Full wwPDB EM Validation Report

Mar 25, 2026 – 01:21 AM UTC

PDB ID	:	5JUS / pdb_00005jus
EMDB ID	:	EMD-6645
Title	:	Saccharomyces cerevisiae 80S ribosome bound with elongation factor eEF2-GDP-sordarin and Taura Syndrome Virus IRES, Structure III (mid-rotated 40S subunit)
Authors	:	Abeyrathne, P.; Koh, C.S.; Grant, T.; Grigorieff, N.; Korostelev, A.A.
Deposited on	:	2016-05-10
Resolution	:	4.20 Å(reported)

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:

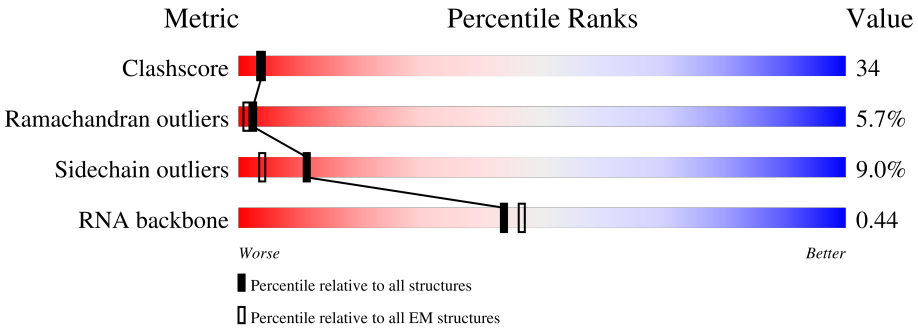
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

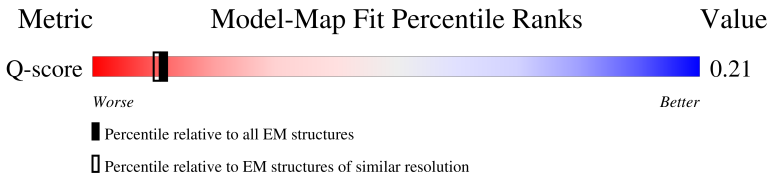
1 Overall quality at a glance (i)

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

The reported resolution of this entry is 4.20 Å.

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





Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	5410 (3.70 - 4.70)

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	A	1798	43% 31% 56% 11% ••
2	B	3396	18% 22% 59% 15% • •
3	C	158	23% 22% 61% 16% •

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Mol	Chain	Length	Quality of chain
4	D	121	26% 64% 8%
5	E	217	77% 11% 29% 32% 7% 21%
6	F	254	41% 20% 48% 27%
7	G	387	45% 24% 54% 19%
8	H	362	39% 25% 43% 27%
9	I	297	35% 38% 46% 15%
10	J	176	66% 27% 49% 22%
11	K	244	39% 25% 41% 22% 9%
12	L	256	59% 31% 43% 15% 9%
13	M	191	63% 26% 57% 16%
14	N	221	34% 25% 48% 21% 5%
15	O	174	43% 39% 49% 9%
16	P	165	40% 5% 21% 25% 6% 43%
17	Q	199	29% 28% 44% 23%
18	R	138	44% 25% 46% 24%
19	S	204	52% 19% 54% 21% 5%
20	T	199	52% 21% 52% 24%
21	U	184	46% 28% 41% 28%
22	V	186	28% 22% 56% 19%
23	W	189	66% 37% 48% 13%
24	X	172	56% 21% 50% 26%
25	Y	160	37% 26% 44% 24% 5%
26	Z	121	66% 43% 36% 17%
27	AA	137	54% 39% 42% 14%
28	BA	155	15% 5% 21% 12% 61%

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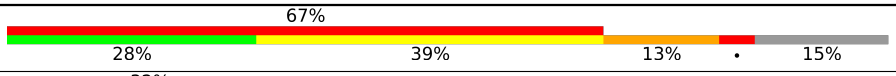
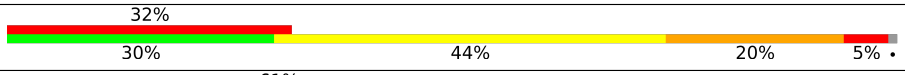
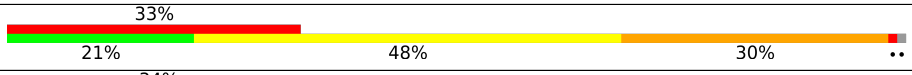
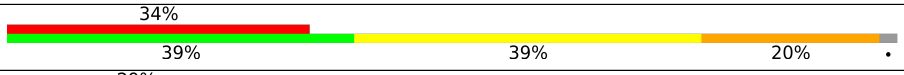
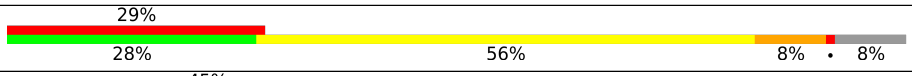
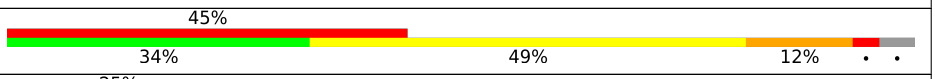
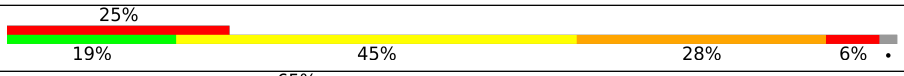
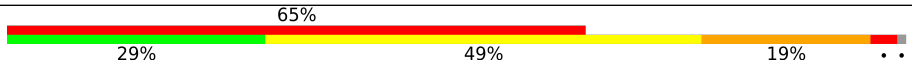
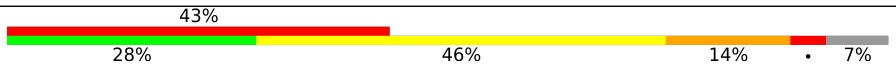
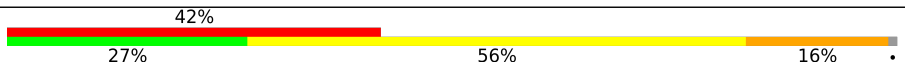
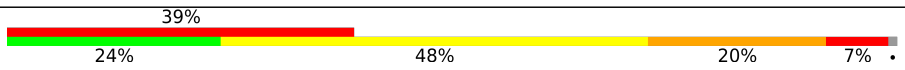
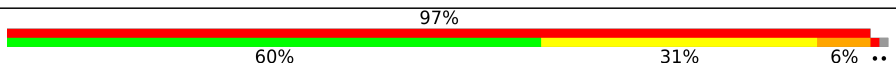
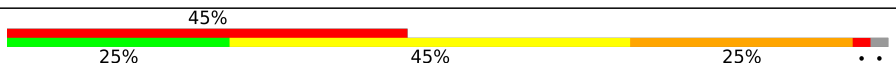
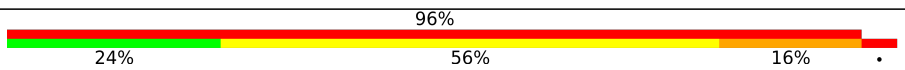
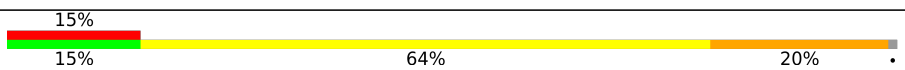
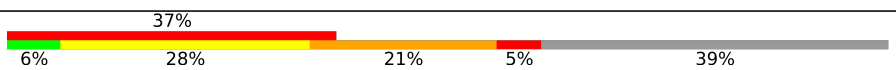
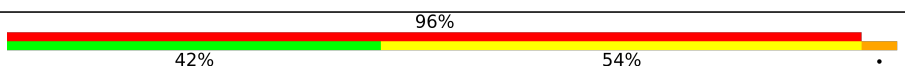
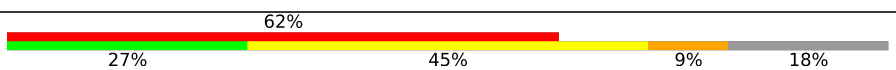
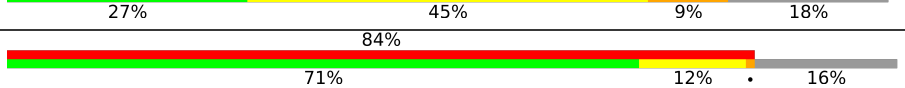
Mol	Chain	Length	Quality of chain
29	CA	142	
30	DA	127	
31	EA	136	
32	FA	149	
33	GA	59	
34	HA	105	
35	IA	113	
36	JA	130	
37	KA	107	
38	LA	121	
39	MA	120	
40	NA	100	
41	OA	88	
42	PA	78	
43	QA	51	
44	RA	128	
45	SA	25	
46	TA	106	
47	UA	92	
48	VA	312	
49	WA	319	
50	XA	252	
51	YA	255	
52	ZA	254	
53	AB	240	

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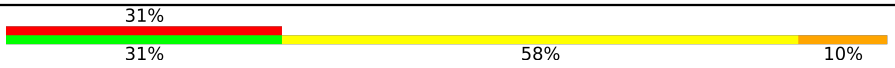
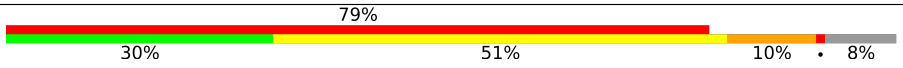
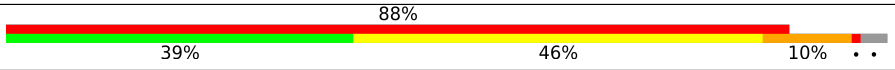
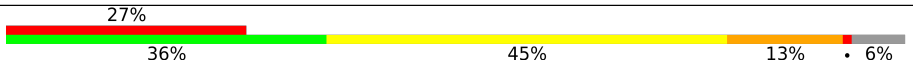
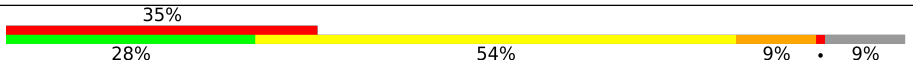
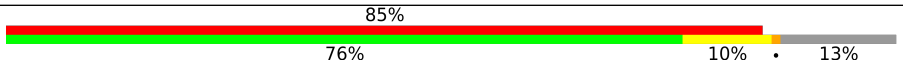
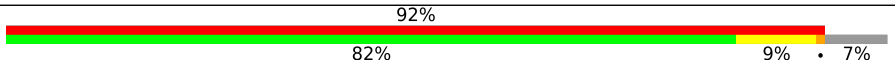
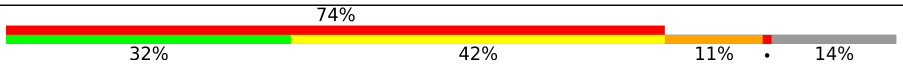
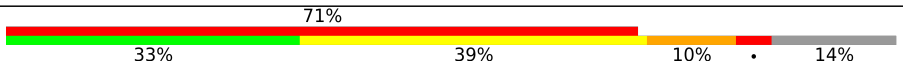
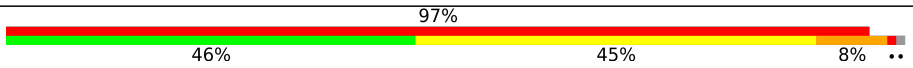
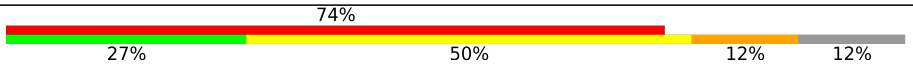
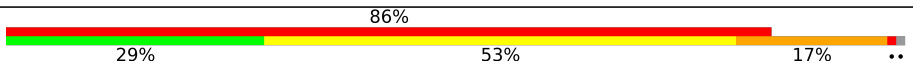
Mol	Chain	Length	Quality of chain
54	BB	261	
55	CB	225	
56	DB	236	
57	EB	190	
58	FB	200	
59	GB	197	
60	HB	105	
61	IB	156	
62	JB	143	
63	KB	151	
64	LB	137	
65	MB	142	
66	NB	143	
67	OB	136	
68	PB	146	
69	QB	144	
70	RB	121	
71	SB	87	
72	TB	130	
73	UB	145	
74	VB	135	
75	WB	108	
76	XB	119	
77	YB	82	
78	ZB	67	

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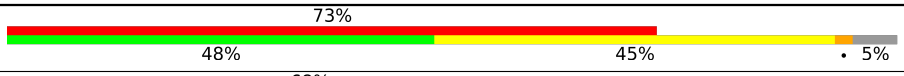
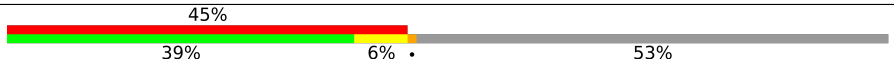
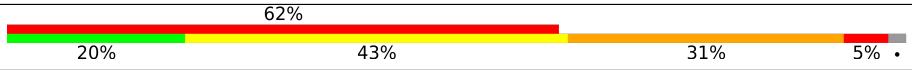
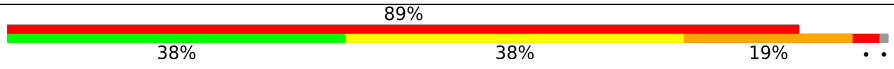
Mol	Chain	Length	Quality of chain
79	AC	56	
80	BC	63	
81	CC	152	
82	DC	842	
83	EC	201	

2 Entry composition (i)

There are 86 unique types of molecules in this entry. The entry contains 212680 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 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	A	1781	36760	16335	6359	12285	1781	0	0

- Molecule 2 is a RNA chain called 25S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	B	3309	70288	31354	12595	23030	3309	0	0

- Molecule 3 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	C	158	3354	1500	586	1110	158	0	0

- Molecule 4 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	D	121	2580	1152	461	846	121	0	0

- Molecule 5 is a protein called uL1 (yeast L1).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	E	171	1359	869	232	251	7	0	0

- Molecule 6 is a protein called uL2 (yeast L2).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	252	1918	1193	389	335	1	0	0

- Molecule 7 is a protein called uL3 (yeast L3).

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	386	Total	C	N	O	S	0	0
			3082	1956	584	534	8		

- Molecule 8 is a protein called uL4 (yeast L4).

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	361	Total	C	N	O	S	0	0
			2750	1730	522	495	3		

- Molecule 9 is a protein called uL18 (yeast L5).

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	296	Total	C	N	O	S	0	0
			2376	1501	414	459	2		

- Molecule 10 is a protein called eL6 (yeast L6).

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	175	Total	C	N	O	S	0	0
			1401	902	251	247	1		

- Molecule 11 is a protein called uL30 (yeast L7).

Mol	Chain	Residues	Atoms					AltConf	Trace
11	K	222	Total	C	N	O	S	0	0
			1785	1151	324	309	1		

- Molecule 12 is a protein called eL8 (yeast L8).

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	233	Total	C	N	O	S	0	0
			1818	1159	326	330	3		

- Molecule 13 is a protein called uL6 (yeast L9).

Mol	Chain	Residues	Atoms					AltConf	Trace
13	M	191	Total	C	N	O	S	0	0
			1519	963	274	278	4		

- Molecule 14 is a protein called uL16 (yeast L10).

Mol	Chain	Residues	Atoms					AltConf	Trace
14	N	211	Total	C	N	O	S	0	0
			1718	1089	325	298	6		

- Molecule 15 is a protein called uL5 (yeast L11).

Mol	Chain	Residues	Atoms					AltConf	Trace
15	O	169	Total	C	N	O	S	0	0
			1354	847	253	250	4		

- Molecule 16 is a protein called uL11 (yeast L12).

Mol	Chain	Residues	Atoms					AltConf	Trace
16	P	94	Total	C	N	O	S	0	0
			723	448	138	135	2		

- Molecule 17 is a protein called eL13 (yeast L13).

Mol	Chain	Residues	Atoms				AltConf	Trace
17	Q	193	Total	C	N	O	0	0
			1543	962	315	266		

- Molecule 18 is a protein called eL14 (yeast L14).

Mol	Chain	Residues	Atoms					AltConf	Trace
18	R	136	Total	C	N	O	S	0	0
			1054	675	199	178	2		

- Molecule 19 is a protein called eL15 (yeast L15).

Mol	Chain	Residues	Atoms					AltConf	Trace
19	S	203	Total	C	N	O	S	0	0
			1721	1077	361	282	1		

- Molecule 20 is a protein called uL13 (yeast L16).

Mol	Chain	Residues	Atoms					AltConf	Trace
20	T	197	Total	C	N	O	S	0	0
			1556	1003	289	263	1		

- Molecule 21 is a protein called uL22 (yeast L17).

Mol	Chain	Residues	Atoms				AltConf	Trace
21	U	183	Total 1443	C 896	N 287	O 260	0	0

- Molecule 22 is a protein called eL18 (yeast L18).

Mol	Chain	Residues	Atoms					AltConf	Trace
22	V	185	Total 1442	C 908	N 290	O 242	S 2	0	0

- Molecule 23 is a protein called eL19 (yeast L19).

Mol	Chain	Residues	Atoms				AltConf	Trace
23	W	188	Total 1522	C 935	N 326	O 261	0	0

- Molecule 24 is a protein called eL20 (yeast L20).

Mol	Chain	Residues	Atoms					AltConf	Trace
24	X	172	Total 1446	C 930	N 267	O 245	S 4	0	0

- Molecule 25 is a protein called eL21 (yeast L21).

Mol	Chain	Residues	Atoms					AltConf	Trace
25	Y	159	Total 1277	C 805	N 246	O 222	S 4	0	0

- Molecule 26 is a protein called eL22 (yeast L22).

Mol	Chain	Residues	Atoms				AltConf	Trace
26	Z	100	Total 796	C 516	N 131	O 149	0	0

- Molecule 27 is a protein called uL14 (yeast L23).

Mol	Chain	Residues	Atoms					AltConf	Trace
27	AA	136	Total 1004	C 628	N 189	O 180	S 7	0	0

- Molecule 28 is a protein called eL24 (yeast L24).

Mol	Chain	Residues	Atoms					AltConf	Trace
28	BA	61	Total	C	N	O	S	0	0
			509	328	100	80	1		

- Molecule 29 is a protein called uL23 (yeast L25).

Mol	Chain	Residues	Atoms					AltConf	Trace
29	CA	121	Total	C	N	O	S	0	0
			969	623	170	174	2		

- Molecule 30 is a protein called uL24 (yeast L26).

Mol	Chain	Residues	Atoms				AltConf	Trace
30	DA	126	Total	C	N	O	0	0
			994	625	192	177		

- Molecule 31 is a protein called eL27 (yeast L27).

Mol	Chain	Residues	Atoms				AltConf	Trace
31	EA	135	Total	C	N	O	0	0
			1093	710	202	181		

- Molecule 32 is a protein called uL15 (yeast L28).

Mol	Chain	Residues	Atoms					AltConf	Trace
32	FA	148	Total	C	N	O	S	0	0
			1174	749	231	191	3		

- Molecule 33 is a protein called eL29 (yeast L29).

Mol	Chain	Residues	Atoms				AltConf	Trace
33	GA	58	Total	C	N	O	0	0
			463	289	100	74		

- Molecule 34 is a protein called eL30 (yeast L30).

Mol	Chain	Residues	Atoms					AltConf	Trace
34	HA	97	Total	C	N	O	S	0	0
			743	479	124	139	1		

- Molecule 35 is a protein called eL31 (yeast L31).

Mol	Chain	Residues	Atoms					AltConf	Trace
35	IA	109	Total	C	N	O	S	0	0
			890	565	168	156	1		

- Molecule 36 is a protein called eL32 (yeast L32).

Mol	Chain	Residues	Atoms					AltConf	Trace
36	JA	127	Total	C	N	O	S	0	0
			1020	647	205	167	1		

- Molecule 37 is a protein called eL33 (yeast L33).

Mol	Chain	Residues	Atoms					AltConf	Trace
37	KA	106	Total	C	N	O	S	0	0
			851	540	165	145	1		

- Molecule 38 is a protein called eL34 (yeast L34).

Mol	Chain	Residues	Atoms					AltConf	Trace
38	LA	112	Total	C	N	O	S	0	0
			881	546	179	152	4		

- Molecule 39 is a protein called uL29 (yeast L35).

Mol	Chain	Residues	Atoms					AltConf	Trace
39	MA	119	Total	C	N	O	S	0	0
			970	615	186	168	1		

- Molecule 40 is a protein called eL36 (yeast L36).

Mol	Chain	Residues	Atoms					AltConf	Trace
40	NA	99	Total	C	N	O	S	0	0
			772	481	156	133	2		

- Molecule 41 is a protein called eL37 (yeast L37).

Mol	Chain	Residues	Atoms					AltConf	Trace
41	OA	87	Total	C	N	O	S	0	0
			682	414	148	115	5		

- Molecule 42 is a protein called eL38 (yeast L38).

Mol	Chain	Residues	Atoms				AltConf	Trace
42	PA	77	Total	C	N	O	0	0
			613	391	115	107		

- Molecule 43 is a protein called eL39 (yeast L39).

Mol	Chain	Residues	Atoms					AltConf	Trace
43	QA	50	Total	C	N	O	S	0	0
			437	272	97	66	2		

- Molecule 44 is a protein called eL40 (yeast L40).

Mol	Chain	Residues	Atoms					AltConf	Trace
44	RA	52	Total	C	N	O	S	0	0
			418	259	86	68	5		

- Molecule 45 is a protein called eL41 (yeast L41).

Mol	Chain	Residues	Atoms					AltConf	Trace
45	SA	25	Total	C	N	O	S	0	0
			234	142	63	28	1		

- Molecule 46 is a protein called eL42 (yeast L42).

Mol	Chain	Residues	Atoms					AltConf	Trace
46	TA	105	Total	C	N	O	S	0	0
			848	534	170	139	5		

- Molecule 47 is a protein called eL43 (yeast L43).

Mol	Chain	Residues	Atoms					AltConf	Trace
47	UA	91	Total	C	N	O	S	0	0
			695	429	138	122	6		

- Molecule 48 is a protein called uL10 (yeast P0).

Mol	Chain	Residues	Atoms					AltConf	Trace
48	VA	189	Total	C	N	O	S	0	0
			1473	942	257	270	4		

- Molecule 49 is a protein called RACK1 (yeast Asc1).

Mol	Chain	Residues	Atoms					AltConf	Trace
49	WA	318	Total	C	N	O	S	0	0
			2445	1546	419	472	8		

- Molecule 50 is a protein called uS2 (yeast S0).

Mol	Chain	Residues	Atoms					AltConf	Trace
50	XA	206	Total	C	N	O	S	0	0
			1612	1034	285	291	2		

- Molecule 51 is a protein called eS1 (yeast S1).

Mol	Chain	Residues	Atoms				AltConf	Trace
51	YA	214	Total	C	N	O	0	0
			856	428	214	214		

- Molecule 52 is a protein called uS5 (yeast S2).

Mol	Chain	Residues	Atoms					AltConf	Trace
52	ZA	217	Total	C	N	O	S	0	0
			1635	1047	289	297	2		

- Molecule 53 is a protein called uS3 (yeast S3).

Mol	Chain	Residues	Atoms					AltConf	Trace
53	AB	223	Total	C	N	O	S	0	0
			1734	1101	313	314	6		

- Molecule 54 is a protein called eS4 (yeast S4).

Mol	Chain	Residues	Atoms					AltConf	Trace
54	BB	260	Total	C	N	O	S	0	0
			2069	1316	389	361	3		

- Molecule 55 is a protein called uS7 (yeast S5).

Mol	Chain	Residues	Atoms					AltConf	Trace
55	CB	206	Total	C	N	O	S	0	0
			1610	1007	300	300	3		

- Molecule 56 is a protein called eS6 (yeast S6).

Mol	Chain	Residues	Atoms					AltConf	Trace
56	DB	226	Total	C	N	O	S	0	0
			1820	1142	350	325	3		

- Molecule 57 is a protein called eS7 (yeast S7).

Mol	Chain	Residues	Atoms				AltConf	Trace
57	EB	184	Total	C	N	O	0	0
			1481	951	265	265		

- Molecule 58 is a protein called eS8 (yeast S8).

Mol	Chain	Residues	Atoms					AltConf	Trace
58	FB	188	Total	C	N	O	S	0	0
			1490	925	298	265	2		

- Molecule 59 is a protein called uS4 (yeast S9).

Mol	Chain	Residues	Atoms					AltConf	Trace
59	GB	185	Total	C	N	O	S	0	0
			1494	943	289	261	1		

- Molecule 60 is a protein called eS10 (yeast S10).

Mol	Chain	Residues	Atoms					AltConf	Trace
60	HB	96	Total	C	N	O	S	0	0
			817	529	133	153	2		

- Molecule 61 is a protein called uS17 (yeast S11).

Mol	Chain	Residues	Atoms					AltConf	Trace
61	IB	155	Total	C	N	O	S	0	0
			1245	798	235	209	3		

- Molecule 62 is a protein called eS12 (yeast S12).

Mol	Chain	Residues	Atoms				AltConf	Trace
62	JB	124	Total	C	N	O	0	0
			496	248	124	124		

- Molecule 63 is a protein called uS15 (yeast S13).

Mol	Chain	Residues	Atoms					AltConf	Trace
63	KB	150	Total	C	N	O	S	0	0
			1193	759	224	208	2		

- Molecule 64 is a protein called uS11 (yeast S14).

Mol	Chain	Residues	Atoms				AltConf	Trace
64	LB	127	Total	C	N	O	0	0
			508	254	127	127		

- Molecule 65 is a protein called uS19 (yeast S15).

Mol	Chain	Residues	Atoms					AltConf	Trace
65	MB	122	Total	C	N	O	S	0	0
			975	622	182	164	7		

- Molecule 66 is a protein called uS9 (yeast S16).

Mol	Chain	Residues	Atoms				AltConf	Trace
66	NB	141	Total	C	N	O	0	0
			1106	708	203	195		

- Molecule 67 is a protein called eS17 (yeast S17).

Mol	Chain	Residues	Atoms					AltConf	Trace
67	OB	117	Total	C	N	O	S	0	0
			836	515	166	153	2		

- Molecule 68 is a protein called uS13 (yeast S18).

Mol	Chain	Residues	Atoms					AltConf	Trace
68	PB	145	Total	C	N	O	S	0	0
			1193	743	237	211	2		

- Molecule 69 is a protein called eS19 (yeast S19).

Mol	Chain	Residues	Atoms					AltConf	Trace
69	QB	143	Total	C	N	O	S	0	0
			1113	694	208	209	2		

- Molecule 70 is a protein called uS10 (yeast S20).

Mol	Chain	Residues	Atoms					AltConf	Trace
70	RB	107	Total	C	N	O	S	0	0
			856	539	156	160	1		

- Molecule 71 is a protein called eS21 (yeast S21).

Mol	Chain	Residues	Atoms					AltConf	Trace
71	SB	87	Total	C	N	O	S	0	0
			685	420	125	138	2		

- Molecule 72 is a protein called uS8 (yeast S22).

Mol	Chain	Residues	Atoms					AltConf	Trace
72	TB	129	Total	C	N	O	S	0	0
			1022	650	188	181	3		

- Molecule 73 is a protein called uS12 (yeast S23).

Mol	Chain	Residues	Atoms					AltConf	Trace
73	UB	144	Total	C	N	O	S	0	0
			1122	708	220	192	2		

- Molecule 74 is a protein called eS24 (yeast S24).

Mol	Chain	Residues	Atoms				AltConf	Trace
74	VB	134	Total	C	N	O	0	0
			1074	676	208	190		

- Molecule 75 is a protein called eS25 (yeast S25).

Mol	Chain	Residues	Atoms				AltConf	Trace
75	WB	70	Total	C	N	O	0	0
			563	360	104	99		

- Molecule 76 is a protein called eS26 (yeast S26).

Mol	Chain	Residues	Atoms				AltConf	Trace
76	XB	97	Total	C	N	O	0	0
			388	194	97	97		

- Molecule 77 is a protein called eS27 (yeast S27).

Mol	Chain	Residues	Atoms					AltConf	Trace
77	YB	81	Total	C	N	O	S	0	0
			611	382	110	114	5		

- Molecule 78 is a protein called eS28 (yeast S28).

Mol	Chain	Residues	Atoms					AltConf	Trace
78	ZB	63	Total	C	N	O	S	0	0
			498	306	99	92	1		

- Molecule 79 is a protein called uS14 (yeast S29).

Mol	Chain	Residues	Atoms					AltConf	Trace
79	AC	53	Total	C	N	O	S	0	0
			444	275	92	73	4		

- Molecule 80 is a protein called eS30 (yeast S30).

Mol	Chain	Residues	Atoms					AltConf	Trace
80	BC	60	Total	C	N	O	S	0	0
			475	299	98	77	1		

- Molecule 81 is a protein called eS31 (yeast S31).

Mol	Chain	Residues	Atoms				AltConf	Trace
81	CC	71	Total	C	N	O	0	0
			284	142	71	71		

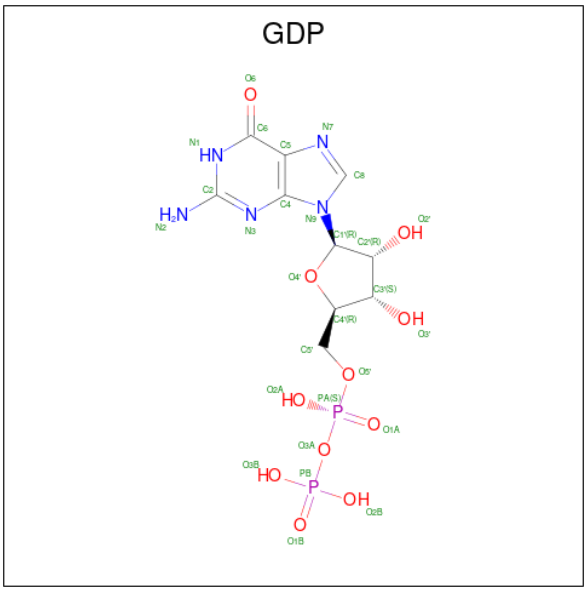
- Molecule 82 is a protein called yeast eEF2.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	DC	824	Total	C	N	O	S	0	0
			6419	4085	1096	1208	30		

- Molecule 83 is a RNA chain called IRES.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	EC	198	Total	C	N	O	P	0	0
			4129	1839	725	1367	198		

- Molecule 84 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).

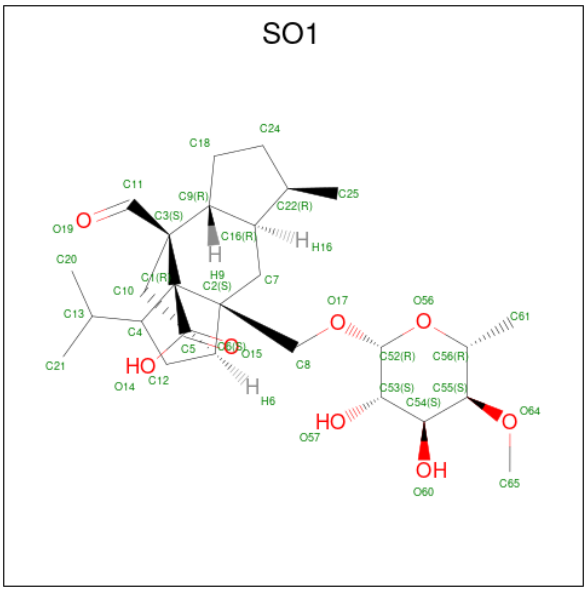


Mol	Chain	Residues	Atoms					AltConf
84	DC	1	Total	C	N	O	P	0
			28	10	5	11	2	

- Molecule 85 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
85	DC	1	Total	Mg	0
			1	1	

- Molecule 86 is [1R-(1.ALPHA.,3A.BETA.,4.BETA.,4A.BETA.,7.BETA.,7A.ALPHA.,8A.BETA.)]8A-[(6-DEOXY-4-O-METHYL-BETA-D-ALTROPYRANOSYLOXY)METHYL]-4-FORMYL-4,4A,5,6,7,7A,8,8A-OCTAHYDRO-7-METHYL-3-(1-METHYLETHYL)-1,4-METHANO-S-INDACENE-3A(1H)-CARBOXYLIC ACID (CCD ID: SO1) (formula: $C_{27}H_{42}O_8$).

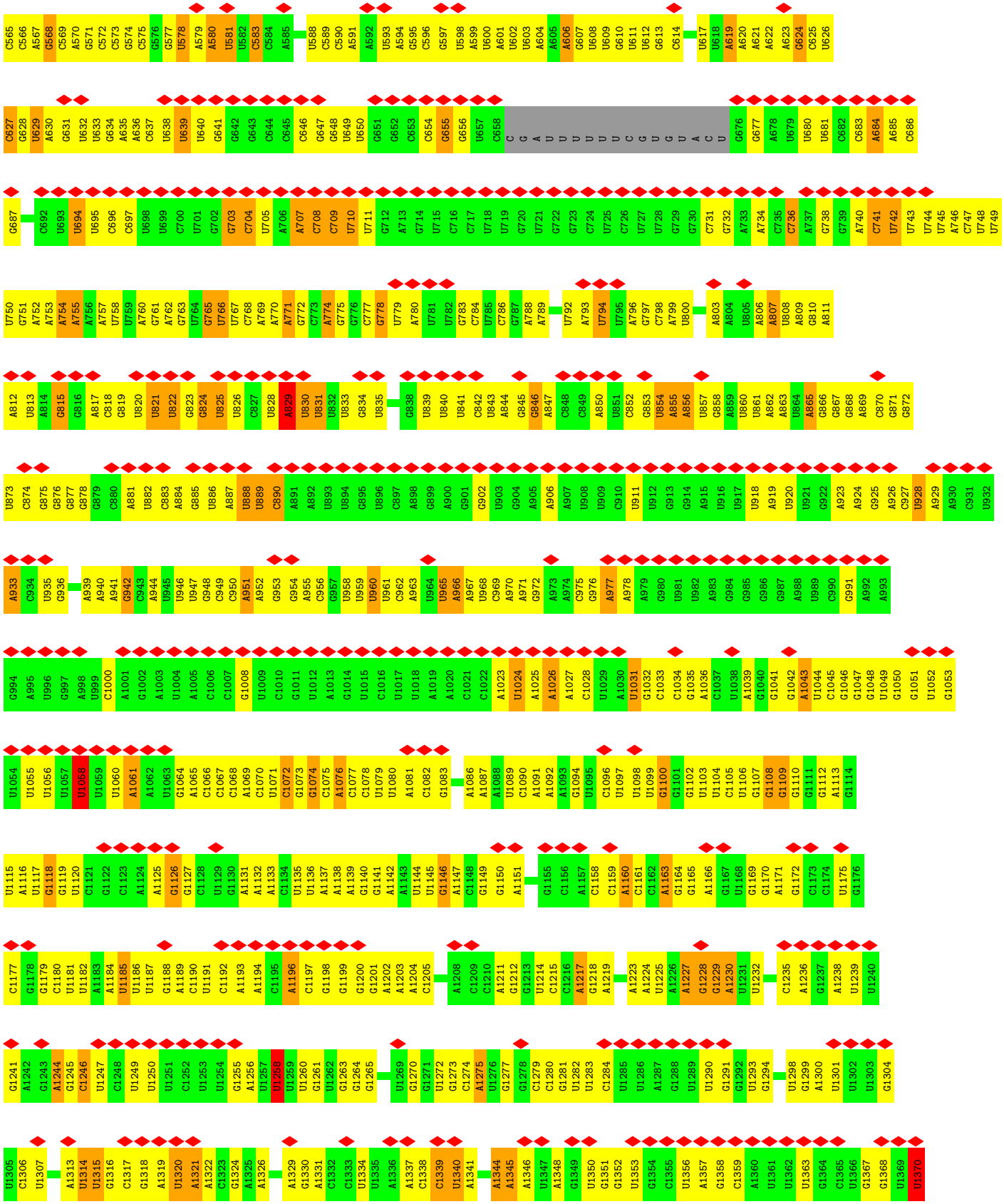


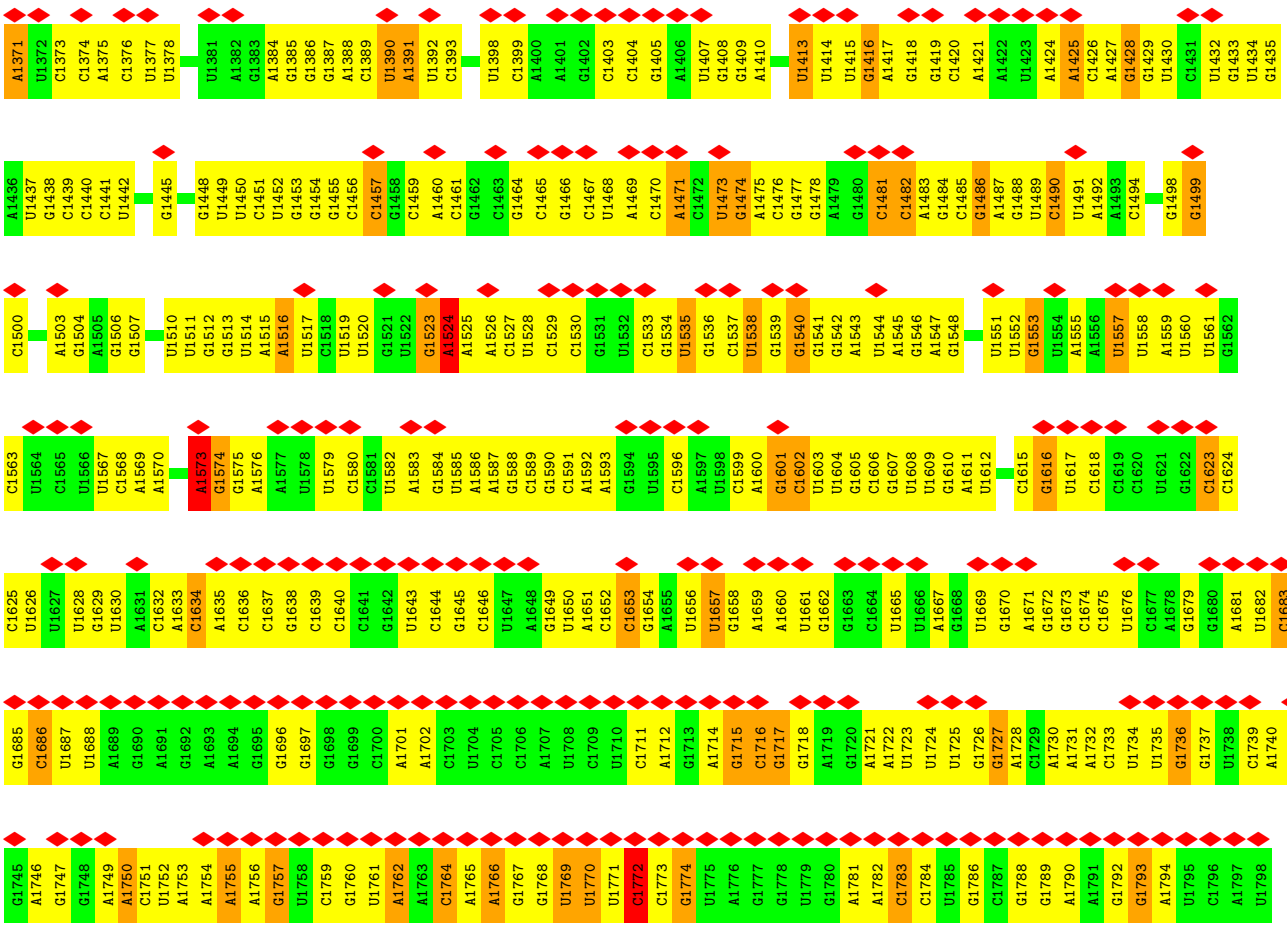
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
86	DC	1	35	27	8	0

3 Residue-property plots (i)

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

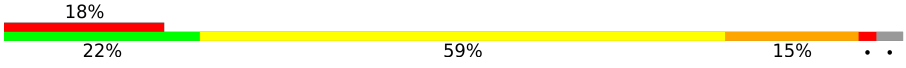
- Molecule 1: 18S ribosomal RNA

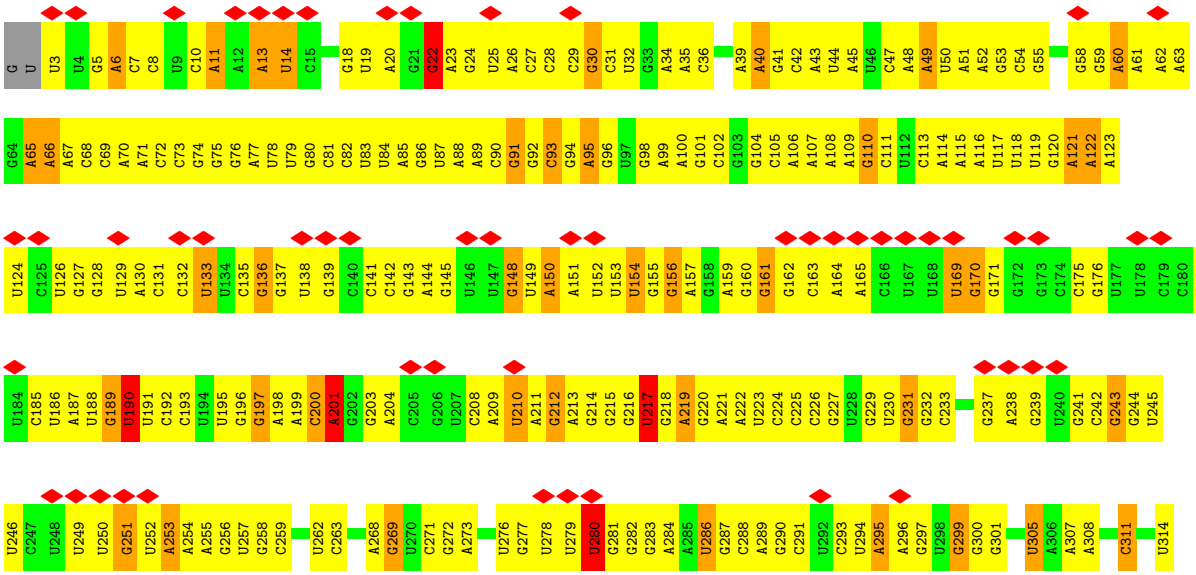


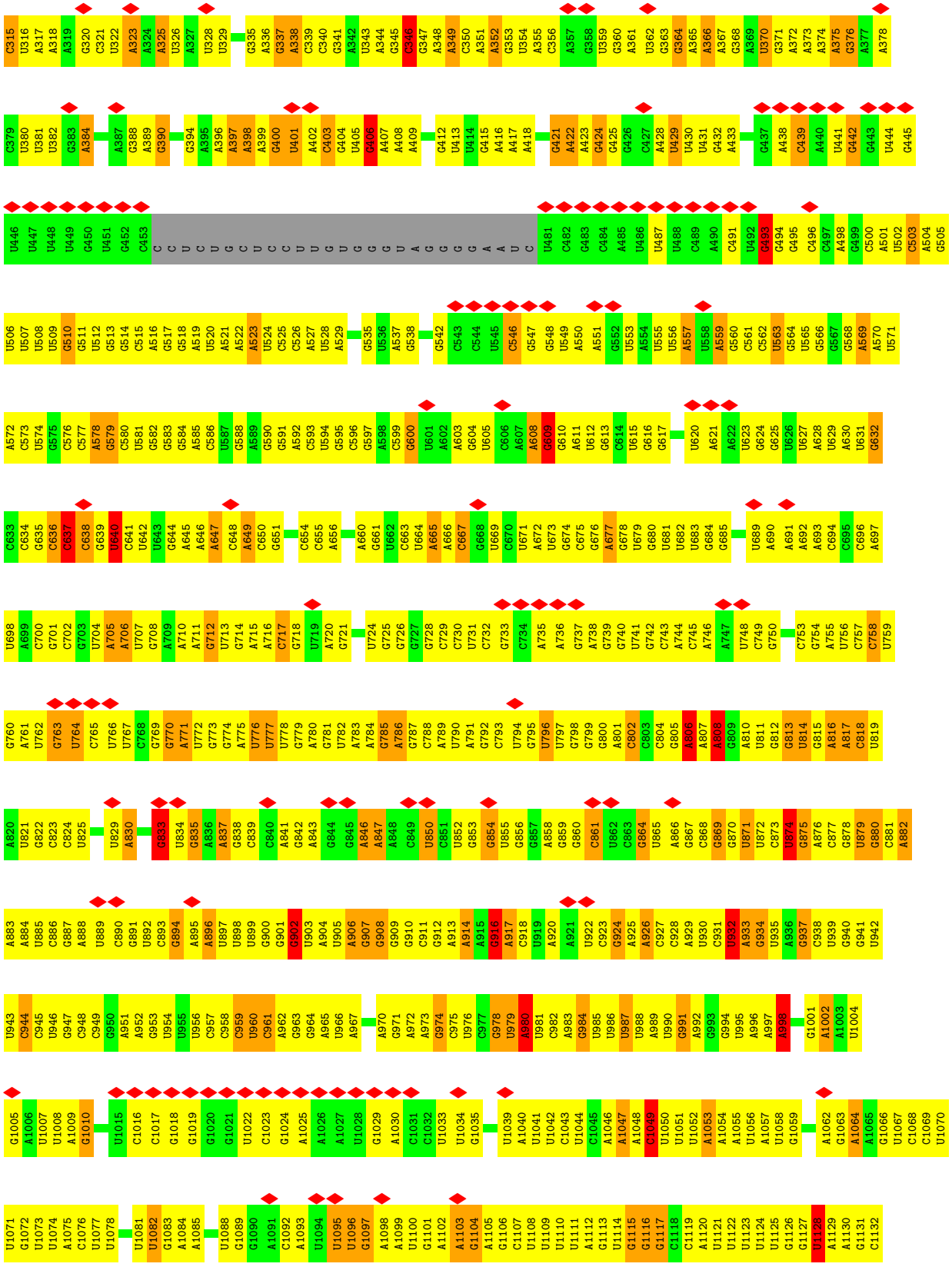


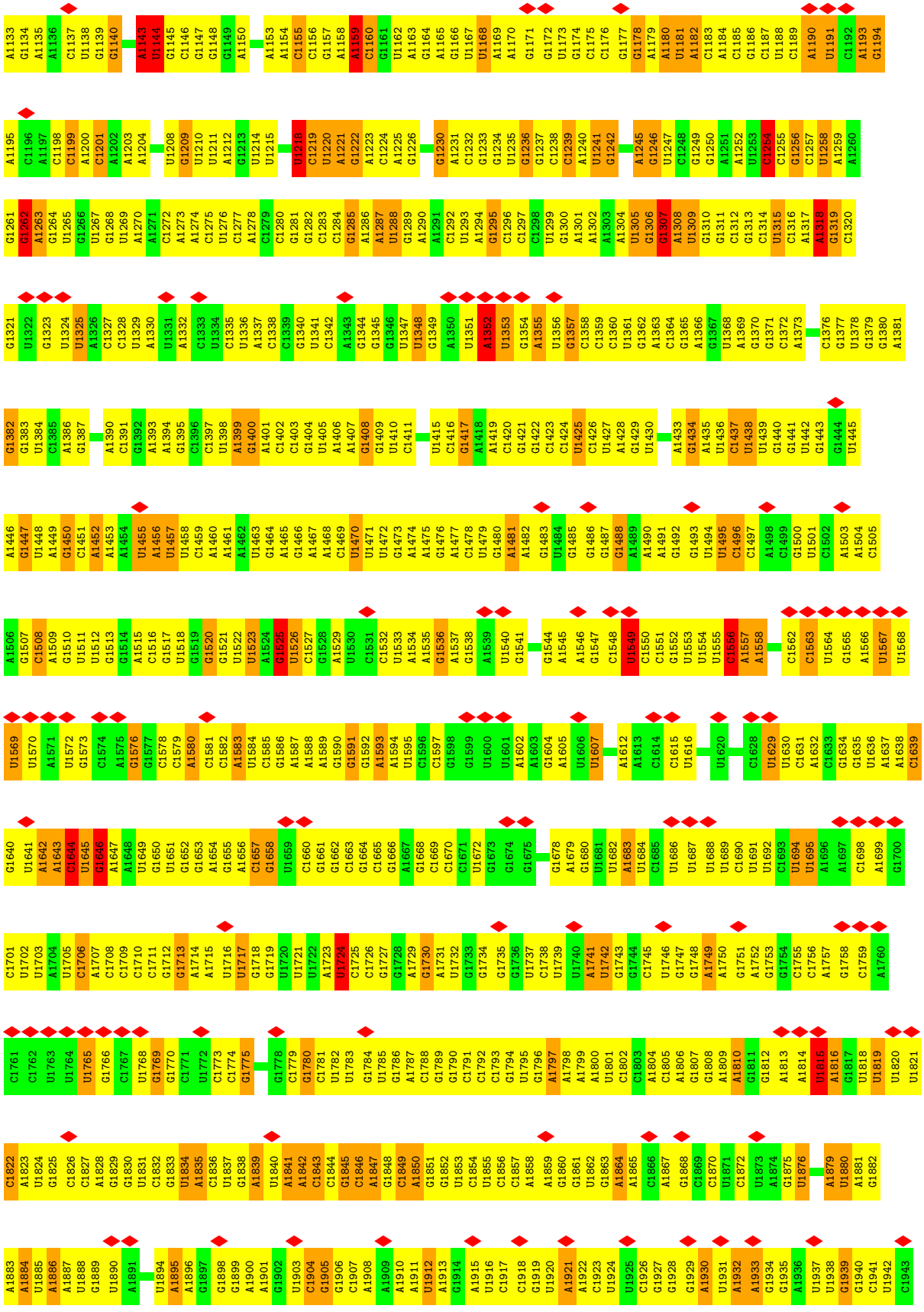
• Molecule 2: 25S ribosomal RNA

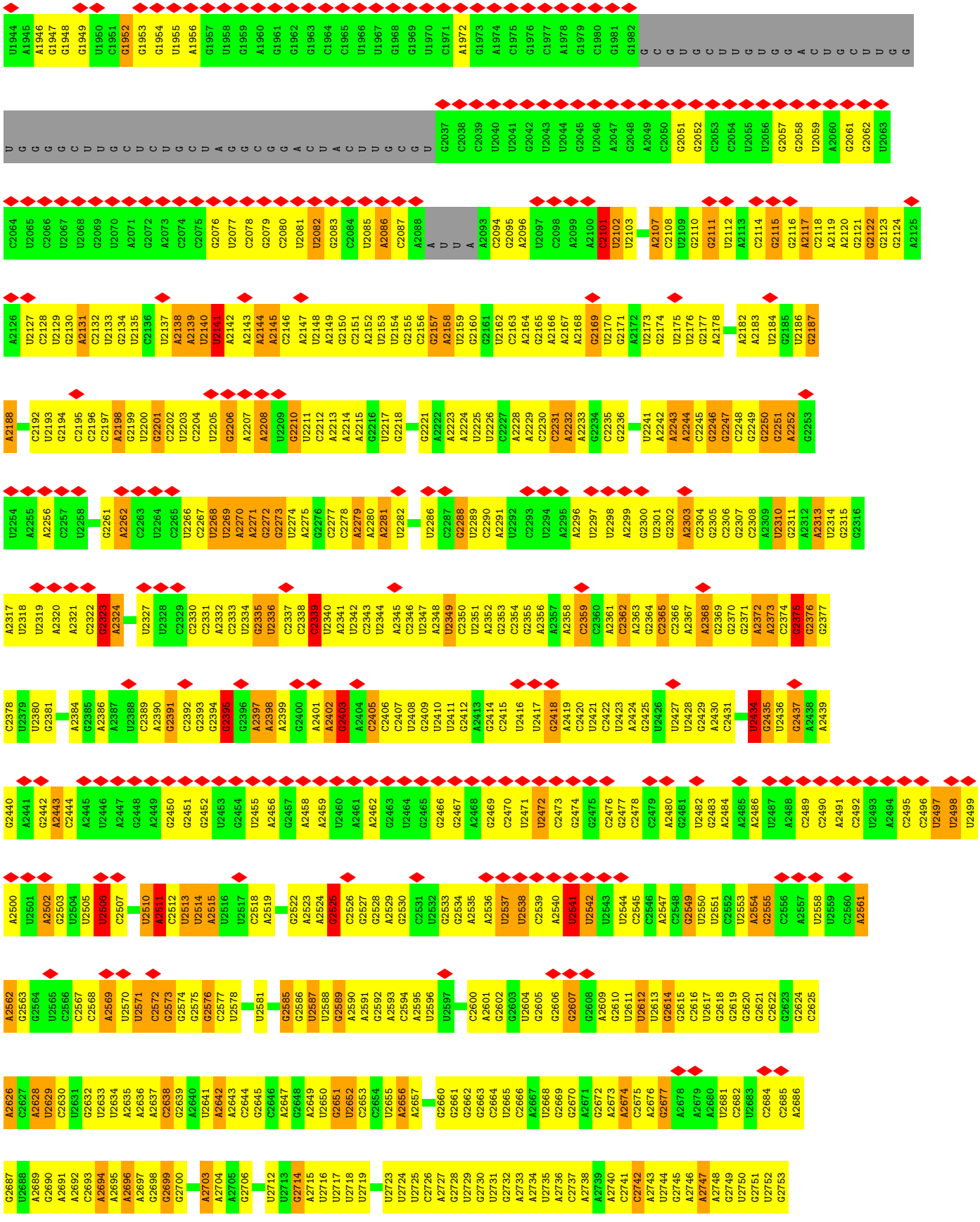
Chain B:

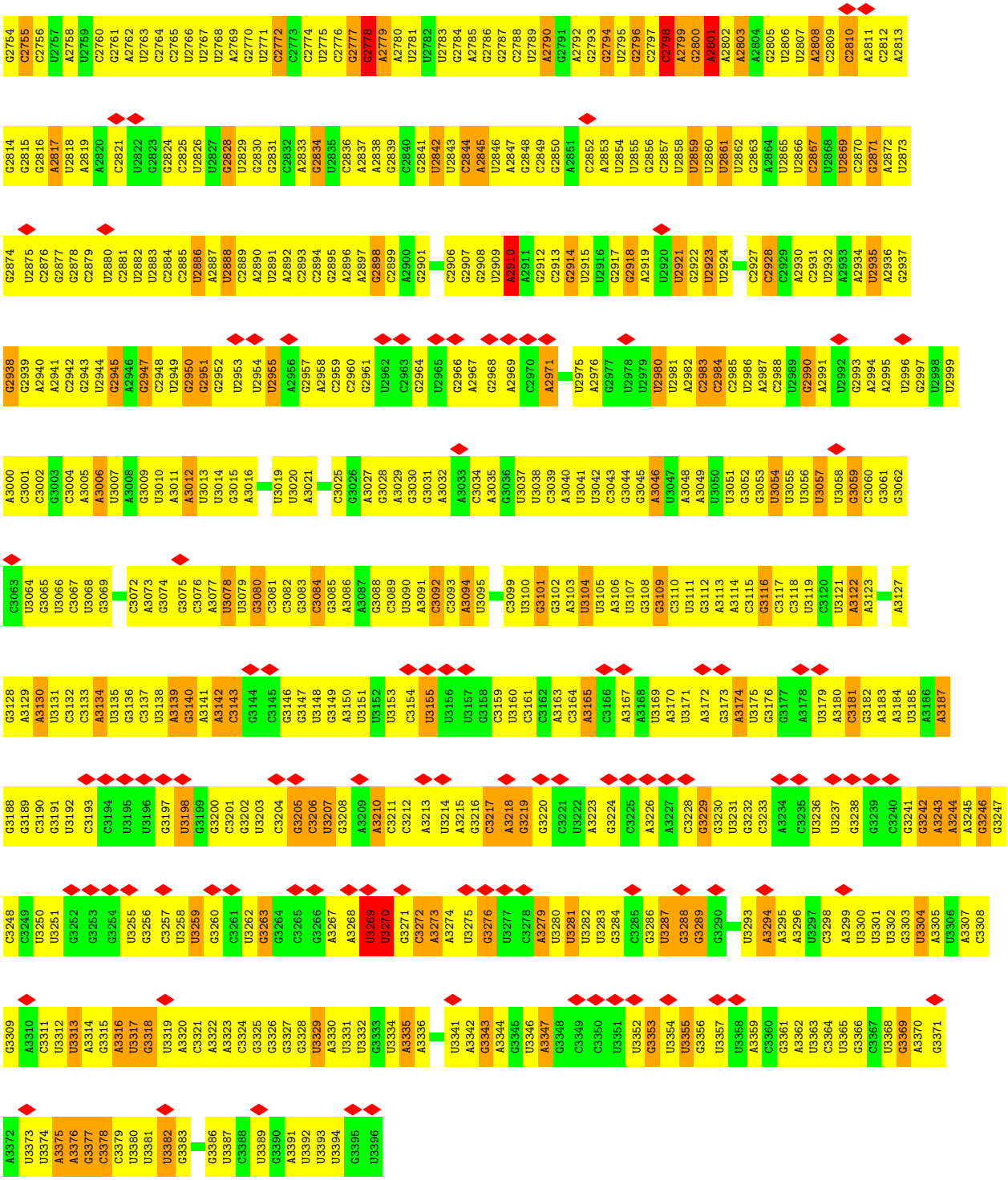






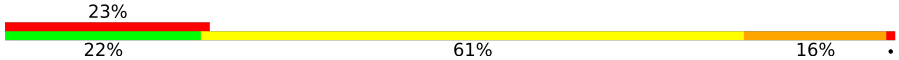


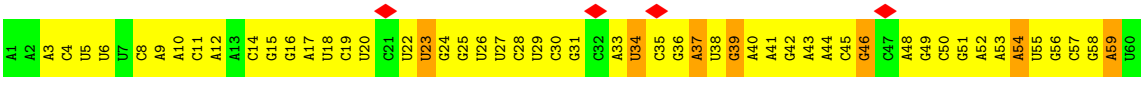


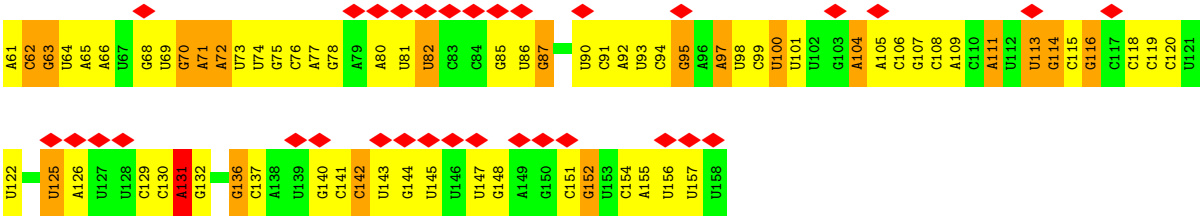


• Molecule 3: 5.8S ribosomal RNA

Chain C:

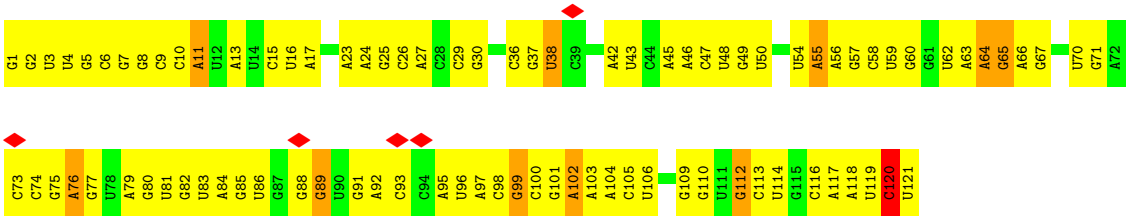






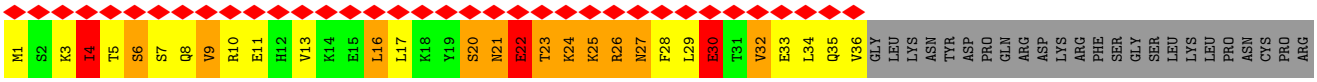
• Molecule 4: 5S ribosomal RNA

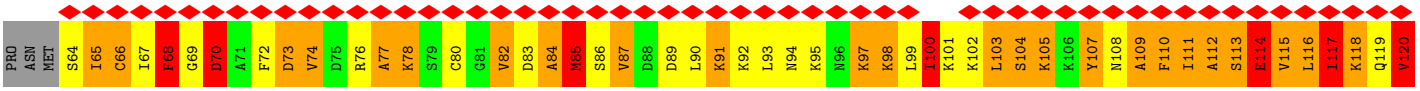
Chain D:

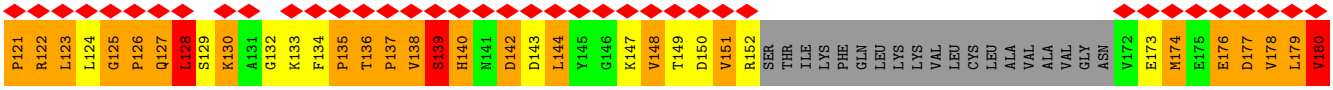


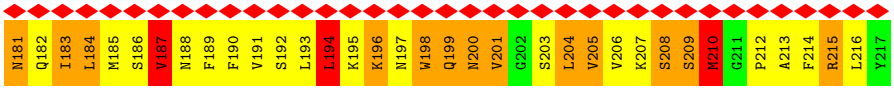
• Molecule 5: uL1 (yeast L1)

Chain E:



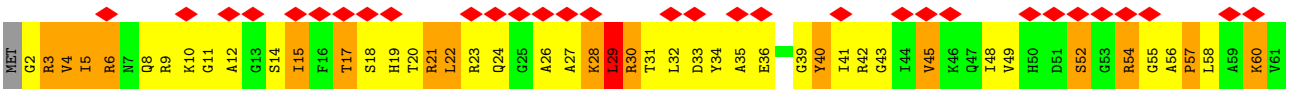


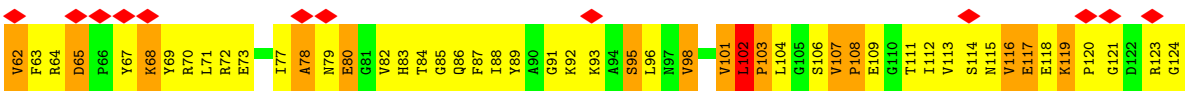




• Molecule 6: uL2 (yeast L2)

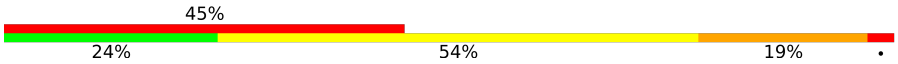
Chain F:

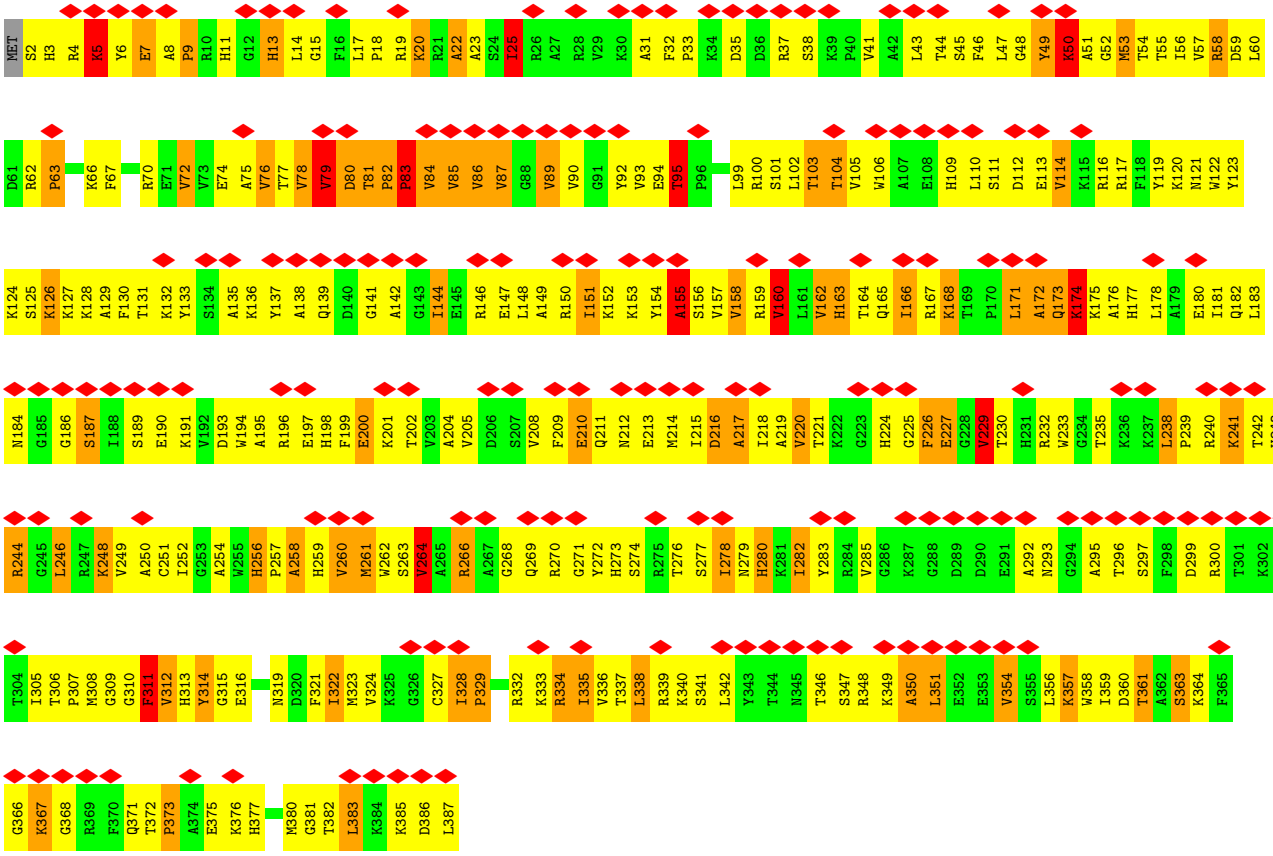




• Molecule 7: uL3 (yeast L3)

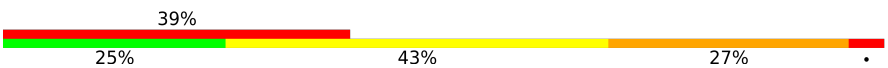
Chain G:

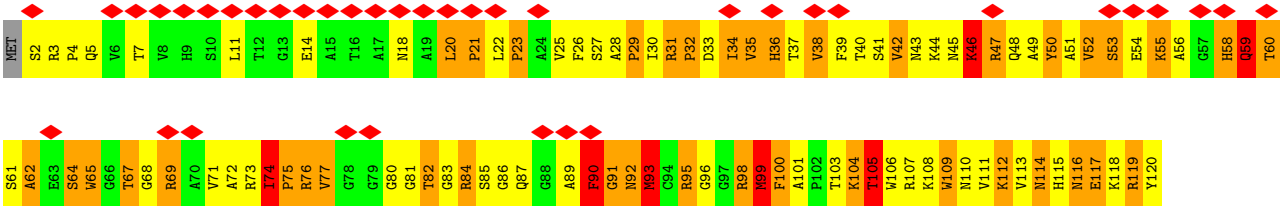


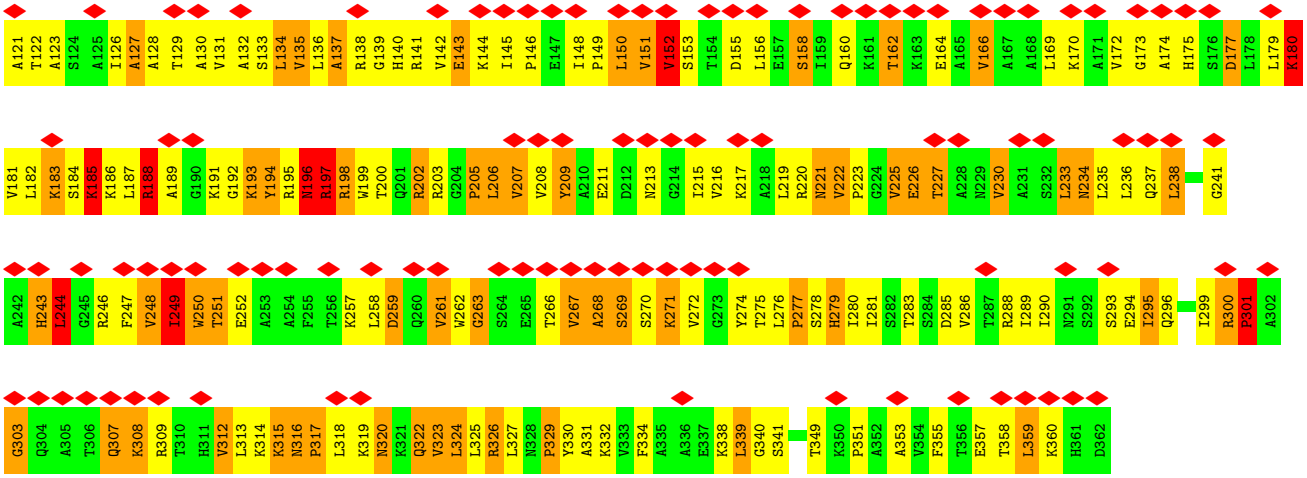


• Molecule 8: uL4 (yeast L4)

Chain H:

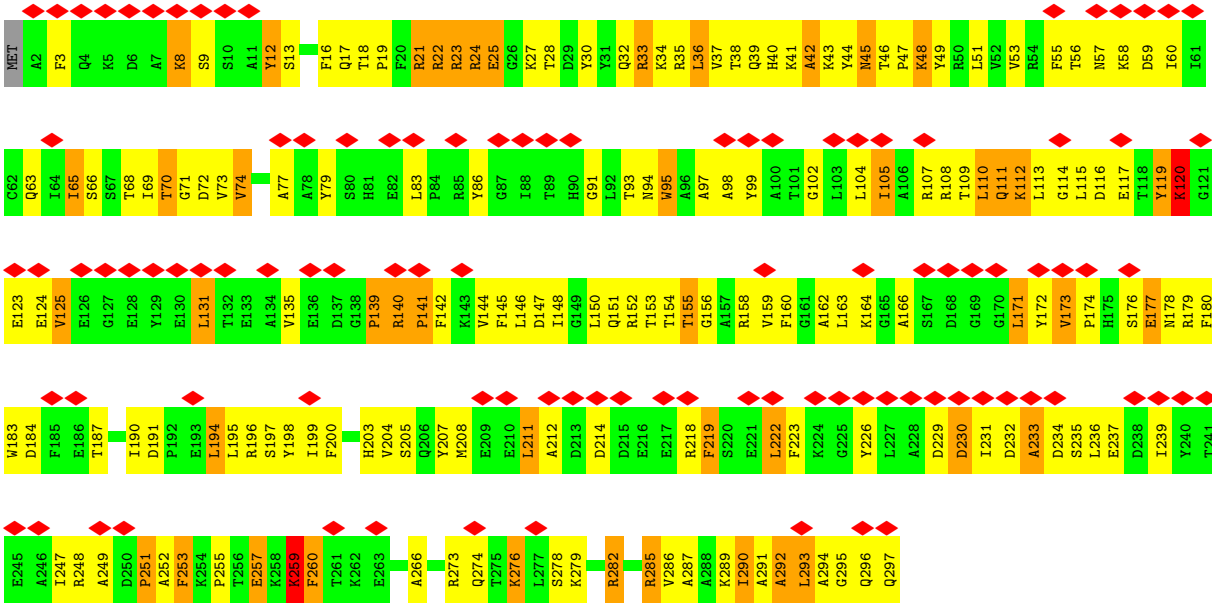






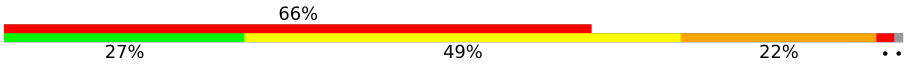
• Molecule 9: uL18 (yeast L5)

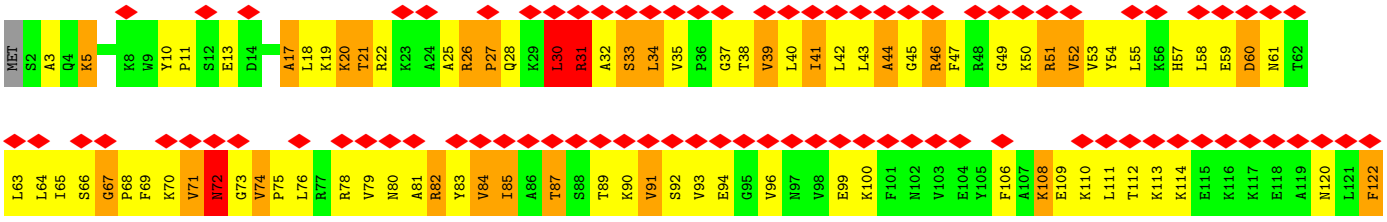
Chain I:

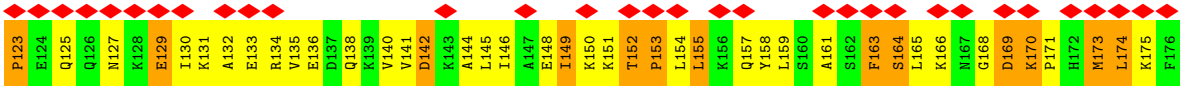


• Molecule 10: eL6 (yeast L6)

Chain J:

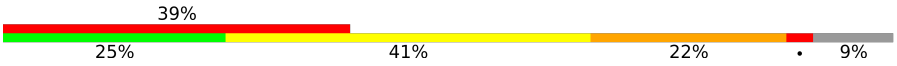


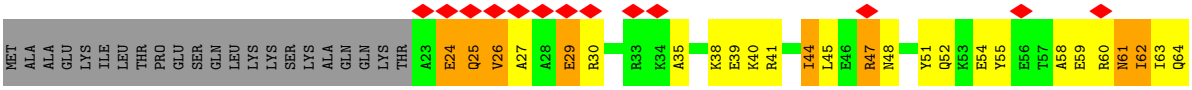


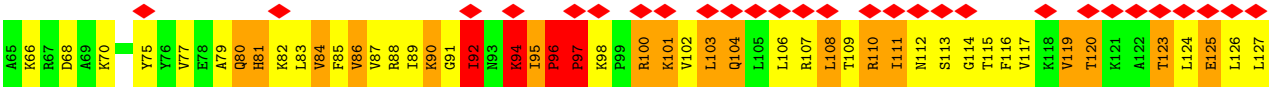


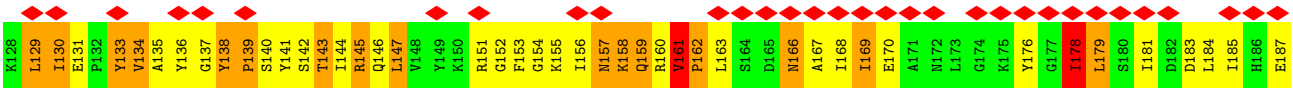
• Molecule 11: uL30 (yeast L7)

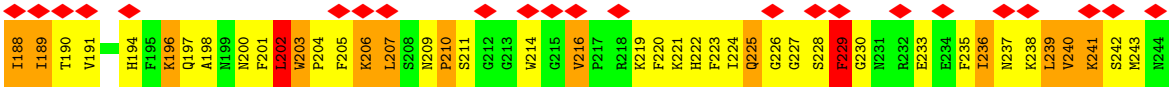
Chain K:





