:BB:87:G:C2'	36:BB:88:C:H5"	2.49	0.43
37:BC:86:GLU:HA	37:BC:89:GLU:OE1	2.18	0.43
39:BE:39:PRO:HG2	39:BE:40:GLU:HG3	2.00	0.43
39:BE:51:PHE:CD1	39:BE:51:PHE:C	2.97	0.43
41:BG:67:LYS:HD3	41:BG:68:PRO:O	2.17	0.43
41:BG:173:LEU:O	41:BG:174:GLU:C	2.60	0.43
42:BH:46:GLU:HG2	42:BH:46:GLU:H	1.52	0.43
43:BK:93:ARG:HB2	57:BZ:112:ARG:NE	2.32	0.43
43:BK:115:LEU:HD22	43:BK:126:MET:CE	2.48	0.43
46:BO:25:LEU:HA	46:BO:25:LEU:HD23	1.75	0.43
47:BP:92:GLU:OE2	47:BP:121:LYS:HE2	2.18	0.43
48:BQ:43:THR:OG1	48:BQ:46:GLN:HB2	2.18	0.43
49:BR:48:VAL:O	49:BR:51:LEU:N	2.51	0.43
49:BR:66:VAL:O	49:BR:67:LEU:C	2.61	0.43
50:BS:17:ARG:C	50:BS:19:LYS:N	2.75	0.43
51:BT:106:SER:HA	51:BT:110:ILE:CG1	2.46	0.43
51:BT:117:ASP:OD2	51:BT:120:ARG:HG3	2.18	0.43
52:BU:55:ARG:HA	52:BU:58:ARG:HD2	2.00	0.43
52:BU:59:ARG:NH1	52:BU:59:ARG:HG2	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BU:70:ARG:NH2	52:BU:75:ASN:CB	2.81	0.43
52:BU:92:ARG:NH1	53:BV:11:GLN:CG	2.82	0.43
57:BZ:115:GLY:C	57:BZ:116:VAL:CG2	2.92	0.43
1:AA:80:G:C5'	1:AA:81:U:H5'	2.44	0.43
1:AA:356:A:O2'	1:AA:357:G:H5'	2.19	0.43
1:AA:554:C:H2'	1:AA:555:C:C6	2.54	0.43
1:AA:738:C:C2	1:AA:739:C:C5	3.07	0.43
1:AA:867:G:H2'	1:AA:868:C:C6	2.53	0.43
1:AA:1253:G:H2'	1:AA:1254:C:C6	2.54	0.43
1:AA:1315:U:C4	1:AA:1316:G:C6	3.07	0.43
1:AA:1315:U:H2'	1:AA:1316:G:C8	2.54	0.43
1:AA:1316:G:O3'	14:AN:18:VAL:CG1	2.67	0.43
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.54	0.43
1:AA:1396:A:H4'	1:AA:1397:C:C5'	2.48	0.43
1:AA:1502:A:C2	1:AA:1505:G:N1	2.57	0.43
2:AB:110:GLN:C	2:AB:112:VAL:N	2.76	0.43
2:AB:160:ASP:O	2:AB:161:ALA:CB	2.66	0.43
2:AB:189:ASP:C	2:AB:191:ASP:N	2.77	0.43
12:AL:76:ASN:OD1	12:AL:108:ALA:CB	2.67	0.43
13:AM:66:LEU:O	13:AM:70:LEU:CB	2.62	0.43
13:AM:74:VAL:HA	13:AM:77:ASN:ND2	2.34	0.43
20:AT:29:LYS:O	20:AT:33:ILE:HG13	2.19	0.43
24:AY:98:MET:CE	24:AY:125:ALA:HA	2.48	0.43
24:AY:590:ILE:C	24:AY:592:GLU:H	2.26	0.43
24:AY:635:GLU:CD	24:AY:635:GLU:N	2.76	0.43
25:B0:44:ARG:HH11	25:B0:44:ARG:CG	2.29	0.43
25:B0:73:GLY:C	25:B0:75:LEU:N	2.76	0.43
26:B1:78:LYS:O	26:B1:80:LEU:N	2.51	0.43
26:B1:90:ILE:O	26:B1:94:LEU:HD13	2.19	0.43
31:B6:39:TYR:O	31:B6:47:THR:HG22	2.18	0.43
35:BA:205:G:HO2'	35:BA:206:U:P	2.41	0.43
35:BA:208:C:H2'	35:BA:209:C:C6	2.50	0.43
35:BA:271(D):G:H1	35:BA:271(T):C:H42	1.67	0.43
35:BA:425:G:C2	35:BA:426:C:C6	3.07	0.43
35:BA:507:A:H4'	35:BA:509:C:C6	2.53	0.43
35:BA:564:C:HO2'	35:BA:565:C:H5'	1.81	0.43
35:BA:649:G:H2'	35:BA:650:C:C6	2.53	0.43
35:BA:799:G:C3'	35:BA:800:A:H5"	2.47	0.43
35:BA:803:U:H2'	35:BA:804:A:C5'	2.48	0.43
35:BA:805:G:H4'	35:BA:806:C:OP2	2.18	0.43
35:BA:1152:C:OP2	35:BA:1152:C:C6	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1324:G:C5	35:BA:1328:G:C6	3.06	0.43
35:BA:1613:G:H2'	35:BA:1617:C:H42	1.83	0.43
35:BA:2220:G:C4	35:BA:2221:G:C8	3.07	0.43
35:BA:2439:A:C8	35:BA:2586:C:H4'	2.54	0.43
35:BA:2636:U:OP1	39:BE:79:ARG:HG3	2.18	0.43
35:BA:2657:A:H2'	35:BA:2658:C:C5'	2.43	0.43
35:BA:2745:C:H1'	42:BH:143:GLN:HG2	2.01	0.43
35:BA:2838:G:H1'	49:BR:45:ARG:HH11	1.83	0.43
36:BB:74:U:O2	57:BZ:34:ASN:ND2	2.51	0.43
37:BC:100:ILE:C	37:BC:102:GLN:N	2.76	0.43
37:BC:150:ILE:HG13	37:BC:154:ILE:HG13	1.99	0.43
38:BD:154:LYS:C	38:BD:155:LEU:HD12	2.41	0.43
38:BD:252:TRP:H	38:BD:252:TRP:CD1	2.35	0.43
39:BE:65:GLY:HA2	39:BE:70:ALA:CB	2.48	0.43
40:BF:9:ILE:HG12	40:BF:14:PRO:CA	2.49	0.43
40:BF:102:PRO:O	40:BF:106:ARG:HG2	2.19	0.43
41:BG:103:LEU:HA	41:BG:106:LEU:HB3	2.01	0.43
41:BG:125:PHE:O	41:BG:126:ASP:C	2.62	0.43
42:BH:170:ARG:O	42:BH:171:LEU:HB2	2.15	0.43
43:BK:3:LYS:HE2	43:BK:29:GLN:CD	2.44	0.43
47:BP:63:PRO:C	47:BP:65:ARG:H	2.24	0.43
47:BP:112:LEU:O	47:BP:128:HIS:HB2	2.19	0.43
51:BT:24:PRO:HD3	51:BT:52:ILE:CD1	2.45	0.43
52:BU:93:LYS:H	52:BU:93:LYS:HD2	1.84	0.43
57:BZ:23:LYS:HB3	57:BZ:38:TYR:CD2	2.53	0.43
57:BZ:59:LEU:HD21	57:BZ:88:PHE:CE2	2.54	0.43
1:AA:277:C:P	17:AQ:68:ARG:HH12	2.42	0.43
1:AA:430:A:OP2	4:AD:8:VAL:HG22	2.18	0.43
1:AA:475:G:H2'	1:AA:476:G:H8	1.83	0.43
1:AA:610:G:H2'	1:AA:610:G:N3	2.33	0.43
1:AA:777:A:H3'	1:AA:778:G:H8	1.84	0.43
1:AA:928:G:H2'	1:AA:929:G:H8	1.84	0.43
1:AA:992:U:O2'	1:AA:993:G:P	2.77	0.43
1:AA:1237:C:H3'	1:AA:1336:C:H41	1.84	0.43
1:AA:1260:C:H4'	1:AA:1284:C:H5'	2.00	0.43
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.83	0.43
4:AD:171:GLY:O	4:AD:173:TRP:N	2.52	0.43
5:AE:32:VAL:HG12	5:AE:33:VAL:N	2.34	0.43
6:AF:71:ARG:HH11	6:AF:71:ARG:HG3	1.83	0.43
6:AF:81:ILE:O	6:AF:81:ILE:HG22	2.18	0.43
8:AH:1:MET:O	8:AH:2:LEU:C	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:17:VAL:O	9:AI:18:PHE:HD1	2.02	0.43
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.18	0.43
17:AQ:99:SER:O	17:AQ:100:LYS:HG3	2.19	0.43
20:AT:47:GLY:O	20:AT:49:ALA:N	2.40	0.43
24:AY:216:LEU:HD23	24:AY:216:LEU:O	2.18	0.43
24:AY:434:GLU:OE1	24:AY:465:ARG:NH2	2.51	0.43
25:B0:77:ARG:HH22	35:BA:857:C:H5'	1.83	0.43
26:B1:53:VAL:O	26:B1:54:ALA:C	2.62	0.43
31:B6:28:ARG:HB2	31:B6:29:ASN:H	1.57	0.43
33:B8:15:LYS:HB2	47:BP:65:ARG:NH1	2.33	0.43
33:B8:28:GLY:CA	33:B8:32:LEU:HD21	2.47	0.43
35:BA:143:G:H2'	35:BA:143(A):C:C6	2.54	0.43
35:BA:444:C:O2'	35:BA:445:C:H5'	2.19	0.43
35:BA:605:C:OP1	40:BF:104:LYS:NZ	2.52	0.43
35:BA:850:C:HO2'	35:BA:851:U:H5'	1.83	0.43
35:BA:1044:G:C2	35:BA:1112:G:C6	3.06	0.43
35:BA:1221:C:O2	35:BA:1221(A):C:C6	2.72	0.43
35:BA:1256:G:O2'	40:BF:82:ILE:HD12	2.19	0.43
35:BA:1462:C:H4'	35:BA:2703:C:H5'	1.99	0.43
35:BA:1528:A:N6	35:BA:1544:A:C2	2.87	0.43
35:BA:1541:G:H1'	35:BA:1542:A:N9	2.34	0.43
35:BA:1984:G:O2'	35:BA:1985:G:H5'	2.18	0.43
35:BA:2521:C:O2	35:BA:2521:C:C2'	2.65	0.43
35:BA:2673:G:H5'	35:BA:2673:G:C8	2.53	0.43
35:BA:2841:C:H2'	35:BA:2842:G:C8	2.53	0.43
36:BB:87:G:O3'	36:BB:88:C:H6	2.02	0.43
41:BG:35:GLU:O	41:BG:35:GLU:HG2	2.18	0.43
41:BG:55:LYS:C	41:BG:55:LYS:HD3	2.43	0.43
41:BG:133:LEU:CD1	41:BG:133:LEU:C	2.91	0.43
41:BG:153:ARG:HB3	41:BG:153:ARG:NH1	2.34	0.43
43:BK:6:ALA:HB2	43:BK:59:ILE:HG22	1.98	0.43
46:BO:104:ARG:C	46:BO:106:LEU:H	2.26	0.43
48:BQ:55:VAL:HG12	48:BQ:56:ARG:H	1.83	0.43
48:BQ:76:LYS:HG3	48:BQ:77:LYS:O	2.19	0.43
49:BR:51:LEU:CD2	49:BR:70:LEU:HD11	2.49	0.43
49:BR:82:GLU:C	49:BR:84:ALA:N	2.75	0.43
53:BV:38:LEU:C	53:BV:39:LEU:HD13	2.43	0.43
56:BY:2:ARG:CD	56:BY:3:VAL:HG23	2.48	0.43
56:BY:58:GLY:O	56:BY:59:GLY:C	2.62	0.43
57:BZ:29:TYR:HB3	57:BZ:34:ASN:CB	2.42	0.43
1:AA:270:A:H2'	1:AA:271:C:H6	1.77	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:630:G:O2'	1:AA:631:G:H5"	2.19	0.43
1:AA:918:A:H2'	1:AA:919:A:O4'	2.19	0.43
1:AA:953:G:N7	13:AM:104:ARG:NH2	2.66	0.43
1:AA:1094:G:HO2'	1:AA:1095:U:P	2.42	0.43
2:AB:95:GLN:CA	2:AB:95:GLN:OE1	2.67	0.43
2:AB:111:ARG:NH1	2:AB:111:ARG:CG	2.77	0.43
4:AD:162:LEU:HD11	4:AD:181:MET:HG2	2.01	0.43
5:AE:19:MET:HE1	5:AE:24:ARG:HH21	1.82	0.43
5:AE:33:VAL:HG12	5:AE:112:LEU:HD12	2.01	0.43
7:AG:64:GLN:HG3	7:AG:128:ALA:HB1	2.01	0.43
9:AI:22:GLY:HA3	9:AI:60:ASP:CG	2.44	0.43
9:AI:86:VAL:HB	9:AI:96:LEU:HD21	2.01	0.43
13:AM:22:ILE:HD12	13:AM:22:ILE:N	2.34	0.43
13:AM:45:VAL:HA	13:AM:48:LEU:HD11	2.01	0.43
15:AO:50:HIS:O	15:AO:53:HIS:HB3	2.18	0.43
20:AT:89:ARG:HD2	20:AT:104:LEU:HG	2.01	0.43
23:AX:16:A:H2'	23:AX:17:U:H6	1.83	0.43
24:AY:627:ARG:HA	24:AY:651:GLU:CG	2.48	0.43
24:AY:655:TYR:OH	24:AY:659:LEU:HD23	2.19	0.43
26:B1:30:VAL:H	35:BA:2396:G:C4'	2.31	0.43
26:B1:88:LYS:HE2	26:B1:88:LYS:HB3	1.81	0.43
31:B6:41:PRO:HD3	31:B6:47:THR:HG22	2.01	0.43
31:B6:53:LYS:HG3	31:B6:54:ILE:HG23	2.00	0.43
35:BA:437:G:H2'	35:BA:438:G:H8	1.83	0.43
35:BA:503:A:H4'	35:BA:504:U:H5'	1.99	0.43
35:BA:560:C:H2'	35:BA:561:G:O4'	2.19	0.43
35:BA:566:U:H2'	35:BA:567:A:O4'	2.18	0.43
35:BA:630:G:C4'	35:BA:640:C:H4'	2.45	0.43
35:BA:654:A:H4'	35:BA:654(A):G:O5'	2.19	0.43
35:BA:654(P):C:H2'	35:BA:654(Q):C:O4'	2.19	0.43
35:BA:986:C:O2'	35:BA:987:G:H5'	2.18	0.43
35:BA:1750:G:H2'	35:BA:1751:C:C6	2.54	0.43
35:BA:1863:G:H8	35:BA:1863:G:O5'	2.02	0.43
35:BA:2010:G:H2'	35:BA:2011:U:C6	2.53	0.43
35:BA:2206:G:H3'	35:BA:2206:G:N3	2.33	0.43
35:BA:2334:G:N3	50:BS:18:ILE:HD13	2.33	0.43
35:BA:2389:G:C5'	35:BA:2390:U:H5'	2.36	0.43
35:BA:2526:G:H5'	35:BA:2742:C:O2'	2.19	0.43
35:BA:2784:C:H3'	35:BA:2784:C:C6	2.54	0.43
36:BB:9:G:H2'	36:BB:10:C:H6	1.84	0.43
36:BB:20:C:C2'	36:BB:21:G:C5'	2.97	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:22:U:H2'	36:BB:23:G:C8	2.54	0.43
36:BB:66:A:H2	36:BB:69:G:O6	2.02	0.43
36:BB:86:G:C2	36:BB:92:C:O2	2.72	0.43
37:BC:60:ARG:HG2	37:BC:61:GLY:N	2.34	0.43
38:BD:46:GLN:OE1	38:BD:46:GLN:N	2.52	0.43
39:BE:33:VAL:H	39:BE:90:THR:HA	1.84	0.43
39:BE:59:VAL:CG2	39:BE:63:LEU:HA	2.48	0.43
40:BF:177:ALA:HB1	40:BF:178:PRO:HD2	2.00	0.43
41:BG:98:ARG:HA	41:BG:98:ARG:HD3	1.92	0.43
41:BG:140:ILE:HD12	41:BG:140:ILE:N	2.31	0.43
43:BK:76:TYR:CD2	43:BK:77:LEU:HD23	2.54	0.43
45:BN:78:TYR:HA	45:BN:79:PRO:HD3	1.85	0.43
47:BP:62:LEU:H	47:BP:62:LEU:HD22	1.82	0.43
47:BP:83:VAL:HB	47:BP:105:LEU:HD22	2.00	0.43
49:BR:9:LYS:O	49:BR:10:LEU:CD2	2.66	0.43
49:BR:79:LEU:C	49:BR:79:LEU:HD13	2.43	0.43
50:BS:25:ARG:CG	50:BS:26:LEU:N	2.81	0.43
50:BS:56:LEU:C	50:BS:58:LEU:N	2.77	0.43
51:BT:108:ARG:HB3	51:BT:108:ARG:NH1	2.28	0.43
52:BU:78:THR:O	52:BU:79:PHE:C	2.62	0.43
57:BZ:111:VAL:O	57:BZ:111:VAL:HG12	2.19	0.43
57:BZ:182:LYS:O	57:BZ:183:LEU:HG	2.19	0.43
1:AA:279:A:H1'	1:AA:281:G:C5	2.54	0.43
1:AA:309:G:H1'	1:AA:608:A:H2	1.80	0.43
1:AA:356:A:N3	1:AA:368:U:H1'	2.34	0.43
1:AA:781:A:O2'	1:AA:1522:U:O2	2.37	0.43
1:AA:939:G:H2'	1:AA:940:C:C6	2.53	0.43
1:AA:948:C:H2'	1:AA:949:A:C8	2.53	0.43
1:AA:973:G:O4'	10:AJ:55:LYS:CG	2.62	0.43
1:AA:994:A:C2	1:AA:995:C:C6	3.07	0.43
1:AA:1137:C:C4'	1:AA:1138:G:C2	3.02	0.43
1:AA:1149:C:H2'	1:AA:1150:U:O4'	2.19	0.43
1:AA:1190:G:OP1	3:AC:4:LYS:HA	2.18	0.43
1:AA:1258:G:C6	1:AA:1259:C:N4	2.86	0.43
2:AB:119:GLU:C	2:AB:121:LEU:N	2.77	0.43
2:AB:187:LEU:HD23	2:AB:214:ILE:HG21	2.00	0.43
2:AB:223:ILE:CA	2:AB:226:ARG:CZ	2.97	0.43
3:AC:84:ILE:O	3:AC:84:ILE:CG1	2.67	0.43
4:AD:6:GLY:O	4:AD:8:VAL:HG13	2.18	0.43
7:AG:89:MET:O	7:AG:90:GLU:C	2.62	0.43
7:AG:122:HIS:CD2	7:AG:122:HIS:N	2.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:77:GLU:HG2	8:AH:78:GLN:N	2.34	0.43
9:AI:16:ARG:O	9:AI:63:ILE:HG23	2.19	0.43
9:AI:40:LEU:O	9:AI:42:ARG:N	2.47	0.43
9:AI:47:LEU:N	9:AI:47:LEU:HD12	2.34	0.43
12:AL:44:THR:HA	12:AL:45:PRO:HD3	1.90	0.43
12:AL:80:HIS:O	12:AL:81:SER:CB	2.67	0.43
13:AM:116:THR:C	13:AM:117:VAL:CG2	2.91	0.43
15:AO:32:LEU:O	15:AO:33:THR:C	2.60	0.43
15:AO:34:LEU:C	15:AO:34:LEU:HD12	2.44	0.43
17:AQ:60:ILE:HG21	17:AQ:74:LEU:HD23	2.00	0.43
18:AR:44:LEU:HD21	18:AR:79:LEU:HD13	1.99	0.43
20:AT:42:GLN:HG3	20:AT:43:LEU:N	2.33	0.43
20:AT:43:LEU:O	20:AT:44:ALA:C	2.62	0.43
20:AT:89:ARG:CD	20:AT:104:LEU:HD11	2.45	0.43
22:AV:68:C:H2'	22:AV:69:C:C6	2.54	0.43
24:AY:182:ARG:O	24:AY:183:MET:C	2.61	0.43
24:AY:421:GLN:HE21	24:AY:421:GLN:HB3	1.52	0.43
24:AY:483:TYR:CZ	24:AY:687:LEU:HD11	2.54	0.43
24:AY:554:PRO:HG2	24:AY:555:LEU:HG	1.99	0.43
24:AY:641:GLN:HE21	24:AY:641:GLN:HB2	1.61	0.43
28:B3:8:LEU:O	28:B3:31:LEU:HD22	2.18	0.43
28:B3:17:LYS:HZ3	28:B3:20:LYS:CE	2.24	0.43
30:B5:3:LYS:HE2	35:BA:2613:U:C2'	2.41	0.43
31:B6:7:ILE:O	31:B6:7:ILE:HG22	2.18	0.43
31:B6:9:LEU:HD21	31:B6:26:ASN:ND2	2.34	0.43
31:B6:9:LEU:CD1	31:B6:26:ASN:HB2	2.49	0.43
32:B7:32:LYS:HE2	35:BA:180:G:P	2.59	0.43
33:B8:52:LYS:HE2	35:BA:834:C:C4'	2.47	0.43
35:BA:154(A):C:N4	35:BA:171:G:N1	2.66	0.43
35:BA:182:A:C6	35:BA:183:C:C4	3.07	0.43
35:BA:271(M):G:C2'	35:BA:271(N):U:H5"	2.48	0.43
35:BA:436:C:H2'	35:BA:437:G:C8	2.54	0.43
35:BA:603:A:O2'	35:BA:604:G:P	2.76	0.43
35:BA:662:G:P	47:BP:18:ARG:HD2	2.59	0.43
35:BA:688:U:C4'	35:BA:1780:A:C2	3.02	0.43
35:BA:764:A:N7	38:BD:209:ALA:HB3	2.33	0.43
35:BA:925:C:C3'	35:BA:926:A:H5"	2.48	0.43
35:BA:967:C:H2'	35:BA:968:G:C5'	2.48	0.43
35:BA:979:G:N7	35:BA:981:A:OP1	2.51	0.43
35:BA:1783:A:C2	35:BA:2587:A:C5	3.06	0.43
35:BA:1858:G:O2'	35:BA:1884:A:N6	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1911:U:H2'	35:BA:1918:A:N1	2.34	0.43
35:BA:2012:G:C4'	54:BW:96:ILE:HD11	2.33	0.43
35:BA:2131:G:H8	35:BA:2158:A:H62	1.62	0.43
35:BA:2203:U:H5'	35:BA:2205:C:OP1	2.18	0.43
35:BA:2398:U:O2	35:BA:2398:U:H2'	2.18	0.43
35:BA:2544:G:H2'	35:BA:2545:G:O4'	2.18	0.43
35:BA:2653:U:H2'	35:BA:2654:A:C8	2.53	0.43
35:BA:2795:G:N2	35:BA:2796:U:H5	2.16	0.43
35:BA:2849:U:HO2'	35:BA:2866:U:H5	1.65	0.43
38:BD:24:ILE:CD1	38:BD:25:THR:N	2.80	0.43
38:BD:177:LEU:O	38:BD:178:PRO:C	2.59	0.43
39:BE:59:VAL:CG1	39:BE:63:LEU:HA	2.48	0.43
39:BE:78:LEU:C	39:BE:79:ARG:HD2	2.44	0.43
39:BE:111:ARG:CZ	49:BR:2:ARG:NH2	2.82	0.43
41:BG:120:LEU:HB3	41:BG:131:TYR:OH	2.18	0.43
42:BH:56:SER:OG	42:BH:61:HIS:ND1	2.41	0.43
45:BN:43:THR:HA	45:BN:44:PRO:HD2	1.85	0.43
47:BP:96:THR:HG22	47:BP:126:VAL:HB	2.01	0.43
48:BQ:37:LEU:HG	48:BQ:129:THR:HA	2.01	0.43
49:BR:21:TYR:N	49:BR:21:TYR:CD1	2.86	0.43
51:BT:22:PHE:CD1	51:BT:22:PHE:C	2.95	0.43
53:BV:47:VAL:O	53:BV:47:VAL:HG23	2.19	0.43
56:BY:51:VAL:HG12	56:BY:53:PRO:HD2	2.00	0.43
57:BZ:115:GLY:N	57:BZ:177:PRO:HG3	2.30	0.43
1:AA:318:G:H2'	1:AA:319:G:H8	1.84	0.42
1:AA:505:G:OP2	1:AA:534:U:H2'	2.18	0.42
1:AA:961:U:OP2	1:AA:1223:C:C4'	2.67	0.42
3:AC:73:PRO:HA	3:AC:76:VAL:HG22	2.01	0.42
3:AC:118:GLN:O	3:AC:119:ARG:C	2.62	0.42
5:AE:18:ARG:HH22	5:AE:25:ARG:HG2	1.84	0.42
6:AF:31:GLU:O	6:AF:32:ASN:C	2.62	0.42
6:AF:87:ARG:HH11	6:AF:87:ARG:CG	2.32	0.42
7:AG:88:PRO:O	7:AG:88:PRO:CG	2.67	0.42
8:AH:6:ILE:HG21	8:AH:85:ARG:NH1	2.33	0.42
9:AI:4:TYR:CD2	9:AI:59:PHE:HE2	2.36	0.42
9:AI:121:ARG:NH1	9:AI:122:ALA:O	2.52	0.42
10:AJ:40:LEU:N	10:AJ:40:LEU:CD2	2.70	0.42
11:AK:18:ARG:HG2	11:AK:81:ASP:HB2	2.00	0.42
13:AM:39:ILE:HD13	13:AM:52:GLU:HB3	2.00	0.42
24:AY:219:VAL:C	24:AY:221:ALA:H	2.25	0.42
24:AY:314:PHE:HD1	24:AY:314:PHE:C	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:500:GLN:HE21	24:AY:500:GLN:HB2	1.66	0.42
27:B2:18:PRO:CG	27:B2:19:VAL:H	2.32	0.42
30:B5:2:ALA:O	35:BA:747:U:C5	2.72	0.42
30:B5:33:CYS:O	30:B5:36:CYS:O	2.37	0.42
31:B6:37:ARG:HH22	35:BA:2286:A:N6	2.16	0.42
31:B6:42:TRP:NE1	35:BA:643:A:OP1	2.52	0.42
33:B8:33:ASN:HA	33:B8:36:LYS:CD	2.48	0.42
35:BA:67:U:H2'	35:BA:68:G:C8	2.54	0.42
35:BA:271(D):G:O2'	35:BA:271(E):U:H5'	2.19	0.42
35:BA:272(I):U:O2	35:BA:272(I):U:H5'	2.19	0.42
35:BA:572:A:N1	35:BA:2033:A:C2	2.87	0.42
35:BA:606:U:O2	35:BA:606:U:H2'	2.18	0.42
35:BA:1108:U:C4	35:BA:1109:C:C6	3.07	0.42
35:BA:1186:G:H2'	35:BA:1187:G:O4'	2.19	0.42
35:BA:1486:A:N1	35:BA:1504:C:C2	2.87	0.42
35:BA:1592:C:H2'	35:BA:1593:G:O4'	2.18	0.42
35:BA:1654:A:OP1	49:BR:3:HIS:HB2	2.19	0.42
35:BA:1803:A:O3'	38:BD:259:THR:CG2	2.59	0.42
35:BA:2026:C:O2	35:BA:2026:C:H2'	2.17	0.42
35:BA:2127:G:H2'	35:BA:2128:C:C6	2.54	0.42
35:BA:2193:G:C2'	35:BA:2194:G:C5'	2.95	0.42
35:BA:2507:C:H2'	35:BA:2508:G:H8	1.84	0.42
35:BA:2795:G:H21	35:BA:2796:U:H5	1.67	0.42
35:BA:2895:U:H3'	35:BA:2895:U:C6	2.54	0.42
36:BB:70:C:O2'	36:BB:71:C:H5'	2.19	0.42
36:BB:89:G:C6	36:BB:90:A:N1	2.87	0.42
36:BB:96:U:H2'	36:BB:97:G:H8	1.84	0.42
38:BD:28:GLU:OE1	38:BD:29:PRO:HD3	2.19	0.42
38:BD:179:SER:C	38:BD:181:GLU:H	2.27	0.42
40:BF:81:PRO:O	40:BF:82:ILE:C	2.60	0.42
40:BF:121:GLY:C	40:BF:123:LEU:N	2.76	0.42
41:BG:55:LYS:C	41:BG:57:ALA:N	2.76	0.42
41:BG:77:ILE:O	41:BG:80:PHE:N	2.52	0.42
43:BK:33:ASN:C	43:BK:35:MET:H	2.27	0.42
46:BO:9:GLU:O	46:BO:83:ALA:HA	2.19	0.42
47:BP:41:ARG:HD2	47:BP:41:ARG:N	2.30	0.42
47:BP:58:THR:O	47:BP:58:THR:HG22	2.19	0.42
47:BP:107:LYS:C	47:BP:109:GLY:N	2.74	0.42
48:BQ:66:ILE:HG22	48:BQ:104:PHE:CD2	2.54	0.42
51:BT:74:ARG:HD2	51:BT:76:PHE:CE1	2.54	0.42
53:BV:46:VAL:HG22	53:BV:47:VAL:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BV:91:TYR:N	53:BV:91:TYR:CD1	2.87	0.42
54:BW:73:ALA:O	54:BW:106:ILE:HG13	2.18	0.42
54:BW:74:ALA:O	54:BW:75:TYR:HB3	2.18	0.42
55:BX:53:LYS:HG3	55:BX:54:VAL:N	2.34	0.42
56:BY:8:LYS:CE	56:BY:72:VAL:HG23	2.49	0.42
57:BZ:48:PHE:CE1	57:BZ:71:VAL:HG11	2.54	0.42
1:AA:188:C:O4'	20:AT:89:ARG:NH1	2.52	0.42
1:AA:189(B):C:C2	1:AA:189(J):G:C2	3.07	0.42
1:AA:244:U:C6	1:AA:894:G:C2	3.07	0.42
1:AA:309:G:O2'	1:AA:607:A:N1	2.52	0.42
1:AA:368:U:OP2	24:AY:353:ALA:CB	2.64	0.42
1:AA:444:C:N4	1:AA:491:G:N1	2.67	0.42
1:AA:690:G:H2'	1:AA:691:G:O4'	2.19	0.42
1:AA:814:A:H4'	1:AA:1511:G:H5'	2.01	0.42
1:AA:993:G:N2	1:AA:996:A:N6	2.67	0.42
1:AA:1030(C):G:H2'	1:AA:1030(D):A:H8	1.84	0.42
1:AA:1186:G:C2	1:AA:1187:G:C8	3.07	0.42
2:AB:31:TYR:CD1	2:AB:31:TYR:N	2.85	0.42
5:AE:82:VAL:HB	5:AE:89:ILE:HG22	2.00	0.42
6:AF:27:GLN:NE2	6:AF:27:GLN:HA	2.34	0.42
9:AI:56:LEU:HD23	9:AI:56:LEU:O	2.18	0.42
15:AO:64:ARG:O	15:AO:65:ARG:C	2.61	0.42
17:AQ:6:LEU:N	17:AQ:6:LEU:HD23	2.34	0.42
21:AU:6:ARG:NE	21:AU:15:ARG:NH2	2.66	0.42
24:AY:39:ILE:HG23	24:AY:41:LYS:HG3	2.00	0.42
24:AY:121:VAL:HA	24:AY:124:GLN:NE2	2.35	0.42
24:AY:622:GLY:O	24:AY:625:ASN:N	2.52	0.42
25:B0:47:PRO:HB3	25:B0:51:VAL:O	2.19	0.42
27:B2:17:SER:CB	27:B2:18:PRO:CD	2.97	0.42
27:B2:31:GLU:O	27:B2:35:LEU:N	2.47	0.42
27:B2:36:ARG:O	27:B2:37:PHE:C	2.59	0.42
30:B5:44:THR:HG23	49:BR:101:ALA:N	2.34	0.42
35:BA:420:C:H2'	35:BA:421:U:C6	2.54	0.42
35:BA:512:G:O2'	35:BA:513:A:H8	2.01	0.42
35:BA:515:A:C2	35:BA:1261:C:H1'	2.53	0.42
35:BA:523:C:H3'	35:BA:523:C:H6	1.85	0.42
35:BA:557:U:O5'	35:BA:557:U:H6	2.01	0.42
35:BA:738:G:H2'	35:BA:739:G:C8	2.54	0.42
35:BA:825:C:C2'	35:BA:826:U:H5'	2.48	0.42
35:BA:1057:A:H61	35:BA:1081:U:H3	1.68	0.42
35:BA:1084:A:H2'	35:BA:1085:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1100:C:O2	35:BA:1100:C:C2'	2.67	0.42
35:BA:1179:C:C4	35:BA:1180:C:C5	3.07	0.42
35:BA:1342:A:C2	35:BA:1345:C:C5	3.07	0.42
35:BA:1422:G:H1'	35:BA:1496:A:H62	1.83	0.42
35:BA:1430:C:H42	35:BA:1563:G:H1	1.66	0.42
35:BA:1786:A:C2	35:BA:2606:C:H1'	2.54	0.42
35:BA:2078:C:O4'	35:BA:2434:A:H1'	2.19	0.42
35:BA:2323:G:H8	35:BA:2323:G:O5'	2.02	0.42
35:BA:2481:G:C2'	35:BA:2482:G:OP2	2.67	0.42
35:BA:2694:G:O2'	35:BA:2695:C:H5'	2.19	0.42
37:BC:30:VAL:O	37:BC:33:LEU:N	2.50	0.42
37:BC:43:GLU:OE2	37:BC:218:THR:HA	2.19	0.42
40:BF:11:VAL:CG1	40:BF:12:LEU:N	2.80	0.42
40:BF:89:VAL:C	40:BF:91:GLY:H	2.28	0.42
41:BG:40:ASN:O	41:BG:155:MET:HB2	2.20	0.42
41:BG:170:ARG:HE	41:BG:180:PHE:HD2	1.63	0.42
43:BK:121:GLU:O	43:BK:125:ARG:HG3	2.19	0.42
48:BQ:45:GLN:NE2	48:BQ:45:GLN:H	2.16	0.42
48:BQ:110:THR:HG23	48:BQ:113:GLN:H	1.82	0.42
49:BR:75:LEU:C	49:BR:75:LEU:CD1	2.92	0.42
52:BU:21:ALA:HA	52:BU:24:TYR:CE2	2.54	0.42
54:BW:13:SER:O	54:BW:16:LYS:HB2	2.18	0.42
1:AA:78:G:H1	1:AA:91:C:N4	2.17	0.42
1:AA:688:G:H2'	1:AA:689:C:C6	2.55	0.42
1:AA:949:A:H2'	1:AA:950:U:O4'	2.19	0.42
1:AA:1006:C:H2'	1:AA:1007:C:C5	2.54	0.42
1:AA:1104:G:P	2:AB:111:ARG:HD2	2.59	0.42
1:AA:1217:C:H5'	14:AN:9:LYS:NZ	2.34	0.42
1:AA:1256:A:N6	1:AA:1278:U:H1'	2.34	0.42
1:AA:1299:A:C2	1:AA:1301:U:N3	2.87	0.42
1:AA:1371:G:C6	1:AA:1372:U:C4	3.08	0.42
1:AA:1505:G:H5"	1:AA:1505:G:C8	2.54	0.42
1:AA:1513:A:C4	1:AA:1514:C:C5	3.08	0.42
3:AC:113:ALA:N	3:AC:114:PRO:CD	2.82	0.42
3:AC:136:GLN:C	3:AC:138:VAL:N	2.75	0.42
13:AM:23:TYR:CE1	13:AM:70:LEU:HD22	2.47	0.42
14:AN:42:ILE:HD13	14:AN:42:ILE:HA	1.92	0.42
24:AY:121:VAL:HA	24:AY:124:GLN:HE22	1.84	0.42
24:AY:364:GLU:HG2	24:AY:366:VAL:HG13	2.02	0.42
24:AY:373:ASP:C	24:AY:374:LEU:HD12	2.45	0.42
24:AY:416:LYS:CD	24:AY:417:THR:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:465:ARG:O	24:AY:470:PHE:HD2	2.02	0.42
24:AY:525:PHE:N	24:AY:525:PHE:HD1	2.15	0.42
24:AY:575:VAL:O	24:AY:575:VAL:CG1	2.67	0.42
24:AY:627:ARG:C	24:AY:629:GLY:N	2.77	0.42
24:AY:679:VAL:HG23	24:AY:679:VAL:O	2.20	0.42
25:B0:48:GLY:CA	25:B0:80:HIS:HD1	2.28	0.42
26:B1:18:ILE:HD12	26:B1:37:ILE:HG12	2.00	0.42
26:B1:76:ARG:HG2	35:BA:271(R):G:H5'	2.01	0.42
27:B2:24:LEU:C	27:B2:24:LEU:CD2	2.92	0.42
29:B4:39:CYS:SG	29:B4:42:PHE:CE2	3.11	0.42
31:B6:13:CYS:HA	31:B6:50:ARG:O	2.19	0.42
31:B6:45:LYS:HD3	35:BA:2372:G:OP1	2.19	0.42
35:BA:49:A:C5	35:BA:177:G:C6	3.07	0.42
35:BA:87:C:OP2	35:BA:90:U:O4	2.36	0.42
35:BA:199:A:H2	35:BA:2079:U:O4'	2.01	0.42
35:BA:220:G:N1	35:BA:427:U:H2'	2.34	0.42
35:BA:260:G:C1'	35:BA:621:A:H1'	2.48	0.42
35:BA:286:C:C2	35:BA:287:C:C5	3.08	0.42
35:BA:536:A:H2'	35:BA:537:C:C6	2.54	0.42
35:BA:560:C:H4'	52:BU:52:ARG:CZ	2.50	0.42
35:BA:686:G:N2	35:BA:788:A:N6	2.67	0.42
35:BA:847:U:OP2	35:BA:928:G:O6	2.37	0.42
35:BA:864:G:O5'	35:BA:864:G:H8	2.02	0.42
35:BA:1030:G:OP2	48:BQ:128:LYS:HE2	2.19	0.42
35:BA:1074:G:H2'	35:BA:1075:C:H6	1.85	0.42
35:BA:1290:C:H2'	35:BA:1291:C:H6	1.84	0.42
35:BA:2088:G:C5	35:BA:2089:U:C5	3.08	0.42
35:BA:2447:G:C5	35:BA:2501:C:N3	2.87	0.42
35:BA:2572:A:H5'	35:BA:2574:G:O3'	2.19	0.42
35:BA:2712:U:C2'	35:BA:2712(A):A:O5'	2.67	0.42
35:BA:2734:A:N7	35:BA:2735:G:C8	2.87	0.42
35:BA:2758:A:C5	42:BH:67:LEU:HD21	2.54	0.42
35:BA:2857:G:C2	35:BA:2861:G:C6	3.07	0.42
35:BA:2892:A:N7	35:BA:2893:G:N3	2.67	0.42
37:BC:84:ILE:HD13	37:BC:84:ILE:HG21	1.87	0.42
38:BD:7:LYS:HB3	38:BD:8:PRO:CD	2.49	0.42
38:BD:67:PHE:HD1	38:BD:67:PHE:HA	1.60	0.42
38:BD:118:VAL:HG22	38:BD:119:ALA:N	2.33	0.42
38:BD:213:ARG:O	38:BD:214:TRP:C	2.63	0.42
39:BE:51:PHE:H	39:BE:74:PRO:HG3	1.82	0.42
41:BG:12:TYR:O	41:BG:16:ARG:HB2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:77:ILE:O	41:BG:78:SER:C	2.62	0.42
42:BH:16:SER:HB2	42:BH:27:LYS:CB	2.40	0.42
43:BK:6:ALA:HB3	43:BK:59:ILE:H	1.85	0.42
45:BN:62:VAL:HG22	45:BN:66:LYS:CG	2.43	0.42
47:BP:100:LEU:C	47:BP:103:ALA:H	2.27	0.42
47:BP:102:ARG:O	47:BP:102:ARG:CG	2.66	0.42
47:BP:122:PRO:O	47:BP:123:LEU:CB	2.65	0.42
49:BR:9:LYS:C	49:BR:10:LEU:CG	2.87	0.42
50:BS:35:ILE:HD11	50:BS:99:LYS:HE3	2.01	0.42
50:BS:101:LEU:O	50:BS:102:ALA:O	2.36	0.42
53:BV:6:LYS:HE2	53:BV:37:VAL:HG12	2.01	0.42
53:BV:15:GLU:O	53:BV:16:PRO:C	2.61	0.42
54:BW:83:LYS:HE3	54:BW:97:LYS:CD	2.49	0.42
55:BX:14:SER:O	55:BX:17:ALA:HB3	2.19	0.42
57:BZ:4:ARG:HD2	57:BZ:60:GLU:OE2	2.20	0.42
57:BZ:14:LYS:O	57:BZ:17:ALA:N	2.43	0.42
57:BZ:63:ASP:OD1	57:BZ:63:ASP:N	2.46	0.42
1:AA:187:C:H5”	20:AT:86:ARG:HH11	1.84	0.42
1:AA:452:A:C4’	16:AP:72:ARG:CZ	2.95	0.42
1:AA:483:C:C3’	1:AA:484:G:H5”	2.48	0.42
1:AA:703:G:C2’	1:AA:704:A:OP2	2.67	0.42
1:AA:778:G:H1’	11:AK:119:CYS:HB3	2.01	0.42
1:AA:998:G:H2’	1:AA:999:C:N1	2.34	0.42
1:AA:1037:C:H2’	1:AA:1038:C:N3	2.34	0.42
1:AA:1121:U:O4	1:AA:1122:U:O4	2.38	0.42
1:AA:1319:A:OP1	19:AS:10:PHE:CZ	2.72	0.42
1:AA:1472:U:H2’	1:AA:1473:A:C8	2.54	0.42
2:AB:119:GLU:O	2:AB:121:LEU:N	2.52	0.42
6:AF:22:GLU:C	6:AF:24:GLU:N	2.78	0.42
7:AG:51:GLN:OE1	7:AG:51:GLN:HA	2.20	0.42
9:AI:2:GLU:O	9:AI:21:PRO:HD3	2.19	0.42
11:AK:12:ARG:HE	11:AK:14:VAL:CG1	2.33	0.42
15:AO:25:THR:O	15:AO:26:GLU:C	2.62	0.42
15:AO:65:ARG:HG2	15:AO:65:ARG:NH1	2.34	0.42
16:AP:8:ARG:O	16:AP:9:PHE:HD1	2.02	0.42
18:AR:87:ARG:NH1	18:AR:87:ARG:CB	2.82	0.42
21:AU:10:ARG:O	21:AU:13:ILE:N	2.50	0.42
24:AY:132:ARG:O	24:AY:132:ARG:HG2	2.16	0.42
24:AY:206:LEU:HD11	24:AY:210:ARG:HH12	1.85	0.42
24:AY:342:TYR:OH	24:AY:347:GLY:HA2	2.19	0.42
25:B0:19:LYS:O	25:B0:20:ARG:C	2.61	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:27:GLU:H	26:B1:27:GLU:HG3	1.70	0.42
27:B2:27:GLU:O	27:B2:28:LYS:C	2.62	0.42
27:B2:29:LYS:C	27:B2:31:GLU:N	2.76	0.42
28:B3:22:ALA:O	28:B3:25:ALA:HB3	2.18	0.42
29:B4:1:MET:CE	41:BG:66:GLN:CD	2.92	0.42
34:B9:10:ILE:HD12	34:B9:32:HIS:CG	2.54	0.42
35:BA:21:A:O2'	35:BA:22:C:H5'	2.19	0.42
35:BA:27:G:H1'	35:BA:513:A:H62	1.84	0.42
35:BA:272(I):U:O2	35:BA:272(I):U:C3'	2.67	0.42
35:BA:322:A:C3'	40:BF:169:ASN:HD21	2.27	0.42
35:BA:336:C:O3'	56:BY:7:VAL:HG22	2.19	0.42
35:BA:669:G:N3	35:BA:669:G:C2'	2.81	0.42
35:BA:921:G:H4'	35:BA:2269:A:C5	2.54	0.42
35:BA:1042:G:O2'	35:BA:1043:C:H5'	2.20	0.42
35:BA:1141:U:OP1	45:BN:25:ARG:NH1	2.52	0.42
35:BA:1142(A):A:O2'	35:BA:1143:A:H2'	2.19	0.42
35:BA:1301:A:N3	35:BA:1301:A:H5"	2.34	0.42
35:BA:1322:A:OP1	54:BW:11:ARG:HG3	2.19	0.42
35:BA:1602:U:H3'	35:BA:1603:A:C5'	2.49	0.42
35:BA:1654:A:O2'	39:BE:113:PHE:O	2.38	0.42
35:BA:1695:G:H3'	35:BA:1695:G:N3	2.34	0.42
35:BA:1718:G:C8	35:BA:1718:G:C5'	3.00	0.42
35:BA:2019:A:C2'	35:BA:2020:A:O5'	2.68	0.42
35:BA:2222:G:H5"	38:BD:186:HIS:CE1	2.54	0.42
35:BA:2290:G:H1	35:BA:2342:C:H42	1.66	0.42
35:BA:2334:G:C2	50:BS:15:ARG:NH1	2.87	0.42
35:BA:2422:A:H3'	35:BA:2422:A:C8	2.55	0.42
36:BB:9:G:C6	36:BB:113:G:C6	3.07	0.42
36:BB:86:G:C6	36:BB:87:G:C6	3.08	0.42
37:BC:19:LYS:HG2	37:BC:20:VAL:N	2.35	0.42
37:BC:140:ASN:HB3	37:BC:143:ALA:CB	2.49	0.42
37:BC:225:ILE:HD12	37:BC:225:ILE:O	2.19	0.42
38:BD:72:LYS:HD3	38:BD:75:ILE:HG21	2.00	0.42
40:BF:24:LEU:N	40:BF:24:LEU:CD2	2.83	0.42
40:BF:110:LEU:O	40:BF:110:LEU:HD22	2.19	0.42
40:BF:198:ALA:HA	40:BF:201:VAL:HG12	2.02	0.42
42:BH:152:ARG:O	42:BH:153:LYS:C	2.62	0.42
43:BK:5:VAL:HA	43:BK:59:ILE:HG23	2.01	0.42
43:BK:27:LEU:HA	43:BK:30:HIS:HB2	1.99	0.42
44:BL:94:LEU:HD23	44:BL:94:LEU:HA	1.86	0.42
46:BO:105:GLU:C	46:BO:108:GLU:OE1	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:64:LYS:C	47:BP:66:GLY:H	2.28	0.42
50:BS:98:VAL:HG12	50:BS:100:ALA:HB2	2.00	0.42
51:BT:32:TYR:O	51:BT:41:ARG:O	2.37	0.42
51:BT:128:GLU:C	51:BT:130:ALA:H	2.27	0.42
52:BU:94:ASN:C	52:BU:96:ALA:H	2.27	0.42
53:BV:2:PHE:HB3	53:BV:41:GLY:C	2.44	0.42
54:BW:84:ARG:O	54:BW:95:ILE:HA	2.20	0.42
55:BX:64:LYS:HB3	55:BX:64:LYS:HE2	1.79	0.42
57:BZ:14:LYS:O	57:BZ:18:LEU:CD1	2.67	0.42
1:AA:151:A:N1	1:AA:171:A:N1	2.67	0.42
1:AA:260:G:H2'	1:AA:261:U:H6	1.84	0.42
1:AA:332:G:O2'	1:AA:333:G:H5'	2.20	0.42
1:AA:505:G:H2'	1:AA:506:G:C8	2.55	0.42
1:AA:582:U:OP1	15:AO:68:ARG:NH2	2.52	0.42
1:AA:633:G:H5'	1:AA:634:C:OP2	2.19	0.42
1:AA:960:U:C6	1:AA:1225:A:C8	3.08	0.42
1:AA:1027:C:C4	1:AA:1028:C:N4	2.87	0.42
1:AA:1030(A):G:H1'	1:AA:1031:G:N1	2.32	0.42
1:AA:1422:G:H2'	1:AA:1423:G:H8	1.84	0.42
1:AA:1499:A:C2	1:AA:1500:A:C8	3.08	0.42
2:AB:166:ASP:OD2	2:AB:205:ASP:OD2	2.36	0.42
2:AB:229:VAL:CG1	2:AB:230:VAL:N	2.83	0.42
3:AC:94:LEU:O	3:AC:95:THR:CG2	2.63	0.42
6:AF:35:ALA:O	6:AF:36:ARG:C	2.61	0.42
9:AI:19:LEU:HB3	9:AI:59:PHE:HD2	1.85	0.42
13:AM:54:VAL:O	13:AM:55:ARG:C	2.62	0.42
13:AM:56:LEU:HD13	13:AM:57:ARG:N	2.32	0.42
13:AM:88:ARG:HG2	13:AM:88:ARG:HH11	1.84	0.42
14:AN:36:PHE:C	14:AN:36:PHE:HD1	2.25	0.42
18:AR:74:ARG:HD3	18:AR:81:PHE:CE1	2.54	0.42
19:AS:19:VAL:HG12	19:AS:20:LEU:HG	2.02	0.42
19:AS:44:MET:HB3	19:AS:47:HIS:HD2	1.84	0.42
19:AS:53:ASN:C	19:AS:55:LYS:N	2.78	0.42
19:AS:61:TYR:CG	19:AS:62:ILE:N	2.79	0.42
24:AY:8:ASP:HB2	24:AY:11:ARG:CZ	2.50	0.42
24:AY:25:LYS:N	59:AY:702:GDP:O2B	2.53	0.42
24:AY:106:VAL:CG2	24:AY:132:ARG:HG3	2.49	0.42
24:AY:207:ASP:O	24:AY:208:GLN:C	2.61	0.42
24:AY:260:LEU:HD13	24:AY:260:LEU:N	2.35	0.42
24:AY:492:ASP:OD2	24:AY:513:LYS:HA	2.20	0.42
28:B3:9:VAL:CG2	28:B3:10:LYS:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B7:5:TRP:CZ3	35:BA:464:U:H4'	2.54	0.42
34:B9:1:MET:HE1	34:B9:31:LYS:HB3	2.02	0.42
35:BA:31:C:H4'	35:BA:1238:G:H4'	2.01	0.42
35:BA:69:C:O2	35:BA:69:C:C2'	2.68	0.42
35:BA:272(H):C:C2'	35:BA:272(I):U:C5'	2.95	0.42
35:BA:391:G:C2'	35:BA:392:C:H5'	2.49	0.42
35:BA:523:C:H5'	35:BA:541:C:H1'	2.00	0.42
35:BA:820:A:N3	35:BA:943:U:O2'	2.47	0.42
35:BA:1036:G:C6	35:BA:1120:G:C6	3.07	0.42
35:BA:1057:A:O2'	35:BA:1058:G:O5'	2.34	0.42
35:BA:1453:U:OP1	49:BR:63:ARG:NH2	2.50	0.42
35:BA:1582:C:O2'	35:BA:1586:A:C8	2.71	0.42
35:BA:2146:C:H4'	35:BA:2147:G:N7	2.34	0.42
35:BA:2147:G:H2'	35:BA:2148:G:C4'	2.49	0.42
35:BA:2200:C:O2	35:BA:2200:C:H2'	2.19	0.42
35:BA:2246:G:H2'	35:BA:2247:A:C8	2.54	0.42
35:BA:2749:A:C5	35:BA:2750:A:N7	2.88	0.42
38:BD:208:LYS:HB2	38:BD:209:ALA:H	1.62	0.42
39:BE:61:ARG:CG	39:BE:62:PRO:HD3	2.43	0.42
41:BG:35:GLU:O	41:BG:35:GLU:CG	2.66	0.42
41:BG:149:VAL:O	41:BG:150:ASP:C	2.62	0.42
42:BH:65:HIS:CE1	42:BH:69:ARG:HH11	2.32	0.42
43:BK:34:ILE:H	43:BK:34:ILE:HG12	1.53	0.42
45:BN:131:GLN:O	45:BN:131:GLN:HG3	2.19	0.42
46:BO:53:LYS:O	46:BO:54:GLU:O	2.38	0.42
46:BO:114:ILE:O	46:BO:115:VAL:C	2.63	0.42
47:BP:7:ARG:CB	47:BP:8:PRO:HD3	2.39	0.42
47:BP:16:ARG:CZ	47:BP:18:ARG:HB2	2.49	0.42
48:BQ:50:ALA:O	48:BQ:51:ARG:C	2.62	0.42
51:BT:53:ARG:NH1	51:BT:53:ARG:CB	2.61	0.42
54:BW:14:PRO:O	54:BW:16:LYS:N	2.53	0.42
56:BY:15:VAL:O	56:BY:22:GLY:CA	2.67	0.42
56:BY:39:VAL:HG12	56:BY:40:GLU:H	1.85	0.42
1:AA:15:G:H2'	1:AA:16:A:C8	2.54	0.42
1:AA:56:U:O5'	1:AA:56:U:H6	2.02	0.42
1:AA:71:C:H6	1:AA:71:C:O5'	2.03	0.42
1:AA:404:U:H2'	1:AA:405:U:H6	1.83	0.42
1:AA:445:G:H2'	1:AA:446:G:C8	2.55	0.42
1:AA:692:U:OP1	11:AK:124:LYS:CE	2.67	0.42
1:AA:741:G:C2'	1:AA:742:G:H5'	2.50	0.42
1:AA:838:G:H2'	1:AA:839:U:H5"	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1030(A):G:H2'	1:AA:1030(B):C:H5'	2.01	0.42
1:AA:1193:G:O2'	1:AA:1194:U:H5'	2.19	0.42
1:AA:1381:U:H3'	1:AA:1381:U:C6	2.54	0.42
1:AA:1477:C:O5'	1:AA:1477:C:H6	2.03	0.42
3:AC:49:SER:HB3	3:AC:75:VAL:HG11	2.02	0.42
3:AC:186:PHE:HA	3:AC:198:VAL:O	2.20	0.42
5:AE:41:VAL:HG11	5:AE:109:ILE:O	2.18	0.42
10:AJ:4:ILE:HG22	10:AJ:5:ARG:N	2.33	0.42
10:AJ:24:VAL:C	10:AJ:26:ALA:N	2.76	0.42
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.83	0.42
11:AK:105:VAL:H	11:AK:105:VAL:HG22	1.60	0.42
13:AM:33:ALA:HA	13:AM:59:TYR:HE2	1.85	0.42
15:AO:43:LEU:HD13	15:AO:56:LEU:HD22	1.99	0.42
19:AS:71:LEU:HD23	19:AS:71:LEU:HA	1.84	0.42
19:AS:72:GLY:O	19:AS:75:ALA:N	2.52	0.42
22:AV:35:A:C2	23:AX:18:G:C2	3.08	0.42
24:AY:20:HIS:HB2	24:AY:87:HIS:HD2	1.84	0.42
24:AY:93:GLU:O	24:AY:94:VAL:C	2.60	0.42
24:AY:156:ARG:HB2	24:AY:157:LEU:HD23	2.01	0.42
24:AY:247:ARG:C	24:AY:249:GLY:N	2.77	0.42
26:B1:12:PRO:HG2	35:BA:1365:A:H5'	2.02	0.42
27:B2:69:ARG:NH2	35:BA:111:A:H5"	2.34	0.42
31:B6:8:LYS:O	31:B6:9:LEU:O	2.38	0.42
31:B6:15:GLU:C	31:B6:16:CYS:O	2.57	0.42
31:B6:27:LYS:HD2	31:B6:27:LYS:O	2.20	0.42
31:B6:27:LYS:HB3	31:B6:32:ASN:HD22	1.83	0.42
32:B7:17:GLY:O	32:B7:20:ALA:HB3	2.18	0.42
32:B7:33:ARG:HH11	32:B7:33:ARG:HB2	1.85	0.42
32:B7:41:ARG:NH2	35:BA:460:A:P	2.79	0.42
33:B8:49:VAL:HG23	33:B8:53:PRO:HB3	2.02	0.42
34:B9:17:ILE:HG21	34:B9:19:ARG:HE	1.84	0.42
35:BA:324:A:N6	35:BA:338:G:O2'	2.53	0.42
35:BA:324:A:OP2	35:BA:1205:U:N3	2.45	0.42
35:BA:331:A:C2	35:BA:1209:G:C5	3.08	0.42
35:BA:438:G:H2'	35:BA:440:G:H8	1.85	0.42
35:BA:816:C:O5'	35:BA:816:C:H6	2.03	0.42
35:BA:900:A:H2'	35:BA:901:A:O4'	2.20	0.42
35:BA:999:U:O2	35:BA:1157:G:C2	2.72	0.42
35:BA:1224:C:C5	35:BA:1225:G:C5	3.08	0.42
35:BA:1292:U:H2'	35:BA:1293:C:C6	2.54	0.42
35:BA:1787:A:O2'	35:BA:2589:A:H4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1815:A:C5	35:BA:1817:G:C6	3.08	0.42
35:BA:2171:A:H4'	35:BA:2172:U:OP1	2.20	0.42
35:BA:2199:A:N7	35:BA:2225:A:C6	2.87	0.42
35:BA:2313:C:H2'	35:BA:2314:C:C6	2.54	0.42
35:BA:2404:C:N4	35:BA:2414:G:C6	2.88	0.42
35:BA:2501:C:H6	35:BA:2501:C:H2'	1.60	0.42
35:BA:2649:U:O2'	35:BA:2650:U:H5'	2.19	0.42
35:BA:2659:G:N2	35:BA:2661:G:H3'	2.34	0.42
35:BA:2666:C:H3'	35:BA:2667:C:H6	1.85	0.42
35:BA:2795:G:N2	35:BA:2796:U:C5	2.87	0.42
37:BC:75:VAL:HG12	37:BC:76:LEU:N	2.35	0.42
38:BD:127:VAL:HA	38:BD:193:VAL:HG13	2.02	0.42
38:BD:267:SER:CB	38:BD:270:ILE:HD11	2.46	0.42
40:BF:29:ASN:O	40:BF:30:PRO:C	2.63	0.42
40:BF:40:GLN:C	40:BF:42:ALA:N	2.75	0.42
41:BG:67:LYS:HG2	41:BG:68:PRO:CD	2.49	0.42
41:BG:72:ARG:HB3	41:BG:87:PRO:HD2	2.01	0.42
41:BG:102:PHE:HD2	41:BG:103:LEU:CD2	2.31	0.42
41:BG:131:TYR:HE2	41:BG:133:LEU:CB	2.29	0.42
42:BH:109:PHE:O	42:BH:111:HIS:N	2.43	0.42
43:BK:6:ALA:CB	43:BK:30:HIS:HE1	2.32	0.42
43:BK:10:LEU:HD11	43:BK:27:LEU:CD1	2.50	0.42
49:BR:28:LEU:CD2	49:BR:29:LEU:HD12	2.50	0.42
54:BW:1:MET:HE2	54:BW:2:GLU:H	1.81	0.42
55:BX:11:PRO:CA	55:BX:28:PHE:HB3	2.19	0.42
57:BZ:126:VAL:HA	57:BZ:163:LEU:HA	2.02	0.42
1:AA:422:C:O2'	1:AA:423:G:N2	2.53	0.42
1:AA:664:G:H2'	1:AA:666:G:OP1	2.20	0.42
1:AA:1245:A:C2	1:AA:1293:G:C2	3.07	0.42