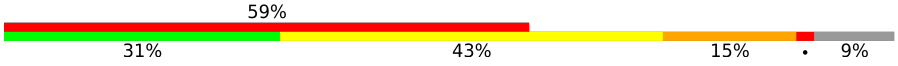


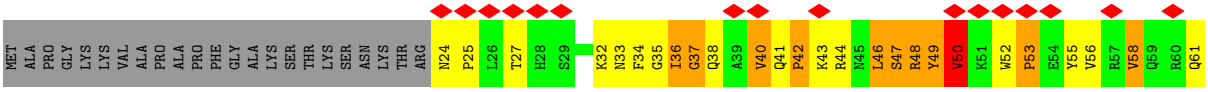


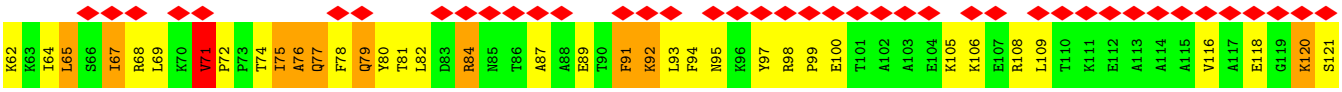


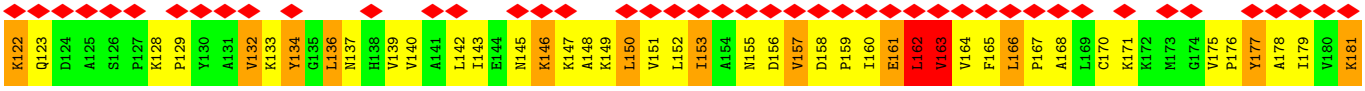
• Molecule 12: eL8 (yeast L8)

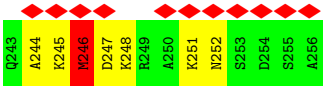
Chain L:





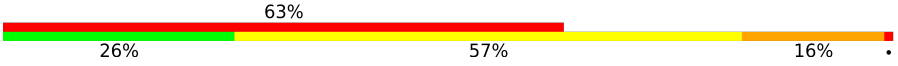


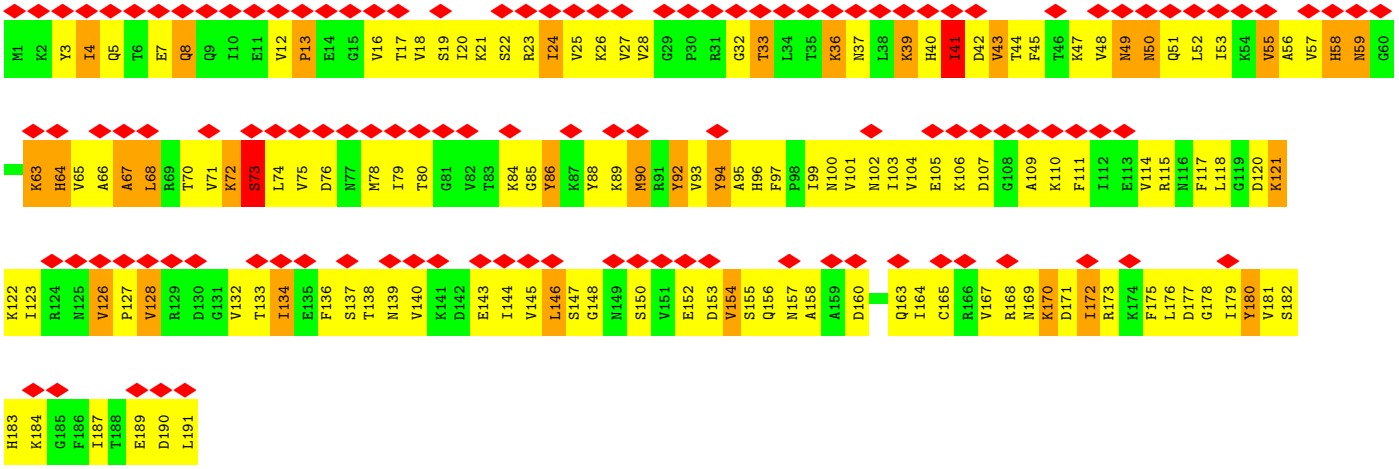




• Molecule 13: uL6 (yeast L9)

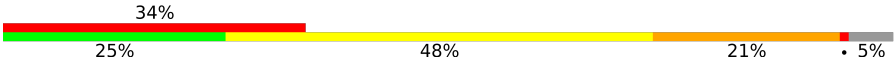
Chain M:

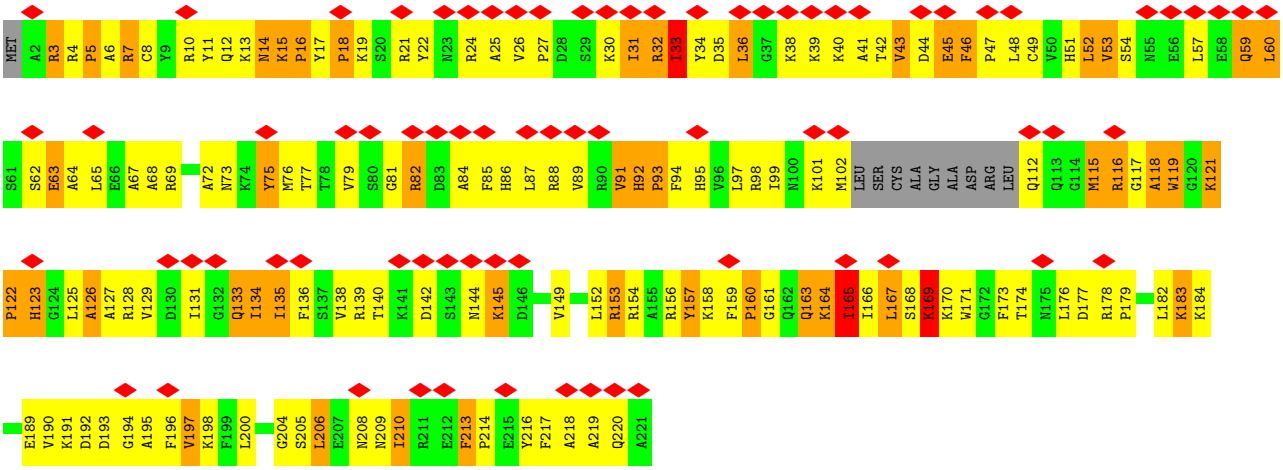




• Molecule 14: uL16 (yeast L10)

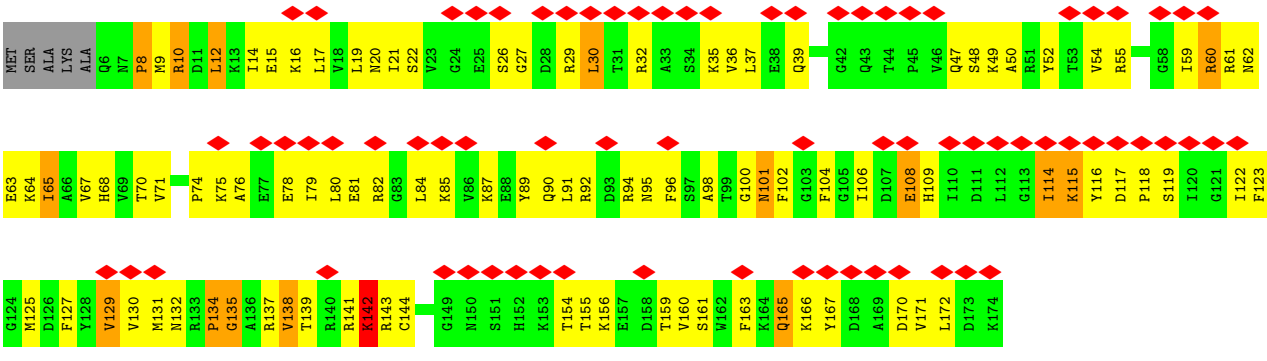
Chain N:





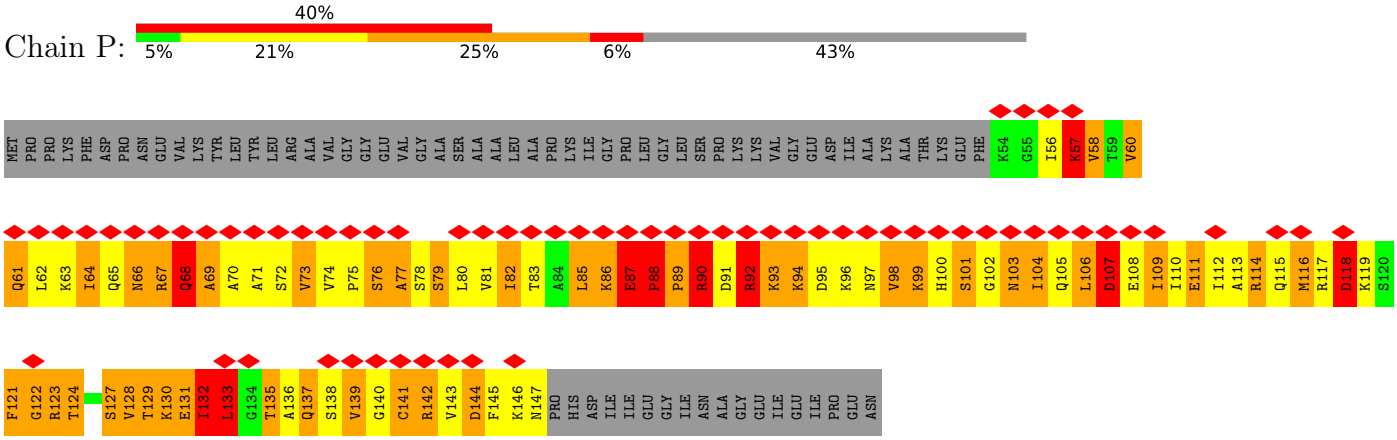
• Molecule 15: uL5 (yeast L11)

Chain O:



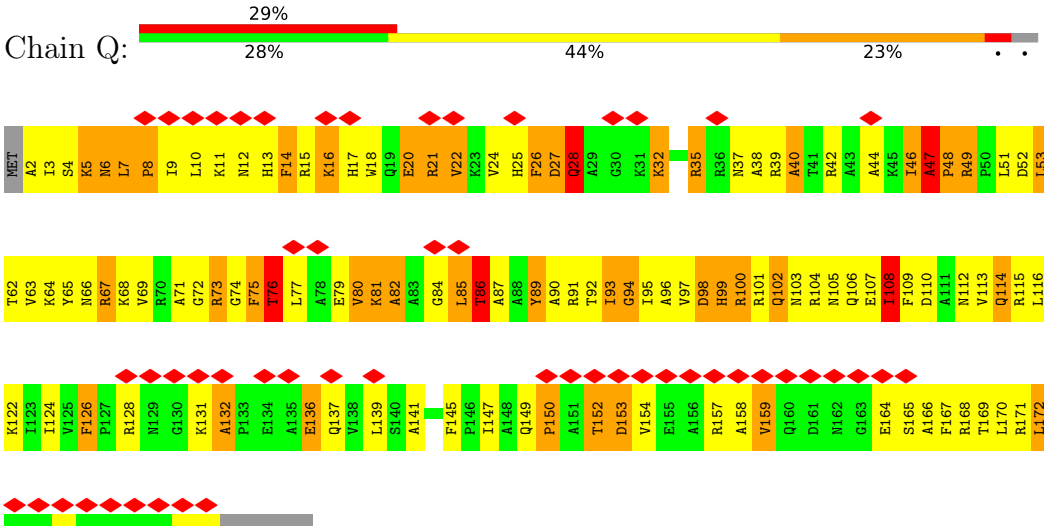
• Molecule 16: uL11 (yeast L12)

Chain P:



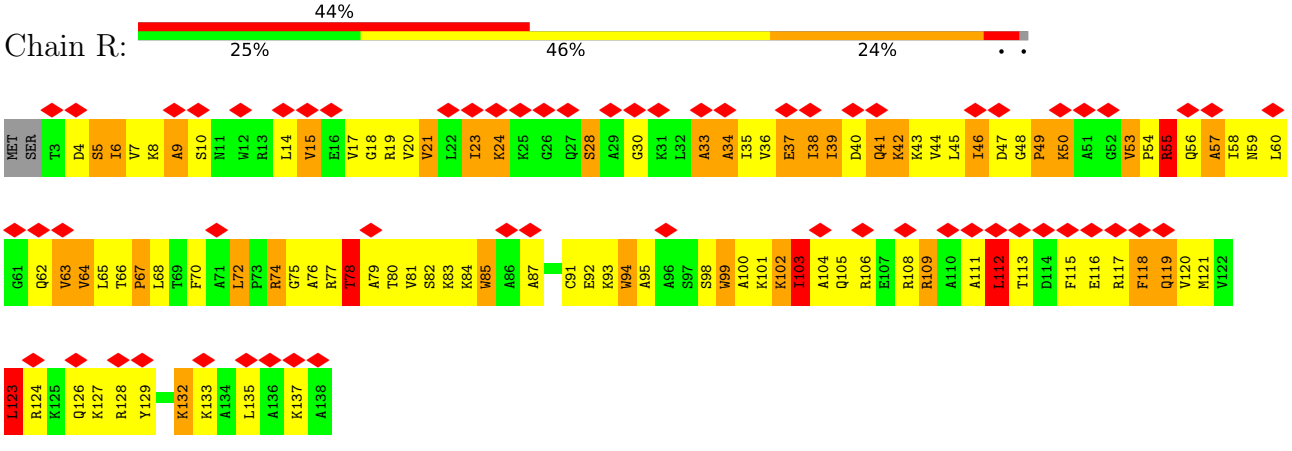
• Molecule 17: eL13 (yeast L13)

Chain Q:



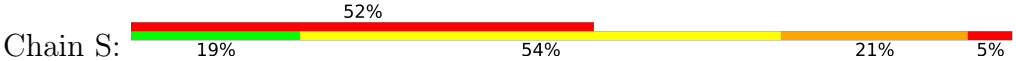
• Molecule 18: eL14 (yeast L14)

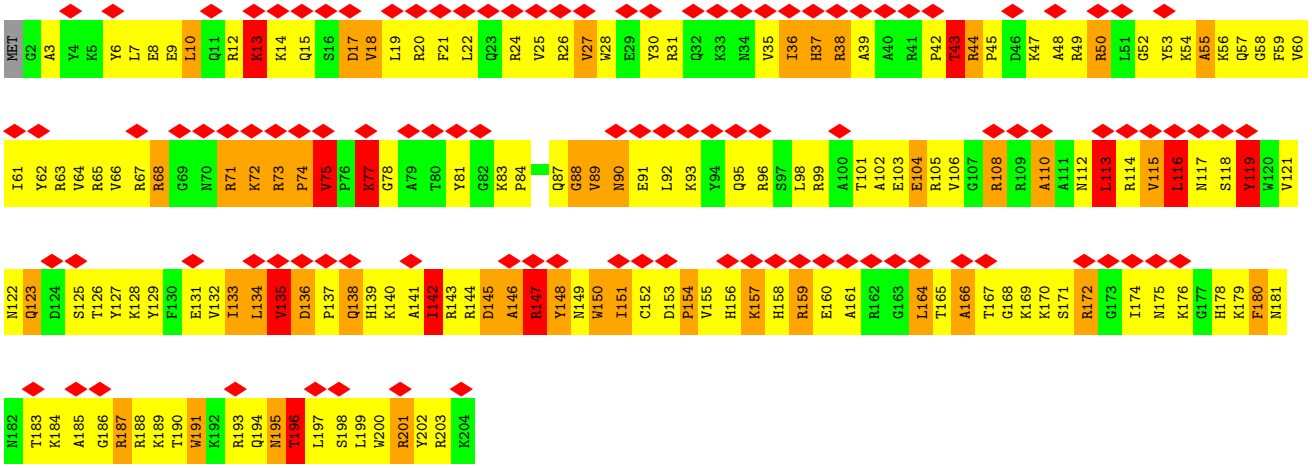
Chain R:



• Molecule 19: eL15 (yeast L15)

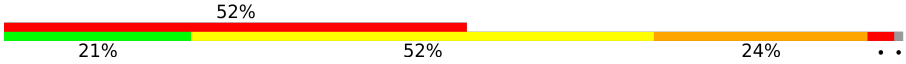
Chain S:

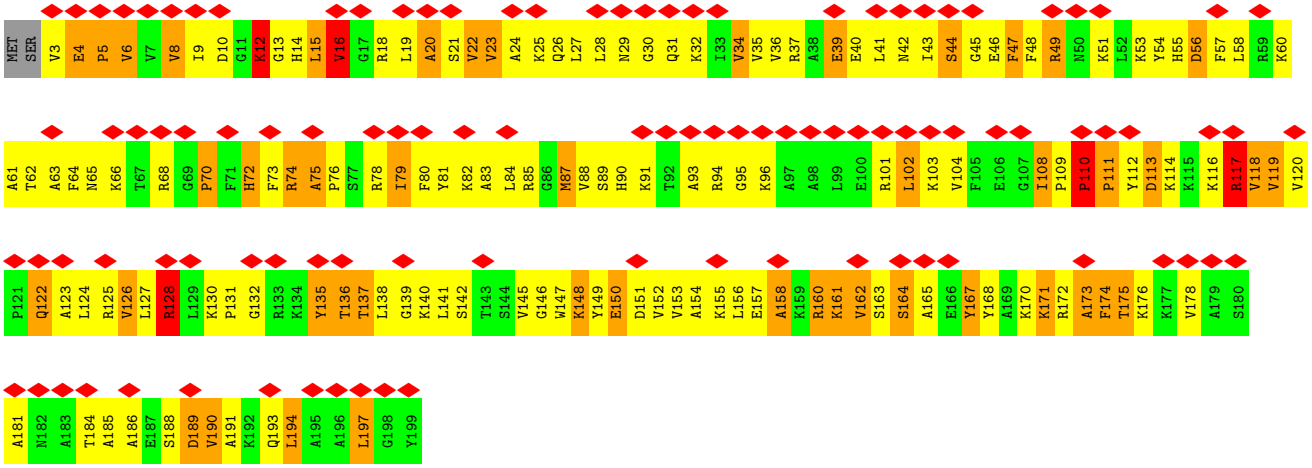




• Molecule 20: uL13 (yeast L16)

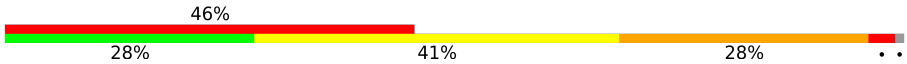
Chain T:

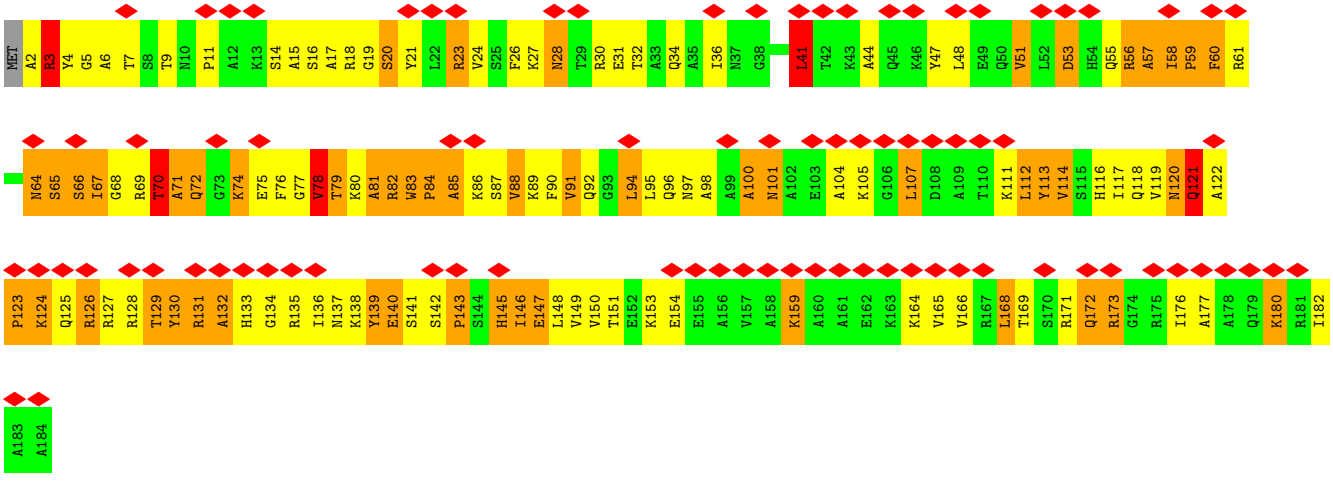




• Molecule 21: uL22 (yeast L17)

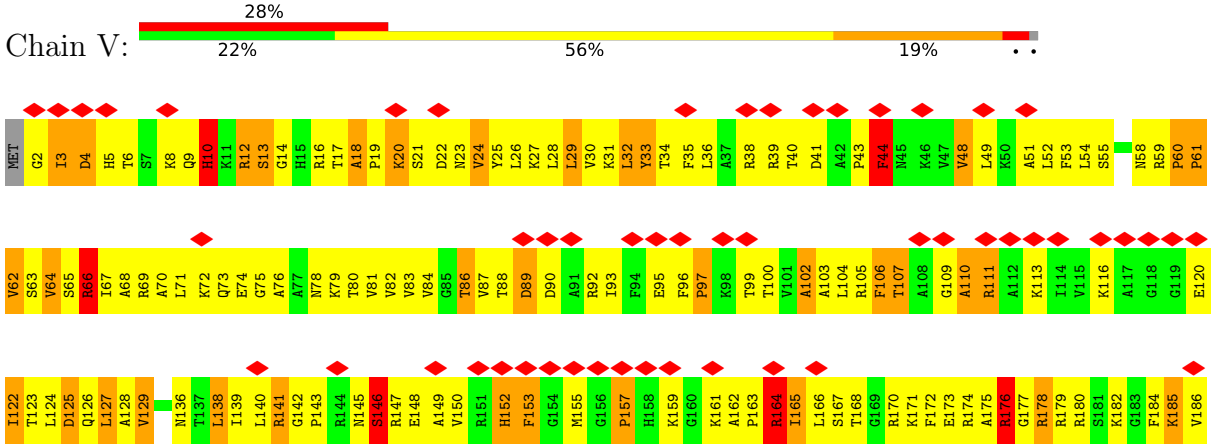
Chain U:





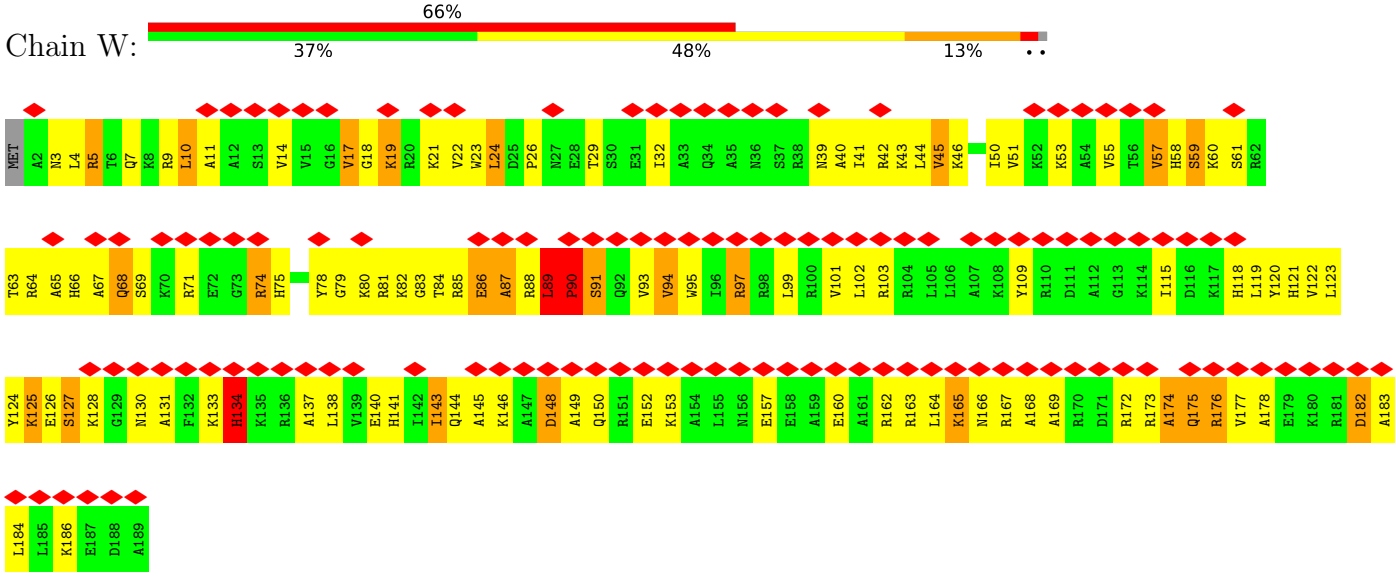
• Molecule 22: eL18 (yeast L18)

Chain V:



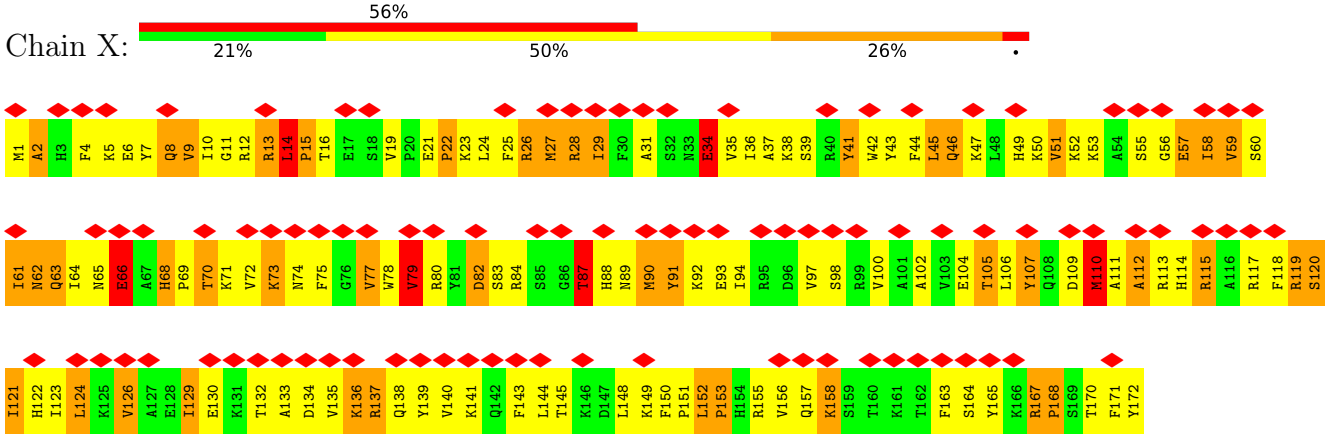
• Molecule 23: eL19 (yeast L19)

Chain W:



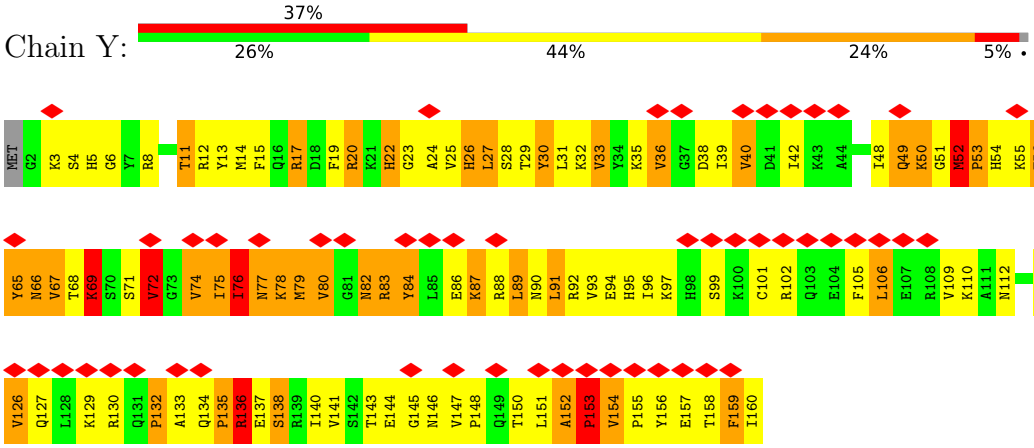
• Molecule 24: eL20 (yeast L20)

Chain X:



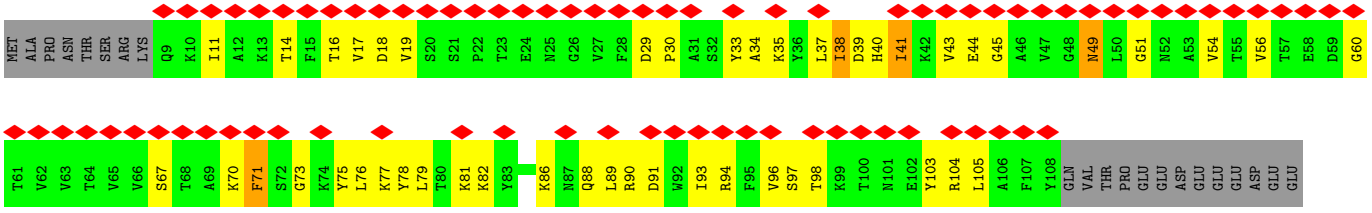
• Molecule 25: eL21 (yeast L21)

Chain Y:



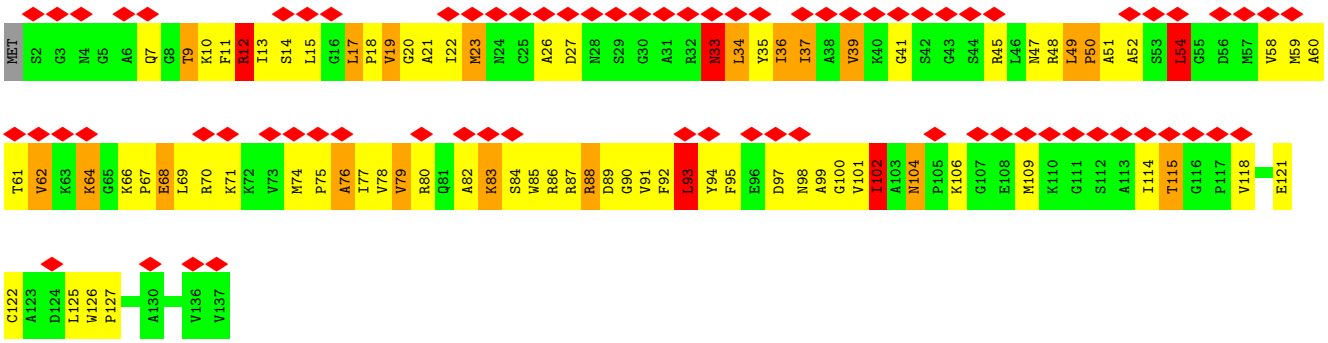
• Molecule 26: eL22 (yeast L22)

Chain Z:



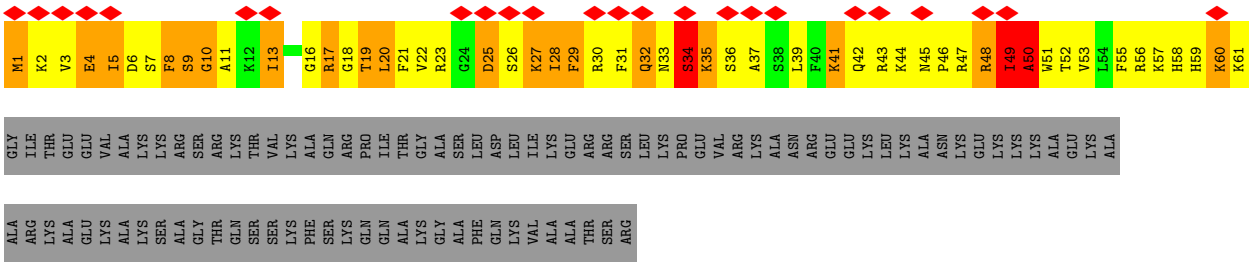
• Molecule 27: uL14 (yeast L23)

Chain AA:



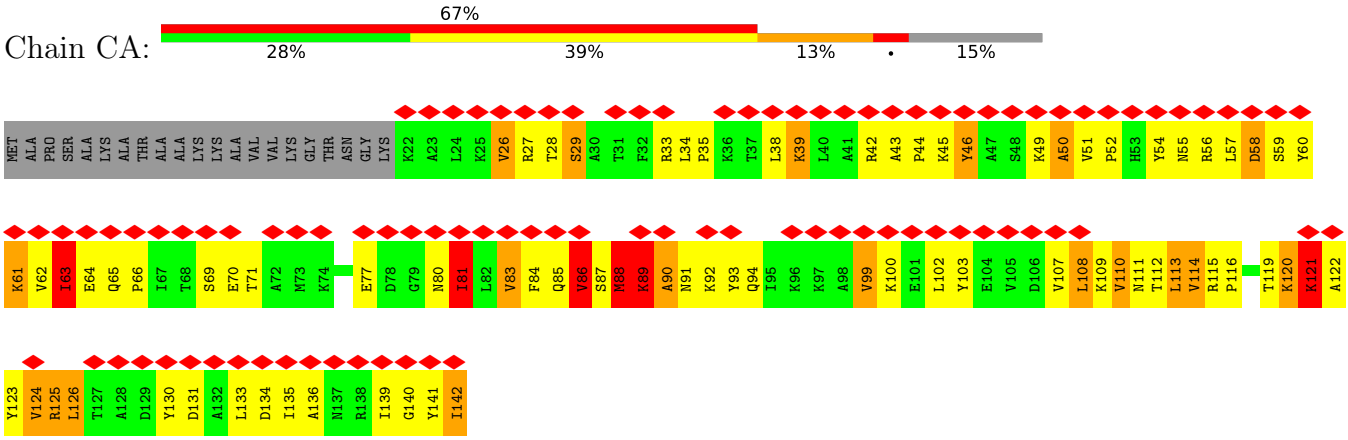
• Molecule 28: eL24 (yeast L24)

Chain BA:



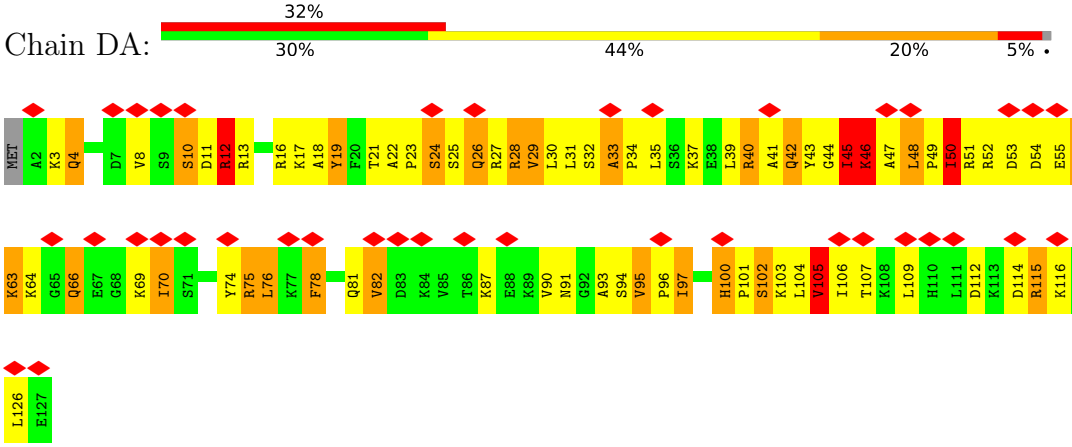
• Molecule 29: uL23 (yeast L25)

Chain CA:



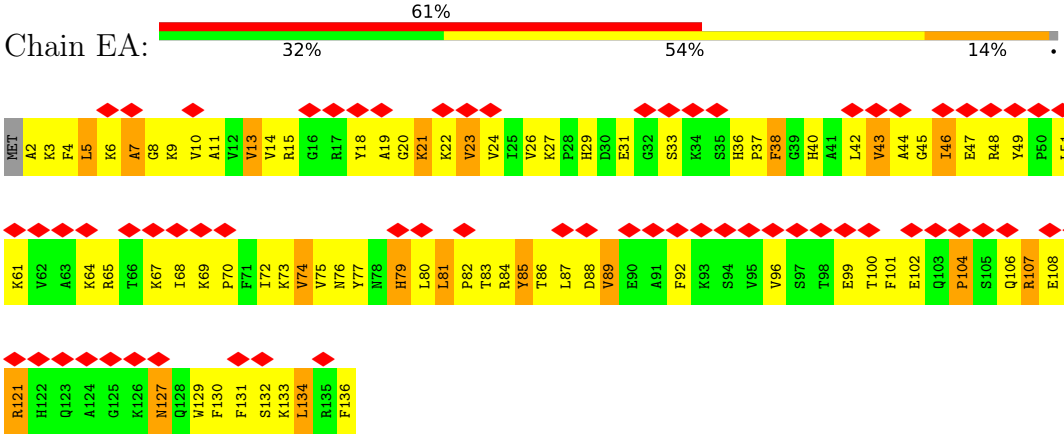
• Molecule 30: uL24 (yeast L26)

Chain DA:



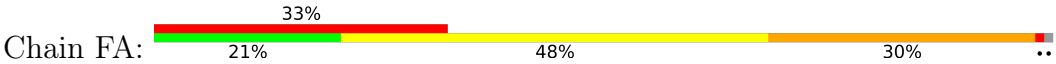
• Molecule 31: eL27 (yeast L27)

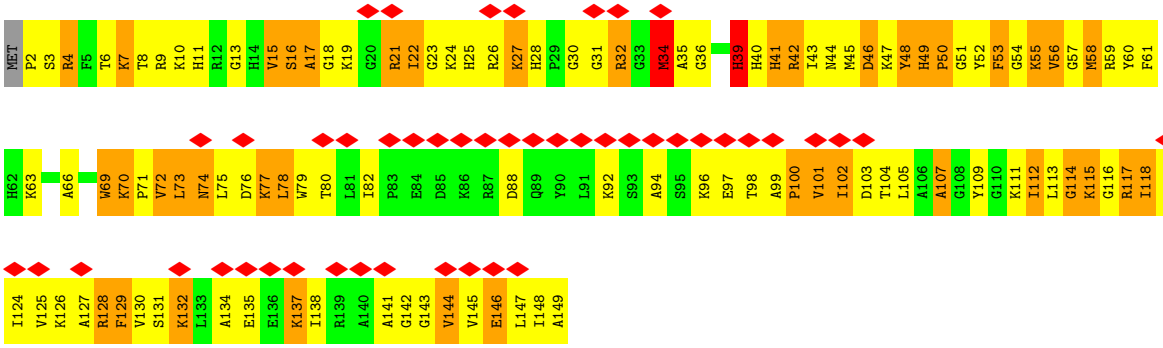
Chain EA:



• Molecule 32: uL15 (yeast L28)

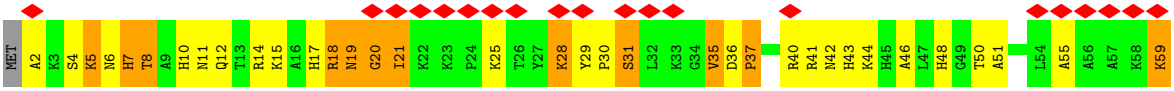
Chain FA:





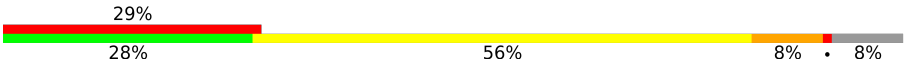
• Molecule 33: eL29 (yeast L29)

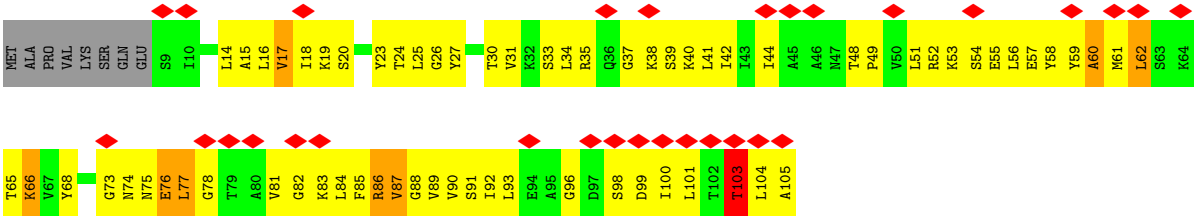
Chain GA:



• Molecule 34: eL30 (yeast L30)

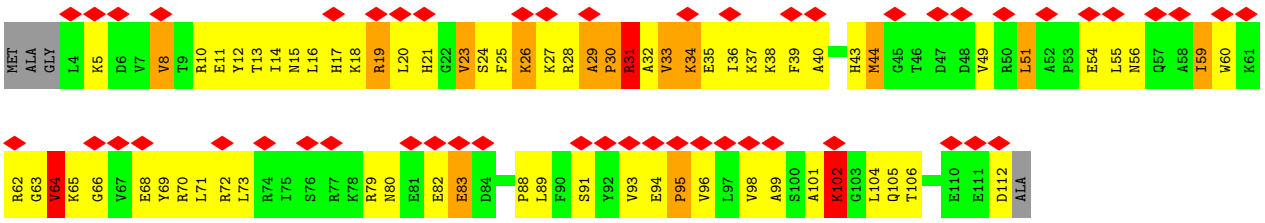
Chain HA:





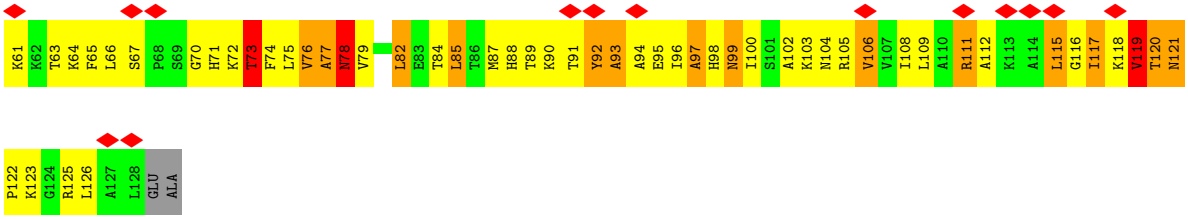
• Molecule 35: eL31 (yeast L31)

Chain IA:



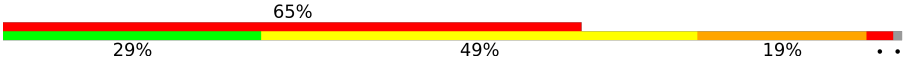
• Molecule 36: eL32 (yeast L32)

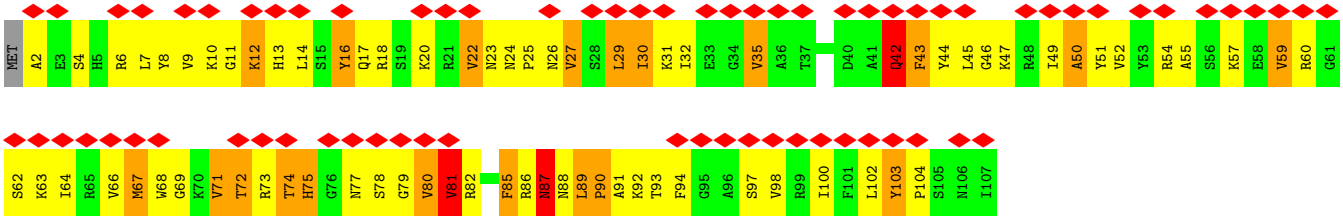
Chain JA:



• Molecule 37: eL33 (yeast L33)

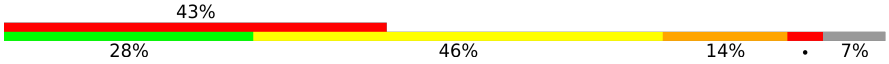
Chain KA:

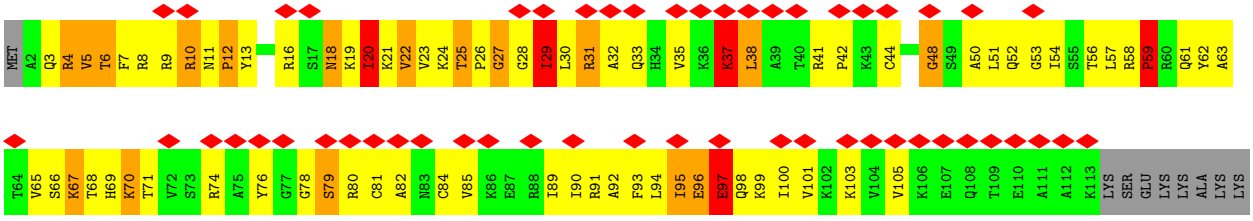




• Molecule 38: eL34 (yeast L34)

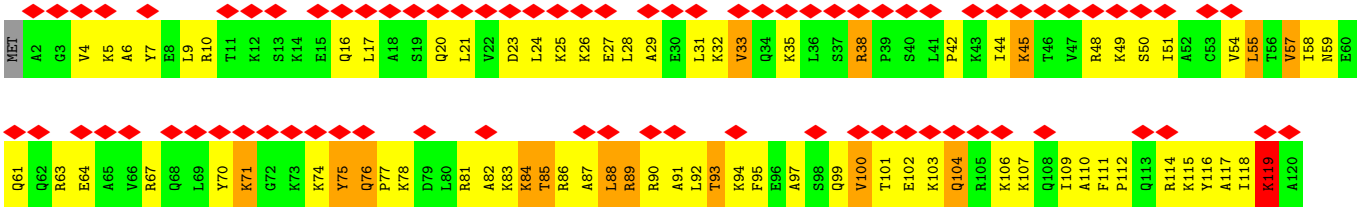
Chain LA:





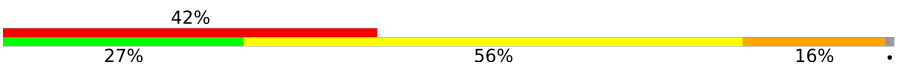
• Molecule 39: uL29 (yeast L35)

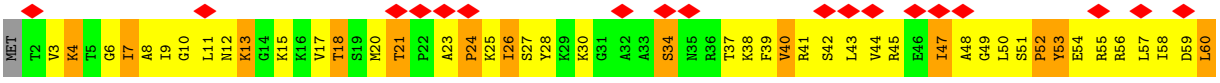
Chain MA:

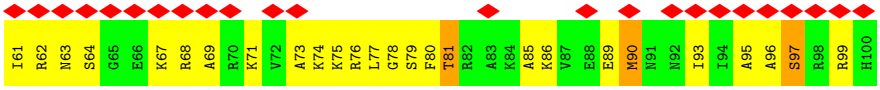


• Molecule 40: eL36 (yeast L36)

Chain NA:

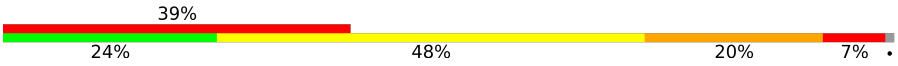


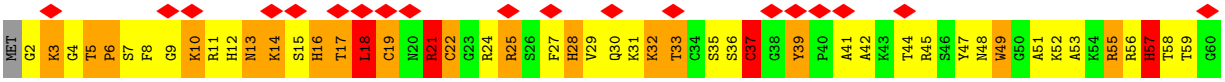


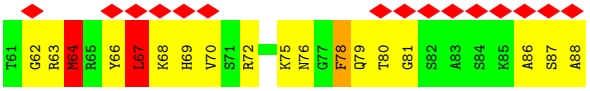


• Molecule 41: eL37 (yeast L37)

Chain OA:

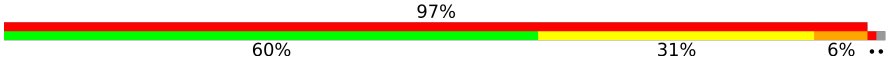


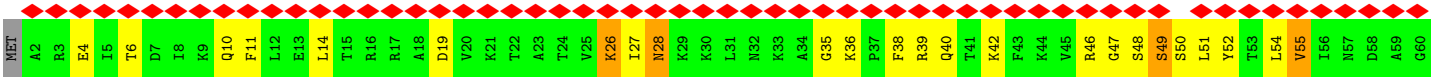


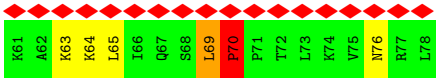


• Molecule 42: eL38 (yeast L38)

Chain PA:

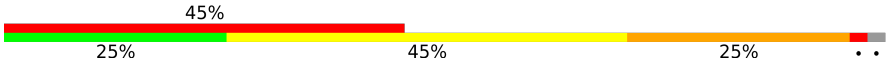


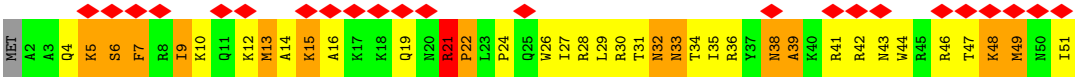




• Molecule 43: eL39 (yeast L39)

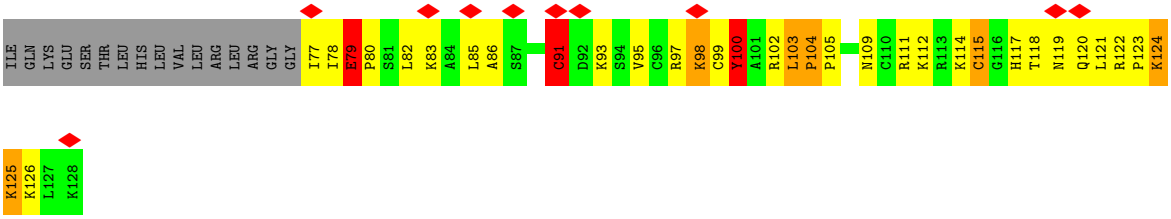
Chain QA:





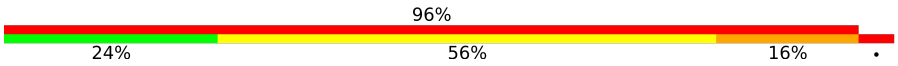
• Molecule 44: eL40 (yeast L40)

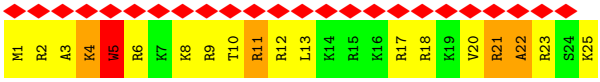
Chain RA:



• Molecule 45: eL41 (yeast L41)

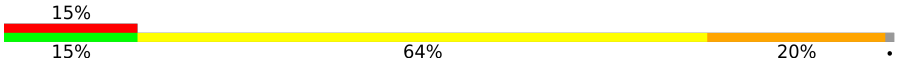
Chain SA:





• Molecule 46: eL42 (yeast L42)

Chain TA:

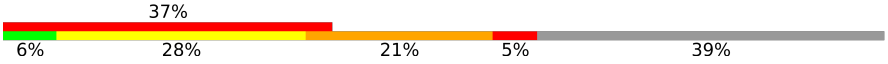


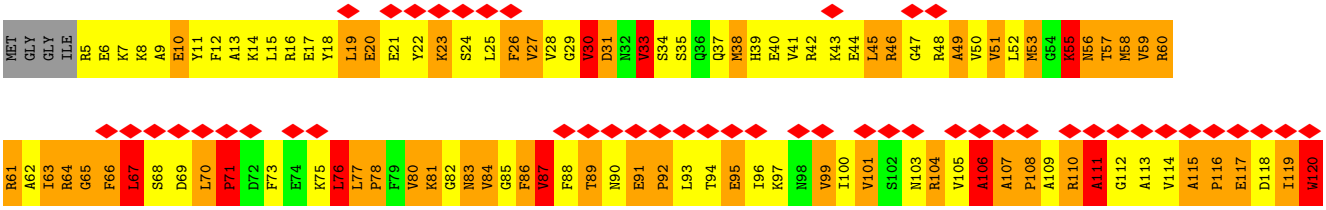
• Molecule 47: eL43 (yeast L43)

Chain UA:

• Molecule 48: uL10 (yeast P0)

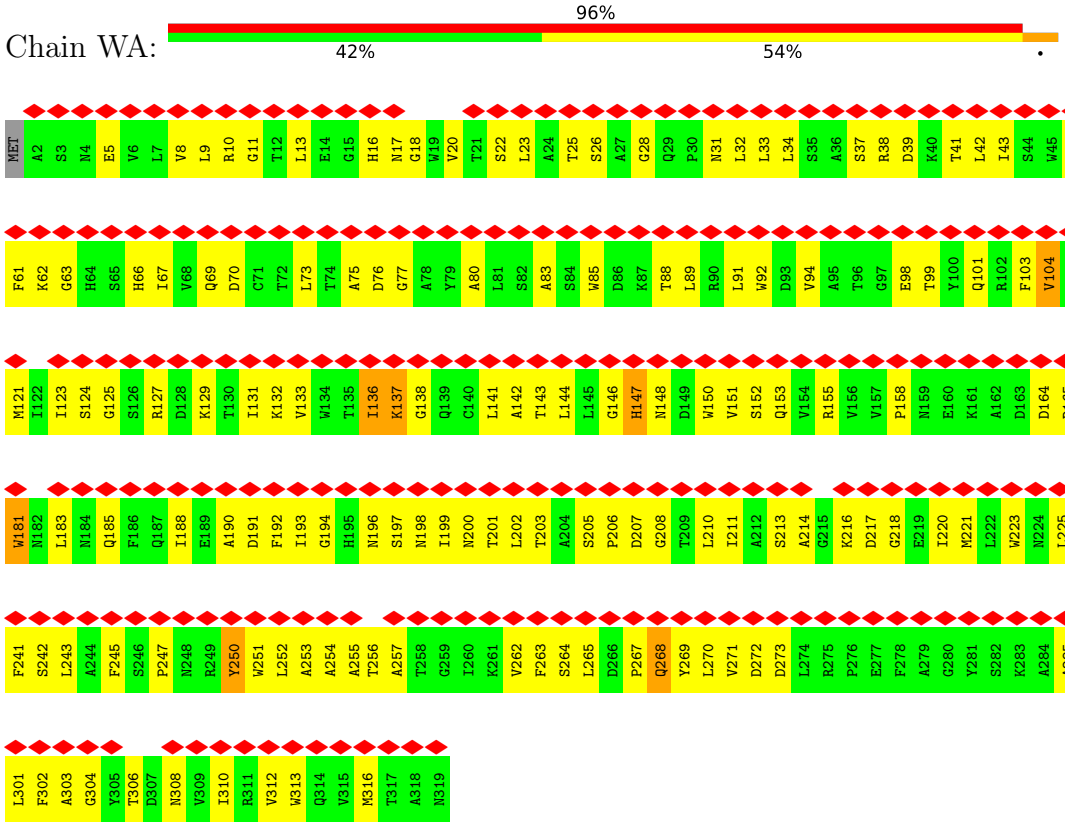
Chain VA:





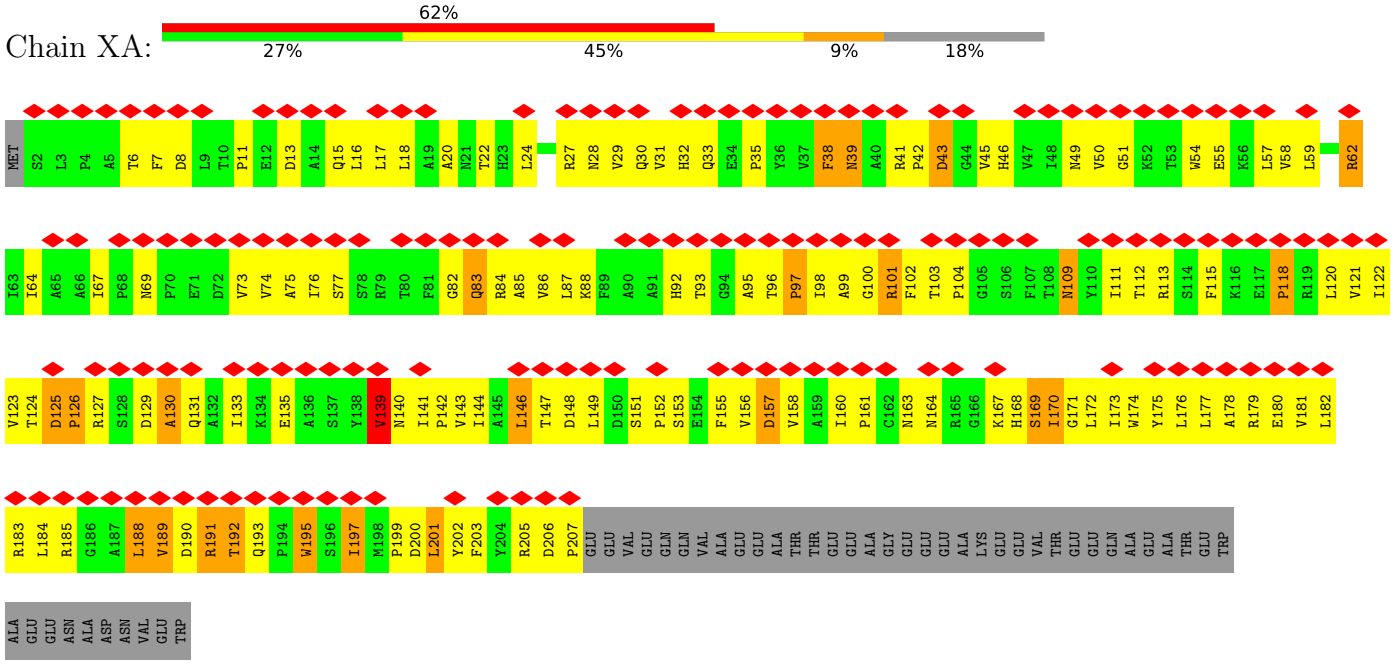
• Molecule 49: RACK1 (yeast Asc1)

Chain WA:



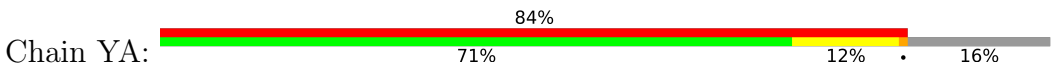
• Molecule 50: uS2 (yeast S0)

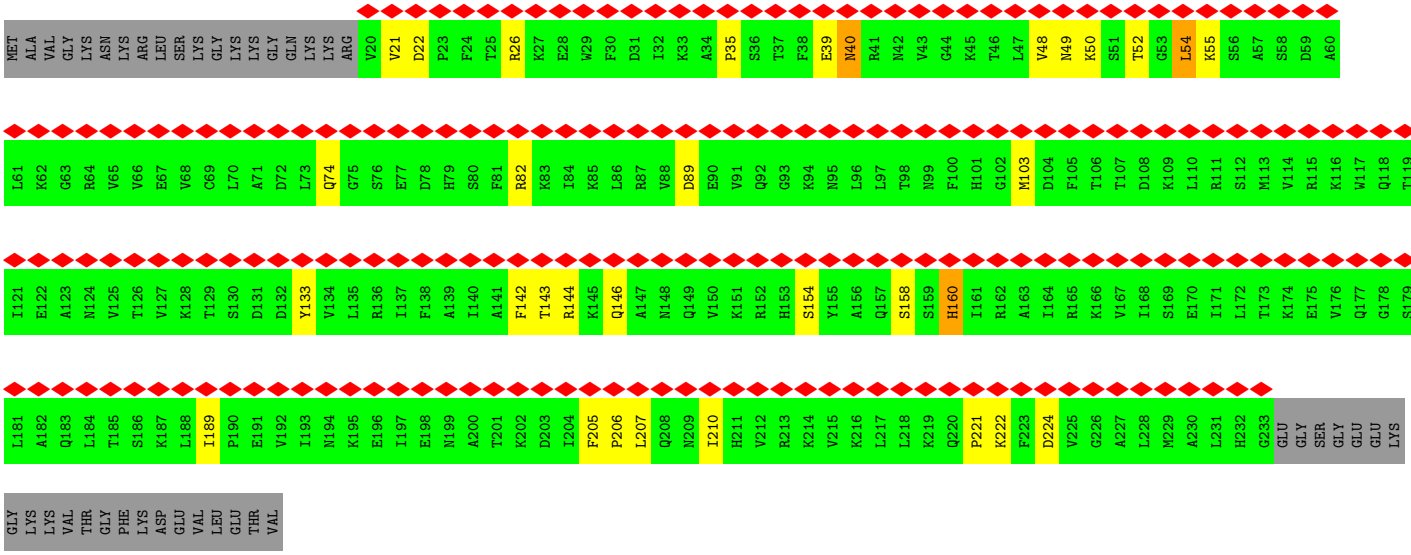
Chain XA:



• Molecule 51: eS1 (yeast S1)

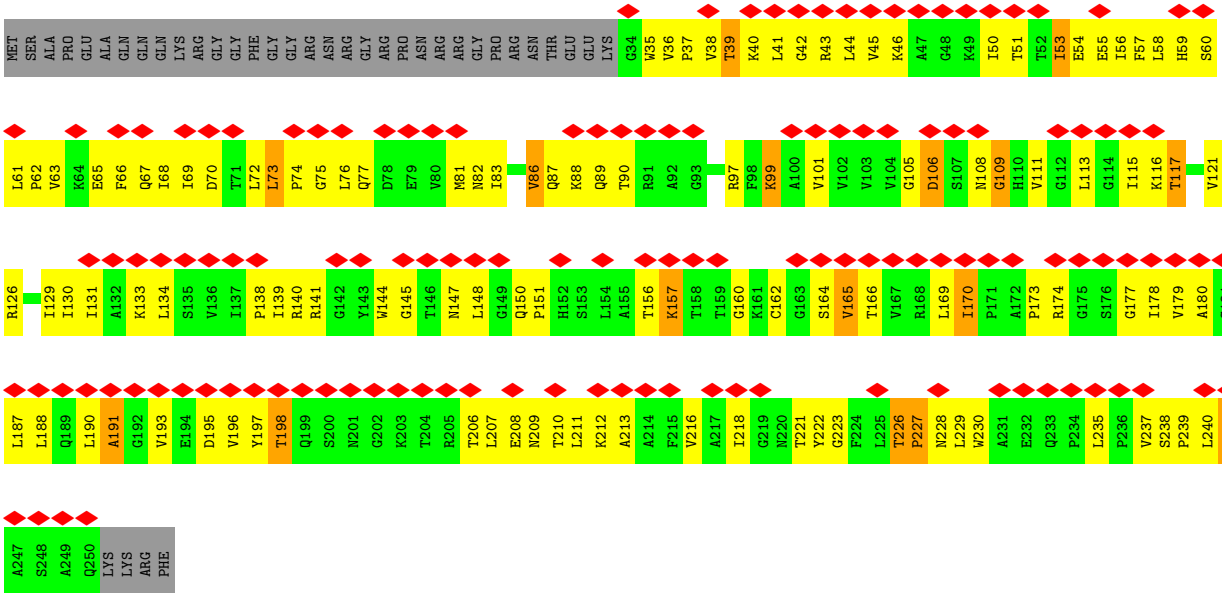
Chain YA:





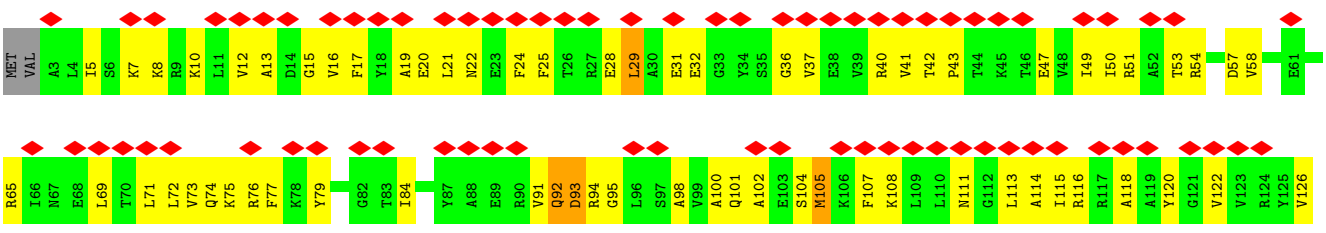
• Molecule 52: uS5 (yeast S2)

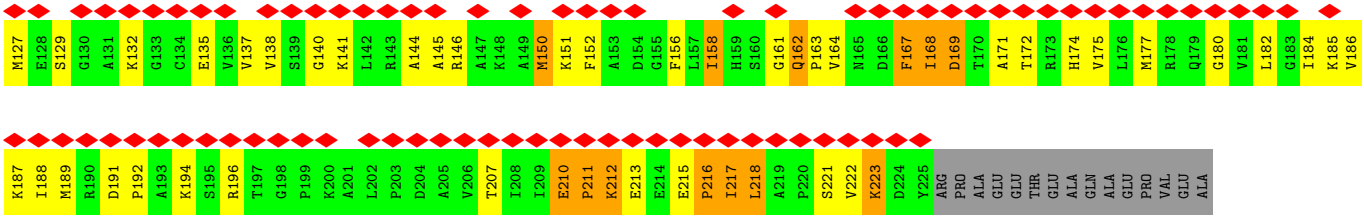
Chain ZA:



• Molecule 53: uS3 (yeast S3)

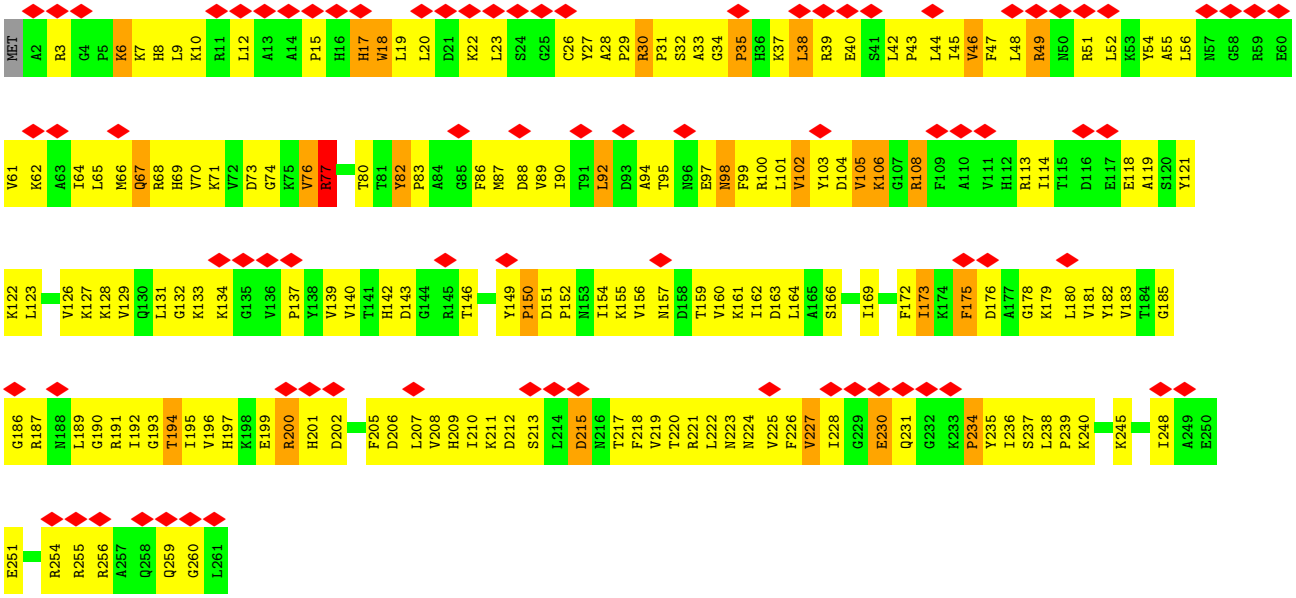
Chain AB:





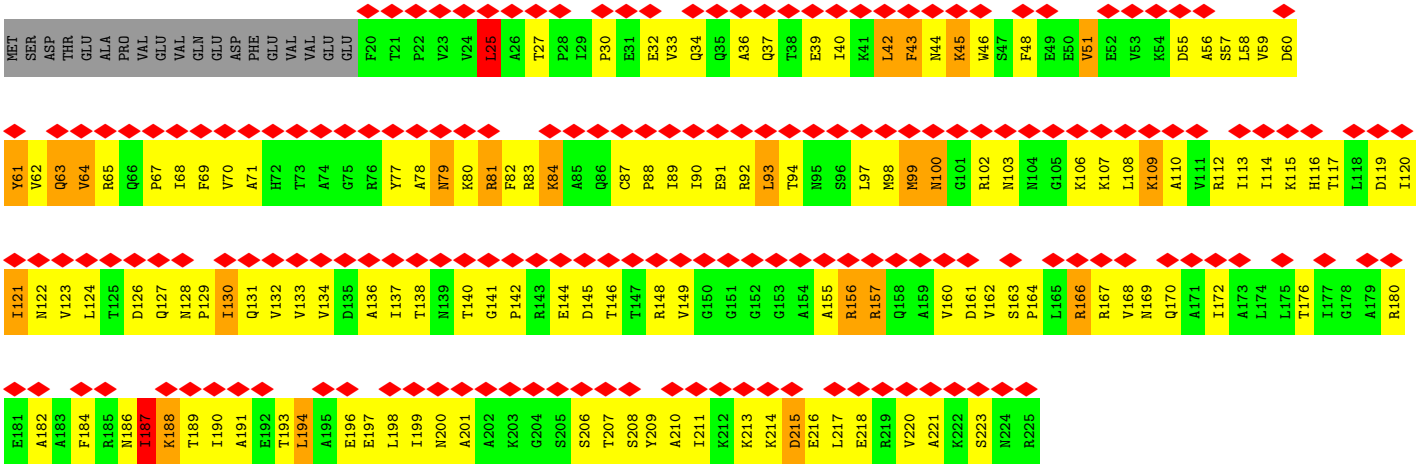
• Molecule 54: eS4 (yeast S4)

Chain BB:



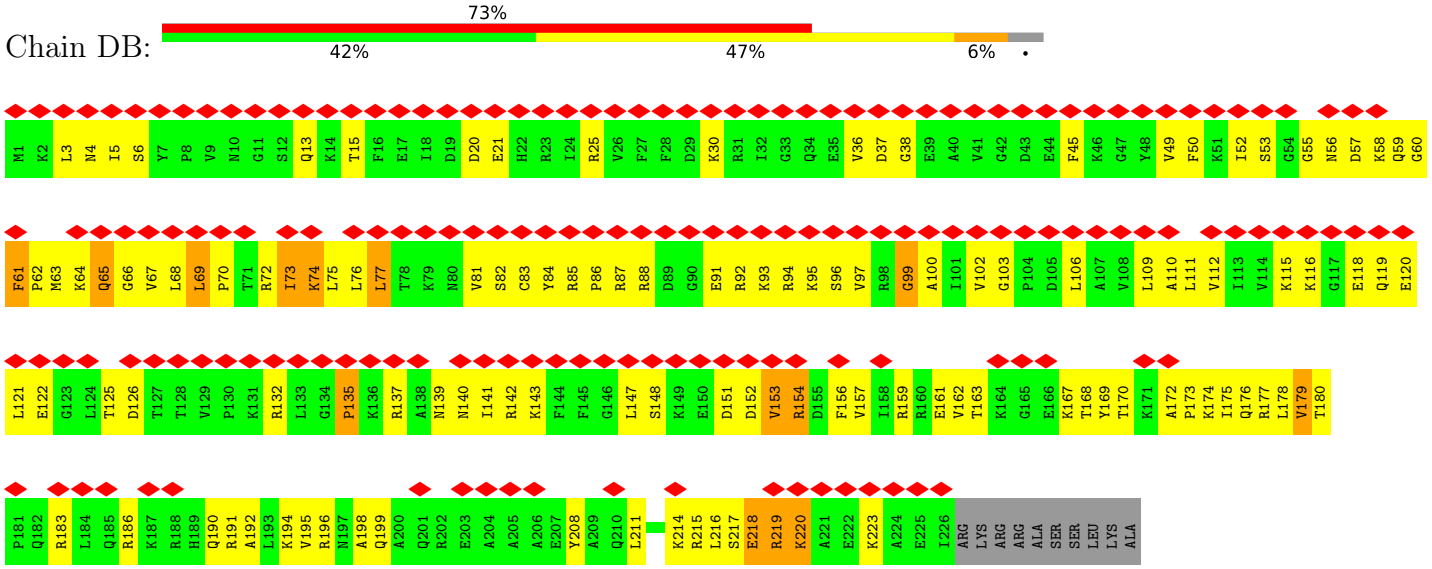
• Molecule 55: uS7 (yeast S5)

Chain CB:



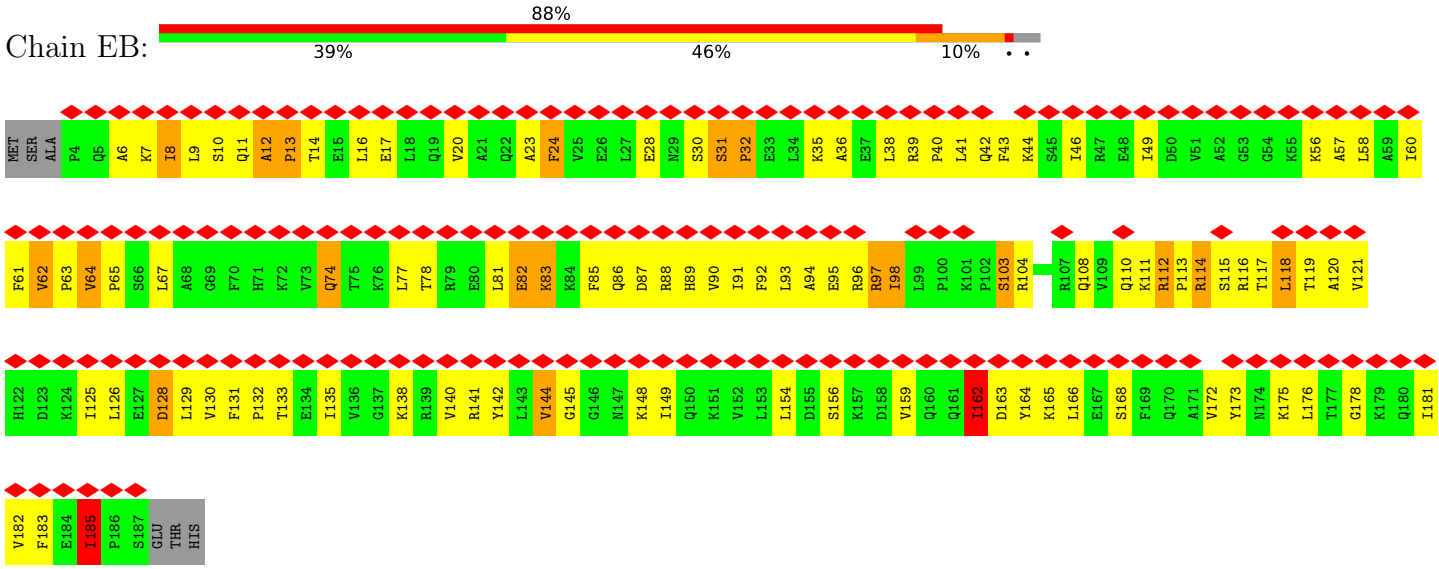
• Molecule 56: eS6 (yeast S6)