1:AA:1261:A:C2'	1:AA:1262:C:H5'	2.47	0.42
2:AB:149:LEU:O	2:AB:150:SER:C	2.61	0.42
3:AC:126:ARG:C	3:AC:127:ARG:HD2	2.45	0.42
4:AD:168:ARG:HH11	4:AD:168:ARG:HG3	1.84	0.42
5:AE:12:LEU:CD1	5:AE:31:LEU:CB	2.92	0.42
5:AE:94:ALA:HB3	5:AE:117:ASP:C	2.45	0.42
6:AF:38:GLU:O	6:AF:39:LYS:O	2.37	0.42
9:AI:32:ASP:OD1	9:AI:34:ASN:N	2.53	0.42
9:AI:79:LEU:HD11	9:AI:83:ARG:HB2	2.01	0.42
11:AK:33:THR:HB	11:AK:38:ASN:O	2.20	0.42
13:AM:96:LEU:HB3	13:AM:97:PRO:CD	2.40	0.42
19:AS:20:LEU:HA	19:AS:20:LEU:HD23	1.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:35:SER:C	19:AS:37:ARG:H	2.26	0.42
20:AT:13:LEU:CD1	20:AT:13:LEU:N	2.66	0.42
20:AT:75:ASN:ND2	20:AT:75:ASN:N	2.65	0.42
24:AY:339:SER:O	24:AY:351:ARG:HD3	2.20	0.42
24:AY:415:PRO:HB2	24:AY:421:GLN:N	2.35	0.42
24:AY:607:ARG:NH2	24:AY:672:PHE:CD2	2.88	0.42
24:AY:681:LYS:HE2	24:AY:681:LYS:HB3	1.77	0.42
26:B1:12:PRO:HG3	35:BA:1365:A:H5'	2.01	0.42
26:B1:71:TYR:HA	26:B1:74:VAL:HG21	2.02	0.42
27:B2:40:SER:C	27:B2:42:GLY:N	2.77	0.42
29:B4:20:ASN:HD22	29:B4:20:ASN:HA	1.40	0.42
33:B8:26:LYS:HD3	33:B8:47:LYS:HD2	2.02	0.42
34:B9:29:ASN:ND2	34:B9:29:ASN:O	2.52	0.42
35:BA:216:A:C4	35:BA:432:A:C2	3.06	0.42
35:BA:332:A:O2'	35:BA:333:G:P	2.78	0.42
35:BA:374:A:H2'	35:BA:375:C:H5'	2.01	0.42
35:BA:531:C:C5	35:BA:2035:G:C2	3.08	0.42
35:BA:645:C:O2	35:BA:645:C:C4'	2.67	0.42
35:BA:688:U:C3'	35:BA:688:U:C6	3.02	0.42
35:BA:846:C:C4	35:BA:930:U:C5	3.08	0.42
35:BA:950:G:H2'	35:BA:951:C:C6	2.55	0.42
35:BA:1045:A:C2	35:BA:1047:G:N2	2.87	0.42
35:BA:1445:A:C8	35:BA:1460:A:C2	3.08	0.42
35:BA:1464:C:H1'	35:BA:1528(A):A:N3	2.35	0.42
35:BA:1491:G:N2	35:BA:1492:G:H1'	2.35	0.42
35:BA:1675:C:H2'	35:BA:1676:A:O4'	2.19	0.42
35:BA:1971:A:N3	38:BD:240:ALA:HA	2.35	0.42
35:BA:2076:U:C5'	35:BA:2238:G:N2	2.81	0.42
35:BA:2078:C:H1'	35:BA:2434:A:H1'	2.02	0.42
35:BA:2377:A:O2'	35:BA:2378:A:H5'	2.19	0.42
35:BA:2453:A:H2'	35:BA:2454:G:H8	1.85	0.42
35:BA:2682:U:C6	39:BE:11:MET:HE2	2.54	0.42
35:BA:2726:U:H4'	46:BO:1:MET:HE1	2.02	0.42
39:BE:59:VAL:HG21	39:BE:63:LEU:HA	2.01	0.42
40:BF:204:ASN:C	40:BF:206:ILE:H	2.26	0.42
41:BG:41:GLN:CD	41:BG:60:LEU:HD21	2.45	0.42
43:BK:55:VAL:CG2	43:BK:67:PHE:HD2	2.33	0.42
44:BL:58:LEU:HD23	44:BL:58:LEU:O	2.19	0.42
47:BP:96:THR:HB	47:BP:97:PRO:HD2	2.02	0.42
50:BS:11:LYS:CG	50:BS:13:ARG:HH21	2.33	0.42
51:BT:50:ILE:HA	51:BT:99:LEU:HD11	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BV:2:PHE:O	53:BV:3:ALA:CB	2.68	0.42
54:BW:50:VAL:CG1	54:BW:51:LEU:N	2.83	0.42
54:BW:59:VAL:HG21	54:BW:66:GLU:HB2	2.01	0.42
1:AA:425:G:O2'	1:AA:426:G:H5'	2.20	0.42
1:AA:619:U:N3	4:AD:134:ASP:OD1	2.52	0.42
1:AA:828:A:H2'	1:AA:829:G:O4'	2.19	0.42
1:AA:1349:A:OP1	9:AI:120:ARG:HB2	2.20	0.42
3:AC:77:ILE:HA	3:AC:84:ILE:HB	2.01	0.42
4:AD:70:ILE:HD13	4:AD:70:ILE:HG21	1.79	0.42
5:AE:72:GLN:HE22	5:AE:144:THR:HG22	1.85	0.42
7:AG:15:ASP:HA	7:AG:24:THR:HG23	2.02	0.42
7:AG:64:GLN:HG2	7:AG:128:ALA:HB1	2.02	0.42
7:AG:113:GLU:CG	7:AG:119:ARG:HG2	2.50	0.42
8:AH:104:ARG:CZ	8:AH:138:TRP:CH2	3.02	0.42
12:AL:27:LEU:C	12:AL:29:GLY:N	2.75	0.42
12:AL:47:LYS:CB	12:AL:48:PRO:CD	2.82	0.42
13:AM:120:LYS:O	13:AM:121:LYS:C	2.62	0.42
15:AO:59:MET:HE3	15:AO:59:MET:HB2	1.69	0.42
16:AP:44:THR:O	16:AP:45:THR:CB	2.68	0.42
24:AY:519:ARG:NH2	24:AY:678:GLU:HB2	2.34	0.42
58:AY:701:FUA:H213	58:AY:701:FUA:H9	1.77	0.42
25:B0:27:GLU:CD	35:BA:856:C:C4'	2.93	0.42
26:B1:13:ILE:HG12	26:B1:42:GLN:HB2	2.01	0.42
29:B4:20:ASN:HB3	29:B4:36:CYS:SG	2.59	0.42
29:B4:25:TYR:O	29:B4:26:SER:HB3	2.20	0.42
30:B5:4:HIS:CB	30:B5:5:PRO:CD	2.92	0.42
30:B5:5:PRO:C	30:B5:6:VAL:HG23	2.45	0.42
31:B6:10:LEU:O	31:B6:54:ILE:OXT	2.37	0.42
31:B6:53:LYS:HG3	31:B6:54:ILE:H	1.84	0.42
33:B8:48:PHE:C	33:B8:49:VAL:HG22	2.44	0.42
35:BA:209:C:H4'	35:BA:681:G:H4'	2.02	0.42
35:BA:253:C:H2'	35:BA:254:G:O4'	2.20	0.42
35:BA:476:G:H4'	35:BA:502:A:N1	2.34	0.42
35:BA:638:G:C5	35:BA:651:G:C2	3.08	0.42
35:BA:688:U:C6	35:BA:688:U:H3'	2.55	0.42
35:BA:701:G:C6	35:BA:732:C:N4	2.88	0.42
35:BA:709:U:O5'	35:BA:709:U:H6	2.02	0.42
35:BA:752:A:HO2'	35:BA:753:C:P	2.39	0.42
35:BA:826:U:OP1	35:BA:2429:G:OP1	2.37	0.42
35:BA:947:G:H8	35:BA:947:G:O5'	2.03	0.42
35:BA:1005:C:C2	35:BA:1006:C:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1035:U:O5'	42:BH:59:ARG:NH1	2.53	0.42
35:BA:1042:G:H2'	35:BA:1043:C:C6	2.55	0.42
35:BA:1097:U:C2'	35:BA:1098:A:H5'	2.50	0.42
35:BA:1241:A:C8	35:BA:1242:A:C8	3.08	0.42
35:BA:1565:C:H2'	38:BD:21:PHE:CE2	2.55	0.42
35:BA:1802:A:N1	35:BA:1822:G:H1'	2.35	0.42
35:BA:2053:G:H1	35:BA:2616:C:N4	2.17	0.42
35:BA:2283:C:H2'	35:BA:2284:C:O4'	2.19	0.42
35:BA:2311:A:H3'	35:BA:2312:U:C5	2.54	0.42
35:BA:2625:G:H2'	35:BA:2626:C:C6	2.55	0.42
35:BA:2697:G:H2'	35:BA:2698:U:O4'	2.20	0.42
37:BC:148:PHE:C	37:BC:150:ILE:H	2.28	0.42
38:BD:186:HIS:CD2	38:BD:188:GLU:H	2.37	0.42
39:BE:119:ARG:HG2	39:BE:160:TYR:HB2	2.02	0.42
40:BF:41:LEU:HD23	40:BF:44:ARG:NE	2.34	0.42
41:BG:3:LEU:HD12	41:BG:3:LEU:HA	1.87	0.42
45:BN:38:HIS:O	52:BU:67:ALA:HB1	2.19	0.42
46:BO:17:ARG:HH21	46:BO:47:ILE:HD11	1.84	0.42
47:BP:83:VAL:HG12	47:BP:113:LYS:O	2.19	0.42
47:BP:124:LYS:HD3	47:BP:143:GLY:CA	2.50	0.42
48:BQ:37:LEU:HD21	48:BQ:130:LYS:HB2	2.02	0.42
50:BS:68:GLN:O	50:BS:69:VAL:C	2.62	0.42
51:BT:5:ALA:O	51:BT:7:ILE:N	2.53	0.42
51:BT:113:LYS:O	51:BT:114:LEU:HD23	2.16	0.42
51:BT:132:LYS:HG2	51:BT:133:GLU:N	2.35	0.42
52:BU:110:VAL:O	52:BU:113:ALA:N	2.50	0.42
53:BV:82:ARG:N	53:BV:82:ARG:CD	2.80	0.42
57:BZ:37:VAL:O	57:BZ:38:TYR:HB3	2.19	0.42
1:AA:204:U:O2'	1:AA:216:G:P	2.78	0.42
1:AA:371:G:N2	1:AA:374:A:N6	2.68	0.42
1:AA:432:A:H2'	1:AA:433:C:O4'	2.20	0.42
1:AA:719:C:O2	18:AR:49:LYS:HA	2.20	0.42
1:AA:765:G:H1	1:AA:812:C:H2'	1.85	0.42
1:AA:803:G:C5	1:AA:804:U:C4	3.07	0.42
1:AA:909:A:H2'	1:AA:910:C:O4'	2.20	0.42
1:AA:1137:C:H5'	1:AA:1138:G:C5	2.55	0.42
1:AA:1254:C:H5'	1:AA:1356:G:H4'	2.01	0.42
1:AA:1517:G:H2'	1:AA:1518:A:H5'	2.02	0.42
2:AB:78:GLN:HB3	2:AB:94:ASN:ND2	2.34	0.42
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	2.02	0.42
5:AE:153:LYS:HD3	5:AE:153:LYS:HA	1.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:120:ILE:O	7:AG:124:LEU:HD12	2.19	0.42
7:AG:126:ASP:O	7:AG:130:GLY:N	2.40	0.42
8:AH:109:ILE:CG1	8:AH:110:ALA:N	2.78	0.42
9:AI:86:VAL:HG13	9:AI:87:GLN:N	2.34	0.42
10:AJ:23:ILE:HG22	10:AJ:23:ILE:O	2.20	0.42
10:AJ:32:ALA:N	10:AJ:78:ASN:CG	2.78	0.42
11:AK:18:ARG:O	11:AK:32:ILE:HA	2.20	0.42
11:AK:96:ARG:O	11:AK:99:GLN:HB2	2.19	0.42
11:AK:120:ARG:HA	11:AK:121:PRO:HD3	1.80	0.42
13:AM:77:ASN:C	13:AM:79:LYS:N	2.77	0.42
24:AY:31:ARG:HD2	24:AY:263:ALA:O	2.20	0.42
24:AY:74:TRP:O	24:AY:75:LYS:C	2.61	0.42
24:AY:100:VAL:HG23	24:AY:329:ARG:CG	2.48	0.42
24:AY:165:GLN:HE21	24:AY:177:ILE:HG21	1.85	0.42
24:AY:228:MET:CE	24:AY:229:LEU:HG	2.49	0.42
25:B0:67:VAL:HG12	25:B0:68:GLU:N	2.33	0.42
26:B1:46:LEU:CB	26:B1:63:ALA:HA	2.41	0.42
28:B3:4:LEU:HD23	28:B3:4:LEU:HA	1.86	0.42
30:B5:29:THR:O	30:B5:42:PRO:HD2	2.19	0.42
30:B5:30:LEU:HD23	30:B5:41:PRO:CA	2.50	0.42
33:B8:32:LEU:H	33:B8:32:LEU:CD2	2.33	0.42
33:B8:37:SER:O	33:B8:40:GLU:HB2	2.20	0.42
33:B8:49:VAL:O	33:B8:53:PRO:HG3	2.19	0.42
34:B9:31:LYS:HD3	35:BA:2478:A:OP1	2.20	0.42
35:BA:74:A:H5"	35:BA:75:G:O4'	2.19	0.42
35:BA:90:U:O2	35:BA:90:U:C3'	2.67	0.42
35:BA:176:G:C2'	35:BA:177:G:H5'	2.50	0.42
35:BA:178:G:C6	35:BA:179:G:N7	2.88	0.42
35:BA:212:G:C8	35:BA:212:G:C4'	3.03	0.42
35:BA:307:G:H2'	35:BA:309:G:OP2	2.20	0.42
35:BA:615:G:OP1	40:BF:182:ASN:HB3	2.20	0.42
35:BA:774:A:O2'	35:BA:775:G:OP2	2.33	0.42
35:BA:776:G:H4'	35:BA:777:A:O5'	2.19	0.42
35:BA:1437:C:H2'	35:BA:1438:U:C6	2.55	0.42
35:BA:1545:A:N7	35:BA:1546:C:C2	2.88	0.42
35:BA:1668:A:N7	35:BA:1674:G:C6	2.88	0.42
35:BA:1722:A:H2	35:BA:1740:G:H2'	1.84	0.42
35:BA:1887:C:C2'	35:BA:1888:G:H5"	2.49	0.42
35:BA:2061:G:O6	35:BA:2501:C:O2	2.37	0.42
35:BA:2206:G:H3'	35:BA:2207:G:C5'	2.50	0.42
35:BA:2308:G:N7	35:BA:2310:A:C5'	2.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2328:A:N1	35:BA:2329:G:C6	2.88	0.42
35:BA:2369:A:O2'	35:BA:2370:G:H5'	2.19	0.42
35:BA:2428:G:H5'	35:BA:2429:G:P	2.60	0.42
35:BA:2467:C:H4'	48:BQ:123:HIS:CE1	2.54	0.42
35:BA:2572:A:C8	39:BE:144:ARG:CB	3.03	0.42
35:BA:2693:A:C6	35:BA:2717:G:C6	3.08	0.42
35:BA:2776:A:C6	35:BA:2782:G:H1'	2.55	0.42
35:BA:2886:G:H2'	35:BA:2887:U:H6	1.85	0.42
36:BB:40:U:C2	36:BB:43:C:H5"	2.51	0.42
36:BB:94:C:H2'	36:BB:95:C:C6	2.55	0.42
38:BD:16:MET:HE2	38:BD:211:ARG:HE	1.85	0.42
38:BD:26:LYS:HA	38:BD:26:LYS:HE2	2.01	0.42
39:BE:33:VAL:CG1	39:BE:90:THR:H	2.20	0.42
40:BF:162:LEU:O	40:BF:166:ALA:N	2.51	0.42
42:BH:124:GLU:HB2	42:BH:132:ARG:O	2.20	0.42
43:BK:29:GLN:O	43:BK:59:ILE:CD1	2.67	0.42
43:BK:48:MET:HB2	43:BK:49:GLY:H	1.56	0.42
44:BL:76:THR:OG1	44:BL:77:GLY:N	2.51	0.42
45:BN:78:TYR:N	45:BN:78:TYR:CD1	2.86	0.42
47:BP:124:LYS:HD3	47:BP:143:GLY:HA3	2.02	0.42
50:BS:98:VAL:HG11	50:BS:100:ALA:HB2	2.00	0.42
50:BS:106:ARG:O	50:BS:107:GLU:CB	2.68	0.42
56:BY:44:ILE:CG2	56:BY:45:VAL:H	2.19	0.42
57:BZ:41:LEU:O	57:BZ:45:ASP:N	2.51	0.42
57:BZ:56:VAL:HA	57:BZ:70:LEU:HD23	2.02	0.42
57:BZ:118:GLN:HG2	57:BZ:120:ILE:CD1	2.50	0.42
1:AA:15:G:H4'	5:AE:24:ARG:NH1	2.34	0.42
1:AA:66:G:H4'	1:AA:173:U:H5	1.83	0.42
1:AA:102:G:N3	1:AA:151:A:H2	2.18	0.42
1:AA:321:A:C2	1:AA:333:G:C2	3.08	0.42
1:AA:765:G:N2	1:AA:812:C:O2'	2.52	0.42
1:AA:790:A:H2	1:AA:1497:G:H5"	1.85	0.42
1:AA:809:G:H2'	1:AA:810:C:O5'	2.20	0.42
1:AA:973:G:H1'	10:AJ:55:LYS:HZ2	1.81	0.42
1:AA:1118:C:N4	1:AA:1155:G:H1	2.17	0.42
1:AA:1215:G:C4	1:AA:1216:G:C8	3.08	0.42
1:AA:1226:C:C6	13:AM:103:THR:O	2.73	0.42
1:AA:1226:C:C4	13:AM:104:ARG:HB2	2.54	0.42
1:AA:1234:C:C2'	1:AA:1235:U:H5'	2.50	0.42
1:AA:1271:G:H5'	1:AA:1314:C:H5"	2.02	0.42
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1493:A:OP2	1:AA:1493:A:H8	2.03	0.42
2:AB:86:GLU:C	2:AB:89:GLY:H	2.26	0.42
3:AC:14:ILE:O	3:AC:15:THR:HB	2.20	0.42
3:AC:79:ARG:O	3:AC:82:GLU:OE2	2.38	0.42
3:AC:94:LEU:CD1	3:AC:94:LEU:C	2.93	0.42
4:AD:68:TYR:O	4:AD:69:GLY:C	2.62	0.42
5:AE:144:THR:C	5:AE:146:ALA:N	2.77	0.42
6:AF:72:VAL:CG1	6:AF:73:ASN:N	2.82	0.42
6:AF:91:VAL:CG1	6:AF:92:LYS:N	2.82	0.42
8:AH:35:ILE:HG22	8:AH:39:LEU:CD2	2.50	0.42
9:AI:37:PHE:CE2	9:AI:74:ILE:HG12	2.55	0.42
9:AI:43:ALA:HA	9:AI:74:ILE:HD13	2.01	0.42
9:AI:90:PRO:CG	9:AI:91:ASP:N	2.83	0.42
9:AI:128:ARG:OXT	9:AI:128:ARG:HG2	2.20	0.42
10:AJ:63:PHE:HB2	14:AN:57:ARG:O	2.20	0.42
11:AK:22:HIS:C	11:AK:22:HIS:CD2	2.97	0.42
12:AL:41:ARG:CG	12:AL:42:THR:N	2.53	0.42
13:AM:26:GLY:C	13:AM:28:ALA:N	2.78	0.42
14:AN:41:ARG:NH1	14:AN:41:ARG:HG2	2.29	0.42
17:AQ:56:VAL:O	17:AQ:76:LEU:HD12	2.20	0.42
19:AS:58:VAL:O	19:AS:59:PRO:C	2.63	0.42
24:AY:28:THR:O	24:AY:32:ILE:HG13	2.20	0.42
24:AY:97:SER:O	24:AY:98:MET:C	2.62	0.42
24:AY:357:ARG:HG3	24:AY:357:ARG:NH1	2.35	0.42
24:AY:526:VAL:CG1	24:AY:566:THR:HG23	2.50	0.42
24:AY:635:GLU:OE2	24:AY:644:ARG:NH1	2.53	0.42
28:B3:1:MET:SD	28:B3:40:THR:HG22	2.60	0.42
29:B4:26:SER:HB3	41:BG:105:LYS:HZ2	1.83	0.42
35:BA:154(A):C:N4	35:BA:171:G:H1	2.17	0.42
35:BA:185:U:H2'	35:BA:186:G:C8	2.54	0.42
35:BA:332:A:C6	35:BA:335:C:C2	3.08	0.42
35:BA:347:A:H2'	35:BA:348:G:H8	1.85	0.42
35:BA:545:C:H2'	35:BA:547:A:C5'	2.42	0.42
35:BA:1122:G:H2'	35:BA:1122:G:N3	2.34	0.42
35:BA:1536:C:H2'	35:BA:1537:G:H4'	2.01	0.42
35:BA:1798:U:C4	35:BA:1819:A:C2	3.08	0.42
35:BA:1799:G:H5'	35:BA:1819:A:H61	1.84	0.42
35:BA:2193:G:H2'	35:BA:2194:G:O5'	2.19	0.42
35:BA:2286:A:C6	35:BA:2346:A:N6	2.88	0.42
35:BA:2380:C:C5	35:BA:2381:C:H5	2.38	0.42
37:BC:98:GLU:HA	37:BC:101:ILE:HD11	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:134:PRO:C	37:BC:135:ARG:HD2	2.45	0.42
38:BD:35:LYS:CD	38:BD:36:PRO:N	2.72	0.42
38:BD:77:ALA:HB2	38:BD:97:TYR:CG	2.55	0.42
39:BE:69:LYS:C	39:BE:71:GLY:N	2.73	0.42
39:BE:147:PRO:HG2	39:BE:148:GLY:N	2.34	0.42
40:BF:6:VAL:O	40:BF:6:VAL:HG12	2.19	0.42
40:BF:116:ASP:OD2	47:BP:5:ASP:N	2.53	0.42
41:BG:47:LYS:HG2	41:BG:81:LYS:CB	2.50	0.42
42:BH:31:GLY:O	42:BH:79:VAL:CG1	2.68	0.42
42:BH:33:LEU:HD21	42:BH:136:ILE:HG22	2.02	0.42
42:BH:128:PRO:HG2	42:BH:129:THR:N	2.35	0.42
46:BO:115:VAL:CG1	46:BO:121:VAL:HG21	2.47	0.42
48:BQ:21:THR:O	48:BQ:22:LYS:CB	2.67	0.42
52:BU:80:ILE:O	52:BU:80:ILE:CG2	2.68	0.42
54:BW:49:LYS:HB2	54:BW:49:LYS:HE3	1.73	0.42
54:BW:59:VAL:O	54:BW:59:VAL:CG1	2.61	0.42
56:BY:18:GLY:O	56:BY:21:LYS:HB2	2.20	0.42
56:BY:95:LYS:HB3	56:BY:100:ALA:HA	2.02	0.42
57:BZ:14:LYS:HB2	57:BZ:17:ALA:HB3	2.02	0.42
1:AA:50:A:H62	1:AA:361:G:H4'	1.79	0.41
1:AA:129(A):G:O2'	1:AA:189(F):U:O5'	2.33	0.41
1:AA:720:C:H2'	1:AA:721:G:C8	2.54	0.41
1:AA:751:U:H2'	1:AA:752:G:O4'	2.20	0.41
1:AA:814:A:H5'	1:AA:1511:G:H4'	2.02	0.41
1:AA:1030:C:H2'	1:AA:1030(A):G:H5'	2.02	0.41
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.20	0.41
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.55	0.41
1:AA:1480:G:N2	1:AA:1481:U:H1'	2.35	0.41
4:AD:108:LEU:HD12	4:AD:108:LEU:HA	1.88	0.41
5:AE:33:VAL:CG1	5:AE:112:LEU:HD12	2.49	0.41
6:AF:6:VAL:HB	6:AF:63:TYR:HB2	2.01	0.41
6:AF:29:ALA:O	6:AF:30:LEU:C	2.63	0.41
7:AG:62:PHE:O	7:AG:63:LYS:C	2.63	0.41
7:AG:81:GLY:O	7:AG:83:ALA:N	2.51	0.41
7:AG:143:ARG:O	7:AG:147:ALA:HB2	2.20	0.41
9:AI:5:TYR:O	9:AI:84:ALA:HA	2.20	0.41
9:AI:118:LYS:C	9:AI:120:ARG:H	2.28	0.41
11:AK:80:VAL:O	11:AK:80:VAL:HG23	2.19	0.41
12:AL:70:ILE:HG23	12:AL:100:ILE:HD12	2.01	0.41
19:AS:19:VAL:HG12	19:AS:20:LEU:HD23	2.01	0.41
20:AT:16:HIS:O	20:AT:19:SER:HB3	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:19:G:C4	22:AV:57:A:C2	3.08	0.41
24:AY:329:ARG:HD3	24:AY:374:LEU:CD1	2.40	0.41
24:AY:388:THR:HG21	24:AY:399:LEU:HD13	1.99	0.41
24:AY:428:LEU:HD13	24:AY:440:VAL:CG1	2.24	0.41
24:AY:438:PHE:O	24:AY:439:ARG:CG	2.68	0.41
24:AY:482:ALA:O	24:AY:676:TYR:HE1	2.03	0.41
24:AY:486:THR:HB	24:AY:561:VAL:O	2.19	0.41
28:B3:13:ILE:HD11	35:BA:989:G:C8	2.54	0.41
33:B8:47:LYS:HZ3	33:B8:49:VAL:HG13	1.85	0.41
33:B8:55:ALA:C	33:B8:59:LYS:HZ3	2.26	0.41
35:BA:9:U:C5	35:BA:2629:A:N6	2.86	0.41
35:BA:84:A:H5'	56:BY:9:LYS:CB	2.50	0.41
35:BA:253:C:O2'	35:BA:254:G:H5'	2.20	0.41
35:BA:476:G:C2	35:BA:479:A:C8	3.08	0.41
35:BA:569:U:OP1	35:BA:945:A:C8	2.73	0.41
35:BA:801:G:O4'	40:BF:54:ARG:HD3	2.20	0.41
35:BA:933:A:H2'	35:BA:934:G:O4'	2.20	0.41
35:BA:1005:C:C4	35:BA:1006:C:N4	2.88	0.41
35:BA:1167:U:C2	35:BA:1183:G:N2	2.88	0.41
35:BA:1303:G:H5'	35:BA:1642:G:H21	1.84	0.41
35:BA:1343:G:N2	35:BA:1405:U:C2	2.88	0.41
35:BA:1669:A:C2	35:BA:1994:C:H1'	2.54	0.41
35:BA:1709:U:C2	35:BA:1750:G:N2	2.88	0.41
35:BA:1884:A:C2'	35:BA:1885:A:C5'	2.89	0.41
35:BA:2031:A:C5	35:BA:2498:C:H1'	2.55	0.41
35:BA:2290:G:C6	35:BA:2291:U:N3	2.88	0.41
35:BA:2337:G:H2'	35:BA:2338:G:C8	2.55	0.41
35:BA:2495:G:H5"	48:BQ:82:ARG:HG2	2.01	0.41
35:BA:2527:C:O2	35:BA:2527:C:H2'	2.20	0.41
35:BA:2620:C:H1'	39:BE:156:MET:HB2	2.02	0.41
35:BA:2748:A:C5	35:BA:2757:A:C6	3.08	0.41
35:BA:2755:C:O2	35:BA:2755:C:H2'	2.19	0.41
36:BB:82:G:C2'	36:BB:83:G:C5'	2.98	0.41
38:BD:51:VAL:HG12	38:BD:54:ARG:HG2	2.02	0.41
39:BE:89:ASP:O	39:BE:90:THR:O	2.37	0.41
39:BE:110:GLY:C	49:BR:2:ARG:HD3	2.44	0.41
39:BE:113:PHE:C	39:BE:113:PHE:CD1	2.98	0.41
39:BE:126:PRO:O	39:BE:126:PRO:HG2	2.20	0.41
40:BF:20:LEU:HD23	40:BF:21:ALA:H	1.79	0.41
40:BF:168:ARG:C	40:BF:170:LEU:H	2.28	0.41
40:BF:202:PHE:O	40:BF:206:ILE:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:106:LEU:HD12	41:BG:110:ALA:CB	2.50	0.41
41:BG:140:ILE:H	41:BG:140:ILE:CD1	2.13	0.41
42:BH:76:VAL:C	42:BH:78:GLY:H	2.28	0.41
42:BH:121:ILE:HA	42:BH:134:SER:O	2.20	0.41
43:BK:70:LYS:HE3	43:BK:70:LYS:CA	2.50	0.41
43:BK:95:LYS:HG2	43:BK:137:GLU:CG	2.50	0.41
45:BN:55:VAL:HG22	45:BN:126:PRO:CA	2.41	0.41
47:BP:125:VAL:O	47:BP:145:PRO:CD	2.56	0.41
48:BQ:21:THR:O	48:BQ:21:THR:HG22	2.20	0.41
48:BQ:24:GLY:O	48:BQ:101:ARG:HD2	2.19	0.41
48:BQ:110:THR:CG2	48:BQ:113:GLN:CG	2.94	0.41
48:BQ:118:LEU:HD23	48:BQ:118:LEU:HA	1.67	0.41
49:BR:43:GLU:OE1	49:BR:43:GLU:HA	2.20	0.41
50:BS:17:ARG:O	50:BS:20:ARG:CG	2.67	0.41
56:BY:10:GLY:O	56:BY:27:VAL:HG22	2.19	0.41
57:BZ:14:LYS:HB3	57:BZ:17:ALA:CB	2.50	0.41
1:AA:43:C:O5'	1:AA:43:C:H6	2.03	0.41
1:AA:251:G:H4'	1:AA:252:U:O5'	2.20	0.41
1:AA:291:C:O2'	1:AA:292:G:C5'	2.59	0.41
1:AA:862:C:O2'	1:AA:863:U:H5'	2.21	0.41
1:AA:937:A:C2	1:AA:1379:G:O6	2.73	0.41
1:AA:1050:G:C2	1:AA:1209:C:O2	2.73	0.41
1:AA:1352:C:OP1	21:AU:3:LYS:HE2	2.20	0.41
1:AA:1456:G:N2	1:AA:1457:G:C4	2.88	0.41
7:AG:4:ARG:HB3	7:AG:5:ARG:HH11	1.85	0.41
12:AL:30:ALA:HA	12:AL:31:PRO:HD3	1.86	0.41
13:AM:7:VAL:O	13:AM:7:VAL:HG12	2.21	0.41
13:AM:109:THR:O	13:AM:109:THR:HG22	2.20	0.41
17:AQ:67:LYS:HA	17:AQ:70:ARG:NH1	2.34	0.41
18:AR:52:PRO:HB2	18:AR:54:ARG:HG3	2.01	0.41
19:AS:79:THR:CG2	19:AS:80:TYR:N	2.83	0.41
20:AT:28:ALA:C	20:AT:30:LYS:N	2.77	0.41
20:AT:36:LEU:HD21	20:AT:55:ILE:CG2	2.50	0.41
22:AV:20:U:H3'	22:AV:21:A:C5'	2.36	0.41
24:AY:128:TYR:O	24:AY:129:LYS:CB	2.63	0.41
24:AY:355:LEU:N	24:AY:355:LEU:HD22	2.35	0.41
26:B1:11:ARG:HB3	26:B1:11:ARG:NH1	2.35	0.41
26:B1:27:GLU:O	26:B1:28:GLY:C	2.63	0.41
29:B4:14:ILE:HG22	29:B4:15:ILE:H	1.85	0.41
31:B6:5:VAL:O	31:B6:8:LYS:HB3	2.19	0.41
31:B6:37:ARG:O	31:B6:38:LYS:C	2.62	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:90:U:H4'	35:BA:92:A:C8	2.56	0.41
35:BA:320:A:H4'	35:BA:322:A:N7	2.35	0.41
35:BA:331:A:N3	35:BA:1209:G:C6	2.88	0.41
35:BA:464:U:C2	35:BA:788:A:N6	2.89	0.41
35:BA:968:G:C6	35:BA:969:U:C4	3.08	0.41
35:BA:999:U:OP2	35:BA:1153:C:OP2	2.38	0.41
35:BA:1066:U:O5'	35:BA:1066:U:H6	2.03	0.41
35:BA:1121:C:H2'	35:BA:1122:G:O4'	2.20	0.41
35:BA:1285:G:C5	35:BA:1329:U:C4	3.08	0.41
35:BA:1336:A:H2'	35:BA:1337:G:H8	1.85	0.41
35:BA:1472:A:H2'	35:BA:1473:G:C8	2.55	0.41
35:BA:1517:G:H5'	35:BA:1517:G:C8	2.53	0.41
35:BA:2056:G:N2	35:BA:2057:A:C8	2.88	0.41
35:BA:2056:G:C5	35:BA:2577:A:C5	3.08	0.41
35:BA:2126:A:O2'	35:BA:2127:G:P	2.77	0.41
35:BA:2137:C:N3	35:BA:2155:G:C2	2.88	0.41
35:BA:2538:C:O5'	35:BA:2538:C:H6	2.03	0.41
35:BA:2601:C:H2'	35:BA:2603:G:C8	2.55	0.41
35:BA:2787:C:O2	39:BE:61:ARG:HD3	2.20	0.41
35:BA:2849:U:H1'	35:BA:2866:U:H6	1.86	0.41
36:BB:73:A:N7	36:BB:74:U:C5	2.88	0.41
37:BC:14:LYS:O	37:BC:15:VAL:HG13	2.20	0.41
37:BC:37:LYS:O	37:BC:38:PHE:CB	2.68	0.41
38:BD:109:ASP:C	38:BD:111:LEU:H	2.28	0.41
38:BD:150:LYS:HA	38:BD:150:LYS:HD3	1.96	0.41
39:BE:117:MET:O	39:BE:117:MET:CG	2.62	0.41
40:BF:80:ALA:O	40:BF:83:PHE:HB2	2.20	0.41
40:BF:162:LEU:C	40:BF:164:ARG:N	2.73	0.41
41:BG:42:GLY:O	41:BG:88:ILE:HG23	2.20	0.41
41:BG:97:ASP:N	41:BG:100:TRP:HD1	1.94	0.41
42:BH:93:GLY:C	42:BH:94:TYR:HD1	2.29	0.41
48:BQ:28:ALA:C	48:BQ:29:PHE:CD1	2.98	0.41
51:BT:129:ARG:O	51:BT:131:ALA:N	2.45	0.41
52:BU:53:ARG:O	52:BU:56:ASP:HB2	2.20	0.41
53:BV:18:LEU:CG	53:BV:19:LYS:N	2.73	0.41
57:BZ:54:HIS:CE1	57:BZ:123:ASP:OD2	2.73	0.41
57:BZ:79:ARG:O	57:BZ:79:ARG:HG3	2.19	0.41
1:AA:64:G:C2	1:AA:67:C:N4	2.88	0.41
1:AA:346:G:OP1	51:BT:41:ARG:CZ	2.68	0.41
1:AA:354:G:C2	1:AA:355:C:C5	3.08	0.41
1:AA:532:A:H2'	1:AA:533:A:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:602:A:H2'	1:AA:603:U:C6	2.55	0.41
1:AA:608:A:O2'	1:AA:609:A:H5'	2.20	0.41
1:AA:694:A:H2'	1:AA:695:A:O4'	2.20	0.41
1:AA:703:G:O2'	1:AA:704:A:P	2.78	0.41
1:AA:973:G:C3'	1:AA:974:A:H5"	2.40	0.41
1:AA:1002:G:N2	1:AA:1039:C:H2'	2.36	0.41
1:AA:1053:G:C4	1:AA:1199:U:C5	3.09	0.41
2:AB:166:ASP:HB2	2:AB:205:ASP:OD2	2.19	0.41
4:AD:35:ARG:O	4:AD:37:PRO:HD3	2.19	0.41
4:AD:56:VAL:HG12	4:AD:202:LEU:CD1	2.48	0.41
6:AF:11:ASN:HB3	6:AF:14:LEU:CD1	2.51	0.41
6:AF:30:LEU:HD23	6:AF:30:LEU:HA	1.82	0.41
8:AH:114:THR:C	8:AH:116:LYS:H	2.28	0.41
10:AJ:33:GLN:N	10:AJ:75:ILE:CD1	2.82	0.41
12:AL:91:LYS:HB2	12:AL:91:LYS:HE2	1.86	0.41
15:AO:26:GLU:CG	15:AO:77:ARG:HH12	2.33	0.41
17:AQ:8:GLY:HA3	17:AQ:22:LEU:O	2.20	0.41
18:AR:84:LYS:HA	18:AR:84:LYS:HD3	1.90	0.41
19:AS:7:LYS:HD3	19:AS:7:LYS:HA	1.78	0.41
21:AU:6:ARG:NH2	21:AU:15:ARG:NH2	2.68	0.41
22:AV:35:A:C6	22:AV:36:U:C4	3.07	0.41
24:AY:138:LYS:HE2	59:AY:702:GDP:N9	2.36	0.41
24:AY:274:ASP:C	24:AY:276:VAL:N	2.77	0.41
27:B2:18:PRO:O	27:B2:19:VAL:C	2.64	0.41
27:B2:69:ARG:O	27:B2:70:GLN:CB	2.59	0.41
28:B3:17:LYS:HZ2	28:B3:20:LYS:CE	2.26	0.41
31:B6:9:LEU:HD13	31:B6:26:ASN:HB2	2.01	0.41
35:BA:27:G:H1'	35:BA:513:A:N6	2.35	0.41
35:BA:744:G:H3'	35:BA:745:G:H8	1.85	0.41
35:BA:1271:G:H21	35:BA:1617:C:H1'	1.85	0.41
35:BA:1680:U:O2'	35:BA:1681:G:H5'	2.20	0.41
35:BA:1700:A:H2'	35:BA:1701:A:H5'	2.03	0.41
35:BA:1797:C:O2'	35:BA:1798:U:H5'	2.20	0.41
35:BA:2414:G:C2	35:BA:2415:G:C8	3.09	0.41
35:BA:2416:C:H2'	35:BA:2417:C:C6	2.55	0.41
35:BA:2787:C:O2	35:BA:2787:C:H2'	2.19	0.41
35:BA:2843:G:C2	35:BA:2875:C:N3	2.88	0.41
36:BB:62:C:C2	36:BB:63:G:C8	3.07	0.41
36:BB:104:U:O3'	57:BZ:72:ARG:NH1	2.53	0.41
36:BB:111:G:O2'	36:BB:112:U:H5'	2.21	0.41
37:BC:132:LEU:HD22	37:BC:137:LEU:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:41:LEU:CD2	40:BF:44:ARG:HH21	2.34	0.41
41:BG:91:ARG:CG	41:BG:92:VAL:N	2.83	0.41
41:BG:172:LEU:CD2	41:BG:176:LEU:HD21	2.50	0.41
42:BH:118:PRO:CG	42:BH:121:ILE:HD12	2.47	0.41
42:BH:138:LYS:C	42:BH:140:LYS:H	2.29	0.41
42:BH:170:ARG:HG2	42:BH:170:ARG:NH1	2.34	0.41
46:BO:104:ARG:NE	51:BT:33:LYS:CE	2.79	0.41
47:BP:85:LEU:HD12	47:BP:120:ALA:CB	2.46	0.41
47:BP:89:ALA:HA	47:BP:121:LYS:HD3	2.02	0.41
52:BU:84:LYS:C	52:BU:86:ALA:N	2.73	0.41
52:BU:86:ALA:HB3	52:BU:88:ILE:HG12	2.02	0.41
53:BV:45:THR:O	53:BV:46:VAL:HG12	2.20	0.41
54:BW:25:ARG:HB2	54:BW:25:ARG:NH1	2.35	0.41
57:BZ:141:VAL:CG1	57:BZ:142:SER:N	2.82	0.41
1:AA:37:U:C2'	1:AA:38:G:H5'	2.50	0.41
1:AA:369:C:C2	1:AA:393:A:C2	3.08	0.41
1:AA:537:G:H2'	1:AA:538:G:H8	1.85	0.41
1:AA:936:C:H2'	1:AA:937:A:C5'	2.50	0.41
1:AA:1299:A:C6	1:AA:1301:U:O2	2.74	0.41
1:AA:1430:C:H2'	1:AA:1431:C:H6	1.83	0.41
7:AG:27:ILE:O	7:AG:27:ILE:HG23	2.21	0.41
14:AN:18:VAL:HG23	14:AN:19:ARG:N	2.35	0.41
18:AR:68:LYS:O	18:AR:71:LYS:HB2	2.20	0.41
21:AU:21:TYR:CD1	21:AU:21:TYR:N	2.88	0.41
22:AV:61:C:C2'	22:AV:62:C:H5'	2.49	0.41
24:AY:12:LEU:HB3	24:AY:283:PRO:CG	2.50	0.41
24:AY:38:ARG:O	24:AY:39:ILE:C	2.62	0.41
24:AY:334:THR:HG23	24:AY:370:LYS:HA	2.02	0.41
24:AY:350:GLU:OE1	24:AY:350:GLU:HA	2.21	0.41
27:B2:10:LEU:HA	27:B2:10:LEU:HD23	1.80	0.41
27:B2:64:LEU:C	27:B2:64:LEU:CD1	2.93	0.41
28:B3:34:GLU:O	28:B3:35:ARG:HB2	2.20	0.41
28:B3:43:ILE:O	28:B3:47:VAL:HG23	2.20	0.41
29:B4:9:LEU:HD13	29:B4:26:SER:C	2.45	0.41
31:B6:38:LYS:O	31:B6:39:TYR:CD1	2.72	0.41
35:BA:272(I):U:C4	35:BA:363(A):A:N1	2.81	0.41
35:BA:299:A:C6	35:BA:300:A:C6	3.08	0.41
35:BA:444:C:OP2	52:BU:2:PRO:HD3	2.20	0.41
35:BA:483:A:H2'	35:BA:483:A:N3	2.35	0.41
35:BA:823:G:C6	35:BA:824:A:C6	3.08	0.41
35:BA:869:G:C4	35:BA:870:A:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1020:A:C2'	35:BA:1021:A:OP2	2.68	0.41
35:BA:1412:A:C2'	35:BA:1413:G:H5'	2.49	0.41
35:BA:1509(B):A:H2'	35:BA:1510:G:O4'	2.21	0.41
35:BA:1565:C:C2	35:BA:1567:A:C8	3.08	0.41
35:BA:1849:G:N3	35:BA:1849:G:H2'	2.36	0.41
35:BA:1948:G:C5'	35:BA:1948:G:H8	2.27	0.41
35:BA:2196:C:H2'	35:BA:2197:U:C6	2.55	0.41
35:BA:2310:A:O4'	35:BA:2310:A:N3	2.51	0.41
35:BA:2512:C:H5"	39:BE:122:PHE:CE2	2.55	0.41
35:BA:2555:U:C5	35:BA:2556:C:N1	2.88	0.41
35:BA:2876:G:H5'	51:BT:3:ARG:HA	2.01	0.41
36:BB:66:A:H4'	36:BB:67:G:OP1	2.19	0.41
36:BB:76:G:O3'	57:BZ:19:ARG:NH2	2.53	0.41
36:BB:82:G:C2	36:BB:83:G:C8	3.08	0.41
36:BB:103:G:OP2	36:BB:103:G:H8	2.03	0.41
37:BC:156:GLU:OE2	37:BC:161:ARG:HD3	2.21	0.41
38:BD:165:ILE:CD1	38:BD:175:LEU:HD21	2.39	0.41
39:BE:94:GLU:OE1	39:BE:177:PRO:CB	2.68	0.41
40:BF:169:ASN:C	40:BF:170:LEU:HD22	2.46	0.41
41:BG:2:PRO:HB2	41:BG:3:LEU:H	1.48	0.41
41:BG:82:LEU:HD21	41:BG:87:PRO:HB3	2.01	0.41
41:BG:164:GLU:C	41:BG:165:THR:CG2	2.92	0.41
42:BH:35:VAL:HG12	42:BH:37:VAL:CG2	2.50	0.41
43:BK:19:PRO:HD3	43:BK:35:MET:HE3	2.02	0.41
45:BN:133:GLN:NE2	45:BN:135:PRO:HG2	2.33	0.41
47:BP:17:LYS:O	47:BP:19:VAL:N	2.53	0.41
49:BR:77:ARG:C	49:BR:79:LEU:H	2.28	0.41
50:BS:19:LYS:O	50:BS:19:LYS:HG2	2.20	0.41
50:BS:80:LEU:HD23	50:BS:80:LEU:HA	1.91	0.41
51:BT:45:PHE:HE2	51:BT:74:ARG:HB2	1.75	0.41
53:BV:61:VAL:HG22	53:BV:63:GLY:H	1.85	0.41
54:BW:66:GLU:O	54:BW:68:ARG:N	2.54	0.41
57:BZ:9:TYR:CB	57:BZ:35:ARG:HH22	2.31	0.41
1:AA:113:G:C2	1:AA:315:A:C2	3.09	0.41
1:AA:252:U:H5'	1:AA:253:U:OP2	2.20	0.41
1:AA:409:G:C5'	4:AD:25:ARG:HB2	2.50	0.41
1:AA:1030:C:H41	1:AA:1032:G:N2	2.17	0.41
1:AA:1055:A:H8	1:AA:1055:A:O5'	2.03	0.41
1:AA:1129:C:C5	1:AA:1139:G:C4	3.09	0.41
1:AA:1466:C:N4	1:AA:1467:G:C2	2.89	0.41
2:AB:180:LEU:C	2:AB:181:PHE:CD1	2.98	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:36:ASP:O	3:AC:39:ILE:N	2.49	0.41
3:AC:65:ALA:O	3:AC:66:VAL:CB	2.60	0.41
3:AC:78:GLY:CA	3:AC:83:ARG:HB3	2.50	0.41
4:AD:60:GLU:OE2	4:AD:198:VAL:HA	2.19	0.41
4:AD:61:LYS:NZ	4:AD:72:GLU:OE1	2.34	0.41
4:AD:97:LEU:HD23	4:AD:97:LEU:HA	1.72	0.41
9:AI:3:GLN:NE2	9:AI:20:ARG:NH2	2.68	0.41
10:AJ:4:ILE:CB	10:AJ:74:ILE:HD11	2.50	0.41
11:AK:58:PRO:O	11:AK:59:TYR:C	2.62	0.41
13:AM:44:ARG:H	13:AM:44:ARG:HG2	1.71	0.41
13:AM:54:VAL:HG12	13:AM:58:GLU:HG2	2.03	0.41
23:AX:16:A:O2'	23:AX:17:U:H5'	2.20	0.41
24:AY:86:GLY:O	24:AY:87:HIS:CB	2.65	0.41
24:AY:130:VAL:HA	24:AY:131:PRO:HD3	1.84	0.41
25:B0:84:LEU:H	25:B0:84:LEU:HG	1.62	0.41
26:B1:88:LYS:O	26:B1:88:LYS:CG	2.65	0.41
27:B2:59:ARG:O	27:B2:61:LEU:N	2.53	0.41
29:B4:2:LYS:HB2	36:BB:40:U:C4	2.55	0.41
31:B6:12:GLU:HA	31:B6:23:THR:HA	2.03	0.41
35:BA:66:C:C4	35:BA:67:U:C4	3.09	0.41
35:BA:78:A:O2'	35:BA:79:G:H5'	2.20	0.41
35:BA:221:A:N7	35:BA:266:G:C6	2.89	0.41
35:BA:329:G:H4'	35:BA:330:A:OP2	2.21	0.41
35:BA:552:G:O2'	35:BA:553:G:H5'	2.19	0.41
35:BA:605:C:C4	35:BA:606:U:C5	3.09	0.41
35:BA:613:G:H8	35:BA:613:G:C5'	2.34	0.41
35:BA:654(R):C:O2'	35:BA:654(S):G:H8	2.04	0.41
35:BA:812:C:H1'	35:BA:1250:G:N2	2.36	0.41
35:BA:939:G:H2'	35:BA:939:G:N3	2.35	0.41
35:BA:1081:U:H4'	43:BK:117:THR:CG2	2.51	0.41
35:BA:1118:C:H2'	35:BA:1119:C:C6	2.56	0.41
35:BA:1313:U:C2	35:BA:1610:A:C2	3.09	0.41
35:BA:1482:G:N3	35:BA:1482:G:H2'	2.36	0.41
35:BA:1528:A:C2	35:BA:1542:A:H2	2.38	0.41
35:BA:1827:C:H2'	35:BA:1828:G:O4'	2.20	0.41
35:BA:1930:G:O2'	35:BA:1931:U:O5'	2.38	0.41
35:BA:2476:A:C3'	35:BA:2477:C:H5"	2.50	0.41
35:BA:2555:U:C2'	35:BA:2556:C:H5'	2.49	0.41
35:BA:2766:G:N3	35:BA:2766:G:H2'	2.34	0.41
35:BA:2835:A:O2'	35:BA:2836:U:P	2.79	0.41
37:BC:19:LYS:CG	37:BC:20:VAL:N	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:65:LEU:CD1	37:BC:189:ASN:ND2	2.80	0.41
37:BC:73:VAL:O	37:BC:158:LYS:HE3	2.20	0.41
37:BC:181:PHE:HA	37:BC:182:PRO:HD3	1.74	0.41
38:BD:26:LYS:O	38:BD:27:THR:HB	2.20	0.41
38:BD:41:GLY:O	38:BD:42:GLY:O	2.38	0.41
38:BD:130:ALA:HB2	38:BD:192:THR:HB	2.02	0.41
38:BD:158:ALA:O	38:BD:196:VAL:CG1	2.68	0.41
38:BD:245:PRO:O	38:BD:245:PRO:CG	2.69	0.41
39:BE:167:VAL:HG12	39:BE:189:PRO:CD	2.50	0.41
40:BF:39:TRP:CB	40:BF:101:LEU:HD22	2.51	0.41
40:BF:150:GLY:HA2	40:BF:172:TRP:CE3	2.55	0.41
40:BF:170:LEU:HB2	40:BF:173:VAL:CG2	2.51	0.41
42:BH:120:GLY:C	42:BH:121:ILE:HG13	2.45	0.41
45:BN:55:VAL:CG2	45:BN:126:PRO:HA	2.43	0.41
48:BQ:29:PHE:CD1	48:BQ:29:PHE:N	2.88	0.41
48:BQ:139:GLU:OE1	48:BQ:141:GLN:HG3	2.20	0.41
49:BR:48:VAL:O	49:BR:49:ASP:C	2.63	0.41
50:BS:89:ARG:HE	50:BS:91:PRO:HG2	1.86	0.41
51:BT:107:ASP:N	51:BT:107:ASP:OD1	2.50	0.41
55:BX:36:LYS:CE	55:BX:54:VAL:O	2.68	0.41
56:BY:28:LYS:HE3	56:BY:28:LYS:HB2	1.72	0.41
56:BY:38:ILE:CG2	56:BY:39:VAL:N	2.84	0.41
57:BZ:14:LYS:O	57:BZ:18:LEU:HD13	2.20	0.41
1:AA:179:A:H2'	1:AA:180:U:H6	1.77	0.41
1:AA:216:G:O2'	1:AA:217:C:O5'	2.39	0.41
1:AA:311:C:H2'	1:AA:312:C:H6	1.85	0.41
1:AA:501:C:H1'	1:AA:549:C:H1'	2.01	0.41
1:AA:946:A:H3'	1:AA:947:G:C8	2.56	0.41
1:AA:1000:U:H3'	1:AA:1000:U:H6	1.86	0.41
1:AA:1139:G:N2	1:AA:1143:G:C6	2.89	0.41
1:AA:1360:A:H2'	1:AA:1361:G:O4'	2.21	0.41
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.20	0.41
2:AB:120:ALA:O	2:AB:121:LEU:CD2	2.57	0.41
2:AB:212:GLN:O	2:AB:216:SER:CB	2.69	0.41
3:AC:119:ARG:O	3:AC:122:GLU:HB2	2.21	0.41
3:AC:154:SER:HG	3:AC:196:LEU:HD13	1.85	0.41
4:AD:73:ARG:HA	4:AD:73:ARG:HD3	1.83	0.41
4:AD:84:LYS:HA	4:AD:84:LYS:HD3	1.86	0.41
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.21	0.41
5:AE:5:ASP:O	5:AE:6:PHE:CG	2.72	0.41
5:AE:123:LEU:HD23	5:AE:123:LEU:HA	1.71	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:4:ARG:HB3	7:AG:5:ARG:HD2	2.03	0.41
8:AH:27:PRO:CA	8:AH:58:TYR:CD1	3.03	0.41
9:AI:50:LEU:CB	9:AI:56:LEU:HG	2.50	0.41
12:AL:38:THR:C	12:AL:39:VAL:HG23	2.45	0.41
13:AM:74:VAL:CA	13:AM:77:ASN:HD22	2.33	0.41
15:AO:26:GLU:HG3	15:AO:77:ARG:HH12	1.85	0.41
17:AQ:22:LEU:HD13	17:AQ:41:LYS:HG2	2.03	0.41
19:AS:43:GLU:O	19:AS:44:MET:C	2.64	0.41
20:AT:94:ALA:O	20:AT:95:ALA:CB	2.68	0.41
24:AY:174:PHE:HE2	24:AY:267:LYS:HB2	1.85	0.41
24:AY:227:ILE:CD1	24:AY:241:GLU:O	2.63	0.41
24:AY:456:GLU:O	24:AY:457:LEU:C	2.64	0.41
24:AY:483:TYR:O	24:AY:484:ARG:HD3	2.21	0.41
24:AY:491:VAL:CG1	24:AY:492:ASP:N	2.79	0.41
26:B1:71:TYR:C	26:B1:73:LEU:N	2.78	0.41
28:B3:40:THR:HG23	28:B3:43:ILE:HG13	2.03	0.41
30:B5:55:ARG:NH2	49:BR:33:ARG:HD2	2.35	0.41
34:B9:11:CYS:HB3	34:B9:32:HIS:HE1	1.85	0.41
35:BA:533:G:C5'	52:BU:24:TYR:CD1	2.96	0.41
35:BA:603:A:HO2'	35:BA:604:G:P	2.43	0.41
35:BA:613:G:C6	35:BA:614:U:C5	3.09	0.41
35:BA:669:G:N3	35:BA:669:G:H2'	2.34	0.41
35:BA:814:C:C5	47:BP:27:HIS:CE1	3.07	0.41
35:BA:1007:C:H5"	45:BN:35:ARG:NH1	2.35	0.41
35:BA:1127:A:C6	35:BA:2518:A:C2	3.08	0.41
35:BA:2185:C:O2	35:BA:2185:C:H2'	2.20	0.41
35:BA:2679:A:H4'	39:BE:165:VAL:HG11	2.03	0.41
35:BA:2794:C:N4	35:BA:2801(A):A:N6	2.67	0.41
36:BB:93:G:O2'	36:BB:94:C:H5'	2.21	0.41
37:BC:139:PRO:HA	37:BC:145:THR:HG21	2.03	0.41
37:BC:172:ILE:HG21	37:BC:197:LEU:HD11	2.03	0.41
39:BE:69:LYS:O	39:BE:71:GLY:N	2.53	0.41
40:BF:89:VAL:CG1	40:BF:90:PHE:H	2.33	0.41
41:BG:15:VAL:HG22	41:BG:175:LEU:O	2.20	0.41
45:BN:123:TYR:CD1	45:BN:123:TYR:N	2.88	0.41
48:BQ:12:GLN:NE2	48:BQ:72:LYS:HG3	2.36	0.41
48:BQ:47:ILE:O	48:BQ:48:GLU:C	2.63	0.41
49:BR:45:ARG:O	49:BR:46:GLY:C	2.63	0.41
51:BT:8:LYS:C	51:BT:10:VAL:N	2.78	0.41
51:BT:27:THR:C	51:BT:28:VAL:HG23	2.41	0.41
51:BT:35:LYS:NZ	51:BT:41:ARG:NH1	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BU:74:LEU:C	52:BU:74:LEU:CD1	2.93	0.41
57:BZ:23:LYS:HB3	57:BZ:38:TYR:HD2	1.85	0.41
57:BZ:107:THR:CG2	57:BZ:111:VAL:HB	2.51	0.41
57:BZ:119:GLU:C	57:BZ:121:HIS:N	2.79	0.41
1:AA:10:A:H2'	1:AA:11:G:C8	2.55	0.41
1:AA:67:C:H4'	1:AA:172:A:O4'	2.20	0.41
1:AA:311:C:HO2'	1:AA:312:C:H5'	1.83	0.41
1:AA:448:A:O2'	1:AA:449:C:H5'	2.20	0.41
1:AA:579:G:H5'	1:AA:728:A:O2'	2.21	0.41
1:AA:963:G:H21	10:AJ:55:LYS:HD2	1.85	0.41
1:AA:985:C:H2'	1:AA:986:A:C8	2.55	0.41
1:AA:1009:G:N3	1:AA:1009:G:H2'	2.35	0.41
1:AA:1473:A:C2'	1:AA:1474:G:H5'	2.49	0.41
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.55	0.41
3:AC:29:TYR:OH	14:AN:54:PRO:HD2	2.20	0.41
3:AC:47:LEU:HB3	3:AC:52:LEU:HD22	2.02	0.41
3:AC:90:GLU:OE1	3:AC:93:LYS:HD2	2.21	0.41
4:AD:29:PRO:C	4:AD:30:LYS:CG	2.88	0.41
4:AD:190:ASP:HB3	4:AD:193:ASP:OD2	2.20	0.41
5:AE:107:ARG:O	5:AE:108:ALA:C	2.63	0.41
7:AG:105:VAL:O	7:AG:108:ALA:HB3	2.21	0.41
7:AG:113:GLU:CB	7:AG:119:ARG:HG2	2.51	0.41
7:AG:134:ALA:C	7:AG:136:LYS:N	2.77	0.41
9:AI:104:ARG:O	9:AI:104:ARG:HG2	2.21	0.41
10:AJ:27:ALA:HA	10:AJ:30:SER:OG	2.20	0.41
11:AK:34:ASP:OD1	11:AK:34:ASP:C	2.64	0.41
16:AP:8:ARG:NH2	16:AP:15:PRO:HG3	2.36	0.41
18:AR:34:TYR:H	18:AR:34:TYR:HD1	1.68	0.41
24:AY:21:ILE:HG21	24:AY:88:VAL:CG1	2.51	0.41
24:AY:99:ARG:CZ	24:AY:128:TYR:HB2	2.51	0.41
24:AY:138:LYS:C	24:AY:140:ASP:H	2.27	0.41
24:AY:226:ASN:C	24:AY:228:MET:N	2.79	0.41
24:AY:303:PRO:HA	24:AY:331:TYR:O	2.20	0.41
24:AY:431:LEU:HD22	24:AY:466:LEU:CD1	2.40	0.41
24:AY:503:GLY:C	24:AY:505:GLY:N	2.74	0.41
24:AY:528:ALA:HB3	24:AY:567:LEU:O	2.21	0.41