Chain DB:



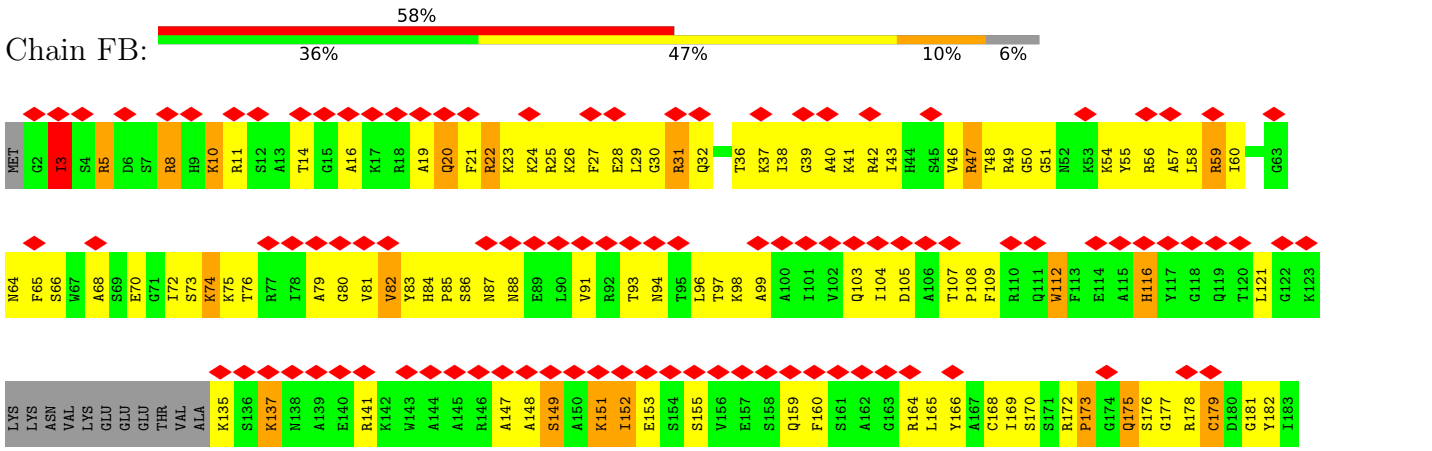
• Molecule 57: eS7 (yeast S7)

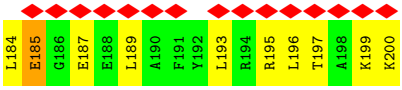
Chain EB:



• Molecule 58: eS8 (yeast S8)

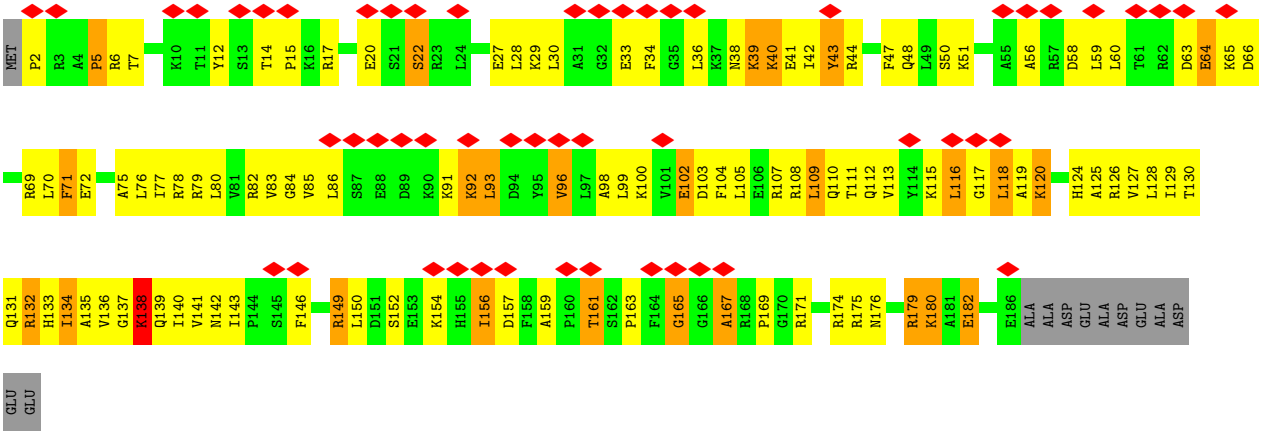
Chain FB:





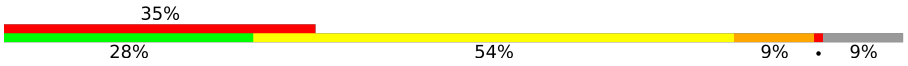
• Molecule 59: uS4 (yeast S9)

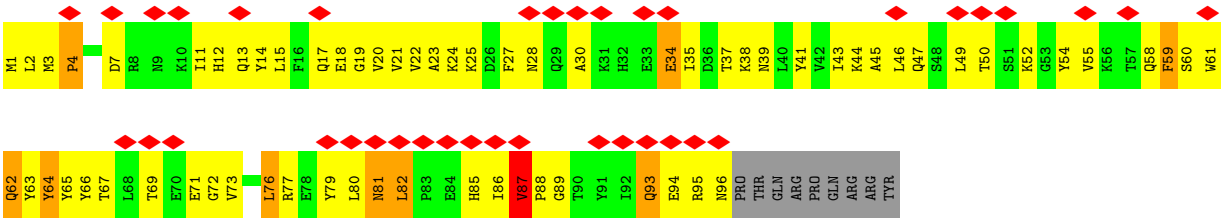
Chain GB:



• Molecule 60: eS10 (yeast S10)

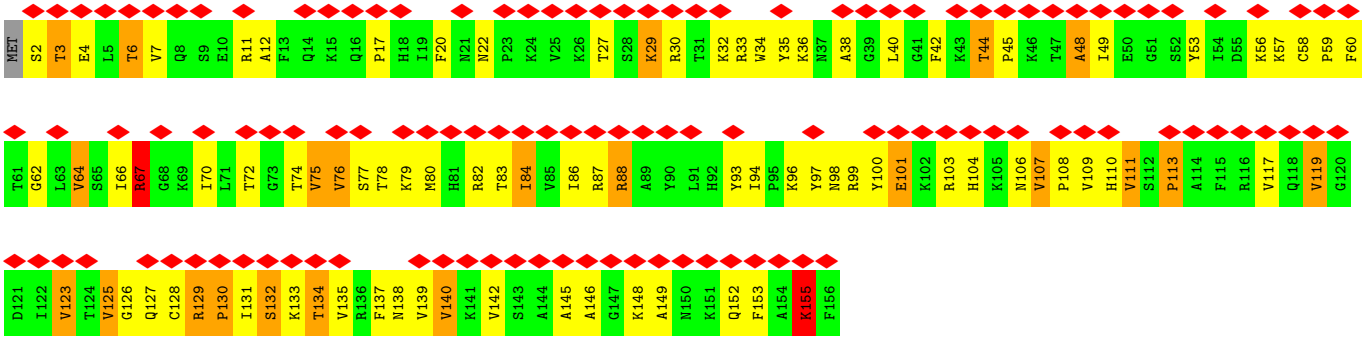
Chain HB:





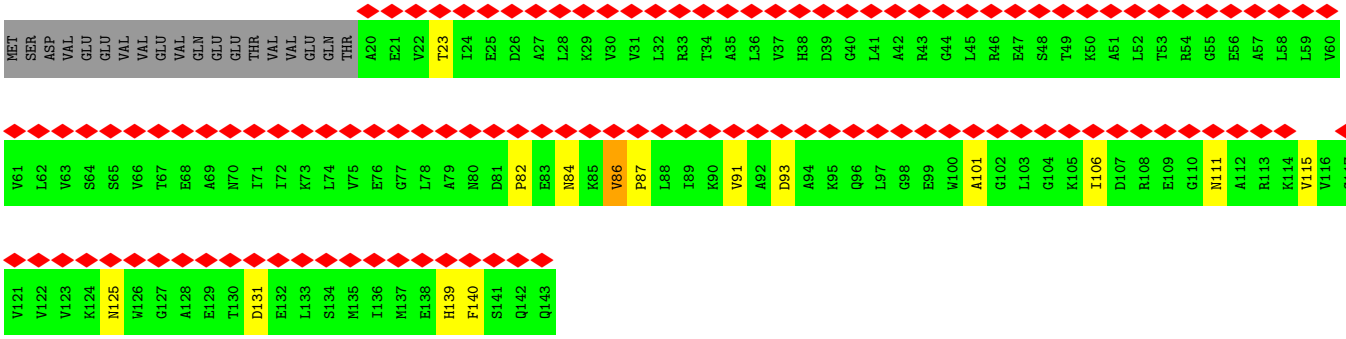
• Molecule 61: uS17 (yeast S11)

Chain IB:



• Molecule 62: eS12 (yeast S12)

Chain JB:

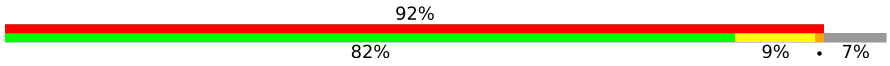


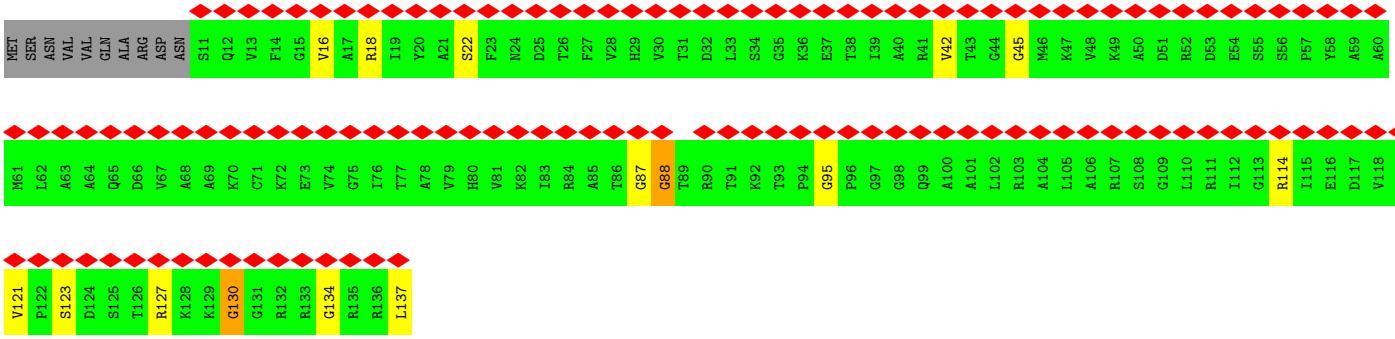
• Molecule 63: uS15 (yeast S13)

Chain KB:

• Molecule 64: uS11 (yeast S14)

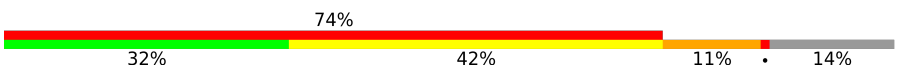
Chain LB:

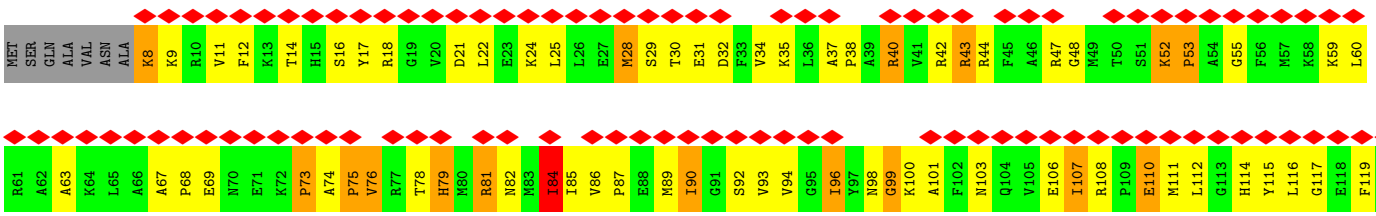


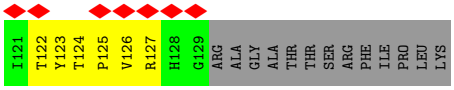


• Molecule 65: uS19 (yeast S15)

Chain MB:

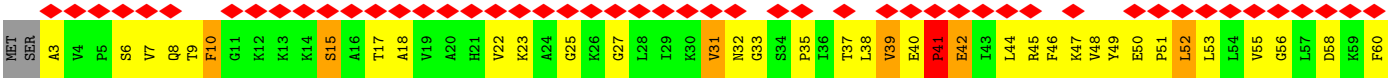


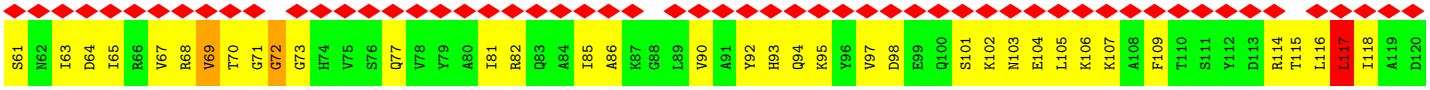


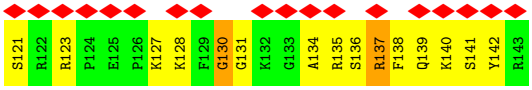


• Molecule 66: uS9 (yeast S16)

Chain NB:

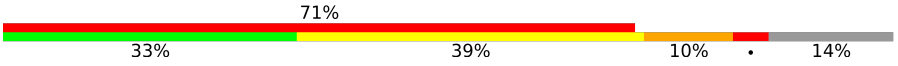


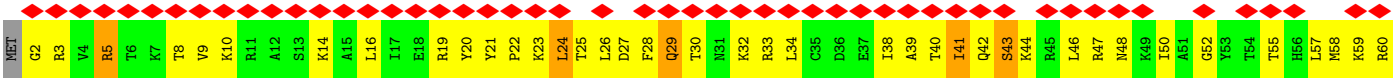


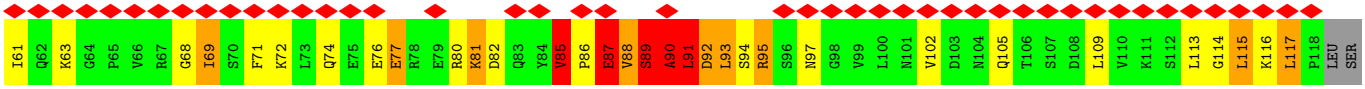


• Molecule 67: eS17 (yeast S17)

Chain OB:

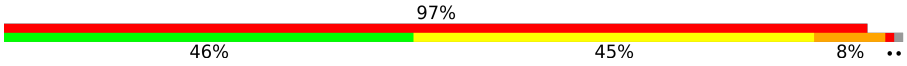


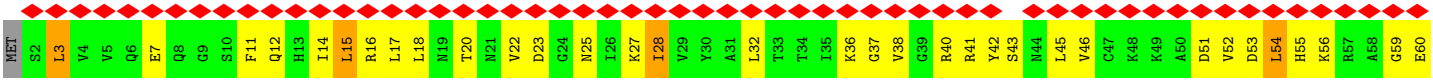


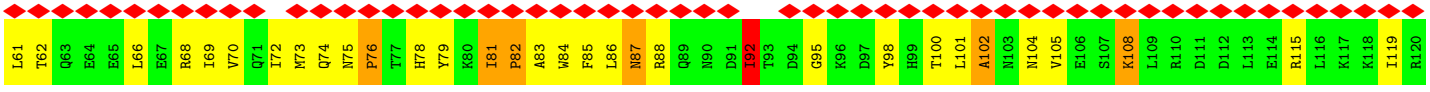


• Molecule 68: uS13 (yeast S18)

Chain PB:

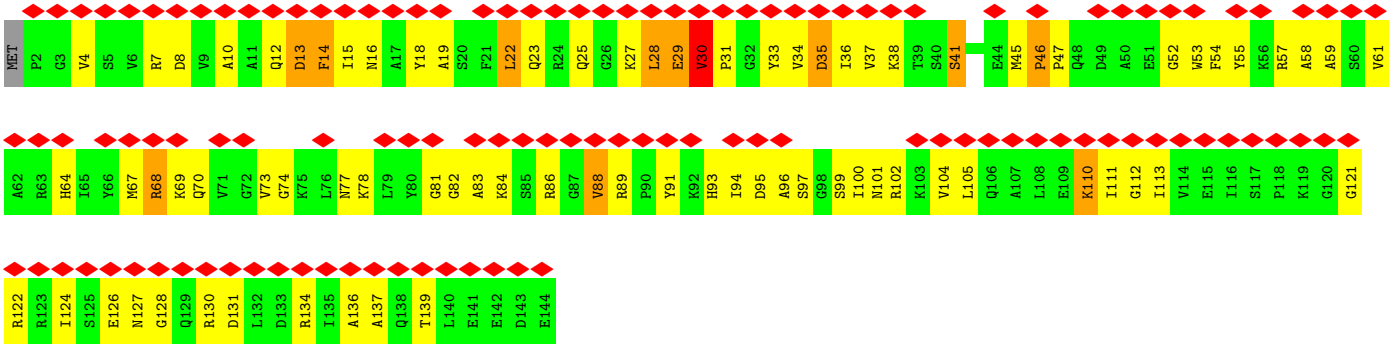






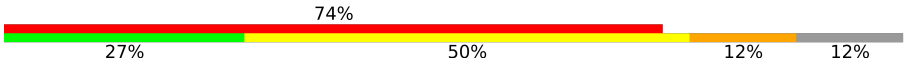
• Molecule 69: eS19 (yeast S19)

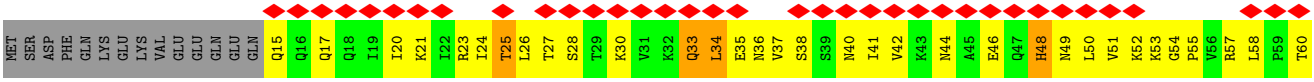
Chain QB:

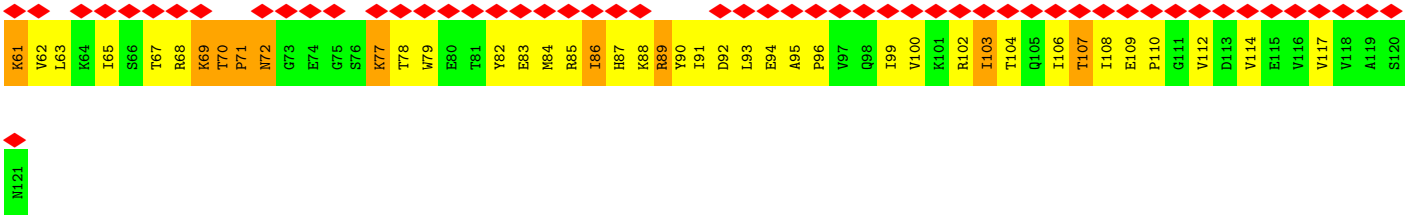


• Molecule 70: uS10 (yeast S20)

Chain RB:

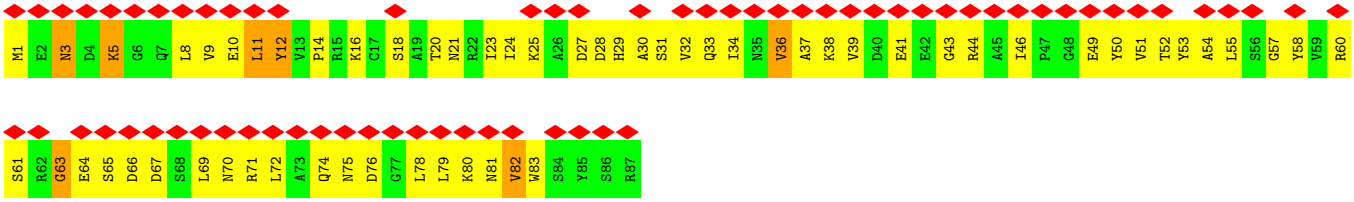






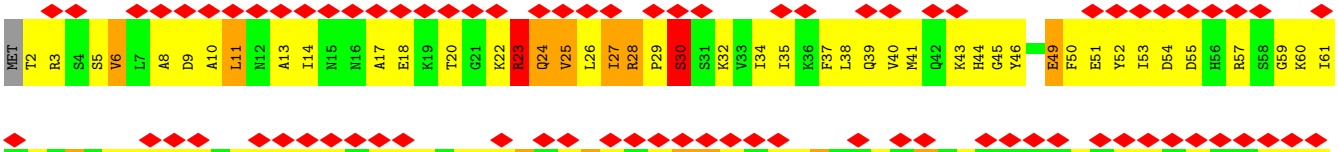
• Molecule 71: eS21 (yeast S21)

Chain SB:



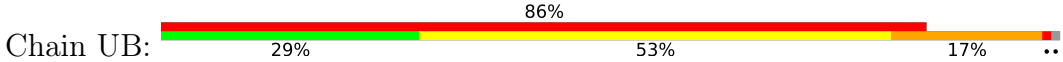
• Molecule 72: uS8 (yeast S22)

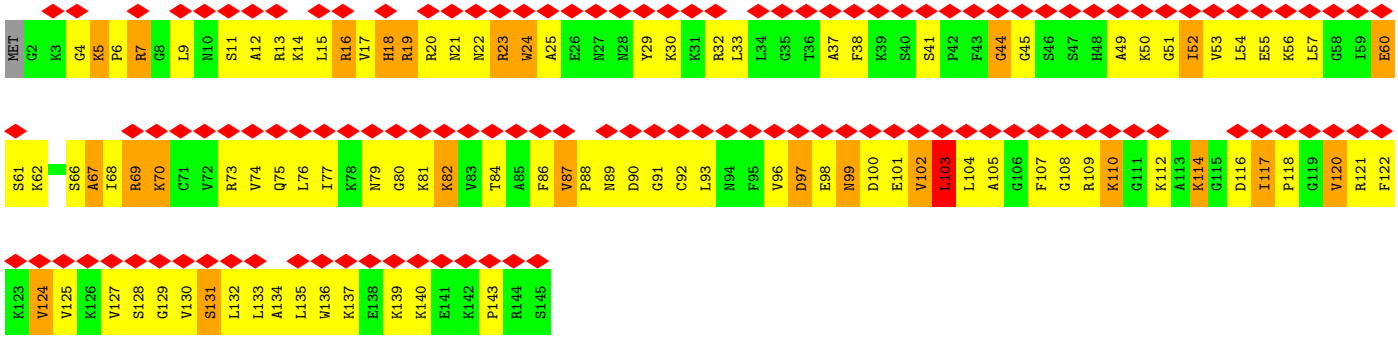
Chain TB:



• Molecule 73: uS12 (yeast S23)

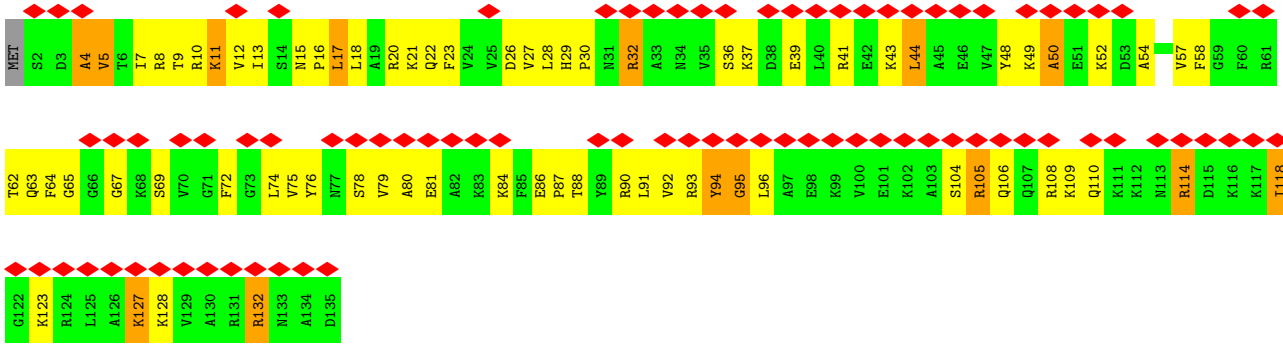
Chain UB:





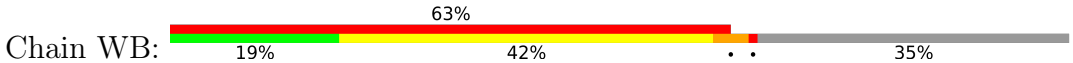
• Molecule 74: eS24 (yeast S24)

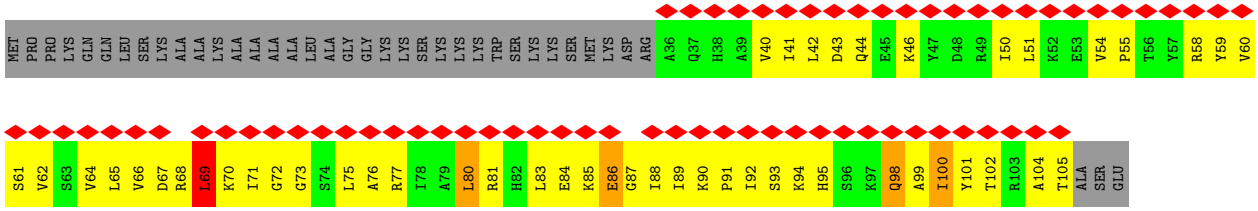
Chain VB:



• Molecule 75: eS25 (yeast S25)

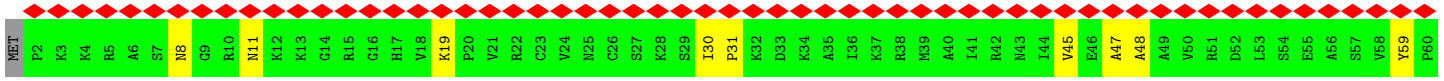
Chain WB:





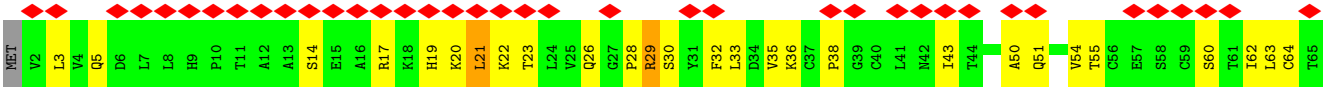
• Molecule 76: eS26 (yeast S26)

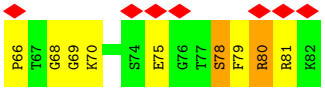
Chain XB:



• Molecule 77: eS27 (yeast S27)

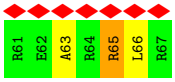
Chain YB:





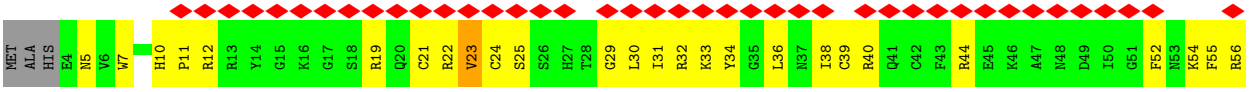
• Molecule 78: eS28 (yeast S28)

Chain ZB:



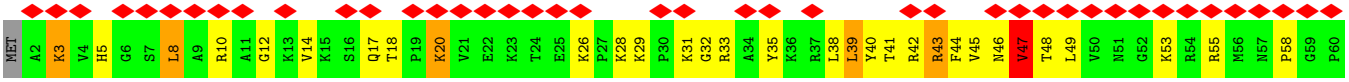
• Molecule 79: uS14 (yeast S29)

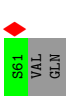
Chain AC:



• Molecule 80: eS30 (yeast S30)

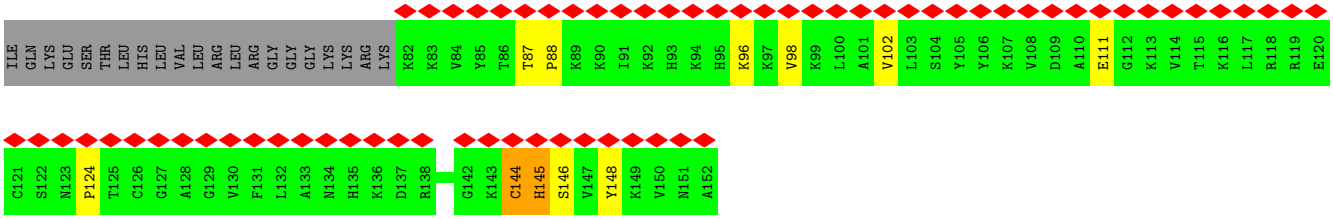
Chain BC:





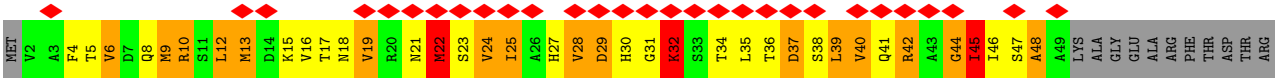
• Molecule 81: eS31 (yeast S31)

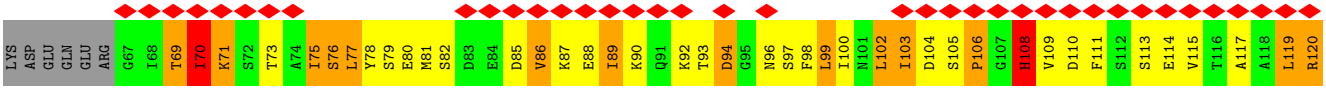
Chain CC:

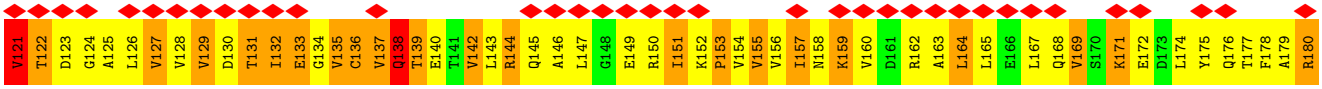


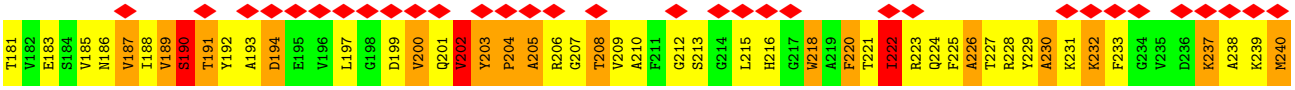
• Molecule 82: yeast eEF2

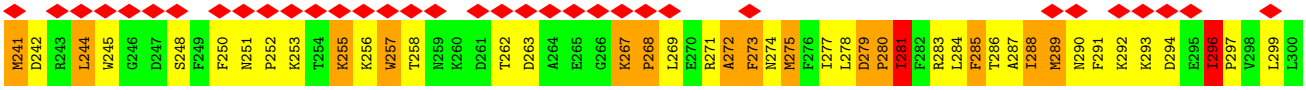
Chain DC:

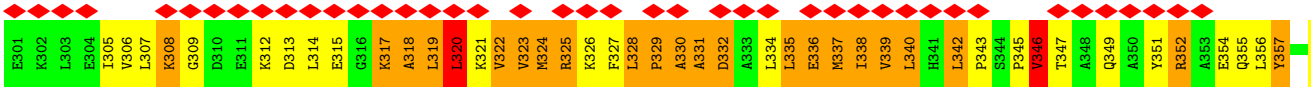


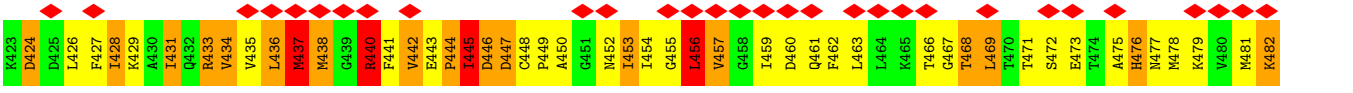


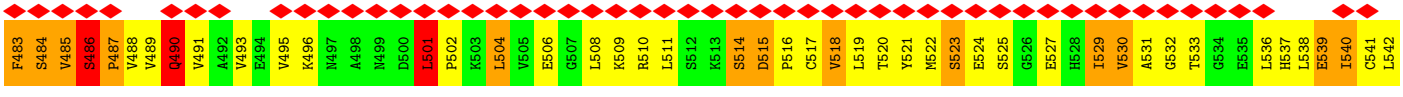


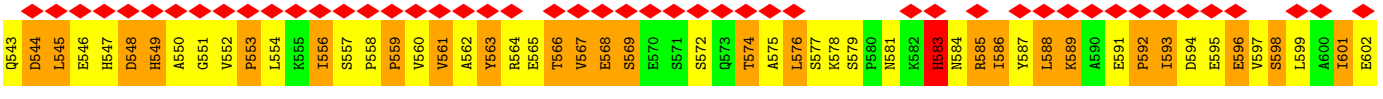


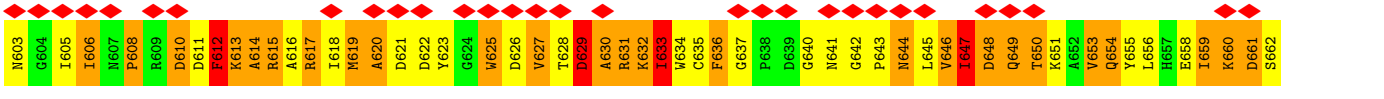


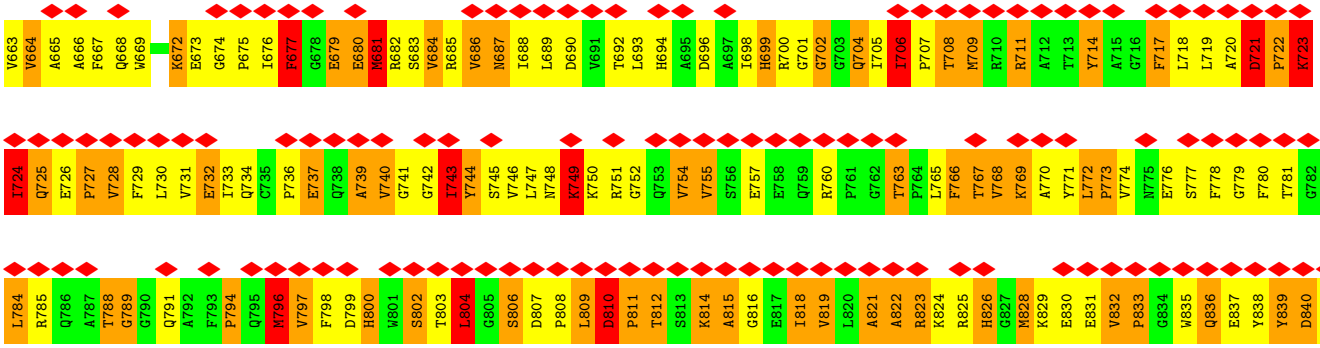






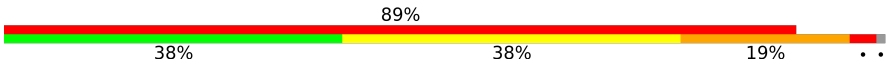


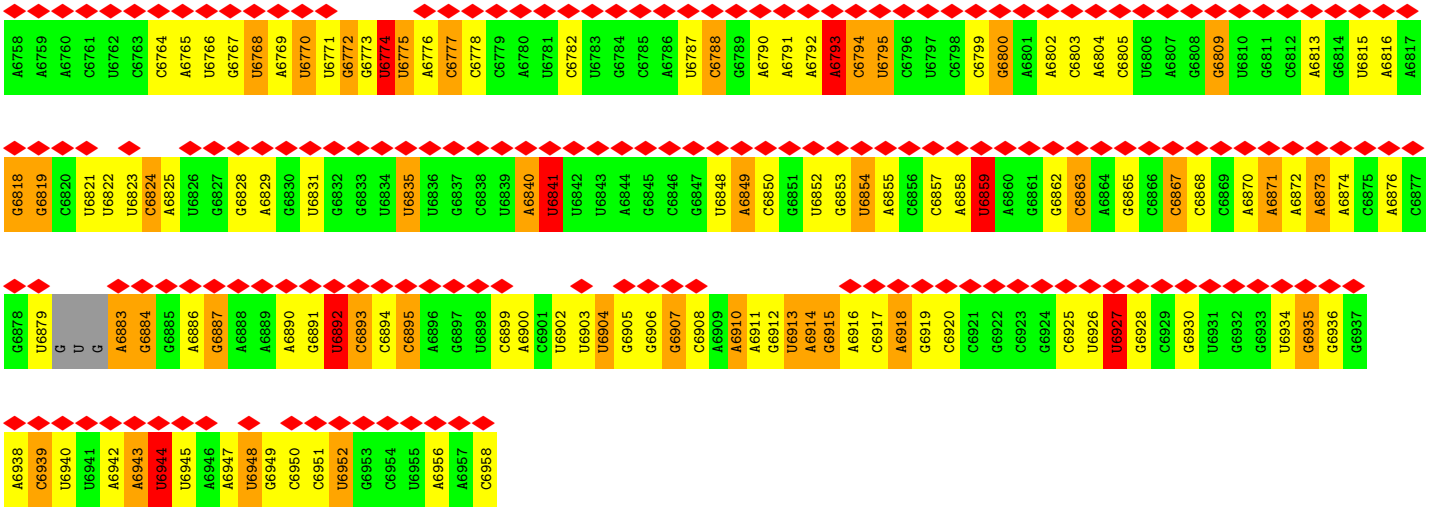




• Molecule 83: IRES

Chain EC:





4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	38054	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	1.4	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.055	Depositor
Minimum map value	-0.025	Depositor
Average map value	-0.002	Depositor
Map value standard deviation	0.004	Depositor
Recommended contour level	0.015	Depositor
Map size (Å)	419.84, 419.84, 419.84	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.82, 0.82, 0.82	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: DDE, MG, SO1, GDP

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	A	0.85	1/41014 (0.0%)	0.67	29/63809 (0.0%)
2	B	1.10	4/78631 (0.0%)	0.74	96/122552 (0.1%)
3	C	1.10	0/3747	0.73	3/5832 (0.1%)
4	D	1.02	0/2884	0.69	2/4491 (0.0%)
5	E	2.80	150/1377 (10.9%)	1.14	7/1844 (0.4%)
6	F	2.03	64/1952 (3.3%)	1.02	8/2622 (0.3%)
7	G	1.97	90/3153 (2.9%)	0.96	4/4239 (0.1%)
8	H	2.14	112/2802 (4.0%)	1.12	24/3792 (0.6%)
9	I	1.62	16/2426 (0.7%)	1.00	9/3271 (0.3%)
10	J	1.94	43/1425 (3.0%)	1.00	6/1912 (0.3%)
11	K	2.08	58/1822 (3.2%)	1.13	9/2451 (0.4%)
12	L	1.70	18/1850 (1.0%)	1.06	10/2495 (0.4%)
13	M	1.92	30/1540 (1.9%)	0.97	4/2073 (0.2%)
14	N	1.88	46/1754 (2.6%)	1.02	9/2350 (0.4%)
15	O	1.54	2/1375 (0.1%)	0.86	1/1842 (0.1%)
16	P	2.83	82/728 (11.3%)	1.11	3/975 (0.3%)
17	Q	1.93	35/1568 (2.2%)	1.11	17/2106 (0.8%)
18	R	2.05	32/1069 (3.0%)	1.06	7/1438 (0.5%)
19	S	1.97	44/1758 (2.5%)	1.08	8/2354 (0.3%)
20	T	2.06	51/1586 (3.2%)	1.12	9/2128 (0.4%)
21	U	2.11	52/1466 (3.5%)	1.08	7/1968 (0.4%)
22	V	2.08	40/1466 (2.7%)	1.05	4/1965 (0.2%)
23	W	1.67	11/1539 (0.7%)	1.21	17/2050 (0.8%)
24	X	2.17	56/1482 (3.8%)	1.03	6/1990 (0.3%)
25	Y	2.15	54/1301 (4.2%)	0.99	4/1743 (0.2%)
26	Z	1.51	2/812 (0.2%)	0.85	1/1099 (0.1%)
27	AA	2.05	32/1019 (3.1%)	0.94	5/1369 (0.4%)
28	BA	2.13	20/521 (3.8%)	0.99	1/691 (0.1%)
29	CA	1.96	26/984 (2.6%)	0.95	2/1325 (0.2%)
30	DA	2.00	28/1005 (2.8%)	1.06	4/1341 (0.3%)
31	EA	1.59	10/1119 (0.9%)	0.90	3/1497 (0.2%)
32	FA	2.01	37/1205 (3.1%)	1.06	4/1612 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	GA	1.91	14/474 (3.0%)	1.30	7/629 (1.1%)
34	HA	1.53	1/751 (0.1%)	1.04	7/1008 (0.7%)
35	IA	1.79	14/904 (1.5%)	0.90	3/1213 (0.2%)
36	JA	2.15	46/1041 (4.4%)	0.99	4/1394 (0.3%)
37	KA	2.11	26/869 (3.0%)	1.00	2/1168 (0.2%)
38	LA	1.84	18/891 (2.0%)	1.07	7/1191 (0.6%)
39	MA	1.79	9/979 (0.9%)	1.04	2/1301 (0.2%)
40	NA	1.75	10/779 (1.3%)	1.09	3/1034 (0.3%)
41	OA	2.16	30/697 (4.3%)	1.01	4/923 (0.4%)
42	PA	1.69	6/619 (1.0%)	0.87	3/826 (0.4%)
43	QA	1.98	12/444 (2.7%)	1.17	3/588 (0.5%)
44	RA	1.92	6/424 (1.4%)	0.96	1/562 (0.2%)
45	SA	2.29	15/235 (6.4%)	1.09	0/300
46	TA	1.88	17/861 (2.0%)	0.95	2/1136 (0.2%)
47	UA	1.88	12/702 (1.7%)	1.00	1/934 (0.1%)
48	VA	2.55	127/1498 (8.5%)	1.35	18/2025 (0.9%)
49	WA	1.46	4/2498 (0.2%)	0.78	4/3398 (0.1%)
50	XA	1.21	4/1653 (0.2%)	0.94	3/2261 (0.1%)
51	YA	2.16	12/855 (1.4%)	1.00	0/1067
52	ZA	1.50	10/1665 (0.6%)	0.94	5/2263 (0.2%)
53	AB	1.51	8/1759 (0.5%)	0.90	3/2368 (0.1%)
54	BB	1.36	5/2110 (0.2%)	0.92	7/2839 (0.2%)
55	CB	1.38	2/1630 (0.1%)	0.97	7/2202 (0.3%)
56	DB	1.37	2/1844 (0.1%)	0.96	8/2464 (0.3%)
57	EB	1.45	4/1506 (0.3%)	0.88	1/2028 (0.0%)
58	FB	1.58	7/1515 (0.5%)	0.96	5/2021 (0.2%)
59	GB	1.26	0/1519	1.06	6/2035 (0.3%)
60	HB	1.49	4/837 (0.5%)	0.85	0/1131
61	IB	1.72	13/1273 (1.0%)	0.91	7/1712 (0.4%)
62	JB	2.06	5/495 (1.0%)	1.23	2/617 (0.3%)
63	KB	1.54	5/1216 (0.4%)	1.05	4/1638 (0.2%)
64	LB	1.92	1/507 (0.2%)	1.10	0/632
65	MB	1.59	5/996 (0.5%)	0.94	3/1335 (0.2%)
66	NB	1.44	2/1126 (0.2%)	0.87	2/1510 (0.1%)
67	OB	1.61	9/844 (1.1%)	1.37	11/1120 (1.0%)
68	PB	1.44	2/1212 (0.2%)	0.88	2/1628 (0.1%)
69	QB	1.36	2/1131 (0.2%)	1.07	6/1517 (0.4%)
70	RB	1.60	6/866 (0.7%)	0.87	0/1169
71	SB	1.35	2/694 (0.3%)	0.84	1/935 (0.1%)
72	TB	1.43	4/1039 (0.4%)	0.91	3/1395 (0.2%)
73	UB	1.66	9/1140 (0.8%)	0.90	1/1518 (0.1%)
74	VB	1.35	1/1088 (0.1%)	0.92	3/1449 (0.2%)
75	WB	1.40	0/571	0.97	2/768 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
76	XB	2.07	2/387 (0.5%)	1.24	4/482 (0.8%)
77	YB	1.34	0/621	0.80	0/838
78	ZB	1.42	2/500 (0.4%)	0.79	2/670 (0.3%)
79	AC	1.52	1/454 (0.2%)	0.87	1/602 (0.2%)
80	BC	1.56	2/483 (0.4%)	0.95	1/643 (0.2%)
81	CC	1.84	1/283 (0.4%)	0.89	1/352 (0.3%)
82	DC	2.40	432/6521 (6.6%)	1.08	30/8830 (0.3%)
83	EC	1.53	1/4608 (0.0%)	0.90	14/7166 (0.2%)
All	All	1.45	2178/227994 (1.0%)	0.85	539/334061 (0.2%)

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	A	0	14
2	B	0	72
3	C	0	6
4	D	0	2
50	XA	0	1
83	EC	0	5
All	All	0	100