27:B2:19:VAL:HG12	27:B2:23:LYS:HE3	2.02	0.41
27:B2:38:GLN:NE2	27:B2:44:LEU:CB	2.82	0.41
29:B4:55:ARG:HB2	29:B4:55:ARG:NH1	2.36	0.41
30:B5:29:THR:HG21	35:BA:2814:C:O2'	2.21	0.41
32:B7:7:PRO:HA	35:BA:686:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:201:C:C5	35:BA:202:U:C5	3.08	0.41
35:BA:658:C:C2	35:BA:659:C:C5	3.08	0.41
35:BA:750:A:C2	35:BA:753:C:C6	3.08	0.41
35:BA:797:C:H2'	35:BA:798:G:C8	2.54	0.41
35:BA:992:C:C2	35:BA:993:G:C8	3.09	0.41
35:BA:1063:G:H5"	43:BK:75:SER:OG	2.21	0.41
35:BA:1313:U:H3'	35:BA:1313:U:O2	2.20	0.41
35:BA:1771:C:C1'	35:BA:1786:A:C8	3.04	0.41
35:BA:1858:G:O2'	35:BA:1859:A:H8	2.04	0.41
35:BA:1945:G:N3	35:BA:1945:G:H2'	2.35	0.41
35:BA:2068:U:C4	35:BA:2430:A:H2	2.38	0.41
35:BA:2345:G:H4'	35:BA:2347:C:H5"	2.02	0.41
35:BA:2346:A:H1'	35:BA:2383:G:N9	2.34	0.41
35:BA:2483:C:C5'	35:BA:2484:G:OP2	2.68	0.41
35:BA:2591:C:OP2	38:BD:239:ARG:CB	2.68	0.41
37:BC:185:LYS:HA	37:BC:185:LYS:CE	2.49	0.41
38:BD:176:ARG:HB3	38:BD:176:ARG:CZ	2.51	0.41
38:BD:205:VAL:O	38:BD:205:VAL:HG12	2.21	0.41
39:BE:14:ILE:HB	39:BE:15:PHE:H	1.65	0.41
39:BE:134:ILE:HG22	39:BE:137:HIS:CB	2.50	0.41
41:BG:8:LYS:HA	41:BG:8:LYS:HD2	1.82	0.41
41:BG:106:LEU:O	41:BG:106:LEU:HG	2.20	0.41
42:BH:41:MET:HG3	42:BH:42:ARG:N	2.35	0.41
45:BN:55:VAL:HG22	45:BN:126:PRO:C	2.46	0.41
45:BN:67:LEU:C	45:BN:69:GLN:H	2.29	0.41
46:BO:8:LEU:HD13	46:BO:82:ASN:HB3	2.02	0.41
46:BO:107:ARG:C	46:BO:109:LYS:H	2.28	0.41
47:BP:80:TYR:HB3	47:BP:81:GLN:H	1.72	0.41
47:BP:84:ASN:C	47:BP:86:LYS:N	2.78	0.41
54:BW:51:LEU:HD22	54:BW:51:LEU:O	2.20	0.41
56:BY:28:LYS:CB	56:BY:37:VAL:HB	2.26	0.41
1:AA:671:G:C2	1:AA:736:C:O2	2.73	0.41
1:AA:738:C:OP1	6:AF:4:TYR:OH	2.36	0.41
1:AA:811:C:O2'	1:AA:901:A:N1	2.50	0.41
1:AA:962:C:H2'	1:AA:963:G:H8	1.85	0.41
1:AA:992:U:O2	1:AA:992:U:C2'	2.68	0.41
1:AA:1021:G:C2'	1:AA:1022:G:O5'	2.69	0.41
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.55	0.41
1:AA:1055:A:C6	1:AA:1206:G:C5	3.09	0.41
1:AA:1116:C:H2'	1:AA:1117:G:C5'	2.46	0.41
1:AA:1127:G:H5'	1:AA:1280:A:O2'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1226:C:H5”	13:AM:103:THR:HG1	1.84	0.41
1:AA:1344:C:O2’	1:AA:1345:U:H5’	2.21	0.41
1:AA:1376:U:H2’	1:AA:1377:A:H8	1.85	0.41
1:AA:1452:C:C1’	1:AA:1456:G:C2	3.04	0.41
3:AC:69:HIS:HA	3:AC:104:GLN:HB2	2.03	0.41
3:AC:170:GLN:HG2	3:AC:171:GLY:N	2.35	0.41
5:AE:12:LEU:C	5:AE:12:LEU:HD13	2.46	0.41
5:AE:40:ARG:NH2	5:AE:66:MET:HE3	2.36	0.41
5:AE:56:GLN:O	5:AE:59:GLY:N	2.50	0.41
6:AF:20:ALA:O	6:AF:21:LEU:C	2.62	0.41
6:AF:80:ARG:HG2	6:AF:88:VAL:CG2	2.51	0.41
8:AH:44:PHE:O	8:AH:45:ILE:CG2	2.69	0.41
8:AH:86:ILE:HG21	8:AH:133:LEU:HD22	2.02	0.41
9:AI:42:ARG:O	9:AI:43:ALA:C	2.63	0.41
9:AI:77:ILE:O	9:AI:78:LYS:C	2.63	0.41
9:AI:79:LEU:CD1	9:AI:83:ARG:CB	2.95	0.41
10:AJ:99:LYS:HA	10:AJ:99:LYS:HD3	1.87	0.41
11:AK:69:ALA:HB1	11:AK:103:LEU:CD2	2.51	0.41
11:AK:73:MET:O	11:AK:76:GLY:N	2.44	0.41
13:AM:113:PRO:O	13:AM:114:ARG:C	2.63	0.41
15:AO:55:GLY:HA2	15:AO:58:MET:CE	2.35	0.41
17:AQ:46:ASP:OD2	17:AQ:51:TYR:HD2	2.04	0.41
19:AS:9:VAL:O	19:AS:9:VAL:HG12	2.21	0.41
19:AS:40:ILE:HG12	19:AS:71:LEU:CD2	2.49	0.41
20:AT:54:LYS:HA	20:AT:57:ARG:NH2	2.35	0.41
24:AY:20:HIS:H	24:AY:121:VAL:HG11	1.85	0.41
24:AY:117:GLN:O	24:AY:118:SER:C	2.59	0.41
24:AY:149:VAL:O	24:AY:152:THR:CG2	2.62	0.41
24:AY:204:GLU:HB2	24:AY:205:TYR:H	1.51	0.41
25:B0:20:ARG:H	25:B0:20:ARG:HD2	1.85	0.41
26:B1:4:VAL:HG22	26:B1:5:CYS:H	1.85	0.41
27:B2:47:ASN:HB2	35:BA:95:G:C1’	2.35	0.41
28:B3:30:ARG:HH21	35:BA:1158:C:C5’	2.34	0.41
31:B6:10:LEU:CD2	31:B6:10:LEU:N	2.79	0.41
33:B8:25:MET:HB3	33:B8:26:LYS:H	1.65	0.41
33:B8:50:LEU:C	33:B8:52:LYS:H	2.27	0.41
35:BA:123:G:O2’	35:BA:124:G:H5’	2.21	0.41
35:BA:363(F):A:H1’	35:BA:364:C:H5	1.86	0.41
35:BA:1077:A:O2’	35:BA:1078:U:H5’	2.21	0.41
35:BA:1248:G:N3	52:BU:3:ARG:HD2	2.36	0.41
35:BA:1264:G:O3’	35:BA:2615:U:H5’	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1269:A:H2'	35:BA:1270:C:C6	2.55	0.41
35:BA:1316:U:H2'	35:BA:1317:A:C8	2.56	0.41
35:BA:1367:A:C2'	35:BA:1368:G:H5'	2.45	0.41
35:BA:1467:C:OP2	35:BA:1547:C:H5	2.03	0.41
35:BA:2140:C:O2	35:BA:2140:C:C2'	2.68	0.41
35:BA:2845:G:OP1	51:BT:56:GLY:N	2.54	0.41
36:BB:21:G:N7	36:BB:63:G:C2	2.89	0.41
37:BC:4:HIS:CE1	37:BC:8:TYR:CE2	3.09	0.41
39:BE:67:PHE:O	39:BE:68:ALA:C	2.59	0.41
39:BE:109:LYS:HE2	39:BE:191:PRO:HA	2.03	0.41
41:BG:11:TYR:OH	41:BG:33:ARG:HG3	2.21	0.41
41:BG:105:LYS:HE3	41:BG:143:GLU:OE2	2.20	0.41
41:BG:110:ALA:HA	41:BG:140:ILE:O	2.20	0.41
43:BK:76:TYR:C	43:BK:78:ILE:H	2.29	0.41
43:BK:99:ILE:O	43:BK:139:VAL:N	2.51	0.41
45:BN:134:ARG:N	45:BN:135:PRO:HD3	2.36	0.41
46:BO:87:ILE:HG22	46:BO:93:PRO:HA	2.01	0.41
47:BP:80:TYR:HE1	47:BP:111:ARG:HG2	1.84	0.41
47:BP:115:LEU:N	47:BP:115:LEU:CD2	2.77	0.41
48:BQ:27:VAL:O	48:BQ:28:ALA:HB3	2.20	0.41
49:BR:84:ALA:C	49:BR:86:ARG:H	2.28	0.41
1:AA:152:A:N6	1:AA:170:U:C2	2.89	0.41
1:AA:192:U:C4'	20:AT:103:GLY:HA2	2.51	0.41
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	2.01	0.41
1:AA:333:G:O2'	1:AA:334:C:H5'	2.20	0.41
1:AA:458:C:O2	1:AA:458:C:C2'	2.67	0.41
1:AA:713:G:H2'	1:AA:714:G:C8	2.55	0.41
1:AA:769:G:C2'	1:AA:770:C:H5'	2.50	0.41
1:AA:932:C:OP2	1:AA:932:C:H6	2.04	0.41
1:AA:1010:G:C2	1:AA:1011:G:C8	3.08	0.41
1:AA:1056:U:O2'	1:AA:1057:G:H5'	2.21	0.41
1:AA:1057:G:H2'	1:AA:1058:G:C8	2.56	0.41
1:AA:1115:C:O2'	1:AA:1116:C:H5'	2.21	0.41
1:AA:1170:A:H2'	1:AA:1171:G:C4'	2.51	0.41
1:AA:1221:G:OP1	1:AA:1320:C:N4	2.54	0.41
1:AA:1284:C:P	1:AA:1285:A:H3'	2.61	0.41
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.20	0.41
1:AA:1329:A:H4'	13:AM:24:GLY:O	2.21	0.41
1:AA:1446:U:N3	1:AA:1452:C:N3	2.69	0.41
1:AA:1500:A:C2	1:AA:1501:C:C2	3.09	0.41
1:AA:1511:G:O2'	1:AA:1512:U:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:110:GLN:C	2:AB:112:VAL:H	2.28	0.41
5:AE:101:ILE:HD11	5:AE:119:LEU:CA	2.30	0.41
5:AE:136:MET:HB3	5:AE:140:ARG:HH21	1.84	0.41
7:AG:76:ARG:HH12	7:AG:89:MET:HE2	1.83	0.41
7:AG:145:ALA:O	7:AG:146:GLU:CB	2.56	0.41
8:AH:21:LYS:O	8:AH:65:TYR:OH	2.33	0.41
8:AH:99:GLU:O	8:AH:100:ILE:C	2.63	0.41
8:AH:109:ILE:CG2	8:AH:137:VAL:HB	2.51	0.41
8:AH:126:LYS:O	8:AH:126:LYS:HG3	2.20	0.41
10:AJ:27:ALA:HB2	10:AJ:85:LEU:CD1	2.51	0.41
12:AL:24:VAL:HG13	12:AL:98:TYR:CZ	2.56	0.41
12:AL:50:SER:O	12:AL:51:ALA:HB2	2.21	0.41
12:AL:120:TYR:CD1	12:AL:120:TYR:N	2.89	0.41
13:AM:10:PRO:O	13:AM:11:ARG:CB	2.69	0.41
13:AM:96:LEU:CB	13:AM:97:PRO:HD2	2.41	0.41
15:AO:23:GLY:O	15:AO:24:SER:O	2.38	0.41
15:AO:66:LEU:O	15:AO:69:TYR:HB3	2.21	0.41
16:AP:9:PHE:HE2	16:AP:18:ARG:NE	2.19	0.41
18:AR:37:VAL:CG2	18:AR:38:GLU:N	2.73	0.41
18:AR:50:ILE:CD1	18:AR:74:ARG:NH2	2.84	0.41
19:AS:12:ASP:OD2	19:AS:35:SER:CB	2.68	0.41
19:AS:41:VAL:CG2	19:AS:44:MET:HB2	2.42	0.41
20:AT:24:LEU:O	20:AT:24:LEU:HD13	2.20	0.41
24:AY:30:GLU:CG	24:AY:31:ARG:N	2.80	0.41
24:AY:253:LEU:N	24:AY:253:LEU:HD12	2.36	0.41
24:AY:532:GLY:C	24:AY:534:ILE:N	2.77	0.41
27:B2:35:LEU:HD23	27:B2:35:LEU:C	2.46	0.41
28:B3:3:ARG:HA	28:B3:37:LEU:O	2.20	0.41
28:B3:24:LYS:O	28:B3:24:LYS:HG2	2.20	0.41
29:B4:34:GLU:CD	29:B4:34:GLU:N	2.79	0.41
30:B5:39:MET:HB2	54:BW:34:ASN:HD22	1.86	0.41
31:B6:15:GLU:OE1	31:B6:41:PRO:CG	2.69	0.41
33:B8:13:ARG:HH12	47:BP:59:LEU:CG	2.12	0.41
33:B8:17:THR:HB	33:B8:18:ALA:H	1.67	0.41
33:B8:38:GLY:O	33:B8:39:LYS:C	2.64	0.41
35:BA:118:A:OP2	35:BA:119:A:H5"	2.21	0.41
35:BA:172:C:C4	35:BA:173:G:N7	2.89	0.41
35:BA:182:A:N3	35:BA:433:C:O2'	2.51	0.41
35:BA:212:G:C8	35:BA:212:G:C3'	3.04	0.41
35:BA:212:G:C2'	35:BA:213:A:H5'	2.51	0.41
35:BA:322:A:H5'	35:BA:340:A:C1'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:354:G:H2'	35:BA:355:G:O4'	2.20	0.41
35:BA:541:C:H42	35:BA:552:G:H1	1.69	0.41
35:BA:972:G:OP2	35:BA:974:G:H5"	2.21	0.41
35:BA:1020:A:H1'	35:BA:1021:A:N1	2.35	0.41
35:BA:1093:G:C2'	35:BA:1094:U:H5'	2.51	0.41
35:BA:1108:U:O2	35:BA:1108:U:H2'	2.20	0.41
35:BA:1168:G:C6	35:BA:1182:A:N1	2.89	0.41
35:BA:1221:C:C2	35:BA:1221(A):C:C5	3.08	0.41
35:BA:1230:C:H2'	35:BA:1231:G:H8	1.86	0.41
35:BA:1246:A:OP1	47:BP:16:ARG:NH2	2.54	0.41
35:BA:1363:C:C2	35:BA:1364:G:C8	3.09	0.41
35:BA:1433:U:H1'	35:BA:1561:G:N2	2.36	0.41
35:BA:1499:C:H2'	35:BA:1500:G:O4'	2.20	0.41
35:BA:1530:C:H2'	35:BA:1531:C:H6	1.85	0.41
35:BA:1798:U:O2	35:BA:1802:A:H2	2.03	0.41
35:BA:2051:A:H2'	35:BA:2578:G:O5'	2.20	0.41
35:BA:2131:G:N7	35:BA:2133:G:N2	2.69	0.41
35:BA:2178:C:H2'	35:BA:2179:C:H6	1.84	0.41
35:BA:2259:G:C2'	35:BA:2260:C:H5'	2.50	0.41
35:BA:2348:U:C3'	35:BA:2349:G:H5'	2.51	0.41
35:BA:2723:C:OP1	49:BR:5:LYS:HG2	2.21	0.41
35:BA:2776:A:H4'	35:BA:2777:G:H5"	2.02	0.41
35:BA:2867:G:N7	51:BT:23:ARG:NH1	2.69	0.41
36:BB:40:U:O2'	36:BB:43:C:C5	2.70	0.41
37:BC:30:VAL:O	37:BC:31:LYS:C	2.63	0.41
37:BC:65:LEU:CD1	37:BC:189:ASN:HD21	2.33	0.41
37:BC:184:GLU:C	37:BC:185:LYS:HE3	2.46	0.41
38:BD:45:ASN:OD1	38:BD:45:ASN:N	2.52	0.41
38:BD:51:VAL:HG12	38:BD:51:VAL:O	2.21	0.41
38:BD:52:ARG:H	38:BD:52:ARG:HG3	1.63	0.41
39:BE:49:LEU:N	39:BE:49:LEU:CD2	2.83	0.41
39:BE:145:LYS:HB3	39:BE:146:THR:H	1.41	0.41
40:BF:20:LEU:HD23	40:BF:20:LEU:C	2.45	0.41
40:BF:135:LYS:HB3	40:BF:138:GLU:OE2	2.20	0.41
41:BG:22:ARG:NH1	41:BG:23:PHE:CE1	2.87	0.41
41:BG:31:VAL:HG22	41:BG:32:PRO:HD2	2.02	0.41
42:BH:28:GLY:HA3	42:BH:79:VAL:CB	2.51	0.41
42:BH:41:MET:SD	42:BH:41:MET:C	3.03	0.41
42:BH:54:ARG:HA	42:BH:55:PRO:HD2	1.87	0.41
45:BN:10:GLU:OE2	45:BN:11:PRO:HD2	2.20	0.41
45:BN:25:ARG:HD3	45:BN:25:ARG:HA	1.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BO:45:GLU:HA	46:BO:54:GLU:HG2	2.03	0.41
47:BP:107:LYS:HG3	47:BP:107:LYS:O	2.20	0.41
49:BR:12:ARG:HH11	49:BR:12:ARG:HG3	1.86	0.41
50:BS:103:GLU:O	50:BS:104:GLY:C	2.64	0.41
51:BT:12:SER:C	51:BT:14:TYR:H	2.29	0.41
51:BT:118:ARG:HB3	51:BT:122:ASP:OD2	2.21	0.41
52:BU:50:ARG:O	52:BU:51:LYS:C	2.62	0.41
52:BU:92:ARG:NH2	53:BV:11:GLN:H	2.19	0.41
52:BU:98:LEU:HA	52:BU:101:ARG:O	2.21	0.41
55:BX:56:THR:C	55:BX:57:LEU:HD12	2.46	0.41
56:BY:27:VAL:CG1	56:BY:29:GLU:OE1	2.69	0.41
57:BZ:50:GLN:O	57:BZ:51:ALA:C	2.64	0.41
57:BZ:77:ASP:HB2	57:BZ:84:GLU:HG3	2.03	0.41
57:BZ:80:ARG:O	57:BZ:81:ARG:C	2.64	0.41
57:BZ:158:PRO:O	57:BZ:160:GLY:N	2.54	0.41
1:AA:253:U:H2'	1:AA:254:G:C8	2.55	0.41
1:AA:402:G:C6	1:AA:403:C:N4	2.89	0.41
1:AA:671:G:N2	1:AA:736:C:C2	2.89	0.41
1:AA:901:A:C5	1:AA:902:G:H1'	2.56	0.41
1:AA:1288:A:H1'	1:AA:1352:C:O2'	2.21	0.41
1:AA:1312:G:C2'	1:AA:1313:U:H5'	2.51	0.41
1:AA:1372:U:H2'	1:AA:1373:G:H5'	2.02	0.41
1:AA:1442:G:H2'	51:BT:118:ARG:HH12	1.85	0.41
2:AB:108:ILE:HD12	2:AB:108:ILE:HG23	1.81	0.41
3:AC:156:ARG:NH2	3:AC:160:ALA:O	2.53	0.41
4:AD:103:ASN:O	4:AD:104:VAL:C	2.64	0.41
6:AF:62:TRP:CD1	18:AR:35:ARG:NH1	2.89	0.41
7:AG:26:PHE:O	7:AG:30:ILE:HG12	2.21	0.41
7:AG:50:ILE:CD1	7:AG:125:MET:HG2	2.51	0.41
8:AH:24:THR:O	8:AH:24:THR:HG23	2.21	0.41
8:AH:100:ILE:HA	8:AH:101:PRO:HD3	1.73	0.41
16:AP:40:ASP:HA	16:AP:41:PRO:HD2	1.78	0.41
16:AP:50:LYS:HG2	16:AP:51:VAL:H	1.86	0.41
24:AY:484:ARG:HD3	24:AY:484:ARG:HA	1.68	0.41
26:B1:76:ARG:NH2	26:B1:95:LEU:HD22	2.36	0.41
28:B3:14:GLY:O	35:BA:969:U:H4'	2.21	0.41
34:B9:29:ASN:HA	34:B9:30:PRO:HD2	1.76	0.41
35:BA:55:G:H2'	35:BA:56:A:C8	2.55	0.41
35:BA:212:G:H2'	35:BA:213:A:C5'	2.50	0.41
35:BA:534:U:H5'	52:BU:42:ALA:HB1	2.03	0.41
35:BA:611:C:H2'	35:BA:612:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:654(E):G:H2'	35:BA:654(F):C:C5'	2.43	0.41
35:BA:806:C:O2'	35:BA:2445:G:H4'	2.21	0.41
35:BA:1043:C:H3'	35:BA:1044:G:H5"	2.03	0.41
35:BA:1069:A:C2'	35:BA:1070:A:OP2	2.68	0.41
35:BA:1779:U:C2	35:BA:1783:A:N7	2.89	0.41
35:BA:1960:A:C8	35:BA:1960:A:C5'	3.04	0.41
35:BA:2142:C:O2'	35:BA:2143:C:H5'	2.21	0.41
35:BA:2422:A:H3'	35:BA:2422:A:H8	1.86	0.41
35:BA:2584:U:O2	35:BA:2584:U:O4'	2.39	0.41
35:BA:2688:U:H2'	35:BA:2719:G:N2	2.36	0.41
35:BA:2784:C:C6	35:BA:2784:C:C3'	3.04	0.41
36:BB:5:C:O2'	36:BB:6:C:H5'	2.22	0.41
36:BB:71:C:C5	36:BB:72:G:N7	2.89	0.41
36:BB:98:G:O2'	36:BB:99:G:H5'	2.20	0.41
37:BC:138:LEU:O	37:BC:139:PRO:C	2.64	0.41
38:BD:145:VAL:HG12	38:BD:146:GLU:H	1.83	0.41
39:BE:4:ILE:CD1	39:BE:28:ALA:HB1	2.51	0.41
39:BE:147:PRO:HG2	39:BE:148:GLY:H	1.85	0.41
39:BE:168:MET:HE1	39:BE:202:LYS:CE	2.50	0.41
40:BF:132:VAL:O	40:BF:138:GLU:OE1	2.39	0.41
40:BF:187:VAL:CG1	47:BP:7:ARG:HH22	2.34	0.41
42:BH:97:ARG:O	42:BH:98:LEU:C	2.64	0.41
42:BH:109:PHE:C	42:BH:111:HIS:H	2.25	0.41
43:BK:131:ALA:O	43:BK:136:VAL:HG12	2.20	0.41
45:BN:112:LEU:C	45:BN:114:ARG:H	2.28	0.41
46:BO:106:LEU:O	46:BO:109:LYS:N	2.40	0.41
48:BQ:137:TYR:H	48:BQ:137:TYR:HD1	1.68	0.41
49:BR:18:LEU:C	49:BR:20:LEU:H	2.28	0.41
49:BR:45:ARG:CG	49:BR:46:GLY:H	2.32	0.41
50:BS:74:ALA:HB3	50:BS:103:GLU:HG3	2.03	0.41
51:BT:57:PHE:CG	51:BT:58:ASN:N	2.89	0.41
52:BU:111:GLU:HA	52:BU:114:LYS:HG2	2.03	0.41
53:BV:11:GLN:H	53:BV:11:GLN:HG2	1.55	0.41
53:BV:38:LEU:C	53:BV:39:LEU:HD22	2.46	0.41
57:BZ:24:LEU:HD23	57:BZ:25:PRO:O	2.21	0.41
57:BZ:107:THR:HG23	57:BZ:111:VAL:HB	2.02	0.41
57:BZ:141:VAL:O	57:BZ:142:SER:CB	2.69	0.41
57:BZ:186:GLU:H	57:BZ:186:GLU:HG3	1.67	0.41
1:AA:320:C:H2'	1:AA:321:A:C8	2.57	0.40
1:AA:945:G:N3	1:AA:946:A:C8	2.89	0.40
1:AA:986:A:O2'	1:AA:987:G:H5'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.21	0.40
1:AA:1438:G:C2	1:AA:1464:G:C2	3.09	0.40
1:AA:1520:G:H2'	1:AA:1521:G:C8	2.54	0.40
2:AB:12:GLU:CA	2:AB:16:HIS:ND1	2.80	0.40
2:AB:55:PHE:CD1	2:AB:221:LEU:HG	2.55	0.40
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	2.03	0.40
3:AC:47:LEU:HD12	3:AC:47:LEU:HA	1.87	0.40
5:AE:43:LEU:CD2	5:AE:132:ALA:HB1	2.51	0.40
5:AE:150:ARG:O	5:AE:150:ARG:CG	2.69	0.40
6:AF:97:PHE:CD2	18:AR:65:ILE:HD12	2.54	0.40
6:AF:97:PHE:CE2	18:AR:65:ILE:CD1	3.04	0.40
7:AG:45:ASP:HB2	7:AG:117:ALA:CB	2.51	0.40
7:AG:66:VAL:O	7:AG:66:VAL:HG13	2.20	0.40
9:AI:95:LYS:CD	9:AI:96:LEU:HD12	2.51	0.40
12:AL:84:LEU:HD23	12:AL:101:VAL:HG21	2.03	0.40
14:AN:47:LEU:O	14:AN:48:ALA:C	2.64	0.40
15:AO:82:ILE:C	15:AO:82:ILE:CD1	2.79	0.40
20:AT:23:ARG:HA	20:AT:26:ASN:HD21	1.85	0.40
20:AT:61:SER:O	20:AT:62:LEU:C	2.63	0.40
20:AT:81:LYS:C	20:AT:83:ARG:N	2.79	0.40
24:AY:146:LEU:HD21	24:AY:150:ILE:HD11	2.03	0.40
24:AY:247:ARG:C	24:AY:249:GLY:H	2.27	0.40
24:AY:621:ILE:O	24:AY:621:ILE:HG22	2.21	0.40
24:AY:646:PHE:C	24:AY:647:VAL:HG13	2.46	0.40
25:B0:14:ARG:NH1	35:BA:2279:G:N7	2.60	0.40
31:B6:11:LEU:CD1	31:B6:11:LEU:N	2.84	0.40
33:B8:58:ILE:HG22	47:BP:49:ARG:HD3	2.03	0.40
35:BA:94(A):G:C2'	35:BA:95:G:H5"	2.51	0.40
35:BA:109:G:C2'	35:BA:110:G:H5'	2.51	0.40
35:BA:245:G:O2'	35:BA:246:C:H5'	2.22	0.40
35:BA:445:C:C2'	35:BA:446:G:H5'	2.51	0.40
35:BA:519:U:H4'	54:BW:25:ARG:HH21	1.86	0.40
35:BA:813:U:C2	35:BA:814:C:C5	3.09	0.40
35:BA:1150:C:O5'	35:BA:1150:C:H6	2.02	0.40
35:BA:1226:A:C3'	35:BA:1227:G:H5'	2.51	0.40
35:BA:1234:U:H2'	35:BA:1235:G:O4'	2.21	0.40
35:BA:1287:A:H5'	35:BA:1288:U:OP2	2.20	0.40
35:BA:1427:A:H4'	35:BA:1428:C:O5'	2.21	0.40
35:BA:1759:A:H4'	35:BA:2715:C:O4'	2.20	0.40
35:BA:1893:C:C2'	35:BA:1894:C:H5'	2.50	0.40
35:BA:2012:G:O3'	54:BW:96:ILE:HG13	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2192:G:H3'	35:BA:2193:G:H5"	2.01	0.40
35:BA:2194:G:C6	35:BA:2195:C:C4	3.09	0.40
35:BA:2372:G:O2'	35:BA:2373:G:H5'	2.21	0.40
35:BA:2655:G:O2'	35:BA:2656:U:OP2	2.39	0.40
35:BA:2749:A:OP2	35:BA:2751:G:OP2	2.39	0.40
35:BA:2853:C:H2'	35:BA:2854:G:H8	1.85	0.40
37:BC:77:ALA:O	37:BC:78:ILE:HG13	2.21	0.40
40:BF:5:ALA:C	40:BF:6:VAL:HG23	2.45	0.40
40:BF:18:ARG:HG2	40:BF:19:GLU:H	1.87	0.40
40:BF:101:LEU:HB3	40:BF:106:ARG:HD3	2.03	0.40
40:BF:185:ASP:CA	40:BF:188:ARG:HG2	2.48	0.40
41:BG:40:ASN:HD22	41:BG:91:ARG:HB2	1.85	0.40
41:BG:73:ALA:HB3	41:BG:87:PRO:CG	2.51	0.40
42:BH:34:GLU:O	42:BH:36:PRO:HD3	2.21	0.40
43:BK:70:LYS:HB3	43:BK:71:THR:H	1.57	0.40
43:BK:104:VAL:CG1	43:BK:105:LEU:N	2.84	0.40
44:BL:110:LEU:CD1	44:BL:115:ALA:HB3	2.51	0.40
47:BP:98:GLU:O	47:BP:99:LEU:C	2.64	0.40
49:BR:17:ARG:HH11	49:BR:17:ARG:HD2	1.69	0.40
50:BS:78:LEU:HD23	50:BS:78:LEU:HA	1.85	0.40
51:BT:19:LEU:HA	51:BT:20:PRO:HD3	1.70	0.40
53:BV:13:ARG:HG3	53:BV:13:ARG:HH11	1.86	0.40
53:BV:71:LEU:HD23	53:BV:86:GLY:HA2	2.03	0.40
55:BX:34:ALA:HA	55:BX:38:GLU:OE1	2.20	0.40
55:BX:89:ILE:CG2	55:BX:91:ALA:CB	2.93	0.40
57:BZ:17:ALA:HA	57:BZ:20:ARG:HD3	2.03	0.40
1:AA:453:A:C6	1:AA:454:C:C4	3.09	0.40
1:AA:518:C:H5	1:AA:530:G:OP2	2.04	0.40
1:AA:595:G:H1'	1:AA:596:C:H5	1.86	0.40
1:AA:597:G:C8	1:AA:598:U:C5	3.09	0.40
1:AA:1398:A:H5"	1:AA:1398:A:C8	2.56	0.40
1:AA:1432:G:H2'	1:AA:1433:A:OP2	2.20	0.40
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	1.99	0.40
3:AC:79:ARG:HH11	3:AC:79:ARG:CG	2.34	0.40
3:AC:131:ARG:O	3:AC:132:ARG:C	2.65	0.40
4:AD:111:ALA:HB3	4:AD:117:ALA:HB2	2.03	0.40
5:AE:78:HIS:C	5:AE:79:GLU:HG3	2.45	0.40
5:AE:119:LEU:N	5:AE:119:LEU:HD23	2.36	0.40
6:AF:53:ALA:C	6:AF:55:ASP:H	2.29	0.40
6:AF:100:ASN:O	18:AR:28:GLU:HG2	2.20	0.40
10:AJ:98:ILE:O	10:AJ:98:ILE:HG22	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:126:ARG:O	11:AK:127:LYS:C	2.65	0.40
12:AL:113:ARG:HH11	12:AL:113:ARG:CG	2.33	0.40
13:AM:77:ASN:O	13:AM:78:ILE:C	2.64	0.40
14:AN:48:ALA:HB2	14:AN:53:LEU:HD12	2.02	0.40
18:AR:19:LYS:HE2	18:AR:19:LYS:HB2	1.91	0.40
21:AU:8:THR:O	21:AU:9:ARG:C	2.64	0.40
22:AV:35:A:C5	22:AV:36:U:C5	3.09	0.40
24:AY:284:LEU:HA	24:AY:284:LEU:HD12	1.84	0.40
24:AY:543:GLN:C	24:AY:545:GLY:H	2.29	0.40
24:AY:617:MET:O	24:AY:620:VAL:HB	2.21	0.40
24:AY:646:PHE:O	24:AY:647:VAL:CG1	2.69	0.40
26:B1:92:LYS:CE	35:BA:153:C:OP1	2.69	0.40
29:B4:10:VAL:CG1	29:B4:27:THR:HA	2.51	0.40
31:B6:41:PRO:O	31:B6:41:PRO:CG	2.69	0.40
34:B9:29:ASN:ND2	34:B9:29:ASN:H	2.19	0.40
35:BA:38:A:N3	40:BF:48:THR:HB	2.36	0.40
35:BA:246:C:H2'	35:BA:247:G:C5'	2.51	0.40
35:BA:371:A:N3	35:BA:371:A:O2'	2.47	0.40
35:BA:551:G:O2'	35:BA:1220:A:N3	2.42	0.40
35:BA:812:C:H2'	35:BA:813:U:H6	1.85	0.40
35:BA:915:C:H2'	35:BA:916:G:C8	2.56	0.40
35:BA:1011:G:O2'	35:BA:1013:C:C5'	2.70	0.40
35:BA:1210:A:O2'	35:BA:1211:U:OP2	2.36	0.40
35:BA:1341:U:OP1	35:BA:1397:U:N3	2.49	0.40
35:BA:1482:G:N2	35:BA:1484:G:C4	2.90	0.40
35:BA:1499:C:O2'	35:BA:1500:G:H5'	2.21	0.40
35:BA:1805:U:H2'	35:BA:1806:C:H6	1.85	0.40
35:BA:1884:A:O2'	35:BA:1885:A:H5"	2.18	0.40
35:BA:2000:G:OP2	49:BR:3:HIS:HE1	2.04	0.40
35:BA:2006:C:O2'	35:BA:2823:A:N3	2.51	0.40
35:BA:2089:U:O2'	35:BA:2090:G:H5'	2.21	0.40
35:BA:2244:U:H6	35:BA:2244:U:O5'	2.05	0.40
35:BA:2442:C:H2'	35:BA:2443:C:C6	2.46	0.40
35:BA:2464:C:O2'	35:BA:2465:C:P	2.80	0.40
35:BA:2645:G:N2	35:BA:2767:C:OP2	2.55	0.40
35:BA:2791:C:H5	35:BA:2801(A):A:N6	2.19	0.40
37:BC:135:ARG:HG2	37:BC:135:ARG:NH1	2.32	0.40
38:BD:16:MET:CE	38:BD:208:LYS:HG2	2.51	0.40
38:BD:102:LYS:O	38:BD:103:ARG:HG2	2.22	0.40
38:BD:173:VAL:HG12	38:BD:185:VAL:O	2.20	0.40
39:BE:188:VAL:O	39:BE:189:PRO:C	2.63	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:63:LYS:NZ	40:BF:75:HIS:O	2.52	0.40
42:BH:140:LYS:O	42:BH:144:VAL:HG23	2.22	0.40
43:BK:71:THR:CB	43:BK:72:PRO:CD	3.00	0.40
45:BN:4:TYR:O	45:BN:5:VAL:C	2.63	0.40
45:BN:79:PRO:C	45:BN:81:GLY:H	2.29	0.40
46:BO:23:ARG:HG2	46:BO:40:VAL:HG23	2.02	0.40
46:BO:63:VAL:HG23	46:BO:64:ARG:HG3	2.03	0.40
52:BU:57:PHE:C	52:BU:59:ARG:H	2.30	0.40
53:BV:32:THR:HG23	53:BV:60:GLU:HA	2.04	0.40
56:BY:45:VAL:HG13	56:BY:60:PHE:O	2.21	0.40
56:BY:76:CYS:O	56:BY:77:PRO:C	2.64	0.40
56:BY:87:LYS:HE2	56:BY:87:LYS:HB3	1.89	0.40
56:BY:95:LYS:HE2	56:BY:101:LYS:N	2.34	0.40
57:BZ:171:ILE:CG1	57:BZ:172:ALA:N	2.83	0.40
1:AA:47:C:H6	1:AA:365:U:H2’	1.86	0.40
1:AA:147:G:N3	1:AA:147:G:H2’	2.37	0.40
1:AA:293:G:C6	1:AA:305:G:N1	2.90	0.40
1:AA:296:U:O2’	1:AA:297:G:H5’	2.21	0.40
1:AA:334:C:N4	1:AA:335:C:N4	2.70	0.40
1:AA:373:A:H1’	1:AA:481:G:N3	2.36	0.40
1:AA:602:A:C5	1:AA:603:U:C5	3.08	0.40
1:AA:658:G:H2’	1:AA:659:U:C6	2.56	0.40
1:AA:833:U:H2’	1:AA:834:C:C5	2.54	0.40
1:AA:895:G:H5”	1:AA:896:C:OP2	2.21	0.40
1:AA:1065:U:O2	1:AA:1065:U:H2’	2.21	0.40
1:AA:1104:G:O2’	1:AA:1105:A:H5’	2.22	0.40
2:AB:11:LEU:O	2:AB:16:HIS:CE1	2.74	0.40
2:AB:137:ARG:HD3	2:AB:137:ARG:O	2.22	0.40
3:AC:3:ASN:O	3:AC:4:LYS:CB	2.70	0.40
4:AD:92:VAL:O	4:AD:93:PHE:C	2.65	0.40
4:AD:165:MET:HE3	4:AD:176:LEU:CD2	2.51	0.40
5:AE:12:LEU:HD13	5:AE:12:LEU:O	2.21	0.40
7:AG:59:LEU:O	7:AG:60:LYS:C	2.63	0.40
8:AH:38:ILE:O	8:AH:39:LEU:C	2.61	0.40
9:AI:97:LYS:N	9:AI:98:PRO:CD	2.84	0.40
10:AJ:8:LEU:CD2	10:AJ:96:ILE:CG2	2.94	0.40
11:AK:53:SER:H	11:AK:53:SER:HG	1.67	0.40
16:AP:9:PHE:HE2	16:AP:18:ARG:NH1	2.20	0.40
16:AP:58:TYR:CD1	16:AP:59:TRP:N	2.89	0.40
20:AT:8:ARG:HA	20:AT:8:ARG:HD3	1.78	0.40
21:AU:23:PRO:C	21:AU:25:LYS:N	2.66	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:229:LEU:O	24:AY:232:LEU:N	2.54	0.40
24:AY:534:ILE:CG1	24:AY:570:GLY:O	2.69	0.40
24:AY:568:TYR:CD1	24:AY:568:TYR:C	2.98	0.40
24:AY:580:MET:HE3	24:AY:584:ILE:HG12	2.04	0.40
24:AY:637:ARG:O	24:AY:640:ALA:N	2.54	0.40
24:AY:684:GLN:O	24:AY:688:ILE:CD1	2.68	0.40
35:BA:38:A:H4'	40:BF:50:SER:HB3	2.03	0.40
35:BA:110:G:O2'	35:BA:111:A:H5'	2.21	0.40
35:BA:301:G:C6	35:BA:317:G:C6	3.09	0.40
35:BA:306:U:O5'	35:BA:306:U:H6	2.04	0.40
35:BA:570:G:O6	35:BA:2499:C:OP1	2.39	0.40
35:BA:601:C:H6	35:BA:601:C:O5'	2.04	0.40
35:BA:733:G:C6	35:BA:761:A:N7	2.89	0.40
35:BA:803:U:C2'	35:BA:804:A:C5'	2.96	0.40
35:BA:1077:A:H2	35:BA:1088:A:H2'	1.87	0.40
35:BA:1247:A:O2'	35:BA:1248:G:H5'	2.21	0.40
35:BA:1313:U:C2	35:BA:1610:A:H2	2.39	0.40
35:BA:1401:G:O2'	35:BA:1402:C:H5'	2.21	0.40
35:BA:1641:A:C3'	35:BA:1642:G:H5'	2.51	0.40
35:BA:1660:C:H4'	35:BA:2712(A):A:N6	2.37	0.40
35:BA:1771:C:H2'	35:BA:1772:G:H8	1.86	0.40
35:BA:1919:A:N3	35:BA:1919:A:H2'	2.36	0.40
35:BA:2048:G:H4'	35:BA:2823:A:C2	2.56	0.40
35:BA:2190:G:H5'	35:BA:2190:G:H8	1.85	0.40
35:BA:2208:A:H1'	35:BA:2219:G:C5	2.56	0.40
35:BA:2662:A:H2'	35:BA:2663:G:C5'	2.52	0.40
35:BA:2756:U:C4'	35:BA:2757:A:OP1	2.55	0.40
38:BD:14:ARG:HG3	38:BD:15:PHE:N	2.36	0.40
39:BE:7:VAL:C	39:BE:26:ILE:HG22	2.45	0.40
40:BF:10:PRO:HG2	40:BF:11:VAL:N	2.37	0.40
41:BG:120:LEU:O	41:BG:121:ASN:C	2.61	0.40
41:BG:139:LEU:HA	41:BG:144:ILE:HD13	2.03	0.40
42:BH:30:LYS:HD2	42:BH:83:TYR:OH	2.22	0.40
42:BH:85:LYS:NZ	42:BH:87:LEU:CG	2.71	0.40
45:BN:60:ILE:HG21	45:BN:60:ILE:HD13	1.89	0.40
46:BO:26:LYS:HB3	46:BO:30:ALA:CB	2.51	0.40
47:BP:31:ALA:C	47:BP:33:ARG:N	2.80	0.40
47:BP:122:PRO:HB3	47:BP:141:ALA:CB	2.42	0.40
51:BT:128:GLU:C	51:BT:130:ALA:N	2.79	0.40
52:BU:8:VAL:HG22	52:BU:12:ARG:HE	1.86	0.40
55:BX:18:TYR:O	55:BX:19:ALA:C	2.63	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:158:PRO:CB	57:BZ:159:PRO:CD	2.99	0.40
1:AA:189(B):C:C2	1:AA:189(J):G:N2	2.89	0.40
1:AA:784:C:H2'	1:AA:785:G:O4'	2.22	0.40
1:AA:821:G:H2'	1:AA:822:C:H6	1.87	0.40
1:AA:825:G:H2'	1:AA:826:C:C6	2.57	0.40
1:AA:826:C:H2'	1:AA:827:U:C6	2.52	0.40
1:AA:865:A:H5'	1:AA:1078:U:C4	2.56	0.40
1:AA:888:G:O5'	1:AA:888:G:H8	2.04	0.40
1:AA:1358:U:H2'	1:AA:1359:C:O4'	2.21	0.40
3:AC:59:ARG:HD3	3:AC:64:VAL:HG22	2.03	0.40
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.79	0.40
4:AD:119:GLN:CG	4:AD:123:HIS:NE2	2.82	0.40
5:AE:135:THR:O	5:AE:136:MET:C	2.64	0.40
6:AF:8:ILE:HG22	6:AF:9:VAL:N	2.36	0.40
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	2.02	0.40
9:AI:99:LEU:CB	9:AI:101:PHE:HE1	2.34	0.40
10:AJ:54:PHE:HA	10:AJ:55:LYS:HE3	2.04	0.40
12:AL:102:ARG:HA	12:AL:102:ARG:HD2	1.86	0.40
12:AL:102:ARG:HB2	12:AL:120:TYR:HA	2.03	0.40
13:AM:15:VAL:H	13:AM:15:VAL:HG22	1.63	0.40
13:AM:20:THR:HA	13:AM:25:ILE:O	2.21	0.40
16:AP:23:ASP:OD1	16:AP:23:ASP:C	2.64	0.40
20:AT:83:ARG:O	20:AT:84:LEU:C	2.63	0.40
24:AY:148:LEU:HD12	24:AY:148:LEU:HA	1.93	0.40
24:AY:343:ASN:ND2	24:AY:345:THR:CB	2.84	0.40
24:AY:484:ARG:HD2	24:AY:559:PRO:HB2	2.02	0.40
24:AY:590:ILE:O	24:AY:592:GLU:N	2.55	0.40
24:AY:636:PRO:HB2	43:BK:21:PRO:HG2	2.04	0.40
26:B1:80:LEU:CD2	26:B1:81:LYS:H	2.32	0.40
27:B2:53:LEU:O	27:B2:57:ILE:HG12	2.22	0.40
28:B3:11:SER:OG	28:B3:12:PRO:HD2	2.22	0.40
28:B3:52:HIS:CD2	36:BB:83:G:H5"	2.56	0.40
29:B4:5:ILE:HD13	29:B4:6:HIS:CD2	2.56	0.40
29:B4:14:ILE:HG23	29:B4:31:ILE:CG2	2.51	0.40
30:B5:44:THR:O	30:B5:51:TYR:CE2	2.72	0.40
31:B6:11:LEU:CG	31:B6:26:ASN:HD21	2.32	0.40
35:BA:363(F):A:O2'	35:BA:364:C:P	2.80	0.40
35:BA:681:G:H2'	35:BA:682:G:O4'	2.21	0.40
35:BA:730:C:O2'	35:BA:731:C:H5'	2.21	0.40
35:BA:746:A:H2'	35:BA:2612:C:H5"	2.03	0.40
35:BA:823:G:O6	35:BA:824:A:N6	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1094:U:H2'	35:BA:1096:A:OP2	2.21	0.40
35:BA:1188:U:H2'	35:BA:1189:A:H8	1.85	0.40
35:BA:1285:G:C2'	35:BA:1286:A:C5'	2.99	0.40
35:BA:1336:A:P	55:BX:64:LYS:HE3	2.61	0.40
35:BA:1749:A:C6	35:BA:1750:G:C5	3.09	0.40
35:BA:1803:A:N1	35:BA:1822:G:O2'	2.51	0.40
35:BA:2051:A:N6	35:BA:2614:A:C8	2.90	0.40
35:BA:2464:C:N4	35:BA:2487:G:C6	2.89	0.40
35:BA:2515:C:O2	35:BA:2515:C:H2'	2.21	0.40
35:BA:2526:G:C5	35:BA:2527:C:C5	3.09	0.40
35:BA:2835:A:HO2'	35:BA:2836:U:P	2.44	0.40
36:BB:13:A:N6	36:BB:70:C:H5'	2.36	0.40
37:BC:197:LEU:O	37:BC:198:GLU:C	2.63	0.40
38:BD:120:GLY:C	38:BD:122:ASP:H	2.29	0.40
41:BG:67:LYS:CG	41:BG:68:PRO:CD	2.99	0.40
41:BG:133:LEU:HD12	41:BG:133:LEU:O	2.22	0.40
42:BH:159:GLU:OE1	42:BH:159:GLU:CA	2.69	0.40
45:BN:65:LYS:NZ	45:BN:65:LYS:CB	2.85	0.40
47:BP:98:GLU:O	47:BP:101:VAL:HG22	2.20	0.40
48:BQ:63:LYS:HB3	48:BQ:65:PHE:HE1	1.87	0.40
50:BS:25:ARG:CG	50:BS:26:LEU:H	2.34	0.40
53:BV:4:ILE:O	53:BV:4:ILE:HG22	2.20	0.40
56:BY:39:VAL:HG12	56:BY:40:GLU:HG2	2.03	0.40
1:AA:101:A:C2'	1:AA:102:G:H5'	2.52	0.40
1:AA:309:G:H8	1:AA:309:G:O5'	2.05	0.40
1:AA:522:C:O2'	1:AA:523:A:H5'	2.22	0.40
1:AA:598:U:C4	1:AA:599:C:N4	2.90	0.40
1:AA:684:A:H2'	1:AA:685:G:C8	2.56	0.40
1:AA:748:C:O2'	1:AA:749:C:C6	2.69	0.40
1:AA:751:U:H4'	15:AO:24:SER:HA	2.03	0.40
1:AA:771:G:H2'	1:AA:772:U:C6	2.56	0.40
1:AA:1005:A:OP1	1:AA:1006:C:C4	2.74	0.40
1:AA:1037:C:H2'	1:AA:1038:C:C4	2.56	0.40
1:AA:1190:G:OP1	3:AC:5:ILE:HG23	2.21	0.40
1:AA:1216:G:H2'	1:AA:1217:C:H6	1.87	0.40
1:AA:1266:G:O5'	1:AA:1266:G:H8	2.05	0.40
1:AA:1423:G:C5'	46:BO:49:ARG:NH2	2.80	0.40
1:AA:1442(B):A:C5	51:BT:118:ARG:NE	2.90	0.40
2:AB:77:ALA:O	2:AB:81:VAL:HG23	2.21	0.40
4:AD:13:ARG:O	4:AD:14:ARG:C	2.65	0.40
4:AD:58:LEU:HD23	4:AD:58:LEU:C	2.47	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:129:ILE:O	5:AE:132:ALA:HB3	2.22	0.40
6:AF:8:ILE:CG2	6:AF:85:VAL:HG13	2.45	0.40
8:AH:88:LYS:C	8:AH:90:GLY:N	2.79	0.40
8:AH:114:THR:C	8:AH:116:LYS:N	2.80	0.40
9:AI:102:LEU:HD23	9:AI:102:LEU:HA	1.84	0.40
11:AK:82:VAL:HB	11:AK:108:ILE:HA	2.02	0.40
13:AM:26:GLY:C	13:AM:28:ALA:H	2.27	0.40
13:AM:70:LEU:O	13:AM:73:GLU:N	2.54	0.40
16:AP:40:ASP:C	16:AP:40:ASP:OD1	2.62	0.40
16:AP:55:ARG:O	16:AP:56:ALA:C	2.64	0.40
19:AS:48:THR:HG22	19:AS:61:TYR:CD1	2.56	0.40
20:AT:47:GLY:C	20:AT:49:ALA:N	2.78	0.40
24:AY:95:GLU:OE1	24:AY:124:GLN:HB3	2.22	0.40
24:AY:177:ILE:HG22	24:AY:178:ILE:N	2.36	0.40
24:AY:203:GLU:HB3	24:AY:204:GLU:H	1.41	0.40
24:AY:227:ILE:O	24:AY:227:ILE:CG2	2.69	0.40
24:AY:319:ASP:HA	24:AY:320:PRO:HD3	1.71	0.40
24:AY:420:ASP:OD1	24:AY:420:ASP:N	2.53	0.40
25:B0:49:LYS:HE3	25:B0:80:HIS:CD2	2.57	0.40
26:B1:20:ARG:HA	26:B1:33:LYS:O	2.22	0.40
26:B1:88:LYS:O	26:B1:92:LYS:CB	2.66	0.40
30:B5:5:PRO:C	30:B5:6:VAL:CG2	2.95	0.40
31:B6:9:LEU:CD1	31:B6:9:LEU:N	2.85	0.40
33:B8:21:LYS:HD3	33:B8:48:PHE:CE1	2.56	0.40
35:BA:42:G:H3'	35:BA:43:A:H8	1.86	0.40
35:BA:88:G:OP1	35:BA:90:U:C5	2.66	0.40
35:BA:562:U:O2	35:BA:572:A:C4	2.75	0.40
35:BA:789:A:N6	35:BA:1614:A:OP2	2.55	0.40
35:BA:996:A:O3'	52:BU:92:ARG:CG	2.69	0.40
35:BA:1233:C:H2'	35:BA:1234:U:C6	2.56	0.40
35:BA:1385:G:H1'	35:BA:1386:C:C6	2.56	0.40
35:BA:1567:A:OP2	38:BD:84:TYR:OH	2.38	0.40
35:BA:1608:A:C6	35:BA:1611:C:C2	3.10	0.40
35:BA:1613:G:N1	35:BA:1619:G:C5	2.89	0.40
35:BA:1930:G:H2'	35:BA:1968:G:N1	2.36	0.40
35:BA:2116:G:C8	35:BA:2117:A:C5	3.10	0.40
35:BA:2521:C:O2'	35:BA:2564:A:N3	2.52	0.40
35:BA:2593:U:C2	35:BA:2594:C:C5	3.10	0.40
35:BA:2740:A:C6	35:BA:2741:A:C6	3.09	0.40
35:BA:2820:A:O2'	35:BA:2821:A:OP1	2.33	0.40
36:BB:82:G:C4	36:BB:83:G:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:68:LYS:O	38:BD:68:LYS:CG	2.69	0.40
38:BD:264:LYS:HD3	38:BD:266:SER:HB3	2.03	0.40
40:BF:11:VAL:HB	40:BF:12:LEU:H	1.45	0.40
40:BF:17:ARG:HH11	40:BF:17:ARG:CG	2.17	0.40
40:BF:112:MET:O	40:BF:115:ALA:HB3	2.21	0.40
40:BF:154:VAL:CG1	40:BF:193:VAL:HG23	2.46	0.40
41:BG:102:PHE:O	41:BG:105:LYS:N	2.54	0.40
45:BN:24:GLY:CA	45:BN:27:ALA:HB3	2.50	0.40
45:BN:57:ALA:O	45:BN:58:ASP:C	2.65	0.40
48:BQ:27:VAL:HG21	48:BQ:134:ARG:HG2	2.03	0.40
48:BQ:111:GLU:O	48:BQ:112:GLU:C	2.64	0.40
49:BR:82:GLU:O	49:BR:85:PRO:HD2	2.21	0.40
51:BT:28:VAL:O	51:BT:29:ARG:HD3	2.21	0.40
52:BU:66:ASN:HD21	52:BU:76:TYR:H	1.67	0.40
52:BU:97:ASP:C	52:BU:99:ALA:N	2.69	0.40
53:BV:2:PHE:HB2	53:BV:42:GLY:CA	2.51	0.40
55:BX:32:PRO:HA	55:BX:77:LYS:HD3	2.03	0.40
56:BY:4:LYS:HD2	56:BY:32:PRO:HG3	2.03	0.40
57:BZ:82:ARG:HH11	57:BZ:82:ARG:HG2	1.86	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%)	149 (64%)	49 (21%)	34 (15%)	0 3
3	AC	204/239 (85%)	129 (63%)	56 (28%)	19 (9%)	0 8
4	AD	206/209 (99%)	138 (67%)	49 (24%)	19 (9%)	0 8
5	AE	148/162 (91%)	113 (76%)	25 (17%)	10 (7%)	1 11
6	AF	99/101 (98%)	77 (78%)	18 (18%)	4 (4%)	2 18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
7	AG	153/156 (98%)	108 (71%)	35 (23%)	10 (6%)	1 12
8	AH	136/138 (99%)	110 (81%)	23 (17%)	3 (2%)	5 29
9	AI	125/128 (98%)	85 (68%)	24 (19%)	16 (13%)	0 4
10	AJ	96/105 (91%)	60 (62%)	23 (24%)	13 (14%)	0 4
11	AK	117/129 (91%)	91 (78%)	21 (18%)	5 (4%)	2 17
12	AL	122/132 (92%)	82 (67%)	23 (19%)	17 (14%)	0 3
13	AM	122/126 (97%)	73 (60%)	26 (21%)	23 (19%)	0 2
14	AN	58/61 (95%)	49 (84%)	5 (9%)	4 (7%)	1 11
15	AO	86/89 (97%)	55 (64%)	24 (28%)	7 (8%)	1 9
16	AP	81/88 (92%)	56 (69%)	19 (24%)	6 (7%)	1 10
17	AQ	97/105 (92%)	78 (80%)	15 (16%)	4 (4%)	2 18
18	AR	68/88 (77%)	49 (72%)	15 (22%)	4 (6%)	1 13
19	AS	76/93 (82%)	37 (49%)	21 (28%)	18 (24%)	0 1
20	AT	97/106 (92%)	49 (50%)	31 (32%)	17 (18%)	0 2
21	AU	22/27 (82%)	13 (59%)	8 (36%)	1 (4%)	2 17
24	AY	662/691 (96%)	440 (66%)	137 (21%)	85 (13%)	0 4
25	B0	82/85 (96%)	66 (80%)	13 (16%)	3 (4%)	2 20
26	B1	91/98 (93%)	65 (71%)	16 (18%)	10 (11%)	0 5
27	B2	69/72 (96%)	32 (46%)	24 (35%)	13 (19%)	0 2
28	B3	57/60 (95%)	41 (72%)	11 (19%)	5 (9%)	0 8
29	B4	55/71 (78%)	28 (51%)	12 (22%)	15 (27%)	0 0
30	B5	57/60 (95%)	36 (63%)	11 (19%)	10 (18%)	0 2
31	B6	48/54 (89%)	23 (48%)	11 (23%)	14 (29%)	0 0
32	B7	46/49 (94%)	38 (83%)	5 (11%)	3 (6%)	1 12
33	B8	61/65 (94%)	34 (56%)	16 (26%)	11 (18%)	0 2
34	B9	35/37 (95%)	21 (60%)	9 (26%)	5 (14%)	0 3
37	BC	226/229 (99%)	161 (71%)	55 (24%)	10 (4%)	2 17
38	BD	273/276 (99%)	192 (70%)	47 (17%)	34 (12%)	0 4
39	BE	202/206 (98%)	120 (59%)	49 (24%)	33 (16%)	0 2
40	BF	205/210 (98%)	141 (69%)	37 (18%)	27 (13%)	0 4
41	BG	179/182 (98%)	113 (63%)	41 (23%)	25 (14%)	0 3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
42	BH	164/180 (91%)	85 (52%)	43 (26%)	36 (22%)	0 1
43	BK	137/147 (93%)	87 (64%)	41 (30%)	9 (7%)	1 12
44	BL	65/121 (54%)	57 (88%)	8 (12%)	0	100 100
45	BN	136/140 (97%)	90 (66%)	28 (21%)	18 (13%)	0 4
46	BO	120/122 (98%)	95 (79%)	16 (13%)	9 (8%)	1 10
47	BP	144/150 (96%)	78 (54%)	40 (28%)	26 (18%)	0 2
48	BQ	139/141 (99%)	103 (74%)	23 (16%)	13 (9%)	0 8
49	BR	115/118 (98%)	80 (70%)	20 (17%)	15 (13%)	0 4
50	BS	96/112 (86%)	46 (48%)	30 (31%)	20 (21%)	0 2
51	BT	135/146 (92%)	76 (56%)	32 (24%)	27 (20%)	0 2
52	BU	115/118 (98%)	75 (65%)	27 (24%)	13 (11%)	0 5
53	BV	99/101 (98%)	71 (72%)	11 (11%)	17 (17%)	0 2
54	BW	111/113 (98%)	78 (70%)	22 (20%)	11 (10%)	0 7
55	BX	90/96 (94%)	58 (64%)	24 (27%)	8 (9%)	0 8
56	BY	104/110 (94%)	50 (48%)	30 (29%)	24 (23%)	0 1
57	BZ	182/206 (88%)	113 (62%)	41 (22%)	28 (15%)	0 2
All	All	6645/7104 (94%)	4394 (66%)	1440 (22%)	811 (12%)	1 4