All (2178) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	OB	91	LEU	C-O	12.18	1.39	1.24
11	K	96	PRO	CA-C	11.61	1.62	1.52
7	G	82	PRO	CA-C	11.48	1.58	1.51
1	A	627	C	O3'-P	-11.22	1.44	1.61
19	S	116	LEU	CA-C	11.18	1.59	1.53
20	T	120	VAL	CA-C	10.51	1.61	1.53
82	DC	42	ARG	CA-C	10.38	1.60	1.52
24	X	124	LEU	CA-C	10.17	1.59	1.53
16	P	88	PRO	CA-C	10.16	1.61	1.52
62	JB	101	ALA	CA-C	10.11	1.57	1.52
26	Z	98	THR	CA-C	9.82	1.57	1.52
55	CB	25	LEU	CA-C	9.59	1.57	1.52
5	E	120	VAL	CA-C	9.57	1.62	1.52
36	JA	77	ALA	CA-C	9.56	1.59	1.52
20	T	109	PRO	CA-C	9.53	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	KA	67	MET	SD-CE	9.40	2.03	1.79
8	H	207	VAL	CA-C	9.30	1.61	1.53
80	BC	48	THR	CA-C	9.06	1.58	1.53
5	E	4	ILE	CA-C	9.02	1.60	1.52
82	DC	558	PRO	CA-C	8.96	1.60	1.52
48	VA	63	ILE	CA-C	8.93	1.62	1.52
25	Y	154	VAL	CA-C	8.92	1.59	1.52
48	VA	179	SER	CA-C	8.87	1.63	1.52
20	T	120	VAL	N-CA	8.86	1.53	1.46
46	TA	4	VAL	CA-C	8.81	1.58	1.52
67	OB	93	LEU	CA-C	-8.74	1.41	1.52
51	YA	89	ASP	CA-C	8.62	1.56	1.52
21	U	122	ALA	CA-C	8.59	1.60	1.52
48	VA	80	VAL	CA-C	8.54	1.60	1.52
14	N	196	PHE	CA-C	8.51	1.58	1.53
63	KB	136	PRO	CA-C	8.50	1.60	1.52
25	Y	52	MET	SD-CE	8.49	2.00	1.79
5	E	151	VAL	CA-CB	8.49	1.63	1.54
82	DC	724	ILE	CA-CB	8.45	1.64	1.54
48	VA	178	ILE	CA-C	8.41	1.62	1.52
82	DC	522	MET	SD-CE	8.39	2.00	1.79
21	U	83	TRP	CA-C	8.36	1.63	1.52
82	DC	530	VAL	CA-CB	8.32	1.63	1.53
16	P	97	ASN	CA-C	8.22	1.62	1.52
82	DC	487	PRO	CA-C	8.20	1.60	1.53
16	P	71	ALA	CA-C	8.09	1.61	1.52
67	OB	90	ALA	C-O	8.08	1.34	1.24
5	E	100	ILE	CA-CB	8.05	1.63	1.54
11	K	95	ILE	CA-C	8.04	1.60	1.53
16	P	106	LEU	CA-C	8.04	1.62	1.52
82	DC	552	VAL	CA-C	8.03	1.61	1.52
82	DC	832	VAL	CA-C	8.02	1.61	1.52
16	P	112	ILE	CA-C	8.00	1.61	1.52
11	K	216	VAL	CA-C	8.00	1.61	1.52
67	OB	92	ASP	CA-C	-7.99	1.42	1.52
2	B	1285	G	O3'-P	-7.98	1.49	1.61
10	J	170	LYS	CA-C	7.97	1.59	1.52
5	E	212	PRO	CA-C	7.94	1.61	1.52
82	DC	324	MET	SD-CE	7.91	1.99	1.79
16	P	139	VAL	CA-C	7.91	1.60	1.52
82	DC	633	ILE	CA-CB	7.90	1.63	1.54
82	DC	157	ILE	CA-CB	7.90	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	DA	100	HIS	CA-C	7.88	1.60	1.52
82	DC	200	VAL	CA-C	7.87	1.61	1.52
16	P	139	VAL	CA-CB	7.85	1.62	1.53
5	E	21	ASN	CA-C	7.85	1.60	1.52
5	E	113	SER	CA-C	7.84	1.62	1.52
21	U	58	ILE	CA-C	7.80	1.59	1.53
82	DC	251	ASN	CA-C	7.78	1.60	1.52
10	J	35	VAL	CA-CB	7.74	1.61	1.53
25	Y	22	HIS	CA-C	7.71	1.58	1.53
48	VA	92	PRO	CA-C	7.69	1.61	1.52
82	DC	591	GLU	CA-C	7.68	1.59	1.52
30	DA	50	ILE	CA-C	7.67	1.61	1.52
48	VA	187	VAL	CA-C	7.67	1.61	1.52
30	DA	47	ALA	CA-C	7.62	1.61	1.52
5	E	151	VAL	CA-C	7.62	1.61	1.52
16	P	131	GLU	CA-C	7.62	1.59	1.52
24	X	79	VAL	CA-C	7.60	1.61	1.52
48	VA	89	THR	CA-C	7.60	1.61	1.52
46	TA	4	VAL	CA-CB	7.59	1.60	1.54
48	VA	99	VAL	CA-CB	7.57	1.63	1.54
24	X	58	ILE	CA-C	7.57	1.59	1.53
17	Q	47	ALA	CA-C	7.53	1.62	1.52
48	VA	90	ASN	CA-C	7.50	1.62	1.52
82	DC	709	MET	SD-CE	7.50	1.98	1.79
82	DC	263	ASP	CA-C	7.50	1.60	1.53
20	T	119	VAL	CA-C	7.47	1.62	1.52
48	VA	178	ILE	CA-CB	7.45	1.62	1.54
7	G	261	MET	SD-CE	7.44	1.98	1.79
5	E	187	VAL	CA-CB	7.44	1.64	1.54
82	DC	706	ILE	CA-C	7.44	1.60	1.52
11	K	123	THR	CA-C	7.43	1.61	1.52
16	P	143	VAL	CA-CB	7.42	1.62	1.53
82	DC	433	ARG	CA-C	7.42	1.61	1.52
82	DC	767	THR	CA-CB	7.42	1.62	1.52
5	E	111	ILE	CA-C	7.41	1.62	1.52
16	P	82	ILE	CA-CB	7.40	1.64	1.54
19	S	158	HIS	CA-C	7.40	1.63	1.53
16	P	143	VAL	CA-C	7.39	1.62	1.52
19	S	89	VAL	CA-C	7.39	1.59	1.52
12	L	71	VAL	CA-C	7.36	1.60	1.53
62	JB	86	VAL	CA-C	7.35	1.60	1.52
48	VA	58	MET	SD-CE	7.35	1.98	1.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	686	VAL	CA-CB	7.35	1.61	1.53
41	OA	67	LEU	CA-C	7.33	1.62	1.52
8	H	99	MET	SD-CE	7.33	1.97	1.79
25	Y	64	VAL	CA-CB	7.32	1.62	1.54
82	DC	807	ASP	CA-C	7.31	1.60	1.52
48	VA	141	VAL	CA-CB	7.31	1.63	1.54
5	E	1	MET	SD-CE	7.31	1.97	1.79
76	XB	97	PRO	CA-C	7.30	1.58	1.52
5	E	66	CYS	CA-C	7.26	1.61	1.52
22	V	165	ILE	CA-CB	7.25	1.62	1.54
8	H	148	ILE	CA-C	7.25	1.58	1.52
20	T	119	VAL	CA-CB	7.25	1.62	1.53
2	B	493	G	P-OP2	-7.25	1.34	1.49
55	CB	39	GLU	CA-C	7.24	1.56	1.52
8	H	148	ILE	CA-CB	7.24	1.59	1.54
5	E	85	MET	CA-C	7.21	1.61	1.52
82	DC	9	MET	SD-CE	7.20	1.97	1.79
24	X	98	SER	CA-C	7.19	1.61	1.52
82	DC	24	VAL	CA-C	7.19	1.61	1.52
10	J	35	VAL	CA-C	7.18	1.58	1.53
11	K	62	ILE	CA-CB	7.17	1.62	1.54
33	GA	6	ASN	CA-C	7.17	1.60	1.53
16	P	74	VAL	CA-C	7.17	1.60	1.52
11	K	139	PRO	CA-C	7.16	1.61	1.52
73	UB	105	ALA	CA-C	7.16	1.60	1.53
82	DC	70	ILE	CA-CB	7.16	1.63	1.54
11	K	111	ILE	CA-CB	7.16	1.61	1.54
16	P	116	MET	SD-CE	7.16	1.97	1.79
82	DC	686	VAL	CA-C	7.14	1.60	1.53
7	G	53	MET	SD-CE	7.14	1.97	1.79
5	E	112	ALA	CA-C	7.13	1.61	1.52
6	F	196	TRP	CA-C	7.13	1.59	1.52
8	H	249	ILE	CA-C	7.13	1.61	1.52
20	T	120	VAL	CA-CB	7.13	1.61	1.53
82	DC	518	VAL	CA-C	7.13	1.61	1.52
14	N	123	HIS	CA-C	7.13	1.59	1.52
73	UB	117	ILE	CA-C	7.13	1.60	1.52
8	H	89	ALA	CA-C	7.12	1.61	1.52
49	WA	69	GLN	CA-C	7.11	1.56	1.52
25	Y	80	VAL	CA-C	7.11	1.61	1.52
16	P	98	VAL	CA-C	7.09	1.60	1.52
19	S	151	ILE	CA-C	7.09	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
52	ZA	81	MET	CA-C	7.09	1.57	1.52
45	SA	4	LYS	CA-C	7.09	1.61	1.52
5	E	65	ILE	CA-C	7.08	1.61	1.52
5	E	214	PHE	CA-C	7.08	1.61	1.52
21	U	136	ILE	CA-C	7.08	1.60	1.53
30	DA	48	LEU	CA-C	7.06	1.60	1.52
48	VA	149	THR	CA-C	7.06	1.62	1.52
28	BA	9	SER	CA-C	7.06	1.58	1.52
7	G	8	ALA	CA-C	7.05	1.60	1.52
5	E	86	SER	CA-C	7.04	1.61	1.52
6	F	204	MET	SD-CE	7.04	1.97	1.79
22	V	166	LEU	CA-C	7.04	1.59	1.52
48	VA	188	VAL	CA-C	7.04	1.61	1.53
16	P	105	GLN	CA-C	7.04	1.61	1.52
19	S	36	ILE	CA-CB	7.04	1.62	1.54
8	H	99	MET	CA-C	7.04	1.60	1.53
82	DC	664	VAL	CA-C	7.03	1.61	1.52
82	DC	692	THR	CA-CB	7.03	1.61	1.52
23	W	93	VAL	CA-C	7.00	1.60	1.52
82	DC	644	ASN	CA-C	7.00	1.60	1.52
21	U	114	VAL	CA-C	6.99	1.60	1.53
82	DC	619	MET	SD-CE	6.99	1.97	1.79
5	E	216	LEU	CA-C	6.98	1.61	1.52
11	K	209	ASN	CA-C	6.97	1.60	1.53
2	B	3318	G	O3'-P	6.97	1.71	1.61
46	TA	21	THR	CA-C	6.95	1.57	1.53
48	VA	66	PHE	CA-C	6.95	1.61	1.52
48	VA	33	VAL	CA-C	6.95	1.61	1.52
21	U	122	ALA	N-CA	6.94	1.50	1.46
37	KA	103	TYR	CA-C	6.94	1.58	1.52
6	F	40	TYR	CA-C	6.93	1.59	1.53
48	VA	122	ARG	CA-C	6.93	1.61	1.52
67	OB	87	GLU	C-O	6.93	1.32	1.24
82	DC	540	ILE	CA-CB	6.93	1.62	1.54
21	U	51	VAL	CA-C	6.92	1.60	1.52
82	DC	530	VAL	CA-C	6.92	1.60	1.52
28	BA	19	THR	CA-CB	6.91	1.61	1.52
5	E	114	GLU	CA-C	6.91	1.61	1.52
8	H	215	ILE	CA-C	6.91	1.61	1.52
20	T	117	ARG	CA-C	6.91	1.61	1.52
34	HA	103	THR	CA-C	6.91	1.57	1.53
21	U	7	THR	CA-C	6.90	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	E	111	ILE	CA-CB	6.90	1.64	1.54
41	OA	57	HIS	CA-C	6.89	1.58	1.52
5	E	201	VAL	CA-CB	6.89	1.62	1.54
18	R	53	VAL	CA-C	6.89	1.60	1.52
48	VA	154	SER	CA-C	6.89	1.60	1.52
82	DC	485	VAL	CA-C	6.88	1.61	1.52
48	VA	38	MET	SD-CE	6.87	1.96	1.79
8	H	189	ALA	CA-C	6.87	1.61	1.53
7	G	280	HIS	CA-C	6.86	1.60	1.52
11	K	210	PRO	CA-C	6.86	1.60	1.52
33	GA	21	ILE	CA-C	6.86	1.61	1.52
18	R	74	ARG	CA-C	6.85	1.61	1.52
8	H	222	VAL	CA-C	6.84	1.60	1.52
16	P	87	GLU	CA-C	6.83	1.61	1.52
27	AA	22	ILE	CA-CB	6.83	1.62	1.53
6	F	107	VAL	CA-C	6.83	1.60	1.52
6	F	245	LEU	CA-C	6.83	1.60	1.53
48	VA	77	LEU	CA-C	6.82	1.61	1.52
82	DC	777	SER	CA-C	6.82	1.60	1.52
82	DC	778	PHE	CA-C	6.82	1.61	1.52
6	F	165	VAL	CA-CB	6.81	1.62	1.54
82	DC	189	VAL	CA-C	6.81	1.61	1.52
9	I	214	ASP	CA-C	6.80	1.55	1.52
18	R	46	ILE	CA-CB	6.79	1.62	1.53
16	P	56	ILE	CA-C	6.79	1.61	1.52
82	DC	165	LEU	CA-C	6.79	1.58	1.52
16	P	112	ILE	CA-CB	6.78	1.62	1.54
10	J	27	PRO	CA-C	6.78	1.59	1.52
5	E	213	ALA	CA-C	6.78	1.60	1.52
22	V	157	PRO	CA-C	6.78	1.59	1.52
82	DC	566	THR	CA-C	6.78	1.60	1.52
67	OB	88	VAL	C-O	6.77	1.31	1.24
5	E	215	ARG	CA-C	6.76	1.61	1.52
19	S	44	ARG	CA-C	6.76	1.59	1.52
36	JA	91	THR	CA-C	6.76	1.61	1.52
48	VA	165	VAL	CA-CB	6.76	1.62	1.54
5	E	126	PRO	CA-C	6.75	1.61	1.53
16	P	107	ASP	CA-C	6.75	1.61	1.52
16	P	65	GLN	CA-C	6.75	1.61	1.52
10	J	152	THR	CA-C	6.74	1.59	1.52
82	DC	188	ILE	CA-CB	6.74	1.61	1.54
32	FA	121	VAL	CA-C	6.74	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	435	VAL	CA-C	6.74	1.60	1.52
82	DC	673	GLU	CA-C	6.74	1.60	1.52
82	DC	22	MET	SD-CE	6.74	1.96	1.79
17	Q	11	LYS	CA-C	6.72	1.59	1.53
48	VA	159	VAL	CA-C	6.72	1.60	1.52
82	DC	828	MET	SD-CE	6.72	1.96	1.79
82	DC	45	ILE	CA-CB	6.71	1.61	1.54
13	M	126	VAL	CA-C	6.71	1.58	1.53
14	N	131	ILE	CA-C	6.70	1.60	1.53
18	R	63	VAL	CA-C	6.70	1.61	1.52
17	Q	75	PHE	CA-C	6.70	1.61	1.52
5	E	203	SER	CA-C	6.69	1.60	1.52
5	E	80	CYS	CA-C	6.69	1.60	1.52
5	E	206	VAL	CA-C	6.69	1.60	1.52
5	E	32	VAL	CA-CB	6.68	1.64	1.54
19	S	195	ASN	CA-C	6.68	1.60	1.53
30	DA	57	LEU	CA-C	6.68	1.59	1.52
5	E	17	LEU	CA-C	6.68	1.61	1.52
8	H	207	VAL	CA-CB	6.68	1.60	1.53
41	OA	21	ARG	CA-C	6.68	1.61	1.52
21	U	84	PRO	CA-C	6.68	1.61	1.52
82	DC	123	ASP	CA-C	6.68	1.60	1.52
48	VA	188	VAL	CA-CB	6.67	1.63	1.54
8	H	30	ILE	CA-C	6.67	1.59	1.53
21	U	36	ILE	CA-C	6.67	1.62	1.53
82	DC	830	GLU	CA-C	6.66	1.61	1.52
16	P	104	ILE	CA-C	6.66	1.61	1.52
25	Y	14	MET	SD-CE	6.66	1.96	1.79
82	DC	778	PHE	N-CA	6.66	1.54	1.46
16	P	73	VAL	CA-CB	6.66	1.63	1.54
82	DC	557	SER	CA-C	6.66	1.58	1.52
48	VA	115	ALA	CA-C	6.65	1.60	1.52
5	E	176	GLU	CA-C	6.65	1.61	1.52
73	UB	118	PRO	CA-C	6.65	1.59	1.53
5	E	128	LEU	CA-C	6.65	1.61	1.52
18	R	64	VAL	CA-CB	6.64	1.62	1.54
48	VA	177	ASN	CA-C	6.64	1.62	1.53
82	DC	627	VAL	CA-CB	6.64	1.63	1.54
48	VA	149	THR	CA-CB	6.63	1.64	1.53
82	DC	625	TRP	CA-C	6.63	1.61	1.52
7	G	244	ARG	CA-C	6.62	1.61	1.52
9	I	174	PRO	CA-C	6.62	1.60	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	676	ILE	CA-C	6.62	1.61	1.52
82	DC	289	MET	SD-CE	6.61	1.96	1.79
5	E	13	VAL	CA-CB	6.61	1.62	1.54
32	FA	32	ARG	CA-C	6.61	1.60	1.52
58	FB	82	VAL	CA-C	6.61	1.59	1.52
8	H	249	ILE	CA-CB	6.61	1.61	1.54
54	BB	230	GLU	CA-C	6.60	1.57	1.53
82	DC	559	PRO	CA-C	6.60	1.61	1.52
5	E	207	LYS	CA-C	6.60	1.60	1.52
24	X	73	LYS	CA-C	6.60	1.60	1.52
25	Y	75	ILE	CA-C	6.60	1.61	1.52
5	E	136	THR	CA-C	6.60	1.60	1.53
25	Y	152	ALA	CA-C	6.60	1.61	1.52
82	DC	437	MET	SD-CE	6.60	1.96	1.79
30	DA	10	SER	CA-C	6.59	1.61	1.52
25	Y	77	ASN	CA-C	6.59	1.60	1.52
18	R	28	SER	CA-C	6.59	1.58	1.52
24	X	68	HIS	CA-C	6.59	1.60	1.52
82	DC	200	VAL	CA-CB	6.59	1.62	1.54
38	LA	74	ARG	CA-C	6.58	1.60	1.52
24	X	58	ILE	CA-CB	6.58	1.61	1.53
7	G	95	THR	CA-CB	6.57	1.63	1.53
82	DC	94	ASP	CA-C	6.57	1.61	1.53
82	DC	784	LEU	CA-C	6.57	1.61	1.52
20	T	4	GLU	CA-C	6.57	1.58	1.52
17	Q	7	LEU	CA-C	6.57	1.61	1.52
5	E	5	THR	CA-C	6.57	1.60	1.52
5	E	82	VAL	CA-C	6.57	1.60	1.52
41	OA	69	HIS	CA-C	6.57	1.61	1.52
82	DC	717	PHE	CA-C	6.56	1.61	1.52
5	E	4	ILE	CA-CB	6.56	1.62	1.53
18	R	109	ARG	CA-C	6.56	1.61	1.52
21	U	7	THR	CA-CB	6.56	1.62	1.53
48	VA	53	MET	SD-CE	6.55	1.96	1.79
5	E	84	ALA	CA-C	6.55	1.60	1.52
82	DC	825	ARG	CA-C	6.55	1.61	1.52
5	E	116	LEU	CA-C	6.55	1.61	1.53
82	DC	650	THR	CA-C	6.55	1.61	1.53
6	F	238	ILE	CA-C	6.54	1.61	1.52
22	V	5	HIS	CA-C	6.54	1.61	1.52
22	V	146	SER	CA-C	6.53	1.58	1.52
36	JA	93	ALA	CA-C	6.53	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	LA	31	ARG	CA-C	6.53	1.60	1.52
16	P	68	GLN	CA-C	6.53	1.61	1.52
82	DC	704	GLN	CA-C	6.53	1.58	1.52
5	E	67	ILE	CA-C	6.52	1.60	1.52
16	P	89	PRO	CA-C	6.52	1.61	1.52
5	E	197	ASN	CA-C	6.52	1.61	1.52
21	U	58	ILE	N-CA	6.51	1.51	1.46
21	U	82	ARG	CA-C	6.51	1.59	1.53
33	GA	21	ILE	CA-CB	6.51	1.63	1.54
82	DC	105	SER	CA-C	6.51	1.60	1.53
82	DC	150	ARG	CA-C	6.51	1.61	1.52
24	X	61	ILE	CA-CB	6.51	1.63	1.54
46	TA	83	LEU	CA-C	6.50	1.60	1.52
29	CA	108	LEU	CA-C	6.50	1.58	1.52
82	DC	804	LEU	CA-C	6.50	1.61	1.52
14	N	26	VAL	CA-C	6.50	1.59	1.52
82	DC	239	LYS	CA-C	6.50	1.61	1.52
16	P	58	VAL	CA-C	6.50	1.60	1.52
5	E	208	SER	CA-C	6.49	1.60	1.52
19	S	27	VAL	CA-C	6.49	1.59	1.52
21	U	70	THR	CA-CB	6.49	1.64	1.53
51	YA	49	ASN	CA-C	6.49	1.59	1.52
82	DC	724	ILE	CA-C	6.49	1.60	1.52
18	R	72	LEU	CA-C	6.49	1.58	1.52
29	CA	89	LYS	CA-C	6.49	1.61	1.52
82	DC	164	LEU	CA-C	6.48	1.60	1.52
82	DC	208	THR	CA-C	6.48	1.61	1.52
21	U	113	TYR	CA-C	6.48	1.60	1.52
35	IA	29	ALA	CA-C	6.48	1.60	1.52
48	VA	117	GLU	CA-C	6.48	1.60	1.52
82	DC	647	ILE	CA-CB	6.47	1.61	1.54
17	Q	16	LYS	CA-C	6.47	1.60	1.53
25	Y	33	VAL	CA-C	6.46	1.59	1.53
24	X	97	VAL	CA-CB	6.46	1.63	1.54
46	TA	65	THR	CA-C	6.46	1.59	1.53
82	DC	596	GLU	CA-C	6.46	1.61	1.52
61	IB	134	THR	CA-C	6.45	1.60	1.52
29	CA	51	VAL	CA-C	6.45	1.59	1.53
14	N	33	ILE	CA-CB	6.44	1.61	1.54
24	X	110	MET	SD-CE	6.44	1.95	1.79
5	E	70	ASP	CA-C	6.44	1.61	1.52
36	JA	67	SER	CA-C	6.44	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	VA	81	LYS	CA-C	6.44	1.59	1.52
11	K	185	ILE	CA-CB	6.44	1.61	1.54
82	DC	630	ALA	CA-C	6.44	1.61	1.52
48	VA	99	VAL	CA-C	6.43	1.60	1.52
13	M	53	ILE	CA-C	6.43	1.60	1.52
82	DC	13	MET	SD-CE	6.43	1.95	1.79
5	E	11	GLU	CA-C	6.42	1.61	1.52
16	P	73	VAL	CA-C	6.42	1.60	1.52
24	X	29	ILE	CA-CB	6.42	1.60	1.54
70	RB	69	LYS	CA-C	6.42	1.58	1.53
82	DC	832	VAL	CA-CB	6.42	1.62	1.54
30	DA	97	ILE	CA-CB	6.42	1.60	1.54
47	UA	4	ARG	CA-C	6.42	1.61	1.52
17	Q	108	ILE	CA-C	6.42	1.60	1.52
5	E	34	LEU	CA-C	6.41	1.61	1.52
22	V	20	LYS	CA-C	6.41	1.61	1.52
82	DC	490	GLN	CA-C	6.41	1.60	1.52
8	H	55	LYS	CA-C	6.41	1.61	1.52
82	DC	40	VAL	CA-CB	6.41	1.61	1.54
82	DC	661	ASP	CA-C	6.41	1.61	1.52
8	H	74	ILE	CA-C	6.41	1.59	1.52
22	V	148	GLU	CA-C	6.41	1.61	1.52
5	E	187	VAL	CA-C	6.40	1.61	1.52
82	DC	70	ILE	CA-C	6.40	1.59	1.52
61	IB	44	THR	CA-C	6.40	1.59	1.52
82	DC	810	ASP	CA-C	6.40	1.60	1.52
48	VA	9	ALA	CA-C	6.39	1.60	1.52
5	E	35	GLN	CA-C	6.39	1.61	1.52
16	P	101	SER	CA-C	6.39	1.59	1.52
22	V	3	ILE	CA-C	6.39	1.60	1.52
24	X	88	HIS	CA-C	6.39	1.60	1.52
6	F	207	VAL	CA-CB	6.39	1.61	1.54
7	G	328	ILE	CA-C	6.39	1.59	1.52
13	M	4	ILE	CA-C	6.39	1.60	1.52
16	P	57	LYS	CA-C	6.39	1.60	1.52
36	JA	10	VAL	CA-C	6.39	1.60	1.52
51	YA	144	ARG	CA-C	6.39	1.60	1.53
21	U	58	ILE	CA-CB	6.38	1.60	1.53
7	G	264	VAL	CA-CB	6.38	1.61	1.54
16	P	138	SER	CA-C	6.38	1.61	1.52
82	DC	529	ILE	CA-C	6.38	1.60	1.52
25	Y	67	VAL	CA-C	6.38	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	561	VAL	CA-C	6.37	1.60	1.52
82	DC	23	SER	CA-C	6.37	1.59	1.53
20	T	75	ALA	CA-C	6.37	1.59	1.52
48	VA	168	SER	CA-C	6.37	1.61	1.52
82	DC	40	VAL	CA-C	6.37	1.60	1.52
17	Q	76	THR	CA-C	6.36	1.61	1.52
5	E	118	LYS	CA-C	6.36	1.61	1.52
5	E	120	VAL	CA-CB	6.36	1.62	1.54
25	Y	65	TYR	CA-C	6.36	1.61	1.52
28	BA	28	ILE	CA-CB	6.36	1.60	1.53
29	CA	63	ILE	CA-CB	6.36	1.61	1.53
36	JA	92	TYR	CA-C	6.36	1.60	1.52
8	H	92	ASN	CA-C	6.35	1.61	1.52
40	NA	21	THR	CA-C	6.35	1.59	1.52
82	DC	378	LEU	CA-C	6.35	1.60	1.52
48	VA	133	THR	CA-C	6.35	1.61	1.52
82	DC	560	VAL	CA-C	6.35	1.59	1.52
25	Y	71	SER	CA-C	6.35	1.60	1.52
82	DC	618	ILE	CA-C	6.35	1.61	1.52
5	E	196	LYS	CA-C	6.35	1.59	1.52
22	V	165	ILE	CA-C	6.35	1.60	1.52
16	P	116	MET	CA-C	6.34	1.61	1.52
82	DC	121	VAL	CA-C	6.34	1.60	1.52
5	E	108	ASN	CA-C	6.34	1.60	1.52
41	OA	70	VAL	CA-C	6.34	1.61	1.52
24	X	120	SER	CA-C	6.34	1.61	1.52
5	E	87	VAL	CA-CB	6.34	1.61	1.54
25	Y	74	VAL	CA-C	6.34	1.60	1.52
5	E	87	VAL	CA-C	6.33	1.59	1.52
10	J	21	THR	CA-C	6.33	1.60	1.52
7	G	278	ILE	CA-C	6.33	1.60	1.52
10	J	85	ILE	CA-C	6.33	1.59	1.52
82	DC	684	VAL	CA-C	6.33	1.60	1.52
82	DC	519	LEU	CA-C	6.33	1.59	1.52
36	JA	76	VAL	CA-C	6.33	1.59	1.52
7	G	84	VAL	CA-CB	6.32	1.60	1.53
50	XA	96	THR	CA-C	6.32	1.59	1.52
13	M	90	MET	CA-C	6.31	1.59	1.52
20	T	110	PRO	CA-C	6.31	1.58	1.52
8	H	31	ARG	CA-C	6.31	1.59	1.52
5	E	67	ILE	CA-CB	6.31	1.62	1.54
48	VA	139	LEU	CA-C	6.31	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	G	314	TYR	CA-C	6.30	1.58	1.53
82	DC	731	VAL	CA-CB	6.30	1.61	1.54
29	CA	124	VAL	CA-C	6.30	1.59	1.53
5	E	110	PHE	CA-C	6.30	1.59	1.52
17	Q	13	HIS	CA-C	6.30	1.60	1.53
32	FA	34	MET	SD-CE	6.30	1.95	1.79
6	F	157	VAL	CA-CB	6.29	1.60	1.53
48	VA	24	SER	CA-C	6.29	1.60	1.52
32	FA	58	MET	SD-CE	6.29	1.95	1.79
8	H	160	GLN	CA-C	6.28	1.58	1.52
16	P	141	CYS	CA-C	6.28	1.60	1.52
17	Q	8	PRO	CA-C	6.28	1.59	1.52
60	HB	87	VAL	CA-C	6.28	1.59	1.52
82	DC	400	VAL	CA-C	6.28	1.60	1.52
10	J	87	THR	CA-C	6.28	1.61	1.52
16	P	127	SER	CA-C	6.28	1.60	1.52
8	H	150	LEU	CA-C	6.27	1.60	1.52
82	DC	837	GLU	CA-C	6.27	1.60	1.52
5	E	85	MET	SD-CE	6.27	1.95	1.79
82	DC	434	VAL	CA-C	6.27	1.59	1.52
37	KA	81	VAL	CA-C	6.27	1.60	1.52
11	K	129	LEU	CA-C	6.26	1.58	1.52
48	VA	129	GLU	CA-C	6.26	1.60	1.52
82	DC	203	TYR	CA-C	6.26	1.59	1.52
82	DC	279	ASP	CA-C	6.26	1.59	1.52
11	K	156	ILE	CA-CB	6.26	1.61	1.54
7	G	256	HIS	CA-C	6.26	1.59	1.52
12	L	162	LEU	CA-C	6.26	1.61	1.52
30	DA	50	ILE	CA-CB	6.26	1.61	1.54
67	OB	89	SER	C-O	6.26	1.31	1.24
82	DC	244	LEU	CA-C	6.26	1.58	1.52
47	UA	10	ILE	CA-C	6.26	1.60	1.52
81	CC	124	PRO	CA-C	6.26	1.58	1.52
48	VA	55	LYS	CA-C	6.25	1.61	1.52
22	V	159	LYS	CA-C	6.25	1.58	1.52
5	E	77	ALA	CA-C	6.25	1.61	1.52
36	JA	119	VAL	CA-C	6.25	1.59	1.52
7	G	32	PHE	CA-C	6.24	1.58	1.52
46	TA	81	ALA	CA-C	6.24	1.59	1.53
5	E	185	MET	SD-CE	6.24	1.95	1.79
11	K	188	ILE	CA-C	6.24	1.60	1.52
82	DC	438	MET	SD-CE	6.24	1.95	1.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
52	ZA	198	THR	CA-C	6.24	1.59	1.53
48	VA	165	VAL	CA-C	6.24	1.60	1.52
82	DC	605	ILE	CA-C	6.24	1.60	1.52
37	KA	35	VAL	CA-CB	6.23	1.60	1.54
82	DC	688	ILE	CA-C	6.23	1.60	1.53
8	H	54	GLU	CA-C	6.23	1.61	1.52
48	VA	143	THR	CA-C	6.23	1.59	1.52
43	QA	48	LYS	CA-C	6.23	1.60	1.52
5	E	179	LEU	CA-C	6.23	1.61	1.52
18	R	15	VAL	CA-C	6.22	1.60	1.52
5	E	210	MET	SD-CE	6.22	1.95	1.79
10	J	89	THR	CA-C	6.22	1.60	1.52
25	Y	4	SER	CA-C	6.22	1.60	1.52
82	DC	385	MET	SD-CE	6.22	1.95	1.79
5	E	194	LEU	CA-C	6.22	1.60	1.52
10	J	34	LEU	CA-C	6.22	1.60	1.53
21	U	142	SER	CA-C	6.22	1.60	1.52
44	RA	104	PRO	CA-C	6.22	1.57	1.52
48	VA	179	SER	N-CA	6.22	1.53	1.46
7	G	216	ASP	CA-C	6.21	1.59	1.53
20	T	135	TYR	CA-C	6.21	1.60	1.52
43	QA	5	LYS	CA-C	6.21	1.60	1.52
17	Q	126	PHE	CA-C	6.21	1.58	1.52
5	E	174	MET	SD-CE	6.21	1.95	1.79
17	Q	9	ILE	CA-C	6.21	1.60	1.53
8	H	58	HIS	CA-C	6.21	1.60	1.52
18	R	46	ILE	CA-C	6.21	1.60	1.52
43	QA	49	MET	SD-CE	6.21	1.95	1.79
36	JA	28	VAL	CA-CB	6.21	1.60	1.53
45	SA	5	TRP	CA-C	6.21	1.61	1.52
82	DC	199	ASP	CA-C	6.21	1.60	1.53
17	Q	102	GLN	CA-C	6.20	1.59	1.53
35	IA	94	GLU	CA-C	6.20	1.58	1.52
41	OA	5	THR	CA-C	6.20	1.60	1.52
5	E	143	ASP	CA-C	6.20	1.60	1.52
82	DC	73	THR	CA-C	6.20	1.60	1.52
19	S	138	GLN	CA-C	6.20	1.59	1.52
20	T	23	VAL	CA-CB	6.20	1.61	1.54
82	DC	645	LEU	CA-C	6.20	1.60	1.52
48	VA	150	ILE	CA-CB	6.19	1.62	1.54
24	X	61	ILE	CA-C	6.19	1.60	1.52
82	DC	330	ALA	CA-C	6.19	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	P	63	LYS	CA-C	6.19	1.60	1.52
48	VA	121	VAL	CA-C	6.19	1.60	1.52
12	L	190	VAL	CA-C	6.18	1.60	1.52
5	E	74	VAL	CA-CB	6.18	1.62	1.54
82	DC	647	ILE	CA-C	6.18	1.59	1.52
20	T	6	VAL	CA-C	6.18	1.60	1.52
46	TA	70	LEU	CA-C	6.18	1.60	1.53
82	DC	560	VAL	CA-CB	6.18	1.61	1.54
82	DC	794	PRO	CA-C	6.18	1.59	1.52
16	P	142	ARG	CA-C	6.18	1.61	1.52
82	DC	556	ILE	CA-CB	6.17	1.61	1.54
5	E	127	GLN	CA-C	6.17	1.61	1.52
36	JA	119	VAL	CA-CB	6.17	1.60	1.53
82	DC	797	VAL	CA-CB	6.17	1.62	1.54
27	AA	77	ILE	CA-C	6.16	1.59	1.53
82	DC	743	ILE	CA-CB	6.16	1.61	1.54
24	X	97	VAL	CA-C	6.16	1.61	1.52
8	H	131	VAL	CA-C	6.16	1.60	1.52
6	F	177	LYS	CA-C	6.15	1.59	1.52
8	H	205	PRO	CA-C	6.15	1.59	1.53
10	J	153	PRO	CA-C	6.15	1.59	1.52
13	M	13	PRO	CA-C	6.15	1.58	1.52
48	VA	159	VAL	CA-CB	6.15	1.61	1.54
82	DC	768	VAL	CA-C	6.15	1.60	1.52
48	VA	167	GLN	CA-C	6.14	1.60	1.52
24	X	82	ASP	CA-C	6.14	1.59	1.52
82	DC	135	VAL	CA-CB	6.14	1.61	1.53
82	DC	841	LYS	CA-C	6.14	1.60	1.52
28	BA	13	ILE	CA-C	6.13	1.59	1.52
7	G	79	VAL	CA-CB	6.13	1.61	1.53
24	X	22	PRO	CA-C	6.13	1.60	1.52
48	VA	158	VAL	CA-CB	6.13	1.61	1.54
82	DC	245	TRP	CA-C	6.13	1.60	1.52
82	DC	448	CYS	CA-C	6.13	1.60	1.52
16	P	91	ASP	CA-C	6.13	1.59	1.52
16	P	121	PHE	CA-C	6.13	1.60	1.52
48	VA	30	VAL	CA-C	6.13	1.60	1.52
82	DC	24	VAL	CA-CB	6.13	1.62	1.53
82	DC	253	LYS	CA-C	6.12	1.59	1.52
24	X	115	ARG	CA-C	6.12	1.60	1.52
6	F	52	SER	CA-C	6.12	1.60	1.53
48	VA	189	GLN	CA-C	6.12	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	P	92	ARG	CA-C	6.12	1.60	1.52
48	VA	58	MET	CA-C	6.12	1.60	1.52
82	DC	248	SER	CA-C	6.12	1.60	1.52
28	BA	35	LYS	CA-C	6.11	1.60	1.52
36	JA	115	LEU	CA-C	6.11	1.59	1.53
63	KB	84	ILE	CA-C	6.11	1.57	1.52
14	N	31	ILE	CA-C	6.11	1.59	1.52
32	FA	107	ALA	CA-C	6.11	1.59	1.52
45	SA	22	ALA	CA-C	6.11	1.60	1.52
82	DC	130	ASP	CA-C	6.11	1.60	1.52
8	H	35	VAL	CA-C	6.11	1.60	1.52
18	R	15	VAL	CA-CB	6.11	1.61	1.54
16	P	144	ASP	CA-C	6.11	1.60	1.52
82	DC	157	ILE	CA-C	6.11	1.59	1.53
82	DC	621	ASP	CA-C	6.11	1.60	1.52
7	G	174	LYS	CA-C	6.10	1.60	1.52
82	DC	620	ALA	CA-C	6.10	1.60	1.52
82	DC	780	PHE	CA-C	6.10	1.60	1.52
42	PA	36	LYS	CA-C	6.10	1.58	1.52
23	W	19	LYS	CA-C	6.10	1.60	1.52
82	DC	796	MET	SD-CE	6.10	1.94	1.79
5	E	204	LEU	CA-C	6.10	1.60	1.52
20	T	79	ILE	CA-CB	6.09	1.61	1.54
5	E	91	LYS	CA-C	6.09	1.60	1.52
82	DC	643	PRO	CA-C	6.09	1.60	1.53
82	DC	405	VAL	CA-CB	6.09	1.61	1.54
82	DC	240	MET	SD-CE	6.08	1.94	1.79
19	S	119	TYR	CA-C	6.08	1.59	1.52
32	FA	100	PRO	CA-C	6.08	1.58	1.52
36	JA	121	ASN	CA-C	6.08	1.60	1.52
39	MA	4	VAL	CA-CB	6.08	1.61	1.54
46	TA	62	ALA	CA-C	6.08	1.58	1.52
48	VA	30	VAL	CA-CB	6.08	1.62	1.54
82	DC	346	VAL	CA-C	6.08	1.60	1.52
5	E	27	ASN	CA-C	6.08	1.60	1.52
23	W	94	VAL	CA-CB	6.08	1.62	1.54
6	F	221	LYS	CA-C	6.08	1.59	1.52
36	JA	74	PHE	CA-C	6.08	1.60	1.52
41	OA	64	MET	SD-CE	6.08	1.94	1.79
28	BA	5	ILE	CA-CB	6.08	1.62	1.54
80	BC	26	LYS	CA-C	6.08	1.58	1.52
5	E	32	VAL	CA-C	6.07	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	N	121	LYS	CA-C	6.07	1.59	1.52
48	VA	190	VAL	CA-C	6.07	1.59	1.52
27	AA	74	MET	CA-C	6.07	1.59	1.53
82	DC	379	MET	SD-CE	6.07	1.94	1.79
82	DC	428	ILE	CA-C	6.07	1.58	1.53
82	DC	434	VAL	CA-CB	6.07	1.62	1.54
16	P	66	ASN	CA-C	6.07	1.60	1.53
82	DC	367	ILE	CA-CB	6.07	1.62	1.54
7	G	79	VAL	CA-C	6.06	1.60	1.52
10	J	163	PHE	CA-C	6.06	1.59	1.52
30	DA	26	GLN	CA-C	6.06	1.58	1.52
82	DC	329	PRO	CA-C	6.06	1.61	1.52
82	DC	520	THR	CA-CB	6.06	1.61	1.53
14	N	159	PHE	CA-C	6.06	1.59	1.52
13	M	55	VAL	CA-CB	6.06	1.61	1.54
22	V	10	HIS	CA-C	6.06	1.60	1.52
37	KA	9	VAL	CA-C	6.06	1.59	1.52
48	VA	116	PRO	CA-C	6.05	1.60	1.52
5	E	104	SER	CA-C	6.05	1.61	1.52
20	T	8	VAL	CA-C	6.05	1.59	1.52
29	CA	46	TYR	CA-C	6.05	1.59	1.53
82	DC	552	VAL	CA-CB	6.05	1.61	1.54
5	E	102	LYS	CA-C	6.05	1.60	1.52
8	H	197	ARG	CA-C	6.04	1.60	1.53
11	K	151	ARG	CA-C	6.04	1.59	1.52
28	BA	28	ILE	CA-C	6.04	1.59	1.53
82	DC	629	ASP	CA-C	6.04	1.61	1.52
7	G	105	VAL	CA-C	6.04	1.59	1.52
82	DC	6	VAL	CA-C	6.04	1.60	1.52
6	F	4	VAL	CA-C	6.04	1.60	1.52
32	FA	74	ASN	CA-C	6.03	1.59	1.52
37	KA	87	ASN	CA-C	6.03	1.60	1.52
25	Y	154	VAL	CA-CB	6.03	1.60	1.55
5	E	68	PHE	CA-C	6.03	1.59	1.52
6	F	208	ASP	CA-C	6.03	1.60	1.52
63	KB	21	ASN	CA-C	6.03	1.57	1.53
82	DC	327	PHE	CA-C	6.03	1.57	1.52
11	K	168	ILE	CA-C	6.03	1.60	1.52
12	L	53	PRO	CA-C	6.03	1.59	1.52
6	F	136	ILE	CA-CB	6.02	1.60	1.53
14	N	18	PRO	CA-C	6.02	1.59	1.52
21	U	112	LEU	CA-C	6.02	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	U	123	PRO	CA-C	6.02	1.60	1.52
32	FA	50	PRO	CA-C	6.02	1.60	1.52
33	GA	7	HIS	CA-C	6.02	1.59	1.52
62	JB	140	PHE	CA-C	6.02	1.58	1.52
7	G	239	PRO	CA-C	6.02	1.59	1.52
82	DC	563	TYR	CA-C	6.02	1.59	1.52
16	P	69	ALA	CA-C	6.02	1.60	1.52
82	DC	651	LYS	CA-C	6.02	1.59	1.52
5	E	119	GLN	CA-C	6.01	1.60	1.52
45	SA	12	ARG	CA-C	6.01	1.60	1.52
82	DC	296	ILE	CA-C	6.01	1.59	1.52
82	DC	650	THR	CA-CB	6.01	1.63	1.53
29	CA	52	PRO	CA-C	6.01	1.59	1.52
6	F	235	ALA	CA-C	6.01	1.60	1.52
82	DC	486	SER	CA-C	6.01	1.60	1.52
82	DC	723	LYS	CA-C	6.00	1.60	1.52
30	DA	12	ARG	CA-C	6.00	1.60	1.52
82	DC	646	VAL	CA-C	6.00	1.60	1.52
5	E	92	LYS	CA-C	6.00	1.60	1.52
7	G	81	THR	CA-CB	6.00	1.60	1.53
8	H	60	THR	CA-C	6.00	1.60	1.52
21	U	135	ARG	CA-C	6.00	1.59	1.52
27	AA	71	LYS	CA-C	6.00	1.60	1.52
10	J	84	VAL	CA-CB	6.00	1.61	1.54
32	FA	49	HIS	CA-C	6.00	1.60	1.52
82	DC	553	PRO	CA-C	6.00	1.59	1.52
7	G	50	LYS	CA-C	6.00	1.60	1.52
5	E	201	VAL	CA-C	5.99	1.59	1.52
82	DC	618	ILE	CA-CB	5.99	1.62	1.54
36	JA	99	ASN	CA-C	5.99	1.60	1.52
82	DC	520	THR	CA-C	5.98	1.60	1.52
5	E	173	GLU	CA-C	5.98	1.58	1.53
25	Y	26	HIS	CA-C	5.98	1.60	1.52
9	I	74	VAL	CA-C	5.98	1.58	1.53
16	P	123	ARG	CA-C	5.98	1.60	1.52
82	DC	106	PRO	CA-C	5.98	1.59	1.52
5	E	30	GLU	CA-C	5.98	1.60	1.52
8	H	75	PRO	CA-C	5.98	1.59	1.52
22	V	60	PRO	CA-C	5.98	1.57	1.52
29	CA	121	LYS	CA-C	5.98	1.59	1.52
16	P	56	ILE	CA-CB	5.97	1.62	1.54
16	P	96	LYS	CA-C	5.97	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	X	90	MET	CA-C	5.97	1.59	1.52
27	AA	33	ASN	CA-C	5.97	1.59	1.52
11	K	206	LYS	CA-C	5.97	1.60	1.52
82	DC	21	ASN	CA-C	5.97	1.60	1.52
22	V	149	ALA	CA-C	5.97	1.60	1.52
72	TB	93	LEU	CA-C	5.97	1.58	1.52
8	H	131	VAL	CA-CB	5.97	1.62	1.54
82	DC	142	VAL	CA-CB	5.97	1.61	1.54
7	G	23	ALA	CA-C	5.96	1.60	1.52
16	P	64	ILE	CA-C	5.96	1.60	1.52
82	DC	521	TYR	CA-C	5.96	1.59	1.52
20	T	87	MET	SD-CE	5.96	1.94	1.79
24	X	91	TYR	CA-C	5.96	1.59	1.53
82	DC	763	THR	CA-C	5.96	1.57	1.52
5	E	139	SER	CA-C	5.96	1.60	1.52
10	J	52	VAL	CA-C	5.95	1.60	1.52
41	OA	48	ASN	CA-C	5.95	1.60	1.52
45	SA	8	LYS	CA-C	5.95	1.60	1.52
5	E	188	ASN	CA-C	5.95	1.60	1.52
5	E	205	VAL	CA-C	5.95	1.59	1.52
82	DC	627	VAL	CA-C	5.95	1.60	1.52
17	Q	21	ARG	CA-C	5.95	1.60	1.52
82	DC	610	ASP	CA-C	5.95	1.60	1.52
12	L	132	VAL	CA-C	5.95	1.59	1.52
5	E	83	ASP	CA-C	5.95	1.60	1.52
17	Q	5	LYS	CA-C	5.95	1.60	1.52
8	H	312	VAL	CA-C	5.94	1.58	1.52
25	Y	79	MET	SD-CE	5.94	1.94	1.79
25	Y	3	LYS	CA-C	5.94	1.59	1.52
39	MA	91	ALA	CA-C	5.94	1.60	1.52
12	L	163	VAL	CA-C	5.94	1.60	1.52
20	T	167	TYR	CA-C	5.94	1.60	1.52
61	IB	123	VAL	CA-C	5.94	1.60	1.52
16	P	98	VAL	CA-CB	5.94	1.60	1.54
21	U	66	SER	CA-C	5.93	1.60	1.52
9	I	18	THR	CA-C	5.93	1.59	1.53
14	N	88	ARG	CA-C	5.93	1.59	1.53
32	FA	122	PRO	CA-C	5.93	1.58	1.52
82	DC	337	MET	SD-CE	5.93	1.94	1.79
8	H	38	VAL	CA-C	5.93	1.60	1.52
48	VA	138	ALA	CA-C	5.93	1.60	1.52
11	K	188	ILE	CA-CB	5.93	1.61	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	BA	25	ASP	CA-C	5.93	1.58	1.52
14	N	59	GLN	CA-C	5.93	1.59	1.52
82	DC	711	ARG	CA-C	5.93	1.60	1.52
11	K	161	VAL	CA-C	5.92	1.59	1.52
18	R	38	ILE	CA-C	5.92	1.60	1.52
21	U	59	PRO	CA-C	5.92	1.60	1.52
36	JA	100	ILE	CA-C	5.92	1.60	1.52
16	P	82	ILE	CA-C	5.92	1.60	1.52
18	R	23	ILE	CA-C	5.92	1.59	1.52
29	CA	110	VAL	CA-C	5.92	1.58	1.53
82	DC	46	ILE	CA-C	5.92	1.60	1.52
5	E	192	SER	CA-C	5.92	1.61	1.52
5	E	209	SER	CA-C	5.92	1.60	1.52
20	T	118	VAL	CA-CB	5.92	1.61	1.54
22	V	51	ALA	CA-C	5.92	1.60	1.52
82	DC	339	VAL	CA-C	5.92	1.60	1.52
27	AA	37	ILE	CA-CB	5.92	1.62	1.54
82	DC	241	MET	SD-CE	5.91	1.94	1.79
82	DC	589	LYS	CA-C	5.91	1.60	1.53
7	G	158	VAL	CA-C	5.91	1.59	1.52
45	SA	9	ARG	CA-C	5.91	1.60	1.52
82	DC	45	ILE	CA-C	5.91	1.59	1.52
20	T	81	TYR	CA-C	5.91	1.60	1.52
82	DC	833	PRO	CA-C	5.91	1.60	1.52
48	VA	128	MET	CA-C	5.91	1.59	1.52
48	VA	178	ILE	N-CA	5.91	1.52	1.46
10	J	26	ARG	CA-C	5.91	1.60	1.52
14	N	32	ARG	CA-C	5.90	1.57	1.52
37	KA	30	ILE	CA-C	5.90	1.59	1.52
82	DC	122	THR	CA-C	5.90	1.60	1.52
25	Y	87	LYS	CA-C	5.90	1.59	1.52
82	DC	41	GLN	CA-C	5.90	1.60	1.52
20	T	16	VAL	CA-C	5.90	1.60	1.52
19	S	36	ILE	CA-C	5.89	1.60	1.52
36	JA	9	ILE	CA-CB	5.89	1.62	1.54
82	DC	256	LYS	CA-C	5.89	1.59	1.52
82	DC	529	ILE	CA-CB	5.89	1.61	1.54
5	E	130	LYS	CA-C	5.89	1.60	1.52
5	E	121	PRO	CA-C	5.89	1.60	1.52
43	QA	9	ILE	CA-C	5.89	1.61	1.53
27	AA	77	ILE	CA-CB	5.89	1.59	1.53
7	G	278	ILE	CA-CB	5.89	1.62	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	FA	102	ILE	CA-C	5.89	1.60	1.52
41	OA	39	TYR	CA-C	5.89	1.60	1.52
82	DC	687	ASN	CA-C	5.89	1.60	1.52
8	H	329	PRO	CA-C	5.88	1.58	1.52
24	X	28	ARG	CA-C	5.88	1.60	1.53
28	BA	20	LEU	CA-C	5.88	1.59	1.52
41	OA	66	TYR	CA-C	5.88	1.61	1.52
82	DC	617	ARG	CA-C	5.88	1.60	1.52
82	DC	469	LEU	CA-C	5.88	1.59	1.52
5	E	189	PHE	CA-C	5.88	1.60	1.52
19	S	72	LYS	CA-C	5.88	1.60	1.52
37	KA	43	PHE	CA-C	5.88	1.60	1.52
16	P	107	ASP	N-CA	5.88	1.53	1.46
9	I	173	VAL	CA-C	5.88	1.59	1.52
27	AA	62	VAL	CA-C	5.88	1.59	1.52
36	JA	40	SER	CA-C	5.88	1.59	1.52
41	OA	15	SER	CA-C	5.88	1.60	1.52
5	E	206	VAL	CA-CB	5.88	1.60	1.54
8	H	47	ARG	CA-C	5.87	1.59	1.52
45	SA	10	THR	CA-C	5.87	1.60	1.52
16	P	109	ILE	CA-C	5.87	1.60	1.52
6	F	150	LEU	CA-C	5.87	1.60	1.52
16	P	85	LEU	CA-C	5.87	1.59	1.52
36	JA	33	ARG	CA-C	5.87	1.59	1.52
5	E	26	ARG	CA-C	5.86	1.59	1.52
32	FA	103	ASP	CA-C	5.86	1.59	1.53
5	E	28	PHE	CA-C	5.86	1.61	1.53
6	F	233	GLN	CA-C	5.86	1.60	1.52
17	Q	10	LEU	CA-C	5.86	1.59	1.52
28	BA	19	THR	CA-C	5.86	1.60	1.52
82	DC	653	VAL	CA-C	5.86	1.59	1.52
25	Y	155	PRO	CA-C	5.86	1.58	1.52
67	OB	41	ILE	CA-C	5.86	1.57	1.52
13	M	144	ILE	CA-CB	5.85	1.61	1.54
14	N	46	PHE	CA-C	5.85	1.58	1.52
8	H	42	VAL	CA-CB	5.85	1.61	1.54
8	H	323	VAL	CA-CB	5.85	1.61	1.54
24	X	72	VAL	CA-C	5.85	1.59	1.52
82	DC	606	ILE	CA-C	5.85	1.60	1.52
6	F	209	HIS	CA-C	5.85	1.59	1.52
37	KA	74	THR	CA-CB	5.85	1.61	1.53
43	QA	42	ARG	CA-C	5.85	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	VA	13	ALA	CA-C	5.85	1.60	1.52
5	E	184	LEU	CA-C	5.85	1.60	1.52
32	FA	22	ILE	CA-C	5.85	1.60	1.52
22	V	178	ARG	CA-C	5.84	1.58	1.52
41	OA	37	CYS	CA-C	5.84	1.60	1.52
82	DC	338	ILE	CA-CB	5.84	1.61	1.54
82	DC	740	VAL	CA-C	5.84	1.60	1.52
21	U	136	ILE	CA-CB	5.84	1.61	1.53
82	DC	131	THR	CA-C	5.84	1.60	1.52
5	E	148	VAL	CA-C	5.84	1.60	1.52
17	Q	63	VAL	CA-C	5.84	1.59	1.52
27	AA	50	PRO	CA-C	5.84	1.60	1.52
82	DC	706	ILE	CA-CB	5.84	1.61	1.54
31	EA	81	LEU	CA-C	5.84	1.58	1.52
41	OA	22	CYS	CA-C	5.84	1.60	1.52
6	F	54	ARG	CA-C	5.83	1.60	1.53
36	JA	117	ILE	CA-C	5.83	1.59	1.52
82	DC	818	ILE	CA-CB	5.83	1.60	1.54
8	H	41	SER	CA-C	5.83	1.60	1.52
11	K	134	VAL	CA-C	5.83	1.59	1.52
19	S	136	ASP	CA-C	5.83	1.58	1.52
46	TA	84	THR	CA-CB	5.83	1.61	1.53
48	VA	119	ILE	CA-C	5.83	1.59	1.52
20	T	164	SER	CA-C	5.83	1.60	1.52
5	E	78	LYS	CA-C	5.83	1.60	1.52
25	Y	25	VAL	CA-C	5.83	1.60	1.53
39	MA	87	ALA	CA-C	5.83	1.60	1.52
82	DC	405	VAL	CA-C	5.83	1.59	1.52
48	VA	93	LEU	CA-C	5.82	1.60	1.52
51	YA	143	THR	CA-C	5.82	1.60	1.52
82	DC	252	PRO	CA-C	5.82	1.60	1.52
25	Y	66	ASN	CA-C	5.82	1.59	1.52
57	EB	185	ILE	CA-CB	5.82	1.59	1.54
82	DC	29	ASP	CA-C	5.82	1.59	1.53
82	DC	743	ILE	CA-C	5.82	1.60	1.52
25	Y	5	HIS	CA-C	5.81	1.60	1.53
48	VA	10	GLU	CA-C	5.81	1.60	1.52
10	J	144	ALA	CA-C	5.81	1.60	1.52
6	F	119	LYS	CA-C	5.81	1.59	1.53
20	T	28	LEU	CA-C	5.81	1.60	1.52
48	VA	17	GLU	CA-C	5.81	1.60	1.52
14	N	27	PRO	CA-C	5.81	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	E	140	HIS	CA-C	5.80	1.60	1.52
8	H	101	ALA	CA-C	5.80	1.60	1.52
12	L	166	LEU	CA-C	5.80	1.59	1.52
16	P	111	GLU	CA-C	5.80	1.60	1.52
23	W	93	VAL	CA-CB	5.80	1.61	1.54
58	FB	10	LYS	CA-C	5.80	1.60	1.52
82	DC	525	SER	CA-C	5.80	1.60	1.52
5	E	190	PHE	CA-C	5.80	1.60	1.52
6	F	24	GLN	CA-C	5.80	1.60	1.52
35	IA	95	PRO	CA-C	5.80	1.58	1.52
60	HB	95	ARG	CA-C	5.80	1.57	1.52
82	DC	191	THR	CA-C	5.80	1.59	1.52
5	E	205	VAL	CA-CB	5.80	1.60	1.53
7	G	7	GLU	CA-C	5.80	1.59	1.52
19	S	75	VAL	CA-C	5.80	1.58	1.52
82	DC	357	TYR	CA-C	5.80	1.59	1.52
17	Q	76	THR	N-CA	5.79	1.53	1.46
21	U	28	ASN	CA-C	5.79	1.60	1.52
36	JA	120	THR	CA-C	5.79	1.60	1.52
13	M	134	ILE	CA-CB	5.79	1.60	1.53
14	N	134	ILE	CA-C	5.79	1.58	1.52
24	X	143	PHE	CA-C	5.79	1.60	1.53
46	TA	26	THR	CA-C	5.79	1.59	1.52
7	G	229	VAL	CA-C	5.78	1.60	1.52
27	AA	74	MET	SD-CE	5.78	1.94	1.79
27	AA	82	ALA	CA-C	5.78	1.59	1.52
32	FA	128	ARG	CA-C	5.78	1.57	1.52
82	DC	237	LYS	CA-C	5.78	1.60	1.52
11	K	98	LYS	CA-C	5.78	1.59	1.52
25	Y	72	VAL	CA-C	5.78	1.60	1.52
16	P	103	ASN	CA-C	5.78	1.60	1.52
82	DC	612	PHE	CA-C	5.78	1.60	1.52
82	DC	404	THR	CA-C	5.78	1.59	1.52
82	DC	257	TRP	CA-C	5.78	1.60	1.52
5	E	90	LEU	CA-C	5.77	1.60	1.52
6	F	129	ALA	CA-C	5.77	1.60	1.52
82	DC	683	SER	CA-C	5.77	1.60	1.53
82	DC	822	ALA	CA-C	5.77	1.60	1.52
5	E	180	VAL	CA-CB	5.77	1.62	1.54
39	MA	88	LEU	CA-C	5.77	1.60	1.52
82	DC	386	VAL	CA-C	5.77	1.58	1.52
16	P	72	SER	CA-C	5.77	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	FA	21	ARG	CA-C	5.77	1.59	1.52
9	I	131	LEU	CA-C	5.77	1.56	1.53
22	V	48	VAL	CA-CB	5.77	1.61	1.54
82	DC	10	ARG	CA-C	5.76	1.60	1.52
24	X	98	SER	N-CA	5.76	1.53	1.46
27	AA	22	ILE	CA-C	5.76	1.58	1.53
48	VA	84	VAL	CA-C	5.76	1.59	1.52
58	FB	3	ILE	CA-C	5.76	1.60	1.52
82	DC	275	MET	SD-CE	5.76	1.94	1.79
5	E	114	GLU	N-CA	5.76	1.53	1.46
6	F	102	LEU	CA-C	5.75	1.60	1.52
8	H	34	ILE	CA-CB	5.75	1.60	1.54
10	J	161	ALA	CA-C	5.75	1.60	1.52
82	DC	727	PRO	CA-C	5.75	1.60	1.52
82	DC	767	THR	CA-C	5.75	1.60	1.52
16	P	69	ALA	N-CA	5.75	1.53	1.46
41	OA	33	THR	CA-C	5.75	1.59	1.52
11	K	120	THR	CA-C	5.75	1.59	1.52
48	VA	53	MET	CA-C	5.75	1.60	1.52
8	H	37	THR	CA-CB	5.75	1.62	1.53
8	H	261	VAL	CA-C	5.75	1.58	1.52
31	EA	47	GLU	CA-C	5.75	1.58	1.52
48	VA	119	ILE	CA-CB	5.75	1.61	1.54
82	DC	208	THR	CA-CB	5.75	1.62	1.53
48	VA	121	VAL	CA-CB	5.75	1.62	1.54
48	VA	123	ALA	CA-C	5.75	1.60	1.52
8	H	36	HIS	CA-C	5.74	1.60	1.52
48	VA	120	TRP	CA-C	5.74	1.60	1.52
69	QB	46	PRO	CA-C	5.74	1.57	1.52
82	DC	218	TRP	CA-C	5.74	1.59	1.52
16	P	74	VAL	CA-CB	5.74	1.61	1.54
21	U	120	ASN	CA-C	5.74	1.59	1.52
48	VA	49	ALA	CA-C	5.74	1.58	1.52
6	F	193	ARG	CA-C	5.74	1.60	1.52
10	J	169	ASP	CA-C	5.73	1.59	1.52
20	T	194	LEU	CA-C	5.73	1.60	1.52
82	DC	37	ASP	CA-C	5.73	1.60	1.52
6	F	116	VAL	CA-CB	5.73	1.60	1.54
14	N	53	VAL	CA-CB	5.73	1.59	1.54
30	DA	51	ARG	CA-C	5.72	1.60	1.52
82	DC	394	PHE	CA-C	5.72	1.58	1.53
25	Y	36	VAL	CA-C	5.72	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	449	PRO	CA-C	5.72	1.60	1.52
16	P	83	THR	CA-C	5.72	1.59	1.52
82	DC	681	MET	SD-CE	5.72	1.93	1.79
13	M	24	ILE	CA-CB	5.72	1.60	1.54
22	V	161	LYS	CA-C	5.72	1.59	1.52
82	DC	121	VAL	CA-CB	5.72	1.62	1.54
5	E	33	GLU	CA-C	5.72	1.61	1.53
5	E	186	SER	CA-C	5.72	1.60	1.52
13	M	33	THR	CA-C	5.72	1.59	1.52
20	T	15	LEU	CA-C	5.72	1.60	1.52
7	G	106	TRP	CA-C	5.72	1.60	1.52
10	J	71	VAL	CA-C	5.72	1.60	1.52
24	X	77	VAL	CA-CB	5.72	1.61	1.54
46	TA	85	LEU	CA-C	5.72	1.59	1.52
5	E	100	ILE	CA-C	5.71	1.59	1.52
20	T	12	LYS	CA-C	5.71	1.60	1.52
21	U	97	ASN	CA-C	5.71	1.60	1.52
37	KA	72	THR	CA-C	5.71	1.60	1.52
82	DC	722	PRO	CA-C	5.71	1.60	1.52
7	G	104	THR	CA-C	5.71	1.59	1.52
14	N	131	ILE	CA-CB	5.71	1.60	1.53
14	N	17	TYR	CA-C	5.71	1.60	1.52
45	SA	18	ARG	CA-C	5.71	1.60	1.52
7	G	226	PHE	CA-C	5.71	1.60	1.52
7	G	283	TYR	CA-C	5.71	1.59	1.52
82	DC	71	LYS	CA-C	5.71	1.59	1.52
43	QA	43	ASN	CA-C	5.70	1.59	1.52
48	VA	25	LEU	CA-C	5.70	1.59	1.52
82	DC	167	LEU	CA-C	5.70	1.58	1.52
82	DC	444	PRO	CA-C	5.70	1.60	1.52
82	DC	633	ILE	CA-C	5.70	1.58	1.52
82	DC	240	MET	CA-C	5.70	1.60	1.52
61	IB	140	VAL	CA-C	5.70	1.58	1.52
7	G	154	TYR	CA-C	5.70	1.60	1.52
5	E	177	ASP	CA-C	5.69	1.60	1.52
21	U	114	VAL	CA-CB	5.69	1.60	1.53
48	VA	23	LYS	CA-C	5.69	1.60	1.52
7	G	160	VAL	CA-C	5.69	1.59	1.52
16	P	64	ILE	CA-CB	5.69	1.62	1.54
7	G	266	ARG	CA-C	5.69	1.59	1.52
14	N	31	ILE	CA-CB	5.69	1.61	1.54
48	VA	169	GLU	CA-C	5.69	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	440	ARG	CA-C	5.69	1.60	1.52
31	EA	53	VAL	CA-C	5.68	1.59	1.52
82	DC	567	VAL	CA-C	5.68	1.59	1.52
18	R	63	VAL	CA-CB	5.68	1.62	1.54
33	GA	35	VAL	CA-C	5.68	1.59	1.52
41	OA	5	THR	CA-CB	5.68	1.62	1.53
38	LA	41	ARG	CA-C	5.68	1.58	1.53
44	RA	103	LEU	CA-C	5.68	1.59	1.52
45	SA	2	ARG	CA-C	5.68	1.60	1.52
25	Y	135	PRO	CA-C	5.68	1.59	1.52
10	J	164	SER	CA-C	5.68	1.59	1.52
11	K	228	SER	CA-C	5.68	1.59	1.53
13	M	41	ILE	CA-C	5.68	1.60	1.52
14	N	57	LEU	CA-C	5.68	1.59	1.52
8	H	225	VAL	CA-C	5.67	1.59	1.52
22	V	153	PHE	CA-C	5.67	1.61	1.53
24	X	167	ARG	CA-C	5.67	1.59	1.53
48	VA	128	MET	SD-CE	5.67	1.93	1.79
52	ZA	198	THR	CA-CB	5.67	1.60	1.52
82	DC	676	ILE	CA-CB	5.67	1.61	1.54
7	G	311	PHE	CA-C	5.67	1.60	1.52
8	H	52	VAL	CA-C	5.67	1.59	1.52
19	S	115	VAL	CA-C	5.67	1.59	1.52
61	IB	84	ILE	CA-C	5.67	1.59	1.53
82	DC	574	THR	CA-C	5.67	1.60	1.52
21	U	70	THR	CA-C	5.67	1.60	1.52
28	BA	48	ARG	CA-C	5.67	1.60	1.52
10	J	91	VAL	CA-C	5.67	1.59	1.52
14	N	165	ILE	CA-C	5.67	1.59	1.52
22	V	155	MET	CA-C	5.67	1.59	1.52
37	KA	22	VAL	CA-C	5.67	1.59	1.52
8	H	98	ARG	CA-C	5.67	1.59	1.52
32	FA	69	TRP	CA-C	5.67	1.59	1.52
82	DC	89	ILE	CA-CB	5.67	1.60	1.53
82	DC	97	SER	CA-C	5.66	1.59	1.53
5	E	181	ASN	CA-C	5.66	1.60	1.52
7	G	85	VAL	CA-CB	5.66	1.61	1.54
41	OA	80	THR	CA-C	5.66	1.59	1.52
82	DC	781	THR	CA-C	5.66	1.60	1.52
25	Y	133	ALA	CA-C	5.66	1.59	1.52
8	H	7	THR	CA-C	5.66	1.59	1.52
82	DC	659	ILE	CA-C	5.66	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	H	20	LEU	CA-C	5.66	1.59	1.52
8	H	243	HIS	CA-C	5.66	1.59	1.52
37	KA	74	THR	CA-C	5.66	1.60	1.52
25	Y	132	PRO	CA-C	5.65	1.59	1.52
5	E	138	VAL	CA-C	5.65	1.59	1.52
7	G	363	SER	CA-C	5.65	1.59	1.52
25	Y	56	PHE	CA-C	5.65	1.60	1.52
24	X	8	GLN	CA-C	5.65	1.59	1.53
17	Q	22	VAL	CA-CB	5.64	1.61	1.54
20	T	22	VAL	CA-C	5.64	1.59	1.52
52	ZA	226	THR	CA-C	5.64	1.57	1.52
82	DC	485	VAL	CA-CB	5.64	1.62	1.54
9	I	144	VAL	CA-C	5.64	1.58	1.52
32	FA	53	PHE	CA-C	5.64	1.59	1.52
32	FA	72	VAL	CA-C	5.64	1.59	1.52
52	ZA	157	LYS	CA-C	5.64	1.59	1.52
82	DC	583	HIS	CA-C	5.64	1.60	1.52
41	OA	70	VAL	CA-CB	5.64	1.61	1.54
47	UA	16	VAL	CA-CB	5.64	1.60	1.54
82	DC	240	MET	N-CA	5.64	1.53	1.46
46	TA	44	ASP	CA-C	5.64	1.60	1.52
5	E	105	LYS	CA-C	5.64	1.60	1.52
8	H	183	LYS	CA-C	5.64	1.59	1.52
82	DC	812	THR	CA-C	5.64	1.60	1.52
8	H	53	SER	CA-C	5.63	1.60	1.52
82	DC	159	LYS	CA-C	5.63	1.60	1.53
5	E	24	LYS	CA-C	5.63	1.60	1.52
10	J	21	THR	CA-CB	5.63	1.61	1.53
20	T	163	SER	CA-C	5.63	1.59	1.52
21	U	36	ILE	CA-CB	5.63	1.62	1.54
82	DC	572	SER	CA-C	5.63	1.60	1.52
48	VA	69	ASP	CA-C	5.63	1.60	1.52
25	Y	72	VAL	CA-CB	5.63	1.61	1.54
82	DC	840	ASP	CA-C	5.63	1.60	1.53
30	DA	54	ASP	CA-C	5.63	1.59	1.53
32	FA	146	GLU	CA-C	5.63	1.59	1.53
82	DC	627	VAL	N-CA	5.63	1.53	1.46
10	J	74	VAL	CA-C	5.62	1.57	1.53
5	E	193	LEU	CA-C	5.62	1.60	1.52
48	VA	141	VAL	CA-C	5.62	1.58	1.52
82	DC	772	LEU	CA-C	5.62	1.58	1.52
14	N	165	ILE	CA-CB	5.62	1.62	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	VA	114	VAL	CA-CB	5.62	1.62	1.54
12	L	163	VAL	CA-CB	5.62	1.62	1.54
7	G	49	TYR	CA-C	5.62	1.59	1.53
16	P	118	ASP	CA-C	5.62	1.60	1.52
82	DC	798	PHE	CA-C	5.62	1.59	1.52
8	H	7	THR	CA-CB	5.62	1.62	1.53
22	V	62	VAL	CA-CB	5.62	1.60	1.53
57	EB	44	LYS	CA-C	5.62	1.56	1.52
5	E	20	SER	CA-C	5.61	1.60	1.52
51	YA	160	HIS	CA-C	5.61	1.58	1.52
82	DC	714	TYR	CA-C	5.61	1.60	1.52
17	Q	154	VAL	CA-C	5.61	1.59	1.52
6	F	194	ASN	CA-C	5.61	1.59	1.53
27	AA	93	LEU	CA-C	5.61	1.59	1.52
82	DC	441	PHE	CA-C	5.61	1.59	1.52
16	P	67	ARG	CA-C	5.61	1.60	1.53
19	S	71	ARG	CA-C	5.61	1.59	1.52
5	E	76	ARG	CA-C	5.61	1.60	1.52
5	E	113	SER	N-CA	5.61	1.53	1.46
11	K	189	ILE	CA-CB	5.61	1.61	1.54
36	JA	106	VAL	CA-CB	5.61	1.61	1.54
45	SA	17	ARG	CA-C	5.61	1.60	1.52
24	X	14	LEU	CA-C	5.60	1.57	1.52
8	H	135	VAL	CA-CB	5.60	1.60	1.54
13	M	127	PRO	CA-C	5.60	1.59	1.52
61	IB	111	VAL	CA-CB	5.60	1.60	1.53
36	JA	118	LYS	CA-C	5.60	1.59	1.52
52	ZA	206	THR	CA-CB	5.60	1.60	1.53
8	H	360	LYS	CA-C	5.60	1.59	1.52
10	J	149	ILE	CA-C	5.60	1.59	1.52
21	U	57	ALA	CA-C	5.60	1.59	1.52
62	JB	111	ASN	CA-C	5.60	1.58	1.53
51	YA	146	GLN	CA-C	5.60	1.59	1.52
83	EC	6918	A	O5'-C5'	5.59	1.50	1.42
21	U	85	ALA	CA-C	5.59	1.60	1.52
48	VA	156	VAL	CA-CB	5.59	1.62	1.54
11	K	44	ILE	CA-C	5.59	1.59	1.52
14	N	43	VAL	CA-C	5.59	1.58	1.52
27	AA	75	PRO	CA-C	5.59	1.60	1.52
82	DC	328	LEU	CA-C	5.59	1.59	1.52
82	DC	622	ASP	CA-C	5.59	1.60	1.52
22	V	176	ARG	CA-C	5.59	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	456	LEU	CA-C	5.59	1.59	1.52
11	K	47	ARG	CA-C	5.59	1.59	1.53
17	Q	6	ASN	CA-C	5.58	1.60	1.53
11	K	104	GLN	CA-C	5.58	1.60	1.52
37	KA	35	VAL	CA-C	5.58	1.60	1.52
79	AC	23	VAL	CA-C	5.58	1.58	1.52
20	T	42	ASN	CA-C	5.58	1.59	1.52
35	IA	51	LEU	CA-C	5.58	1.59	1.52
48	VA	46	ARG	CA-C	5.58	1.60	1.52
82	DC	39	LEU	CA-C	5.58	1.60	1.52
20	T	175	THR	CA-CB	5.58	1.62	1.53
61	IB	84	ILE	CA-CB	5.58	1.62	1.54
5	E	9	VAL	CA-C	5.58	1.60	1.52
21	U	23	ARG	CA-C	5.58	1.59	1.53
50	XA	160	ILE	CA-C	5.58	1.57	1.52
7	G	260	VAL	CA-CB	5.58	1.59	1.54
13	M	146	LEU	CA-C	5.58	1.59	1.53
20	T	102	LEU	CA-C	5.58	1.59	1.52
31	EA	79	HIS	CA-C	5.58	1.60	1.52
82	DC	522	MET	CA-C	5.58	1.59	1.52
82	DC	736	PRO	CA-C	5.58	1.59	1.52
6	F	135	ILE	CA-C	5.57	1.59	1.52
24	X	45	LEU	CA-C	5.57	1.60	1.52
82	DC	99	LEU	CA-C	5.57	1.59	1.52
7	G	9	PRO	CA-C	5.57	1.59	1.52
48	VA	91	GLU	CA-C	5.57	1.61	1.52
48	VA	152	ILE	CA-CB	5.57	1.60	1.54
82	DC	379	MET	CA-C	5.57	1.59	1.52
5	E	29	LEU	CA-C	5.57	1.59	1.52
82	DC	472	SER	CA-C	5.57	1.59	1.52
11	K	108	LEU	CA-C	5.56	1.59	1.53
13	M	8	GLN	CA-C	5.56	1.59	1.52
18	R	78	THR	CA-C	5.56	1.60	1.52
82	DC	419	VAL	CA-CB	5.56	1.58	1.54
48	VA	71	PRO	CA-C	5.56	1.60	1.52
73	UB	124	VAL	CA-C	5.56	1.59	1.52
5	E	98	LYS	CA-C	5.56	1.59	1.52
22	V	64	VAL	CA-C	5.56	1.59	1.52
29	CA	113	LEU	CA-C	5.56	1.59	1.52
5	E	135	PRO	CA-C	5.56	1.60	1.52
5	E	191	VAL	CA-CB	5.56	1.62	1.54
8	H	52	VAL	CA-CB	5.56	1.61	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
68	PB	131	LEU	CA-C	5.56	1.60	1.52
82	DC	591	GLU	N-CA	5.56	1.49	1.46
82	DC	719	LEU	CA-C	5.56	1.60	1.52
8	H	272	VAL	CA-C	5.56	1.59	1.52
64	LB	121	VAL	CA-C	5.56	1.57	1.53
82	DC	641	ASN	CA-C	5.56	1.60	1.52
28	BA	34	SER	CA-C	5.55	1.60	1.52
8	H	317	PRO	CA-C	5.55	1.58	1.52
54	BB	234	PRO	CA-C	5.55	1.57	1.52
82	DC	770	ALA	CA-C	5.55	1.58	1.52
5	E	117	ILE	CA-CB	5.55	1.62	1.54
10	J	82	ARG	CA-C	5.55	1.60	1.52
48	VA	130	PRO	CA-C	5.55	1.60	1.52
82	DC	592	PRO	CA-C	5.55	1.60	1.52
10	J	31	ARG	CA-C	5.55	1.60	1.52
20	T	93	ALA	CA-C	5.55	1.60	1.52
5	E	191	VAL	CA-C	5.55	1.60	1.52
7	G	218	ILE	CA-C	5.55	1.59	1.52
19	S	37	HIS	CA-C	5.55	1.59	1.52
43	QA	13	MET	SD-CE	5.55	1.93	1.79
82	DC	809	LEU	CA-C	5.55	1.60	1.52
82	DC	103	ILE	CA-C	5.54	1.59	1.52
5	E	115	VAL	CA-CB	5.54	1.61	1.54
32	FA	17	ALA	CA-C	5.54	1.60	1.53
48	VA	55	LYS	N-CA	5.54	1.53	1.46
53	AB	175	VAL	CA-C	5.54	1.59	1.52
27	AA	23	MET	SD-CE	5.54	1.93	1.79
42	PA	19	ASP	CA-C	5.54	1.57	1.52
82	DC	335	LEU	CA-C	5.54	1.60	1.52
30	DA	75	ARG	CA-C	5.54	1.59	1.52
31	EA	43	VAL	CA-C	5.54	1.59	1.52
82	DC	628	THR	CA-C	5.54	1.60	1.52
8	H	134	LEU	CA-C	5.54	1.60	1.52
20	T	70	PRO	CA-C	5.54	1.57	1.52
37	KA	22	VAL	CA-CB	5.54	1.60	1.54
39	MA	100	VAL	CA-C	5.54	1.59	1.52
48	VA	135	PHE	CA-C	5.54	1.60	1.52
82	DC	442	VAL	CA-C	5.54	1.59	1.52
48	VA	101	VAL	CA-C	5.54	1.59	1.52
23	W	57	VAL	CA-CB	5.54	1.59	1.54
30	DA	48	LEU	N-CA	5.53	1.52	1.46
82	DC	443	GLU	CA-C	5.53	1.58	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	684	VAL	CA-CB	5.53	1.61	1.54
21	U	124	LYS	CA-C	5.53	1.60	1.52
10	J	25	ALA	CA-C	5.53	1.59	1.53
16	P	135	THR	CA-C	5.53	1.59	1.52
36	JA	30	GLU	CA-C	5.53	1.60	1.52
82	DC	267	LYS	CA-C	5.53	1.59	1.52
19	S	191	TRP	CA-C	5.53	1.60	1.52
27	AA	39	VAL	CA-CB	5.53	1.60	1.54
48	VA	51	VAL	CA-C	5.53	1.59	1.52
19	S	142	ILE	N-CA	5.53	1.51	1.46
82	DC	296	ILE	CA-CB	5.53	1.61	1.54
37	KA	42	GLN	CA-C	5.52	1.60	1.52
82	DC	180	ARG	CA-C	5.52	1.59	1.52
30	DA	82	VAL	CA-C	5.52	1.59	1.52
18	R	54	PRO	CA-C	5.52	1.60	1.52
82	DC	688	ILE	CA-CB	5.52	1.60	1.53
12	L	177	TYR	CA-C	5.52	1.58	1.52
12	L	196	ALA	CA-C	5.52	1.60	1.52
11	K	133	TYR	CA-C	5.52	1.59	1.52
82	DC	347	THR	CA-C	5.52	1.60	1.52
21	U	41	LEU	CA-C	5.52	1.59	1.52
38	LA	22	VAL	CA-C	5.52	1.59	1.53
76	XB	30	ILE	CA-C	5.52	1.58	1.52
82	DC	155	VAL	CA-C	5.52	1.58	1.52
8	H	177	ASP	CA-C	5.51	1.60	1.52
11	K	131	GLU	CA-C	5.51	1.59	1.52
16	P	144	ASP	N-CA	5.51	1.53	1.46
27	AA	64	LYS	CA-C	5.51	1.60	1.52
28	BA	39	LEU	CA-C	5.51	1.59	1.52
82	DC	588	LEU	CA-C	5.51	1.59	1.52
82	DC	366	CYS	CA-C	5.51	1.59	1.52
7	G	238	LEU	CA-C	5.51	1.59	1.52
11	K	90	LYS	CA-C	5.51	1.60	1.53
15	O	65	ILE	CA-C	5.51	1.59	1.52
82	DC	402	ALA	CA-C	5.51	1.59	1.52
20	T	171	LYS	CA-C	5.51	1.60	1.52
9	I	83	LEU	CA-C	5.51	1.59	1.52
82	DC	626	ASP	CA-C	5.51	1.59	1.52
16	P	145	PHE	CA-C	5.50	1.60	1.52
37	KA	10	LYS	CA-C	5.50	1.59	1.52
48	VA	19	LEU	CA-C	5.50	1.60	1.52
82	DC	88	GLU	CA-C	5.50	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	593	ILE	CA-C	5.50	1.59	1.52
82	DC	308	LYS	CA-C	5.50	1.58	1.52
7	G	86	VAL	CA-C	5.50	1.59	1.52
7	G	240	ARG	CA-C	5.50	1.60	1.52
11	K	117	VAL	CA-C	5.50	1.59	1.52
82	DC	658	GLU	CA-C	5.50	1.59	1.52
18	R	56	GLN	CA-C	5.50	1.60	1.52
45	SA	13	LEU	CA-C	5.50	1.60	1.52
82	DC	445	ILE	CA-CB	5.50	1.61	1.54
6	F	28	LYS	CA-C	5.50	1.58	1.52
22	V	4	ASP	CA-C	5.50	1.59	1.52
58	FB	87	ASN	CA-C	5.50	1.59	1.52
27	AA	14	SER	CA-C	5.49	1.60	1.52
63	KB	135	LEU	CA-C	5.49	1.57	1.52
82	DC	547	HIS	CA-C	5.49	1.60	1.52
82	DC	619	MET	CA-C	5.49	1.60	1.52
35	IA	64	VAL	CA-C	5.49	1.59	1.52
16	P	62	LEU	CA-C	5.49	1.60	1.52
52	ZA	165	VAL	CA-C	5.49	1.58	1.53
82	DC	146	ALA	CA-C	5.49	1.60	1.52
82	DC	372	CYS	CA-C	5.49	1.60	1.52
82	DC	800	HIS	CA-C	5.49	1.59	1.52
8	H	64	SER	CA-C	5.49	1.59	1.52
23	W	130	ASN	CA-C	5.49	1.60	1.52
32	FA	132	LYS	CA-C	5.49	1.59	1.52
48	VA	87	VAL	CA-C	5.49	1.59	1.52
82	DC	602	GLU	CA-C	5.49	1.60	1.52
7	G	215	ILE	CA-CB	5.49	1.61	1.54
8	H	151	VAL	CA-C	5.49	1.59	1.52
17	Q	90	ALA	CA-C	5.49	1.59	1.52
82	DC	436	LEU	CA-C	5.49	1.59	1.52
7	G	22	ALA	CA-C	5.48	1.60	1.52
13	M	180	TYR	CA-C	5.48	1.59	1.52
16	P	70	ALA	CA-C	5.48	1.59	1.52
29	CA	99	VAL	CA-C	5.48	1.60	1.52
47	UA	54	ILE	CA-CB	5.48	1.60	1.54
82	DC	773	PRO	CA-C	5.48	1.58	1.52
6	F	165	VAL	CA-C	5.48	1.59	1.52
14	N	119	TRP	CA-C	5.48	1.59	1.52
13	M	184	LYS	CA-C	5.48	1.59	1.53
30	DA	76	LEU	CA-C	5.48	1.59	1.52
82	DC	258	THR	CA-C	5.48	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	P	133	LEU	CA-C	5.48	1.59	1.52
17	Q	48	PRO	CA-C	5.48	1.60	1.52
82	DC	238	ALA	CA-C	5.48	1.59	1.52
11	K	207	LEU	CA-C	5.47	1.59	1.52
46	TA	10	THR	CA-C	5.47	1.59	1.52
82	DC	501	LEU	CA-C	5.47	1.59	1.52
6	F	237	LEU	CA-C	5.47	1.59	1.53
82	DC	839	TYR	CA-C	5.47	1.59	1.52
12	L	230	LYS	CA-C	5.47	1.60	1.52
23	W	97	ARG	CA-C	5.47	1.60	1.52
25	Y	25	VAL	CA-CB	5.47	1.60	1.54
7	G	78	VAL	CA-C	5.46	1.59	1.52
7	G	163	HIS	CA-C	5.46	1.58	1.52
19	S	176	LYS	CA-C	5.46	1.59	1.52
21	U	78	VAL	CA-C	5.46	1.59	1.52
65	MB	96	ILE	CA-C	5.46	1.58	1.52
72	TB	27	ILE	CA-C	5.46	1.57	1.52
82	DC	524	GLU	CA-C	5.46	1.60	1.52
24	X	87	THR	CA-C	5.46	1.59	1.52
35	IA	68	GLU	CA-C	5.46	1.59	1.52
7	G	327	CYS	CA-C	5.46	1.59	1.52
13	M	73	SER	CA-C	5.46	1.60	1.52
82	DC	726	GLU	CA-C	5.46	1.59	1.52
82	DC	289	MET	CA-C	5.46	1.60	1.52
19	S	198	SER	CA-C	5.46	1.59	1.52
20	T	47	PHE	CA-C	5.46	1.60	1.52
5	E	82	VAL	CA-CB	5.46	1.62	1.54
14	N	160	PRO	CA-C	5.46	1.59	1.52
37	KA	20	LYS	CA-C	5.45	1.60	1.52
5	E	137	PRO	CA-C	5.45	1.60	1.52
6	F	78	ALA	CA-C	5.45	1.59	1.52
36	JA	9	ILE	CA-C	5.45	1.59	1.52
31	EA	13	VAL	CA-C	5.45	1.58	1.52
33	GA	5	LYS	CA-C	5.45	1.59	1.52
5	E	107	TYR	CA-C	5.45	1.59	1.52
82	DC	721	ASP	CA-C	5.45	1.59	1.52
21	U	44	ALA	CA-C	5.44	1.60	1.52
11	K	130	ILE	CA-CB	5.44	1.61	1.54
14	N	89	VAL	CA-C	5.44	1.58	1.52
16	P	95	ASP	CA-C	5.44	1.59	1.53
8	H	152	VAL	CA-C	5.44	1.59	1.52
14	N	48	LEU	CA-C	5.44	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	F	67	TYR	CA-C	5.44	1.59	1.52
8	H	270	SER	CA-C	5.44	1.60	1.52
11	K	138	TYR	CA-C	5.44	1.59	1.52
16	P	90	ARG	CA-C	5.44	1.60	1.52
48	VA	114	VAL	CA-C	5.44	1.59	1.52
10	J	84	VAL	CA-C	5.44	1.59	1.52
24	X	90	MET	SD-CE	5.44	1.93	1.79
9	I	171	LEU	CA-C	5.43	1.59	1.52
13	M	59	ASN	CA-C	5.43	1.60	1.52
18	R	23	ILE	CA-CB	5.43	1.60	1.54
37	KA	80	VAL	CA-C	5.43	1.59	1.52
51	YA	205	PHE	CA-C	5.43	1.58	1.52
82	DC	32	LYS	CA-C	5.43	1.60	1.52
38	LA	95	ILE	CA-C	5.43	1.59	1.52
8	H	208	VAL	CA-C	5.43	1.59	1.52
14	N	167	LEU	CA-C	5.43	1.59	1.52
24	X	55	SER	CA-C	5.43	1.60	1.52
48	VA	61	ARG	CA-C	5.43	1.60	1.52
82	DC	281	ILE	CA-C	5.43	1.59	1.52
6	F	5	ILE	CA-C	5.43	1.59	1.52
32	FA	102	ILE	CA-CB	5.43	1.60	1.53
11	K	97	PRO	CA-C	5.42	1.60	1.52
14	N	7	ARG	CA-C	5.42	1.61	1.52
30	DA	78	PHE	CA-C	5.42	1.60	1.52
43	QA	7	PHE	CA-C	5.42	1.59	1.52
7	G	72	VAL	CA-CB	5.42	1.60	1.54
82	DC	818	ILE	CA-C	5.42	1.59	1.52
17	Q	27	ASP	CA-C	5.42	1.59	1.52
30	DA	119	ILE	CA-CB	5.42	1.60	1.54
5	E	6	SER	CA-C	5.42	1.60	1.52
5	E	74	VAL	CA-C	5.42	1.59	1.52
22	V	13	SER	N-CA	5.42	1.53	1.46
48	VA	26	PHE	CA-C	5.42	1.59	1.52
82	DC	826	HIS	CA-C	5.42	1.60	1.52
6	F	168	VAL	CA-C	5.42	1.59	1.52
19	S	202	TYR	CA-C	5.42	1.59	1.52
35	IA	21	HIS	CA-C	5.42	1.59	1.52
37	KA	73	ARG	CA-C	5.42	1.60	1.53
8	H	166	VAL	CA-CB	5.41	1.60	1.54
19	S	196	THR	CA-C	5.41	1.59	1.52
30	DA	58	VAL	CA-CB	5.41	1.60	1.54
32	FA	45	MET	SD-CE	5.41	1.93	1.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	86	VAL	CA-C	5.41	1.59	1.52
5	E	97	LYS	CA-C	5.41	1.59	1.52
28	BA	8	PHE	CA-C	5.41	1.59	1.52
29	CA	88	MET	CA-C	5.41	1.60	1.52
5	E	16	LEU	CA-C	5.41	1.59	1.52
7	G	25	ILE	CA-CB	5.41	1.61	1.54
29	CA	120	LYS	CA-C	5.41	1.59	1.52
53	AB	167	PHE	CA-C	5.41	1.57	1.52
82	DC	315	GLU	CA-C	5.41	1.59	1.52
38	LA	9	ARG	CA-C	5.41	1.59	1.52
29	CA	29	SER	CA-C	5.40	1.58	1.52
32	FA	101	VAL	CA-C	5.40	1.59	1.52
36	JA	97	ALA	CA-C	5.40	1.59	1.52
61	IB	67	ARG	CA-C	5.40	1.58	1.52
82	DC	69	THR	CA-CB	5.40	1.59	1.53
82	DC	187	VAL	CA-C	5.40	1.59	1.52
5	E	199	GLN	CA-C	5.40	1.60	1.52
11	K	225	GLN	CA-C	5.40	1.59	1.52
13	M	37	ASN	CA-C	5.40	1.59	1.52
25	Y	11	THR	CA-C	5.40	1.60	1.52
47	UA	28	LYS	CA-C	5.40	1.60	1.52
82	DC	457	VAL	CA-C	5.40	1.59	1.52
82	DC	548	ASP	CA-C	5.40	1.60	1.52
82	DC	737	GLU	CA-C	5.40	1.60	1.52
16	P	105	GLN	N-CA	5.40	1.53	1.46
20	T	21	SER	CA-C	5.40	1.59	1.52
8	H	244	LEU	CA-C	5.40	1.59	1.52
25	Y	140	ILE	CA-CB	5.40	1.60	1.54
36	JA	42	VAL	CA-C	5.40	1.59	1.52
48	VA	95	GLU	CA-C	5.40	1.59	1.52
82	DC	169	VAL	CA-C	5.40	1.59	1.52
24	X	27	MET	CA-C	5.40	1.58	1.52
5	E	73	ASP	CA-C	5.39	1.59	1.53
8	H	184	SER	CA-C	5.39	1.59	1.52
10	J	33	SER	CA-C	5.39	1.59	1.52
22	V	110	ALA	CA-C	5.39	1.59	1.52
35	IA	19	ARG	CA-C	5.39	1.59	1.52
48	VA	111	ALA	CA-C	5.39	1.59	1.52
27	AA	54	LEU	CA-C	5.39	1.59	1.52
38	LA	38	LEU	CA-C	5.39	1.59	1.52
7	G	13	HIS	CA-C	5.39	1.59	1.52
11	K	214	TRP	CA-C	5.39	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	28	VAL	CA-C	5.39	1.59	1.52
11	K	169	ILE	CA-CB	5.39	1.60	1.54
18	R	57	ALA	CA-C	5.39	1.59	1.53
82	DC	288	ILE	CA-C	5.39	1.59	1.52
82	DC	435	VAL	N-CA	5.39	1.51	1.46
82	DC	567	VAL	CA-CB	5.39	1.62	1.54
20	T	96	LYS	CA-C	5.38	1.59	1.52
28	BA	7	SER	CA-C	5.38	1.59	1.52
82	DC	431	ILE	CA-C	5.38	1.58	1.52
8	H	119	ARG	CA-C	5.38	1.60	1.52
36	JA	50	ILE	CA-C	5.38	1.59	1.52
82	DC	319	LEU	CA-C	5.38	1.59	1.52
17	Q	40	ALA	CA-C	5.38	1.59	1.52
40	NA	90	MET	SD-CE	5.38	1.93	1.79
82	DC	171	LYS	CA-C	5.38	1.59	1.52
30	DA	102	SER	CA-C	5.38	1.60	1.52
48	VA	80	VAL	CA-CB	5.38	1.61	1.53
16	P	124	THR	CA-C	5.38	1.59	1.52
48	VA	94	THR	CA-C	5.38	1.60	1.52
17	Q	73	ARG	CA-C	5.38	1.59	1.52
31	EA	80	LEU	CA-C	5.38	1.59	1.52
47	UA	78	THR	CA-C	5.38	1.59	1.52
82	DC	628	THR	CA-CB	5.38	1.62	1.53
5	E	23	THR	CA-C	5.37	1.59	1.52
31	EA	46	ILE	CA-C	5.37	1.57	1.52
82	DC	504	LEU	CA-C	5.37	1.59	1.52
11	K	110	ARG	CA-C	5.37	1.59	1.52
11	K	167	ALA	CA-C	5.37	1.59	1.52
25	Y	158	THR	CA-C	5.37	1.58	1.52
27	AA	76	ALA	CA-C	5.37	1.59	1.52
30	DA	70	ILE	CA-CB	5.37	1.60	1.54
48	VA	137	GLN	CA-C	5.37	1.59	1.52
65	MB	107	ILE	CA-CB	5.37	1.59	1.53
82	DC	25	ILE	CA-CB	5.37	1.61	1.54
82	DC	36	THR	CA-CB	5.37	1.62	1.53
82	DC	650	THR	N-CA	5.37	1.52	1.45
82	DC	387	PRO	CA-C	5.37	1.59	1.53
8	H	90	PHE	CA-C	5.37	1.59	1.52
8	H	188	ARG	CA-C	5.37	1.59	1.52
69	QB	88	VAL	CA-CB	5.37	1.60	1.54
82	DC	491	VAL	CA-C	5.37	1.59	1.52
5	E	109	ALA	CA-C	5.36	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	F	140	ASN	CA-C	5.36	1.59	1.52
17	Q	32	LYS	CA-C	5.36	1.59	1.52
8	H	29	PRO	CA-C	5.36	1.60	1.52
23	W	55	VAL	CA-C	5.36	1.58	1.52
36	JA	13	HIS	CA-C	5.36	1.59	1.52
48	VA	93	LEU	N-CA	5.36	1.52	1.46
82	DC	515	ASP	CA-C	5.36	1.58	1.52
6	F	178	PRO	CA-C	5.36	1.59	1.52
8	H	50	TYR	CA-C	5.36	1.58	1.52
16	P	99	LYS	CA-C	5.36	1.59	1.52
25	Y	53	PRO	CA-C	5.36	1.58	1.52
82	DC	447	ASP	CA-C	5.36	1.59	1.52
16	P	104	ILE	CA-CB	5.35	1.61	1.54
22	V	102	ALA	CA-C	5.35	1.59	1.53
42	PA	76	ASN	CA-C	5.35	1.58	1.53
48	VA	188	VAL	N-CA	5.35	1.51	1.45
32	FA	4	ARG	CA-C	5.35	1.59	1.52
73	UB	87	VAL	CA-C	5.35	1.57	1.53
82	DC	342	LEU	CA-C	5.35	1.58	1.53
8	H	238	LEU	CA-C	5.35	1.59	1.52
11	K	242	SER	CA-C	5.35	1.59	1.52
14	N	14	ASN	CA-C	5.35	1.58	1.52
14	N	54	SER	CA-C	5.35	1.59	1.52
25	Y	78	LYS	CA-C	5.35	1.59	1.52
27	AA	115	THR	CA-C	5.35	1.59	1.52
30	DA	41	ALA	CA-C	5.35	1.59	1.52
48	VA	174	ASN	CA-C	5.35	1.60	1.52
6	F	217	GLN	CA-C	5.35	1.59	1.52
16	P	137	GLN	CA-C	5.35	1.59	1.52
7	G	312	VAL	CA-C	5.34	1.59	1.52
33	GA	8	THR	CA-C	5.34	1.58	1.53
40	NA	40	VAL	CA-C	5.34	1.60	1.52
36	JA	17	PHE	CA-C	5.34	1.59	1.52
41	OA	22	CYS	N-CA	5.34	1.53	1.46
48	VA	20	GLU	CA-C	5.34	1.59	1.52
6	F	45	VAL	CA-C	5.34	1.58	1.52
6	F	101	VAL	CA-C	5.34	1.58	1.52
11	K	103	LEU	CA-C	5.34	1.59	1.52
11	K	178	ILE	CA-C	5.34	1.59	1.52
14	N	5	PRO	CA-C	5.34	1.58	1.52
16	P	61	GLN	CA-C	5.34	1.59	1.53
22	V	164	ARG	CA-C	5.34	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	S	13	LYS	CA-C	5.33	1.59	1.53
23	W	91	SER	CA-C	5.33	1.60	1.52
27	AA	102	ILE	CA-CB	5.33	1.60	1.53
82	DC	137	VAL	CA-C	5.33	1.59	1.52
24	X	136	LYS	CA-C	5.33	1.59	1.52
82	DC	821	ALA	CA-C	5.33	1.59	1.52
5	E	25	LYS	CA-C	5.33	1.59	1.52
16	P	58	VAL	CA-CB	5.33	1.61	1.54
11	K	236	ILE	CA-C	5.33	1.60	1.52
25	Y	42	ILE	CA-CB	5.33	1.60	1.53
82	DC	76	SER	CA-C	5.33	1.59	1.52
82	DC	672	LYS	CA-C	5.33	1.60	1.52
20	T	20	ALA	CA-C	5.33	1.60	1.52
82	DC	819	VAL	CA-C	5.33	1.60	1.52
33	GA	37	PRO	CA-C	5.32	1.60	1.52
7	G	6	TYR	CA-C	5.32	1.59	1.53
8	H	198	ARG	CA-C	5.32	1.60	1.52
74	VB	118	ILE	CA-CB	5.32	1.59	1.53
22	V	62	VAL	CA-C	5.32	1.58	1.52
24	X	41	TYR	CA-C	5.32	1.59	1.52
28	BA	11	ALA	CA-C	5.32	1.59	1.52
44	RA	117	HIS	CA-C	5.32	1.58	1.53
82	DC	471	THR	CA-C	5.32	1.59	1.52
82	DC	608	PRO	CA-C	5.32	1.60	1.52
24	X	126	VAL	CA-C	5.32	1.59	1.52
82	DC	364	ALA	CA-C	5.32	1.59	1.52
11	K	95	ILE	CA-CB	5.32	1.60	1.54
36	JA	12	LYS	CA-C	5.32	1.59	1.52
42	PA	70	PRO	CA-C	5.32	1.57	1.52
68	PB	81	ILE	CA-C	5.32	1.58	1.52
7	G	312	VAL	N-CA	5.32	1.52	1.46
13	M	25	VAL	CA-C	5.32	1.59	1.52
18	R	111	ALA	CA-C	5.32	1.59	1.52
10	J	122	PHE	CA-C	5.31	1.59	1.53
82	DC	280	PRO	CA-C	5.31	1.59	1.52
10	J	52	VAL	CA-CB	5.31	1.61	1.54
24	X	83	SER	CA-C	5.31	1.60	1.53
61	IB	132	SER	CA-C	5.31	1.59	1.52
19	S	113	LEU	CA-C	5.31	1.59	1.52
6	F	49	VAL	CA-C	5.31	1.58	1.52
7	G	218	ILE	CA-CB	5.31	1.60	1.54
25	Y	76	ILE	CA-C	5.31	1.59	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	BA	50	ALA	CA-C	5.31	1.59	1.52
82	DC	345	PRO	CA-C	5.31	1.59	1.52
17	Q	49	ARG	CA-C	5.31	1.59	1.52
24	X	51	VAL	CA-C	5.31	1.59	1.52
52	ZA	166	THR	CA-CB	5.31	1.59	1.53
12	L	50	VAL	CA-C	5.31	1.59	1.52
7	G	227	GLU	CA-C	5.30	1.59	1.52
11	K	166	ASN	CA-C	5.30	1.59	1.52
36	JA	35	GLN	CA-C	5.30	1.59	1.52
18	R	112	LEU	CA-C	5.30	1.59	1.52
8	H	135	VAL	CA-C	5.30	1.59	1.52
11	K	216	VAL	CA-CB	5.30	1.61	1.54
14	N	93	PRO	CA-C	5.30	1.57	1.52
43	QA	6	SER	CA-C	5.30	1.60	1.53
82	DC	34	THR	CA-C	5.30	1.60	1.52
24	X	66	GLU	CA-C	5.30	1.59	1.52
32	FA	39	HIS	CA-C	5.30	1.59	1.52
62	JB	87	PRO	CA-C	5.30	1.59	1.52
82	DC	457	VAL	CA-CB	5.30	1.61	1.54
5	E	115	VAL	CA-C	5.29	1.59	1.52
8	H	162	THR	CA-C	5.29	1.59	1.52
32	FA	55	LYS	CA-C	5.29	1.59	1.52
46	TA	25	VAL	CA-C	5.29	1.59	1.52
21	U	88	VAL	CA-C	5.29	1.58	1.52
22	V	122	ILE	CA-CB	5.29	1.60	1.54
24	X	126	VAL	CA-CB	5.29	1.61	1.54
66	NB	121	SER	CA-C	5.29	1.58	1.53
82	DC	375	LYS	CA-C	5.29	1.59	1.52
82	DC	579	SER	CA-C	5.29	1.60	1.52
9	I	36	LEU	CA-C	5.29	1.59	1.53
10	J	39	VAL	CA-C	5.29	1.58	1.52
54	BB	46	VAL	CA-C	5.29	1.59	1.52
82	DC	13	MET	CA-C	5.29	1.59	1.52
82	DC	613	LYS	CA-C	5.29	1.59	1.52
82	DC	749	LYS	CA-C	5.29	1.58	1.53
13	M	64	HIS	CA-C	5.29	1.59	1.52
82	DC	119	LEU	CA-C	5.29	1.59	1.52
8	H	315	LYS	CA-C	5.29	1.59	1.52
8	H	351	PRO	CA-C	5.29	1.59	1.52
33	GA	10	HIS	CA-C	5.29	1.59	1.52
82	DC	30	HIS	CA-C	5.29	1.59	1.52
8	H	100	PHE	CA-C	5.28	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
13	M	66	ALA	CA-C	5.28	1.60	1.52
17	Q	52	ASP	CA-C	5.28	1.59	1.52
19	S	123	GLN	CA-C	5.28	1.59	1.52
53	AB	168	ILE	CA-C	5.28	1.58	1.52
78	ZB	45	LYS	CA-C	5.28	1.57	1.52
7	G	270	ARG	CA-C	5.28	1.59	1.52
5	E	22	GLU	N-CA	5.28	1.53	1.46
7	G	261	MET	CA-C	5.28	1.59	1.52
10	J	35	VAL	N-CA	5.28	1.50	1.46
25	Y	50	LYS	CA-C	5.28	1.59	1.52
58	FB	175	GLN	CA-C	5.28	1.56	1.52
5	E	70	ASP	N-CA	5.28	1.52	1.46
5	E	117	ILE	CA-C	5.28	1.59	1.52
21	U	56	ARG	CA-C	5.28	1.58	1.52
82	DC	190	SER	CA-C	5.28	1.59	1.52
82	DC	437	MET	CA-C	5.28	1.59	1.52
22	V	96	PHE	CA-C	5.28	1.57	1.52
47	UA	10	ILE	CA-CB	5.28	1.61	1.54
82	DC	133	GLU	CA-C	5.28	1.60	1.52
28	BA	45	ASN	CA-C	5.27	1.58	1.52
32	FA	144	VAL	CA-C	5.27	1.59	1.52
8	H	93	MET	SD-CE	5.27	1.92	1.79
10	J	91	VAL	CA-CB	5.27	1.61	1.54
12	L	197	VAL	CA-CB	5.27	1.61	1.54
38	LA	12	PRO	CA-C	5.27	1.58	1.52
82	DC	514	SER	CA-C	5.27	1.58	1.52
6	F	62	VAL	CA-CB	5.27	1.61	1.54
13	M	39	LYS	CA-C	5.27	1.60	1.53
21	U	11	PRO	CA-C	5.27	1.60	1.52
29	CA	124	VAL	CA-CB	5.27	1.60	1.53
32	FA	66	ALA	CA-C	5.27	1.59	1.52
48	VA	50	VAL	CA-CB	5.27	1.60	1.54
70	RB	70	THR	CA-C	5.27	1.59	1.53
82	DC	255	LYS	CA-C	5.27	1.59	1.52
82	DC	376	ALA	CA-C	5.27	1.59	1.52
5	E	148	VAL	CA-CB	5.27	1.60	1.54
16	P	60	VAL	CA-CB	5.27	1.60	1.53
82	DC	419	VAL	CA-C	5.27	1.57	1.52
7	G	160	VAL	CA-CB	5.27	1.61	1.54
29	CA	86	VAL	CA-C	5.27	1.58	1.52
13	M	128	VAL	CA-CB	5.26	1.60	1.54
19	S	77	LYS	CA-C	5.26	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	Y	24	ALA	CA-C	5.26	1.59	1.52
47	UA	51	ALA	CA-C	5.26	1.60	1.53
30	DA	46	LYS	CA-C	5.26	1.59	1.52
38	LA	10	ARG	CA-C	5.26	1.59	1.52
16	P	94	LYS	CA-C	5.26	1.59	1.52
29	CA	63	ILE	CA-C	5.26	1.59	1.53
71	SB	32	VAL	CA-C	5.26	1.59	1.52
82	DC	562	ALA	CA-C	5.26	1.59	1.52
5	E	111	ILE	N-CA	5.26	1.52	1.46
24	X	121	ILE	CA-C	5.26	1.59	1.52
21	U	104	ALA	CA-C	5.26	1.59	1.52
22	V	12	ARG	CA-C	5.26	1.60	1.52
82	DC	205	ALA	CA-C	5.26	1.60	1.52
20	T	29	ASN	CA-C	5.25	1.59	1.52
38	LA	22	VAL	CA-CB	5.25	1.60	1.53
73	UB	102	VAL	CA-C	5.25	1.58	1.52
5	E	149	THR	CA-C	5.25	1.59	1.52
5	E	183	ILE	CA-CB	5.25	1.61	1.54
11	K	229	PHE	CA-C	5.25	1.59	1.52
29	CA	114	VAL	CA-C	5.25	1.59	1.52
82	DC	89	ILE	CA-C	5.25	1.58	1.53
19	S	148	TYR	CA-C	5.25	1.59	1.52
23	W	138	LEU	CA-C	5.25	1.59	1.52
48	VA	155	ASP	N-CA	5.25	1.52	1.46
24	X	26	ARG	CA-C	5.25	1.58	1.52
24	X	89	ASN	CA-C	5.25	1.59	1.52
8	H	250	TRP	CA-C	5.25	1.59	1.52
20	T	113	ASP	CA-C	5.25	1.59	1.52
20	T	118	VAL	CA-C	5.25	1.58	1.52
14	N	19	LYS	CA-C	5.25	1.59	1.52
17	Q	44	ALA	CA-C	5.25	1.59	1.52
29	CA	100	LYS	CA-C	5.25	1.59	1.52
82	DC	318	ALA	CA-C	5.25	1.59	1.52
8	H	300	ARG	CA-C	5.25	1.59	1.52
82	DC	313	ASP	CA-C	5.25	1.59	1.52
8	H	46	LYS	CA-C	5.24	1.59	1.53
10	J	44	ALA	CA-C	5.24	1.58	1.52
11	K	130	ILE	CA-C	5.24	1.59	1.52
11	K	241	LYS	CA-C	5.24	1.60	1.52
14	N	122	PRO	CA-C	5.24	1.58	1.52
24	X	57	GLU	CA-C	5.24	1.59	1.52
9	I	65	ILE	CA-C	5.24	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	K	119	VAL	CA-C	5.24	1.59	1.52
82	DC	649	GLN	CA-C	5.24	1.60	1.52
6	F	95	SER	CA-C	5.24	1.59	1.52
7	G	63	PRO	CA-C	5.24	1.59	1.52
24	X	124	LEU	N-CA	5.24	1.49	1.46
48	VA	63	ILE	CA-CB	5.24	1.60	1.54
82	DC	220	PHE	CA-C	5.24	1.59	1.52
7	G	80	ASP	CA-C	5.24	1.59	1.52
18	R	34	ALA	CA-C	5.24	1.59	1.52
24	X	59	VAL	CA-C	5.23	1.59	1.52
27	AA	97	ASP	CA-C	5.23	1.58	1.53
32	FA	118	ILE	CA-C	5.23	1.58	1.52
36	JA	18	LYS	CA-C	5.23	1.59	1.52
82	DC	336	GLU	CA-C	5.23	1.59	1.52
7	G	103	THR	CA-C	5.23	1.58	1.52
14	N	135	ILE	CA-C	5.23	1.59	1.52
49	WA	148	ASN	CA-C	5.23	1.57	1.52
9	I	60	ILE	CA-C	5.23	1.58	1.52
38	LA	29	ILE	CA-C	5.23	1.59	1.52
82	DC	611	ASP	CA-C	5.23	1.59	1.52
25	Y	40	VAL	CA-C	5.23	1.59	1.52
8	H	185	LYS	CA-C	5.23	1.59	1.53
38	LA	5	VAL	CA-C	5.23	1.59	1.52
82	DC	269	LEU	CA-C	5.23	1.59	1.52
82	DC	586	ILE	CA-CB	5.23	1.61	1.54
8	H	21	PRO	CA-C	5.23	1.58	1.53
19	S	135	VAL	CA-C	5.23	1.59	1.52
82	DC	323	VAL	CA-CB	5.23	1.61	1.54
82	DC	728	VAL	CA-C	5.23	1.58	1.52
45	SA	20	VAL	CA-CB	5.22	1.61	1.54
10	J	41	ILE	CA-C	5.22	1.59	1.52
10	J	51	ARG	CA-C	5.22	1.59	1.52
10	J	80	ASN	CA-C	5.22	1.59	1.52
19	S	73	ARG	CA-C	5.22	1.59	1.52
48	VA	155	ASP	CA-C	5.22	1.61	1.52
53	AB	175	VAL	CA-CB	5.22	1.60	1.54
82	DC	268	PRO	CA-C	5.22	1.58	1.52
82	DC	382	VAL	CA-CB	5.22	1.59	1.53
6	F	3	ARG	CA-C	5.22	1.59	1.52
8	H	196	ASN	CA-C	5.22	1.59	1.52
25	Y	63	VAL	CA-C	5.22	1.59	1.52
29	CA	26	VAL	CA-C	5.22	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	IA	93	VAL	CA-C	5.22	1.58	1.52
5	E	144	LEU	N-CA	5.22	1.52	1.46
46	TA	40	LYS	CA-C	5.22	1.59	1.52
5	E	89	ASP	CA-C	5.22	1.60	1.52
24	X	114	HIS	CA-C	5.22	1.59	1.52
36	JA	16	LYS	CA-C	5.22	1.59	1.52
41	OA	28	HIS	CA-C	5.22	1.59	1.52
41	OA	78	PHE	CA-C	5.22	1.59	1.52
48	VA	27	VAL	CA-CB	5.22	1.61	1.54
82	DC	754	VAL	CA-CB	5.22	1.60	1.54
16	P	132	ILE	CA-CB	5.21	1.61	1.54
36	JA	4	LEU	CA-C	5.21	1.58	1.52
36	JA	28	VAL	CA-C	5.21	1.58	1.53
37	KA	29	LEU	CA-C	5.21	1.59	1.52
73	UB	120	VAL	CA-C	5.21	1.58	1.52
82	DC	473	GLU	CA-C	5.21	1.59	1.52
82	DC	539	GLU	CA-C	5.21	1.59	1.52
6	F	17	THR	CA-CB	5.21	1.60	1.53
11	K	100	ARG	CA-C	5.21	1.59	1.52
13	M	67	ALA	CA-C	5.21	1.59	1.52
41	OA	18	LEU	CA-C	5.21	1.59	1.52
41	OA	7	SER	CA-C	5.21	1.59	1.52
41	OA	49	TRP	CA-C	5.21	1.58	1.52
82	DC	527	GLU	CA-C	5.21	1.59	1.52
7	G	329	PRO	CA-C	5.21	1.58	1.52
16	P	93	LYS	CA-C	5.21	1.60	1.52
24	X	15	PRO	CA-C	5.21	1.57	1.52
65	MB	40	ARG	CA-C	5.21	1.59	1.52
82	DC	136	CYS	CA-C	5.21	1.60	1.53
82	DC	352	ARG	CA-C	5.21	1.59	1.52
6	F	225	ILE	CA-C	5.21	1.58	1.52
38	LA	79	SER	CA-C	5.21	1.59	1.52
82	DC	636	PHE	CA-C	5.21	1.58	1.52
5	E	66	CYS	N-CA	5.21	1.52	1.46
5	E	91	LYS	N-CA	5.21	1.52	1.46
8	H	227	THR	CA-C	5.21	1.59	1.52
8	H	202	ARG	CA-C	5.21	1.59	1.52
21	U	132	ALA	CA-C	5.21	1.59	1.52
82	DC	75	ILE	CA-C	5.21	1.58	1.52
7	G	354	VAL	CA-CB	5.20	1.60	1.54
8	H	32	PRO	CA-C	5.20	1.60	1.52
8	H	42	VAL	CA-C	5.20	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	R	37	GLU	CA-C	5.20	1.58	1.52
30	DA	24	SER	CA-C	5.20	1.59	1.52
48	VA	157	LYS	CA-C	5.20	1.58	1.53
53	AB	29	LEU	CA-C	5.20	1.58	1.53
41	OA	25	ARG	CA-C	5.20	1.60	1.53
48	VA	67	LEU	CA-C	5.20	1.59	1.52
20	T	136	THR	CA-C	5.20	1.59	1.52
25	Y	42	ILE	CA-C	5.20	1.59	1.52
37	KA	12	LYS	CA-C	5.20	1.58	1.52
41	OA	6	PRO	CA-C	5.20	1.59	1.52
7	G	334	ARG	CA-C	5.20	1.58	1.52
8	H	248	VAL	CA-CB	5.20	1.60	1.53
14	N	89	VAL	CA-CB	5.20	1.60	1.53
16	P	130	LYS	CA-C	5.20	1.59	1.52
33	GA	7	HIS	N-CA	5.20	1.52	1.45
82	DC	343	PRO	CA-C	5.20	1.59	1.52
82	DC	797	VAL	CA-C	5.20	1.59	1.52
7	G	367	LYS	CA-C	5.20	1.59	1.52
31	EA	82	PRO	CA-C	5.20	1.58	1.52
12	L	181	LYS	CA-C	5.20	1.58	1.53
82	DC	258	THR	CA-CB	5.20	1.61	1.53
82	DC	380	LEU	CA-C	5.20	1.59	1.53
7	G	220	VAL	CA-CB	5.19	1.60	1.54
12	L	197	VAL	CA-C	5.19	1.59	1.52
39	MA	55	LEU	CA-C	5.19	1.59	1.52
48	VA	124	VAL	CA-CB	5.19	1.61	1.54
36	JA	73	THR	CA-C	5.19	1.59	1.52
60	HB	4	PRO	CA-C	5.19	1.58	1.52
82	DC	232	LYS	CA-C	5.19	1.60	1.52
72	TB	28	ARG	CA-C	5.19	1.58	1.52
18	R	64	VAL	CA-C	5.19	1.59	1.52
22	V	106	PHE	CA-C	5.19	1.58	1.52
38	LA	50	ALA	CA-C	5.19	1.59	1.52
48	VA	18	TYR	CA-C	5.19	1.59	1.52
40	NA	42	SER	CA-C	5.19	1.59	1.52
48	VA	78	PRO	CA-C	5.19	1.59	1.52
9	I	12	TYR	CA-C	5.18	1.59	1.52
35	IA	23	VAL	CA-C	5.18	1.58	1.52
82	DC	788	THR	CA-CB	5.18	1.60	1.53
7	G	312	VAL	CA-CB	5.18	1.61	1.54
18	R	33	ALA	CA-C	5.18	1.59	1.52
27	AA	39	VAL	CA-C	5.18	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	VA	86	PHE	CA-C	5.18	1.60	1.53
73	UB	103	LEU	CA-C	5.18	1.58	1.52
5	E	178	VAL	CA-C	5.18	1.60	1.52
8	H	23	PRO	CA-C	5.18	1.59	1.52
20	T	34	VAL	CA-CB	5.18	1.61	1.54
37	KA	75	HIS	CA-C	5.18	1.59	1.52
19	S	18	VAL	CA-CB	5.18	1.61	1.54
82	DC	377	ASP	CA-C	5.18	1.59	1.52
82	DC	561	VAL	CA-CB	5.18	1.61	1.54
13	M	58	HIS	CA-C	5.18	1.59	1.52
19	S	141	ALA	CA-C	5.18	1.59	1.52
82	DC	823	ARG	CA-C	5.18	1.59	1.52
5	E	7	SER	CA-C	5.18	1.59	1.52
5	E	198	TRP	CA-C	5.18	1.59	1.52
11	K	92	ILE	CA-C	5.18	1.59	1.52
20	T	162	VAL	CA-C	5.18	1.59	1.52
8	H	164	GLU	CA-C	5.17	1.59	1.52
24	X	9	VAL	CA-C	5.17	1.58	1.52
24	X	34	GLU	CA-C	5.17	1.59	1.52
24	X	60	SER	CA-C	5.17	1.58	1.52
35	IA	34	LYS	CA-C	5.17	1.59	1.52
37	KA	7	LEU	CA-C	5.17	1.59	1.52
60	HB	55	VAL	CA-CB	5.17	1.59	1.54
61	IB	129	ARG	CA-C	5.17	1.58	1.52
10	J	72	ASN	CA-C	5.17	1.59	1.52
16	P	86	LYS	CA-C	5.17	1.59	1.52
18	R	118	PHE	CA-C	5.17	1.59	1.52
24	X	77	VAL	CA-C	5.17	1.59	1.52
39	MA	33	VAL	CA-CB	5.17	1.61	1.54
49	WA	104	VAL	CA-C	5.17	1.57	1.52
7	G	81	THR	CA-C	5.17	1.59	1.52
30	DA	29	VAL	CA-C	5.17	1.60	1.53
30	DA	33	ALA	CA-C	5.17	1.59	1.52
40	NA	81	THR	CA-CB	5.17	1.61	1.53
70	RB	86	ILE	CA-C	5.17	1.59	1.52
82	DC	233	PHE	CA-C	5.17	1.59	1.52
82	DC	745	SER	CA-C	5.17	1.59	1.52
25	Y	60	LYS	CA-C	5.17	1.59	1.52
82	DC	291	PHE	CA-C	5.17	1.59	1.52
82	DC	338	ILE	CA-C	5.17	1.59	1.52
82	DC	601	ILE	CA-C	5.17	1.59	1.52
6	F	114	SER	CA-C	5.16	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	R	41	GLN	CA-C	5.16	1.59	1.52
42	PA	55	VAL	CA-C	5.16	1.59	1.52
53	AB	162	GLN	CA-C	5.16	1.59	1.52
72	TB	30	SER	CA-C	5.16	1.59	1.52
16	P	128	VAL	CA-CB	5.16	1.61	1.54
20	T	137	THR	CA-C	5.16	1.58	1.52
28	BA	49	ILE	CA-C	5.16	1.59	1.52
36	JA	111	ARG	CA-C	5.16	1.59	1.52
40	NA	21	THR	CA-CB	5.16	1.61	1.52
8	H	162	THR	CA-CB	5.16	1.61	1.53
8	H	209	TYR	CA-C	5.16	1.59	1.53
9	I	9	SER	CA-C	5.16	1.59	1.52
11	K	125	GLU	CA-C	5.16	1.59	1.52
16	P	100	HIS	CA-C	5.16	1.60	1.53
21	U	60	PHE	CA-C	5.16	1.59	1.52
26	Z	41	ILE	CA-CB	5.16	1.59	1.53
27	AA	49	LEU	CA-C	5.16	1.58	1.52
48	VA	86	PHE	N-CA	5.16	1.51	1.45
82	DC	576	LEU	CA-C	5.16	1.58	1.52
20	T	108	ILE	CA-C	5.16	1.58	1.52
28	BA	29	PHE	CA-C	5.16	1.59	1.52
82	DC	25	ILE	CA-C	5.16	1.59	1.52
41	OA	19	CYS	CA-C	5.15	1.59	1.52
52	ZA	121	VAL	CA-C	5.15	1.59	1.52
7	G	277	SER	CA-C	5.15	1.60	1.53
19	S	43	THR	CA-C	5.15	1.59	1.52
70	RB	103	ILE	CA-C	5.15	1.58	1.52
82	DC	340	LEU	CA-C	5.15	1.59	1.52
7	G	84	VAL	CA-C	5.15	1.58	1.52
7	G	151	ILE	CA-C	5.15	1.59	1.52
21	U	81	ALA	CA-C	5.15	1.59	1.52
33	GA	4	SER	CA-C	5.15	1.59	1.52
41	OA	70	VAL	N-CA	5.15	1.52	1.46
49	WA	110	VAL	CA-C	5.15	1.59	1.52
50	XA	161	PRO	CA-C	5.15	1.57	1.52
51	YA	189	ILE	CA-C	5.15	1.58	1.52
82	DC	677	PHE	CA-C	5.15	1.60	1.52
14	N	126	ALA	CA-C	5.15	1.58	1.52
19	S	157	LYS	CA-C	5.15	1.59	1.52
40	NA	86	LYS	CA-C	5.15	1.59	1.52
82	DC	153	PRO	CA-C	5.15	1.58	1.52
21	U	64	ASN	CA-C	5.15	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	U	129	THR	CA-C	5.15	1.58	1.52
29	CA	92	LYS	CA-C	5.15	1.59	1.52
82	DC	202	VAL	CA-CB	5.15	1.59	1.53
82	DC	369	ILE	CA-C	5.15	1.59	1.52
36	JA	106	VAL	CA-C	5.15	1.59	1.52
37	KA	27	VAL	CA-CB	5.15	1.60	1.54
82	DC	216	HIS	CA-C	5.15	1.59	1.52
7	G	89	VAL	CA-C	5.14	1.59	1.52
17	Q	159	VAL	CA-C	5.14	1.58	1.52
19	S	110	ALA	CA-C	5.14	1.59	1.52
82	DC	273	PHE	CA-C	5.14	1.59	1.52
19	S	38	ARG	CA-C	5.14	1.59	1.52
21	U	6	ALA	CA-C	5.14	1.59	1.52
8	H	251	THR	CA-CB	5.14	1.60	1.53
22	V	44	PHE	CA-C	5.14	1.59	1.52
29	CA	57	LEU	CA-C	5.14	1.58	1.52
48	VA	64	ARG	CA-C	5.14	1.59	1.52
66	NB	31	VAL	CA-C	5.14	1.59	1.52
82	DC	22	MET	CA-C	5.14	1.59	1.52
36	JA	78	ASN	CA-C	5.14	1.60	1.53
6	F	181	LYS	CA-C	5.14	1.59	1.52
29	CA	55	ASN	CA-C	5.14	1.59	1.52
36	JA	23	ASP	CA-C	5.14	1.59	1.52
65	MB	76	VAL	CA-C	5.14	1.58	1.52
82	DC	47	SER	CA-C	5.14	1.59	1.52
48	VA	33	VAL	CA-CB	5.13	1.61	1.54
67	OB	43	SER	CA-C	5.13	1.58	1.52
7	G	217	ALA	CA-C	5.13	1.59	1.52
10	J	30	LEU	CA-C	5.13	1.59	1.52
35	IA	30	PRO	CA-C	5.13	1.60	1.52
40	NA	13	LYS	CA-C	5.13	1.60	1.52
45	SA	3	ALA	CA-C	5.13	1.59	1.52
51	YA	133	TYR	CA-C	5.13	1.58	1.52
58	FB	185	GLU	CA-C	5.13	1.58	1.52
22	V	116	LYS	CA-C	5.13	1.59	1.52
44	RA	115	CYS	CA-C	5.13	1.59	1.52
33	GA	31	SER	CA-C	5.13	1.59	1.52
38	LA	20	ILE	CA-C	5.13	1.58	1.52
45	SA	20	VAL	CA-C	5.13	1.61	1.52
20	T	158	ALA	CA-C	5.13	1.59	1.52
29	CA	56	ARG	CA-C	5.13	1.59	1.52
48	VA	187	VAL	N-CA	5.13	1.51	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	272	ALA	CA-C	5.13	1.59	1.52
61	IB	76	VAL	CA-C	5.12	1.59	1.52
14	N	133	GLN	CA-C	5.12	1.58	1.52
24	X	105	THR	CA-CB	5.12	1.61	1.53
36	JA	11	LYS	CA-C	5.12	1.59	1.52
43	QA	46	ARG	CA-C	5.12	1.57	1.52
48	VA	147	ARG	CA-C	5.12	1.59	1.52
82	DC	653	VAL	CA-CB	5.12	1.59	1.53
25	Y	134	GLN	CA-C	5.12	1.59	1.53
46	TA	84	THR	CA-C	5.12	1.59	1.52
82	DC	815	ALA	CA-C	5.12	1.59	1.52
6	F	45	VAL	CA-CB	5.12	1.60	1.54
6	F	202	VAL	CA-C	5.12	1.58	1.52
25	Y	147	VAL	CA-C	5.12	1.58	1.52
8	H	271	LYS	CA-C	5.12	1.59	1.52
19	S	134	LEU	CA-C	5.12	1.58	1.52
21	U	133	HIS	CA-C	5.12	1.59	1.52
53	AB	168	ILE	CA-CB	5.12	1.61	1.54
82	DC	708	THR	CA-C	5.12	1.59	1.52
5	E	144	LEU	CA-C	5.11	1.59	1.52
14	N	213	PHE	CA-C	5.11	1.58	1.53
20	T	126	VAL	CA-CB	5.11	1.59	1.54
82	DC	262	THR	CA-CB	5.11	1.62	1.53
53	AB	210	GLU	CA-C	5.11	1.57	1.52
37	KA	90	PRO	CA-C	5.11	1.59	1.52
82	DC	445	ILE	CA-C	5.11	1.59	1.52
5	E	92	LYS	N-CA	5.11	1.52	1.46
7	G	62	ARG	CA-C	5.11	1.58	1.52
8	H	278	SER	CA-C	5.11	1.59	1.52
11	K	124	LEU	CA-C	5.11	1.59	1.52
45	SA	23	ARG	CA-C	5.11	1.59	1.52
47	UA	70	THR	CA-CB	5.11	1.60	1.53
7	G	335	ILE	CA-C	5.11	1.58	1.52
14	N	60	LEU	CA-C	5.11	1.59	1.52
18	R	103	ILE	CA-CB	5.11	1.61	1.54
29	CA	81	ILE	CA-C	5.11	1.59	1.52
27	AA	15	LEU	CA-C	5.10	1.59	1.52
36	JA	91	THR	CA-CB	5.10	1.62	1.53
43	QA	47	THR	CA-C	5.10	1.60	1.53
48	VA	76	LEU	CA-C	5.10	1.59	1.52
7	G	241	LYS	CA-C	5.10	1.59	1.52
25	Y	69	LYS	CA-C	5.10	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	127	VAL	CA-C	5.10	1.58	1.52
5	E	182	GLN	CA-C	5.10	1.59	1.52
48	VA	110	ARG	CA-C	5.10	1.61	1.52
5	E	200	ASN	CA-C	5.10	1.59	1.53
6	F	108	PRO	CA-C	5.10	1.58	1.52
19	S	154	PRO	CA-C	5.10	1.59	1.52
21	U	78	VAL	CA-CB	5.10	1.61	1.54
36	JA	34	LYS	CA-C	5.10	1.59	1.52
47	UA	32	GLN	CA-C	5.10	1.59	1.52
7	G	78	VAL	CA-CB	5.10	1.60	1.54
82	DC	87	LYS	CA-C	5.10	1.59	1.52
82	DC	615	ARG	CA-C	5.10	1.59	1.52
32	FA	11	HIS	CA-C	5.10	1.58	1.52
39	MA	76	GLN	CA-C	5.10	1.59	1.52
48	VA	132	LYS	CA-C	5.10	1.59	1.52
8	H	158	SER	CA-C	5.09	1.59	1.53
30	DA	95	VAL	CA-C	5.09	1.58	1.52
71	SB	36	VAL	CA-C	5.09	1.57	1.53
13	M	140	VAL	CA-C	5.09	1.59	1.52
44	RA	91	CYS	CA-C	5.09	1.59	1.52
18	R	38	ILE	CA-CB	5.09	1.61	1.54
43	QA	44	TRP	CA-C	5.09	1.59	1.52
54	BB	175	PHE	CA-C	5.09	1.57	1.53
82	DC	654	GLN	CA-C	5.09	1.59	1.52
8	H	266	THR	CA-C	5.09	1.57	1.52
24	X	70	THR	CA-CB	5.09	1.61	1.53
82	DC	77	LEU	CA-C	5.09	1.59	1.52
82	DC	632	LYS	CA-C	5.09	1.59	1.52
7	G	5	LYS	CA-C	5.09	1.59	1.52
8	H	339	LEU	CA-C	5.09	1.59	1.52
10	J	32	ALA	CA-C	5.09	1.59	1.52
25	Y	75	ILE	CA-CB	5.09	1.61	1.54
48	VA	68	SER	CA-C	5.09	1.59	1.53
61	IB	101	GLU	CA-C	5.09	1.59	1.52
11	K	196	LYS	CA-C	5.09	1.59	1.52
41	OA	16	HIS	CA-C	5.09	1.59	1.52
6	F	137	ILE	CA-C	5.08	1.59	1.52
38	LA	59	PRO	CA-C	5.08	1.59	1.52
2	B	496	C	O3'-P	-5.08	1.53	1.61
6	F	12	ALA	CA-C	5.08	1.59	1.52
30	DA	56	VAL	CA-C	5.08	1.59	1.52
48	VA	118	ASP	CA-C	5.08	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	F	15	ILE	CA-CB	5.08	1.60	1.54
7	G	282	ILE	CA-CB	5.08	1.59	1.54
82	DC	594	ASP	CA-C	5.08	1.59	1.52
32	FA	121	VAL	CA-CB	5.08	1.60	1.54
38	LA	37	LYS	CA-C	5.08	1.59	1.52
6	F	234	LYS	CA-C	5.08	1.59	1.52
7	G	254	ALA	CA-C	5.08	1.60	1.53
8	H	324	LEU	CA-C	5.08	1.59	1.52
14	N	15	LYS	CA-C	5.08	1.58	1.53
21	U	9	THR	CA-C	5.08	1.59	1.52
36	JA	36	LYS	CA-C	5.08	1.58	1.52
82	DC	120	ARG	CA-C	5.08	1.59	1.52
8	H	59	GLN	CA-C	5.08	1.59	1.52
82	DC	202	VAL	CA-C	5.08	1.58	1.53
8	H	277	PRO	CA-C	5.08	1.59	1.52
14	N	63	GLU	CA-C	5.08	1.59	1.52
82	DC	367	ILE	CA-C	5.08	1.59	1.52
13	M	75	VAL	CA-C	5.07	1.59	1.52
19	S	187	ARG	CA-C	5.07	1.59	1.52
25	Y	30	TYR	CA-C	5.07	1.58	1.52
56	DB	73	ILE	CA-CB	5.07	1.59	1.53
9	I	153	THR	CA-C	5.07	1.57	1.53
18	R	55	ARG	CA-C	5.07	1.59	1.52
17	Q	14	PHE	CA-C	5.07	1.60	1.53
46	TA	64	THR	CA-C	5.07	1.59	1.52
73	UB	100	ASP	CA-C	5.07	1.58	1.52
82	DC	802	SER	CA-C	5.07	1.59	1.52
82	DC	317	LYS	CA-C	5.07	1.59	1.52
82	DC	523	SER	CA-C	5.07	1.59	1.52
82	DC	769	LYS	CA-C	5.07	1.59	1.52
57	EB	62	VAL	CA-C	5.07	1.58	1.52
82	DC	172	GLU	CA-C	5.07	1.59	1.52
82	DC	204	PRO	CA-C	5.07	1.60	1.52
8	H	234	ASN	CA-C	5.07	1.58	1.52
44	RA	119	ASN	CA-C	5.07	1.59	1.52
51	YA	120	LEU	CA-C	5.07	1.58	1.52
21	U	79	THR	CA-C	5.06	1.59	1.52
27	AA	17	LEU	CA-C	5.06	1.58	1.52
27	AA	36	ILE	CA-C	5.06	1.58	1.52
5	E	185	MET	CA-C	5.06	1.59	1.52
24	X	29	ILE	CA-C	5.06	1.59	1.52
82	DC	151	ILE	CA-C	5.06	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	406	LYS	CA-C	5.06	1.58	1.52
82	DC	468	THR	CA-C	5.06	1.59	1.52
21	U	67	ILE	CA-C	5.06	1.59	1.52
8	H	308	LYS	CA-C	5.06	1.59	1.52
12	L	41	GLN	CA-C	5.06	1.59	1.52
8	H	30	ILE	CA-CB	5.06	1.59	1.53
13	M	144	ILE	CA-C	5.06	1.59	1.52
51	YA	142	PHE	CA-C	5.06	1.59	1.52
54	BB	102	VAL	CA-C	5.06	1.58	1.52
56	DB	61	PHE	CA-C	5.06	1.58	1.52
6	F	18	SER	CA-C	5.06	1.59	1.52
7	G	157	VAL	CA-C	5.06	1.58	1.52
36	JA	46	PHE	CA-C	5.06	1.58	1.52
48	VA	27	VAL	CA-C	5.06	1.59	1.52
11	K	84	VAL	CA-C	5.05	1.58	1.52
14	N	135	ILE	CA-CB	5.05	1.61	1.54
37	KA	71	VAL	CA-CB	5.05	1.60	1.54
82	DC	370	LYS	CA-C	5.05	1.59	1.52
6	F	136	ILE	CA-C	5.05	1.58	1.53
17	Q	53	LEU	N-CA	5.05	1.51	1.45
48	VA	126	THR	CA-C	5.05	1.59	1.52
7	G	166	ILE	CA-C	5.05	1.59	1.52
8	H	77	VAL	CA-C	5.05	1.58	1.52
15	O	132	ASN	CA-C	5.05	1.58	1.52
22	V	111	ARG	CA-C	5.05	1.59	1.52
32	FA	16	SER	CA-C	5.05	1.59	1.52
32	FA	137	LYS	CA-C	5.05	1.59	1.52
47	UA	22	LEU	CA-C	5.05	1.59	1.52
65	MB	75	PRO	CA-C	5.05	1.58	1.52
6	F	133	TYR	CA-C	5.05	1.59	1.52
12	L	40	VAL	CA-C	5.05	1.58	1.52
58	FB	81	VAL	CA-C	5.05	1.58	1.52
82	DC	222	ILE	CA-CB	5.05	1.60	1.54
19	S	142	ILE	CA-C	5.05	1.57	1.52
27	AA	37	ILE	CA-C	5.05	1.59	1.52
82	DC	814	LYS	CA-C	5.05	1.59	1.52
6	F	26	ALA	CA-C	5.05	1.60	1.53
7	G	322	ILE	CA-CB	5.05	1.59	1.53
20	T	5	PRO	CA-C	5.05	1.59	1.52
25	Y	153	PRO	CA-C	5.05	1.59	1.52
31	EA	23	VAL	CA-C	5.05	1.58	1.52
52	ZA	170	ILE	CA-C	5.05	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	IB	107	VAL	CA-C	5.05	1.58	1.52
82	DC	614	ALA	CA-C	5.05	1.59	1.52
8	H	226	GLU	CA-C	5.04	1.59	1.52
9	I	122	VAL	CA-C	5.04	1.58	1.53
29	CA	83	VAL	CA-CB	5.04	1.59	1.53
82	DC	322	VAL	CA-C	5.04	1.60	1.52
8	H	123	ALA	CA-C	5.04	1.59	1.52
17	Q	100	ARG	CA-C	5.04	1.59	1.52
18	R	53	VAL	CA-CB	5.04	1.60	1.54
82	DC	19	VAL	CA-C	5.04	1.59	1.52
33	GA	11	ASN	CA-C	5.04	1.59	1.52
82	DC	593	ILE	CA-CB	5.04	1.60	1.54
8	H	28	ALA	CA-C	5.04	1.57	1.52
40	NA	7	ILE	CA-C	5.04	1.59	1.52
20	T	162	VAL	CA-CB	5.04	1.61	1.54
22	V	129	VAL	CA-CB	5.04	1.60	1.54
23	W	134	HIS	CA-C	5.04	1.58	1.52
41	OA	41	ALA	CA-C	5.04	1.59	1.52
48	VA	133	THR	CA-CB	5.04	1.62	1.53
82	DC	509	LYS	CA-C	5.04	1.59	1.52
8	H	279	HIS	CA-C	5.04	1.59	1.52
12	L	153	ILE	CA-C	5.04	1.59	1.52
19	S	184	LYS	CA-C	5.04	1.59	1.52
48	VA	21	GLU	CA-C	5.04	1.59	1.52
8	H	200	THR	CA-C	5.03	1.59	1.53
17	Q	86	THR	CA-C	5.03	1.59	1.52
27	AA	19	VAL	CA-C	5.03	1.59	1.52
35	IA	26	LYS	CA-C	5.03	1.59	1.52
47	UA	60	CYS	CA-C	5.03	1.59	1.52
63	KB	14	SER	CA-C	5.03	1.58	1.52
82	DC	783	GLU	CA-C	5.03	1.59	1.52
82	DC	838	TYR	CA-C	5.03	1.59	1.52
8	H	138	ARG	CA-C	5.03	1.59	1.52
27	AA	34	LEU	CA-C	5.03	1.58	1.52
48	VA	48	ARG	CA-C	5.03	1.58	1.52
7	G	210	GLU	CA-C	5.03	1.58	1.52
17	Q	28	GLN	CA-C	5.03	1.59	1.52
19	S	17	ASP	CA-C	5.03	1.59	1.52
82	DC	138	GLN	CA-C	5.03	1.59	1.52
82	DC	585	ARG	CA-C	5.03	1.59	1.52
21	U	65	SER	CA-C	5.03	1.59	1.52
22	V	13	SER	CA-C	5.03	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	V	48	VAL	CA-C	5.03	1.59	1.52
78	ZB	41	VAL	CA-C	5.03	1.57	1.53
82	DC	806	SER	CA-C	5.03	1.59	1.53
24	X	112	ALA	CA-C	5.03	1.59	1.52
50	XA	139	VAL	CA-C	5.03	1.59	1.52
82	DC	127	VAL	CA-CB	5.03	1.59	1.54
82	DC	129	VAL	CA-C	5.03	1.59	1.52
11	K	120	THR	CA-CB	5.03	1.61	1.53
22	V	16	ARG	CA-C	5.03	1.58	1.52
22	V	86	THR	CA-CB	5.03	1.60	1.53
82	DC	103	ILE	CA-CB	5.03	1.60	1.54
14	N	142	ASP	CA-C	5.02	1.59	1.52
19	S	121	VAL	CA-C	5.02	1.59	1.52
40	NA	24	PRO	CA-C	5.02	1.59	1.52
6	F	230	VAL	CA-C	5.02	1.59	1.52
19	S	74	PRO	CA-C	5.02	1.59	1.52
20	T	190	VAL	CA-C	5.02	1.60	1.52
33	GA	30	PRO	CA-C	5.02	1.58	1.52
42	PA	69	LEU	CA-C	5.02	1.58	1.52
36	JA	32	TRP	CA-C	5.02	1.59	1.52
7	G	155	ALA	CA-C	5.02	1.59	1.52
7	G	373	PRO	CA-C	5.02	1.59	1.52
25	Y	82	ASN	CA-C	5.02	1.59	1.52
32	FA	145	VAL	CA-C	5.02	1.58	1.52
38	LA	6	THR	CA-CB	5.02	1.59	1.53
82	DC	660	LYS	CA-C	5.02	1.60	1.52
82	DC	739	ALA	CA-C	5.02	1.59	1.52
27	AA	83	LYS	CA-C	5.02	1.59	1.52
35	IA	39	PHE	CA-C	5.02	1.59	1.52
39	MA	57	VAL	CA-CB	5.02	1.60	1.54
41	OA	67	LEU	N-CA	5.02	1.52	1.46
48	VA	175	LEU	CA-C	5.02	1.59	1.52
82	DC	648	ASP	CA-C	5.02	1.59	1.52
7	G	335	ILE	CA-CB	5.02	1.60	1.54
82	DC	320	LEU	CA-C	5.02	1.59	1.52
16	P	132	ILE	CA-C	5.01	1.59	1.52
18	R	67	PRO	CA-C	5.01	1.59	1.52
6	F	154	ALA	CA-C	5.01	1.58	1.52
10	J	120	ASN	CA-C	5.01	1.58	1.52
25	Y	13	TYR	CA-C	5.01	1.59	1.52
25	Y	55	LYS	CA-C	5.01	1.59	1.52
13	M	63	LYS	CA-C	5.01	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	N	115	MET	SD-CE	5.01	1.92	1.79
32	FA	112	ILE	CA-CB	5.01	1.60	1.53
48	VA	108	PRO	CA-C	5.01	1.59	1.52
7	G	20	LYS	CA-C	5.01	1.59	1.52
51	YA	22	ASP	CA-C	5.01	1.59	1.52
8	H	65	TRP	CA-C	5.01	1.59	1.52
10	J	112	THR	CA-C	5.01	1.59	1.52
32	FA	42	ARG	CA-C	5.01	1.59	1.52
57	EB	83	LYS	CA-C	5.01	1.57	1.52
82	DC	374	PRO	CA-C	5.01	1.60	1.52
6	F	199	THR	CA-C	5.00	1.58	1.52
20	T	91	LYS	CA-C	5.00	1.59	1.52
70	RB	25	THR	CA-C	5.00	1.57	1.53
70	RB	60	THR	CA-CB	5.00	1.59	1.52
82	DC	144	ARG	CA-C	5.00	1.59	1.52
6	F	65	ASP	CA-C	5.00	1.59	1.52
6	F	246	LEU	CA-C	5.00	1.59	1.52
48	VA	134	SER	CA-C	5.00	1.59	1.52
48	VA	153	VAL	CA-C	5.00	1.59	1.52
82	DC	550	ALA	CA-C	5.00	1.59	1.52
82	DC	725	GLN	CA-C	5.00	1.58	1.52

All (539) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	493	G	O5'-P-OP1	-15.38	61.87	108.00
67	OB	93	LEU	N-CA-C	13.00	127.69	111.69
2	B	487	U	P-O3'-C3'	12.57	139.06	120.20
1	A	627	C	O3'-P-O5'	12.39	122.59	104.00
48	VA	107	ALA	CA-C-N	10.93	133.50	119.84
48	VA	107	ALA	C-N-CA	10.93	133.50	119.84
82	DC	267	LYS	CA-C-N	10.01	130.64	119.83
82	DC	267	LYS	C-N-CA	10.01	130.64	119.83
48	VA	103	ASN	N-CA-C	9.80	124.85	113.19
2	B	3317	U	C2'-C3'-O3'	9.34	123.52	109.50
38	LA	25	THR	CA-C-N	9.12	129.31	119.28
38	LA	25	THR	C-N-CA	9.12	129.31	119.28
67	OB	93	LEU	CA-C-N	-9.12	100.19	121.52
67	OB	93	LEU	C-N-CA	-9.12	100.19	121.52
2	B	493	G	O5'-P-OP2	8.84	134.51	108.00
2	B	1307	G	C2'-C3'-O3'	8.70	122.54	109.50
16	P	88	PRO	N-CA-C	8.47	121.03	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	K	96	PRO	CA-C-N	8.42	130.36	119.84
11	K	96	PRO	C-N-CA	8.42	130.36	119.84
20	T	110	PRO	N-CA-C	8.17	120.67	110.70
83	EC	6919	G	N9-C1'-C2'	8.04	124.05	112.00
67	OB	97	ASN	N-CA-C	7.88	123.09	111.34
18	R	99	TRP	N-CA-C	-7.84	102.05	111.69
48	VA	105	VAL	N-CA-C	7.79	119.97	108.45
1	A	1370	U	C2'-C3'-O3'	7.70	121.05	109.50
1	A	1573	A	C2'-C3'-O3'	7.70	121.05	109.50
40	NA	67	LYS	N-CA-C	-7.68	105.86	114.62
2	B	2541	U	C2'-C3'-O3'	7.66	120.99	109.50
14	N	8	CYS	N-CA-C	-7.65	104.85	114.56
83	EC	6893	C	N1-C1'-C2'	7.57	123.36	112.00
2	B	487	U	O3'-P-O5'	7.51	115.26	104.00
2	B	850	U	N1-C1'-C2'	7.44	123.16	112.00
48	VA	57	THR	N-CA-C	-7.43	104.19	113.18
1	A	25	C	C2'-C3'-O3'	7.41	120.62	109.50
32	FA	18	GLY	N-CA-C	7.32	123.60	114.37
53	AB	15	GLY	N-CA-C	-7.29	106.65	114.67
19	S	146	ALA	N-CA-C	-7.28	104.27	113.01
33	GA	19	ASN	N-CA-C	-7.28	104.91	114.31
32	FA	54	GLY	N-CA-C	7.26	120.99	111.70
19	S	108	ARG	N-CA-C	-7.25	106.36	114.62
48	VA	155	ASP	N-CA-C	-7.24	105.29	112.97
25	Y	6	GLY	N-CA-C	7.24	122.81	112.82
8	H	222	VAL	CA-C-N	7.20	128.83	119.84
8	H	222	VAL	C-N-CA	7.20	128.83	119.84
59	GB	179	ARG	N-CA-C	-7.18	104.54	113.38
1	A	501	U	C2'-C3'-O3'	7.17	120.25	109.50
55	CB	61	TYR	N-CA-C	-7.15	104.71	113.50
14	N	116	ARG	N-CA-C	-7.14	103.83	112.54
23	W	173	ARG	N-CA-C	-7.11	104.73	113.41
48	VA	65	GLY	N-CA-C	-7.05	104.51	115.73
67	OB	91	LEU	CA-C-O	7.04	130.58	120.51
2	B	2434	U	N1-C1'-C2'	7.01	124.52	114.00
8	H	137	ALA	N-CA-C	-7.00	104.71	113.18
1	A	829	A	C2'-C3'-O3'	7.00	120.00	109.50
67	OB	92	ASP	CA-C-N	-6.97	108.66	120.58
67	OB	92	ASP	C-N-CA	-6.97	108.66	120.58
1	A	1339	C	N1-C1'-C2'	6.92	122.38	112.00
14	N	169	LYS	N-CA-C	-6.90	104.83	113.18
69	QB	74	GLY	N-CA-C	6.88	120.96	112.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	DB	103	GLY	CA-C-N	6.87	126.49	119.56
56	DB	103	GLY	C-N-CA	6.87	126.49	119.56
56	DB	219	ARG	N-CA-C	-6.85	105.05	113.41
6	F	108	PRO	N-CA-C	6.84	121.32	111.13
33	GA	18	ARG	N-CA-C	-6.83	103.95	112.90
2	B	201	A	N9-C1'-C2'	6.81	122.21	112.00
1	A	139	C	C2'-C3'-O3'	6.80	119.69	109.50
2	B	2323	G	N9-C1'-C2'	6.79	122.19	112.00
49	WA	11	GLY	N-CA-C	6.79	119.43	111.63
20	T	56	ASP	N-CA-C	-6.78	103.35	111.69
2	B	2513	U	C2'-C3'-O3'	6.78	119.67	109.50
8	H	138	ARG	N-CA-C	-6.78	105.55	113.88
1	A	610	G	N9-C1'-C2'	6.77	122.16	112.00
33	GA	36	ASP	CA-C-N	6.77	126.37	119.19
33	GA	36	ASP	C-N-CA	6.77	126.37	119.19
48	VA	60	ARG	N-CA-C	-6.76	103.71	112.23
23	W	127	SER	N-CA-C	-6.75	104.86	113.23
22	V	66	ARG	N-CA-C	-6.75	103.95	111.71
2	B	2101	C	C2'-C3'-O3'	6.74	119.61	109.50
48	VA	62	ALA	N-CA-C	-6.74	103.74	112.23
6	F	185	ALA	N-CA-C	-6.73	103.75	112.23
17	Q	174	ARG	N-CA-C	-6.70	103.23	111.40
17	Q	81	LYS	N-CA-C	-6.69	104.13	112.90
82	DC	581	ASN	N-CA-C	-6.67	103.82	112.23
8	H	143	GLU	N-CA-C	-6.67	104.51	114.64
49	WA	31	ASN	N-CA-C	-6.66	105.91	112.97
59	GB	180	LYS	N-CA-C	-6.65	105.20	113.38
2	B	764	U	N1-C1'-C2'	6.63	121.95	112.00
17	Q	173	ALA	N-CA-C	-6.62	105.17	113.18
59	GB	42	ILE	N-CA-C	-6.62	106.56	112.12
83	EC	6871	A	N9-C1'-C2'	6.62	121.93	112.00
17	Q	26	PHE	N-CA-C	-6.61	104.97	113.16
18	R	102	LYS	N-CA-C	-6.57	104.74	112.89
41	OA	81	GLY	N-CA-C	6.55	118.03	111.21
8	H	180	LYS	N-CA-C	-6.55	103.83	110.97
5	E	212	PRO	N-CA-C	6.55	120.89	111.13
75	WB	81	ARG	N-CA-C	-6.54	106.25	114.56
53	AB	218	LEU	CB-CA-C	-6.54	109.02	116.54
2	B	2506	U	N1-C1'-C2'	6.53	121.80	112.00
23	W	69	SER	N-CA-C	-6.52	104.80	112.89
2	B	1144	U	N1-C1'-C2'	6.51	123.77	114.00
67	OB	85	VAL	CA-C-N	-6.48	111.74	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
67	OB	85	VAL	C-N-CA	-6.48	111.74	119.84
2	B	2798	C	N1-C1'-C2'	6.48	121.72	112.00
2	B	632	G	N9-C1'-C2'	6.47	121.70	112.00
74	VB	132	ARG	N-CA-C	-6.46	105.40	113.28
5	E	11	GLU	N-CA-C	-6.46	104.88	112.89
16	P	114	ARG	N-CA-C	-6.45	104.89	112.89
2	B	3269	U	C2'-C3'-O3'	6.44	119.16	109.50
9	I	23	ARG	N-CA-C	-6.43	105.25	113.23
1	A	1024	U	N1-C1'-C2'	6.42	121.63	112.00
2	B	3167	A	N9-C1'-C2'	6.41	121.61	112.00
40	NA	85	ALA	N-CA-C	-6.39	104.41	111.82
58	FB	151	LYS	N-CA-C	-6.38	105.63	113.41
20	T	75	ALA	CA-C-N	6.36	127.79	119.84
20	T	75	ALA	C-N-CA	6.36	127.79	119.84
28	BA	32	GLN	N-CA-C	-6.36	105.83	113.97
48	VA	70	LEU	CA-C-N	6.36	127.79	119.84
48	VA	70	LEU	C-N-CA	6.36	127.79	119.84
1	A	1757	G	N9-C1'-C2'	6.33	121.50	112.00
48	VA	59	VAL	N-CA-C	-6.33	103.70	112.50
62	JB	139	HIS	N-CA-C	-6.33	105.13	112.92
83	EC	6927	U	N1-C1'-C2'	6.33	121.50	112.00
78	ZB	46	GLY	CA-C-N	6.30	126.52	119.90
78	ZB	46	GLY	C-N-CA	6.30	126.52	119.90
2	B	1549	U	N1-C1'-C2'	6.29	121.44	112.00
2	B	3218	A	C2'-C3'-O3'	6.29	123.13	113.70
65	MB	79	HIS	N-CA-C	-6.29	105.61	113.28
48	VA	69	ASP	N-CA-C	-6.28	104.51	111.36
54	BB	17	HIS	N-CA-C	-6.27	105.59	113.18
48	VA	106	ALA	N-CA-C	6.27	124.15	110.80
38	LA	27	GLY	N-CA-C	-6.25	107.80	114.67
8	H	144	LYS	N-CA-C	-6.22	105.45	113.16
22	V	34	THR	N-CA-C	-6.21	104.60	111.36
82	DC	807	ASP	CA-C-N	6.20	125.89	119.56
82	DC	807	ASP	C-N-CA	6.20	125.89	119.56
58	FB	112	TRP	N-CA-C	-6.19	105.89	113.50
12	L	76	ALA	N-CA-C	-6.17	104.12	113.51
2	B	1352	A	C2'-C3'-O3'	6.17	118.75	109.50
2	B	280	U	N1-C1'-C2'	6.16	121.24	112.00
4	D	120	C	N1-C1'-C2'	6.15	121.23	112.00
23	W	66	HIS	N-CA-C	-6.15	104.13	111.69
2	B	640	U	N1-C1'-C2'	6.15	121.22	112.00
58	FB	91	VAL	N-CA-C	-6.14	106.53	111.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	I	140	ARG	CA-C-N	6.14	127.52	119.84
9	I	140	ARG	C-N-CA	6.14	127.52	119.84
10	J	152	THR	CA-C-N	6.14	126.46	119.83
10	J	152	THR	C-N-CA	6.14	126.46	119.83
7	G	349	LYS	N-CA-C	-6.13	104.51	111.14
12	L	65	LEU	N-CA-C	-6.12	105.77	113.18
20	T	109	PRO	CA-C-N	6.12	126.68	120.38
20	T	109	PRO	C-N-CA	6.12	126.68	120.38
55	CB	141	GLY	CA-C-N	6.11	126.12	119.89
55	CB	141	GLY	C-N-CA	6.11	126.12	119.89
49	WA	118	LYS	N-CA-C	-6.10	106.44	114.31
2	B	637	C	C2'-C3'-O3'	6.10	118.65	109.50
50	XA	130	ALA	N-CA-C	-6.10	105.69	113.01
12	L	193	LYS	N-CA-C	-6.10	105.75	113.43
10	J	46	ARG	N-CA-C	-6.09	106.21	113.21
36	JA	37	GLY	N-CA-C	6.09	119.56	111.03
17	Q	20	GLU	N-CA-C	-6.09	105.08	113.18
41	OA	9	GLY	N-CA-C	6.08	119.56	112.50
8	H	303	GLY	N-CA-C	6.08	118.92	111.93
83	EC	6939	C	N1-C1'-C2'	6.08	121.11	112.00
48	VA	66	PHE	N-CA-C	-6.07	106.20	113.97
2	B	2288	G	N9-C1'-C2'	6.07	121.11	112.00
34	HA	103	THR	CB-CA-C	-6.07	108.33	117.07
35	IA	63	GLY	N-CA-C	6.05	118.97	110.38
1	A	1772	C	N1-C1'-C2'	6.05	121.07	112.00
27	AA	126	TRP	CA-C-N	6.04	125.26	118.97
27	AA	126	TRP	C-N-CA	6.04	125.26	118.97
33	GA	41	ARG	N-CA-C	-6.03	104.79	111.36
50	XA	201	LEU	N-CA-C	-6.02	104.29	111.69
2	B	2525	G	C2'-C3'-O3'	6.01	122.72	113.70
76	XB	91	ASP	N-CA-C	-6.01	104.54	112.72
40	NA	48	ALA	N-CA-C	-6.00	106.50	113.88
54	BB	105	VAL	N-CA-C	-5.99	105.86	113.22
7	G	350	ALA	N-CA-C	-5.98	98.98	108.73
18	R	117	ARG	N-CA-C	-5.96	104.72	112.23
2	B	922	U	N1-C1'-C2'	5.95	120.92	112.00
23	W	45	VAL	N-CA-C	-5.94	106.47	113.42
10	J	3	ALA	N-CA-C	-5.93	104.20	112.45
13	M	32	GLY	N-CA-C	5.93	117.89	110.29
65	MB	99	GLY	N-CA-C	-5.92	107.52	115.21
2	B	169	U	C2'-C3'-O3'	5.91	118.37	109.50
1	A	824	G	N9-C1'-C2'	5.91	120.86	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
59	GB	40	LYS	N-CA-C	-5.90	105.57	112.89
23	W	182	ASP	N-CA-C	-5.90	106.21	113.41
41	OA	70	VAL	N-CA-C	5.90	116.68	110.72
14	N	18	PRO	N-CA-C	5.90	119.92	111.13
62	JB	87	PRO	N-CA-C	5.89	120.44	111.19
34	HA	76	GLU	N-CA-C	-5.88	106.24	113.41
23	W	174	ALA	N-CA-C	-5.88	106.11	113.28
30	DA	40	ARG	N-CA-C	-5.88	105.96	113.01
42	PA	70	PRO	N-CA-C	5.87	117.86	110.70
17	Q	114	GLN	N-CA-C	-5.87	104.80	111.14
2	B	1815	U	C2'-C3'-O3'	5.87	118.30	109.50
12	L	246	MET	N-CA-C	-5.87	105.61	112.89
75	WB	80	LEU	N-CA-C	-5.87	106.75	112.97
24	X	68	HIS	CA-C-N	5.86	126.63	120.12
24	X	68	HIS	C-N-CA	5.86	126.63	120.12
72	TB	23	ARG	N-CA-C	-5.86	107.12	114.56
83	EC	6944	U	N1-C1'-C2'	5.85	120.77	112.00
63	KB	130	ARG	N-CA-C	-5.84	105.65	112.89
17	Q	82	ALA	N-CA-C	-5.82	106.22	113.15
19	S	201	ARG	N-CA-C	-5.82	103.92	111.02
82	DC	701	GLY	N-CA-C	5.82	120.02	110.77
47	UA	33	GLN	N-CA-C	-5.82	106.81	114.31
58	FB	105	ASP	N-CA-C	-5.81	106.32	113.41
2	B	1254	C	N1-C1'-C2'	5.81	120.72	112.00
27	AA	79	VAL	N-CA-C	-5.80	108.20	113.71
2	B	1657	C	N1-C1'-C2'	5.79	122.69	114.00
2	B	1556	C	N1-C1'-C2'	5.79	120.69	112.00
2	B	1843	C	N1-C1'-C2'	5.79	120.69	112.00
8	H	129	THR	N-CA-C	-5.79	104.74	113.89
9	I	285	ARG	N-CA-C	-5.79	105.71	112.89
9	I	219	PHE	N-CA-C	-5.79	106.22	113.28
8	H	329	PRO	N-CA-C	-5.77	108.68	114.68
33	GA	48	HIS	N-CA-C	-5.77	105.07	111.36
34	HA	75	ASN	N-CA-C	-5.77	106.20	113.18
83	EC	6913	U	N1-C1'-C2'	5.77	120.65	112.00
54	BB	82	TYR	CA-C-N	5.76	127.05	119.84
54	BB	82	TYR	C-N-CA	5.76	127.05	119.84
61	IB	48	ALA	N-CA-C	-5.76	106.15	112.72
1	A	418	G	N9-C1'-C2'	5.76	120.64	112.00
35	IA	31	ARG	N-CA-C	-5.76	105.14	111.82
83	EC	6883	A	N9-C1'-C2'	5.75	120.63	112.00
23	W	86	GLU	N-CA-C	-5.75	106.60	113.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	U	55	GLN	N-CA-C	-5.74	106.63	113.97
29	CA	61	LYS	N-CA-C	-5.74	107.52	114.75
23	W	143	ILE	N-CA-C	-5.74	104.53	112.50
36	JA	44	ARG	N-CA-C	-5.73	105.55	112.54
2	B	854	G	N9-C1'-C2'	5.73	120.59	112.00
2	B	1262	G	N9-C1'-C2'	5.73	120.59	112.00
32	FA	114	GLY	N-CA-C	5.73	121.97	110.97
2	B	609	G	N9-C1'-C2'	5.72	120.58	112.00
1	A	453	U	N1-C1'-C2'	5.72	120.58	112.00
17	Q	93	ILE	N-CA-C	-5.72	106.64	111.56
82	DC	748	ASN	N-CA-C	-5.72	106.39	113.19
2	B	2268	U	N1-C1'-C2'	5.71	120.56	112.00
11	K	236	ILE	N-CA-C	-5.70	107.42	112.90
11	K	203	TRP	CA-C-N	5.70	126.97	119.84
11	K	203	TRP	C-N-CA	5.70	126.97	119.84
8	H	105	THR	N-CA-C	-5.70	105.59	112.54
13	M	121	LYS	N-CA-C	-5.69	106.31	113.20
2	B	190	U	N1-C1'-C2'	5.67	120.50	112.00
82	DC	325	ARG	N-CA-C	-5.67	106.33	113.18
82	DC	755	VAL	N-CA-C	-5.66	105.59	110.74
82	DC	471	THR	N-CA-C	-5.65	107.63	114.75
9	I	120	LYS	N-CA-C	-5.65	107.63	114.75
52	ZA	73	LEU	CA-C-N	5.65	126.90	119.84
52	ZA	73	LEU	C-N-CA	5.65	126.90	119.84
3	C	100	U	N1-C1'-C2'	5.65	120.47	112.00
2	B	2375	G	N9-C1'-C2'	5.65	122.47	114.00
52	ZA	191	ALA	N-CA-C	-5.64	106.94	113.88
22	V	29	LEU	N-CA-C	-5.64	105.28	111.82
2	B	1049	C	N1-C1'-C2'	5.63	120.45	112.00
55	CB	121	ILE	N-CA-C	-5.63	105.03	110.72
23	W	175	GLN	N-CA-C	-5.62	106.55	113.41
38	LA	84	CYS	N-CA-C	-5.62	106.26	113.01
74	VB	114	ARG	N-CA-C	-5.62	105.92	112.89
19	S	20	ARG	N-CA-C	-5.62	105.69	112.54
39	MA	26	LYS	N-CA-C	-5.61	105.69	112.54
39	MA	84	LYS	CB-CA-C	-5.61	109.12	115.79
68	PB	108	LYS	N-CA-C	-5.61	105.70	112.54
10	J	83	TYR	N-CA-C	-5.60	106.48	113.15
82	DC	242	ASP	N-CA-C	-5.60	106.41	113.18
2	B	906	A	N9-C1'-C2'	5.60	122.39	114.00
2	B	978	G	N9-C1'-C2'	5.58	120.38	112.00
1	A	280	U	N1-C1'-C2'	5.58	120.37	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	2359	C	N1-C1'-C2'	5.58	120.37	112.00
61	IB	145	ALA	N-CA-C	-5.58	105.97	112.89
69	QB	139	THR	N-CA-C	-5.58	106.44	113.18
2	B	2310	U	N1-C1'-C2'	5.57	120.35	112.00
38	LA	96	GLU	N-CA-C	-5.57	106.62	113.41
56	DB	61	PHE	CA-C-N	5.57	125.77	120.31
56	DB	61	PHE	C-N-CA	5.57	125.77	120.31
24	X	124	LEU	CA-C-O	5.56	121.17	117.94
21	U	91	VAL	N-CA-C	-5.55	104.00	111.44
20	T	45	GLY	N-CA-C	5.55	118.81	111.70
5	E	114	GLU	N-CA-C	5.55	117.01	111.07
67	OB	90	ALA	N-CA-C	-5.55	98.98	110.80
82	DC	545	LEU	N-CA-C	-5.55	106.51	113.28
69	QB	41	SER	N-CA-C	-5.54	106.37	113.02
69	QB	14	PHE	N-CA-C	-5.54	105.16	111.14
81	CC	144	CYS	N-CA-C	-5.54	102.81	110.35
59	GB	167	ALA	CB-CA-C	-5.54	110.21	116.63
6	F	212	GLY	N-CA-C	5.53	126.29	113.18
65	MB	75	PRO	N-CA-C	5.53	119.89	111.15
82	DC	105	SER	CA-C-N	5.53	125.53	119.89
82	DC	105	SER	C-N-CA	5.53	125.53	119.89
56	DB	143	LYS	N-CA-C	-5.53	107.08	113.88
19	S	180	PHE	N-CA-C	-5.53	106.74	112.93
48	VA	56	ASN	N-CA-C	-5.52	106.62	113.19
82	DC	631	ARG	N-CA-C	-5.52	106.52	113.20
48	VA	147	ARG	N-CA-C	-5.52	105.89	113.56
8	H	139	GLY	N-CA-C	5.52	118.95	111.72
46	TA	51	GLY	N-CA-C	-5.51	103.84	113.76
18	R	123	LEU	N-CA-C	-5.51	105.35	111.36
2	B	2502	A	N9-C1'-C2'	5.51	122.26	114.00
23	W	5	ARG	N-CA-C	-5.51	105.38	111.71
2	B	998	A	N9-C1'-C2'	5.50	120.25	112.00
18	R	85	TRP	N-CA-C	-5.50	104.92	111.69
76	XB	19	LYS	CA-C-N	5.50	125.97	120.52
76	XB	19	LYS	C-N-CA	5.50	125.97	120.52
13	M	40	HIS	N-CA-C	-5.50	107.82	114.75
57	EB	82	GLU	N-CA-C	-5.50	106.89	113.21
27	AA	87	ARG	N-CA-C	-5.49	103.13	110.55
82	DC	206	ARG	N-CA-C	-5.49	106.49	114.12
17	Q	80	VAL	N-CA-C	-5.49	104.87	112.50
8	H	355	PHE	N-CA-C	-5.48	105.38	111.36
17	Q	48	PRO	N-CA-C	5.48	123.76	112.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
76	XB	97	PRO	N-CA-C	5.48	117.39	110.70
82	DC	392	GLY	N-CA-C	5.47	120.20	113.79
83	EC	6951	C	N1-C1'-C2'	5.47	120.21	112.00
82	DC	230	ALA	N-CA-C	-5.47	105.48	111.82
63	KB	136	PRO	CA-C-N	5.46	124.98	119.19
63	KB	136	PRO	C-N-CA	5.46	124.98	119.19
12	L	34	PHE	N-CA-C	-5.45	106.35	114.64
71	SB	63	GLY	N-CA-C	-5.45	106.69	115.08
2	B	3329	U	N1-C1'-C2'	5.45	120.17	112.00
36	JA	27	ARG	N-CA-C	-5.45	105.42	111.36
31	EA	107	ARG	N-CA-C	-5.45	106.31	113.12
55	CB	115	LYS	N-CA-C	-5.44	105.43	111.36
22	V	31	LYS	N-CA-C	-5.44	105.46	111.71
61	IB	129	ARG	CA-C-N	5.44	126.64	119.84
61	IB	129	ARG	C-N-CA	5.44	126.64	119.84
2	B	833	G	N9-C1'-C2'	5.43	120.15	112.00
82	DC	669	TRP	N-CA-C	-5.43	105.78	112.90
34	HA	60	ALA	N-CA-C	-5.43	105.44	111.36
83	EC	6803	C	N1-C1'-C2'	5.43	120.14	112.00
1	A	965	U	N1-C1'-C2'	5.43	120.14	112.00
27	AA	22	ILE	CB-CA-C	-5.41	106.51	112.68
72	TB	94	LEU	CA-C-N	5.41	124.60	118.97
72	TB	94	LEU	C-N-CA	5.41	124.60	118.97
17	Q	152	THR	N-CA-C	-5.41	106.61	113.43
10	J	127	ASN	N-CA-C	-5.41	106.04	113.56
2	B	796	U	N1-C1'-C2'	5.40	120.10	112.00
2	B	980	A	N9-C1'-C2'	5.40	120.10	112.00
16	P	122	GLY	N-CA-C	5.40	123.44	114.48
11	K	157	ASN	N-CA-C	-5.40	105.33	112.24
25	Y	49	GLN	N-CA-C	-5.40	107.71	114.56
44	RA	104	PRO	N-CA-C	5.39	117.27	110.70
38	LA	97	GLU	N-CA-C	-5.38	105.85	112.90
2	B	1525	G	N9-C1'-C2'	5.38	120.07	112.00
54	BB	186	GLY	N-CA-C	5.38	119.89	112.52
17	Q	121	SER	N-CA-C	-5.38	106.77	113.38
2	B	2114	C	N1-C1'-C2'	5.37	120.06	112.00
19	S	73	ARG	CA-C-N	5.37	126.56	119.84
19	S	73	ARG	C-N-CA	5.37	126.56	119.84
61	IB	29	LYS	N-CA-C	-5.37	107.38	114.04
1	A	1258	U	N1-C1'-C2'	5.37	120.05	112.00
6	F	184	ARG	N-CA-C	-5.37	106.68	113.18
35	IA	99	ALA	N-CA-C	-5.36	106.87	113.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	637	C	O4'-C4'-C3'	-5.36	100.75	106.10
18	R	93	LYS	N-CA-C	-5.36	106.01	112.54
56	DB	99	GLY	N-CA-C	5.35	119.42	112.25
1	A	1653	C	N1-C1'-C2'	5.35	120.02	112.00
17	Q	188	ARG	N-CA-C	-5.34	106.61	113.23
26	Z	86	LYS	N-CA-C	-5.34	106.44	113.17
82	DC	226	ALA	N-CA-C	-5.34	105.36	111.07
2	B	717	C	N1-C1'-C2'	5.34	120.01	112.00
21	U	96	GLN	N-CA-C	-5.34	105.11	111.03
17	Q	185	LYS	N-CA-C	-5.33	106.28	112.89
2	B	916	G	C4'-C3'-O3'	5.33	120.99	113.00
8	H	358	THR	N-CA-C	-5.33	106.46	113.12
2	B	1128	U	N1-C1'-C2'	5.32	119.98	112.00
8	H	359	LEU	N-CA-C	-5.32	106.86	113.19
54	BB	254	ARG	N-CA-C	-5.32	106.76	113.20
2	B	902	G	N9-C1'-C2'	5.32	119.98	112.00
3	C	46	G	N9-C1'-C2'	5.32	119.97	112.00
19	S	147	ARG	N-CA-C	-5.32	105.57	111.36
8	H	127	ALA	N-CA-C	-5.31	107.10	113.21
2	B	871	U	N1-C1'-C2'	5.31	119.96	112.00
50	XA	126	PRO	N-CA-C	-5.31	107.72	114.35
8	H	83	GLY	N-CA-C	-5.30	107.69	114.37
14	N	45	GLU	N-CA-C	-5.30	106.65	113.23
14	N	196	PHE	CA-C-O	5.30	121.01	117.94
61	IB	22	ASN	CA-C-N	5.29	124.62	118.85
61	IB	22	ASN	C-N-CA	5.29	124.62	118.85
18	R	119	GLN	N-CA-C	-5.29	105.42	111.14
34	HA	77	LEU	N-CA-C	-5.29	106.78	113.18
82	DC	484	SER	N-CA-C	-5.29	104.83	111.92
2	B	1285	G	P-O3'-C3'	-5.29	112.27	120.20
2	B	2306	C	N1-C1'-C2'	5.29	121.93	114.00
52	ZA	42	GLY	N-CA-C	5.28	118.63	112.50
82	DC	448	CYS	CA-C-N	5.28	126.44	119.84
82	DC	448	CYS	C-N-CA	5.28	126.44	119.84
43	QA	39	ALA	N-CA-C	-5.28	106.61	113.16
2	B	1706	C	N1-C1'-C2'	5.28	119.91	112.00
53	AB	111	ASN	N-CA-C	-5.28	106.79	114.12
7	G	368	GLY	N-CA-C	5.27	118.78	110.71
8	H	43	ASN	N-CA-C	-5.27	106.35	112.89
9	I	282	ARG	N-CA-C	-5.27	105.70	111.82
1	A	1616	G	N9-C1'-C2'	5.27	119.90	112.00
1	A	583	C	N1-C1'-C2'	5.26	119.88	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	3077	A	N9-C1'-C2'	5.26	119.88	112.00
2	B	814	U	N1-C1'-C2'	5.25	119.88	112.00
21	U	53	ASP	N-CA-C	-5.25	106.55	113.17
23	W	68	GLN	N-CA-C	-5.25	106.02	112.90
1	A	483	A	N9-C1'-C2'	5.25	119.87	112.00
73	UB	114	LYS	N-CA-C	-5.25	106.65	113.16
1	A	1425	A	N9-C1'-C2'	5.24	119.87	112.00
2	B	1035	G	N9-C1'-C2'	5.24	119.85	112.00
8	H	84	ARG	N-CA-C	-5.24	106.94	113.38
2	B	2712	U	N1-C1'-C2'	5.23	119.85	112.00
46	TA	47	GLN	N-CA-C	-5.23	106.40	112.89
2	B	3204	C	N1-C1'-C2'	5.23	119.85	112.00
36	JA	54	LYS	N-CA-C	-5.23	101.91	109.59
2	B	882	A	N9-C1'-C2'	5.22	119.84	112.00
14	N	213	PHE	CA-C-N	5.22	125.92	120.12
14	N	213	PHE	C-N-CA	5.22	125.92	120.12
2	B	346	C	N1-C1'-C2'	5.22	119.83	112.00
24	X	168	PRO	N-CA-C	5.22	119.41	111.11
31	EA	121	ARG	N-CA-C	-5.22	106.50	112.92
1	A	1391	A	N9-C1'-C2'	5.22	119.82	112.00
1	A	1344	A	C2'-C3'-O3'	5.21	121.52	113.70
7	G	195	ALA	N-CA-C	-5.21	105.49	111.07
8	H	69	ARG	N-CA-C	-5.21	108.18	114.75
9	I	211	LEU	N-CA-C	-5.20	108.69	114.62
30	DA	51	ARG	N-CA-C	5.20	115.01	108.45
37	KA	89	LEU	CA-C-N	5.20	126.23	120.45
37	KA	89	LEU	C-N-CA	5.20	126.23	120.45
2	B	1921	A	N9-C1'-C2'	5.20	119.80	112.00
2	B	1939	G	N9-C1'-C2'	5.20	119.80	112.00
2	B	2726	C	N1-C1'-C2'	5.20	119.80	112.00
83	EC	6793	A	N9-C1'-C2'	5.20	119.80	112.00
6	F	102	LEU	CA-CB-CG	5.20	134.48	116.30
2	B	874	U	N1-C1'-C2'	5.19	119.79	112.00
2	B	2984	C	N1-C1'-C2'	5.19	119.79	112.00
2	B	1644	C	N1-C1'-C2'	5.19	119.79	112.00
82	DC	579	SER	CA-C-N	5.19	126.33	119.84
82	DC	579	SER	C-N-CA	5.19	126.33	119.84
8	H	96	GLY	N-CA-C	-5.19	108.46	115.36
69	QB	30	VAL	CA-C-N	5.19	124.36	118.97
69	QB	30	VAL	C-N-CA	5.19	124.36	118.97
8	H	117	GLU	N-CA-C	-5.18	105.72	111.36
30	DA	63	LYS	N-CA-C	-5.18	107.13	112.93

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
83	EC	6918	A	N9-C1'-C2'	5.18	119.76	112.00
67	OB	89	SER	N-CA-C	-5.17	99.79	110.80
1	A	279	G	N9-C1'-C2'	5.17	119.75	112.00
66	NB	72	GLY	N-CA-C	5.16	117.79	111.45
13	M	154	VAL	N-CA-C	-5.16	106.11	111.58
56	DB	218	GLU	N-CA-C	-5.16	106.84	113.23
6	F	182	ALA	N-CA-C	-5.15	107.06	113.19
83	EC	6774	U	N1-C1'-C2'	5.15	119.72	112.00
23	W	89	LEU	CA-C-N	5.14	126.27	119.84
23	W	89	LEU	C-N-CA	5.14	126.27	119.84
2	B	197	G	N9-C1'-C2'	5.14	119.71	112.00
58	FB	149	SER	N-CA-C	-5.14	106.85	113.02
32	FA	9	ARG	N-CA-C	-5.14	106.11	112.38
33	GA	20	GLY	N-CA-C	5.14	120.83	112.61
12	L	67	ILE	N-CA-C	-5.14	107.83	113.43
20	T	173	ALA	N-CA-C	-5.14	106.85	113.01
55	CB	166	ARG	N-CA-C	-5.14	106.52	112.89
48	VA	174	ASN	N-CA-C	-5.13	106.28	112.54
68	PB	7	GLU	CB-CA-C	-5.13	110.67	116.63
21	U	172	GLN	N-CA-C	-5.13	106.99	114.12
74	VB	44	LEU	N-CA-C	-5.13	106.97	113.18
24	X	110	MET	N-CA-C	-5.13	106.53	112.89
17	Q	184	GLU	N-CA-C	-5.13	107.19	113.50
2	B	802	C	N1-C1'-C2'	5.12	119.69	112.00
21	U	173	ARG	N-CA-C	-5.12	107.08	113.38
23	W	87	ALA	N-CA-C	-5.12	106.37	113.18
43	QA	21	ARG	CA-C-N	5.12	126.24	119.84
43	QA	21	ARG	C-N-CA	5.12	126.24	119.84
2	B	608	A	N9-C1'-C2'	5.11	119.67	112.00
2	B	1285	G	O3'-P-O5'	-5.11	96.33	104.00
2	B	1724	U	N1-C1'-C2'	5.11	121.67	114.00
23	W	176	ARG	N-CA-C	-5.11	106.30	112.54
34	HA	17	VAL	N-CA-C	-5.11	106.36	113.00
38	LA	98	GLN	N-CA-C	-5.11	106.56	112.89
12	L	245	LYS	N-CA-C	-5.10	107.06	113.28
23	W	75	HIS	N-CA-C	-5.10	107.41	113.38
5	E	10	ARG	N-CA-C	-5.10	106.22	112.90
14	N	210	ILE	N-CA-C	-5.10	107.45	113.42
9	I	70	THR	N-CA-C	-5.10	105.85	111.71
17	Q	172	LEU	N-CA-C	-5.10	106.91	113.23
29	CA	136	ALA	N-CA-C	-5.09	105.81	111.36
2	B	861	C	N1-C1'-C2'	5.09	119.64	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	1115	G	N9-C1'-C2'	5.09	119.63	112.00
2	B	2801	A	N9-C1'-C2'	5.09	119.63	112.00
5	E	4	ILE	N-CA-C	5.09	111.65	106.21
63	KB	28	LEU	CB-CA-C	-5.09	109.74	115.79
59	GB	43	TYR	N-CA-C	-5.08	105.74	111.28
2	B	637	C	C4'-C3'-O3'	5.08	117.02	109.40
2	B	2612	U	N1-C1'-C2'	5.08	119.63	112.00
11	K	95	ILE	CA-C-N	5.08	125.62	120.38
11	K	95	ILE	C-N-CA	5.08	125.62	120.38
12	L	145	ASN	N-CA-C	-5.08	106.77	113.17
82	DC	544	ASP	N-CA-C	-5.08	105.83	112.23
25	Y	23	GLY	N-CA-C	5.08	120.47	111.02
82	DC	44	GLY	N-CA-C	5.08	119.79	110.95
2	B	283	G	N9-C1'-C2'	5.08	119.62	112.00
4	D	93	C	N1-C1'-C2'	5.08	119.62	112.00
83	EC	6914	A	N9-C1'-C2'	5.08	119.62	112.00
17	Q	38	ALA	N-CA-C	-5.08	105.66	111.14
1	A	1031	U	N1-C1'-C2'	5.07	121.61	114.00
1	A	73	U	N1-C1'-C2'	5.07	121.61	114.00
1	A	888	U	N1-C1'-C2'	5.07	119.61	112.00
24	X	46	GLN	N-CA-C	-5.07	107.38	113.21
8	H	290	ILE	N-CA-C	-5.07	104.94	112.04
55	CB	180	ARG	N-CA-C	-5.07	105.84	111.36
82	DC	637	GLY	N-CA-C	5.07	122.68	112.34
80	BC	48	THR	CB-CA-C	-5.07	109.08	116.53
2	B	384	A	N9-C1'-C2'	5.06	119.59	112.00
82	DC	212	GLY	N-CA-C	5.06	116.86	110.38
12	L	106	LYS	N-CA-C	-5.06	106.61	112.89
52	ZA	241	ASP	N-CA-C	-5.06	106.45	113.18
2	B	2349	U	N1-C1'-C2'	5.05	119.58	112.00
2	B	366	A	N9-C1'-C2'	5.05	119.58	112.00
15	O	98	ALA	N-CA-C	-5.05	107.09	113.20
54	BB	18	TRP	N-CA-C	-5.05	106.71	112.92
6	F	195	SER	N-CA-C	-5.04	106.97	112.72
2	B	2826	U	N1-C1'-C2'	5.04	119.56	112.00
8	H	230	VAL	N-CA-C	-5.04	104.98	112.04
2	B	1865	A	N9-C1'-C2'	5.04	119.56	112.00
5	E	139	SER	CA-C-N	5.04	127.29	120.44
5	E	139	SER	C-N-CA	5.04	127.29	120.44
20	T	174	PHE	N-CA-C	-5.04	105.88	112.23
31	EA	118	PHE	N-CA-C	-5.04	107.10	113.20
66	NB	117	LEU	N-CA-C	-5.04	108.16	114.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	F	176	ASP	N-CA-C	-5.03	107.11	113.20
3	C	54	A	N9-C1'-C2'	5.03	119.55	112.00
21	U	100	ALA	N-CA-C	-5.03	106.66	112.89
49	WA	250	TYR	N-CA-C	-5.03	106.99	112.72
25	Y	22	HIS	CB-CA-C	-5.03	109.83	117.07
79	AC	32	ARG	N-CA-C	-5.02	107.31	112.93
41	OA	3	LYS	N-CA-C	-5.02	107.11	113.18
2	B	217	U	N1-C1'-C2'	5.01	119.52	112.00
12	L	91	PHE	N-CA-C	-5.01	108.43	114.75
2	B	806	A	N9-C1'-C2'	5.01	119.52	112.00
11	K	96	PRO	N-CA-C	5.01	116.81	110.70
82	DC	481	MET	CB-CA-C	-5.01	109.33	116.34
2	B	400	G	N9-C1'-C2'	5.01	121.52	114.00
30	DA	4	GLN	N-CA-C	-5.01	107.22	113.38
2	B	1295	G	N9-C1'-C2'	5.01	119.51	112.00
34	HA	103	THR	CA-C-O	5.00	120.84	117.94
42	PA	69	LEU	CA-C-N	5.00	125.53	120.38
42	PA	69	LEU	C-N-CA	5.00	125.53	120.38

There are no chirality outliers.