All (811) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	20	GLU
2	AB	195	ASP
2	AB	233	SER
2	AB	239	VAL
3	AC	12	LEU
3	AC	47	LEU
3	AC	61	ALA
3	AC	95	THR
3	AC	129	ALA
3	AC	154	SER
3	AC	156	ARG
4	AD	3	ARG
4	AD	13	ARG
4	AD	14	ARG
4	AD	18	LYS

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Mol	Chain	Res	Type
4	AD	30	LYS
4	AD	44	GLY
4	AD	153	ARG
6	AF	39	LYS
7	AG	8	GLU
7	AG	52	GLU
9	AI	41	VAL
9	AI	43	ALA
9	AI	61	ALA
9	AI	89	ASN
9	AI	105	ASP
10	AJ	33	GLN
10	AJ	56	HIS
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	46	LYS
12	AL	47	LYS
12	AL	71	PRO
12	AL	91	LYS
12	AL	106	ASP
13	AM	11	ARG
13	AM	12	ASN
13	AM	91	ARG
13	AM	116	THR
13	AM	124	PRO
14	AN	15	LYS
15	AO	24	SER
17	AQ	13	ASP
17	AQ	49	GLU
18	AR	37	VAL
18	AR	38	GLU
18	AR	45	SER
19	AS	10	PHE
19	AS	27	GLU
19	AS	28	LYS
19	AS	29	ARG
19	AS	63	THR
20	AT	48	LYS