All (100) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1058	U	Sidechain
1	A	1094	G	Sidechain
1	A	1108	G	Sidechain
1	A	1126	G	Sidechain
1	A	1147	A	Sidechain
1	A	1255	G	Sidechain
1	A	1524	A	Sidechain
1	A	1553	G	Sidechain
1	A	1727	G	Sidechain
1	A	313	U	Sidechain
1	A	324	U	Sidechain
1	A	447	U	Sidechain
1	A	53	G	Sidechain
1	A	568	G	Sidechain
2	B	1128	U	Sidechain
2	B	1143	A	Sidechain
2	B	1144	U	Sidechain
2	B	1159	A	Sidechain
2	B	1163	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1194	G	Sidechain
2	B	1218	U	Sidechain
2	B	1258	U	Sidechain
2	B	1262	G	Sidechain
2	B	1318	A	Sidechain
2	B	1382	G	Sidechain
2	B	1438	U	Sidechain
2	B	1520	G	Sidechain
2	B	1646	G	Sidechain
2	B	1695	U	Sidechain
2	B	1713	G	Sidechain
2	B	1880	U	Sidechain
2	B	1904	C	Sidechain
2	B	1905	G	Sidechain
2	B	1912	U	Sidechain
2	B	1921	A	Sidechain
2	B	1930	A	Sidechain
2	B	1932	A	Sidechain
2	B	2137	U	Sidechain
2	B	2141	U	Sidechain
2	B	217	U	Sidechain
2	B	2192	C	Sidechain
2	B	22	G	Sidechain
2	B	2243	A	Sidechain
2	B	2339	C	Sidechain
2	B	2368	A	Sidechain
2	B	2395	G	Sidechain
2	B	2403	G	Sidechain
2	B	2434	U	Sidechain
2	B	2506	U	Sidechain
2	B	2510	U	Sidechain
2	B	2511	A	Sidechain
2	B	2642	A	Sidechain
2	B	2725	U	Sidechain
2	B	2749	G	Sidechain
2	B	2778	G	Sidechain
2	B	2790	A	Sidechain
2	B	2798	C	Sidechain
2	B	2869	U	Sidechain
2	B	2886	U	Sidechain
2	B	2888	U	Sidechain
2	B	2910	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2921	U	Sidechain
2	B	3006	A	Sidechain
2	B	3084	C	Sidechain
2	B	3140	G	Sidechain
2	B	3151	U	Sidechain
2	B	322	U	Sidechain
2	B	325	A	Sidechain
2	B	3270	U	Sidechain
2	B	3288	G	Sidechain
2	B	406	G	Sidechain
2	B	424	G	Sidechain
2	B	553	U	Sidechain
2	B	563	U	Sidechain
2	B	640	U	Sidechain
2	B	808	A	Sidechain
2	B	833	G	Sidechain
2	B	850	U	Sidechain
2	B	869	G	Sidechain
2	B	889	U	Sidechain
2	B	902	G	Sidechain
2	B	91	G	Sidechain
2	B	932	U	Sidechain
2	B	980	A	Sidechain
2	B	987	U	Sidechain
2	B	998	A	Sidechain
3	C	131	A	Sidechain
3	C	18	U	Sidechain
3	C	39	G	Sidechain
3	C	70	G	Sidechain
3	C	71	A	Sidechain
3	C	87	G	Sidechain
4	D	120	C	Sidechain
4	D	89	G	Sidechain
83	EC	6841	U	Sidechain
83	EC	6859	U	Sidechain
83	EC	6892	U	Sidechain
83	EC	6907	G	Sidechain
83	EC	6930	G	Sidechain
50	XA	167	LYS	Mainchain

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	A	36760	0	18348	1353	0
2	B	70288	0	35262	3579	0
3	C	3354	0	1695	188	0
4	D	2580	0	1304	127	0
5	E	1359	0	1425	101	0
6	F	1918	0	1987	262	0
7	G	3082	0	3165	367	0
8	H	2750	0	2863	337	0
9	I	2376	0	2325	221	0
10	J	1401	0	1501	145	0
11	K	1785	0	1862	197	0
12	L	1818	0	1908	194	0
13	M	1519	0	1587	157	0
14	N	1718	0	1754	172	0
15	O	1354	0	1383	91	0
16	P	723	0	774	98	0
17	Q	1543	0	1608	213	0
18	R	1054	0	1149	161	0
19	S	1721	0	1779	248	0
20	T	1556	0	1659	208	0
21	U	1443	0	1485	147	0
22	V	1442	0	1543	201	0
23	W	1522	0	1617	119	0
24	X	1446	0	1487	205	0
25	Y	1277	0	1323	152	0
26	Z	796	0	812	48	0
27	AA	1004	0	1048	95	0
28	BA	509	0	537	70	0
29	CA	969	0	1036	74	0
30	DA	994	0	1081	114	0
31	EA	1093	0	1155	117	0
32	FA	1174	0	1215	170	0
33	GA	463	0	491	47	0
34	HA	743	0	797	87	0
35	IA	890	0	938	80	0
36	JA	1020	0	1090	119	0
37	KA	851	0	880	96	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	LA	881	0	949	104	0
39	MA	970	0	1078	112	0
40	NA	772	0	849	85	0
41	OA	682	0	687	95	0
42	PA	613	0	682	20	0
43	QA	437	0	475	51	0
44	RA	418	0	459	48	0
45	SA	234	0	284	16	0
46	TA	848	0	918	112	0
47	UA	695	0	738	72	0
48	VA	1473	0	1514	186	0
49	WA	2445	0	2401	159	0
50	XA	1612	0	1623	153	0
51	YA	856	0	226	4	0
52	ZA	1635	0	1723	139	0
53	AB	1734	0	1817	129	0
54	BB	2069	0	2154	227	0
55	CB	1610	0	1675	163	0
56	DB	1820	0	1918	118	0
57	EB	1481	0	1572	132	0
58	FB	1490	0	1525	158	0
59	GB	1494	0	1573	124	0
60	HB	817	0	804	66	0
61	IB	1245	0	1314	106	0
62	JB	496	0	141	0	0
63	KB	1193	0	1255	101	0
64	LB	508	0	151	4	0
65	MB	975	0	1017	71	0
66	NB	1106	0	1166	124	0
67	OB	836	0	827	87	0
68	PB	1193	0	1222	82	0
69	QB	1113	0	1124	91	0
70	RB	856	0	917	75	0
71	SB	685	0	672	75	0
72	TB	1022	0	1060	111	0
73	UB	1122	0	1196	126	0
74	VB	1074	0	1132	78	0
75	WB	563	0	603	56	0
76	XB	388	0	96	2	0
77	YB	611	0	633	39	0
78	ZB	498	0	535	48	0
79	AC	444	0	436	30	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
80	BC	475	0	525	28	0
81	CC	284	0	76	1	0
82	DC	6419	0	6493	605	0
83	EC	4129	0	2078	96	0
84	DC	28	0	12	2	0
85	DC	1	0	0	0	0
86	DC	35	0	41	2	0
All	All	212680	0	156239	12595	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 34.

All (12595) 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)
37:KA:67:MET:CE	37:KA:67:MET:SD	2.03	1.47
66:NB:93:HIS:HA	66:NB:97:VAL:HB	1.20	1.19
2:B:1494:U:H4'	2:B:1495:U:H5'	1.24	1.14
2:B:2954:U:H4'	2:B:2955:U:H5'	1.26	1.13
2:B:1719:G:H4'	2:B:1732:U:H4'	1.30	1.11
2:B:2442:G:H2'	2:B:2443:A:H5"	1.32	1.11
2:B:786:A:H5'	22:V:147:ARG:HA	1.28	1.11
2:B:1818:U:H2'	2:B:1819:U:H5"	1.32	1.11
71:SB:34:ILE:HB	71:SB:53:TYR:HB2	1.32	1.11
2:B:1231:A:H5"	2:B:1232:C:H5'	1.33	1.10
19:S:71:ARG:HB3	19:S:92:LEU:HD23	1.30	1.10
2:B:1887:A:H4'	7:G:227:GLU:HA	1.26	1.10
1:A:1227:A:H4'	1:A:1228:G:H5"	1.34	1.09
32:FA:79:TRP:HA	32:FA:82:ILE:HD13	1.33	1.08
2:B:874:U:H5'	2:B:875:G:H5'	1.32	1.08
74:VB:91:LEU:HD22	74:VB:96:LEU:HD22	1.36	1.08
1:A:1386:G:H3'	67:OB:44:LYS:HZ1	1.19	1.07
5:E:132:GLY:HA3	83:EC:6818:G:H1'	1.37	1.07
49:WA:41:THR:HG21	49:WA:62:LYS:HG2	1.33	1.07
82:DC:204:PRO:HG3	82:DC:209:VAL:HB	1.26	1.07
40:NA:60:LEU:HD11	40:NA:68:ARG:HD2	1.33	1.07
30:DA:39:LEU:HA	30:DA:42:GLN:HB2	1.34	1.07
82:DC:593:ILE:HG12	82:DC:685:ARG:HB2	1.37	1.06
21:U:71:ALA:HA	21:U:74:LYS:HG3	1.36	1.06
2:B:546:C:H5'	2:B:547:G:H5'	1.36	1.06
1:A:332:U:H5'	58:FB:30:GLY:HA2	1.37	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:115:VAL:HG11	19:S:160:GLU:HB3	1.34	1.06
27:AA:90:GLY:HA3	28:BA:16:GLY:HA2	1.30	1.06
82:DC:632:LYS:HB3	82:DC:648:ASP:HB3	1.37	1.06
38:LA:57:LEU:HD13	38:LA:62:TYR:HA	1.38	1.05
18:R:21:VAL:HG13	18:R:65:LEU:HD23	1.39	1.04
3:C:41:A:H4'	41:OA:59:THR:HG22	1.36	1.04
10:J:41:ILE:HB	10:J:85:ILE:HB	1.38	1.04
1:A:71:A:H2'	1:A:72:A:H4'	1.40	1.04
6:F:227:ARG:HB2	6:F:239:ALA:HB2	1.35	1.04
1:A:1035:G:H4'	72:TB:2:THR:HG23	1.39	1.04
35:IA:72:ARG:HB3	35:IA:96:VAL:HG21	1.40	1.03
48:VA:5:ARG:HA	48:VA:8:LYS:HD3	1.40	1.03
60:HB:21:VAL:HB	60:HB:66:TYR:HB2	1.40	1.03
2:B:2990:G:H5'	7:G:20:LYS:HB3	1.39	1.03
2:B:1317:A:H4'	20:T:18:ARG:HH22	1.24	1.03
17:Q:105:ASN:HD21	40:NA:17:VAL:HB	1.22	1.03
82:DC:106:PRO:HG3	82:DC:114:GLU:HB2	1.41	1.03
8:H:32:PRO:HD2	22:V:24:VAL:HG21	1.37	1.02
8:H:222:VAL:HG13	8:H:225:VAL:HB	1.40	1.02
2:B:364:G:H5"	8:H:84:ARG:HG2	1.41	1.02
2:B:1235:U:H4'	2:B:1236:G:H5'	1.39	1.02
1:A:478:A:H5'	59:GB:127:VAL:HG21	1.39	1.02
24:X:13:ARG:HA	24:X:56:GLY:HA2	1.39	1.02
1:A:1685:G:H2'	1:A:1686:C:H5"	1.37	1.02
16:P:133:LEU:HA	16:P:137:GLN:HG3	1.42	1.02
17:Q:59:ARG:HA	17:Q:69:VAL:HA	1.36	1.01
63:KB:33:VAL:HG11	63:KB:66:ILE:HG12	1.39	1.01
2:B:1830:G:H22	3:C:114:G:H5'	1.21	1.01
38:LA:58:ARG:HE	38:LA:59:PRO:HD2	1.24	1.01
18:R:55:ARG:HH21	18:R:77:ARG:HA	1.24	1.01
82:DC:154:VAL:HA	82:DC:202:VAL:HG11	1.42	1.01
25:Y:89:LEU:HD11	25:Y:91:LEU:HD12	1.39	1.01
4:D:64:A:H5'	4:D:65:G:H5"	1.41	1.00
14:N:42:THR:HG22	14:N:45:GLU:HG3	1.43	1.00
82:DC:220:PHE:HB3	82:DC:328:LEU:HD13	1.43	1.00
73:UB:51:GLY:HA2	73:UB:77:ILE:HG13	1.42	1.00
2:B:1485:G:H22	2:B:1857:C:H42	1.06	1.00
37:KA:59:VAL:HG23	37:KA:60:ARG:H	1.25	1.00
49:WA:13:LEU:HB2	49:WA:310:ILE:HB	1.42	1.00
18:R:98:SER:HA	18:R:101:LYS:HB2	1.44	0.99
6:F:3:ARG:HG2	6:F:4:VAL:H	1.25	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:58:GLY:HA3	19:S:142:ILE:HD11	1.44	0.99
20:T:35:VAL:HB	20:T:104:VAL:HG13	1.45	0.99
30:DA:60:ARG:HG3	30:DA:103:LYS:HD2	1.38	0.99
82:DC:809:LEU:HD13	82:DC:832:VAL:HB	1.41	0.99
8:H:276:LEU:HD22	8:H:277:PRO:HD2	1.44	0.99
2:B:509:U:H2'	2:B:510:G:H5"	1.43	0.99
1:A:62:A:H4'	1:A:269:G:H4'	1.43	0.99
2:B:211:A:H5'	2:B:229:G:H1'	1.40	0.99
82:DC:289:MET:HG2	82:DC:320:LEU:HD12	1.45	0.99
2:B:1380:G:H5"	8:H:191:LYS:HB2	1.41	0.99
82:DC:79:SER:HB3	82:DC:98:PHE:HB2	1.44	0.99
2:B:1604:G:H2'	2:B:1605:A:H5"	1.42	0.98
21:U:23:ARG:HA	21:U:143:PRO:HB3	1.44	0.98
22:V:177:GLY:HA2	22:V:184:PHE:HB2	1.45	0.98
82:DC:747:LEU:HD12	82:DC:752:GLY:HA3	1.46	0.98
82:DC:45:ILE:H	82:DC:77:LEU:HA	1.24	0.98
82:DC:164:LEU:HD21	82:DC:174:LEU:HD22	1.42	0.98
82:DC:296:ILE:HB	82:DC:297:PRO:HD3	1.46	0.98
49:WA:18:GLY:HA3	49:WA:38:ARG:HB2	1.45	0.98
1:A:991:G:H4'	1:A:1786:G:H4'	1.44	0.98
82:DC:335:LEU:HA	82:DC:338:ILE:HD12	1.44	0.98
82:DC:445:ILE:HG12	82:DC:446:ASP:H	1.29	0.98
1:A:56:U:H4'	1:A:57:G:H5'	1.44	0.98
2:B:2439:A:H2'	2:B:2440:G:C8	1.98	0.98
11:K:86:VAL:HG22	11:K:136:TYR:HB3	1.46	0.98
82:DC:207:GLY:HA2	82:DC:222:ILE:HD11	1.44	0.98
2:B:1301:A:H4'	2:B:1302:A:H5"	1.45	0.98
2:B:1294:A:HO2'	2:B:1295:G:H8	1.05	0.97
2:B:3343:G:H4'	2:B:3362:A:H61	1.26	0.97
65:MB:60:LEU:HA	65:MB:76:VAL:HG21	1.46	0.97
1:A:806:A:H3'	1:A:807:A:H5"	1.45	0.97
2:B:2853:A:H5'	14:N:3:ARG:HH21	1.28	0.97
2:B:3312:U:H5"	7:G:25:ILE:HD12	1.43	0.97
2:B:1138:U:H4'	11:K:97:PRO:HG3	1.45	0.97
43:QA:24:PRO:HB2	43:QA:27:ILE:HD13	1.46	0.97
50:XA:76:ILE:HB	50:XA:123:VAL:HG12	1.47	0.97
82:DC:578:LYS:HB3	82:DC:585:ARG:HG2	1.46	0.97
1:A:1291:G:H1	1:A:1324:G:H22	1.11	0.97
2:B:1694:U:H1'	38:LA:26:PRO:HA	1.45	0.97
5:E:126:PRO:HA	5:E:130:LYS:HD3	1.46	0.97
1:A:866:G:H5"	63:KB:3:ARG:H	1.29	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:30:VAL:HG13	22:V:49:LEU:HD21	1.44	0.97
19:S:35:VAL:HA	19:S:65:ARG:HE	1.30	0.96
52:ZA:41:LEU:HD11	52:ZA:63:VAL:HG12	1.46	0.96
2:B:3191:G:H5"	20:T:176:LYS:HG3	1.45	0.96
2:B:1234:G:H5"	16:P:118:ASP:HB2	1.47	0.96
50:XA:49:ASN:HA	67:OB:109:LEU:HD11	1.47	0.96
8:H:64:SER:HA	8:H:75:PRO:HA	1.48	0.96
30:DA:27:ARG:HA	30:DA:30:LEU:HB3	1.47	0.96
2:B:995:U:H1'	2:B:2637:A:H5'	1.44	0.96
10:J:55:LEU:HG	10:J:65:ILE:HA	1.44	0.96
2:B:3187:A:H5'	13:M:22:SER:HA	1.48	0.95
17:Q:47:ALA:HB1	17:Q:48:PRO:HD3	1.47	0.95
2:B:181:U:H2'	2:B:182:U:H4'	1.48	0.95
48:VA:61:ARG:HA	48:VA:64:ARG:HB3	1.46	0.95
2:B:790:U:H5"	8:H:112:LYS:HB3	1.48	0.95
24:X:26:ARG:HH12	24:X:28:ARG:HH21	0.96	0.95
24:X:79:VAL:HG12	24:X:123:ILE:HA	1.49	0.95
25:Y:152:ALA:HB1	25:Y:153:PRO:HD2	1.49	0.95
39:MA:86:ARG:HA	39:MA:89:ARG:HH12	1.28	0.95
49:WA:89:LEU:HD21	49:WA:110:VAL:HG11	1.48	0.95
1:A:310:C:H4'	73:UB:33:LEU:HD11	1.46	0.95
2:B:984:G:H2'	11:K:101:LYS:HG3	1.47	0.95
78:ZB:42:ARG:HD2	78:ZB:63:ALA:H	1.30	0.95
82:DC:773:PRO:HG2	82:DC:776:GLU:HB2	1.47	0.95
22:V:122:ILE:HD11	22:V:126:GLN:HB2	1.47	0.94
82:DC:495:VAL:HG13	82:DC:504:LEU:HD22	1.45	0.94
1:A:330:G:H3'	58:FB:172:ARG:HH21	1.33	0.94
1:A:540:G:H4'	1:A:541:A:H2'	1.46	0.94
57:EB:8:ILE:HD13	57:EB:42:GLN:HA	1.47	0.94
2:B:1177:G:H5'	37:KA:18:ARG:HH11	1.30	0.94
2:B:2369:G:H2'	2:B:2370:G:C8	2.01	0.94
82:DC:564:ARG:HB3	82:DC:682:ARG:HB2	1.48	0.94
2:B:2611:U:H2'	2:B:2612:U:C6	2.01	0.94
22:V:179:ARG:HH22	32:FA:56:VAL:HA	1.30	0.94
2:B:3329:U:H5"	7:G:308:MET:HB3	1.49	0.94
13:M:44:THR:HB	13:M:56:ALA:H	1.30	0.94
36:JA:19:ARG:HH11	36:JA:28:VAL:HG13	1.30	0.94
2:B:3243:A:HO2'	2:B:3244:A:H8	1.08	0.94
4:D:75:G:H2'	4:D:76:A:H2'	1.49	0.94
2:B:2693:C:H5"	2:B:2694:A:H5"	1.47	0.94
2:B:2922:G:H2'	2:B:2923:U:H4'	1.47	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2953:U:H2'	2:B:2954:U:H2'	1.50	0.93
1:A:770:A:H3'	1:A:771:A:H5"	1.50	0.93
2:B:1538:G:H21	2:B:1583:A:H62	1.16	0.93
3:C:94:C:H5"	41:OA:76:ASN:HD21	1.31	0.93
61:IB:56:LYS:HE3	61:IB:57:LYS:HE3	1.48	0.93
63:KB:98:VAL:HB	63:KB:115:LEU:HD23	1.47	0.93
6:F:78:ALA:HB1	6:F:170:ALA:HB3	1.50	0.93
82:DC:144:ARG:HA	82:DC:147:LEU:HD12	1.48	0.93
2:B:99:A:H5'	19:S:194:GLN:HB2	1.48	0.93
83:EC:6840:A:H2'	83:EC:6841:U:O4'	1.67	0.93
4:D:36:C:H4'	9:I:155:THR:HG23	1.49	0.93
7:G:37:ARG:HA	7:G:186:GLY:HA2	1.49	0.93
52:ZA:237:VAL:HA	71:SB:33:GLN:HE22	1.34	0.93
74:VB:50:ALA:HB1	74:VB:54:ALA:HB3	1.48	0.93
82:DC:10:ARG:HE	82:DC:447:ASP:HB2	1.33	0.93
11:K:224:ILE:HG23	24:X:36:ILE:HG23	1.50	0.93
48:VA:76:LEU:HA	48:VA:189:GLN:HE22	1.30	0.93
58:FB:137:LYS:H	58:FB:137:LYS:HD3	1.33	0.93
2:B:1841:A:H3'	2:B:1842:A:H5"	1.47	0.93
27:AA:80:ARG:HH21	27:AA:95:PHE:HB3	1.33	0.93
50:XA:22:THR:HG22	50:XA:169:SER:HA	1.48	0.93
83:EC:6886:A:H2'	83:EC:6887:G:H5'	1.50	0.93
11:K:75:TYR:HB2	25:Y:141:VAL:HB	1.52	0.92
12:L:84:ARG:H	12:L:84:ARG:HE	1.10	0.92
1:A:1681:A:H1'	56:DB:66:GLY:HA3	1.50	0.92
2:B:382:U:H4'	21:U:100:ALA:HB1	1.50	0.92
2:B:1336:U:H2'	2:B:1337:A:C8	2.05	0.92
2:B:2960:C:H2'	2:B:2961:G:C8	2.04	0.92
17:Q:168:ARG:HH21	17:Q:171:ARG:HB3	1.33	0.92
41:OA:8:PHE:HA	41:OA:11:ARG:HD3	1.48	0.92
2:B:665:A:H5'	19:S:197:LEU:HD21	1.51	0.92
2:B:834:U:H2'	2:B:835:G:H5'	1.52	0.92
2:B:2647:A:H1'	14:N:22:TYR:HD2	1.32	0.92
30:DA:59:VAL:HG13	30:DA:60:ARG:HG2	1.50	0.92
2:B:1059:G:H5"	25:Y:84:TYR:OH	1.68	0.92
9:I:69:ILE:HA	25:Y:31:LEU:HD13	1.48	0.92
36:JA:85:LEU:HA	36:JA:88:HIS:HD2	1.34	0.92
46:TA:67:LYS:HG3	46:TA:87:ARG:HG3	1.47	0.92
54:BB:19:LEU:HD21	54:BB:108:ARG:HD2	1.51	0.92
2:B:29:C:H2'	2:B:30:G:H5"	1.48	0.92
54:BB:206:ASP:HB2	54:BB:222:LEU:HG	1.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:369:ILE:HD11	82:DC:379:MET:HG3	1.48	0.92
50:XA:122:ILE:HG12	50:XA:144:ILE:HB	1.51	0.92
2:B:2424:A:H62	2:B:2605:G:H21	1.15	0.92
59:GB:110:GLN:HE22	59:GB:125:ALA:HB3	1.34	0.92
2:B:316:U:H4'	2:B:317:A:H5'	1.53	0.92
2:B:1494:U:C4'	2:B:1495:U:H5'	1.99	0.92
83:EC:6787:U:H2'	83:EC:6788:C:H4'	1.52	0.92
2:B:2775:U:H2'	2:B:2776:C:C6	2.04	0.91
49:WA:229:LYS:HA	53:AB:222:VAL:HG11	1.52	0.91
2:B:430:U:H1'	37:KA:90:PRO:HB3	1.51	0.91
54:BB:31:PRO:HB2	54:BB:38:LEU:HD22	1.53	0.91
82:DC:147:LEU:HD13	82:DC:192:TYR:HB2	1.53	0.91
1:A:754:A:H3'	1:A:755:A:H5'	1.52	0.91
48:VA:30:VAL:HG22	48:VA:31:ASP:H	1.34	0.91
54:BB:89:VAL:HG11	54:BB:119:ALA:HA	1.53	0.91
1:A:845:G:H2'	1:A:846:G:H5"	1.51	0.91
2:B:676:G:H22	22:V:61:PRO:HG3	1.35	0.91
2:B:879:U:H4'	21:U:132:ALA:HB3	1.52	0.91
18:R:120:VAL:HG22	20:T:197:LEU:HD13	1.53	0.91
2:B:428:A:O2'	37:KA:88:ASN:HB2	1.68	0.91
47:UA:51:ALA:HB3	47:UA:54:ILE:HD12	1.50	0.91
13:M:89:LYS:HG2	13:M:145:VAL:HG22	1.51	0.91
17:Q:67:ARG:HB3	32:FA:105:LEU:HG	1.53	0.91
40:NA:60:LEU:HA	40:NA:63:ASN:HD22	1.36	0.91
2:B:2746:A:H5'	9:I:179:ARG:HG2	1.52	0.91
50:XA:184:LEU:HG	71:SB:43:GLY:HA2	1.50	0.91
83:EC:6872:A:H3'	83:EC:6873:A:H5"	1.52	0.91
2:B:2103:U:H5"	23:W:85:ARG:NH1	1.85	0.91
17:Q:170:LEU:HA	17:Q:173:ALA:HB3	1.52	0.91
52:ZA:111:VAL:HG13	52:ZA:139:ILE:HD11	1.52	0.91
63:KB:22:ALA:HB1	63:KB:23:PRO:HA	1.52	0.91
2:B:886:C:H2'	2:B:887:G:C8	2.06	0.90
46:TA:68:VAL:HB	46:TA:85:LEU:HB3	1.50	0.90
55:CB:187:ILE:H	55:CB:187:ILE:HD12	1.34	0.90
2:B:2342:U:H2'	2:B:2343:C:C6	2.07	0.90
2:B:2723:U:H2'	2:B:2724:U:H5'	1.51	0.90
20:T:26:GLN:HB3	20:T:31:GLN:HB3	1.51	0.90
47:UA:24:ARG:O	47:UA:27:LYS:HG2	1.70	0.90
48:VA:33:VAL:HG22	48:VA:34:SER:H	1.36	0.90
2:B:1121:U:H3	2:B:1137:C:H42	1.19	0.90
5:E:120:VAL:HB	5:E:121:PRO:HD3	1.51	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:65:ILE:HG21	9:I:72:ASP:HB3	1.52	0.90
58:FB:85:PRO:HB2	61:IB:12:ALA:HB2	1.49	0.90
8:H:313:LEU:HD13	8:H:315:LYS:HZ1	1.34	0.90
82:DC:349:GLN:HA	82:DC:352:ARG:HB2	1.51	0.90
2:B:501:A:H4'	10:J:28:GLN:HG3	1.53	0.90
2:B:672:A:H4'	22:V:21:SER:HB2	1.53	0.90
1:A:522:U:H5'	74:VB:36:SER:HA	1.53	0.90
1:A:874:C:H4'	1:A:1046:G:H4'	1.50	0.90
2:B:2511:A:H2'	2:B:2512:C:C6	2.06	0.90
22:V:49:LEU:HA	22:V:52:LEU:HD12	1.51	0.90
8:H:35:VAL:HG13	8:H:235:LEU:HD11	1.54	0.90
18:R:38:ILE:HD12	18:R:44:VAL:HG12	1.53	0.90
20:T:34:VAL:HG12	20:T:103:LYS:HB2	1.54	0.90
22:V:143:PRO:HB2	22:V:146:SER:HB3	1.54	0.90
32:FA:79:TRP:HE1	32:FA:118:ILE:HB	1.37	0.90
65:MB:98:ASN:HB3	65:MB:103:ASN:HD21	1.35	0.90
67:OB:26:LEU:HD23	67:OB:58:MET:HB3	1.52	0.90
2:B:830:A:N6	2:B:864:G:H21	1.69	0.89
2:B:1177:G:H5'	37:KA:18:ARG:NH1	1.87	0.89
12:L:116:VAL:HA	12:L:121:SER:H	1.37	0.89
2:B:1651:U:H5"	6:F:71:LEU:HB2	1.54	0.89
2:B:2395:G:H4'	7:G:258:ALA:HB1	1.53	0.89
2:B:3000:A:H5'	2:B:3296:A:H5"	1.53	0.89
6:F:136:ILE:HG13	6:F:148:VAL:HG12	1.53	0.89
16:P:101:SER:H	16:P:139:VAL:HG12	1.37	0.89
14:N:51:HIS:HB3	14:N:134:ILE:HG23	1.55	0.89
43:QA:28:ARG:HG3	43:QA:36:ARG:HA	1.55	0.89
82:DC:81:MET:HB2	82:DC:96:ASN:HD22	1.33	0.89
2:B:815:G:H2'	2:B:906:A:H62	1.37	0.89
70:RB:82:TYR:HB3	79:AC:52:PHE:HB3	1.54	0.89
1:A:1469:A:H4'	1:A:1541:G:H4'	1.51	0.89
27:AA:18:PRO:HA	27:AA:51:ALA:HA	1.52	0.89
59:GB:83:VAL:HA	59:GB:149:ARG:HA	1.52	0.89
82:DC:750:LYS:HB3	82:DC:776:GLU:HB3	1.55	0.89
2:B:522:A:H3'	2:B:523:A:H5"	1.52	0.89
2:B:1203:A:H2'	2:B:1204:A:C8	2.08	0.89
2:B:3108:G:H21	13:M:163:GLN:HE22	1.18	0.89
53:AB:98:ALA:HA	53:AB:188:ILE:HD12	1.52	0.89
1:A:1171:A:H2'	1:A:1172:G:C8	2.08	0.89
9:I:115:LEU:HD11	9:I:139:PRO:HB2	1.55	0.89
11:K:233:GLU:HB2	24:X:35:VAL:HG22	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:81:ARG:HG2	23:W:88:ARG:HD2	1.54	0.89
82:DC:155:VAL:HB	82:DC:209:VAL:HG22	1.53	0.89
2:B:1347:U:H5"	8:H:303:GLY:HA2	1.54	0.89
35:IA:17:HIS:HB2	35:IA:69:TYR:HB3	1.54	0.89
55:CB:128:ASN:ND2	55:CB:129:PRO:HD2	1.88	0.89
70:RB:52:LYS:HB3	70:RB:93:LEU:HD23	1.55	0.89
2:B:830:A:H62	2:B:864:G:N2	1.71	0.88
2:B:1186:G:H1'	24:X:112:ALA:HB1	1.53	0.88
2:B:825:U:H4'	2:B:1587:A:N1	1.89	0.88
1:A:505:A:H3'	1:A:506:A:H5"	1.55	0.88
2:B:2852:C:N3	14:N:158:LYS:HE3	1.87	0.88
10:J:38:THR:H	10:J:54:TYR:HB3	1.38	0.88
34:HA:39:SER:HA	34:HA:93:LEU:HA	1.54	0.88
2:B:2967:A:H5"	6:F:213:GLY:HA3	1.54	0.88
31:EA:27:LYS:HB3	31:EA:42:LEU:HD22	1.53	0.88
82:DC:153:PRO:HD2	82:DC:200:VAL:HG22	1.55	0.88
2:B:3305:A:H4'	7:G:272:TYR:CZ	2.08	0.88
2:B:431:U:H2'	2:B:432:G:C8	2.09	0.88
13:M:12:VAL:HG13	13:M:16:VAL:HB	1.56	0.88
15:O:47:GLN:HA	15:O:67:VAL:HG12	1.55	0.88
34:HA:25:LEU:HB3	34:HA:87:VAL:HG21	1.53	0.88
66:NB:115:THR:HA	66:NB:118:ILE:HG23	1.54	0.88
1:A:476:U:H5"	1:A:538:A:H61	1.38	0.88
2:B:39:A:H2'	2:B:42:C:N4	1.89	0.88
2:B:1788:C:H2'	2:B:1789:G:H8	1.37	0.88
57:EB:114:ARG:HB2	57:EB:114:ARG:HH11	1.37	0.88
17:Q:67:ARG:HE	17:Q:68:LYS:HG2	1.36	0.88
61:IB:125:VAL:HG12	61:IB:139:VAL:HA	1.54	0.88
63:KB:107:LYS:HE2	63:KB:109:LYS:HD3	1.56	0.88
3:C:142:C:H5'	19:S:113:LEU:HD21	1.56	0.88
15:O:75:LYS:HE3	15:O:79:ILE:HD11	1.54	0.88
25:Y:67:VAL:HG12	25:Y:72:VAL:HA	1.57	0.87
2:B:351:A:H61	43:QA:39:ALA:H	1.21	0.87
2:B:524:U:H5	2:B:568:G:H22	1.18	0.87
47:UA:24:ARG:HB3	47:UA:24:ARG:HH11	1.39	0.87
82:DC:194:ASP:HB2	82:DC:197:LEU:HD13	1.55	0.87
16:P:103:ASN:HA	16:P:141:CYS:HB2	1.56	0.87
21:U:126:ARG:HD3	21:U:140:GLU:HB3	1.57	0.87
2:B:1940:G:H21	2:B:3362:A:H1'	1.37	0.87
29:CA:86:VAL:HG11	29:CA:90:ALA:HB3	1.56	0.87
1:A:1650:U:H2'	1:A:1651:A:C8	2.10	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:818:C:H5”	41:OA:10:LYS:HB2	1.57	0.87
2:B:1923:C:H5”	45:SA:25:LYS:HA	1.56	0.87
19:S:137:PRO:HG2	19:S:138:GLN:HE21	1.38	0.87
60:HB:82:LEU:HB2	60:HB:86:ILE:HG21	1.55	0.87
21:U:114:VAL:HB	21:U:150:VAL:HG12	1.55	0.87
82:DC:338:ILE:O	82:DC:342:LEU:HB2	1.74	0.87
1:A:108:A:H4’	1:A:363:G:O2’	1.74	0.87
34:HA:77:LEU:HD23	34:HA:88:GLY:HA2	1.55	0.87
52:ZA:180:ALA:HB1	52:ZA:184:VAL:HB	1.54	0.87
2:B:62:A:H5”	19:S:164:LEU:HD21	1.55	0.87
19:S:91:GLU:HB2	46:TA:50:PHE:HZ	1.39	0.87
65:MB:52:LYS:HB2	65:MB:53:PRO:HD3	1.55	0.87
2:B:91:G:H2’	2:B:93:C:H5”	1.57	0.87
2:B:627:U:H2’	2:B:628:A:C8	2.10	0.87
82:DC:634:TRP:HB2	82:DC:646:VAL:HB	1.57	0.87
2:B:39:A:H2’	2:B:42:C:H41	1.40	0.86
2:B:3260:G:H4’	18:R:126:GLN:HA	1.57	0.86
18:R:123:LEU:HD22	20:T:194:LEU:HG	1.56	0.86
2:B:885:U:H5”	2:B:1851:G:H4’	1.57	0.86
10:J:13:GLU:HG3	36:JA:87:MET:O	1.75	0.86
11:K:120:THR:HB	25:Y:132:PRO:HB2	1.54	0.86
23:W:10:LEU:HD22	23:W:41:ILE:HD12	1.56	0.86
1:A:1184:A:H2’	1:A:1185:U:H4’	1.55	0.86
82:DC:677:PHE:HB3	82:DC:819:VAL:HG13	1.58	0.86
16:P:123:ARG:NH2	48:VA:39:HIS:HB2	1.90	0.86
14:N:102:MET:HB3	14:N:112:GLN:N	1.91	0.86
18:R:45:LEU:HD21	18:R:55:ARG:HH11	1.41	0.86
1:A:86:A:H2’	1:A:87:C:C6	2.11	0.86
2:B:1304:A:H2’	2:B:2939:G:H1’	1.56	0.86
2:B:2392:C:H1’	7:G:266:ARG:HH21	1.41	0.86
34:HA:48:THR:HB	34:HA:49:PRO:HD2	1.57	0.86
1:A:830:U:H2’	1:A:831:U:H6	1.39	0.86
2:B:1240:A:H3’	2:B:1241:U:H5”	1.55	0.86
2:B:1311:G:O2’	2:B:2381:G:H4’	1.76	0.86
2:B:1546:A:H4’	19:S:101:THR:HG23	1.56	0.86
49:WA:270:LEU:HD11	49:WA:273:ASP:HB2	1.58	0.86
2:B:2567:C:H3’	2:B:2568:C:H5”	1.57	0.86
11:K:107:ARG:HD2	11:K:204:PRO:HG3	1.58	0.86
54:BB:95:THR:HG22	74:VB:16:PRO:HD2	1.58	0.86
1:A:294:C:H5’	54:BB:133:LYS:HD3	1.58	0.86
2:B:1593:A:H2	2:B:1616:U:H4’	1.39	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:329:PRO:HG2	11:K:45:LEU:HD13	1.57	0.86
66:NB:51:PRO:HG2	66:NB:52:LEU:HD23	1.57	0.86
23:W:162:ARG:O	23:W:166:ASN:HB2	1.76	0.85
24:X:93:GLU:HB3	24:X:140:VAL:HG21	1.57	0.85
63:KB:108:ASP:HB3	63:KB:111:ALA:HB3	1.56	0.85
5:E:65:ILE:HG21	5:E:148:VAL:HG13	1.58	0.85
2:B:1221:A:H4'	48:VA:60:ARG:HB2	1.58	0.85
2:B:1898:G:H1'	27:AA:18:PRO:HD2	1.56	0.85
14:N:174:THR:HG22	14:N:176:LEU:H	1.40	0.85
39:MA:48:ARG:HA	39:MA:51:ILE:HD12	1.58	0.85
49:WA:38:ARG:HA	49:WA:67:ILE:HG23	1.57	0.85
82:DC:285:PHE:HA	82:DC:320:LEU:HD11	1.58	0.85
2:B:352:A:H62	2:B:366:A:H62	1.24	0.85
3:C:94:C:H5"	41:OA:76:ASN:ND2	1.91	0.85
15:O:9:MET:HG3	15:O:134:PRO:HB2	1.59	0.85
39:MA:100:VAL:HG22	39:MA:101:THR:H	1.41	0.85
68:PB:53:ASP:HB2	68:PB:56:LYS:HB2	1.58	0.85
2:B:59:G:H4'	2:B:60:A:H4'	1.59	0.85
2:B:815:G:H2'	2:B:906:A:N6	1.90	0.85
19:S:73:ARG:HB2	19:S:89:VAL:HG13	1.59	0.85
67:OB:89:SER:O	67:OB:90:ALA:C	2.18	0.85
1:A:821:U:H3'	1:A:822:U:H5"	1.58	0.85
2:B:286:U:H2'	2:B:287:G:C8	2.12	0.85
2:B:1593:A:C2	2:B:1616:U:H4'	2.12	0.85
2:B:2130:G:H2'	2:B:2131:A:H4'	1.57	0.85
2:B:2732:G:H2'	2:B:2733:A:H8	1.41	0.85
61:IB:3:THR:HG21	61:IB:7:VAL:HG23	1.56	0.85
1:A:1087:A:H5'	1:A:1298:U:C5	2.11	0.85
2:B:1324:U:H5'	24:X:2:ALA:H	1.41	0.85
28:BA:5:ILE:HB	28:BA:10:GLY:HA2	1.57	0.85
30:DA:115:ARG:HB3	30:DA:115:ARG:HH11	1.41	0.85
38:LA:20:ILE:H	38:LA:20:ILE:HD13	1.42	0.85
2:B:818:C:H5'	41:OA:11:ARG:HG3	1.57	0.85
22:V:64:VAL:HG12	22:V:90:ASP:H	1.40	0.85
35:IA:98:VAL:HG11	35:IA:101:ALA:HB2	1.59	0.85
1:A:385:A:H2'	1:A:386:G:C8	2.12	0.85
2:B:2198:A:H2'	2:B:2199:G:H5'	1.59	0.85
2:B:2698:G:H2'	2:B:2699:G:H5"	1.57	0.85
2:B:3321:C:H5"	7:G:172:ALA:HB1	1.59	0.85
8:H:244:LEU:HD23	8:H:244:LEU:H	1.38	0.85
24:X:11:GLY:HA2	24:X:59:VAL:HG23	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:89:LEU:HB3	26:Z:93:ILE:HD12	1.58	0.85
66:NB:128:LYS:HB2	66:NB:137:ARG:HH22	1.39	0.85
69:QB:28:LEU:HD21	69:QB:30:VAL:HG13	1.57	0.85
13:M:147:SER:HB2	13:M:187:ILE:HG12	1.57	0.84
73:UB:61:SER:HB2	73:UB:116:ASP:HB2	1.56	0.84
82:DC:44:GLY:HA2	82:DC:77:LEU:HG	1.58	0.84
2:B:1788:C:H2'	2:B:1789:G:C8	2.12	0.84
2:B:2261:G:H21	2:B:2262:A:H62	1.20	0.84
8:H:259:ASP:HB2	8:H:267:VAL:HG21	1.57	0.84
17:Q:42:ARG:HG2	17:Q:51:LEU:HD22	1.58	0.84
73:UB:60:GLU:HA	73:UB:68:ILE:HA	1.59	0.84
2:B:584:G:H4'	37:KA:46:GLY:HA3	1.58	0.84
2:B:904:A:H5"	2:B:1537:A:H5'	1.57	0.84
2:B:1520:G:H5"	29:CA:69:SER:HB2	1.58	0.84
48:VA:76:LEU:HA	48:VA:189:GLN:NE2	1.91	0.84
50:XA:189:VAL:HG13	50:XA:190:ASP:H	1.40	0.84
82:DC:619:MET:HA	82:DC:623:TYR:HD2	1.41	0.84
1:A:830:U:H2'	1:A:831:U:C6	2.12	0.84
2:B:2361:A:H61	2:B:2377:G:H1	1.24	0.84
7:G:211:GLN:HE21	7:G:285:VAL:HG23	1.40	0.84
52:ZA:56:ILE:HG23	52:ZA:61:LEU:HB2	1.58	0.84
72:TB:86:ILE:HA	72:TB:89:TRP:HB2	1.59	0.84
73:UB:56:LYS:HD3	73:UB:98:GLU:HG3	1.59	0.84
2:B:837:A:H1'	47:UA:10:ILE:HD13	1.60	0.84
2:B:2554:A:O4'	6:F:85:GLY:HA3	1.78	0.84
2:B:3311:C:H2'	2:B:3312:U:H5'	1.60	0.84
36:JA:89:THR:HG22	36:JA:117:ILE:HG23	1.56	0.84
52:ZA:188:LEU:HD13	52:ZA:196:VAL:HG11	1.59	0.84
2:B:669:U:H4'	2:B:1110:U:H5"	1.59	0.84
2:B:2908:G:H4'	44:RA:114:LYS:HZ2	1.40	0.84
7:G:296:THR:HG22	7:G:297:SER:H	1.43	0.84
11:K:224:ILE:HG12	24:X:36:ILE:HA	1.58	0.84
52:ZA:229:LEU:HD11	71:SB:14:PRO:HD2	1.58	0.84
68:PB:69:ILE:HG22	68:PB:73:MET:HE2	1.59	0.84
73:UB:24:TRP:CE3	73:UB:30:LYS:HG2	2.13	0.84
1:A:1393:C:H5"	49:WA:285:ALA:HB1	1.59	0.84
2:B:242:C:O2'	2:B:243:G:H5'	1.76	0.84
2:B:438:A:H2'	2:B:439:C:H4'	1.57	0.84
2:B:896:A:C8	2:B:2134:G:H1'	2.12	0.84
2:B:1535:A:H62	2:B:1586:G:H21	1.24	0.84
2:B:2197:C:H5"	2:B:2242:A:H61	1.43	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:332:U:C5'	58:FB:30:GLY:HA2	2.07	0.84
2:B:2650:U:H2'	2:B:2651:G:C8	2.13	0.84
7:G:25:ILE:H	7:G:25:ILE:HD13	1.43	0.84
2:B:308:A:H5"	40:NA:80:PHE:HD1	1.43	0.84
17:Q:22:VAL:HG22	19:S:197:LEU:HB3	1.60	0.84
53:AB:32:GLU:HG3	53:AB:57:ASP:HB2	1.60	0.84
54:BB:49:ARG:HG3	54:BB:61:VAL:HG21	1.60	0.84
1:A:628:G:O2'	2:B:846:A:N6	2.09	0.83
3:C:154:C:H5"	12:L:181:LYS:HB3	1.58	0.83
39:MA:25:LYS:HE3	39:MA:51:ILE:HD13	1.57	0.83
82:DC:202:VAL:HG12	82:DC:208:THR:HB	1.60	0.83
1:A:1498:G:H2'	1:A:1499:G:H5"	1.59	0.83
5:E:114:GLU:HA	5:E:137:PRO:HB3	1.57	0.83
13:M:28:VAL:HG22	13:M:33:THR:HG23	1.60	0.83
56:DB:159:ARG:HG2	56:DB:172:ALA:HB2	1.60	0.83
2:B:2954:U:H4'	2:B:2955:U:C5'	2.07	0.83
3:C:43:A:H4'	41:OA:22:CYS:HA	1.58	0.83
10:J:63:LEU:HD12	10:J:84:VAL:HG21	1.61	0.83
18:R:78:THR:HA	18:R:81:VAL:HB	1.59	0.83
61:IB:75:VAL:HA	61:IB:86:ILE:HG22	1.58	0.83
71:SB:21:ASN:HB2	72:TB:67:GLY:HA3	1.59	0.83
1:A:1036:A:H5'	72:TB:3:ARG:HH22	1.43	0.83
2:B:1459:C:H2'	2:B:1460:A:C8	2.13	0.83
36:JA:66:LEU:HD23	36:JA:72:LYS:HG3	1.58	0.83
2:B:692:A:H4'	8:H:46:LYS:HG2	1.59	0.83
2:B:830:A:H62	2:B:864:G:H21	0.87	0.83
16:P:123:ARG:HH12	48:VA:42:ARG:HD2	1.42	0.83
3:C:12:A:H5"	21:U:3:ARG:HB3	1.59	0.83
43:QA:26:TRP:O	43:QA:30:ARG:HG3	1.79	0.83
2:B:2960:C:H2'	2:B:2961:G:H8	1.44	0.83
6:F:104:LEU:HB3	6:F:146:THR:HG21	1.60	0.83
18:R:35:ILE:HG13	18:R:46:ILE:HG22	1.60	0.83
32:FA:124:ILE:HA	32:FA:144:VAL:HG23	1.60	0.83
50:XA:170:ILE:H	50:XA:170:ILE:HD12	1.43	0.83
82:DC:706:ILE:HB	82:DC:707:PRO:HD3	1.61	0.83
10:J:47:PHE:HA	10:J:50:LYS:HE3	1.58	0.83
18:R:49:PRO:HG3	18:R:81:VAL:HG12	1.60	0.83
82:DC:45:ILE:HG22	82:DC:438:MET:HE1	1.60	0.83
82:DC:77:LEU:HB2	82:DC:100:ILE:HB	1.61	0.83
1:A:871:G:H2'	1:A:872:G:C8	2.13	0.83
2:B:914:A:H2	6:F:208:ASP:HB3	1.44	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3150:A:H5'	7:G:130:PHE:H	1.44	0.83
14:N:53:VAL:HG21	14:N:166:ILE:HD12	1.60	0.83
22:V:33:TYR:HB3	22:V:49:LEU:HD23	1.60	0.83
80:BC:20:LYS:HE2	80:BC:20:LYS:HA	1.60	0.83
83:EC:6934:U:H2'	83:EC:6935:G:H4'	1.59	0.83
7:G:160:VAL:HG23	7:G:183:LEU:HD11	1.59	0.83
75:WB:62:VAL:HA	75:WB:76:ALA:HB1	1.61	0.83
2:B:590:G:H2'	2:B:591:G:H5'	1.61	0.82
7:G:43:LEU:HB3	7:G:181:ILE:HG21	1.59	0.82
11:K:161:VAL:HG12	11:K:162:PRO:HD2	1.61	0.82
19:S:135:VAL:HG12	19:S:142:ILE:HG21	1.59	0.82
63:KB:143:SER:HA	63:KB:146:ALA:HB3	1.61	0.82
1:A:1766:A:H5'	1:A:1794:A:H5"	1.60	0.82
2:B:346:C:N3	3:C:25:G:H4'	1.95	0.82
2:B:581:U:O2'	2:B:582:G:H5'	1.79	0.82
2:B:665:A:H5"	19:S:199:LEU:HD21	1.61	0.82
2:B:1231:A:H5'	48:VA:35:SER:HB2	1.60	0.82
10:J:67:GLY:HA2	10:J:74:VAL:HB	1.59	0.82
19:S:116:LEU:HB3	19:S:133:ILE:O	1.79	0.82
57:EB:11:GLN:HG3	57:EB:13:PRO:HD2	1.59	0.82
1:A:1203:A:H5'	1:A:1457:C:H41	1.44	0.82
13:M:41:ILE:HG23	13:M:43:VAL:HG13	1.60	0.82
24:X:26:ARG:NH1	24:X:28:ARG:HH21	1.76	0.82
58:FB:46:VAL:HG11	58:FB:56:ARG:HE	1.43	0.82
82:DC:171:LYS:HB3	82:DC:274:ASN:HB3	1.61	0.82
2:B:1295:G:H2'	2:B:1296:C:C6	2.14	0.82
11:K:110:ARG:HD3	11:K:206:LYS:HE3	1.61	0.82
36:JA:102:ALA:HB2	36:JA:125:ARG:HB3	1.61	0.82
1:A:478:A:C5'	59:GB:127:VAL:HG21	2.10	0.82
6:F:117:GLU:HA	6:F:125:ALA:HB3	1.61	0.82
24:X:26:ARG:HH22	24:X:64:ILE:HD11	1.42	0.82
11:K:145:ARG:HB3	11:K:145:ARG:NH1	1.94	0.82
2:B:1263:A:H4'	2:B:1264:G:H8	1.43	0.82
31:EA:83:THR:HG23	31:EA:85:TYR:H	1.41	0.82
37:KA:17:GLN:HB3	37:KA:24:ASN:HB3	1.59	0.82
1:A:632:U:H4'	73:UB:11:SER:HB3	1.62	0.82
21:U:98:ALA:HB2	21:U:148:LEU:HD21	1.60	0.82
22:V:30:VAL:HG22	22:V:52:LEU:HD13	1.61	0.82
40:NA:60:LEU:CD1	40:NA:68:ARG:HD2	2.10	0.82
49:WA:136:ILE:HD13	49:WA:136:ILE:H	1.43	0.82
52:ZA:38:VAL:HG13	52:ZA:39:THR:HG23	1.62	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1281:G:H5'	48:VA:55:LYS:HB3	1.62	0.82
2:B:1380:G:H5'	8:H:191:LYS:HE2	1.62	0.82
6:F:22:LEU:HD21	6:F:191:LEU:HD21	1.62	0.82
18:R:45:LEU:HD21	18:R:55:ARG:HD3	1.60	0.82
20:T:153:VAL:HA	20:T:156:LEU:HD12	1.62	0.82
41:OA:52:LYS:HA	41:OA:55:ARG:HH12	1.44	0.82
54:BB:183:VAL:HG13	54:BB:224:ASN:HB3	1.62	0.82
70:RB:50:LEU:HD22	70:RB:95:ALA:HB2	1.62	0.82
82:DC:601:ILE:HG23	82:DC:636:PHE:HD1	1.44	0.82
1:A:1319:A:H3'	1:A:1320:U:H5"	1.61	0.82
1:A:1420:C:H2'	1:A:1421:A:H5'	1.60	0.82
6:F:6:ARG:HB3	6:F:10:LYS:HE2	1.60	0.82
22:V:138:LEU:HD22	22:V:139:ILE:H	1.44	0.82
27:AA:62:VAL:HB	27:AA:70:ARG:HG3	1.59	0.82
31:EA:33:SER:HB3	31:EA:36:HIS:HB2	1.62	0.82
63:KB:27:LYS:HG3	63:KB:28:LEU:HG	1.60	0.82
2:B:355:A:H2'	2:B:356:C:O4'	1.80	0.81
2:B:2995:A:H2'	2:B:2996:U:H5"	1.62	0.81
2:B:3090:U:H2'	2:B:3091:A:C8	2.15	0.81
7:G:260:VAL:HG11	7:G:266:ARG:NH1	1.94	0.81
12:L:158:ASP:HB2	12:L:159:PRO:HD3	1.62	0.81
1:A:143:G:H2'	1:A:144:U:H5"	1.59	0.81
18:R:113:THR:HB	18:R:116:GLU:HB2	1.60	0.81
82:DC:772:LEU:HD12	82:DC:773:PRO:HD2	1.60	0.81
1:A:911:U:H5"	2:B:2207:A:H5'	1.62	0.81
2:B:296:A:O2'	2:B:297:G:H5'	1.80	0.81
2:B:802:C:H5	32:FA:25:HIS:HB3	1.46	0.81
2:B:1779:C:H5'	23:W:97:ARG:HH22	1.44	0.81
2:B:2922:G:H3'	2:B:2923:U:H5"	1.62	0.81
17:Q:85:LEU:HD12	17:Q:89:TYR:HB3	1.61	0.81
1:A:780:A:H1'	74:VB:9:THR:H	1.46	0.81
2:B:2424:A:H5"	19:S:90:ASN:HB2	1.63	0.81
15:O:29:ARG:HA	15:O:32:ARG:HD3	1.62	0.81
27:AA:66:LYS:HE2	27:AA:68:GLU:HB2	1.62	0.81
38:LA:54:ILE:HG12	38:LA:71:THR:HG22	1.61	0.81
49:WA:120:SER:HA	49:WA:136:ILE:HD12	1.59	0.81
52:ZA:82:ASN:HB2	52:ZA:207:LEU:HD12	1.61	0.81
74:VB:20:ARG:HA	74:VB:76:TYR:HA	1.62	0.81
2:B:20:A:H1'	19:S:112:ASN:HB3	1.59	0.81
2:B:1230:G:H4'	48:VA:34:SER:HA	1.62	0.81
2:B:1261:G:H4'	2:B:1278:A:N1	1.95	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:MA:59:ASN:O	39:MA:63:ARG:HG3	1.81	0.81
49:WA:25:THR:HG21	49:WA:295:SER:HA	1.60	0.81
2:B:2908:G:H4'	44:RA:114:LYS:NZ	1.94	0.81
2:B:2985:C:H2'	2:B:2986:U:C6	2.14	0.81
20:T:119:VAL:HG11	24:X:167:ARG:HG3	1.62	0.81
46:TA:9:LYS:HA	46:TA:21:THR:O	1.81	0.81
2:B:631:U:H2'	2:B:632:G:C8	2.15	0.81
2:B:1448:U:H4'	21:U:66:SER:HB3	1.60	0.81
2:B:1546:A:H5"	19:S:105:ARG:HH21	1.45	0.81
2:B:2656:A:H4'	46:TA:98:LYS:HE2	1.61	0.81
2:B:3273:A:H4'	10:J:44:ALA:HB3	1.63	0.81
13:M:100:ASN:O	13:M:114:VAL:HA	1.81	0.81
24:X:59:VAL:HG13	25:Y:141:VAL:HG21	1.63	0.81
38:LA:42:PRO:HB2	38:LA:51:LEU:HD13	1.61	0.81
73:UB:76:LEU:HD13	73:UB:79:ASN:HB2	1.61	0.81
1:A:1169:G:H21	1:A:1576:A:H62	1.25	0.81
2:B:1448:U:H4'	21:U:66:SER:CB	2.10	0.81
9:I:17:GLN:HG3	25:Y:22:HIS:H	1.45	0.81
82:DC:493:VAL:HG22	82:DC:556:ILE:HD12	1.63	0.81
2:B:13:A:H2	29:CA:39:LYS:HA	1.46	0.81
7:G:224:HIS:H	7:G:271:GLY:HA3	1.43	0.81
1:A:398:G:H5"	58:FB:49:ARG:HG3	1.63	0.81
1:A:628:G:HO2'	2:B:846:A:N6	1.78	0.81
2:B:2242:A:H5'	6:F:243:THR:HG23	1.63	0.81
8:H:134:LEU:HA	8:H:137:ALA:HB3	1.63	0.81
10:J:146:ILE:HA	10:J:149:ILE:HD12	1.63	0.81
56:DB:178:LEU:HG	56:DB:180:THR:HG23	1.62	0.81
61:IB:38:ALA:HB2	61:IB:60:PHE:CE1	2.16	0.81
2:B:70:A:H2	2:B:72:C:H42	1.25	0.80
2:B:1888:U:H2'	2:B:1889:G:O4'	1.81	0.80
16:P:106:LEU:H	16:P:142:ARG:HG3	1.45	0.80
24:X:75:PHE:HB2	24:X:94:ILE:O	1.81	0.80
73:UB:114:LYS:H	73:UB:117:ILE:HD11	1.44	0.80
2:B:2393:G:H4'	7:G:252:ILE:HG13	1.63	0.80
2:B:2571:U:H4'	2:B:2572:C:H5'	1.60	0.80
2:B:3232:G:H2'	2:B:3233:C:C6	2.15	0.80
8:H:216:VAL:HA	8:H:227:THR:HG21	1.63	0.80
11:K:88:ARG:HA	11:K:134:VAL:HG12	1.63	0.80
2:B:109:A:H4'	2:B:110:G:H5'	1.61	0.80
2:B:2817:A:H3'	2:B:2818:U:H5'	1.62	0.80
19:S:84:PRO:HA	19:S:87:GLN:HG3	1.61	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:12:ARG:HB3	24:X:24:LEU:HG	1.61	0.80
82:DC:577:SER:HA	82:DC:840:ASP:HB2	1.63	0.80
1:A:1229:G:H21	1:A:1256:A:H62	1.29	0.80
2:B:74:G:H5"	17:Q:104:ARG:HD2	1.62	0.80
2:B:351:A:N6	43:QA:39:ALA:H	1.79	0.80
2:B:1270:A:H5'	82:DC:741:GLY:HA2	1.63	0.80
11:K:222:HIS:HB3	11:K:225:GLN:HB2	1.62	0.80
41:OA:52:LYS:HA	41:OA:55:ARG:NH1	1.96	0.80
50:XA:84:ARG:HH21	50:XA:205:ARG:H	1.28	0.80
80:BC:14:VAL:HA	80:BC:17:GLN:HG2	1.64	0.80
2:B:1232:C:C5	2:B:1261:G:H2'	2.17	0.80
2:B:1380:G:C5'	8:H:191:LYS:HB2	2.10	0.80
7:G:261:MET:HG2	20:T:64:PHE:HA	1.63	0.80
31:EA:22:LYS:HE2	31:EA:129:TRP:HB3	1.63	0.80
75:WB:83:LEU:HA	75:WB:87:GLY:HA3	1.63	0.80
1:A:115:G:H5'	61:IB:129:ARG:HE	1.46	0.80
1:A:1036:A:H5"	72:TB:28:ARG:HH22	1.46	0.80
2:B:912:G:H2'	2:B:914:A:N7	1.97	0.80
2:B:1828:A:H2'	2:B:1829:G:H8	1.45	0.80
8:H:113:VAL:HB	8:H:118:LYS:HE2	1.62	0.80
30:DA:39:LEU:HD23	30:DA:42:GLN:HG3	1.64	0.80
43:QA:21:ARG:NH1	43:QA:24:PRO:HG3	1.95	0.80
54:BB:62:LYS:HA	54:BB:65:LEU:HD12	1.64	0.80
61:IB:125:VAL:HA	61:IB:140:VAL:HG12	1.62	0.80
66:NB:39:VAL:HG21	66:NB:45:ARG:HD3	1.63	0.80
1:A:1198:G:H3'	1:A:1199:G:H5'	1.60	0.80
7:G:117:ARG:HH21	7:G:177:HIS:HA	1.47	0.80
21:U:126:ARG:HA	21:U:140:GLU:HA	1.63	0.80
28:BA:48:ARG:HH21	28:BA:58:HIS:HE1	1.30	0.80
47:UA:24:ARG:HB3	47:UA:24:ARG:NH1	1.95	0.80
54:BB:183:VAL:HA	54:BB:224:ASN:O	1.82	0.80
72:TB:81:VAL:HG13	72:TB:85:ASP:HB2	1.61	0.80
2:B:185:C:H5"	30:DA:122:LYS:HE2	1.63	0.80
2:B:1064:A:H62	2:B:1096:U:H3	1.30	0.80
8:H:110:ASN:HB2	19:S:201:ARG:O	1.81	0.80
16:P:87:GLU:HB2	16:P:88:PRO:HD2	1.64	0.80
26:Z:75:TYR:O	26:Z:79:LEU:HG	1.82	0.80
50:XA:20:ALA:HA	50:XA:168:HIS:HB2	1.63	0.80
55:CB:124:LEU:HD11	75:WB:59:TYR:HB2	1.64	0.80
2:B:671:U:H2'	2:B:672:A:H8	1.47	0.80
2:B:2095:G:H2'	2:B:2096:A:H8	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2982:A:O2'	2:B:2983:C:H5"	1.82	0.80
50:XA:157:ASP:O	71:SB:66:ASP:HB3	1.81	0.80
54:BB:100:ARG:HB2	54:BB:114:ILE:HD13	1.63	0.80
82:DC:360:PRO:HB2	82:DC:363:ASP:HB2	1.63	0.80
1:A:462:G:H2'	1:A:463:U:C6	2.17	0.79
2:B:95:A:H2'	2:B:96:G:O4'	1.82	0.79
2:B:1340:G:H2'	2:B:1341:U:C6	2.17	0.79
6:F:126:LEU:H	6:F:126:LEU:HD12	1.48	0.79
17:Q:77:LEU:HA	17:Q:80:VAL:HG22	1.64	0.79
57:EB:141:ARG:HB2	57:EB:149:ILE:HB	1.63	0.79
67:OB:19:ARG:HG3	67:OB:20:TYR:HD1	1.47	0.79
82:DC:15:LYS:HB3	82:DC:18:ASN:HB2	1.63	0.79
82:DC:220:PHE:CB	82:DC:328:LEU:HD13	2.13	0.79
1:A:256:A:H1'	58:FB:72:ILE:HA	1.64	0.79
1:A:1519:U:H2'	1:A:1520:U:C5	2.18	0.79
2:B:2212:C:H1'	2:B:2233:A:H61	1.48	0.79
2:B:3182:G:H4'	20:T:161:LYS:HD3	1.64	0.79
12:L:48:ARG:NH2	12:L:49:TYR:HB3	1.98	0.79
12:L:203:VAL:HG21	12:L:208:GLU:HA	1.62	0.79
30:DA:31:LEU:HB3	30:DA:101:PRO:HG3	1.63	0.79
60:HB:15:LEU:HD13	60:HB:21:VAL:HG23	1.65	0.79
2:B:1792:C:H5"	6:F:184:ARG:HD3	1.62	0.79
25:Y:52:MET:HG2	25:Y:53:PRO:HD2	1.62	0.79
34:HA:24:THR:OG1	34:HA:91:SER:HB3	1.83	0.79
54:BB:150:PRO:HG2	54:BB:151:ASP:H	1.47	0.79
68:PB:36:LYS:HB2	68:PB:102:ALA:HA	1.64	0.79
2:B:2356:A:H61	2:B:2983:C:H41	1.26	0.79
2:B:3065:G:H2'	2:B:3066:U:C6	2.17	0.79
32:FA:100:PRO:HB2	32:FA:123:VAL:HG13	1.64	0.79
52:ZA:55:GLU:HA	52:ZA:58:LEU:HD12	1.62	0.79
1:A:5:U:H2'	1:A:6:G:C8	2.18	0.79
2:B:1472:U:H2'	2:B:1473:G:C8	2.18	0.79
2:B:3202:G:H2'	2:B:3203:U:O4'	1.83	0.79
2:B:3327:G:H2'	2:B:3328:G:H8	1.44	0.79
72:TB:81:VAL:HG11	72:TB:86:ILE:HG23	1.64	0.79
82:DC:711:ARG:HA	82:DC:714:TYR:HD2	1.47	0.79
2:B:29:C:C2'	2:B:30:G:H5"	2.12	0.79
3:C:45:C:H5"	43:QA:15:LYS:HG3	1.64	0.79
6:F:82:VAL:H	47:UA:65:ALA:HB3	1.46	0.79
43:QA:22:PRO:HA	43:QA:41:ARG:HH22	1.48	0.79
2:B:1828:A:H2'	2:B:1829:G:C8	2.17	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:173:GLU:HG2	32:FA:52:TYR:HA	1.62	0.79
82:DC:730:LEU:HB2	82:DC:799:ASP:HB2	1.62	0.79
1:A:589:C:H2'	1:A:590:C:C6	2.17	0.79
2:B:3312:U:H2'	2:B:3313:U:H5"	1.63	0.79
22:V:64:VAL:HA	22:V:67:ILE:HD12	1.65	0.79
67:OB:26:LEU:HG	67:OB:58:MET:HE3	1.65	0.79
82:DC:225:PHE:HA	82:DC:228:ARG:HB3	1.63	0.79
1:A:1158:C:H1'	1:A:1161:C:H41	1.46	0.79
6:F:3:ARG:HB2	6:F:207:VAL:HG23	1.65	0.79
25:Y:36:VAL:HG13	25:Y:65:TYR:HA	1.65	0.79
54:BB:193:GLY:HA3	54:BB:212:ASP:HA	1.64	0.79
63:KB:128:TYR:HA	63:KB:131:THR:HB	1.65	0.79
82:DC:653:VAL:HG11	82:DC:659:ILE:HD11	1.64	0.79
1:A:1352:G:H4'	66:NB:3:ALA:HB3	1.64	0.79
2:B:83:U:H2'	2:B:84:U:O4'	1.82	0.79
2:B:422:A:C2	2:B:2363:A:H4'	2.18	0.79
2:B:1138:U:H2'	2:B:1139:G:C8	2.18	0.79
5:E:21:ASN:HA	5:E:210:MET:HE1	1.63	0.79
7:G:126:LYS:HA	7:G:126:LYS:HE3	1.65	0.79
19:S:8:GLU:HG3	19:S:50:ARG:HH22	1.48	0.79
2:B:1259:A:H61	48:VA:33:VAL:HG11	1.48	0.78
2:B:1655:G:H1'	2:B:1800:A:H61	1.46	0.78
2:B:2662:G:H2'	2:B:2663:G:C8	2.19	0.78
5:E:3:LYS:HB3	5:E:8:GLN:HG3	1.65	0.78
8:H:145:ILE:HG22	8:H:173:GLY:HA3	1.63	0.78
11:K:163:LEU:HD13	11:K:181:ILE:HD13	1.63	0.78
57:EB:61:PHE:HB3	57:EB:95:GLU:HB2	1.65	0.78
82:DC:711:ARG:HA	82:DC:714:TYR:CD2	2.18	0.78
1:A:94:U:H4'	54:BB:6:LYS:HA	1.65	0.78
1:A:638:U:H1'	57:EB:112:ARG:HH22	1.47	0.78
1:A:1685:G:C2'	1:A:1686:C:H5"	2.12	0.78
22:V:30:VAL:HA	22:V:33:TYR:HB2	1.65	0.78
28:BA:42:GLN:HB3	28:BA:44:LYS:HE2	1.64	0.78
73:UB:57:LEU:HD23	73:UB:57:LEU:H	1.48	0.78
75:WB:50:ILE:O	75:WB:54:VAL:HG23	1.82	0.78
1:A:330:G:H3'	58:FB:172:ARG:NH2	1.98	0.78
2:B:1668:G:H2'	2:B:1669:C:C6	2.19	0.78
2:B:1838:G:H5"	2:B:1839:A:O4'	1.83	0.78
22:V:71:LEU:HD13	22:V:97:PRO:HG2	1.64	0.78
49:WA:46:LYS:HB2	49:WA:58:VAL:HG13	1.64	0.78
82:DC:27:HIS:HA	82:DC:138:GLN:HB3	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:409:A:H61	3:C:15:G:H1'	1.49	0.78
2:B:1794:G:H5'	6:F:188:LYS:HA	1.62	0.78
2:B:1797:A:H4'	6:F:22:LEU:HA	1.66	0.78
2:B:2896:A:H5"	44:RA:124:LYS:NZ	1.98	0.78
6:F:104:LEU:HD22	6:F:158:ILE:HD11	1.63	0.78
32:FA:75:LEU:H	32:FA:114:GLY:HA2	1.48	0.78
73:UB:55:GLU:HG3	73:UB:57:LEU:HD22	1.65	0.78
1:A:1106:U:H2'	1:A:1107:G:H8	1.47	0.78
2:B:947:G:H2'	2:B:948:C:C6	2.19	0.78
67:OB:89:SER:O	67:OB:90:ALA:O	2.01	0.78
2:B:740:G:H2'	2:B:741:U:C6	2.19	0.78
2:B:2439:A:H2'	2:B:2440:G:H8	1.48	0.78
31:EA:111:LYS:HA	31:EA:114:VAL:HG22	1.66	0.78
54:BB:129:VAL:HA	54:BB:139:VAL:HG12	1.65	0.78
1:A:777:C:H2'	1:A:778:G:H5"	1.65	0.78
2:B:363:G:H4'	8:H:61:SER:HB3	1.64	0.78
2:B:1706:C:H4'	2:B:1787:A:H4'	1.63	0.78
8:H:32:PRO:HG3	8:H:244:LEU:HD11	1.66	0.78
21:U:48:LEU:HD22	21:U:88:VAL:HG11	1.66	0.78
46:TA:35:LEU:HD23	46:TA:36:PHE:N	1.97	0.78
48:VA:145:ILE:HG21	82:DC:201:GLN:HE22	1.48	0.78
83:EC:6902:U:H2'	83:EC:6903:U:C5	2.19	0.78
1:A:748:U:H4'	72:TB:123:GLY:HA2	1.66	0.78
2:B:121:A:H2'	12:L:108:ARG:HH11	1.48	0.78
2:B:1256:G:H4'	16:P:127:SER:HB3	1.66	0.78
2:B:1359:C:H2'	2:B:1360:C:C6	2.19	0.78
2:B:2724:U:H5"	25:Y:54:HIS:CG	2.19	0.78
2:B:2742:C:H2'	2:B:2743:A:H8	1.47	0.78
4:D:8:G:H5"	25:Y:31:LEU:HD11	1.65	0.78
24:X:138:GLN:NE2	24:X:141:LYS:HD3	1.98	0.78
54:BB:155:LYS:HE2	54:BB:155:LYS:HA	1.65	0.78
65:MB:86:VAL:HG12	65:MB:89:MET:HE3	1.65	0.78
74:VB:86:GLU:HB3	74:VB:91:LEU:HD21	1.65	0.78
1:A:40:A:H62	1:A:467:G:H21	1.29	0.78
1:A:1275:A:H2	53:AB:180:GLY:HA2	1.48	0.78
2:B:784:A:C4	22:V:93:ILE:HG22	2.19	0.78
2:B:2200:U:H2'	2:B:2201:G:C8	2.19	0.78
2:B:2505:U:H2'	2:B:2506:U:H6	1.48	0.78
2:B:3366:G:H5"	28:BA:61:LYS:HE3	1.63	0.78
7:G:235:THR:HG21	7:G:249:VAL:HG22	1.65	0.78
9:I:218:ARG:HH12	9:I:222:LEU:HD12	1.48	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:43:LEU:HD21	10:J:85:ILE:HD11	1.66	0.78
39:MA:89:ARG:HB3	39:MA:89:ARG:HH11	1.48	0.78
53:AB:58:VAL:HA	53:AB:65:ARG:HD3	1.65	0.78
56:DB:67:VAL:H	56:DB:100:ALA:HB2	1.47	0.78
82:DC:222:ILE:HD13	82:DC:222:ILE:H	1.48	0.78
82:DC:308:LYS:HA	82:DC:312:LYS:HE3	1.66	0.78
82:DC:566:THR:HG21	82:DC:803:THR:HG22	1.64	0.78
2:B:1324:U:H3'	2:B:1325:U:H5"	1.66	0.78
2:B:2767:U:H4'	46:TA:31:GLY:HA3	1.65	0.78
8:H:49:ALA:HA	8:H:109:TRP:NE1	1.99	0.78
37:KA:90:PRO:HB2	37:KA:92:LYS:HG2	1.64	0.78
54:BB:49:ARG:HA	54:BB:55:ALA:HB3	1.66	0.78
67:OB:41:ILE:HG23	67:OB:46:LEU:HD22	1.66	0.78
2:B:199:A:H3'	30:DA:60:ARG:HH11	1.49	0.77
2:B:1887:A:H4'	7:G:227:GLU:CA	2.10	0.77
2:B:2366:C:H2'	2:B:2367:A:C8	2.19	0.77
2:B:2730:G:H4'	22:V:184:PHE:HD1	1.49	0.77
18:R:66:THR:HB	18:R:67:PRO:HD2	1.66	0.77
43:QA:28:ARG:HB3	43:QA:28:ARG:HH11	1.48	0.77
54:BB:45:ILE:HB	54:BB:80:THR:HG22	1.65	0.77
66:NB:137:ARG:HA	66:NB:137:ARG:HE	1.49	0.77
73:UB:54:LEU:HD11	73:UB:75:GLN:HB2	1.65	0.77
1:A:5:U:H2'	1:A:6:G:H8	1.50	0.77
2:B:406:G:H1'	3:C:17:A:H61	1.49	0.77
2:B:3006:A:H2'	2:B:3007:U:O4'	1.84	0.77
21:U:59:PRO:HA	21:U:81:ALA:HA	1.66	0.77
55:CB:145:ASP:HB2	55:CB:162:VAL:HB	1.66	0.77
68:PB:15:LEU:HD23	68:PB:15:LEU:H	1.50	0.77
73:UB:76:LEU:HD12	73:UB:81:LYS:HB2	1.66	0.77
1:A:126:A:H62	1:A:291:G:H21	1.33	0.77
2:B:1259:A:H5'	48:VA:53:MET:O	1.85	0.77
2:B:1822:C:H5"	38:LA:66:SER:HB2	1.66	0.77
2:B:2103:U:H5"	23:W:85:ARG:HH11	1.48	0.77
2:B:2746:A:H5"	9:I:178:ASN:HB3	1.66	0.77
2:B:3182:G:H5'	20:T:160:ARG:HH22	1.48	0.77
16:P:122:GLY:HA2	48:VA:43:LYS:HD2	1.65	0.77
49:WA:133:VAL:HB	49:WA:142:ALA:HB3	1.66	0.77
6:F:54:ARG:HG2	6:F:55:GLY:H	1.49	0.77
8:H:158:SER:HA	8:H:213:ASN:HB2	1.66	0.77
16:P:133:LEU:HA	16:P:137:GLN:CG	2.15	0.77
34:HA:51:LEU:HD21	38:LA:91:ARG:HB2	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:NA:95:ALA:HA	40:NA:99:ARG:HD3	1.66	0.77
58:FB:38:ILE:CD1	58:FB:80:GLY:HA2	2.14	0.77
61:IB:64:VAL:HA	61:IB:129:ARG:HD3	1.66	0.77
1:A:189:C:H3'	1:A:190:C:H5"	1.66	0.77
1:A:338:C:H1'	58:FB:5:ARG:HB3	1.65	0.77
1:A:443:C:OP2	74:VB:105:ARG:HB2	1.84	0.77
1:A:889:U:H2'	1:A:890:C:H4'	1.66	0.77
2:B:882:A:H2'	2:B:883:A:H5"	1.66	0.77
8:H:234:ASN:HD22	8:H:236:LEU:HB2	1.50	0.77
15:O:82:ARG:HA	15:O:85:LYS:HE2	1.66	0.77
19:S:73:ARG:HG3	19:S:92:LEU:HD13	1.67	0.77
71:SB:5:LYS:H	71:SB:5:LYS:HD3	1.49	0.77
1:A:1727:G:H21	58:FB:32:GLN:HE22	1.32	0.77
2:B:3272:C:H5'	10:J:78:ARG:HB2	1.66	0.77
30:DA:70:ILE:HD13	30:DA:82:VAL:HG22	1.65	0.77
66:NB:35:PRO:HG2	66:NB:38:LEU:HG	1.67	0.77
67:OB:57:LEU:O	67:OB:61:ILE:HG13	1.85	0.77
73:UB:73:ARG:HA	73:UB:84:THR:HA	1.64	0.77
82:DC:629:ASP:HB3	82:DC:647:ILE:HG23	1.66	0.77
2:B:2766:U:H2'	2:B:2767:U:C6	2.20	0.77
43:QA:24:PRO:CB	43:QA:27:ILE:HD13	2.14	0.77
55:CB:92:ARG:HH22	55:CB:169:ASN:HA	1.49	0.77
61:IB:80:MET:HG2	61:IB:83:THR:HG23	1.67	0.77
1:A:1:U:H5	59:GB:50:SER:HB3	1.49	0.77
2:B:841:A:H4'	23:W:126:GLU:HA	1.64	0.77
2:B:2770:G:H5"	46:TA:79:THR:HB	1.66	0.77
59:GB:60:LEU:HD11	59:GB:93:LEU:HD21	1.65	0.77
1:A:138:A:N6	1:A:266:A:H61	1.83	0.77
2:B:1725:C:H2'	2:B:1726:C:C6	2.20	0.77
2:B:2732:G:H2'	2:B:2733:A:C8	2.19	0.77
44:RA:93:LYS:HD2	44:RA:102:ARG:HG2	1.67	0.77
1:A:155:U:H4'	56:DB:59:GLN:H	1.49	0.77
1:A:593:U:H4'	1:A:595:G:H4'	1.67	0.77
2:B:1221:A:H4'	48:VA:60:ARG:CB	2.15	0.77
2:B:1301:A:H4'	2:B:1302:A:C5'	2.15	0.77
2:B:1494:U:H4'	2:B:1495:U:C5'	2.10	0.77
2:B:2210:G:N2	2:B:2236:G:H1'	2.00	0.77
11:K:86:VAL:HG22	11:K:136:TYR:CB	2.14	0.77
21:U:88:VAL:HA	21:U:91:VAL:HB	1.67	0.77
23:W:45:VAL:HG22	23:W:50:ILE:HB	1.67	0.77
58:FB:107:THR:OG1	58:FB:108:PRO:HD3	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:RB:40:ASN:HD21	70:RB:107:THR:HG21	1.49	0.77
7:G:307:PRO:HA	7:G:361:THR:O	1.83	0.76
1:A:1260:U:H2'	1:A:1261:G:H8	1.49	0.76
2:B:2890:A:H61	2:B:2913:C:H42	1.32	0.76
34:HA:30:THR:HG21	34:HA:89:VAL:HG22	1.65	0.76
36:JA:73:THR:HA	36:JA:93:ALA:HB3	1.65	0.76
36:JA:98:HIS:HA	36:JA:125:ARG:HH12	1.49	0.76
37:KA:75:HIS:HB2	37:KA:82:ARG:HG3	1.66	0.76
48:VA:42:ARG:NH1	48:VA:51:VAL:HB	1.99	0.76
56:DB:163:THR:HA	56:DB:168:THR:HG22	1.67	0.76
83:EC:6947:A:H2'	83:EC:6948:U:H4'	1.66	0.76
1:A:1429:G:H2'	1:A:1430:U:C6	2.19	0.76
2:B:1324:U:H5'	24:X:2:ALA:N	1.98	0.76
2:B:2334:U:H2'	2:B:2335:G:H5"	1.67	0.76
3:C:29:U:H5"	17:Q:27:ASP:HB3	1.67	0.76
9:I:13:SER:HA	9:I:16:PHE:HB2	1.67	0.76
39:MA:82:ALA:HB1	39:MA:84:LYS:HE3	1.68	0.76
63:KB:37:ILE:HG12	63:KB:54:LEU:HD11	1.67	0.76
1:A:1727:G:H21	58:FB:32:GLN:NE2	1.82	0.76
2:B:1594:A:H1'	2:B:1615:C:H1'	1.67	0.76
6:F:250:GLN:HG3	6:F:251:LYS:H	1.50	0.76
22:V:180:ARG:HH11	22:V:185:LYS:HG3	1.49	0.76
42:PA:42:LYS:HG2	42:PA:55:VAL:HG22	1.66	0.76
54:BB:199:GLU:HB2	54:BB:207:LEU:O	1.84	0.76
82:DC:25:ILE:HG12	82:DC:125:ALA:HB1	1.68	0.76
2:B:705:A:H4'	2:B:706:A:H5'	1.67	0.76
2:B:1009:A:H2'	2:B:1010:G:C8	2.21	0.76
2:B:1719:G:C4'	2:B:1732:U:H4'	2.15	0.76
5:E:95:LYS:HE2	5:E:123:LEU:HG	1.67	0.76
8:H:205:PRO:HD2	8:H:225:VAL:HG22	1.66	0.76
60:HB:11:ILE:HB	60:HB:46:LEU:HD21	1.67	0.76
61:IB:125:VAL:HB	61:IB:138:ASN:O	1.86	0.76
1:A:680:U:H2'	1:A:681:U:H5'	1.67	0.76
1:A:1106:U:H2'	1:A:1107:G:C8	2.21	0.76
20:T:30:GLY:HA2	20:T:101:ARG:CZ	2.14	0.76
38:LA:58:ARG:HE	38:LA:59:PRO:CD	1.99	0.76
53:AB:69:LEU:HA	53:AB:72:LEU:HD12	1.65	0.76
2:B:1785:U:H2'	2:B:1786:G:C8	2.20	0.76
2:B:2549:G:H2'	12:L:33:ASN:ND2	2.01	0.76
2:B:2660:G:H2'	2:B:2661:G:C8	2.21	0.76
12:L:148:ALA:HA	12:L:201:THR:HG22	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:191:TRP:HA	19:S:194:GLN:HG2	1.68	0.76
35:IA:23:VAL:HB	35:IA:28:ARG:HG3	1.68	0.76
82:DC:739:ALA:HB1	82:DC:788:THR:HB	1.67	0.76
83:EC:6799:C:H2'	83:EC:6800:G:H4'	1.67	0.76
1:A:21:U:H2'	1:A:22:A:C8	2.21	0.76
1:A:939:A:H2'	1:A:940:A:C8	2.21	0.76
2:B:952:A:H62	2:B:1143:A:H62	1.34	0.76
2:B:1157:G:H5"	11:K:220:PHE:CE2	2.21	0.76
2:B:2290:C:H2'	2:B:2291:A:O4'	1.85	0.76
2:B:2587:U:H4'	12:L:48:ARG:HH21	1.49	0.76
9:I:182:GLY:HA3	9:I:191:ASP:HB3	1.67	0.76
19:S:68:ARG:HH21	19:S:128:LYS:HE3	1.51	0.76
27:AA:80:ARG:HB2	27:AA:99:ALA:N	2.01	0.76
73:UB:37:ALA:O	73:UB:44:GLY:HA2	1.86	0.76
82:DC:140:GLU:HA	82:DC:143:LEU:HB3	1.66	0.76
2:B:985:U:H2'	2:B:986:U:C6	2.20	0.76
2:B:991:G:H2'	2:B:992:A:O4'	1.86	0.76
2:B:1827:C:H2'	2:B:1828:A:C8	2.21	0.76
2:B:1830:G:N2	3:C:114:G:H5'	2.00	0.76
2:B:2390:A:H2'	2:B:2391:G:O4'	1.86	0.76
10:J:30:LEU:HD23	10:J:30:LEU:H	1.51	0.76
12:L:84:ARG:HE	12:L:84:ARG:N	1.83	0.76
20:T:188:SER:H	20:T:191:ALA:HB3	1.51	0.76
30:DA:97:ILE:H	30:DA:97:ILE:HD12	1.49	0.76
59:GB:29:LYS:HA	80:BC:40:TYR:CE2	2.21	0.76
74:VB:41:ARG:HH21	74:VB:52:LYS:HB3	1.49	0.76
82:DC:501:LEU:HD23	82:DC:504:LEU:HD23	1.68	0.76
82:DC:565:GLU:HB3	82:DC:717:PHE:CZ	2.20	0.76
1:A:1762:A:H1'	1:A:1783:C:H4'	1.68	0.76
2:B:199:A:H3'	30:DA:60:ARG:NH1	2.01	0.76
2:B:1234:G:N3	16:P:132:ILE:HG12	2.00	0.76
12:L:149:LYS:H	12:L:201:THR:HA	1.51	0.76
14:N:43:VAL:HA	14:N:139:ARG:NH2	2.01	0.76
48:VA:11:TYR:HA	48:VA:14:LYS:HE3	1.68	0.76
1:A:479:C:H5'	59:GB:124:HIS:HB2	1.67	0.75
1:A:1386:G:H3'	67:OB:44:LYS:NZ	1.99	0.75
2:B:7:C:H2'	2:B:8:C:H6	1.50	0.75
2:B:578:A:H4'	8:H:324:LEU:HD21	1.68	0.75
2:B:2921:U:H2'	2:B:2923:U:C5'	2.16	0.75
2:B:3159:C:H2'	2:B:3160:U:C6	2.22	0.75
17:Q:98:ASP:OD2	17:Q:101:ARG:HD3	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:68:LEU:HD11	18:R:94:TRP:HB2	1.68	0.75
24:X:138:GLN:HE22	24:X:141:LYS:HD3	1.51	0.75
52:ZA:162:CYS:HB3	52:ZA:213:ALA:HB2	1.68	0.75
1:A:185:U:H2'	1:A:186:C:H5"	1.66	0.75
2:B:3111:U:H1'	13:M:152:GLU:OE2	1.86	0.75
2:B:3286:G:H2'	2:B:3287:U:H5"	1.66	0.75
7:G:168:LYS:HA	7:G:168:LYS:HE3	1.67	0.75
12:L:84:ARG:H	12:L:84:ARG:NE	1.84	0.75
22:V:102:ALA:HB1	22:V:127:LEU:HG	1.69	0.75
24:X:14:LEU:HD11	25:Y:136:ARG:NH2	2.00	0.75
71:SB:20:THR:HA	72:TB:23:ARG:CZ	2.16	0.75
71:SB:51:VAL:HG21	71:SB:78:LEU:HD21	1.66	0.75
82:DC:454:ILE:HG13	82:DC:455:GLY:H	1.51	0.75
1:A:1132:A:H2'	1:A:1133:A:C8	2.21	0.75
12:L:99:PRO:HD2	12:L:190:VAL:HA	1.67	0.75
61:IB:125:VAL:CG1	61:IB:139:VAL:HA	2.15	0.75
73:UB:134:ALA:HB1	73:UB:140:LYS:HB2	1.68	0.75
1:A:1260:U:H2'	1:A:1261:G:C8	2.21	0.75
2:B:741:U:H4'	22:V:74:GLU:HG2	1.67	0.75
2:B:1130:A:H61	14:N:115:MET:HE1	1.52	0.75
2:B:1362:G:H5'	11:K:161:VAL:HG22	1.68	0.75
2:B:1818:U:C2'	2:B:1819:U:H5"	2.15	0.75
2:B:2156:C:H2'	2:B:2178:A:N6	2.01	0.75
3:C:81:U:H4'	3:C:82:U:H5'	1.67	0.75
7:G:144:ILE:H	7:G:144:ILE:HD12	1.50	0.75
11:K:160:ARG:NH2	11:K:206:LYS:HD3	2.02	0.75
15:O:9:MET:HE2	15:O:134:PRO:HG2	1.67	0.75
17:Q:91:ARG:HB2	17:Q:91:ARG:HH11	1.52	0.75
18:R:113:THR:HG22	18:R:115:PHE:H	1.52	0.75
20:T:127:LEU:HD23	24:X:156:VAL:HG12	1.68	0.75
21:U:23:ARG:HA	21:U:143:PRO:CB	2.15	0.75
21:U:116:HIS:HB3	21:U:149:VAL:HB	1.66	0.75
27:AA:62:VAL:HB	27:AA:70:ARG:CG	2.16	0.75
29:CA:110:VAL:HG13	29:CA:124:VAL:HG22	1.67	0.75
55:CB:64:VAL:HG13	55:CB:130:ILE:HD11	1.69	0.75
70:RB:48:HIS:NE2	70:RB:99:ILE:HG12	2.01	0.75
82:DC:387:PRO:HA	82:DC:394:PHE:HB3	1.69	0.75
2:B:1073:U:H1'	33:GA:50:THR:OG1	1.85	0.75
8:H:72:ALA:HB3	8:H:76:ARG:NH2	2.01	0.75
8:H:222:VAL:CG1	8:H:225:VAL:HB	2.15	0.75
49:WA:121:MET:HE1	49:WA:167:VAL:HG21	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:NB:40:GLU:HA	66:NB:41:PRO:C	2.11	0.75
2:B:2372:A:H4'	2:B:2373:A:H8	1.50	0.75
2:B:2882:U:H2'	2:B:2883:U:C6	2.21	0.75
2:B:2907:G:H1'	44:RA:100:TYR:HE2	1.52	0.75
2:B:3113:A:H1'	13:M:70:THR:OG1	1.87	0.75
37:KA:85:PHE:CD2	37:KA:88:ASN:HA	2.22	0.75
2:B:314:U:H2'	2:B:315:C:C6	2.21	0.75
2:B:1336:U:H2'	2:B:1337:A:H8	1.49	0.75
2:B:1731:A:H8	2:B:1731:A:O5'	1.69	0.75
2:B:3302:U:H2'	2:B:3303:G:C8	2.22	0.75
5:E:117:ILE:O	5:E:121:PRO:HD2	1.87	0.75
19:S:135:VAL:HG11	19:S:151:ILE:HG21	1.68	0.75
20:T:79:ILE:HG21	20:T:138:LEU:HD11	1.67	0.75
31:EA:83:THR:HA	34:HA:62:LEU:HD11	1.67	0.75
82:DC:809:LEU:CD1	82:DC:832:VAL:HB	2.17	0.75
2:B:783:A:H5"	2:B:784:A:H5"	1.66	0.75
2:B:970:A:H2'	2:B:971:G:C8	2.22	0.75
2:B:2095:G:H2'	2:B:2096:A:C8	2.20	0.75
2:B:3365:U:H5"	28:BA:59:HIS:CE1	2.22	0.75
8:H:334:PHE:HA	8:H:339:LEU:HD12	1.66	0.75
37:KA:54:ARG:HG2	37:KA:64:ILE:HG12	1.68	0.75
49:WA:42:LEU:HD13	49:WA:61:PHE:HB2	1.69	0.75
82:DC:361:ALA:HA	82:DC:366:CYS:SG	2.27	0.75
1:A:401:A:O2'	1:A:402:C:H4'	1.87	0.75
1:A:1227:A:C4'	1:A:1228:G:H5"	2.16	0.75
2:B:305:U:O4	2:B:2786:G:H1'	1.87	0.75
2:B:500:C:H5"	10:J:82:ARG:HG3	1.68	0.75
2:B:3108:G:H2'	2:B:3109:G:H5"	1.67	0.75
9:I:108:ARG:HA	9:I:251:PRO:O	1.87	0.75
13:M:137:SER:HB2	13:M:145:VAL:HG23	1.68	0.75
82:DC:147:LEU:HD21	82:DC:189:VAL:HA	1.69	0.75
1:A:1316:G:H4'	67:OB:10:LYS:HE3	1.69	0.74
2:B:904:A:C5'	2:B:1537:A:H5'	2.16	0.74
2:B:2102:U:H5'	23:W:88:ARG:HH21	1.52	0.74
4:D:16:U:H2'	4:D:17:A:C8	2.21	0.74
9:I:104:LEU:HA	9:I:247:ILE:HG21	1.66	0.74
11:K:61:ASN:HA	11:K:64:GLN:HB3	1.66	0.74
14:N:30:LYS:HG2	14:N:63:GLU:HG2	1.69	0.74
19:S:136:ASP:HB3	19:S:142:ILE:HD13	1.68	0.74
38:LA:58:ARG:NE	38:LA:59:PRO:HD2	2.01	0.74
40:NA:60:LEU:HB3	40:NA:69:ALA:HB2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:36:GLY:O	53:AB:51:ARG:HB2	1.87	0.74
54:BB:9:LEU:HD13	54:BB:30:ARG:HH12	1.49	0.74
82:DC:18:ASN:HA	82:DC:98:PHE:CD1	2.22	0.74
82:DC:644:ASN:HD22	82:DC:684:VAL:HB	1.50	0.74
2:B:2356:A:H61	2:B:2983:C:N4	1.85	0.74
2:B:3279:A:H2'	2:B:3280:U:H5'	1.68	0.74
7:G:307:PRO:HB3	7:G:363:SER:HA	1.69	0.74
16:P:76:SER:HA	16:P:80:LEU:HG	1.67	0.74
23:W:23:TRP:HB3	23:W:51:VAL:HG22	1.68	0.74
25:Y:130:ARG:NH1	25:Y:130:ARG:HB2	2.01	0.74
32:FA:113:LEU:HD22	32:FA:131:SER:HB2	1.67	0.74
39:MA:25:LYS:HG2	39:MA:51:ILE:HG12	1.66	0.74
60:HB:87:VAL:N	60:HB:88:PRO:HD3	2.01	0.74
79:AC:36:LEU:HD12	79:AC:38:ILE:H	1.52	0.74
82:DC:17:THR:HB	82:DC:93:THR:HA	1.69	0.74
83:EC:6774:U:H3'	83:EC:6775:U:H5"	1.68	0.74
2:B:78:U:H3	2:B:325:A:H61	1.35	0.74
2:B:104:G:H2'	2:B:105:C:O4'	1.88	0.74
2:B:676:G:N2	22:V:61:PRO:HG3	2.01	0.74
16:P:102:GLY:HA3	16:P:140:GLY:N	2.02	0.74
35:IA:49:VAL:HG13	35:IA:91:SER:HB2	1.70	0.74
67:OB:21:TYR:N	67:OB:22:PRO:HD2	2.03	0.74
69:QB:28:LEU:HG	69:QB:55:TYR:CE1	2.21	0.74
69:QB:124:ILE:HD11	69:QB:128:GLY:HA3	1.69	0.74
72:TB:94:LEU:HG	72:TB:102:VAL:HG23	1.69	0.74
82:DC:826:HIS:HB2	82:DC:828:MET:HG3	1.69	0.74
1:A:1042:G:H3'	1:A:1043:A:H5"	1.69	0.74
1:A:1558:U:H4'	68:PB:135:GLY:HA3	1.67	0.74
2:B:1836:C:H2'	2:B:1837:U:H6	1.51	0.74
6:F:27:ALA:HB3	6:F:128:ARG:NH2	2.02	0.74
7:G:293:ASN:HB2	7:G:305:ILE:HG23	1.70	0.74
17:Q:54:LEU:HD12	17:Q:75:PHE:HZ	1.52	0.74
35:IA:25:PHE:HB3	35:IA:65:LYS:HB3	1.69	0.74
44:RA:97:ARG:HB2	44:RA:120:GLN:HB3	1.70	0.74
54:BB:87:MET:HB3	54:BB:122:LYS:HE3	1.68	0.74
54:BB:182:TYR:HE2	54:BB:190:GLY:HA2	1.50	0.74
68:PB:52:VAL:HG21	68:PB:69:ILE:HD11	1.68	0.74
1:A:778:G:H2'	1:A:779:U:H5'	1.68	0.74
2:B:505:G:H5"	8:H:315:LYS:HA	1.68	0.74
2:B:810:A:H2'	2:B:811:U:C6	2.22	0.74
7:G:199:PHE:O	7:G:200:GLU:HB2	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:109:ILE:HG23	16:P:110:ILE:HD12	1.68	0.74
50:XA:62:ARG:HD2	71:SB:36:VAL:HG12	1.69	0.74
54:BB:99:PHE:CE1	54:BB:113:ARG:HG2	2.22	0.74
68:PB:70:VAL:HA	68:PB:73:MET:HE3	1.67	0.74
1:A:122:U:H4'	54:BB:82:TYR:OH	1.87	0.74
2:B:628:A:H5'	2:B:1399:A:C2	2.23	0.74
2:B:2558:U:H5'	12:L:40:VAL:HG21	1.69	0.74
10:J:110:LYS:HD2	10:J:113:LYS:HD3	1.69	0.74
22:V:88:THR:HG22	22:V:107:THR:HG21	1.70	0.74
8:H:49:ALA:HA	8:H:109:TRP:HE1	1.50	0.74
30:DA:33:ALA:HB2	30:DA:50:ILE:HB	1.69	0.74
82:DC:386:VAL:HG13	82:DC:395:TYR:HB2	1.68	0.74
1:A:532:U:H4'	74:VB:62:THR:HG21	1.70	0.74
1:A:569:C:H5	73:UB:69:ARG:HH12	1.33	0.74
1:A:1144:U:H2'	1:A:1145:U:C6	2.22	0.74
2:B:372:A:H2'	2:B:373:A:C8	2.23	0.74
2:B:685:G:H5"	17:Q:39:ARG:HH12	1.53	0.74
2:B:1721:U:H3'	23:W:103:ARG:HH22	1.51	0.74
2:B:2649:A:H4'	2:B:2696:A:O4'	1.87	0.74
5:E:194:LEU:HD22	5:E:196:LYS:HG3	1.68	0.74
12:L:203:VAL:HG22	12:L:204:ARG:H	1.53	0.74
13:M:49:ASN:HD21	13:M:52:LEU:HB3	1.52	0.74
29:CA:59:SER:HB3	29:CA:102:LEU:HD11	1.67	0.74
29:CA:77:GLU:HA	29:CA:133:LEU:HD21	1.70	0.74
31:EA:8:GLY:HA2	31:EA:24:VAL:HG13	1.70	0.74
34:HA:41:LEU:HD12	34:HA:92:ILE:HD12	1.70	0.74
39:MA:92:LEU:HD22	39:MA:97:ALA:HA	1.68	0.74
49:WA:170:ILE:HD13	49:WA:211:ILE:HD13	1.69	0.74
52:ZA:38:VAL:HG22	52:ZA:39:THR:H	1.52	0.74
53:AB:191:ASP:HB3	53:AB:194:LYS:HB2	1.69	0.74
61:IB:133:LYS:HD3	61:IB:134:THR:HG23	1.69	0.74
66:NB:41:PRO:O	66:NB:42:GLU:HB3	1.88	0.74
1:A:1715:G:H2'	1:A:1716:C:H4'	1.70	0.74
2:B:1167:U:O3'	11:K:211:SER:HA	1.88	0.74
2:B:2271:A:H3'	2:B:2272:G:H5'	1.70	0.74
2:B:3273:A:H4'	10:J:44:ALA:CB	2.17	0.74
12:L:166:LEU:HB2	12:L:167:PRO:HD3	1.70	0.74
20:T:124:LEU:HG	20:T:126:VAL:HG12	1.70	0.74
22:V:19:PRO:HD2	22:V:27:LYS:HE3	1.69	0.74
49:WA:137:LYS:HA	49:WA:137:LYS:HE3	1.69	0.74
52:ZA:53:ILE:HD11	52:ZA:73:LEU:HB2	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:317:C:H4'	1:A:354:C:H1'	1.70	0.74
2:B:893:C:H5"	2:B:894:G:H5'	1.69	0.74
2:B:2407:C:O3'	2:B:2620:G:H4'	1.87	0.74
2:B:3392:U:H2'	2:B:3393:U:C6	2.23	0.74
30:DA:32:SER:HA	30:DA:49:PRO:HA	1.70	0.74
71:SB:38:LYS:HD2	71:SB:49:GLU:HG3	1.70	0.74
1:A:736:C:OP1	54:BB:197:HIS:HB2	1.88	0.73
2:B:1097:G:H4'	25:Y:129:LYS:HE2	1.68	0.73
2:B:1245:A:H3'	2:B:1246:G:H5"	1.69	0.73
2:B:1529:A:H5'	2:B:1588:A:O4'	1.87	0.73
6:F:115:ASN:HA	6:F:128:ARG:HG3	1.67	0.73
17:Q:28:GLN:HG2	19:S:201:ARG:HG3	1.70	0.73
34:HA:30:THR:HG21	34:HA:89:VAL:CG2	2.18	0.73
50:XA:109:ASN:O	50:XA:112:THR:HG22	1.87	0.73
54:BB:94:ALA:HB3	74:VB:17:LEU:HB3	1.70	0.73
55:CB:144:GLU:OE1	78:ZB:57:MET:HB3	1.87	0.73
59:GB:108:ARG:O	59:GB:112:GLN:HG2	1.86	0.73
61:IB:107:VAL:HG13	61:IB:108:PRO:HD2	1.70	0.73
71:SB:60:ARG:HA	71:SB:65:SER:HB2	1.68	0.73
1:A:94:U:H2'	1:A:95:G:O4'	1.88	0.73
2:B:1553:U:H4'	2:B:1554:U:H5'	1.70	0.73
2:B:2491:A:H2'	2:B:2492:C:H4'	1.69	0.73
2:B:2838:A:H62	2:B:2850:G:H21	1.36	0.73
8:H:132:ALA:HA	8:H:135:VAL:HB	1.68	0.73
12:L:178:ALA:HB2	12:L:218:ILE:HG23	1.70	0.73
13:M:8:GLN:HG2	13:M:68:LEU:HD12	1.70	0.73
13:M:90:MET:HG2	13:M:181:VAL:HA	1.69	0.73
14:N:169:LYS:HB2	25:Y:159:PHE:HB2	1.70	0.73
57:EB:114:ARG:HB2	57:EB:114:ARG:NH1	2.02	0.73
60:HB:58:GLN:HB2	60:HB:65:TYR:HB2	1.69	0.73
66:NB:90:VAL:HB	66:NB:102:LYS:HE3	1.68	0.73
1:A:29:U:H2'	1:A:30:G:C8	2.23	0.73
1:A:1086:A:H5'	52:ZA:164:SER:HB2	1.69	0.73
2:B:1476:G:H4'	35:IA:60:TRP:HB3	1.68	0.73
2:B:1838:G:H4'	2:B:1839:A:C4	2.23	0.73
2:B:3010:U:H5"	7:G:14:LEU:HD13	1.70	0.73
50:XA:22:THR:CG2	50:XA:169:SER:HA	2.18	0.73
58:FB:55:TYR:HB3	58:FB:177:GLY:HA3	1.68	0.73
59:GB:28:LEU:HD12	80:BC:44:PHE:CE2	2.23	0.73
59:GB:85:VAL:HG22	59:GB:107:ARG:HG3	1.70	0.73
61:IB:155:LYS:HD3	61:IB:155:LYS:H	1.51	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1737:G:H4'	2:B:1933:A:H2	1.54	0.73
2:B:3072:C:H4'	2:B:3336:A:H5"	1.71	0.73
8:H:152:VAL:HG12	8:H:153:SER:H	1.52	0.73
12:L:74:THR:HG21	19:S:18:VAL:HB	1.69	0.73
17:Q:75:PHE:O	17:Q:79:GLU:HB2	1.87	0.73
17:Q:91:ARG:HB2	17:Q:91:ARG:NH1	2.03	0.73
59:GB:93:LEU:O	59:GB:96:VAL:HG22	1.87	0.73
82:DC:22:MET:HA	82:DC:122:THR:HB	1.70	0.73
2:B:516:A:H2'	2:B:517:G:O4'	1.88	0.73
2:B:3001:C:H2'	2:B:3002:C:C6	2.24	0.73
2:B:3099:C:H42	2:B:3135:U:H3	1.34	0.73
3:C:142:C:H5"	19:S:60:VAL:CG2	2.19	0.73
8:H:198:ARG:HH11	30:DA:12:ARG:HH21	1.34	0.73
14:N:16:PRO:O	14:N:18:PRO:HD3	1.88	0.73
25:Y:17:ARG:HB3	25:Y:22:HIS:CD2	2.23	0.73
31:EA:26:VAL:HG12	31:EA:89:VAL:HG21	1.70	0.73
1:A:1041:G:H2'	1:A:1042:G:C8	2.23	0.73
2:B:282:G:H22	19:S:179:LYS:HA	1.54	0.73
2:B:394:G:H2'	2:B:396:A:OP2	1.88	0.73
2:B:925:A:H4'	2:B:926:A:H5'	1.71	0.73
2:B:1845:G:H4'	41:OA:8:PHE:CE2	2.23	0.73
2:B:1853:U:H2'	2:B:1854:C:C5	2.23	0.73
2:B:2198:A:C2'	2:B:2199:G:H5'	2.17	0.73
14:N:39:LYS:HA	14:N:86:HIS:CE1	2.23	0.73
14:N:205:SER:HB3	14:N:208:ASN:OD1	1.89	0.73
38:LA:25:THR:HG23	38:LA:30:LEU:HA	1.68	0.73
2:B:672:A:OP2	22:V:55:SER:HA	1.89	0.73
2:B:704:U:H3'	2:B:705:A:H5"	1.69	0.73
2:B:1715:A:H4'	2:B:1716:U:H3'	1.69	0.73
2:B:3163:A:H3'	2:B:3164:C:H5"	1.70	0.73
12:L:116:VAL:O	12:L:120:LYS:HA	1.88	0.73
15:O:91:LEU:HD11	15:O:104:PHE:HB3	1.69	0.73
17:Q:74:GLY:HA3	17:Q:98:ASP:N	2.04	0.73
17:Q:105:ASN:ND2	40:NA:17:VAL:HB	1.99	0.73
24:X:77:VAL:HG22	24:X:126:VAL:HG13	1.69	0.73
48:VA:42:ARG:HB3	48:VA:46:ARG:HH21	1.52	0.73
82:DC:25:ILE:HD12	82:DC:142:VAL:HG12	1.71	0.73
83:EC:6794:C:H2'	83:EC:6795:U:H5	1.51	0.73
2:B:1552:G:H5'	2:B:2171:G:H4'	1.71	0.73
2:B:2338:C:H4'	27:AA:49:LEU:HG	1.71	0.73
10:J:108:LYS:HZ2	10:J:108:LYS:HB3	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:176:TYR:HB3	11:K:194:HIS:ND1	2.04	0.73
27:AA:80:ARG:HB2	27:AA:99:ALA:H	1.53	0.73
30:DA:112:ASP:HB2	30:DA:115:ARG:HB2	1.70	0.73
52:ZA:65:GLU:N	52:ZA:134:LEU:HD11	2.03	0.73
78:ZB:36:THR:HG23	78:ZB:37:SER:H	1.54	0.73
83:EC:6912:G:H2'	83:EC:6913:U:H4'	1.70	0.73
1:A:86:A:H2'	1:A:87:C:H6	1.54	0.73
2:B:1923:C:H5"	45:SA:25:LYS:CA	2.18	0.73
10:J:55:LEU:H	10:J:65:ILE:HG22	1.53	0.73
12:L:94:PHE:HA	12:L:97:TYR:HD2	1.54	0.73
37:KA:46:GLY:H	37:KA:71:VAL:HG12	1.53	0.73
55:CB:123:VAL:HG13	75:WB:102:THR:HG22	1.71	0.73
82:DC:407:SER:HA	82:DC:434:VAL:HG23	1.70	0.73
83:EC:6768:U:C2'	83:EC:6769:A:H5'	2.18	0.73
83:EC:6768:U:H2'	83:EC:6769:A:H5'	1.69	0.73
8:H:359:LEU:HG	24:X:64:ILE:HG12	1.70	0.73
17:Q:102:GLN:H	17:Q:104:ARG:HH22	1.37	0.73
23:W:137:ALA:O	23:W:141:HIS:HB2	1.89	0.73
39:MA:20:GLN:O	39:MA:24:LEU:HG	1.89	0.73
43:QA:9:ILE:HG23	43:QA:51:ILE:HG23	1.70	0.73
66:NB:39:VAL:HG12	66:NB:42:GLU:H	1.54	0.73
83:EC:6903:U:H3'	83:EC:6904:U:C5'	2.19	0.73
1:A:13:C:H5"	52:ZA:209:ASN:HD21	1.54	0.72
1:A:1477:G:O2'	69:QB:47:PRO:HA	1.89	0.72
2:B:1177:G:H4'	37:KA:18:ARG:HD3	1.71	0.72
12:L:75:ILE:HG22	12:L:76:ALA:H	1.53	0.72
35:IA:72:ARG:HG3	35:IA:96:VAL:HG11	1.71	0.72
43:QA:27:ILE:HG13	43:QA:30:ARG:HE	1.54	0.72
67:OB:88:VAL:O	67:OB:89:SER:O	2.07	0.72
2:B:1256:G:O2'	16:P:123:ARG:HB2	1.88	0.72
2:B:1742:U:H2'	2:B:1743:G:C8	2.24	0.72
11:K:59:GLU:O	11:K:62:ILE:HG12	1.89	0.72
30:DA:28:ARG:HH22	30:DA:29:VAL:HG22	1.55	0.72
49:WA:103:PHE:HE1	49:WA:138:GLY:HA2	1.54	0.72
82:DC:226:ALA:HA	82:DC:240:MET:HE3	1.69	0.72
1:A:1099:U:H2'	1:A:1100:G:N2	2.03	0.72
2:B:2891:U:O2'	2:B:3014:U:H5"	1.89	0.72
2:B:2954:U:C4'	2:B:2955:U:H5'	2.14	0.72
2:B:3148:U:H2'	2:B:3149:G:C8	2.24	0.72
2:B:3191:G:H2'	2:B:3192:U:O4'	1.90	0.72
2:B:3326:G:H2'	2:B:3327:G:C8	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:263:GLY:CA	8:H:269:SER:HA	2.19	0.72
19:S:35:VAL:HG13	19:S:65:ARG:HG3	1.70	0.72
21:U:15:ALA:HB3	21:U:150:VAL:HG23	1.71	0.72
54:BB:194:THR:O	54:BB:195:ILE:HG13	1.89	0.72
63:KB:43:LYS:HE3	63:KB:43:LYS:HA	1.71	0.72
66:NB:7:VAL:HG12	66:NB:95:LYS:HE2	1.71	0.72
66:NB:47:LYS:HE2	66:NB:114:ARG:HH21	1.55	0.72
82:DC:659:ILE:HG23	82:DC:700:ARG:HD2	1.70	0.72
1:A:1414:U:H5"	67:OB:3:ARG:HE	1.52	0.72
2:B:584:G:H2'	2:B:585:A:C8	2.23	0.72
2:B:689:U:O2'	2:B:690:A:H5'	1.88	0.72
2:B:1249:G:H2'	2:B:1250:G:C8	2.24	0.72
2:B:2241:U:O2'	6:F:243:THR:HG22	1.89	0.72
2:B:2422:C:H2'	2:B:2423:U:C6	2.23	0.72
2:B:3054:U:H2'	2:B:3055:U:C6	2.24	0.72
21:U:24:VAL:HG11	21:U:87:SER:HA	1.69	0.72
56:DB:5:ILE:HA	56:DB:111:LEU:O	1.89	0.72
77:YB:54:VAL:HB	77:YB:63:LEU:HD12	1.71	0.72
82:DC:135:VAL:HG11	82:DC:185:VAL:HG22	1.70	0.72
82:DC:588:LEU:HD13	82:DC:686:VAL:HG13	1.71	0.72
82:DC:593:ILE:CG1	82:DC:685:ARG:HB2	2.18	0.72
2:B:121:A:H2'	12:L:108:ARG:NH1	2.04	0.72
2:B:250:U:H5'	2:B:251:G:H5"	1.69	0.72
2:B:1234:G:O2'	16:P:132:ILE:HD13	1.89	0.72
2:B:2510:U:O2'	2:B:2511:A:H5'	1.89	0.72
3:C:114:G:H2'	3:C:115:C:C6	2.24	0.72
9:I:125:VAL:HG12	9:I:196:ARG:HG3	1.72	0.72
10:J:42:LEU:HD12	10:J:50:LYS:HB2	1.70	0.72
10:J:72:ASN:HD22	10:J:72:ASN:H	1.37	0.72
11:K:108:LEU:HD13	11:K:134:VAL:HG11	1.71	0.72
20:T:39:GLU:CD	20:T:39:GLU:H	1.98	0.72
67:OB:85:VAL:O	67:OB:86:PRO:C	2.33	0.72
72:TB:65:LEU:HD13	72:TB:65:LEU:H	1.54	0.72
82:DC:19:VAL:HG22	82:DC:99:LEU:HB3	1.69	0.72
82:DC:724:ILE:HG23	82:DC:815:ALA:HB1	1.72	0.72
2:B:711:A:C8	2:B:712:G:H1'	2.24	0.72
2:B:1508:C:H3'	2:B:1509:A:C8	2.24	0.72
2:B:1779:C:H5'	23:W:97:ARG:NH2	2.03	0.72
2:B:3089:C:H2'	2:B:3090:U:C6	2.24	0.72
2:B:3153:U:H3	2:B:3293:U:H3	1.36	0.72
4:D:80:G:H2'	4:D:81:U:C6	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:219:ALA:HB2	7:G:336:VAL:HG13	1.71	0.72
12:L:64:ILE:O	12:L:68:ARG:HG2	1.90	0.72
12:L:162:LEU:HD11	19:S:45:PRO:HG2	1.72	0.72
39:MA:10:ARG:HD3	39:MA:57:VAL:HG13	1.72	0.72
48:VA:52:LEU:HB2	48:VA:86:PHE:HB2	1.71	0.72
70:RB:69:LYS:O	79:AC:44:ARG:HD2	1.90	0.72
82:DC:171:LYS:HD3	82:DC:279:ASP:HA	1.70	0.72
1:A:843:U:H2'	1:A:844:A:C8	2.24	0.72
1:A:1545:A:H2'	1:A:1546:G:C8	2.25	0.72
2:B:1805:C:H2'	2:B:1806:A:H8	1.55	0.72
2:B:2343:C:H2'	2:B:2344:U:H6	1.53	0.72
2:B:2857:C:H2'	2:B:2858:U:C6	2.24	0.72
2:B:2888:U:O4	2:B:2910:A:H2'	1.89	0.72
3:C:37:A:H2	39:MA:86:ARG:HE	1.36	0.72
6:F:77:ILE:HG22	6:F:78:ALA:H	1.54	0.72
8:H:65:TRP:CZ3	8:H:76:ARG:HD2	2.24	0.72
17:Q:58:VAL:C	17:Q:69:VAL:HG23	2.14	0.72
22:V:23:ASN:HB3	22:V:27:LYS:HG3	1.71	0.72
35:IA:56:ASN:HA	35:IA:59:ILE:CD1	2.20	0.72
48:VA:58:MET:HA	48:VA:61:ARG:HB2	1.70	0.72
66:NB:52:LEU:HD23	66:NB:52:LEU:H	1.53	0.72
80:BC:14:VAL:O	80:BC:18:THR:HG23	1.89	0.72
82:DC:561:VAL:HG11	82:DC:774:VAL:HG21	1.70	0.72
2:B:217:U:H4'	30:DA:100:HIS:CD2	2.24	0.72
2:B:509:U:C2'	2:B:510:G:H5"	2.19	0.72
2:B:1928:G:H2'	2:B:1929:G:O4'	1.90	0.72
2:B:2975:U:H2'	2:B:2976:A:C8	2.25	0.72