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Mol	Chain	Res	Type
20	AT	74	LYS
20	AT	99	LEU
24	AY	19	ALA
24	AY	21	ILE
24	AY	23	ALA
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	197	ARG
24	AY	203	GLU
24	AY	204	GLU
24	AY	206	LEU
24	AY	209	ALA
24	AY	210	ARG
24	AY	251	ILE
24	AY	276	VAL
24	AY	360	ALA
24	AY	385	THR
24	AY	396	ARG
24	AY	447	GLY
24	AY	448	GLN
24	AY	498	ILE
24	AY	505	GLY
24	AY	530	VAL
24	AY	614	GLU
25	B0	20	ARG
25	B0	74	ARG
26	B1	28	GLY
26	B1	52	ARG
26	B1	53	VAL
26	B1	85	LEU
27	B2	19	VAL
27	B2	47	ASN
27	B2	48	HIS
28	B3	3	ARG
29	B4	3	GLU

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Mol	Chain	Res	Type
29	B4	9	LEU
29	B4	26	SER
29	B4	38	LYS
29	B4	40	HIS
29	B4	43	TYR
29	B4	48	ARG
29	B4	50	VAL
30	B5	49	CYS
30	B5	53	ALA
30	B5	56	LYS
30	B5	57	VAL
31	B6	7	ILE
31	B6	9	LEU
31	B6	18	ARG
31	B6	20	ASN
31	B6	23	THR
31	B6	27	LYS
31	B6	31	PRO
31	B6	44	ARG
31	B6	52	VAL
33	B8	31	HIS
33	B8	33	ASN
33	B8	49	VAL
34	B9	2	LYS
34	B9	12	ASP
34	B9	35	ARG
38	BD	24	ILE
38	BD	25	THR
38	BD	27	THR
38	BD	34	VAL
38	BD	127	VAL
38	BD	225	ALA
38	BD	239	ARG
38	BD	246	PRO
39	BE	35	GLN
39	BE	77	ILE
39	BE	88	GLY
39	BE	90	THR
39	BE	134	ILE
39	BE	145	LYS
39	BE	186	GLY
40	BF	11	VAL

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Mol	Chain	Res	Type
40	BF	21	ALA
40	BF	64	ILE
40	BF	89	VAL
40	BF	167	ALA
41	BG	4	ASP
41	BG	6	ALA
41	BG	87	PRO
41	BG	96	ARG
41	BG	102	PHE
41	BG	109	VAL
41	BG	110	ALA
41	BG	181	ARG
42	BH	41	MET
42	BH	46	GLU
42	BH	55	PRO
42	BH	83	TYR
42	BH	85	LYS
42	BH	154	PRO
42	BH	155	SER
42	BH	156	ALA
42	BH	157	TYR
42	BH	160	LYS
42	BH	169	VAL
42	BH	173	PRO
43	BK	10	LEU
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	63	THR
45	BN	130	HIS
45	BN	133	GLN
46	BO	35	VAL
46	BO	48	PRO
47	BP	12	ALA
47	BP	14	LYS
47	BP	17	LYS
47	BP	31	ALA
47	BP	48	PRO

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Mol	Chain	Res	Type
47	BP	52	GLU
47	BP	57	THR
47	BP	58	THR
47	BP	111	ARG
47	BP	135	LEU
47	BP	147	LEU
48	BQ	27	VAL
48	BQ	135	ASP
49	BR	8	ARG
49	BR	14	SER
49	BR	45	ARG
49	BR	88	ARG
49	BR	107	ASP
49	BR	117	VAL
50	BS	13	ARG
50	BS	23	ARG
50	BS	94	TYR
50	BS	97	ARG
50	BS	100	ALA
50	BS	102	ALA
51	BT	6	LEU
51	BT	24	PRO
51	BT	30	VAL
51	BT	80	SER
51	BT	91	ARG
51	BT	103	ARG
51	BT	104	ASN
51	BT	107	ASP
51	BT	129	ARG
51	BT	132	LYS
52	BU	91	ASP
52	BU	93	LYS
52	BU	114	LYS
53	BV	18	LEU
53	BV	19	LYS
53	BV	46	VAL
53	BV	47	VAL
53	BV	67	GLY
54	BW	11	ARG
54	BW	25	ARG
55	BX	12	VAL
56	BY	7	VAL

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Mol	Chain	Res	Type
56	BY	24	VAL
56	BY	38	ILE
56	BY	48	ALA
56	BY	74	PRO
56	BY	77	PRO
56	BY	78	ALA
56	BY	98	VAL
56	BY	99	CYS
56	BY	100	ALA
57	BZ	27	VAL
57	BZ	51	ALA
57	BZ	78	LYS
57	BZ	81	ARG
57	BZ	85	HIS
57	BZ	112	ARG
57	BZ	120	ILE
57	BZ	142	SER
57	BZ	146	ILE
57	BZ	158	PRO
57	BZ	163	LEU
57	BZ	168	GLU
2	AB	12	GLU
2	AB	15	VAL
2	AB	18	GLY
2	AB	64	ARG
2	AB	128	GLU
2	AB	151	GLY
2	AB	153	ARG
2	AB	190	THR
2	AB	224	GLN
3	AC	4	LYS
3	AC	65	ALA
3	AC	96	GLY
3	AC	131	ARG
3	AC	160	ALA
4	AD	5	ILE
4	AD	32	ALA
4	AD	69	GLY
4	AD	171	GLY
5	AE	11	ILE
5	AE	137	GLU
6	AF	34	GLY

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Mol	Chain	Res	Type
7	AG	41	ARG
7	AG	90	GLU
8	AH	2	LEU
8	AH	105	ARG
9	AI	11	LYS
9	AI	34	ASN
9	AI	44	VAL
10	AJ	19	SER
10	AJ	55	LYS
10	AJ	57	LYS
10	AJ	61	GLU
12	AL	38	THR
12	AL	45	PRO
12	AL	81	SER
12	AL	87	GLY
13	AM	4	ILE
13	AM	7	VAL
13	AM	53	VAL
13	AM	55	ARG
13	AM	70	LEU
13	AM	83	ASP
13	AM	90	LEU
13	AM	100	GLY
13	AM	114	ARG
13	AM	118	ALA
14	AN	14	PRO
14	AN	16	PHE
14	AN	29	ARG
15	AO	14	GLU
16	AP	13	HIS
16	AP	34	GLU
19	AS	26	GLY
19	AS	47	HIS
19	AS	54	GLY
19	AS	62	ILE
20	AT	49	ALA
20	AT	62	LEU
20	AT	78	ALA
21	AU	3	LYS
24	AY	10	LYS
24	AY	34	TYR
24	AY	92	ILE

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Mol	Chain	Res	Type
24	AY	114	VAL
24	AY	196	ILE
24	AY	205	TYR
24	AY	361	ASN
24	AY	519	ARG
24	AY	559	PRO
24	AY	617	MET
24	AY	636	PRO
24	AY	678	GLU
26	B1	30	VAL
26	B1	84	GLY
27	B2	18	PRO
27	B2	30	ARG
28	B3	29	ARG
28	B3	38	GLU
29	B4	20	ASN
29	B4	44	THR
29	B4	51	ASP
30	B5	36	CYS
30	B5	58	LEU
30	B5	59	GLU
31	B6	28	ARG
31	B6	36	LEU
33	B8	34	TRP
33	B8	37	SER
34	B9	11	CYS
34	B9	30	PRO
37	BC	30	VAL
37	BC	38	PHE
37	BC	101	ILE
37	BC	127	LYS
37	BC	165	ARG
38	BD	12	SER
38	BD	19	ALA
38	BD	41	GLY
38	BD	42	GLY
38	BD	125	ILE
38	BD	129	ASN
38	BD	134	ARG
38	BD	198	ASN
38	BD	242	ARG
39	BE	53	PRO

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Mol	Chain	Res	Type
39	BE	54	GLN
39	BE	71	GLY
39	BE	118	LYS
39	BE	129	HIS
39	BE	189	PRO
40	BF	3	GLU
40	BF	10	PRO
40	BF	84	VAL
40	BF	115	ALA
40	BF	127	GLU
40	BF	180	GLY
40	BF	206	ILE
41	BG	14	GLU
41	BG	75	LYS
41	BG	81	LYS
41	BG	82	LEU
41	BG	84	LYS
41	BG	99	MET
42	BH	13	LYS
42	BH	21	PRO
42	BH	42	ARG
42	BH	69	ARG
42	BH	138	LYS
42	BH	158	HIS
42	BH	171	LEU
42	BH	176	ALA
43	BK	87	GLY
45	BN	57	ALA
45	BN	58	ASP
45	BN	77	GLY
45	BN	134	ARG
46	BO	5	GLN
46	BO	89	ASN
46	BO	120	GLU
47	BP	34	GLY
47	BP	47	ASP
47	BP	49	ARG
48	BQ	30	GLY
48	BQ	52	VAL
48	BQ	62	GLY
48	BQ	71	ASP
49	BR	42	LYS

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Mol	Chain	Res	Type
49	BR	58	GLY
50	BS	15	ARG
50	BS	37	ALA
50	BS	71	ARG
50	BS	85	VAL
50	BS	103	GLU
50	BS	104	GLY
50	BS	107	GLU
51	BT	3	ARG
51	BT	5	ALA
51	BT	12	SER
51	BT	28	VAL
51	BT	55	ASN
51	BT	58	ASN
51	BT	97	ALA
51	BT	130	ALA
51	BT	133	GLU
51	BT	135	ALA
52	BU	27	LEU
52	BU	52	ARG
52	BU	110	VAL
53	BV	2	PHE
53	BV	22	VAL
53	BV	26	ASP
53	BV	53	GLU
53	BV	55	ALA
53	BV	78	LYS
54	BW	6	ILE
54	BW	63	ASP
55	BX	6	ASP
55	BX	42	ALA
55	BX	87	GLN
55	BX	93	GLU
56	BY	17	SER
56	BY	41	GLY
56	BY	60	PHE
56	BY	92	ASN
56	BY	104	GLY
57	BZ	5	LEU
57	BZ	30	ASN
57	BZ	80	ARG
57	BZ	121	HIS

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Mol	Chain	Res	Type
57	BZ	128	VAL
57	BZ	148	ASP
57	BZ	180	VAL
57	BZ	185	GLU
2	AB	13	ALA
2	AB	95	GLN
2	AB	120	ALA
2	AB	129	GLU
2	AB	207	ALA
2	AB	238	LEU
3	AC	35	GLU
3	AC	165	THR
3	AC	206	GLU
4	AD	40	PRO
4	AD	156	GLU
5	AE	8	GLU
5	AE	118	ILE
5	AE	136	MET
7	AG	10	ARG
7	AG	131	LYS
9	AI	121	ARG
12	AL	27	LEU
12	AL	121	GLY
13	AM	5	ALA
15	AO	77	ARG
17	AQ	89	LEU
19	AS	61	TYR
19	AS	66	MET
19	AS	73	GLU
20	AT	69	GLY
20	AT	96	GLY
24	AY	100	VAL
24	AY	120	THR
24	AY	148	LEU
24	AY	299	VAL
24	AY	347	GLY
24	AY	371	ALA
24	AY	399	LEU
24	AY	416	LYS
24	AY	418	LYS
24	AY	458	HIS
24	AY	471	LYS

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Mol	Chain	Res	Type
24	AY	502	GLY
24	AY	532	GLY
24	AY	535	PRO
24	AY	631	ILE
24	AY	666	ARG
27	B2	20	GLU
27	B2	21	LEU
27	B2	58	ALA
28	B3	32	GLN
28	B3	39	ASP
29	B4	2	LYS
32	B7	18	PHE
33	B8	40	GLU
33	B8	61	LEU
37	BC	12	LEU
37	BC	168	LYS
38	BD	3	VAL
38	BD	30	GLU
38	BD	35	LYS
38	BD	36	PRO
38	BD	206	LEU
38	BD	267	SER
39	BE	44	TYR
39	BE	46	ALA
39	BE	64	LYS
39	BE	66	HIS
39	BE	72	VAL
39	BE	86	PRO
39	BE	94	GLU
39	BE	130	GLY
39	BE	144	ARG
40	BF	108	LYS
41	BG	36	LYS
41	BG	43	LEU
41	BG	47	LYS
41	BG	103	LEU
41	BG	163	ALA
42	BH	81	GLU
42	BH	98	LEU
42	BH	126	PRO
42	BH	165	ALA
43	BK	16	LYS

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Mol	Chain	Res	Type
45	BN	40	PRO
45	BN	129	PRO
46	BO	29	ASN
46	BO	68	GLU
46	BO	100	GLY
47	BP	23	PRO
47	BP	33	ARG
48	BQ	53	ALA
48	BQ	139	GLU
49	BR	102	GLU
50	BS	89	ARG
50	BS	92	TYR
50	BS	105	ALA
51	BT	41	ARG
52	BU	51	LYS
52	BU	67	ALA
53	BV	3	ALA
53	BV	50	PRO
54	BW	18	ARG
55	BX	19	ALA
56	BY	39	VAL
56	BY	46	LYS
56	BY	67	LEU
56	BY	81	LYS
57	BZ	83	PRO
57	BZ	152	ALA
57	BZ	159	PRO
57	BZ	170	THR
2	AB	24	TRP
2	AB	79	ASP
2	AB	97	TRP
2	AB	130	ARG
2	AB	150	SER
2	AB	216	SER
3	AC	15	THR
3	AC	135	LYS
5	AE	72	GLN
5	AE	140	ARG
6	AF	43	LEU
8	AH	104	ARG
9	AI	12	GLU
9	AI	33	PHE

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Mol	Chain	Res	Type
9	AI	54	ASP
10	AJ	84	GLN
10	AJ	91	PRO
12	AL	19	ARG
12	AL	51	ALA
12	AL	92	ASP
13	AM	121	LYS
15	AO	86	GLY
19	AS	5	LEU
19	AS	25	LYS
19	AS	51	VAL
20	AT	39	LYS
20	AT	61	SER
20	AT	97	ALA
20	AT	100	ILE
20	AT	104	LEU
24	AY	25	LYS
24	AY	75	LYS
24	AY	112	GLN
24	AY	239	GLU
24	AY	283	PRO
24	AY	314	PHE
24	AY	402	ILE
24	AY	486	THR
24	AY	506	GLN
24	AY	577	SER
24	AY	598	ASP
24	AY	656	ALA
24	AY	680	PRO
27	B2	26	ARG
31	B6	16	CYS
33	B8	3	LYS
33	B8	35	GLN
37	BC	166	ASN
38	BD	28	GLU
38	BD	214	TRP
38	BD	274	ARG
39	BE	52	LEU
39	BE	55	ASN
39	BE	57	LYS
39	BE	75	VAL
39	BE	83	ASP

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Mol	Chain	Res	Type
40	BF	2	LYS
40	BF	122	LYS
40	BF	126	VAL
40	BF	134	GLY
40	BF	168	ARG
41	BG	22	ARG
41	BG	116	ASP
42	BH	20	ALA
42	BH	47	GLU
42	BH	110	SER
42	BH	137	ASP
42	BH	174	GLY
43	BK	62	ASP
47	BP	39	LYS
47	BP	43	GLY
47	BP	81	GLN
47	BP	106	LEU
47	BP	123	LEU
50	BS	99	LYS
51	BT	26	ASP
51	BT	81	PRO
51	BT	88	ILE
51	BT	90	GLN
52	BU	46	ALA
53	BV	16	PRO
54	BW	93	ALA
55	BX	11	PRO
56	BY	90	LEU
57	BZ	42	VAL
57	BZ	166	SER
2	AB	65	GLY
2	AB	152	PHE
2	AB	157	ARG
2	AB	165	VAL
4	AD	179	GLU
4	AD	191	ARG
4	AD	193	ASP
6	AF	51	PRO
7	AG	14	PRO
7	AG	80	VAL
7	AG	150	ALA
9	AI	55	ALA

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Mol	Chain	Res	Type
9	AI	106	ALA
11	AK	34	ASP
13	AM	10	PRO
13	AM	21	TYR
15	AO	27	VAL
16	AP	54	GLU
16	AP	61	SER
17	AQ	25	ARG
18	AR	87	ARG
20	AT	25	ARG
20	AT	44	ALA
20	AT	95	ALA
24	AY	24	GLY
24	AY	90	PHE
24	AY	123	ARG
24	AY	303	PRO
24	AY	380	LEU
24	AY	406	GLU
24	AY	408	VAL
24	AY	456	GLU
24	AY	548	GLU
26	B1	54	ALA
26	B1	78	LYS
26	B1	86	SER
27	B2	51	ARG
30	B5	3	LYS
32	B7	17	GLY
33	B8	43	GLN
37	BC	107	GLY
38	BD	268	ARG
38	BD	273	ARG
39	BE	2	LYS
39	BE	45	THR
39	BE	84	PHE
39	BE	98	PRO
39	BE	178	GLU
40	BF	27	GLU
40	BF	66	PRO
40	BF	69	HIS
41	BG	97	ASP
41	BG	126	ASP
41	BG	166	ASP

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Mol	Chain	Res	Type
42	BH	95	ARG
43	BK	48	MET
45	BN	125	GLY
46	BO	18	LYS
47	BP	10	PRO
47	BP	141	ALA
48	BQ	22	LYS
48	BQ	59	ARG
48	BQ	134	ARG
49	BR	31	HIS
49	BR	61	HIS
49	BR	83	ILE
50	BS	57	LYS
51	BT	105	LEU
52	BU	53	ARG
52	BU	66	ASN
53	BV	31	ALA
54	BW	9	TYR
54	BW	14	PRO
55	BX	22	ALA
57	BZ	165	VAL
2	AB	78	GLN
2	AB	83	MET
3	AC	66	VAL
4	AD	123	HIS
5	AE	146	ALA
10	AJ	23	ILE
11	AK	57	THR
12	AL	40	VAL
13	AM	113	PRO
19	AS	42	PRO
24	AY	386	GLY
25	B0	42	GLY
26	B1	36	GLY
27	B2	14	ARG
29	B4	8	LYS
30	B5	4	HIS
31	B6	19	ARG
31	B6	41	PRO
39	BE	58	ARG
40	BF	58	ALA
40	BF	85	GLY

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Mol	Chain	Res	Type
42	BH	92	ILE
45	BN	60	ILE
45	BN	112	LEU
45	BN	127	ASP
49	BR	4	LEU
49	BR	49	ASP
54	BW	65	LEU
54	BW	67	ASP
56	BY	3	VAL
2	AB	232	PRO
5	AE	96	PRO
5	AE	129	ILE
15	AO	11	VAL
20	AT	41	ILE
24	AY	42	ILE
24	AY	65	ILE
24	AY	200	PRO
24	AY	415	PRO
27	B2	17	SER
32	B7	25	PRO
37	BC	17	PRO
40	BF	9	ILE
40	BF	14	PRO
40	BF	82	ILE
42	BH	151	ILE
48	BQ	108	GLY
53	BV	54	GLY
54	BW	112	GLY
56	BY	37	VAL
2	AB	230	VAL
3	AC	55	VAL
11	AK	95	ILE
16	AP	62	VAL
19	AS	9	VAL
27	B2	41	ILE
29	B4	5	ILE
38	BD	10	THR
38	BD	244	ARG
42	BH	107	VAL
45	BN	5	VAL
48	BQ	122	GLY
50	BS	22	GLY

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Mol	Chain	Res	Type
50	BS	90	GLY
52	BU	26	GLY
52	BU	90	VAL
56	BY	59	GLY
56	BY	75	ILE
57	BZ	133	ILE
2	AB	131	PRO
9	AI	67	GLY
9	AI	80	GLY
13	AM	54	VAL
13	AM	78	ILE
15	AO	75	PRO
16	AP	45	THR
19	AS	59	PRO
30	B5	50	GLY
33	B8	28	GLY
38	BD	197	GLY
38	BD	234	GLY
40	BF	25	PRO
41	BG	129	GLY
42	BH	45	VAL
42	BH	48	GLY
47	BP	146	VAL
49	BR	46	GLY
51	BT	15	VAL
4	AD	7	PRO
4	AD	88	VAL
7	AG	42	ILE
10	AJ	36	GLY
13	AM	60	VAL
24	AY	618	GLY
29	B4	28	LYS
38	BD	228	PRO
42	BH	39	PRO
47	BP	9	ASN
53	BV	51	VAL
10	AJ	53	PRO
43	BK	73	PRO
47	BP	83	VAL
38	BD	245	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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%)	172 (85%)	30 (15%)	3 12
3	AC	160/188 (85%)	137 (86%)	23 (14%)	3 13
4	AD	180/181 (99%)	160 (89%)	20 (11%)	6 19
5	AE	115/123 (94%)	99 (86%)	16 (14%)	3 14
6	AF	90/90 (100%)	83 (92%)	7 (8%)	11 32
7	AG	126/127 (99%)	112 (89%)	14 (11%)	6 19
8	AH	119/119 (100%)	106 (89%)	13 (11%)	6 20
9	AI	98/99 (99%)	85 (87%)	13 (13%)	4 14
10	AJ	88/92 (96%)	71 (81%)	17 (19%)	1 7
11	AK	90/99 (91%)	81 (90%)	9 (10%)	7 24
12	AL	104/109 (95%)	90 (86%)	14 (14%)	4 14
13	AM	99/101 (98%)	88 (89%)	11 (11%)	6 19
14	AN	49/50 (98%)	43 (88%)	6 (12%)	5 17
15	AO	79/80 (99%)	71 (90%)	8 (10%)	7 23
16	AP	72/74 (97%)	66 (92%)	6 (8%)	10 30
17	AQ	94/97 (97%)	81 (86%)	13 (14%)	3 14
18	AR	61/77 (79%)	59 (97%)	2 (3%)	33 55
19	AS	69/80 (86%)	54 (78%)	15 (22%)	1 6
20	AT	76/82 (93%)	65 (86%)	11 (14%)	3 13
21	AU	19/22 (86%)	19 (100%)	0	100 100
24	AY	563/582 (97%)	470 (84%)	93 (16%)	2 10
25	B0	66/67 (98%)	58 (88%)	8 (12%)	5 17
26	B1	78/83 (94%)	62 (80%)	16 (20%)	1 7
27	B2	66/67 (98%)	56 (85%)	10 (15%)	3 12
28	B3	51/52 (98%)	44 (86%)	7 (14%)	3 14
29	B4	51/63 (81%)	31 (61%)	20 (39%)	0 1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
30	B5	51/52 (98%)	46 (90%)	5 (10%)	7 24
31	B6	49/52 (94%)	36 (74%)	13 (26%)	0 3
32	B7	41/42 (98%)	38 (93%)	3 (7%)	13 34
33	B8	53/55 (96%)	43 (81%)	10 (19%)	1 8
34	B9	34/34 (100%)	25 (74%)	9 (26%)	0 3
37	BC	180/181 (99%)	162 (90%)	18 (10%)	7 24
38	BD	217/218 (100%)	174 (80%)	43 (20%)	1 7
39	BE	165/166 (99%)	133 (81%)	32 (19%)	1 7
40	BF	165/166 (99%)	149 (90%)	16 (10%)	8 24
41	BG	155/156 (99%)	125 (81%)	30 (19%)	1 7
42	BH	136/148 (92%)	121 (89%)	15 (11%)	6 20
43	BK	104/111 (94%)	87 (84%)	17 (16%)	2 10
44	BL	46/85 (54%)	42 (91%)	4 (9%)	9 29
45	BN	117/119 (98%)	98 (84%)	19 (16%)	2 11
46	BO	100/100 (100%)	89 (89%)	11 (11%)	6 20
47	BP	112/116 (97%)	90 (80%)	22 (20%)	1 7
48	BQ	111/111 (100%)	94 (85%)	17 (15%)	3 12
49	BR	100/101 (99%)	85 (85%)	15 (15%)	3 12
50	BS	77/88 (88%)	65 (84%)	12 (16%)	2 12
51	BT	120/127 (94%)	92 (77%)	28 (23%)	1 5
52	BU	92/94 (98%)	82 (89%)	10 (11%)	6 20
53	BV	82/82 (100%)	70 (85%)	12 (15%)	3 13
54	BW	91/92 (99%)	84 (92%)	7 (8%)	12 32
55	BX	74/78 (95%)	61 (82%)	13 (18%)	2 9
56	BY	87/91 (96%)	75 (86%)	12 (14%)	3 14
57	BZ	162/179 (90%)	130 (80%)	32 (20%)	1 7
All	All	5586/5868 (95%)	4759 (85%)	827 (15%)	5 13

All (827) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	17	PHE

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Mol	Chain	Res	Type
2	AB	32	ILE
2	AB	36	ARG
2	AB	41	ILE
2	AB	44	LEU
2	AB	67	THR
2	AB	79	ASP
2	AB	94	ASN
2	AB	101	MET
2	AB	111	ARG
2	AB	129	GLU
2	AB	137	ARG
2	AB	145	LEU
2	AB	156	LYS
2	AB	162	ILE
2	AB	164	VAL
2	AB	170	GLU
2	AB	172	ILE
2	AB	178	ARG
2	AB	179	LYS
2	AB	185	ILE
2	AB	192	SER
2	AB	196	LEU
2	AB	200	ILE
2	AB	210	SER
2	AB	215	LEU
2	AB	221	LEU
2	AB	223	ILE
2	AB	238	LEU
3	AC	5	ILE
3	AC	14	ILE
3	AC	16	ARG
3	AC	34	LEU
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	98	ASN
3	AC	125	GLU
3	AC	127	ARG
3	AC	152	ILE

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Mol	Chain	Res	Type
3	AC	156	ARG
3	AC	164	ARG
3	AC	165	THR
3	AC	166	GLU
3	AC	167	TRP
3	AC	178	LEU
3	AC	179	ARG
3	AC	204	LEU
3	AC	207	VAL
4	AD	3	ARG
4	AD	7	PRO
4	AD	9	CYS
4	AD	12	CYS
4	AD	15	GLU
4	AD	22	LYS
4	AD	36	ARG
4	AD	50	ARG
4	AD	57	ARG
4	AD	70	ILE
4	AD	73	ARG
4	AD	78	LEU
4	AD	86	LYS
4	AD	88	VAL
4	AD	96	LEU
4	AD	114	ARG
4	AD	127	THR
4	AD	132	ARG
4	AD	135	LEU
4	AD	200	GLU
5	AE	10	MET
5	AE	12	LEU
5	AE	18	ARG
5	AE	20	GLN
5	AE	41	VAL
5	AE	56	GLN
5	AE	64	ARG
5	AE	67	VAL
5	AE	75	THR
5	AE	76	ILE
5	AE	79	GLU
5	AE	96	PRO
5	AE	101	ILE

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Mol	Chain	Res	Type
5	AE	117	ASP
5	AE	119	LEU
5	AE	144	THR
6	AF	15	ASP
6	AF	32	ASN
6	AF	43	LEU
6	AF	47	ARG
6	AF	56	PRO
6	AF	86	ARG
6	AF	98	LEU
7	AG	16	LEU
7	AG	27	ILE
7	AG	30	ILE
7	AG	57	GLU
7	AG	66	VAL
7	AG	75	VAL
7	AG	78	ARG
7	AG	79	ARG
7	AG	104	LEU
7	AG	110	GLN
7	AG	113	GLU
7	AG	124	LEU
7	AG	137	LYS
7	AG	151	TYR
8	AH	1	MET
8	AH	18	ARG
8	AH	39	LEU
8	AH	83	ILE
8	AH	91	ARG
8	AH	92	ARG
8	AH	98	LYS
8	AH	102	ARG
8	AH	109	ILE
8	AH	112	LEU
8	AH	118	VAL
8	AH	129	VAL
8	AH	133	LEU
9	AI	4	TYR
9	AI	10	ARG
9	AI	27	THR
9	AI	29	ASN
9	AI	32	ASP

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Mol	Chain	Res	Type
9	AI	53	VAL
9	AI	59	PHE
9	AI	85	LEU
9	AI	95	LYS
9	AI	96	LEU
9	AI	109	VAL
9	AI	114	TYR
9	AI	128	ARG
10	AJ	4	ILE
10	AJ	19	SER
10	AJ	40	LEU
10	AJ	50	ILE
10	AJ	55	LYS
10	AJ	59	SER
10	AJ	62	HIS
10	AJ	63	PHE
10	AJ	70	ARG
10	AJ	74	ILE
10	AJ	76	ASN
10	AJ	82	ILE
10	AJ	89	ASP
10	AJ	90	LEU
10	AJ	91	PRO
10	AJ	96	ILE
10	AJ	98	ILE
11	AK	21	ILE
11	AK	29	ILE
11	AK	31	THR
11	AK	57	THR
11	AK	63	LEU
11	AK	87	THR
11	AK	92	GLU
11	AK	114	VAL
11	AK	124	LYS
12	AL	7	ILE
12	AL	11	VAL
12	AL	16	GLU
12	AL	38	THR
12	AL	41	ARG
12	AL	44	THR
12	AL	47	LYS
12	AL	67	THR

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Mol	Chain	Res	Type
12	AL	75	HIS
12	AL	81	SER
12	AL	85	ILE
12	AL	98	TYR
12	AL	105	TYR
12	AL	113	ARG
13	AM	47	ASP
13	AM	64	TRP
13	AM	66	LEU
13	AM	70	LEU
13	AM	98	VAL
13	AM	108	ARG
13	AM	113	PRO
13	AM	115	LYS
13	AM	121	LYS
13	AM	122	LYS
13	AM	124	PRO
14	AN	14	PRO
14	AN	16	PHE
14	AN	18	VAL
14	AN	29	ARG
14	AN	41	ARG
14	AN	42	ILE
15	AO	10	LYS
15	AO	18	PHE
15	AO	24	SER
15	AO	31	LEU
15	AO	39	LEU
15	AO	57	LEU
15	AO	67	LEU
15	AO	82	ILE
16	AP	1	MET
16	AP	2	VAL
16	AP	11	SER
16	AP	25	ARG
16	AP	32	TYR
16	AP	69	THR
17	AQ	6	LEU
17	AQ	7	THR
17	AQ	9	VAL
17	AQ	23	VAL
17	AQ	35	VAL

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Mol	Chain	Res	Type
17	AQ	38	ARG
17	AQ	48	GLU
17	AQ	49	GLU
17	AQ	52	LYS
17	AQ	59	ILE
17	AQ	74	LEU
17	AQ	78	GLU
17	AQ	87	LYS
18	AR	29	PHE
18	AR	31	LEU
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	29	ARG
19	AS	30	LEU
19	AS	37	ARG
19	AS	40	ILE
19	AS	41	VAL
19	AS	44	MET
19	AS	60	VAL
19	AS	66	MET
19	AS	77	THR
20	AT	13	LEU
20	AT	24	LEU
20	AT	26	ASN
20	AT	36	LEU
20	AT	42	GLN
20	AT	50	GLU
20	AT	73	HIS
20	AT	74	LYS
20	AT	75	ASN
20	AT	84	LEU
20	AT	93	GLU
24	AY	4	LYS
24	AY	12	LEU
24	AY	15	ILE
24	AY	20	HIS
24	AY	21	ILE
24	AY	40	HIS

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Mol	Chain	Res	Type
24	AY	65	ILE
24	AY	82	ILE
24	AY	83	ASP
24	AY	85	PRO
24	AY	89	ASP
24	AY	91	THR
24	AY	92	ILE
24	AY	96	ARG
24	AY	100	VAL
24	AY	101	LEU
24	AY	102	ASP
24	AY	111	SER
24	AY	117	GLN
24	AY	122	TRP
24	AY	124	GLN
24	AY	130	VAL
24	AY	132	ARG
24	AY	152	THR
24	AY	157	LEU
24	AY	173	THR
24	AY	186	TYR
24	AY	192	LEU
24	AY	194	THR
24	AY	197	ARG
24	AY	201	ILE
24	AY	204	GLU
24	AY	225	GLU
24	AY	238	THR
24	AY	240	GLU
24	AY	242	LEU
24	AY	252	ASP
24	AY	259	PHE
24	AY	260	LEU
24	AY	277	VAL
24	AY	288	PRO
24	AY	289	ILE
24	AY	298	VAL
24	AY	299	VAL
24	AY	312	LEU
24	AY	326	THR
24	AY	328	ILE
24	AY	343	ASN

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Mol	Chain	Res	Type
24	AY	352	VAL
24	AY	354	ARG
24	AY	357	ARG
24	AY	377	VAL
24	AY	378	VAL
24	AY	381	LYS
24	AY	388	THR
24	AY	406	GLU
24	AY	410	ASP
24	AY	418	LYS
24	AY	421	GLN
24	AY	426	GLN
24	AY	428	LEU
24	AY	438	PHE
24	AY	440	VAL
24	AY	445	GLU
24	AY	468	ARG
24	AY	476	VAL
24	AY	481	VAL
24	AY	487	ILE
24	AY	501	THR
24	AY	504	ARG
24	AY	506	GLN
24	AY	507	TYR
24	AY	509	HIS
24	AY	512	ILE
24	AY	513	LYS
24	AY	515	GLU
24	AY	517	LEU
24	AY	525	PHE
24	AY	527	ASN
24	AY	533	VAL
24	AY	559	PRO
24	AY	567	LEU
24	AY	580	MET
24	AY	595	GLN
24	AY	608	VAL
24	AY	614	GLU
24	AY	625	ASN
24	AY	630	GLN
24	AY	631	ILE
24	AY	634	MET

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Mol	Chain	Res	Type
24	AY	635	GLU
24	AY	657	THR
24	AY	685	GLU
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	60	PHE
25	B0	84	LEU
26	B1	3	LYS
26	B1	17	SER
26	B1	18	ILE
26	B1	34	THR
26	B1	43	TYR
26	B1	45	ASN
26	B1	46	LEU
26	B1	56	GLN
26	B1	65	SER
26	B1	69	LYS
26	B1	72	GLU
26	B1	73	LEU
26	B1	75	GLU
26	B1	80	LEU
26	B1	83	GLU
26	B1	94	LEU
27	B2	3	LEU
27	B2	25	VAL
27	B2	30	ARG
27	B2	31	GLU
27	B2	32	LEU
27	B2	38	GLN
27	B2	44	LEU
27	B2	53	LEU
27	B2	59	ARG
27	B2	64	LEU
28	B3	8	LEU
28	B3	15	TYR
28	B3	28	LEU
28	B3	29	ARG
28	B3	35	ARG

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Mol	Chain	Res	Type
28	B3	38	GLU
28	B3	48	GLU
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	14	ILE
29	B4	20	ASN
29	B4	25	TYR
29	B4	28	LYS
29	B4	31	ILE
29	B4	32	TYR
29	B4	40	HIS
29	B4	42	PHE
29	B4	43	TYR
29	B4	44	THR
29	B4	48	ARG
29	B4	49	PHE
29	B4	51	ASP
29	B4	55	ARG
30	B5	3	LYS
30	B5	4	HIS
30	B5	55	ARG
30	B5	58	LEU
30	B5	60	VAL
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	38	LYS
31	B6	39	TYR
31	B6	42	TRP
31	B6	54	ILE
32	B7	1	MET
32	B7	4	THR

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Mol	Chain	Res	Type
32	B7	48	LYS
33	B8	14	VAL
33	B8	30	ARG
33	B8	31	HIS
33	B8	32	LEU
33	B8	33	ASN
33	B8	34	TRP
33	B8	40	GLU
33	B8	52	LYS
33	B8	61	LEU
33	B8	64	TYR
34	B9	2	LYS
34	B9	7	VAL
34	B9	10	ILE
34	B9	11	CYS
34	B9	16	VAL
34	B9	23	VAL
34	B9	25	VAL
34	B9	26	ILE
34	B9	29	ASN
37	BC	15	VAL
37	BC	21	TYR
37	BC	28	ARG
37	BC	31	LYS
37	BC	43	GLU
37	BC	54	ARG
37	BC	58	ASN
37	BC	74	ARG
37	BC	100	ILE
37	BC	101	ILE
37	BC	117	THR
37	BC	138	LEU
37	BC	149	ASN
37	BC	184	GLU
37	BC	185	LYS
37	BC	203	GLU
37	BC	212	SER
37	BC	224	ARG
38	BD	10	THR
38	BD	23	GLU
38	BD	24	ILE
38	BD	25	THR

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Mol	Chain	Res	Type
38	BD	26	LYS
38	BD	35	LYS
38	BD	37	LEU
38	BD	61	LEU
38	BD	65	ILE
38	BD	67	PHE
38	BD	87	ASN
38	BD	89	SER
38	BD	91	ARG
38	BD	92	ILE
38	BD	95	LEU
38	BD	106	ILE
38	BD	111	LEU
38	BD	117	VAL
38	BD	125	ILE
38	BD	131	LEU
38	BD	151	LYS
38	BD	155	LEU
38	BD	157	ARG
38	BD	166	GLN
38	BD	183	ARG
38	BD	192	THR
38	BD	200	ASP
38	BD	202	LYS
38	BD	205	VAL
38	BD	211	ARG
38	BD	221	VAL
38	BD	226	MET
38	BD	228	PRO
38	BD	231	HIS
38	BD	244	ARG
38	BD	245	PRO
38	BD	246	PRO
38	BD	257	LEU
38	BD	260	ARG
38	BD	266	SER
38	BD	270	ILE
38	BD	271	ILE
38	BD	275	LYS
39	BE	4	ILE
39	BE	9	VAL
39	BE	14	ILE

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Mol	Chain	Res	Type
39	BE	21	VAL
39	BE	22	PRO
39	BE	24	THR
39	BE	26	ILE
39	BE	45	THR
39	BE	49	LEU
39	BE	59	VAL
39	BE	61	ARG
39	BE	67	PHE
39	BE	69	LYS
39	BE	76	ARG
39	BE	78	LEU
39	BE	86	PRO
39	BE	94	GLU
39	BE	95	ILE
39	BE	111	ARG
39	BE	118	LYS
39	BE	119	ARG
39	BE	134	ILE
39	BE	143	ASN
39	BE	144	ARG
39	BE	178	GLU
39	BE	179	GLU
39	BE	181	LEU
39	BE	184	VAL
39	BE	188	VAL
39	BE	192	ASN
39	BE	197	ILE
39	BE	202	LYS
40	BF	19	GLU
40	BF	28	ILE
40	BF	41	LEU
40	BF	62	ARG
40	BF	66	PRO
40	BF	70	THR
40	BF	83	PHE
40	BF	106	ARG
40	BF	110	LEU
40	BF	123	LEU
40	BF	124	LEU
40	BF	125	LEU
40	BF	149	ASP

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Mol	Chain	Res	Type
40	BF	165	ARG
40	BF	175	THR
40	BF	179	GLU
41	BG	4	ASP
41	BG	5	VAL
41	BG	14	GLU
41	BG	16	ARG
41	BG	22	ARG
41	BG	33	ARG
41	BG	34	LEU
41	BG	36	LYS
41	BG	45	GLU
41	BG	47	LYS
41	BG	53	LEU
41	BG	60	LEU
41	BG	63	ILE
41	BG	64	THR
41	BG	71	THR
41	BG	74	LYS
41	BG	77	ILE
41	BG	80	PHE
41	BG	83	ARG
41	BG	98	ARG
41	BG	128	ARG
41	BG	135	LEU
41	BG	140	ILE
41	BG	145	THR
41	BG	147	ASP
41	BG	148	MET
41	BG	150	ASP
41	BG	152	LEU
41	BG	159	VAL
41	BG	166	ASP
42	BH	15	VAL
42	BH	44	VAL
42	BH	45	VAL
42	BH	46	GLU
42	BH	49	VAL
42	BH	53	GLU
42	BH	71	LEU
42	BH	83	TYR
42	BH	89	ILE

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Mol	Chain	Res	Type
42	BH	104	GLU
42	BH	110	SER
42	BH	116	GLU
42	BH	143	GLN
42	BH	158	HIS
42	BH	171	LEU
43	BK	2	LYS
43	BK	4	VAL
43	BK	5	VAL
43	BK	21	PRO
43	BK	29	GLN
43	BK	30	HIS
43	BK	34	ILE
43	BK	38	VAL
43	BK	57	ILE
43	BK	59	ILE
43	BK	65	PHE
43	BK	70	LYS
43	BK	77	LEU
43	BK	86	LYS
43	BK	101	TRP
43	BK	105	LEU
43	BK	117	THR
44	BL	65	LYS
44	BL	73	ARG
44	BL	107	LYS
44	BL	120	LYS
45	BN	1	MET
45	BN	4	TYR
45	BN	23	LEU
45	BN	25	ARG
45	BN	26	LEU
45	BN	34	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	87	LEU
45	BN	96	GLU

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Mol	Chain	Res	Type
45	BN	99	LEU
45	BN	109	LYS
45	BN	120	LEU
45	BN	123	TYR
46	BO	23	ARG
46	BO	38	VAL
46	BO	40	VAL
46	BO	45	GLU
46	BO	48	PRO
46	BO	49	ARG
46	BO	69	ILE
46	BO	87	ILE
46	BO	102	VAL
46	BO	105	GLU
46	BO	117	LEU
47	BP	7	ARG
47	BP	13	ASN
47	BP	16	ARG
47	BP	18	ARG
47	BP	39	LYS
47	BP	41	ARG
47	BP	42	SER
47	BP	45	LEU
47	BP	57	THR
47	BP	60	MET
47	BP	61	ARG
47	BP	62	LEU
47	BP	70	GLN
47	BP	75	ILE
47	BP	81	GLN
47	BP	85	LEU
47	BP	86	LYS
47	BP	91	PHE
47	BP	114	ILE
47	BP	123	LEU
47	BP	146	VAL
47	BP	149	GLU
48	BQ	14	ARG
48	BQ	17	LEU
48	BQ	45	GLN
48	BQ	46	GLN
48	BQ	56	ARG

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Mol	Chain	Res	Type
48	BQ	58	PHE
48	BQ	65	PHE
48	BQ	67	ARG
48	BQ	76	LYS
48	BQ	79	LEU
48	BQ	81	VAL
48	BQ	97	VAL
48	BQ	104	PHE
48	BQ	134	ARG
48	BQ	135	ASP
48	BQ	137	TYR
48	BQ	138	ASP
49	BR	8	ARG
49	BR	10	LEU
49	BR	27	SER
49	BR	30	THR
49	BR	45	ARG
49	BR	54	LEU
49	BR	65	LEU
49	BR	71	GLN
49	BR	74	LYS
49	BR	75	LEU
49	BR	80	PHE
49	BR	97	VAL
49	BR	99	LYS
49	BR	100	LEU
49	BR	118	GLU
50	BS	11	LYS
50	BS	18	ILE
50	BS	26	LEU
50	BS	36	TYR
50	BS	42	ASP
50	BS	46	VAL
50	BS	64	GLU
50	BS	65	VAL
50	BS	67	ARG
50	BS	97	ARG
50	BS	101	LEU
50	BS	106	ARG
51	BT	6	LEU
51	BT	13	ARG
51	BT	14	TYR

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Mol	Chain	Res	Type
51	BT	16	ARG
51	BT	17	THR
51	BT	18	ASP
51	BT	24	PRO
51	BT	29	ARG
51	BT	32	TYR
51	BT	38	ASN
51	BT	48	ILE
51	BT	49	VAL
51	BT	50	ILE
51	BT	58	ASN
51	BT	65	LYS
51	BT	78	LEU
51	BT	82	LEU
51	BT	89	VAL
51	BT	90	GLN
51	BT	100	TYR
51	BT	108	ARG
51	BT	110	ILE
51	BT	112	ARG
51	BT	114	LEU
51	BT	115	ARG
51	BT	128	GLU
51	BT	129	ARG
51	BT	132	LYS
52	BU	6	THR
52	BU	8	VAL
52	BU	20	LEU
52	BU	34	LYS
52	BU	59	ARG
52	BU	63	VAL
52	BU	74	LEU
52	BU	92	ARG
52	BU	108	GLU
52	BU	112	ARG
53	BV	1	MET
53	BV	18	LEU
53	BV	19	LYS
53	BV	21	ARG
53	BV	37	VAL
53	BV	39	LEU
53	BV	46	VAL

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Mol	Chain	Res	Type
53	BV	79	VAL
53	BV	89	GLN
53	BV	95	LEU
53	BV	98	GLU
53	BV	99	ILE
54	BW	9	TYR
54	BW	11	ARG
54	BW	39	THR
54	BW	40	ASN
54	BW	52	GLU
54	BW	88	ARG
54	BW	107	LEU
55	BX	3	THR
55	BX	8	ILE
55	BX	27	THR
55	BX	28	PHE
55	BX	37	THR
55	BX	38	GLU
55	BX	51	VAL
55	BX	56	THR
55	BX	57	LEU
55	BX	66	LEU
55	BX	68	ARG
55	BX	76	ARG
55	BX	81	VAL
56	BY	2	ARG
56	BY	7	VAL
56	BY	9	LYS
56	BY	29	GLU
56	BY	51	VAL
56	BY	53	PRO
56	BY	54	LYS
56	BY	55	TYR
56	BY	62	GLU
56	BY	77	PRO
56	BY	79	CYS
56	BY	102	CYS
57	BZ	5	LEU
57	BZ	6	LYS
57	BZ	8	TYR
57	BZ	11	GLU
57	BZ	18	LEU

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Mol	Chain	Res	Type
57	BZ	28	MET
57	BZ	30	ASN
57	BZ	31	ARG
57	BZ	34	ASN
57	BZ	55	HIS
57	BZ	63	ASP
57	BZ	67	LEU
57	BZ	72	ARG
57	BZ	78	LYS
57	BZ	83	PRO
57	BZ	86	VAL
57	BZ	92	SER
57	BZ	94	GLU
57	BZ	100	VAL
57	BZ	116	VAL
57	BZ	123	ASP
57	BZ	124	ILE
57	BZ	127	LYS
57	BZ	140	ASP
57	BZ	146	ILE
57	BZ	150	LEU
57	BZ	154	ASP
57	BZ	163	LEU
57	BZ	166	SER
57	BZ	171	ILE
57	BZ	178	GLU
57	BZ	186	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (186) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	37	ASN
2	AB	40	HIS
2	AB	78	GLN
2	AB	94	ASN
2	AB	110	GLN
2	AB	146	GLN
2	AB	204	ASN
2	AB	224	GLN
3	AC	3	ASN
3	AC	28	GLN
3	AC	31	HIS

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Mol	Chain	Res	Type
3	AC	108	ASN
3	AC	118	GLN
3	AC	170	GLN
3	AC	176	HIS
3	AC	181	ASN
4	AD	62	GLN
4	AD	74	GLN
4	AD	77	ASN
4	AD	129	ASN
5	AE	20	GLN
5	AE	73	ASN
6	AF	18	GLN
6	AF	27	GLN
6	AF	32	ASN
6	AF	57	GLN
6	AF	94	GLN
6	AF	100	ASN
7	AG	37	ASN
7	AG	84	ASN
8	AH	82	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	76	ASN
10	AJ	78	ASN
11	AK	22	HIS
11	AK	27	ASN
12	AL	9	GLN
12	AL	49	ASN
12	AL	75	HIS
12	AL	99	HIS
13	AM	12	ASN
13	AM	77	ASN
13	AM	101	GLN
14	AN	49	HIS
15	AO	13	GLN
15	AO	37	ASN
15	AO	62	GLN
16	AP	76	GLN

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Mol	Chain	Res	Type
17	AQ	16	GLN
19	AS	14	HIS
19	AS	47	HIS
20	AT	16	HIS
20	AT	18	GLN
20	AT	26	ASN
20	AT	42	GLN
20	AT	75	ASN
24	AY	14	ASN
24	AY	77	HIS
24	AY	124	GLN
24	AY	137	ASN
24	AY	165	GLN
24	AY	190	ASN
24	AY	208	GLN
24	AY	343	ASN
24	AY	421	GLN
24	AY	448	GLN
24	AY	458	HIS
24	AY	500	GLN
24	AY	527	ASN
24	AY	543	GLN
24	AY	573	HIS
24	AY	625	ASN
24	AY	630	GLN
24	AY	641	GLN
24	AY	664	GLN
25	B0	12	ASN
25	B0	70	GLN
26	B1	45	ASN
26	B1	56	GLN
26	B1	66	HIS
27	B2	38	GLN
27	B2	56	GLN
27	B2	65	ASN
28	B3	19	GLN
28	B3	52	HIS
29	B4	20	ASN
29	B4	47	GLN
30	B5	22	HIS
30	B5	23	HIS
30	B5	43	HIS

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Mol	Chain	Res	Type
31	B6	20	ASN
31	B6	26	ASN
31	B6	29	ASN
31	B6	32	ASN
32	B7	8	ASN
33	B8	31	HIS
33	B8	33	ASN
33	B8	43	GLN
34	B9	20	HIS
34	B9	29	ASN
37	BC	149	ASN
38	BD	58	HIS
38	BD	96	HIS
38	BD	115	GLN
38	BD	116	GLN
38	BD	164	GLN
38	BD	166	GLN
38	BD	186	HIS
38	BD	198	ASN
38	BD	227	ASN
39	BE	48	GLN
39	BE	54	GLN
39	BE	55	ASN
39	BE	129	HIS
39	BE	169	ASN
39	BE	192	ASN
40	BF	75	HIS
40	BF	133	ASN
40	BF	160	ASN
40	BF	169	ASN
40	BF	204	ASN
41	BG	27	ASN
41	BG	40	ASN
41	BG	41	GLN
41	BG	121	ASN
41	BG	123	ASN
42	BH	65	HIS
42	BH	147	ASN
42	BH	158	HIS
43	BK	29	GLN
43	BK	89	HIS
45	BN	45	ASN

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Mol	Chain	Res	Type
45	BN	56	ASN
45	BN	101	HIS
45	BN	128	HIS
45	BN	133	GLN
46	BO	3	GLN
46	BO	82	ASN
46	BO	89	ASN
47	BP	13	ASN
47	BP	27	HIS
47	BP	35	HIS
47	BP	68	GLN
47	BP	81	GLN
47	BP	84	ASN
47	BP	128	HIS
48	BQ	12	GLN
48	BQ	13	GLN
48	BQ	45	GLN
48	BQ	123	HIS
49	BR	3	HIS
49	BR	23	ASN
49	BR	24	GLN
49	BR	71	GLN
51	BT	38	ASN
51	BT	43	GLN
51	BT	55	ASN
51	BT	58	ASN
51	BT	84	GLN
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	94	ASN
53	BV	11	GLN
54	BW	34	ASN
54	BW	60	ASN
54	BW	61	ASN
54	BW	62	HIS
54	BW	102	HIS
55	BX	55	ASN
55	BX	82	GLN

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Mol	Chain	Res	Type
56	BY	6	HIS
56	BY	92	ASN
57	BZ	30	ASN
57	BZ	54	HIS
57	BZ	65	GLN
57	BZ	118	GLN
57	BZ	151	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	281 (18%)	43 (2%)
22	AV	76/77 (98%)	16 (21%)	0
23	AX	10/11 (90%)	4 (40%)	0
35	BA	2900/2915 (99%)	639 (22%)	77 (2%)
36	BB	118/122 (96%)	25 (21%)	0
All	All	4607/4647 (99%)	965 (20%)	120 (2%)

All (965) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	G
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	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	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

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Mol	Chain	Res	Type
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
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	245	C
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	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

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Mol	Chain	Res	Type
1	AA	346	G
1	AA	350	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	366	C
1	AA	367	U
1	AA	372	C
1	AA	397	A
1	AA	406	G
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	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	481	G
1	AA	484	G
1	AA	485	G
1	AA	496	A
1	AA	498	U
1	AA	509	A
1	AA	511	C
1	AA	527	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

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Mol	Chain	Res	Type
1	AA	568	G
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	577	G
1	AA	588	G
1	AA	631	G
1	AA	632	A
1	AA	650	G
1	AA	653	A
1	AA	682	G
1	AA	683	G
1	AA	686	U
1	AA	687	A
1	AA	688	G
1	AA	700	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	744	C
1	AA	748	C
1	AA	755	G
1	AA	777	A
1	AA	793	U
1	AA	794	A
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
1	AA	858	G
1	AA	859	A
1	AA	867	G
1	AA	874	G

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Mol	Chain	Res	Type
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	946	A
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	979	C
1	AA	980	C
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	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1068	G
1	AA	1081	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1117	G

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Mol	Chain	Res	Type
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	1154	G
1	AA	1159	U
1	AA	1181	G
1	AA	1184	G
1	AA	1187	G
1	AA	1190	G
1	AA	1196	U
1	AA	1197	G
1	AA	1199	U
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	1237	C
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	1285	A
1	AA	1286	A
1	AA	1287	A
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	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1335	C
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
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	1370	G
1	AA	1379	G
1	AA	1394	A
1	AA	1397	C
1	AA	1398	A
1	AA	1404	C
1	AA	1411	C
1	AA	1419	G
1	AA	1434	A
1	AA	1442	G
1	AA	1443	G
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1468	A
1	AA	1475	G
1	AA	1487	G
1	AA	1490	C
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1498	U
1	AA	1499	A
1	AA	1503	A
1	AA	1504	G

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Mol	Chain	Res	Type
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
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	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
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	63	U
35	BA	64	A
35	BA	72	U
35	BA	75	G

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Mol	Chain	Res	Type
35	BA	83	G
35	BA	84	A
35	BA	85	G
35	BA	88	G
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	143(A)	C
35	BA	155	U
35	BA	156	U
35	BA	157	U
35	BA	171	G
35	BA	174	C
35	BA	181	A
35	BA	190	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	229	A
35	BA	233	A
35	BA	241	A
35	BA	248	G

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Mol	Chain	Res	Type
35	BA	261	G
35	BA	271(J)	C
35	BA	271(K)	U
35	BA	271(L)	U
35	BA	271(O)	C
35	BA	271(R)	G
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	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

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Mol	Chain	Res	Type
35	BA	407	G
35	BA	411	G
35	BA	412	A
35	BA	428	A
35	BA	444	C
35	BA	448	U
35	BA	449	A
35	BA	457	A
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	547	A
35	BA	548	A
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	603	A
35	BA	604	G
35	BA	607	U
35	BA	613	G
35	BA	614(B)	G
35	BA	615	G
35	BA	620	G

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Mol	Chain	Res	Type
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(O)	G
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	739	G
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

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Mol	Chain	Res	Type
35	BA	794	G
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	846	C
35	BA	859	G
35	BA	866	A
35	BA	878	A
35	BA	889	C
35	BA	890	A
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	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
35	BA	1011	G

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Mol	Chain	Res	Type
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	1033	U
35	BA	1034	G
35	BA	1036	G
35	BA	1039	G
35	BA	1040	C
35	BA	1044	G
35	BA	1045	A
35	BA	1046	A
35	BA	1047	G
35	BA	1048	A
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	1070	A
35	BA	1073	A
35	BA	1076	C
35	BA	1088	A
35	BA	1109	C
35	BA	1110	G
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	1135	C
35	BA	1136	G
35	BA	1141	U
35	BA	1142(A)	A
35	BA	1143	A
35	BA	1146	C

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Mol	Chain	Res	Type
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	1205	U
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	1241	A
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	1288	U
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

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Mol	Chain	Res	Type
35	BA	1332	G
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	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	1449	A
35	BA	1453	U
35	BA	1455	G
35	BA	1458	C
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

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Mol	Chain	Res	Type
35	BA	1495	A
35	BA	1496	A
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	1539	G
35	BA	1541	G
35	BA	1542	A
35	BA	1544	A
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	1615	C
35	BA	1616	A
35	BA	1618	A
35	BA	1634	A
35	BA	1640	C
35	BA	1642	G
35	BA	1644	C
35	BA	1648	C
35	BA	1668	A
35	BA	1674	G
35	BA	1678	G
35	BA	1699	G
35	BA	1718	G
35	BA	1722	A
35	BA	1739	U

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Mol	Chain	Res	Type
35	BA	1740	G
35	BA	1744	C
35	BA	1748	G
35	BA	1754	C
35	BA	1756	G
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	1828	G
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

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Mol	Chain	Res	Type
35	BA	1937	A
35	BA	1938	A
35	BA	1943	U
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	1987	G
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	2128	C

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Mol	Chain	Res	Type
35	BA	2131	G
35	BA	2132	U
35	BA	2133	G
35	BA	2134	A
35	BA	2147	G
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	2297	C
35	BA	2302	G
35	BA	2305	A
35	BA	2307	G
35	BA	2308	G
35	BA	2309	A

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Mol	Chain	Res	Type
35	BA	2313	C
35	BA	2319	G
35	BA	2320	A
35	BA	2325	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	2391	G
35	BA	2402	C
35	BA	2403	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	2468	G
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

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Mol	Chain	Res	Type
35	BA	2482	G
35	BA	2484	G
35	BA	2491	U
35	BA	2502	G
35	BA	2503	A
35	BA	2505	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	2576	G
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	2655	G
35	BA	2657	A
35	BA	2658	C
35	BA	2670	A
35	BA	2673	G
35	BA	2682	U
35	BA	2689	U
35	BA	2690	C
35	BA	2691	C
35	BA	2702	U
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

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Mol	Chain	Res	Type
35	BA	2732	G
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
35	BA	2762	G
35	BA	2763	G
35	BA	2764	A
35	BA	2765	A
35	BA	2766	G
35	BA	2778	A
35	BA	2779	U
35	BA	2780	G
35	BA	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	2823	A
35	BA	2824	C
35	BA	2833	G
35	BA	2834	G
35	BA	2836	U
35	BA	2849	U
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	13	A
36	BB	15	A
36	BB	16	G

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Mol	Chain	Res	Type
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
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 (120) 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	140	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	366	C
1	AA	428	G
1	AA	438	G
1	AA	532	A

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Mol	Chain	Res	Type
1	AA	533	A
1	AA	535	A
1	AA	560	U
1	AA	575	G
1	AA	631	G
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	1237	C
1	AA	1285	A
1	AA	1299	A
1	AA	1300	G
1	AA	1347	G
1	AA	1364	U
1	AA	1493	A
1	AA	1498	U
1	AA	1505	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

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Mol	Chain	Res	Type
35	BA	614(C)	A
35	BA	728	G
35	BA	739	G
35	BA	752	A
35	BA	790	C
35	BA	961	C
35	BA	1020	A
35	BA	1022	G
35	BA	1052	C
35	BA	1057	A
35	BA	1156	A
35	BA	1173	G
35	BA	1210	A
35	BA	1212	G
35	BA	1237	A
35	BA	1240	U
35	BA	1301	A
35	BA	1378	A
35	BA	1427	A
35	BA	1453	U
35	BA	1494	A
35	BA	1541	G
35	BA	1558	A
35	BA	1661	G
35	BA	1718	G
35	BA	1799	G
35	BA	1801	G
35	BA	1819	A
35	BA	1828	G
35	BA	1838	C
35	BA	1846	G
35	BA	1930	G
35	BA	1943	U
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

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Mol	Chain	Res	Type
35	BA	2318	G
35	BA	2344	U
35	BA	2345	G
35	BA	2402	C
35	BA	2422	A
35	BA	2425	A
35	BA	2481	G
35	BA	2611	U
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

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	$\#\|Z\|>2$
59	GDP	AY	702	-	29,30,30	1.73	5 (17%)	45,47,47	1.90	12 (26%)
58	FUA	AY	701	-	39,40,40	2.30	15 (38%)	50,64,64	2.03	17 (34%)

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	-	-	3/16/32/32	0/3/3/3
58	FUA	AY	701	-	-	6/16/92/92	0/4/4/4

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	AY	702	GDP	C5-N7	-5.55	1.27	1.39
58	AY	701	FUA	C14-C8	-5.15	1.50	1.59
58	AY	701	FUA	C29-C22	4.84	1.54	1.47
58	AY	701	FUA	C23-C22	-4.78	1.39	1.51
58	AY	701	FUA	C23-C24	-4.66	1.38	1.53
58	AY	701	FUA	C24-C25	-3.97	1.38	1.50
58	AY	701	FUA	C10-C5	-3.54	1.49	1.56
58	AY	701	FUA	O1-C11	-3.44	1.36	1.43
59	AY	702	GDP	PA-O2A	-3.06	1.41	1.55
58	AY	701	FUA	C14-C13	-3.04	1.48	1.57
58	AY	701	FUA	C20-C8	-2.94	1.48	1.54
58	AY	701	FUA	C1-C10	-2.59	1.49	1.54
59	AY	702	GDP	C5-C6	-2.58	1.35	1.44
58	AY	701	FUA	O5-C29	-2.33	1.24	1.30
58	AY	701	FUA	C10-C9	-2.29	1.53	1.57
58	AY	701	FUA	C19-C10	-2.24	1.50	1.54
58	AY	701	FUA	C6-C5	-2.19	1.50	1.53
59	AY	702	GDP	C8-N9	-2.16	1.32	1.37
59	AY	702	GDP	PB-O1B	-2.14	1.43	1.50
58	AY	701	FUA	O4-C29	2.12	1.27	1.22

All (29) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
59	AY	702	GDP	C5-C4-N3	-5.36	119.86	128.39
59	AY	702	GDP	C2-N3-C4	5.23	121.30	112.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
58	AY	701	FUA	C24-C23-C22	4.42	122.14	112.72
59	AY	702	GDP	C2-N1-C6	-4.30	117.31	125.11
58	AY	701	FUA	C21-C14-C8	-4.12	108.81	112.23
58	AY	701	FUA	C13-C12-C11	-4.01	106.07	111.90
58	AY	701	FUA	C6-C5-C10	3.98	116.44	111.66
59	AY	702	GDP	N9-C4-N3	3.87	133.69	125.95
58	AY	701	FUA	C18-C4-C3	-3.32	107.46	111.35
59	AY	702	GDP	C4'-O4'-C1'	-3.09	102.64	109.47
58	AY	701	FUA	C16-O2-C31	-3.05	112.47	117.00
58	AY	701	FUA	C20-C8-C14	-3.05	106.60	110.83
58	AY	701	FUA	C20-C8-C7	2.97	112.72	107.83
58	AY	701	FUA	O2-C16-C15	-2.93	103.83	110.81
59	AY	702	GDP	C3'-C2'-C1'	-2.77	96.22	101.46
58	AY	701	FUA	C14-C8-C9	-2.64	104.66	109.30
58	AY	701	FUA	C18-C4-C5	-2.62	108.71	112.95
58	AY	701	FUA	C19-C10-C9	-2.56	106.84	113.19
59	AY	702	GDP	C8-N7-C5	2.49	108.69	104.26
59	AY	702	GDP	N2-C2-N1	2.38	121.79	116.76
58	AY	701	FUA	C10-C5-C4	-2.35	110.34	113.20
58	AY	701	FUA	C8-C9-C10	-2.31	113.94	116.42
59	AY	702	GDP	C5-C6-N1	2.24	118.97	113.25
58	AY	701	FUA	O2-C31-C32	2.13	114.89	111.09
58	AY	701	FUA	C6-C5-C4	-2.08	111.02	114.27
58	AY	701	FUA	C7-C8-C14	-2.06	109.00	110.78
59	AY	702	GDP	C6-C5-C4	2.04	121.90	118.83
59	AY	702	GDP	O6-C6-C5	-2.03	121.18	126.53
59	AY	702	GDP	O4'-C1'-C2'	-2.01	102.32	106.62

There are no chirality outliers.

All (9) 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
58	AY	701	FUA	O3-C31-O2-C16
58	AY	701	FUA	C32-C31-O2-C16
58	AY	701	FUA	C29-C22-C23-C24
58	AY	701	FUA	C17-C22-C23-C24
59	AY	702	GDP	C5'-O5'-PA-O3A
59	AY	702	GDP	C5'-O5'-PA-O1A
59	AY	702	GDP	C5'-O5'-PA-O2A

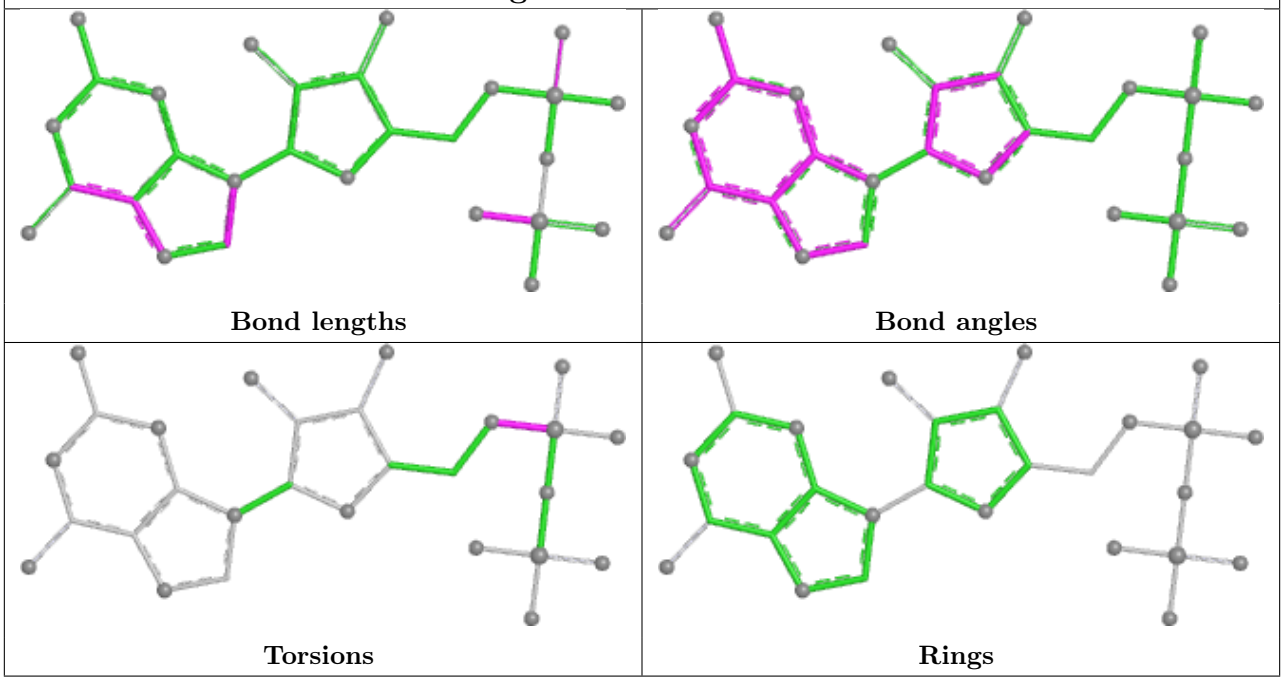
There are no ring outliers.

2 monomers are involved in 23 short contacts:

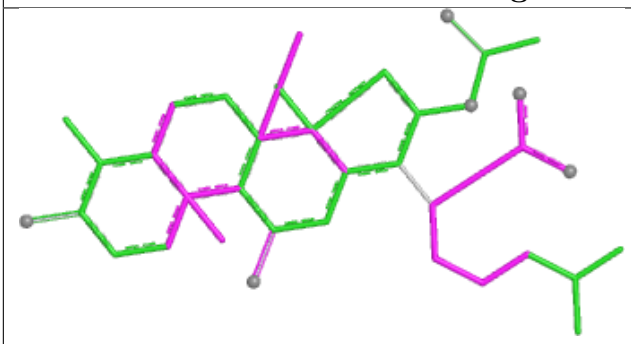
Mol	Chain	Res	Type	Clashes	Symm-Clashes
59	AY	702	GDP	6	0
58	AY	701	FUA	17	0

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.

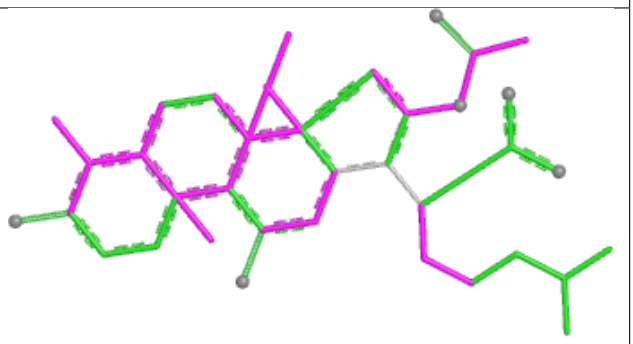
Ligand GDP AY 702



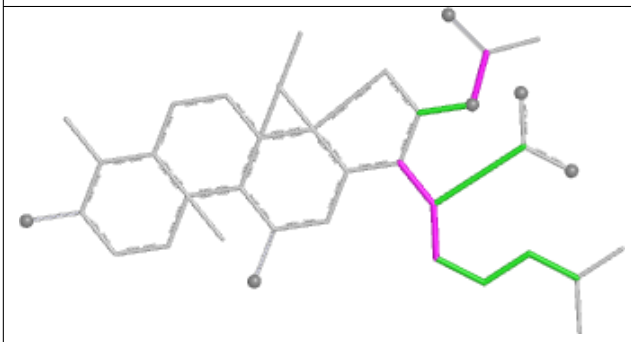
Ligand FUA AY 701



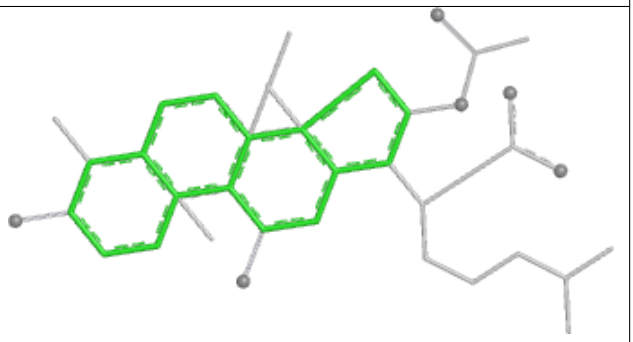
Bond lengths



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.

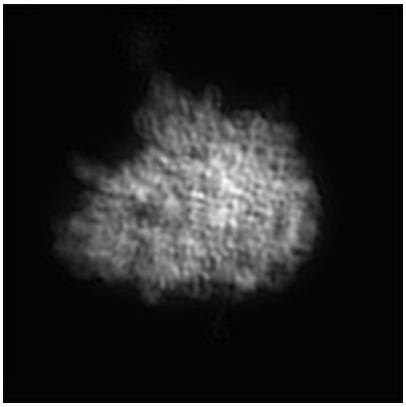
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-1799. These allow visual inspection of the internal detail of the map and identification of artifacts.

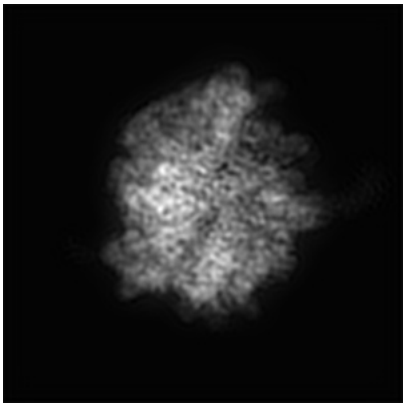
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

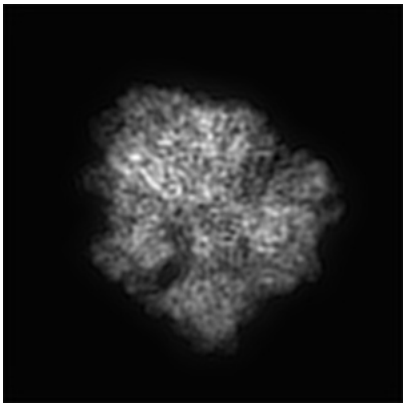
6.1.1 Primary map



X



Y

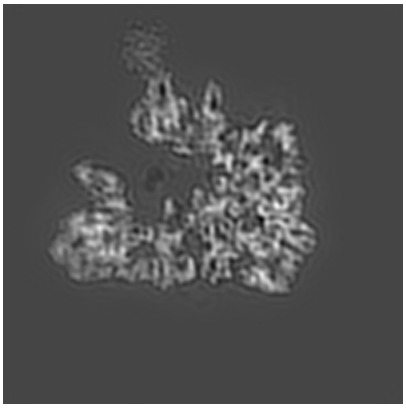


Z

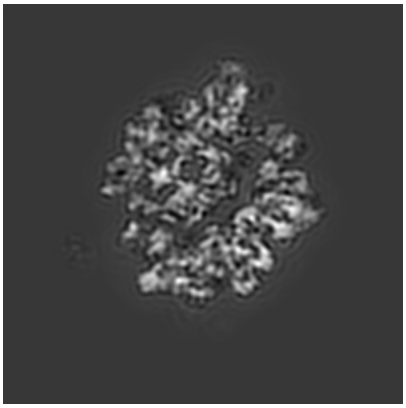
The images above show the map projected in three orthogonal directions.

6.2 Central slices

6.2.1 Primary map



X Index: 150



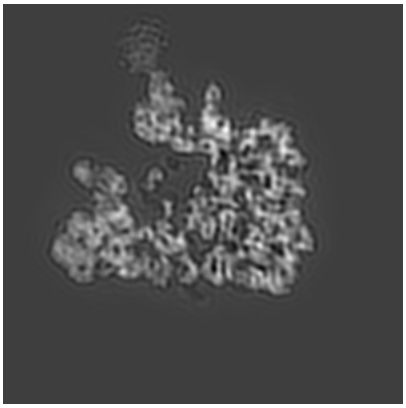
Y Index: 150

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: 153

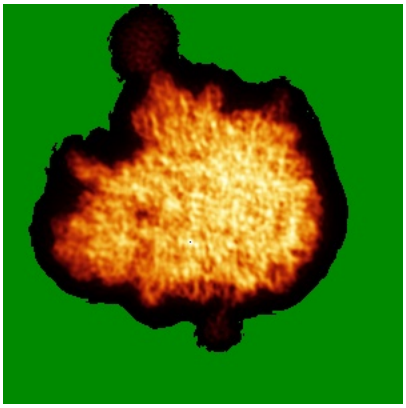
Y Index: 174

Z Index: 160

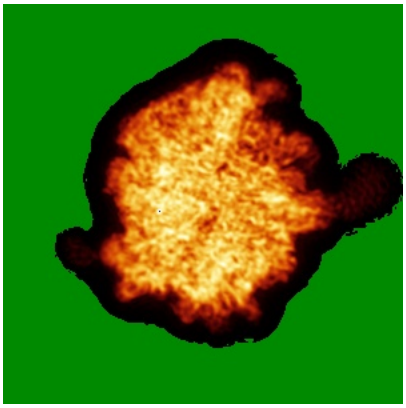
The images above show the largest variance slices of the map in three orthogonal directions.

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

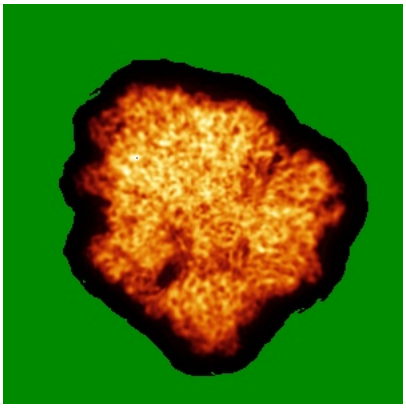
6.4.1 Primary map



X



Y

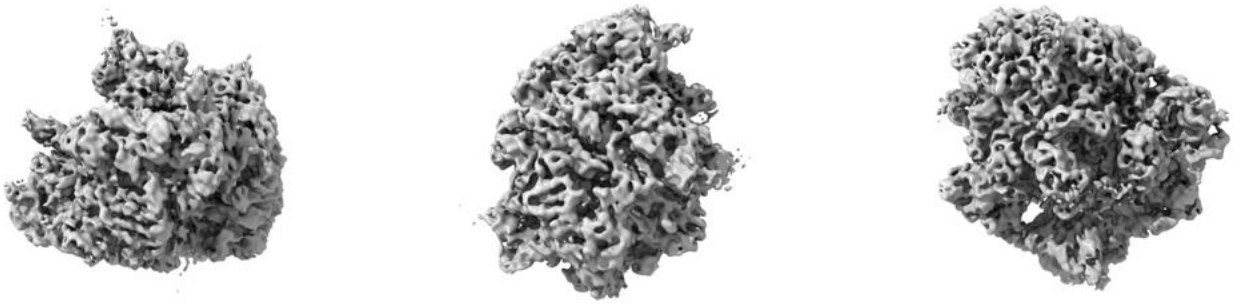


Z

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 2.5. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

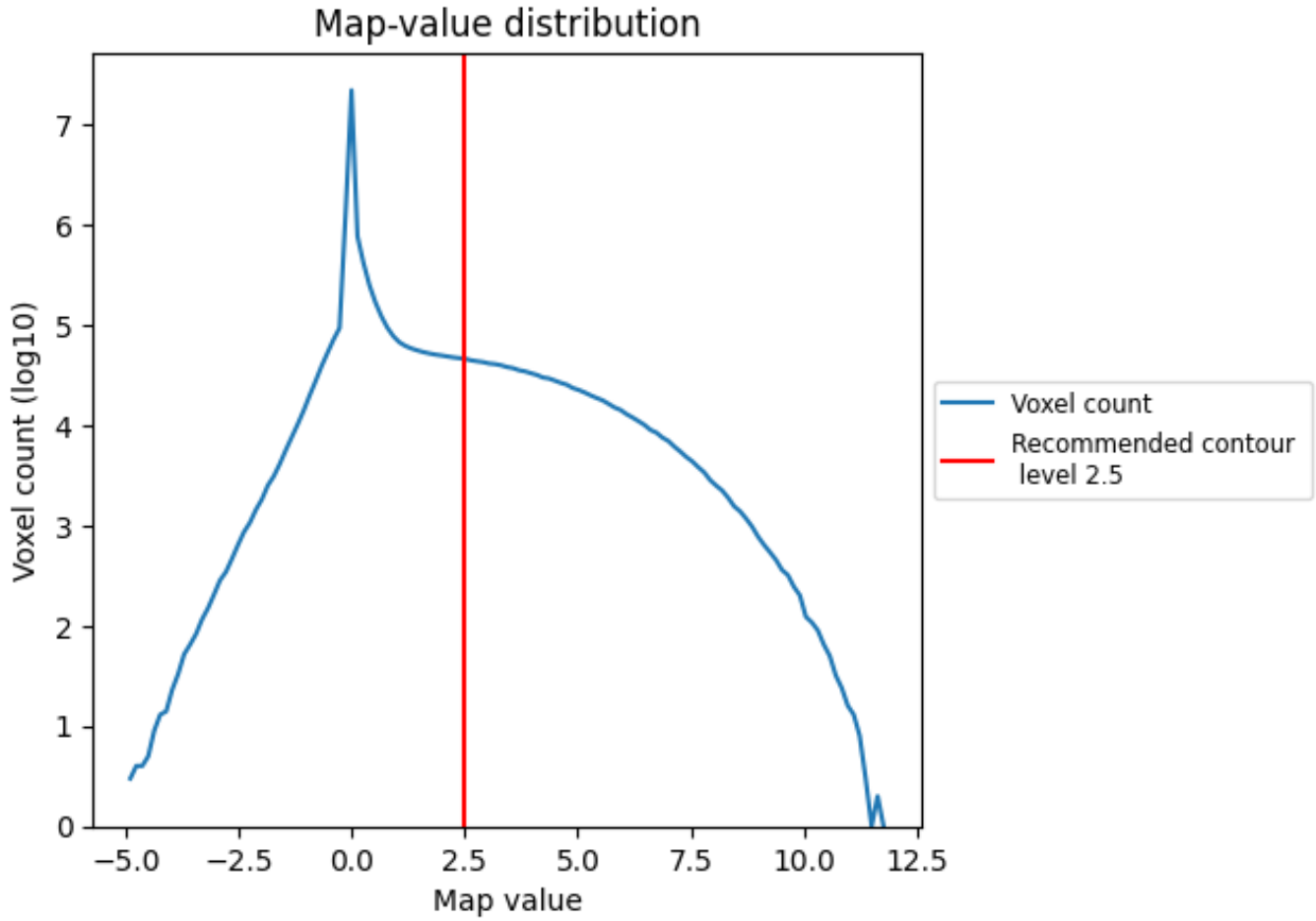
6.6 Mask visualisation (i)

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

7 Map analysis

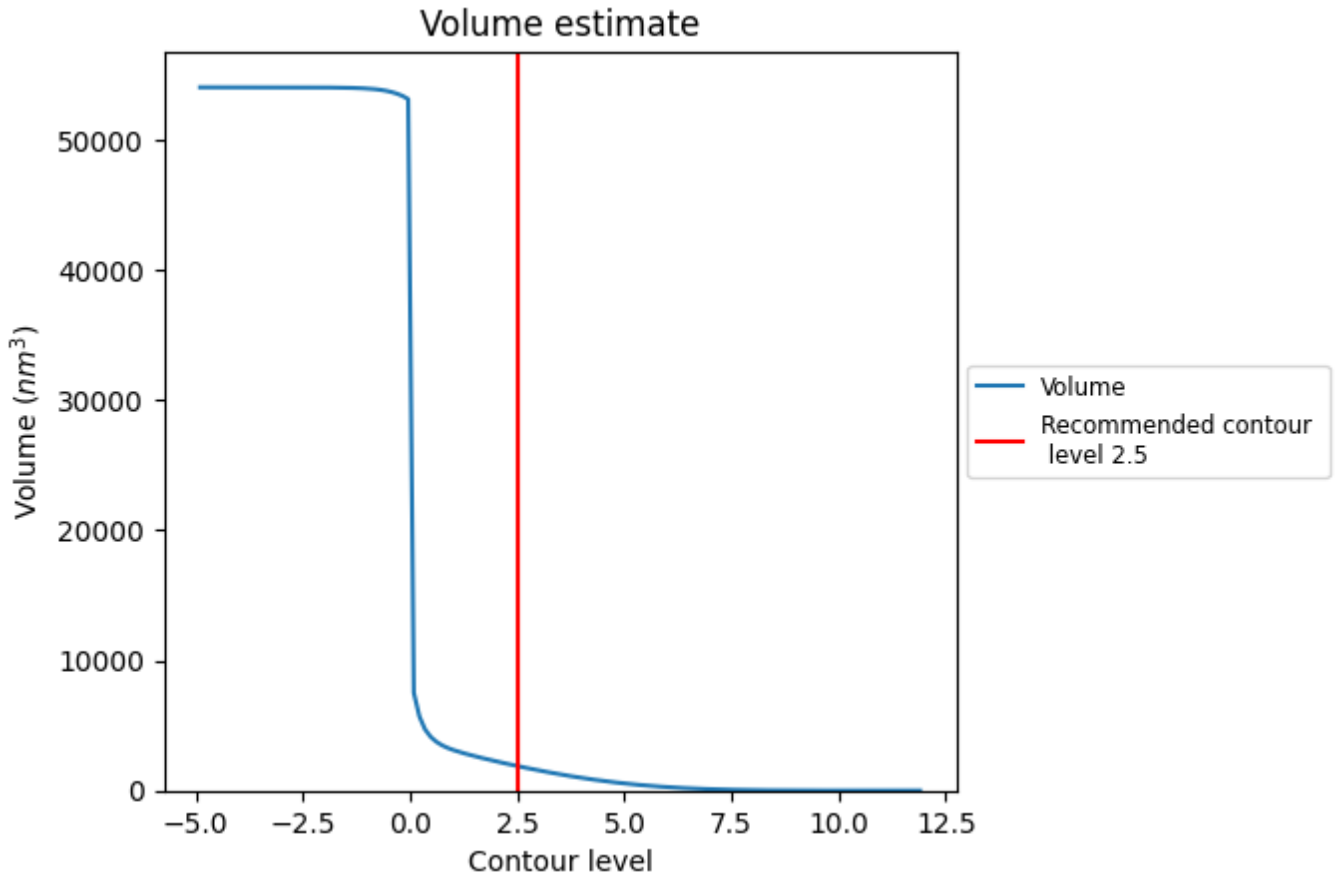
This section contains the results of statistical analysis of the map.

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.

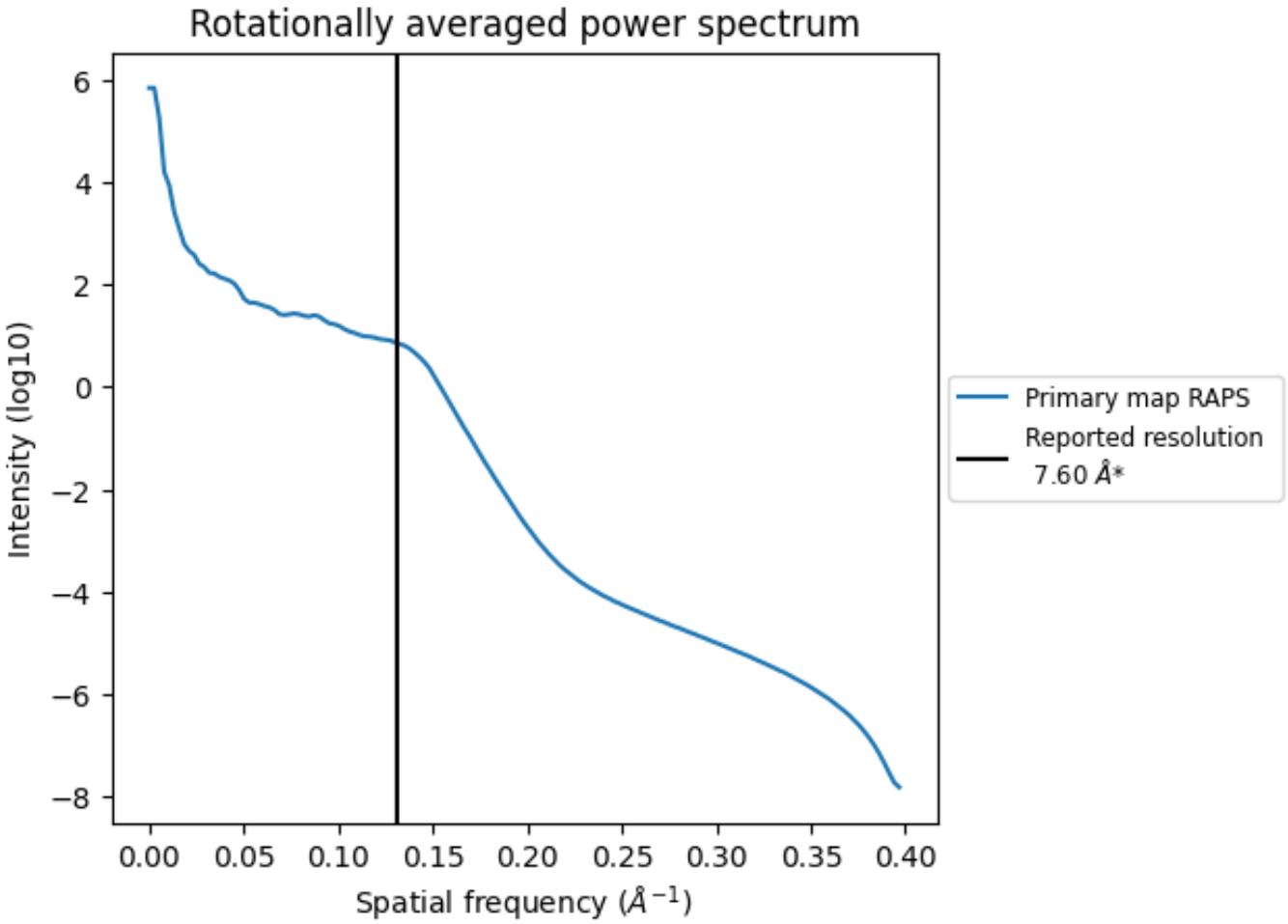
7.2 Volume estimate



The volume at the recommended contour level is 1886 nm^3; this corresponds to an approximate mass of 1703 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 0.132 Å^{-1}

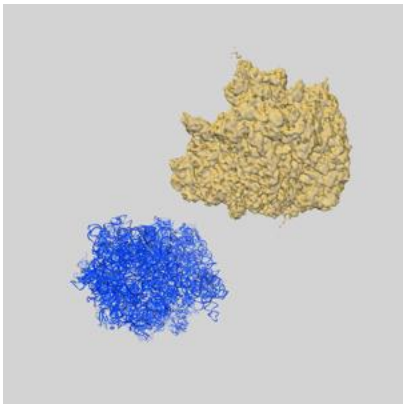
8 Fourier-Shell correlation

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

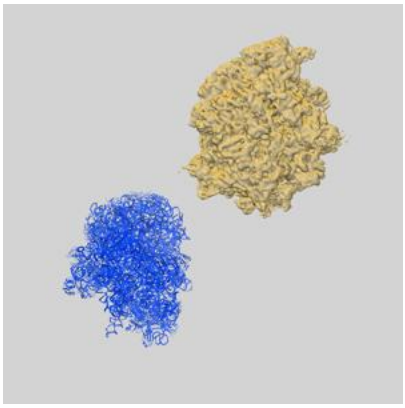
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-1799 and PDB model 4V5N. Per-residue inclusion information can be found in section 3 on page 16.

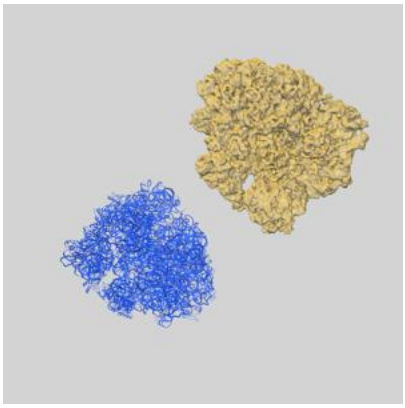
9.1 Map-model overlay



X



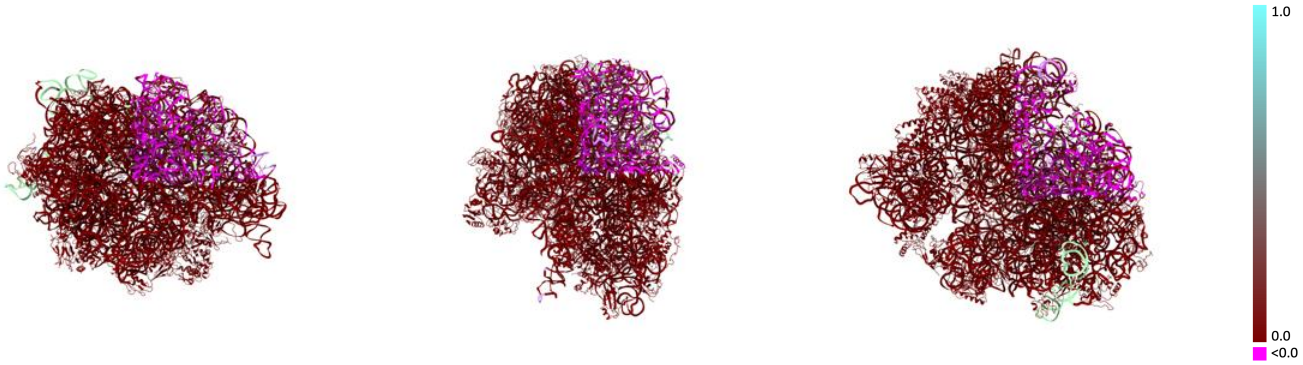
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 2.5 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.

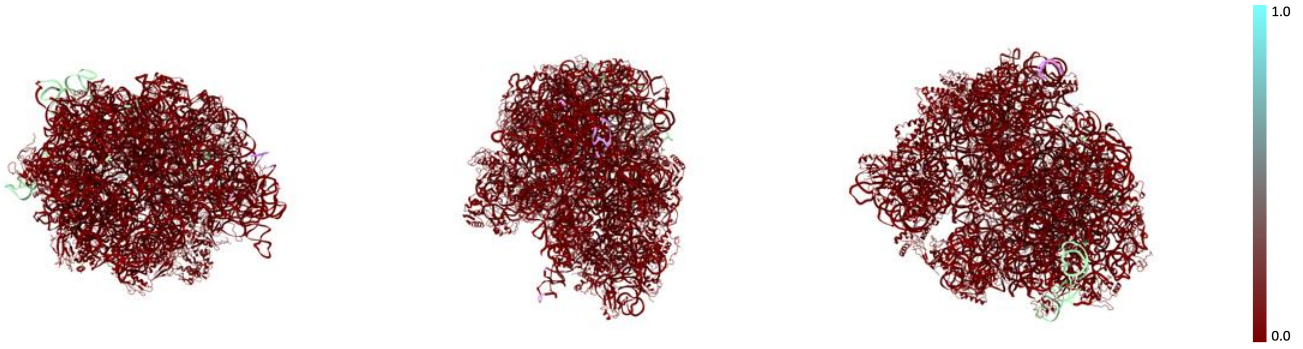
9.2 Q-score mapped to coordinate model



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.

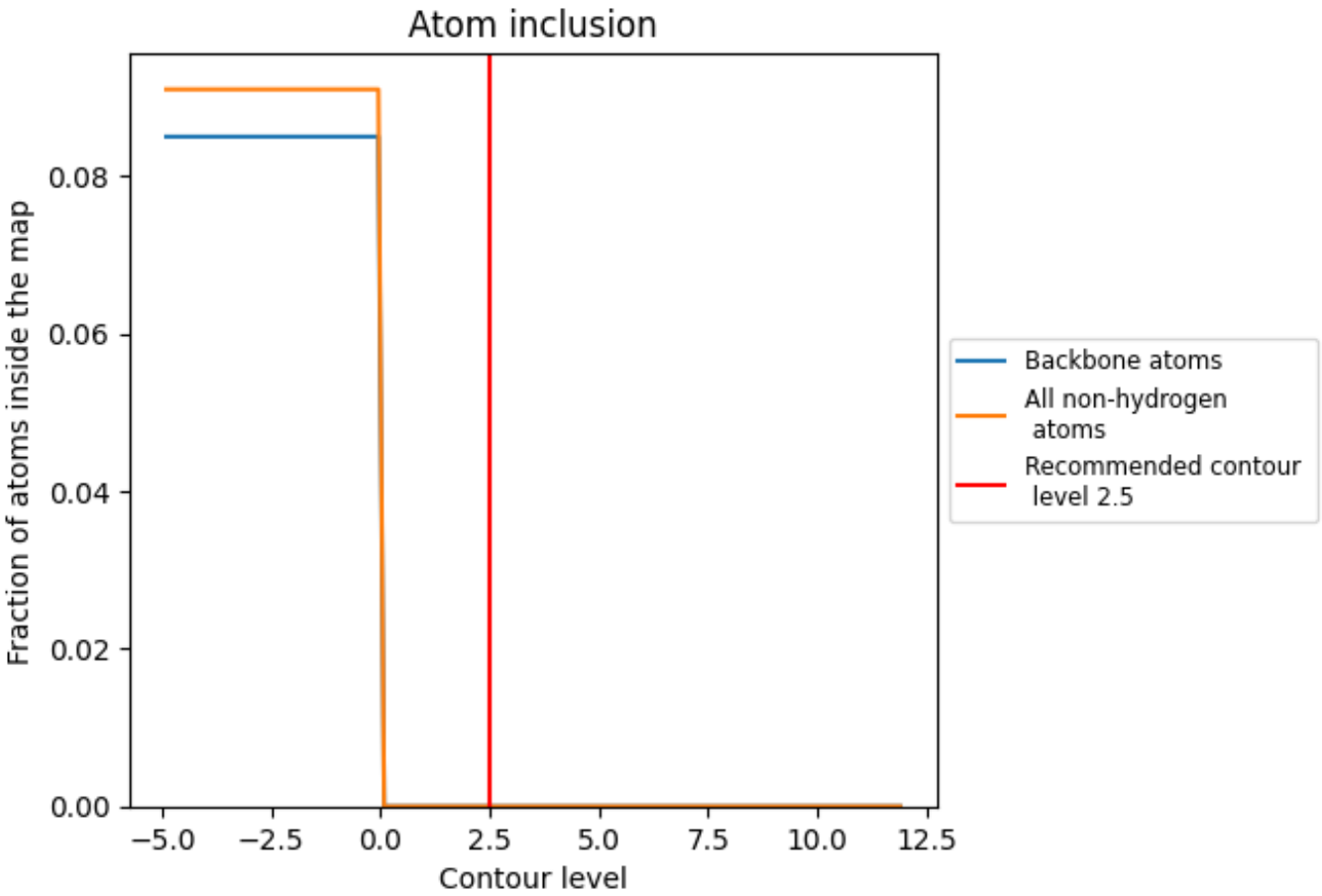
9.3 Atom inclusion mapped to coordinate model



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 (2.5).

9.4 Atom inclusion (i)



At the recommended contour level, 0% of all backbone atoms, 0% 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 (2.5) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.0000	-0.0010
AA	0.0000	-0.0010
AB	0.0000	0.0000
AC	0.0000	0.0000
AD	0.0000	0.0000
AE	0.0000	0.0000
AF	0.0000	-0.0220
AG	0.0000	0.0000
AH	0.0000	0.0000
AI	0.0000	0.0000
AJ	0.0000	0.0000
AK	0.0000	0.0000
AL	0.0000	0.0000
AM	0.0000	0.0000
AN	0.0000	0.0000
AO	0.0000	0.0000
AP	0.0000	0.0000
AQ	0.0000	-0.0060
AR	0.0000	0.0000
AS	0.0000	0.0000
AT	0.0000	-0.0100
AU	0.0000	0.0000
AV	0.0000	0.0000
AX	0.0000	0.0000
AY	0.0000	0.0000
B0	0.0000	0.0000
B1	0.0000	0.0000
B2	0.0000	0.0000
B3	0.0000	0.0000
B4	0.0000	0.0000
B5	0.0000	0.0000
B6	0.0000	0.0000
B7	0.0000	0.0040
B8	0.0000	0.0000
B9	0.0000	0.0000

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Continued from previous page...

Chain	Atom inclusion	Q-score
BA	0.0000	-0.0010
BB	0.0000	0.0000
BC	0.0000	0.0000
BD	0.0000	-0.0130
BE	0.0000	0.0000
BF	0.0000	0.0000
BG	0.0000	0.0000
BH	0.0000	0.0000
BK	0.0000	0.0000
BL	0.0000	0.0000
BN	0.0000	0.0000
BO	0.0000	0.0000
BP	0.0000	0.0000
BQ	0.0000	0.0000
BR	0.0000	0.0000
BS	0.0000	0.0000
BT	0.0000	0.0000
BU	0.0000	0.0000
BV	0.0000	0.0000
BW	0.0000	0.0000
BX	0.0000	-0.0120
BY	0.0000	0.0000
BZ	0.0000	0.0000