19:S:38:ARG:HH12	19:S:60:VAL:HG22	1.55	0.72
72:TB:44:HIS:HB2	72:TB:46:TYR:CE2	2.25	0.72
82:DC:634:TRP:HE3	82:DC:664:VAL:HG23	1.54	0.72
1:A:381:C:H2'	1:A:382:C:C6	2.24	0.72
1:A:646:C:H2'	1:A:647:G:C8	2.25	0.72
2:B:63:A:H4'	19:S:185:ALA:HA	1.72	0.72
2:B:286:U:H2'	2:B:287:G:H8	1.51	0.72
2:B:661:G:N7	32:FA:19:LYS:HG2	2.04	0.72
2:B:1054:A:H5"	2:B:2637:A:H61	1.54	0.72
2:B:2244:A:O2'	6:F:223:SER:HB3	1.90	0.72
11:K:95:ILE:HG23	11:K:133:TYR:HE1	1.54	0.72
13:M:71:VAL:HA	13:M:74:LEU:HB2	1.71	0.72
16:P:133:LEU:HB3	16:P:142:ARG:HH22	1.55	0.72
18:R:44:VAL:HG22	18:R:60:LEU:HD21	1.69	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:59:SER:O	29:CA:63:ILE:HG22	1.89	0.72
34:HA:27:TYR:O	34:HA:31:VAL:HG23	1.89	0.72
53:AB:95:GLY:HA3	53:AB:129:SER:HB2	1.71	0.72
54:BB:160:VAL:HG13	54:BB:169:ILE:HG23	1.72	0.72
58:FB:103:GLN:HG2	58:FB:164:ARG:HB3	1.72	0.72
59:GB:29:LYS:O	59:GB:33:GLU:HG3	1.90	0.72
70:RB:71:PRO:HA	79:AC:40:ARG:HH22	1.55	0.72
2:B:984:G:C5	33:GA:17:HIS:HB2	2.24	0.72
2:B:1647:A:H62	2:B:1808:G:H1'	1.55	0.72
2:B:1919:G:H2'	2:B:1933:A:N6	2.04	0.72
2:B:2182:A:H2'	2:B:2183:A:H8	1.52	0.72
6:F:113:VAL:HG12	6:F:166:ILE:HD13	1.72	0.72
7:G:58:ARG:HA	7:G:357:LYS:HG2	1.72	0.72
7:G:311:PHE:HB3	7:G:314:TYR:HB3	1.70	0.72
8:H:197:ARG:HD3	8:H:197:ARG:H	1.55	0.72
8:H:281:ILE:HD12	22:V:29:LEU:HG	1.70	0.72
36:JA:19:ARG:HB2	36:JA:32:TRP:HA	1.70	0.72
46:TA:4:VAL:HG22	46:TA:93:LEU:HA	1.71	0.72
54:BB:182:TYR:HB2	54:BB:228:ILE:HD13	1.71	0.72
75:WB:88:ILE:HG23	75:WB:104:ALA:HB2	1.71	0.72
1:A:542:A:C2	80:BC:28:LYS:HD3	2.25	0.71
7:G:90:VAL:HG13	7:G:103:THR:O	1.90	0.71
17:Q:67:ARG:NE	17:Q:68:LYS:HG2	2.04	0.71
20:T:37:ARG:HB3	20:T:40:GLU:HB2	1.72	0.71
47:UA:33:GLN:HB2	47:UA:49:ARG:HG3	1.72	0.71
48:VA:56:ASN:HA	48:VA:59:VAL:HG23	1.72	0.71
55:CB:70:VAL:HG21	66:NB:44:LEU:HD12	1.71	0.71
61:IB:38:ALA:HB2	61:IB:60:PHE:HE1	1.52	0.71
83:EC:6771:U:H5'	83:EC:6819:G:H22	1.55	0.71
1:A:821:U:H3'	1:A:822:U:C5'	2.20	0.71
1:A:1466:G:H2'	1:A:1467:C:C6	2.25	0.71
2:B:257:U:H5"	17:Q:86:THR:HG21	1.72	0.71
2:B:2628:A:H4'	2:B:2799:A:OP2	1.89	0.71
5:E:112:ALA:HB2	5:E:135:PRO:HB2	1.70	0.71
6:F:68:LYS:HG2	6:F:69:TYR:N	2.05	0.71
28:BA:9:SER:O	28:BA:53:VAL:HB	1.90	0.71
36:JA:103:LYS:O	36:JA:106:VAL:HG12	1.90	0.71
56:DB:137:ARG:HB3	56:DB:140:ASN:HB2	1.70	0.71
65:MB:28:MET:HE3	65:MB:32:ASP:HB3	1.72	0.71
82:DC:225:PHE:CZ	82:DC:328:LEU:HD21	2.25	0.71
82:DC:515:ASP:HB3	82:DC:518:VAL:HB	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:144:U:O2'	1:A:145:A:H5'	1.91	0.71
1:A:1646:C:H42	1:A:1754:A:H61	1.37	0.71
2:B:641:C:H5	36:JA:38:ILE:HD12	1.55	0.71
2:B:1234:G:H2'	2:B:1235:U:C5	2.25	0.71
2:B:1804:A:H5"	38:LA:67:LYS:HE3	1.71	0.71
2:B:1887:A:C4'	7:G:227:GLU:HA	2.15	0.71
2:B:2731:U:H2'	2:B:2732:G:C8	2.25	0.71
3:C:9:A:H2'	3:C:10:A:C8	2.25	0.71
9:I:107:ARG:HD2	9:I:248:ARG:HD3	1.71	0.71
22:V:179:ARG:NH2	32:FA:56:VAL:HA	2.05	0.71
34:HA:15:ALA:O	34:HA:19:LYS:HG2	1.90	0.71
63:KB:45:LEU:O	63:KB:49:GLN:HB2	1.90	0.71
80:BC:3:LYS:HE2	80:BC:5:HIS:HB2	1.70	0.71
1:A:201:G:H2'	1:A:202:A:H8	1.56	0.71
2:B:418:A:H4'	2:B:629:U:O3'	1.90	0.71
2:B:1919:G:H2'	2:B:1933:A:H61	1.56	0.71
2:B:2637:A:O2'	2:B:2638:C:H5"	1.90	0.71
2:B:2647:A:H1'	14:N:22:TYR:CD2	2.20	0.71
2:B:2921:U:H2'	2:B:2923:U:H5'	1.73	0.71
6:F:211:HIS:ND1	6:F:219:ILE:HG23	2.05	0.71
9:I:236:LEU:HD12	9:I:239:ILE:HD12	1.72	0.71
32:FA:105:LEU:HD13	32:FA:128:ARG:HD2	1.70	0.71
47:UA:46:THR:HB	47:UA:58:SER:H	1.56	0.71
61:IB:34:TRP:HH2	61:IB:36:LYS:HD3	1.53	0.71
1:A:138:A:H61	1:A:266:A:H61	1.36	0.71
1:A:709:C:H3'	1:A:710:U:H5"	1.72	0.71
1:A:1315:U:H5"	1:A:1329:A:C2	2.25	0.71
2:B:381:U:H2'	2:B:382:U:C6	2.25	0.71
2:B:726:G:H21	2:B:744:A:H62	1.36	0.71
2:B:1458:U:H2'	2:B:1459:C:C6	2.25	0.71
2:B:1898:G:H5'	27:AA:17:LEU:HD22	1.72	0.71
2:B:2480:A:H5"	5:E:98:LYS:HG3	1.72	0.71
3:C:59:A:H5'	3:C:59:A:N3	2.04	0.71
53:AB:156:PHE:HD2	53:AB:189:MET:HE1	1.54	0.71
63:KB:145:THR:O	63:KB:149:LEU:HB2	1.91	0.71
71:SB:67:ASP:HA	71:SB:70:ASN:HD22	1.54	0.71
83:EC:6904:U:H2'	83:EC:6906:G:OP2	1.90	0.71
1:A:338:C:O2'	58:FB:5:ARG:HA	1.90	0.71
2:B:254:A:H2'	2:B:255:A:C8	2.26	0.71
2:B:388:G:O2'	21:U:17:ALA:HA	1.90	0.71
2:B:3112:G:O6	2:B:3119:U:H3'	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:10:A:H2'	3:C:11:C:C6	2.25	0.71
11:K:25:GLN:HG2	11:K:29:GLU:HB2	1.73	0.71
11:K:207:LEU:HD22	11:K:243:MET:HE2	1.69	0.71
29:CA:131:ASP:HB3	29:CA:134:ASP:HB2	1.73	0.71
57:EB:168:SER:O	57:EB:172:VAL:HG23	1.91	0.71
59:GB:179:ARG:HA	59:GB:182:GLU:HG2	1.72	0.71
1:A:310:C:H4'	73:UB:33:LEU:CD1	2.21	0.71
2:B:428:A:H2'	2:B:429:U:O4'	1.90	0.71
2:B:793:C:H2'	2:B:794:U:C6	2.25	0.71
3:C:14:C:H5"	21:U:123:PRO:HD3	1.73	0.71
24:X:151:PRO:C	24:X:153:PRO:HD3	2.15	0.71
34:HA:78:GLY:HA2	34:HA:81:VAL:HG22	1.73	0.71
36:JA:123:LYS:HA	36:JA:126:LEU:HD11	1.72	0.71
40:NA:57:LEU:HA	40:NA:60:LEU:HB2	1.71	0.71
48:VA:124:VAL:HG12	48:VA:125:ASN:H	1.54	0.71
50:XA:77:SER:HB2	50:XA:86:VAL:HG11	1.72	0.71
57:EB:111:LYS:O	57:EB:112:ARG:HB3	1.89	0.71
58:FB:26:LYS:NZ	58:FB:49:ARG:HB2	2.06	0.71
82:DC:653:VAL:HG13	82:DC:693:LEU:HD11	1.71	0.71
2:B:149:U:H5"	19:S:54:LYS:HB3	1.72	0.71
2:B:388:G:H4'	21:U:18:ARG:H	1.54	0.71
2:B:1218:U:H3'	2:B:1219:C:H5"	1.69	0.71
7:G:33:PRO:HG2	7:G:44:THR:HB	1.73	0.71
10:J:82:ARG:HD2	37:KA:104:PRO:HB3	1.73	0.71
11:K:160:ARG:HG3	11:K:203:TRP:CD2	2.26	0.71
12:L:146:LYS:HG3	12:L:175:VAL:HG22	1.72	0.71
18:R:15:VAL:HG12	24:X:150:PHE:O	1.90	0.71
52:ZA:177:GLY:O	52:ZA:195:ASP:HA	1.90	0.71
60:HB:30:ALA:O	60:HB:38:LYS:HA	1.91	0.71
1:A:902:G:H4'	1:A:1008:G:H4'	1.71	0.71
2:B:1138:U:H2'	2:B:1139:G:H8	1.55	0.71
2:B:2402:A:H3'	8:H:67:THR:HG23	1.71	0.71
2:B:3011:A:O3'	2:B:3012:A:H4'	1.91	0.71
5:E:177:ASP:HA	5:E:180:VAL:HB	1.71	0.71
11:K:110:ARG:HG2	22:V:3:ILE:HG13	1.73	0.71
53:AB:24:PHE:HZ	53:AB:72:LEU:HD13	1.56	0.71
61:IB:70:ILE:HA	61:IB:126:GLY:HA2	1.72	0.71
1:A:209:U:H2'	1:A:210:A:C8	2.26	0.71
1:A:479:C:H4'	59:GB:120:LYS:NZ	2.06	0.71
1:A:1227:A:H4'	1:A:1228:G:C5'	2.19	0.71
2:B:308:A:H5"	40:NA:80:PHE:CD1	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:891:G:H1'	2:B:2324:A:C6	2.26	0.71
2:B:1129:A:H5"	14:N:13:LYS:NZ	2.06	0.71
2:B:1525:G:H3'	2:B:1526:U:C5	2.25	0.71
3:C:43:A:H4'	41:OA:22:CYS:CA	2.20	0.71
4:D:24:A:O2'	4:D:120:C:H4'	1.91	0.71
5:E:194:LEU:HD23	5:E:195:LYS:H	1.54	0.71
27:AA:90:GLY:CA	28:BA:16:GLY:HA2	2.16	0.71
36:JA:95:GLU:HA	36:JA:121:ASN:OD1	1.89	0.71
37:KA:11:GLY:HA2	37:KA:32:ILE:HG22	1.73	0.71
49:WA:117:LYS:H	49:WA:117:LYS:HD2	1.55	0.71
61:IB:3:THR:O	61:IB:4:GLU:HG3	1.90	0.71
82:DC:410:LYS:HG2	82:DC:428:ILE:HG22	1.72	0.71
2:B:546:C:H5'	2:B:547:G:C5'	2.18	0.70
2:B:561:C:H5"	18:R:76:ALA:HA	1.73	0.70
2:B:608:A:H5"	8:H:322:GLN:CD	2.15	0.70
2:B:632:G:H5"	20:T:94:ARG:HD2	1.73	0.70
2:B:641:C:H2'	2:B:642:U:O4'	1.91	0.70
2:B:726:G:C6	2:B:742:G:H2'	2.25	0.70
2:B:2102:U:H5'	23:W:88:ARG:NH2	2.06	0.70
6:F:125:ALA:O	6:F:128:ARG:HD3	1.90	0.70
8:H:196:ASN:HD21	30:DA:10:SER:HB2	1.57	0.70
20:T:3:VAL:HG13	20:T:4:GLU:HG2	1.71	0.70
39:MA:38:ARG:HB2	39:MA:38:ARG:HH11	1.54	0.70
43:QA:27:ILE:HA	43:QA:30:ARG:NE	2.05	0.70
55:CB:161:ASP:O	78:ZB:44:VAL:HA	1.91	0.70
82:DC:156:VAL:HG22	82:DC:210:ALA:HB3	1.73	0.70
2:B:2182:A:H2'	2:B:2183:A:C8	2.26	0.70
19:S:118:SER:HB2	19:S:132:VAL:HG22	1.73	0.70
48:VA:45:LEU:HB2	48:VA:49:ALA:O	1.92	0.70
68:PB:126:ARG:HB3	68:PB:133:VAL:HB	1.71	0.70
83:EC:6913:U:H5"	83:EC:6935:G:C8	2.26	0.70
1:A:142:G:P	56:DB:139:ASN:HD21	2.14	0.70
1:A:201:G:H2'	1:A:202:A:C8	2.25	0.70
2:B:904:A:H2'	2:B:905:U:C6	2.26	0.70
2:B:1237:G:H5'	16:P:58:VAL:HG11	1.73	0.70
2:B:1240:A:H5'	16:P:98:VAL:HG12	1.72	0.70
2:B:1711:C:H5"	31:EA:38:PHE:HB3	1.72	0.70
15:O:137:ARG:HG2	15:O:141:ARG:HH11	1.54	0.70
24:X:8:GLN:HB3	24:X:62:ASN:HB3	1.73	0.70
25:Y:136:ARG:HH11	25:Y:136:ARG:H	1.39	0.70
28:BA:13:ILE:HG13	28:BA:32:GLN:HE21	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:25:LEU:HD21	34:HA:81:VAL:HG11	1.71	0.70
82:DC:804:LEU:HD11	82:DC:814:LYS:HB2	1.73	0.70
2:B:1220:U:H3'	2:B:1221:A:C2	2.27	0.70
2:B:2394:G:C2'	2:B:2395:G:H5'	2.22	0.70
2:B:2482:U:H3	2:B:2486:A:H62	1.37	0.70
2:B:2536:A:H3'	2:B:2537:U:H5"	1.71	0.70
2:B:3281:U:H2'	2:B:3282:U:C6	2.27	0.70
2:B:3314:A:H5"	7:G:116:ARG:HH21	1.55	0.70
10:J:55:LEU:CG	10:J:65:ILE:HA	2.20	0.70
11:K:108:LEU:HD22	11:K:113:SER:O	1.92	0.70
13:M:4:ILE:O	13:M:58:HIS:HA	1.91	0.70
16:P:86:LYS:HZ2	16:P:106:LEU:HD21	1.57	0.70
20:T:15:LEU:HD21	20:T:125:ARG:HA	1.71	0.70
29:CA:113:LEU:HG	29:CA:123:TYR:HE2	1.56	0.70
48:VA:121:VAL:O	48:VA:155:ASP:HA	1.90	0.70
57:EB:49:ILE:HG22	57:EB:175:LYS:HG2	1.74	0.70
57:EB:63:PRO:C	57:EB:65:PRO:HD2	2.16	0.70
82:DC:412:ARG:HA	82:DC:428:ILE:HG13	1.72	0.70
83:EC:6794:C:H2'	83:EC:6795:U:C5	2.26	0.70
1:A:531:C:H2'	1:A:532:U:H5"	1.73	0.70
1:A:887:A:H4'	64:LB:88:GLY:HA3	1.72	0.70
1:A:1241:G:H1'	65:MB:79:HIS:H	1.57	0.70
1:A:1280:C:H4'	70:RB:69:LYS:HB3	1.74	0.70
1:A:1651:A:H2'	1:A:1652:C:C6	2.25	0.70
1:A:1752:U:H2'	1:A:1753:A:C8	2.26	0.70
2:B:398:A:N6	3:C:11:C:H5"	2.06	0.70
2:B:2805:G:H2'	2:B:2806:U:C6	2.27	0.70
3:C:119:C:H2'	3:C:120:C:C6	2.26	0.70
6:F:101:VAL:HB	6:F:165:VAL:HB	1.71	0.70
14:N:36:LEU:HD21	14:N:69:ARG:HD3	1.73	0.70
19:S:191:TRP:HA	19:S:194:GLN:CG	2.22	0.70
34:HA:23:TYR:HB3	34:HA:92:ILE:HG12	1.71	0.70
1:A:762:A:H4'	59:GB:71:PHE:HE1	1.56	0.70
2:B:269:G:OP1	19:S:47:LYS:HE3	1.92	0.70
2:B:2742:C:H2'	2:B:2743:A:C8	2.26	0.70
2:B:2775:U:H4'	2:B:2777:G:N1	2.05	0.70
17:Q:46:ILE:HG23	17:Q:49:ARG:HB2	1.73	0.70
24:X:29:ILE:HG21	24:X:37:ALA:HA	1.74	0.70
59:GB:140:ILE:HD11	59:GB:161:THR:OG1	1.91	0.70
65:MB:126:VAL:HG13	65:MB:127:ARG:H	1.57	0.70
68:PB:14:ILE:HA	68:PB:22:VAL:O	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:9:MET:O	82:DC:13:MET:HG3	1.91	0.70
2:B:3060:C:H2'	2:B:3061:G:C8	2.27	0.70
8:H:206:LEU:HD21	8:H:237:GLN:OE1	1.92	0.70
57:EB:46:ILE:HD12	57:EB:60:ILE:HG12	1.72	0.70
58:FB:96:LEU:HD13	58:FB:179:CYS:SG	2.32	0.70
1:A:514:G:H1	1:A:543:C:H5	1.38	0.70
2:B:823:C:H2'	2:B:824:C:C6	2.27	0.70
2:B:1145:G:H5'	36:JA:46:PHE:CE2	2.26	0.70
2:B:1147:G:H2'	2:B:1148:G:O4'	1.89	0.70
2:B:2166:A:H4'	19:S:72:LYS:HD2	1.73	0.70
8:H:169:LEU:O	8:H:172:VAL:HG12	1.92	0.70
15:O:141:ARG:HG3	15:O:143:ARG:O	1.92	0.70
18:R:66:THR:HA	18:R:99:TRP:CZ3	2.26	0.70
31:EA:23:VAL:HB	31:EA:43:VAL:HB	1.74	0.70
35:IA:71:LEU:HD22	35:IA:73:LEU:HD23	1.74	0.70
45:SA:11:ARG:HH11	45:SA:11:ARG:HB3	1.56	0.70
59:GB:29:LYS:HA	80:BC:40:TYR:HE2	1.56	0.70
75:WB:71:ILE:HD12	75:WB:76:ALA:HA	1.74	0.70
82:DC:5:THR:HA	82:DC:48:ALA:HA	1.72	0.70
82:DC:89:ILE:HG12	82:DC:340:LEU:HA	1.73	0.70
1:A:625:C:H2'	1:A:626:U:C6	2.27	0.70
2:B:994:G:H5'	2:B:2637:A:O2'	1.92	0.70
2:B:2145:A:H5"	2:B:2959:C:H5'	1.74	0.70
8:H:98:ARG:HD2	8:H:99:MET:O	1.91	0.70
11:K:77:VAL:O	25:Y:138:SER:HA	1.92	0.70
17:Q:18:TRP:O	17:Q:22:VAL:HG23	1.91	0.70
23:W:99:LEU:HA	23:W:102:LEU:HB2	1.73	0.70
24:X:77:VAL:HG11	24:X:106:LEU:HG	1.73	0.70
35:IA:56:ASN:HA	35:IA:59:ILE:HD12	1.72	0.70
55:CB:57:SER:CB	78:ZB:53:ILE:HB	2.22	0.70
83:EC:6767:G:H3'	83:EC:6768:U:H5"	1.74	0.70
1:A:521:A:H2'	1:A:522:U:C6	2.26	0.70
1:A:1773:C:H5'	45:SA:4:LYS:HB3	1.73	0.70
2:B:105:C:H2'	2:B:106:A:C8	2.26	0.70
2:B:120:G:H5'	12:L:129:PRO:HG3	1.71	0.70
2:B:824:C:H1'	2:B:1535:A:H1'	1.74	0.70
2:B:834:U:C2'	2:B:835:G:H5'	2.22	0.70
2:B:1636:U:H4'	31:EA:75:VAL:HA	1.74	0.70
2:B:1695:U:O4'	38:LA:26:PRO:HG3	1.92	0.70
2:B:1894:U:H2'	2:B:1895:A:O4'	1.92	0.70
2:B:2333:C:H2'	2:B:2334:U:C6	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:28:C:H4'	8:H:49:ALA:HB3	1.74	0.70
11:K:45:LEU:HD12	11:K:48:ASN:HD22	1.56	0.70
47:UA:57:CYS:HB3	47:UA:62:LYS:HB2	1.73	0.70
66:NB:7:VAL:HG22	66:NB:22:VAL:HB	1.74	0.70
82:DC:69:THR:HG21	82:DC:106:PRO:HA	1.72	0.70
2:B:10:C:H2'	2:B:11:A:C4'	2.21	0.69
2:B:1245:A:H3'	2:B:1246:G:C5'	2.21	0.69
2:B:1364:C:H2'	2:B:1365:G:C8	2.27	0.69
2:B:1650:G:H2'	2:B:1651:U:C6	2.26	0.69
2:B:1789:G:H2'	2:B:1790:G:H8	1.57	0.69
2:B:2943:G:H2'	2:B:2944:U:O4'	1.92	0.69
6:F:62:VAL:HB	6:F:73:GLU:HG2	1.74	0.69
15:O:21:ILE:HD11	15:O:125:MET:HG2	1.73	0.69
18:R:55:ARG:NH2	18:R:77:ARG:HA	2.05	0.69
18:R:123:LEU:HB3	20:T:194:LEU:HD21	1.74	0.69
48:VA:107:ALA:H	48:VA:182:THR:HG21	1.57	0.69
61:IB:94:ILE:HD11	61:IB:101:GLU:HG2	1.73	0.69
63:KB:113:PHE:CZ	63:KB:117:LEU:HD11	2.27	0.69
70:RB:20:ILE:HD11	70:RB:100:VAL:HG21	1.74	0.69
82:DC:231:LYS:HG3	82:DC:232:LYS:N	2.07	0.69
1:A:869:A:H1'	63:KB:48:SER:HB3	1.73	0.69
1:A:1116:A:O2'	1:A:1652:C:H4'	1.91	0.69
2:B:348:A:H4'	2:B:367:A:H61	1.57	0.69
2:B:916:G:H5'	2:B:917:A:OP1	1.92	0.69
2:B:1324:U:H2'	2:B:1325:U:O4'	1.92	0.69
2:B:1485:G:H22	2:B:1857:C:N4	1.86	0.69
7:G:122:TRP:NE1	7:G:127:LYS:HE3	2.07	0.69
7:G:165:GLN:HB3	7:G:168:LYS:HG2	1.72	0.69
19:S:58:GLY:HA3	19:S:142:ILE:CD1	2.21	0.69
55:CB:33:VAL:HG12	55:CB:37:GLN:CD	2.17	0.69
66:NB:44:LEU:HB3	66:NB:47:LYS:HB3	1.74	0.69
66:NB:93:HIS:HB3	66:NB:102:LYS:HB2	1.74	0.69
79:AC:21:CYS:HB2	79:AC:30:LEU:HD21	1.73	0.69
82:DC:576:LEU:HD11	82:DC:585:ARG:CZ	2.22	0.69
1:A:12:U:H2'	1:A:13:C:C6	2.27	0.69
1:A:448:C:H5'	54:BB:29:PRO:HG3	1.74	0.69
1:A:867:G:H5'	63:KB:4:MET:HE3	1.74	0.69
2:B:580:C:H2'	2:B:581:U:C6	2.27	0.69
2:B:2873:U:O2'	2:B:2874:G:H5'	1.91	0.69
11:K:89:ILE:HG12	11:K:134:VAL:HA	1.72	0.69
11:K:224:ILE:HD13	24:X:39:SER:HB2	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:81:GLU:HA	15:O:84:LEU:HD12	1.74	0.69
25:Y:116:ARG:O	25:Y:120:LYS:HB2	1.92	0.69
35:IA:5:LYS:HG2	35:IA:89:LEU:HD11	1.73	0.69
48:VA:37:GLN:O	48:VA:41:VAL:HG23	1.90	0.69
1:A:25:C:H1'	1:A:26:A:OP2	1.92	0.69
1:A:1573:A:H4'	1:A:1574:G:H5'	1.75	0.69
2:B:623:U:H4'	37:KA:86:ARG:HH21	1.58	0.69
2:B:1180:A:O2'	2:B:1182:A:H5"	1.91	0.69
2:B:2615:G:H2'	2:B:2616:C:C6	2.27	0.69
7:G:260:VAL:HG11	7:G:266:ARG:HH11	1.55	0.69
14:N:5:PRO:HG3	14:N:7:ARG:HH12	1.57	0.69
24:X:4:PHE:HE2	24:X:104:GLU:HG3	1.57	0.69
38:LA:5:VAL:HG13	38:LA:32:ALA:HB2	1.73	0.69
49:WA:34:LEU:HD22	49:WA:73:LEU:HG	1.74	0.69
55:CB:57:SER:HB3	78:ZB:53:ILE:HB	1.74	0.69
56:DB:161:GLU:HA	56:DB:170:THR:HA	1.73	0.69
1:A:683:C:H2'	1:A:684:A:C8	2.26	0.69
1:A:770:A:H3'	1:A:771:A:C5'	2.20	0.69
1:A:1126:G:H5"	45:SA:11:ARG:HE	1.55	0.69
1:A:1643:U:O4'	1:A:1781:A:H4'	1.92	0.69
2:B:229:G:H4'	8:H:220:ARG:HH22	1.57	0.69
2:B:874:U:H5'	2:B:875:G:C5'	2.16	0.69
20:T:61:ALA:HA	20:T:70:PRO:HG2	1.74	0.69
49:WA:170:ILE:HG21	49:WA:211:ILE:HD13	1.74	0.69
70:RB:99:ILE:HD12	70:RB:102:ARG:HD3	1.74	0.69
78:ZB:44:VAL:HG21	78:ZB:48:VAL:HG21	1.74	0.69
1:A:1649:G:H2'	1:A:1650:U:C6	2.28	0.69
2:B:374:A:H4'	2:B:375:A:H5'	1.74	0.69
2:B:1232:C:H5	2:B:1261:G:H2'	1.57	0.69
2:B:3121:U:C4'	2:B:3122:A:H5'	2.22	0.69
5:E:36:VAL:HB	5:E:183:ILE:HG21	1.74	0.69
9:I:17:GLN:HG3	25:Y:22:HIS:HB2	1.73	0.69
30:DA:55:GLU:HA	30:DA:69:LYS:HA	1.74	0.69
40:NA:50:LEU:HG	40:NA:54:GLU:HB3	1.75	0.69
66:NB:39:VAL:HG12	66:NB:41:PRO:HB2	1.74	0.69
69:QB:30:VAL:HB	69:QB:34:VAL:HG11	1.74	0.69
74:VB:127:LYS:HE2	74:VB:128:LYS:HD2	1.74	0.69
82:DC:155:VAL:HG23	82:DC:202:VAL:CG2	2.23	0.69
2:B:55:G:H21	19:S:161:ALA:HB1	1.57	0.69
2:B:351:A:H61	43:QA:39:ALA:N	1.90	0.69
2:B:361:A:H4'	41:OA:35:SER:O	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1178:G:H4'	37:KA:29:LEU:CD1	2.22	0.69
2:B:1226:G:H5"	2:B:3117:C:H1'	1.74	0.69
2:B:1861:G:H2'	2:B:1862:U:C6	2.28	0.69
8:H:313:LEU:HD13	8:H:315:LYS:NZ	2.08	0.69
22:V:106:PHE:HB2	22:V:111:ARG:HH21	1.58	0.69
48:VA:104:ARG:CB	48:VA:184:GLY:HA3	2.21	0.69
53:AB:73:VAL:HG12	53:AB:79:TYR:HE2	1.56	0.69
72:TB:98:GLN:HG3	72:TB:99:PHE:HD1	1.58	0.69
82:DC:322:VAL:HA	82:DC:325:ARG:HD2	1.75	0.69
1:A:767:U:C6	59:GB:141:VAL:HA	2.27	0.69
1:A:1315:U:H2'	1:A:1316:G:O4'	1.93	0.69
2:B:930:U:H5'	41:OA:49:TRP:O	1.93	0.69
2:B:1077:U:H2'	2:B:1078:U:C6	2.27	0.69
2:B:1799:A:H2'	2:B:1800:A:C8	2.28	0.69
2:B:2854:U:O3'	14:N:160:PRO:HB3	1.91	0.69
2:B:2967:A:H5"	6:F:213:GLY:CA	2.23	0.69
2:B:3262:U:H2'	2:B:3263:G:H5"	1.75	0.69
3:C:36:G:OP2	39:MA:85:THR:HG23	1.92	0.69
7:G:119:TYR:HE2	7:G:129:ALA:HB2	1.58	0.69
10:J:146:ILE:HD13	10:J:149:ILE:HD12	1.75	0.69
11:K:51:TYR:HE2	11:K:183:ASP:HA	1.58	0.69
11:K:88:ARG:HG2	11:K:111:ILE:HA	1.74	0.69
11:K:95:ILE:HG23	11:K:133:TYR:CE1	2.28	0.69
25:Y:28:SER:HA	25:Y:31:LEU:HD12	1.74	0.69
26:Z:35:LYS:O	26:Z:39:ASP:HB2	1.93	0.69
31:EA:101:PHE:O	31:EA:102:GLU:HB3	1.92	0.69
39:MA:104:GLN:HA	39:MA:107:LYS:HD3	1.74	0.69
41:OA:64:MET:HB3	41:OA:67:LEU:HB3	1.74	0.69
42:PA:10:GLN:O	42:PA:14:LEU:HG	1.93	0.69
50:XA:172:LEU:O	50:XA:175:TYR:HB3	1.92	0.69
53:AB:132:LYS:HG3	53:AB:156:PHE:HB3	1.75	0.69
67:OB:93:LEU:C	67:OB:95:ARG:N	2.43	0.69
70:RB:24:ILE:O	70:RB:90:TYR:HA	1.93	0.69
82:DC:296:ILE:CB	82:DC:297:PRO:HD3	2.21	0.69
1:A:1036:A:H5"	72:TB:28:ARG:NH2	2.07	0.69
2:B:122:A:H62	2:B:148:G:H21	1.39	0.69
2:B:1604:G:H2'	2:B:1605:A:C5'	2.21	0.69
2:B:1636:U:H1'	31:EA:76:ASN:HB2	1.74	0.69
2:B:2280:A:H2'	2:B:2281:A:H5'	1.75	0.69
2:B:3121:U:H4'	2:B:3122:A:H5'	1.73	0.69
4:D:11:A:N6	9:I:16:PHE:HB3	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:205:PRO:HG2	8:H:225:VAL:HG13	1.75	0.69
11:K:145:ARG:HB3	11:K:145:ARG:HH11	1.55	0.69
26:Z:71:PHE:HA	26:Z:75:TYR:CD2	2.28	0.69
32:FA:76:ASP:HB2	32:FA:115:LYS:HB3	1.75	0.69
34:HA:25:LEU:HD13	34:HA:87:VAL:HG11	1.74	0.69
36:JA:85:LEU:HA	36:JA:88:HIS:CD2	2.24	0.69
48:VA:16:ARG:O	48:VA:20:GLU:HG3	1.92	0.69
56:DB:75:LEU:HB2	56:DB:97:VAL:HG21	1.73	0.69
68:PB:66:LEU:O	68:PB:70:VAL:HG23	1.92	0.69
70:RB:95:ALA:HB1	70:RB:96:PRO:HD2	1.75	0.69
82:DC:757:GLU:HG3	82:DC:768:VAL:HG13	1.74	0.69
1:A:766:U:H5'	1:A:767:U:H5"	1.75	0.69
2:B:805:G:H1'	8:H:73:ARG:HD3	1.73	0.69
2:B:1348:U:H4'	2:B:1349:G:C5'	2.23	0.69
2:B:1765:U:C5	23:W:43:LYS:HB3	2.28	0.69
2:B:2242:A:H5"	6:F:243:THR:O	1.91	0.69
2:B:3007:U:H5'	20:T:73:PHE:HD1	1.57	0.69
22:V:63:SER:HB2	22:V:90:ASP:HB2	1.74	0.69
31:EA:127:ASN:HB3	31:EA:131:PHE:CD1	2.28	0.69
38:LA:82:ALA:HA	38:LA:85:VAL:HB	1.73	0.69
53:AB:17:PHE:HB2	53:AB:77:PHE:CE1	2.28	0.69
54:BB:209:HIS:HA	54:BB:219:VAL:HG22	1.75	0.69
55:CB:89:ILE:HD12	55:CB:137:ILE:HG13	1.75	0.69
82:DC:160:VAL:HG13	82:DC:178:PHE:HZ	1.58	0.69
82:DC:426:LEU:HG	82:DC:428:ILE:HD11	1.74	0.69
1:A:3:U:H5'	52:ZA:179:VAL:HG12	1.74	0.68
1:A:298:C:H5"	54:BB:38:LEU:HD23	1.74	0.68
1:A:617:U:H5'	1:A:1031:U:O4'	1.93	0.68
1:A:771:A:H2'	1:A:772:G:O4'	1.92	0.68
2:B:241:G:H2'	2:B:242:C:H5'	1.75	0.68
7:G:114:VAL:HG13	7:G:163:HIS:HB3	1.74	0.68
11:K:153:PHE:HA	11:K:162:PRO:HA	1.75	0.68
12:L:139:VAL:HA	12:L:142:LEU:HD12	1.73	0.68
14:N:38:LYS:HG2	14:N:41:ALA:HB2	1.74	0.68
14:N:68:ALA:HB2	14:N:158:LYS:HB2	1.75	0.68
28:BA:8:PHE:CE1	28:BA:46:PRO:HG3	2.28	0.68
2:B:137:G:H2'	2:B:138:U:C6	2.28	0.68
2:B:3106:A:H2'	2:B:3107:U:O4'	1.93	0.68
8:H:72:ALA:HB3	8:H:76:ARG:HH21	1.56	0.68
10:J:58:LEU:HG	10:J:64:LEU:HB2	1.74	0.68
12:L:186:LEU:HD22	12:L:198:ALA:HB2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:72:ILE:HD12	31:EA:100:THR:HG21	1.75	0.68
36:JA:2:ALA:HB1	36:JA:90:LYS:HG2	1.74	0.68
37:KA:49:ILE:HG23	37:KA:71:VAL:HG23	1.74	0.68
46:TA:36:PHE:HA	46:TA:41:ARG:HD3	1.75	0.68
50:XA:143:VAL:HB	50:XA:157:ASP:H	1.58	0.68
74:VB:12:VAL:HG22	74:VB:23:PHE:HB3	1.74	0.68
2:B:149:U:C3'	2:B:150:A:H5"	2.23	0.68
2:B:939:U:H2'	2:B:940:G:H8	1.57	0.68
2:B:2617:U:H4'	2:B:2644:C:C5	2.28	0.68
7:G:133:TYR:CD1	7:G:136:LYS:HG3	2.28	0.68
9:I:65:ILE:CG2	9:I:72:ASP:HB3	2.24	0.68
12:L:58:VAL:O	12:L:62:LYS:HB2	1.94	0.68
19:S:21:PHE:O	19:S:25:VAL:HG23	1.93	0.68
27:AA:19:VAL:HG13	27:AA:37:ILE:HA	1.75	0.68
34:HA:25:LEU:CB	34:HA:87:VAL:HG21	2.23	0.68
39:MA:21:LEU:HD11	39:MA:55:LEU:HD23	1.76	0.68
39:MA:107:LYS:O	39:MA:111:PHE:HB2	1.93	0.68
57:EB:35:LYS:HG2	57:EB:36:ALA:H	1.57	0.68
61:IB:64:VAL:HB	61:IB:129:ARG:HG2	1.76	0.68
72:TB:26:LEU:HD21	72:TB:60:LYS:HD3	1.74	0.68
1:A:170:U:H5'	1:A:267:U:H4'	1.75	0.68
1:A:1023:A:H4'	1:A:1024:U:O4'	1.94	0.68
1:A:1066:C:H2'	1:A:1067:C:C6	2.29	0.68
2:B:669:U:H4'	2:B:1110:U:C5'	2.22	0.68
2:B:1420:C:OP1	3:C:20:U:H5"	1.92	0.68
2:B:1791:C:H5"	47:UA:13:LYS:NZ	2.08	0.68
2:B:1910:A:H2'	2:B:1911:A:H8	1.58	0.68
2:B:2085:U:H3'	2:B:2086:A:H5'	1.73	0.68
8:H:300:ARG:HB2	8:H:301:PRO:HD2	1.74	0.68
12:L:149:LYS:HB2	12:L:200:LEU:O	1.91	0.68
12:L:159:PRO:HB2	12:L:162:LEU:HB2	1.74	0.68
16:P:124:THR:O	16:P:128:VAL:HG23	1.92	0.68
18:R:17:VAL:HG12	18:R:72:LEU:HD22	1.74	0.68
18:R:36:VAL:HB	18:R:45:LEU:HD23	1.76	0.68
20:T:24:ALA:HA	20:T:27:LEU:HD12	1.74	0.68
32:FA:75:LEU:HB2	32:FA:115:LYS:H	1.58	0.68
36:JA:97:ALA:HB1	36:JA:99:ASN:OD1	1.94	0.68
77:YB:29:ARG:HB3	77:YB:29:ARG:HH11	1.55	0.68
1:A:237:C:H5"	1:A:238:U:H5'	1.75	0.68
1:A:1773:C:H4'	45:SA:4:LYS:HD3	1.76	0.68
2:B:8:C:H1'	3:C:152:G:C2	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:634:C:H2'	2:B:635:G:O4'	1.94	0.68
2:B:907:G:H21	2:B:925:A:H1'	1.58	0.68
2:B:1200:A:H5'	2:B:1201:C:H4'	1.75	0.68
2:B:1468:A:C5	2:B:1881:A:H4'	2.27	0.68
2:B:1779:C:C2	23:W:89:LEU:HG	2.29	0.68
4:D:117:A:O4'	9:I:74:VAL:HB	1.93	0.68
9:I:141:PRO:HB2	9:I:172:TYR:HB2	1.74	0.68
32:FA:15:VAL:HB	32:FA:21:ARG:NH2	2.09	0.68
52:ZA:69:ILE:HA	52:ZA:72:LEU:HB3	1.76	0.68
74:VB:11:LYS:O	74:VB:23:PHE:HA	1.94	0.68
82:DC:111:PHE:C	82:DC:113:SER:H	2.01	0.68
82:DC:810:ASP:O	82:DC:816:GLY:HA3	1.94	0.68
1:A:1044:U:H2'	1:A:1045:C:C6	2.29	0.68
2:B:671:U:H2'	2:B:672:A:C8	2.29	0.68
2:B:2261:G:N2	2:B:2262:A:H62	1.91	0.68
2:B:3104:U:H3'	2:B:3128:G:H1	1.59	0.68
2:B:3108:G:C3'	2:B:3109:G:H5"	2.23	0.68
13:M:110:LYS:HB3	13:M:128:VAL:HB	1.74	0.68
15:O:52:TYR:HB2	15:O:59:ILE:HD12	1.76	0.68
18:R:45:LEU:CD2	18:R:55:ARG:HH11	2.06	0.68
32:FA:75:LEU:HD13	32:FA:137:LYS:HD2	1.75	0.68
38:LA:5:VAL:HG21	38:LA:32:ALA:H	1.57	0.68
38:LA:11:ASN:HB3	38:LA:18:ASN:ND2	2.08	0.68
54:BB:163:ASP:HB3	54:BB:166:SER:O	1.94	0.68
58:FB:36:THR:HG23	58:FB:96:LEU:HB2	1.74	0.68
82:DC:273:PHE:HD1	82:DC:277:ILE:HD12	1.57	0.68
1:A:1258:U:H4'	60:HB:2:LEU:HD13	1.74	0.68
2:B:431:U:H2'	2:B:432:G:H8	1.59	0.68
5:E:120:VAL:HG13	5:E:124:LEU:HD23	1.76	0.68
14:N:189:GLU:HA	14:N:200:LEU:HB3	1.76	0.68
14:N:191:LYS:HE3	14:N:198:LYS:HG3	1.74	0.68
21:U:127:ARG:HG2	21:U:128:ARG:H	1.59	0.68
23:W:40:ALA:O	23:W:44:LEU:HD23	1.93	0.68
24:X:9:VAL:HG11	24:X:38:LYS:HA	1.74	0.68
29:CA:88:MET:O	29:CA:89:LYS:HG3	1.93	0.68
35:IA:82:GLU:O	35:IA:83:GLU:HB2	1.93	0.68
44:RA:79:GLU:OE1	44:RA:80:PRO:HD2	1.94	0.68
54:BB:89:VAL:HG11	54:BB:119:ALA:CA	2.23	0.68
59:GB:109:LEU:HB2	59:GB:146:PHE:HB3	1.76	0.68
1:A:333:A:N7	58:FB:49:ARG:HD3	2.09	0.68
2:B:2476:C:H2'	2:B:2477:G:O4'	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:91:C:O4'	30:DA:24:SER:HB3	1.93	0.68
16:P:86:LYS:NZ	16:P:106:LEU:HD21	2.09	0.68
19:S:142:ILE:N	19:S:142:ILE:HD12	2.09	0.68
43:QA:27:ILE:HA	43:QA:30:ARG:HE	1.59	0.68
69:QB:83:ALA:HB1	69:QB:91:TYR:HB3	1.75	0.68
70:RB:24:ILE:HB	70:RB:91:ILE:HB	1.74	0.68
82:DC:445:ILE:HG12	82:DC:446:ASP:N	2.07	0.68
83:EC:6828:G:H2'	83:EC:6829:A:C8	2.29	0.68
1:A:1749:A:H2'	1:A:1750:A:H5"	1.74	0.68
2:B:126:U:C1'	19:S:57:GLN:HE22	2.06	0.68
7:G:293:ASN:CB	7:G:305:ILE:HG23	2.24	0.68
8:H:156:LEU:HD22	8:H:251:THR:HG21	1.76	0.68
10:J:51:ARG:CZ	10:J:163:PHE:HB2	2.24	0.68
54:BB:211:LYS:HB3	54:BB:217:THR:HG22	1.75	0.68
82:DC:38:SER:O	82:DC:42:ARG:HB2	1.93	0.68
82:DC:405:VAL:O	82:DC:447:ASP:HA	1.94	0.68
1:A:928:U:H5'	1:A:944:A:H2'	1.75	0.68
1:A:1049:U:H5"	77:YB:70:LYS:HG3	1.76	0.68
1:A:1075:C:H2'	1:A:1076:A:O4'	1.94	0.68
2:B:213:A:H2'	2:B:214:G:O4'	1.93	0.68
2:B:2697:A:H2'	2:B:2698:G:C8	2.29	0.68
11:K:160:ARG:HG3	11:K:203:TRP:CE3	2.29	0.68
14:N:170:LYS:HA	14:N:177:ASP:HA	1.74	0.68
16:P:110:ILE:O	16:P:129:THR:HG21	1.94	0.68
20:T:30:GLY:HA2	20:T:101:ARG:NE	2.09	0.68
82:DC:162:ARG:HB3	84:DC:901:GDP:HN21	1.59	0.68
1:A:1682:U:O2'	1:A:1683:C:H5'	1.93	0.67
2:B:282:G:C6	19:S:181:ASN:HB3	2.29	0.67
8:H:280:ILE:HD11	22:V:105:ARG:HG3	1.76	0.67
10:J:67:GLY:HA3	10:J:68:PRO:C	2.19	0.67
13:M:22:SER:H	18:R:8:LYS:HG2	1.60	0.67
20:T:76:PRO:HA	20:T:79:ILE:HD12	1.76	0.67
27:AA:39:VAL:HB	27:AA:50:PRO:HB2	1.76	0.67
34:HA:24:THR:HG21	34:HA:33:SER:HB3	1.76	0.67
37:KA:59:VAL:HG23	37:KA:60:ARG:N	2.06	0.67
41:OA:76:ASN:HB3	41:OA:79:GLN:HG3	1.76	0.67
50:XA:7:PHE:HE2	50:XA:184:LEU:HD11	1.60	0.67
52:ZA:116:LYS:HB2	52:ZA:131:ILE:HD12	1.76	0.67
73:UB:130:VAL:HA	73:UB:140:LYS:NZ	2.09	0.67
74:VB:54:ALA:HB2	74:VB:79:VAL:HG22	1.76	0.67
77:YB:20:LYS:HG2	77:YB:29:ARG:HG3	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1326:A:H5”	53:AB:156:PHE:HE1	1.58	0.67
2:B:149:U:H3’	2:B:150:A:H5”	1.75	0.67
2:B:343:U:H3’	2:B:344:A:H8	1.59	0.67
2:B:1110:U:H2’	2:B:1111:U:C6	2.29	0.67
2:B:1557:A:O2’	2:B:1558:A:H5”	1.94	0.67
4:D:88:G:H5”	24:X:117:ARG:HH12	1.57	0.67
8:H:359:LEU:HD13	24:X:62:ASN:HD22	1.59	0.67
18:R:49:PRO:HB3	18:R:78:THR:HG23	1.76	0.67
40:NA:4:LYS:HA	40:NA:12:ASN:HB3	1.76	0.67
49:WA:10:ARG:HB3	49:WA:312:VAL:HG23	1.76	0.67
58:FB:168:CYS:HB3	58:FB:182:TYR:CE1	2.29	0.67
73:UB:137:LYS:HD2	73:UB:139:LYS:HE2	1.76	0.67
82:DC:663:VAL:O	82:DC:709:MET:HG2	1.94	0.67
2:B:526:C:H2’	2:B:527:A:C8	2.29	0.67
2:B:1039:U:H2’	2:B:1040:A:C8	2.29	0.67
2:B:1805:C:H2’	2:B:1806:A:C8	2.28	0.67
2:B:1857:C:H1’	38:LA:5:VAL:O	1.95	0.67
2:B:2343:C:H2’	2:B:2344:U:C6	2.30	0.67
2:B:2427:U:H2’	2:B:2428:U:C6	2.29	0.67
21:U:15:ALA:HB3	21:U:150:VAL:CG2	2.24	0.67
24:X:148:LEU:HG	24:X:150:PHE:CE2	2.29	0.67
28:BA:27:LYS:HE3	28:BA:29:PHE:CZ	2.29	0.67
54:BB:49:ARG:CG	54:BB:61:VAL:HG21	2.24	0.67
55:CB:120:ILE:HG12	75:WB:100:ILE:HG13	1.75	0.67
58:FB:55:TYR:HB2	58:FB:176:SER:C	2.18	0.67
59:GB:109:LEU:O	59:GB:113:VAL:HG23	1.94	0.67
65:MB:18:ARG:HH21	65:MB:38:PRO:HD3	1.59	0.67
68:PB:102:ALA:O	68:PB:105:VAL:HG12	1.93	0.67
82:DC:369:ILE:CD1	82:DC:379:MET:HG3	2.22	0.67
1:A:340:U:H2’	1:A:341:A:C8	2.29	0.67
1:A:823:G:H5”	1:A:824:G:H8	1.58	0.67
1:A:1169:G:N2	1:A:1576:A:H62	1.92	0.67
1:A:1345:A:H2’	1:A:1348:A:H62	1.59	0.67
2:B:943:U:H3’	32:FA:13:GLY:HA2	1.76	0.67
2:B:1007:U:H2’	2:B:1008:U:C5	2.29	0.67
2:B:1923:C:H2’	2:B:1924:U:C6	2.28	0.67
2:B:2197:C:H5”	2:B:2242:A:N6	2.09	0.67
3:C:142:C:H5”	19:S:60:VAL:HG21	1.75	0.67
7:G:121:ASN:O	7:G:125:SER:HB3	1.94	0.67
10:J:5:LYS:HA	10:J:5:LYS:HE3	1.75	0.67
16:P:81:VAL:HG13	16:P:113:ALA:HB1	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:180:ARG:N	22:V:185:LYS:HE3	2.09	0.67
26:Z:97:SER:HA	26:Z:103:TYR:HA	1.77	0.67
48:VA:135:PHE:HE1	48:VA:171:SER:HB2	1.60	0.67
53:AB:177:MET:HB2	53:AB:180:GLY:O	1.94	0.67
73:UB:98:GLU:O	73:UB:99:ASN:HB2	1.94	0.67
82:DC:538:LEU:O	82:DC:542:LEU:HG	1.95	0.67
1:A:758:U:H5'	59:GB:7:THR:HG21	1.74	0.67
1:A:1166:A:O2'	1:A:1587:A:H5"	1.93	0.67
1:A:1420:C:C2'	1:A:1421:A:H5'	2.24	0.67
2:B:389:A:H3'	2:B:390:G:H5"	1.76	0.67
2:B:1283:C:OP1	48:VA:81:LYS:HA	1.94	0.67
2:B:2894:C:H2'	2:B:2895:G:H8	1.59	0.67
2:B:2922:G:H1'	2:B:2951:G:H21	1.59	0.67
7:G:87:VAL:HG21	7:G:114:VAL:HG11	1.76	0.67
12:L:61:GLN:HA	12:L:64:ILE:HB	1.75	0.67
19:S:44:ARG:HD3	19:S:119:TYR:CE2	2.28	0.67
19:S:137:PRO:HG2	19:S:138:GLN:NE2	2.09	0.67
29:CA:46:TYR:HB2	39:MA:77:PRO:HA	1.76	0.67
34:HA:17:VAL:HG12	34:HA:100:ILE:HD12	1.75	0.67
38:LA:99:LYS:O	38:LA:103:LYS:HB2	1.94	0.67
55:CB:217:LEU:O	55:CB:221:ALA:HB2	1.94	0.67
57:EB:98:ILE:HG21	57:EB:118:LEU:HD23	1.75	0.67
74:VB:27:VAL:HB	74:VB:69:SER:HB2	1.77	0.67
82:DC:730:LEU:HD22	82:DC:799:ASP:OD2	1.95	0.67
83:EC:6910:A:H2'	83:EC:6947:A:H2	1.59	0.67
2:B:335:G:H2'	2:B:336:A:C8	2.29	0.67
2:B:731:U:H2'	2:B:732:C:C6	2.28	0.67
2:B:1650:G:H4'	6:F:69:TYR:O	1.94	0.67
2:B:2145:A:H2'	2:B:2146:C:O4'	1.93	0.67
10:J:31:ARG:NH1	10:J:81:ALA:HB1	2.10	0.67
11:K:88:ARG:HB3	11:K:113:SER:H	1.59	0.67
11:K:238:LYS:HA	11:K:241:LYS:HB3	1.76	0.67
18:R:50:LYS:HZ2	18:R:50:LYS:H	1.42	0.67
20:T:130:LYS:HD3	20:T:131:PRO:HD2	1.76	0.67
27:AA:80:ARG:HB3	27:AA:98:ASN:HA	1.77	0.67
34:HA:27:TYR:HB2	34:HA:52:ARG:HH12	1.58	0.67
52:ZA:187:LEU:O	52:ZA:191:ALA:HB2	1.94	0.67
2:B:501:A:H2'	2:B:502:U:C6	2.30	0.67
2:B:1186:G:H1'	24:X:112:ALA:CB	2.24	0.67
2:B:1714:A:H61	2:B:1730:G:H1'	1.59	0.67
9:I:184:ASP:HB3	9:I:187:THR:HG22	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:218:ARG:NH1	9:I:222:LEU:HD12	2.10	0.67
14:N:97:LEU:HB2	14:N:123:HIS:HB3	1.76	0.67
19:S:122:ASN:HB2	19:S:129:TYR:HD2	1.60	0.67
21:U:64:ASN:HB2	21:U:80:LYS:HE2	1.76	0.67
35:IA:72:ARG:HB3	35:IA:96:VAL:CG2	2.22	0.67
40:NA:54:GLU:O	40:NA:58:ILE:HG23	1.95	0.67
47:UA:57:CYS:CB	47:UA:62:LYS:HB2	2.25	0.67
66:NB:103:ASN:O	66:NB:107:LYS:HG3	1.95	0.67
73:UB:96:VAL:HG23	73:UB:97:ASP:H	1.58	0.67
1:A:1546:G:H2'	1:A:1547:A:C8	2.29	0.67
2:B:786:A:H3'	22:V:147:ARG:HG2	1.77	0.67
2:B:2347:U:H2'	2:B:2348:A:O4'	1.95	0.67
2:B:2767:U:H2'	2:B:2768:U:H6	1.59	0.67
2:B:3280:U:O2'	2:B:3281:U:H5'	1.94	0.67
5:E:129:SER:HA	5:E:134:PHE:HB3	1.75	0.67
8:H:359:LEU:HD11	24:X:63:GLN:C	2.19	0.67
10:J:37:GLY:HA2	10:J:54:TYR:O	1.95	0.67
13:M:18:VAL:HG13	13:M:27:VAL:HG22	1.75	0.67
20:T:108:ILE:HG21	20:T:117:ARG:HH11	1.60	0.67
20:T:148:LYS:N	20:T:148:LYS:HE3	2.10	0.67
26:Z:81:LYS:HG2	26:Z:90:ARG:HD3	1.77	0.67
29:CA:107:VAL:HG11	29:CA:124:VAL:HG13	1.76	0.67
31:EA:13:VAL:HB	31:EA:19:ALA:HA	1.77	0.67
38:LA:65:VAL:HB	38:LA:70:LYS:HE2	1.75	0.67
46:TA:68:VAL:HG11	46:TA:85:LEU:HD23	1.77	0.67
54:BB:99:PHE:HE1	54:BB:113:ARG:HG2	1.59	0.67
59:GB:142:ASN:HD21	74:VB:64:PHE:HE2	1.42	0.67
72:TB:89:TRP:HA	72:TB:89:TRP:CE3	2.30	0.67
80:BC:32:GLY:H	80:BC:35:TYR:HB2	1.60	0.67
1:A:633:U:H2'	1:A:634:G:O4'	1.95	0.67
1:A:872:G:H1	1:A:955:A:H61	1.42	0.67
1:A:977:A:H2	1:A:1788:G:H1'	1.60	0.67
2:B:77:A:OP2	17:Q:73:ARG:HD2	1.95	0.67
2:B:1508:C:O2'	2:B:2353:G:H1'	1.94	0.67
2:B:2854:U:H2'	2:B:2855:U:C6	2.30	0.67
2:B:3192:U:P	20:T:176:LYS:HD3	2.34	0.67
3:C:8:C:H2'	3:C:9:A:C8	2.30	0.67
4:D:11:A:H62	25:Y:20:ARG:HD2	1.58	0.67
7:G:198:HIS:HA	7:G:201:LYS:HB2	1.76	0.67
9:I:155:THR:HB	9:I:179:ARG:HA	1.77	0.67
20:T:82:LYS:HA	20:T:85:ARG:HB2	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:71:PHE:HE1	26:Z:76:LEU:HD22	1.59	0.67
39:MA:119:LYS:HE2	39:MA:119:LYS:HA	1.76	0.67
40:NA:38:LYS:HE3	40:NA:41:ARG:HH11	1.59	0.67
55:CB:123:VAL:HG21	75:WB:100:ILE:HD11	1.76	0.67
65:MB:98:ASN:HB3	65:MB:103:ASN:ND2	2.10	0.67
82:DC:576:LEU:HD13	82:DC:587:TYR:HE1	1.59	0.67
83:EC:6802:A:H4'	83:EC:6883:A:N1	2.10	0.67
1:A:355:G:H2'	1:A:356:G:C8	2.28	0.67
2:B:680:G:H5"	8:H:114:ASN:ND2	2.09	0.67
2:B:805:G:H5'	8:H:74:ILE:HA	1.77	0.67
2:B:1173:U:H2'	2:B:1180:A:C8	2.30	0.67
2:B:1655:G:H5"	38:LA:58:ARG:HH21	1.59	0.67
2:B:1946:A:H2'	2:B:1947:G:O4'	1.95	0.67
4:D:6:C:H1'	9:I:65:ILE:HD13	1.77	0.67
5:E:93:LEU:HD22	5:E:99:LEU:HG	1.77	0.67
11:K:85:PHE:HB2	11:K:116:PHE:CE1	2.30	0.67
13:M:44:THR:O	13:M:55:VAL:HA	1.95	0.67
15:O:166:LYS:O	15:O:167:TYR:HB2	1.95	0.67
16:P:57:LYS:H	16:P:57:LYS:HD3	1.60	0.67
19:S:169:LYS:HA	19:S:172:ARG:NH1	2.10	0.67
20:T:22:VAL:HG11	20:T:122:GLN:OE1	1.95	0.67
24:X:80:ARG:HG3	25:Y:156:TYR:HB2	1.76	0.67
28:BA:5:ILE:HB	28:BA:10:GLY:CA	2.24	0.67
58:FB:38:ILE:HD13	58:FB:80:GLY:HA2	1.77	0.67
82:DC:76:SER:HA	82:DC:100:ILE:O	1.95	0.67
1:A:1107:G:H3'	1:A:1108:G:N2	2.09	0.66
2:B:54:C:H2'	2:B:55:G:C8	2.30	0.66
2:B:353:G:H22	2:B:364:G:H2'	1.60	0.66
2:B:1456:A:N7	35:IA:64:VAL:HG11	2.10	0.66
2:B:2207:A:H3'	2:B:2208:A:C5'	2.25	0.66
2:B:2524:A:H1'	2:B:2525:G:N7	2.11	0.66
2:B:3021:A:H61	2:B:3032:A:H3'	1.60	0.66
3:C:42:G:H4'	41:OA:57:HIS:HD2	1.59	0.66
9:I:257:GLU:CD	9:I:257:GLU:H	2.03	0.66
11:K:129:LEU:HD23	11:K:130:ILE:HG23	1.77	0.66
14:N:77:THR:HG22	14:N:82:ARG:HB3	1.76	0.66
20:T:142:SER:HA	20:T:145:VAL:HG22	1.76	0.66
23:W:41:ILE:O	23:W:45:VAL:HG23	1.95	0.66
24:X:6:GLU:CD	24:X:64:ILE:HD12	2.21	0.66
30:DA:56:VAL:HG21	30:DA:104:LEU:HB3	1.77	0.66
46:TA:35:LEU:HD23	46:TA:36:PHE:H	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:PB:101:LEU:H	68:PB:104:ASN:HB2	1.61	0.66
1:A:961:U:H1'	63:KB:86:GLU:OE2	1.95	0.66
1:A:1196:A:H4'	1:A:1197:C:H5"	1.76	0.66
1:A:1282:U:H2'	1:A:1283:U:C6	2.31	0.66
1:A:1651:A:H2'	1:A:1652:C:H6	1.60	0.66
2:B:290:G:H5"	19:S:98:LEU:CD2	2.25	0.66
2:B:513:G:H2'	2:B:514:G:H8	1.60	0.66
2:B:1459:C:H5'	35:IA:33:VAL:HG22	1.75	0.66
2:B:2156:C:H2'	2:B:2178:A:H61	1.58	0.66
2:B:2356:A:N6	2:B:2983:C:H41	1.94	0.66
2:B:3013:U:H2'	2:B:3014:U:C6	2.30	0.66
2:B:3108:G:C2'	2:B:3109:G:H5"	2.25	0.66
2:B:3108:G:N2	13:M:163:GLN:HE22	1.91	0.66
7:G:303:LYS:HZ1	7:G:371:GLN:HG3	1.61	0.66
9:I:294:ALA:HB2	14:N:210:ILE:HG23	1.76	0.66
10:J:26:ARG:HB3	10:J:27:PRO:HD2	1.76	0.66
17:Q:3:ILE:HB	32:FA:41:HIS:CE1	2.30	0.66
20:T:124:LEU:HD23	24:X:168:PRO:CG	2.25	0.66
21:U:48:LEU:HD22	21:U:88:VAL:CG1	2.25	0.66
50:XA:7:PHE:CE2	50:XA:184:LEU:HD11	2.30	0.66
50:XA:182:LEU:O	50:XA:188:LEU:HB2	1.94	0.66
54:BB:123:LEU:HD21	54:BB:235:TYR:HB2	1.77	0.66
68:PB:32:LEU:HB2	68:PB:43:SER:HB2	1.77	0.66
1:A:1573:A:H1'	1:A:1574:G:OP2	1.94	0.66
2:B:296:A:H3'	2:B:297:G:H21	1.60	0.66
2:B:655:C:H5"	36:JA:27:ARG:N	2.10	0.66
2:B:1721:U:H2'	2:B:1723:A:OP2	1.96	0.66
2:B:2268:U:H3'	2:B:2269:U:C4'	2.25	0.66
2:B:2798:C:H5"	2:B:2800:G:OP1	1.94	0.66
12:L:183:LYS:HA	12:L:186:LEU:CD1	2.26	0.66
17:Q:42:ARG:HG2	17:Q:46:ILE:HD12	1.78	0.66
17:Q:62:THR:O	17:Q:66:ASN:HB3	1.93	0.66
18:R:127:LYS:HB2	20:T:190:VAL:HG22	1.76	0.66
24:X:117:ARG:HB2	24:X:119:ARG:HG2	1.77	0.66
32:FA:7:LYS:HA	32:FA:10:LYS:HB2	1.76	0.66
43:QA:28:ARG:HB3	43:QA:28:ARG:NH1	2.11	0.66
55:CB:33:VAL:O	55:CB:37:GLN:HG3	1.95	0.66
57:EB:162:ILE:HG22	57:EB:165:LYS:HD2	1.77	0.66
73:UB:69:ARG:HA	73:UB:69:ARG:HE	1.61	0.66
1:A:1424:A:H2'	1:A:1425:A:O4'	1.96	0.66
1:A:1557:U:H5'	65:MB:115:TYR:CD2	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:243:G:H2'	2:B:244:G:O4'	1.94	0.66
2:B:796:U:H2'	2:B:797:U:C6	2.31	0.66
2:B:1103:A:H3'	2:B:1104:G:H5'	1.78	0.66
2:B:2618:G:OP2	2:B:2644:C:H2'	1.94	0.66
2:B:2698:G:C2'	2:B:2699:G:H5"	2.26	0.66
3:C:142:C:C5'	19:S:113:LEU:HD21	2.25	0.66
9:I:286:VAL:O	9:I:290:ILE:HG12	1.94	0.66
21:U:26:PHE:HE1	21:U:120:ASN:HA	1.58	0.66
31:EA:48:ARG:O	31:EA:68:ILE:HG23	1.95	0.66
36:JA:96:ILE:HG21	36:JA:105:ARG:HG3	1.77	0.66
37:KA:31:LYS:HD2	37:KA:35:VAL:HG21	1.77	0.66
37:KA:32:ILE:HG13	37:KA:35:VAL:HG13	1.78	0.66
43:QA:5:LYS:HD2	43:QA:13:MET:HE1	1.77	0.66
50:XA:143:VAL:HB	50:XA:156:VAL:HA	1.77	0.66
50:XA:197:ILE:HD13	50:XA:197:ILE:H	1.59	0.66
58:FB:46:VAL:HG23	58:FB:54:LYS:HB3	1.78	0.66
73:UB:130:VAL:HB	73:UB:140:LYS:HG2	1.76	0.66
1:A:1171:A:H2'	1:A:1172:G:H8	1.60	0.66
2:B:502:U:H3'	2:B:503:C:H5"	1.76	0.66
2:B:856:G:H4'	2:B:1723:A:H1'	1.76	0.66
2:B:943:U:H3'	32:FA:13:GLY:CA	2.25	0.66
2:B:1504:A:H5"	21:U:23:ARG:HH11	1.60	0.66
2:B:1661:G:H2'	2:B:1662:G:O4'	1.96	0.66
2:B:2668:U:H2'	2:B:2669:G:C8	2.30	0.66
2:B:2727:A:C2	32:FA:43:ILE:HG23	2.30	0.66
2:B:3159:C:H2'	2:B:3160:U:H6	1.60	0.66
2:B:3344:A:H3'	2:B:3344:A:N3	2.10	0.66
7:G:86:VAL:HG13	7:G:160:VAL:HG13	1.78	0.66
7:G:216:ASP:OD2	7:G:341:SER:HA	1.96	0.66
20:T:16:VAL:HG22	20:T:41:LEU:HD21	1.76	0.66
27:AA:54:LEU:HD23	27:AA:54:LEU:H	1.59	0.66
30:DA:27:ARG:HG2	30:DA:78:PHE:HE1	1.59	0.66
32:FA:46:ASP:O	32:FA:47:LYS:HB3	1.95	0.66
34:HA:42:ILE:HG22	34:HA:91:SER:HA	1.77	0.66
59:GB:44:ARG:O	59:GB:48:GLN:HG3	1.95	0.66
68:PB:92:ILE:HG21	68:PB:115:ARG:NH2	2.11	0.66
1:A:409:C:H4'	1:A:1732:A:O3'	1.95	0.66
1:A:1426:C:O2'	1:A:1428:G:H5'	1.95	0.66
2:B:126:U:H1'	19:S:57:GLN:HE22	1.60	0.66
2:B:708:G:O2'	2:B:755:A:H4'	1.95	0.66
2:B:769:G:O2'	2:B:770:G:H5'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:834:U:H2'	2:B:835:G:C5'	2.25	0.66
2:B:1364:C:H2'	2:B:1365:G:H8	1.61	0.66
2:B:1378:U:H2'	2:B:1379:G:H8	1.61	0.66
2:B:1948:G:H5'	23:W:101:VAL:HG11	1.76	0.66
2:B:3148:U:H2'	2:B:3149:G:H8	1.58	0.66
9:I:17:GLN:CG	25:Y:22:HIS:H	2.08	0.66
16:P:123:ARG:HH12	48:VA:42:ARG:CD	2.09	0.66
18:R:47:ASP:HA	18:R:55:ARG:HA	1.77	0.66
28:BA:21:PHE:HD2	28:BA:29:PHE:HB2	1.59	0.66
32:FA:100:PRO:HD2	32:FA:123:VAL:HA	1.78	0.66
82:DC:578:LYS:CB	82:DC:585:ARG:HG2	2.23	0.66
82:DC:675:PRO:HB3	82:DC:714:TYR:HD1	1.60	0.66
1:A:143:G:C2'	1:A:144:U:H5"	2.26	0.66
1:A:569:C:O4'	1:A:583:C:H4'	1.96	0.66
1:A:1454:G:H4'	65:MB:122:THR:HG21	1.76	0.66
1:A:1654:G:H21	1:A:1746:A:H62	1.43	0.66
2:B:1799:A:H2'	2:B:1800:A:H8	1.60	0.66
2:B:3369:G:H5"	28:BA:56:ARG:HH12	1.60	0.66
8:H:263:GLY:HA3	8:H:269:SER:HA	1.78	0.66
9:I:146:LEU:HD12	9:I:147:ASP:N	2.11	0.66
11:K:75:TYR:HE2	25:Y:143:THR:HA	1.60	0.66
12:L:136:LEU:O	12:L:140:VAL:HG23	1.96	0.66
14:N:135:ILE:HG22	14:N:136:PHE:CD1	2.30	0.66
23:W:157:GLU:HA	23:W:160:GLU:HG2	1.76	0.66
36:JA:61:LYS:HA	36:JA:64:LYS:HB2	1.76	0.66
37:KA:35:VAL:HB	37:KA:79:GLY:HA3	1.78	0.66
52:ZA:111:VAL:HG21	52:ZA:218:ILE:HD13	1.76	0.66
57:EB:20:VAL:HA	57:EB:23:ALA:HB3	1.77	0.66
82:DC:804:LEU:HD12	82:DC:806:SER:H	1.60	0.66
2:B:192:C:H2'	2:B:193:C:H6	1.61	0.66
2:B:208:C:C2'	2:B:209:A:H5'	2.25	0.66
2:B:1010:G:H1	2:B:1040:A:H61	1.43	0.66
2:B:3279:A:H5'	2:B:3279:A:H8	1.61	0.66
3:C:98:U:H2'	3:C:99:C:H5'	1.78	0.66
7:G:119:TYR:CE1	7:G:125:SER:HB2	2.31	0.66
9:I:278:SER:O	9:I:282:ARG:HG3	1.95	0.66
13:M:128:VAL:HG13	13:M:134:ILE:HD13	1.77	0.66
17:Q:79:GLU:HA	17:Q:82:ALA:HB3	1.77	0.66
24:X:9:VAL:HG22	24:X:61:ILE:HD12	1.78	0.66
26:Z:19:VAL:HG12	26:Z:105:LEU:HD13	1.78	0.66
49:WA:190:ALA:HB2	49:WA:228:LYS:HG2	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:13:ASP:HA	50:XA:16:LEU:HD12	1.76	0.66
56:DB:52:ILE:HG12	56:DB:109:LEU:HD21	1.77	0.66
73:UB:117:ILE:HD12	73:UB:120:VAL:HB	1.78	0.66
83:EC:6886:A:H2'	83:EC:6887:G:C5'	2.24	0.66
1:A:1169:G:H2'	1:A:1170:G:H5'	1.76	0.66
1:A:1639:C:H2'	1:A:1640:C:O4'	1.95	0.66
2:B:10:C:H4'	12:L:55:TYR:HB2	1.77	0.66
2:B:61:A:H2'	2:B:62:A:C8	2.31	0.66
2:B:148:G:H5"	19:S:55:ALA:HB3	1.78	0.66
2:B:389:A:H2'	2:B:390:G:C4'	2.26	0.66
2:B:823:C:H2'	2:B:824:C:H6	1.59	0.66
2:B:965:A:H4'	32:FA:44:ASN:HD22	1.60	0.66
2:B:1175:C:H2'	2:B:1176:C:C6	2.31	0.66
2:B:2652:U:H4'	46:TA:89:LYS:HE3	1.77	0.66
2:B:3229:G:H2'	2:B:3230:G:O4'	1.96	0.66
8:H:29:PRO:CG	8:H:279:HIS:HA	2.26	0.66
8:H:181:VAL:O	8:H:182:LEU:HB3	1.96	0.66
40:NA:61:ILE:C	40:NA:63:ASN:H	2.03	0.66
55:CB:133:VAL:O	55:CB:137:ILE:HG12	1.96	0.66
67:OB:23:LYS:HB3	67:OB:34:LEU:HD21	1.76	0.66
68:PB:53:ASP:CB	68:PB:56:LYS:HB2	2.24	0.66
78:ZB:14:LYS:HG3	78:ZB:15:VAL:H	1.60	0.66
82:DC:129:VAL:HG11	82:DC:135:VAL:HG12	1.76	0.66
1:A:144:U:H6	1:A:144:U:H5'	1.60	0.66
1:A:600:U:H2'	1:A:601:A:H8	1.61	0.66
2:B:296:A:C2'	2:B:297:G:H5'	2.24	0.66
2:B:847:A:H4'	63:KB:123:HIS:CE1	2.31	0.66
2:B:1128:U:H2'	2:B:1129:A:O4'	1.96	0.66
2:B:2076:G:H2'	2:B:2077:U:H5"	1.76	0.66
2:B:3312:U:C2'	2:B:3313:U:H5"	2.24	0.66
6:F:3:ARG:HG2	6:F:4:VAL:N	2.06	0.66
6:F:77:ILE:HG21	6:F:169:ILE:HD12	1.78	0.66
7:G:135:ALA:O	7:G:139:GLN:HG2	1.97	0.66
7:G:151:ILE:HG23	7:G:155:ALA:HB3	1.78	0.66
11:K:166:ASN:HA	11:K:169:ILE:HD12	1.76	0.66
19:S:118:SER:CB	19:S:132:VAL:HG22	2.27	0.66
30:DA:56:VAL:HG22	30:DA:57:LEU:H	1.61	0.66
46:TA:3:ASN:ND2	46:TA:97:LYS:HD3	2.10	0.66
49:WA:179:LYS:HB3	49:WA:188:ILE:HD13	1.78	0.66
82:DC:100:ILE:HD13	82:DC:335:LEU:HD22	1.77	0.66
1:A:96:G:H5'	1:A:460:A:O2'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:398:G:OP1	58:FB:49:ARG:HA	1.96	0.65
1:A:868:G:H1	1:A:960:U:H3	1.43	0.65
2:B:282:G:N2	19:S:179:LYS:HA	2.11	0.65
2:B:502:U:C3'	2:B:503:C:H5"	2.26	0.65
2:B:1692:U:H1'	2:B:1755:C:H4'	1.78	0.65
8:H:281:ILE:HG13	22:V:125:ASP:HB2	1.78	0.65
11:K:114:GLY:O	11:K:205:PHE:HB2	1.97	0.65
22:V:177:GLY:CA	22:V:184:PHE:HB2	2.25	0.65
50:XA:153:SER:O	71:SB:63:GLY:HA2	1.96	0.65
52:ZA:58:LEU:HA	71:SB:12:TYR:HE1	1.60	0.65
55:CB:130:ILE:O	55:CB:134:VAL:HG23	1.96	0.65
60:HB:69:THR:O	60:HB:73:VAL:HG23	1.97	0.65
1:A:70:C:H2'	1:A:71:A:C8	2.31	0.65
1:A:79:C:H2'	1:A:80:A:O4'	1.96	0.65
1:A:1608:U:H2'	1:A:1609:U:C6	2.31	0.65
2:B:211:A:H5'	2:B:229:G:C1'	2.21	0.65
2:B:590:G:C2'	2:B:591:G:H5'	2.25	0.65
2:B:1242:G:C4	82:DC:754:VAL:HB	2.32	0.65
12:L:151:VAL:HB	12:L:176:PRO:O	1.97	0.65
14:N:93:PRO:HB2	14:N:125:LEU:HB3	1.77	0.65
17:Q:109:PHE:CE1	17:Q:113:VAL:HG21	2.31	0.65
17:Q:110:ASP:O	17:Q:114:GLN:HG2	1.96	0.65
48:VA:91:GLU:HB3	48:VA:92:PRO:HD2	1.78	0.65
55:CB:46:TRP:HE1	55:CB:122:ASN:HD22	1.44	0.65
82:DC:575:ALA:O	82:DC:587:TYR:HA	1.95	0.65
1:A:332:U:H4'	58:FB:29:LEU:O	1.95	0.65
2:B:355:A:H61	2:B:364:G:H1'	1.61	0.65
2:B:886:C:H2'	2:B:887:G:H8	1.61	0.65
2:B:1809:A:H2'	2:B:1810:A:O4'	1.97	0.65
2:B:3019:U:H2'	2:B:3020:U:O4'	1.96	0.65
8:H:230:VAL:HA	8:H:233:LEU:HG	1.78	0.65
8:H:293:SER:HA	8:H:296:GLN:HG2	1.78	0.65
14:N:51:HIS:HB3	14:N:134:ILE:CG2	2.25	0.65
36:JA:21:HIS:ND1	36:JA:24:ARG:HD2	2.11	0.65
58:FB:74:LYS:HE3	58:FB:112:TRP:CD1	2.31	0.65
63:KB:118:ILE:O	63:KB:122:ILE:HG13	1.95	0.65
82:DC:163:ALA:O	82:DC:164:LEU:HD23	1.96	0.65
1:A:810:G:H21	57:EB:108:GLN:HG3	1.61	0.65
1:A:1533:C:H4'	1:A:1539:G:C6	2.31	0.65
2:B:871:U:H2'	2:B:872:U:C6	2.31	0.65
2:B:1692:U:O2'	2:B:1755:C:H5'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1814:A:H5”	2:B:1816:A:H1’	1.78	0.65
2:B:2129:U:H2’	2:B:2130:G:H8	1.61	0.65
2:B:3171:U:H3	2:B:3279:A:H61	1.45	0.65
4:D:13:A:H5’	4:D:112:G:O5’	1.95	0.65
5:E:114:GLU:H	5:E:139:SER:HB2	1.62	0.65
7:G:35:ASP:OD1	7:G:184:ASN:HA	1.96	0.65
12:L:61:GLN:HB3	19:S:28:TRP:HH2	1.62	0.65
20:T:13:GLY:O	20:T:124:LEU:HD12	1.96	0.65
48:VA:107:ALA:N	48:VA:182:THR:HG21	2.12	0.65
56:DB:57:ASP:HB3	56:DB:106:LEU:HD23	1.78	0.65
58:FB:98:LYS:HD2	58:FB:172:ARG:HG2	1.79	0.65
77:YB:29:ARG:HB3	77:YB:29:ARG:NH1	2.11	0.65
83:EC:6769:A:N6	83:EC:6772:G:H5’	2.11	0.65
83:EC:6793:A:H3’	83:EC:6794:C:H5”	1.78	0.65
83:EC:6894:C:H2’	83:EC:6895:C:H4’	1.77	0.65
1:A:186:C:H2’	1:A:187:G:O4’	1.96	0.65
1:A:186:C:H6	1:A:186:C:H5’	1.60	0.65
1:A:806:A:C3’	1:A:807:A:H5”	2.23	0.65
2:B:203:G:H2’	2:B:204:A:O4’	1.96	0.65
2:B:916:G:OP1	2:B:2957:G:H5”	1.96	0.65
2:B:1485:G:H2’	2:B:1486:G:C8	2.32	0.65
2:B:1494:U:H1’	2:B:1496:C:C5	2.32	0.65
2:B:1875:G:H2’	2:B:1876:U:C6	2.31	0.65
2:B:2367:A:H2’	2:B:2368:A:O4’	1.96	0.65
2:B:2424:A:O3’	19:S:72:LYS:HE2	1.97	0.65
2:B:2469:G:H4’	5:E:27:ASN:HA	1.77	0.65
2:B:2549:G:C6	12:L:33:ASN:HA	2.31	0.65
2:B:2949:U:H2’	2:B:2950:G:H5’	1.79	0.65
8:H:152:VAL:HG11	8:H:156:LEU:HD12	1.78	0.65
8:H:257:LYS:O	8:H:261:VAL:HG23	1.96	0.65
11:K:86:VAL:HG12	11:K:134:VAL:HB	1.78	0.65
11:K:210:PRO:HD3	11:K:243:MET:HG2	1.78	0.65
13:M:93:VAL:HG11	44:RA:86:ALA:HB2	1.79	0.65
17:Q:124:ILE:O	39:MA:116:TYR:HA	1.95	0.65
26:Z:96:VAL:HG12	26:Z:97:SER:H	1.61	0.65
32:FA:35:ALA:HB3	32:FA:41:HIS:ND1	2.12	0.65
37:KA:55:ALA:HB3	37:KA:63:LYS:O	1.96	0.65
48:VA:7:LYS:HA	48:VA:10:GLU:HG2	1.77	0.65
69:QB:82:GLY:O	69:QB:93:HIS:HA	1.97	0.65
69:QB:99:SER:HA	69:QB:102:ARG:NH1	2.12	0.65
72:TB:5:SER:HB3	72:TB:8:ALA:HB3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:UB:108:GLY:C	73:UB:110:LYS:H	2.05	0.65
82:DC:120:ARG:HH21	82:DC:356:LEU:HD23	1.61	0.65
82:DC:155:VAL:HG23	82:DC:202:VAL:HG23	1.79	0.65
82:DC:698:ILE:HD11	82:DC:699:DDE:HAC3	1.79	0.65
2:B:797:U:H2'	2:B:798:G:H8	1.61	0.65
2:B:995:U:C1'	2:B:2637:A:H5'	2.24	0.65
2:B:1663:C:H2'	2:B:1664:G:C8	2.31	0.65
2:B:2250:G:H1	2:B:2266:U:H3	1.43	0.65
3:C:11:C:H2'	3:C:12:A:H8	1.60	0.65
7:G:78:VAL:HG21	7:G:311:PHE:HZ	1.61	0.65
8:H:104:LYS:HA	8:H:104:LYS:NZ	2.12	0.65
9:I:111:GLN:HA	9:I:116:ASP:HB2	1.77	0.65
13:M:36:LYS:HD2	13:M:78:MET:CE	2.27	0.65
20:T:151:ASP:HA	20:T:154:ALA:HB3	1.77	0.65
28:BA:31:PHE:HB3	28:BA:36:SER:OG	1.96	0.65
32:FA:28:HIS:HB3	32:FA:31:GLY:O	1.96	0.65
34:HA:31:VAL:HG12	34:HA:35:ARG:HD3	1.79	0.65
34:HA:42:ILE:HG23	34:HA:65:THR:HG21	1.78	0.65
39:MA:29:ALA:O	39:MA:33:VAL:HG23	1.95	0.65
59:GB:59:LEU:HD22	59:GB:69:ARG:HA	1.78	0.65
67:OB:43:SER:HB3	67:OB:46:LEU:HD13	1.78	0.65
1:A:476:U:C5'	1:A:538:A:H61	2.07	0.65
1:A:769:A:H2'	1:A:770:A:C8	2.32	0.65
2:B:381:U:H2'	2:B:382:U:C5	2.31	0.65
2:B:595:G:H2'	2:B:596:C:C6	2.32	0.65
2:B:1129:A:OP1	14:N:13:LYS:HD3	1.96	0.65
2:B:1186:G:H4'	24:X:113:ARG:NH1	2.11	0.65
2:B:2738:A:H4'	33:GA:37:PRO:HD2	1.78	0.65
2:B:2995:A:C2'	2:B:2996:U:H5"	2.26	0.65
4:D:16:U:H2'	4:D:17:A:H8	1.62	0.65
5:E:23:THR:HG22	5:E:24:LYS:H	1.62	0.65
13:M:72:LYS:HD3	13:M:73:SER:N	2.12	0.65
14:N:5:PRO:HG3	14:N:7:ARG:NH1	2.11	0.65
16:P:78:SER:HA	16:P:117:ARG:HE	1.62	0.65
20:T:57:PHE:CE2	20:T:72:HIS:HA	2.32	0.65
48:VA:77:LEU:O	48:VA:80:VAL:HG23	1.97	0.65
54:BB:121:TYR:CD2	54:BB:161:LYS:HE3	2.31	0.65
61:IB:45:PRO:HG2	61:IB:48:ALA:HB2	1.78	0.65
82:DC:147:LEU:HD21	82:DC:189:VAL:HG13	1.79	0.65
82:DC:634:TRP:HB3	82:DC:664:VAL:HG21	1.78	0.65
83:EC:6852:U:H2'	83:EC:6853:G:H8	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:607:G:H5'	1:A:613:G:N2	2.12	0.65
1:A:959:U:C6	63:KB:61:THR:HB	2.32	0.65
1:A:1112:G:H1'	1:A:1133:A:H61	1.62	0.65
2:B:650:C:H2'	2:B:651:G:C8	2.32	0.65
2:B:847:A:H4'	63:KB:123:HIS:NE2	2.11	0.65
2:B:1348:U:H5'	2:B:1355:A:N6	2.12	0.65
2:B:1640:G:H5'	2:B:1738:C:H5"	1.78	0.65
3:C:118:C:H2'	3:C:119:C:C6	2.31	0.65
7:G:159:ARG:HG2	7:G:182:GLN:HA	1.78	0.65
8:H:194:TYR:HA	30:DA:12:ARG:HD3	1.77	0.65
8:H:296:GLN:HA	8:H:299:ILE:HB	1.78	0.65
14:N:135:ILE:HG22	14:N:136:PHE:HD1	1.62	0.65
17:Q:47:ALA:CB	17:Q:48:PRO:HD3	2.23	0.65
29:CA:113:LEU:HD11	29:CA:121:LYS:HZ2	1.62	0.65
31:EA:7:ALA:HA	31:EA:89:VAL:HG12	1.79	0.65
46:TA:73:GLU:HA	46:TA:80:ARG:HA	1.79	0.65
48:VA:30:VAL:O	48:VA:31:ASP:HB2	1.96	0.65
48:VA:145:ILE:HG23	48:VA:148:GLY:HA2	1.79	0.65
50:XA:11:PRO:O	50:XA:15:GLN:HG3	1.97	0.65
52:ZA:101:VAL:HG11	52:ZA:211:LEU:HD12	1.79	0.65
57:EB:91:ILE:HD11	57:EB:129:LEU:HA	1.79	0.65
69:QB:31:PRO:HD2	69:QB:34:VAL:HB	1.78	0.65
1:A:975:C:H5"	63:KB:109:LYS:HE3	1.79	0.65
2:B:88:A:H2'	2:B:89:A:O4'	1.96	0.65
2:B:599:C:H3'	2:B:600:G:H5"	1.79	0.65
2:B:939:U:H2'	2:B:940:G:C8	2.31	0.65
2:B:973:A:H2'	2:B:974:G:H4'	1.78	0.65
2:B:1789:G:H2'	2:B:1790:G:C8	2.32	0.65
2:B:3279:A:C2'	2:B:3280:U:H5'	2.27	0.65
9:I:33:ARG:HG2	9:I:37:VAL:HG21	1.79	0.65
11:K:87:VAL:HG22	11:K:114:GLY:HA3	1.77	0.65
12:L:228:GLU:C	12:L:230:LYS:H	2.05	0.65
18:R:119:GLN:O	18:R:123:LEU:HB2	1.96	0.65
21:U:19:GLY:N	21:U:94:LEU:HD11	2.10	0.65
22:V:163:PRO:HG2	22:V:165:ILE:HG22	1.79	0.65
43:QA:10:LYS:HA	43:QA:13:MET:SD	2.36	0.65
43:QA:36:ARG:HB2	43:QA:36:ARG:HH11	1.62	0.65
57:EB:49:ILE:HD11	57:EB:57:ALA:HB3	1.79	0.65
66:NB:6:SER:HB3	66:NB:23:LYS:HB3	1.79	0.65
67:OB:43:SER:HB3	67:OB:46:LEU:CD1	2.26	0.65
82:DC:564:ARG:CB	82:DC:682:ARG:HB2	2.23	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:809:LEU:O	82:DC:811:PRO:HD3	1.96	0.65
1:A:767:U:H6	59:GB:141:VAL:HA	1.60	0.65
1:A:877:G:H4'	1:A:942:G:N2	2.12	0.65
2:B:406:G:H1'	3:C:17:A:N6	2.11	0.65
2:B:2210:G:C6	2:B:2236:G:C2	2.85	0.65
2:B:2402:A:H3'	8:H:67:THR:CG2	2.27	0.65
2:B:3163:A:C3'	2:B:3164:C:H5"	2.26	0.65
3:C:71:A:H5"	30:DA:75:ARG:HH22	1.62	0.65
6:F:20:THR:HA	6:F:23:ARG:HD2	1.79	0.65
7:G:128:LYS:HE2	7:G:131:THR:HG21	1.77	0.65
12:L:203:VAL:HG11	12:L:208:GLU:OE1	1.97	0.65
15:O:61:ARG:HB3	46:TA:103:ALA:CB	2.27	0.65
17:Q:14:PHE:HB3	17:Q:18:TRP:CZ2	2.32	0.65
19:S:42:PRO:HA	19:S:131:GLU:OE2	1.97	0.65
28:BA:8:PHE:HE2	28:BA:49:ILE:HG13	1.61	0.65
38:LA:65:VAL:HG12	38:LA:66:SER:H	1.62	0.65
40:NA:45:ARG:O	40:NA:49:GLY:HA2	1.97	0.65
49:WA:127:ARG:HD3	49:WA:150:TRP:CZ3	2.32	0.65
82:DC:135:VAL:HG11	82:DC:185:VAL:CG2	2.25	0.65
1:A:82:U:H2'	1:A:83:G:O4'	1.97	0.64
1:A:373:G:H4'	61:IB:96:LYS:HG3	1.77	0.64
2:B:700:C:H2'	2:B:701:G:C8	2.32	0.64
2:B:929:A:H1'	41:OA:49:TRP:CE3	2.32	0.64
2:B:979:U:H4'	2:B:980:A:C8	2.32	0.64
2:B:1040:A:H2'	14:N:198:LYS:HE2	1.79	0.64
2:B:1442:U:H2'	2:B:1443:G:O4'	1.97	0.64
2:B:2760:C:H2'	2:B:2761:G:H8	1.62	0.64
2:B:2949:U:C2'	2:B:2950:G:H5'	2.27	0.64
2:B:3049:A:H4'	7:G:364:LYS:HG2	1.79	0.64
2:B:3138:U:H2'	2:B:3139:A:C8	2.32	0.64
5:E:110:PHE:HD2	5:E:135:PRO:HG3	1.61	0.64
7:G:173:GLN:OE1	7:G:175:LYS:HB3	1.97	0.64
13:M:99:ILE:HG12	13:M:117:PHE:CD1	2.32	0.64
15:O:37:LEU:HD23	15:O:125:MET:HE2	1.79	0.64
20:T:44:SER:HA	20:T:135:TYR:HA	1.78	0.64
30:DA:119:ILE:HG22	30:DA:124:GLY:HA3	1.79	0.64
32:FA:75:LEU:CD1	32:FA:137:LYS:HD2	2.26	0.64
52:ZA:157:LYS:HE2	52:ZA:170:ILE:HG23	1.78	0.64
82:DC:32:LYS:CB	82:DC:128:VAL:HG21	2.27	0.64
1:A:1064:G:H2'	1:A:1065:A:C8	2.32	0.64
1:A:1413:U:H5'	67:OB:3:ARG:NH1	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1485:C:H2'	1:A:1486:G:H4'	1.78	0.64
1:A:1737:G:H4'	2:B:1933:A:C2	2.33	0.64
2:B:704:U:H3'	2:B:705:A:C5'	2.27	0.64
2:B:1254:C:H4'	16:P:135:THR:HG21	1.79	0.64
2:B:1544:G:H4'	2:B:2168:A:H4'	1.79	0.64
2:B:2993:G:H4'	21:U:79:THR:HG22	1.80	0.64
2:B:3343:G:H2'	2:B:3361:G:N2	2.11	0.64
6:F:33:ASP:H	6:F:36:GLU:HB2	1.62	0.64
6:F:185:ALA:O	6:F:188:LYS:HG2	1.95	0.64
16:P:82:ILE:O	16:P:86:LYS:HB2	1.97	0.64
17:Q:77:LEU:O	17:Q:81:LYS:HB2	1.97	0.64
24:X:100:VAL:O	24:X:104:GLU:HB2	1.97	0.64
48:VA:112:GLY:HA2	48:VA:165:VAL:O	1.96	0.64
56:DB:67:VAL:HG23	56:DB:100:ALA:N	2.12	0.64
61:IB:99:ARG:HH12	73:UB:7:ARG:HA	1.60	0.64
67:OB:16:LEU:HD22	67:OB:38:ILE:HD13	1.80	0.64
69:QB:64:HIS:NE2	69:QB:68:ARG:HD2	2.12	0.64
82:DC:332:ASP:O	82:DC:336:GLU:HB2	1.98	0.64
82:DC:835:TRP:O	82:DC:839:TYR:HB2	1.96	0.64
1:A:505:A:H3'	1:A:506:A:C5'	2.27	0.64
1:A:562:G:H2'	1:A:563:U:O4'	1.98	0.64
1:A:1519:U:H2'	1:A:1520:U:H5	1.60	0.64
2:B:1919:G:H1'	2:B:1934:G:C2	2.32	0.64
2:B:2271:A:H8	2:B:2272:G:H5'	1.62	0.64
2:B:2967:A:H4'	6:F:206:PRO:HG3	1.79	0.64
2:B:3080:G:H2'	2:B:3081:C:C6	2.32	0.64
8:H:326:ARG:HB3	8:H:327:LEU:HD12	1.78	0.64
11:K:210:PRO:HB3	11:K:243:MET:HG3	1.79	0.64
32:FA:79:TRP:CA	32:FA:82:ILE:HD13	2.18	0.64
82:DC:436:LEU:HA	82:DC:454:ILE:HD11	1.78	0.64
1:A:1184:A:H2'	1:A:1185:U:C4'	2.27	0.64
1:A:1419:G:O2'	79:AC:54:LYS:HB3	1.98	0.64
2:B:54:C:H2'	2:B:55:G:H8	1.62	0.64
2:B:2193:U:H5'	2:B:2194:G:H5'	1.79	0.64
8:H:220:ARG:NH1	30:DA:4:GLN:HB2	2.12	0.64
11:K:102:VAL:HG13	11:K:126:LEU:HD22	1.80	0.64
14:N:92:HIS:HB3	14:N:94:PHE:CE2	2.33	0.64
17:Q:24:VAL:HG22	19:S:199:LEU:HB2	1.79	0.64
19:S:199:LEU:HB3	19:S:203:ARG:CD	2.28	0.64
31:EA:21:LYS:HA	31:EA:49:TYR:OH	1.97	0.64
38:LA:67:LYS:HZ3	38:LA:67:LYS:HB2	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:30:VAL:HG12	48:VA:83:ASN:O	1.98	0.64
61:IB:75:VAL:CA	61:IB:86:ILE:HG22	2.26	0.64
70:RB:27:THR:HA	70:RB:87:HIS:O	1.97	0.64
73:UB:54:LEU:CD1	73:UB:82:LYS:HG3	2.27	0.64
77:YB:36:LYS:HD3	77:YB:43:ILE:HG22	1.79	0.64
1:A:600:U:H2'	1:A:601:A:C8	2.33	0.64
1:A:1739:C:H2'	1:A:1740:A:C8	2.32	0.64
2:B:44:U:H4'	46:TA:54:THR:HG22	1.79	0.64
2:B:681:U:H1'	2:B:696:C:C5	2.33	0.64
2:B:874:U:OP1	7:G:241:LYS:HE3	1.96	0.64
2:B:1327:C:H1'	37:KA:77:ASN:HD21	1.62	0.64
2:B:1522:U:H3'	29:CA:113:LEU:HD22	1.79	0.64
2:B:1757:A:H2'	2:B:1758:G:C8	2.33	0.64
2:B:2207:A:H3'	2:B:2208:A:H5"	1.79	0.64
2:B:2275:A:H62	2:B:2311:G:H1'	1.62	0.64
2:B:3060:C:H2'	2:B:3061:G:H8	1.60	0.64
3:C:24:G:N7	30:DA:13:ARG:HG2	2.12	0.64
9:I:148:ILE:HG23	9:I:151:GLN:HB2	1.80	0.64
16:P:101:SER:N	16:P:139:VAL:HG12	2.10	0.64
18:R:17:VAL:CG1	18:R:72:LEU:HD22	2.27	0.64
18:R:108:ARG:HH22	18:R:112:LEU:HA	1.62	0.64
27:AA:85:TRP:CZ3	27:AA:94:TYR:HA	2.31	0.64
39:MA:71:LYS:HA	39:MA:71:LYS:HE3	1.80	0.64
47:UA:14:TYR:HA	47:UA:17:ARG:NH1	2.11	0.64
50:XA:178:ALA:O	50:XA:181:VAL:HG22	1.96	0.64
56:DB:73:ILE:HG13	56:DB:75:LEU:HG	1.80	0.64
82:DC:724:ILE:HG23	82:DC:808:PRO:HB3	1.80	0.64
83:EC:6903:U:H3	83:EC:6910:A:H61	1.43	0.64
1:A:448:C:H4'	54:BB:28:ALA:C	2.23	0.64
1:A:509:G:H2'	1:A:510:G:C8	2.33	0.64
2:B:198:A:H4'	30:DA:61:GLY:HA2	1.80	0.64
2:B:1257:C:H1'	16:P:123:ARG:CZ	2.27	0.64
2:B:2248:C:O2'	2:B:2272:G:H4'	1.98	0.64
2:B:2251:G:H3'	2:B:2252:A:H8	1.61	0.64
2:B:2528:G:H2'	2:B:2529:A:O4'	1.98	0.64
2:B:3229:G:C2	2:B:3230:G:H1'	2.33	0.64
18:R:35:ILE:HG13	18:R:46:ILE:CG2	2.27	0.64
21:U:27:LYS:H	21:U:27:LYS:HD2	1.61	0.64
24:X:12:ARG:CZ	24:X:22:PRO:HD2	2.28	0.64
36:JA:85:LEU:HB2	36:JA:88:HIS:HB2	1.79	0.64
48:VA:107:ALA:HB3	48:VA:182:THR:HB	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:35:PRO:HB3	54:BB:143:ASP:O	1.96	0.64
54:BB:160:VAL:CG1	54:BB:169:ILE:HG23	2.28	0.64
56:DB:68:LEU:H	56:DB:100:ALA:HB3	1.63	0.64
59:GB:40:LYS:HA	59:GB:43:TYR:CD2	2.32	0.64
60:HB:23:ALA:O	60:HB:64:TYR:HB2	1.98	0.64
69:QB:73:VAL:HG12	69:QB:77:ASN:HD21	1.61	0.64
73:UB:52:ILE:C	73:UB:74:VAL:HG13	2.23	0.64
1:A:163:G:O2'	1:A:164:A:H5'	1.98	0.64
1:A:373:G:H2'	1:A:374:U:C6	2.33	0.64
1:A:865:A:H2'	1:A:866:G:O4'	1.97	0.64
1:A:946:U:H2'	1:A:947:U:C6	2.33	0.64
1:A:1475:A:H2'	1:A:1476:C:C6	2.32	0.64
2:B:404:G:H3'	2:B:404:G:OP1	1.97	0.64
2:B:1523:U:H5'	2:B:1834:U:C4	2.33	0.64
2:B:1843:C:H3'	2:B:1844:C:C6	2.32	0.64
2:B:1898:G:H5'	27:AA:17:LEU:CD2	2.28	0.64
2:B:2268:U:C6	2:B:2269:U:H1'	2.33	0.64
8:H:103:THR:HA	8:H:107:ARG:NH2	2.12	0.64
12:L:153:ILE:HG23	12:L:166:LEU:HD12	1.80	0.64
13:M:23:ARG:HB2	13:M:39:LYS:HG2	1.80	0.64
13:M:182:SER:HA	44:RA:85:LEU:HD21	1.79	0.64
18:R:108:ARG:NH2	18:R:112:LEU:HA	2.13	0.64
22:V:32:LEU:O	22:V:35:PHE:HB3	1.97	0.64
29:CA:116:PRO:O	43:QA:14:ALA:HA	1.97	0.64
47:UA:54:ILE:HG23	47:UA:63:THR:HG23	1.79	0.64
57:EB:30:SER:C	57:EB:32:PRO:HD2	2.23	0.64
61:IB:57:LYS:HB3	61:IB:131:ILE:HD12	1.79	0.64
66:NB:109:PHE:CD1	66:NB:116:LEU:HG	2.32	0.64
82:DC:589:LYS:HD2	82:DC:689:LEU:HD11	1.78	0.64
82:DC:724:ILE:CG2	82:DC:808:PRO:HB3	2.28	0.64
1:A:1487:A:H5'	1:A:1593:A:H4'	1.80	0.64
1:A:1529:C:H2'	1:A:1530:C:C6	2.32	0.64
2:B:1927:G:H4'	47:UA:5:THR:HG22	1.80	0.64
2:B:2154:U:H2'	2:B:2155:G:C8	2.33	0.64
7:G:41:VAL:HG21	7:G:194:TRP:HB2	1.80	0.64
12:L:156:ASP:CB	12:L:183:LYS:HD3	2.27	0.64
37:KA:72:THR:OG1	37:KA:82:ARG:HB2	1.98	0.64
48:VA:111:ALA:HB1	48:VA:167:GLN:HA	1.79	0.64
61:IB:74:THR:OG1	61:IB:87:ARG:HB3	1.98	0.64
73:UB:24:TRP:O	73:UB:30:LYS:HE3	1.97	0.64
1:A:348:U:H4'	58:FB:14:THR:HA	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:965:U:H3'	1:A:966:A:H5'	1.79	0.64
1:A:1432:U:H4'	1:A:1433:G:H5"	1.80	0.64
2:B:317:A:H3'	2:B:318:A:H8	1.62	0.64
2:B:713:U:O2'	2:B:754:G:H5"	1.97	0.64
2:B:769:G:C2'	2:B:770:G:H5'	2.27	0.64
2:B:1661:G:O2'	2:B:1662:G:H5'	1.97	0.64
2:B:1702:U:H2'	2:B:1703:U:C6	2.32	0.64
2:B:2225:U:H2'	2:B:2226:U:C6	2.33	0.64
2:B:2261:G:H21	2:B:2262:A:N6	1.96	0.64
2:B:2514:U:H5'	12:L:68:ARG:HD2	1.79	0.64
10:J:28:GLN:HG2	10:J:30:LEU:HD22	1.78	0.64
11:K:207:LEU:HD22	11:K:240:VAL:HG12	1.80	0.64
56:DB:88:ARG:HB3	56:DB:91:GLU:HB2	1.78	0.64
79:AC:31:ILE:HB	79:AC:36:LEU:HD11	1.79	0.64
82:DC:224:GLN:NE2	82:DC:328:LEU:HD22	2.12	0.64
82:DC:634:TRP:CZ3	82:DC:660:LYS:HA	2.33	0.64
1:A:589:C:H2'	1:A:590:C:H6	1.62	0.64
2:B:907:G:O5'	2:B:909:G:H1'	1.98	0.64
2:B:1932:A:C2	2:B:2124:G:H5"	2.33	0.64
2:B:2242:A:C5'	6:F:243:THR:HG23	2.28	0.64
2:B:3170:A:H2'	2:B:3171:U:C6	2.33	0.64
2:B:3311:C:C2'	2:B:3312:U:H5'	2.26	0.64
8:H:23:PRO:HG3	8:H:258:LEU:HG	1.80	0.64
8:H:64:SER:CA	8:H:75:PRO:HA	2.27	0.64
8:H:309:ARG:NE	8:H:312:VAL:HG11	2.13	0.64
11:K:155:LYS:HD3	11:K:201:PHE:HA	1.79	0.64
14:N:213:PHE:N	14:N:214:PRO:HD3	2.13	0.64
20:T:126:VAL:HG21	24:X:170:THR:CG2	2.28	0.64
31:EA:61:LYS:O	31:EA:65:ARG:HG2	1.97	0.64
55:CB:46:TRP:CG	55:CB:129:PRO:HG3	2.33	0.64
55:CB:63:GLN:C	55:CB:65:ARG:H	2.04	0.64
55:CB:142:PRO:HG3	55:CB:214:LYS:HG2	1.78	0.64
73:UB:24:TRP:CZ3	73:UB:33:LEU:HD13	2.33	0.64
77:YB:35:VAL:HG22	77:YB:79:PHE:HA	1.80	0.64
1:A:56:U:H4'	1:A:57:G:C5'	2.26	0.63
2:B:211:A:H3'	8:H:221:ASN:OD1	1.98	0.63
2:B:610:G:H21	8:H:313:LEU:HG	1.63	0.63
6:F:224:THR:HA	6:F:237:LEU:HB2	1.80	0.63
8:H:39:PHE:HD1	8:H:235:LEU:HG	1.63	0.63
9:I:40:HIS:HB3	9:I:43:LYS:HG3	1.80	0.63
11:K:83:LEU:HD11	11:K:116:PHE:CD1	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:7:GLU:HB3	13:M:56:ALA:HB2	1.79	0.63
15:O:47:GLN:HB3	15:O:64:LYS:HB3	1.81	0.63
27:AA:101:VAL:HB	27:AA:109:MET:HE1	1.79	0.63
36:JA:123:LYS:O	36:JA:126:LEU:HG	1.97	0.63
38:LA:54:ILE:HA	38:LA:70:LYS:O	1.98	0.63
39:MA:95:PHE:O	39:MA:99:GLN:HG2	1.97	0.63
53:AB:53:THR:HG22	53:AB:91:VAL:CG1	2.27	0.63
73:UB:76:LEU:HB2	73:UB:80:GLY:H	1.63	0.63
73:UB:134:ALA:CB	73:UB:140:LYS:HB2	2.27	0.63
2:B:88:A:H3'	2:B:89:A:H8	1.62	0.63
2:B:524:U:H5	2:B:568:G:N2	1.94	0.63
2:B:750:G:H1	2:B:783:A:H2	1.45	0.63
2:B:811:U:H2'	2:B:812:G:C8	2.33	0.63
2:B:1434:G:H5'	2:B:1437:C:H41	1.63	0.63
2:B:2675:C:H2'	2:B:2676:A:C8	2.34	0.63
2:B:2723:U:C2'	2:B:2724:U:H5'	2.28	0.63
7:G:17:LEU:HG	7:G:18:PRO:HA	1.79	0.63
9:I:33:ARG:CZ	9:I:37:VAL:HG21	2.28	0.63
10:J:34:LEU:HD21	10:J:63:LEU:HD11	1.80	0.63
15:O:60:ARG:HG3	15:O:63:GLU:HB2	1.79	0.63
21:U:4:TYR:CD1	21:U:147:GLU:HB2	2.33	0.63
23:W:58:HIS:HB3	23:W:60:LYS:NZ	2.13	0.63
36:JA:111:ARG:HH12	36:JA:115:LEU:HG	1.63	0.63
43:QA:6:SER:HB2	43:QA:9:ILE:HD12	1.80	0.63
48:VA:89:THR:HG21	48:VA:96:ILE:HD13	1.79	0.63
55:CB:36:ALA:HB1	55:CB:42:LEU:HD21	1.81	0.63
72:TB:113:HIS:CE1	72:TB:114:GLU:HG2	2.33	0.63
73:UB:130:VAL:HA	73:UB:140:LYS:HZ2	1.63	0.63
80:BC:46:ASN:O	80:BC:47:VAL:HG12	1.99	0.63
1:A:382:C:H2'	1:A:383:G:C8	2.33	0.63
1:A:1544:U:H3	1:A:1567:U:H3	1.44	0.63
2:B:28:C:H4'	2:B:61:A:C2	2.32	0.63
2:B:728:G:N2	22:V:138:LEU:HD23	2.13	0.63
2:B:750:G:H4'	33:GA:44:LYS:HG3	1.81	0.63
2:B:1765:U:H5	23:W:43:LYS:HB3	1.63	0.63
10:J:76:LEU:HD12	10:J:134:ARG:HG3	1.81	0.63
18:R:133:LYS:O	18:R:137:LYS:HB2	1.97	0.63
23:W:60:LYS:O	23:W:64:ARG:HG3	1.99	0.63
23:W:86:GLU:HG2	23:W:91:SER:HB2	1.79	0.63
24:X:13:ARG:CA	24:X:56:GLY:HA2	2.24	0.63
28:BA:56:ARG:HA	28:BA:56:ARG:HE	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:33:VAL:HG23	48:VA:185:LEU:HD21	1.81	0.63
48:VA:41:VAL:HG21	48:VA:185:LEU:HD12	1.79	0.63
50:XA:20:ALA:CA	50:XA:168:HIS:HB2	2.28	0.63
53:AB:12:VAL:O	53:AB:16:VAL:HG23	1.98	0.63
59:GB:163:PRO:HB3	59:GB:169:PRO:HA	1.80	0.63
68:PB:15:LEU:HG	68:PB:22:VAL:HB	1.81	0.63
71:SB:70:ASN:HB3	71:SB:83:TRP:HB2	1.80	0.63
82:DC:563:TYR:HB2	82:DC:677:PHE:HZ	1.62	0.63
1:A:1636:C:H5"	1:A:1637:C:H2'	1.81	0.63
2:B:44:U:OP1	19:S:84:PRO:HB2	1.97	0.63
2:B:740:G:H2'	2:B:741:U:H6	1.63	0.63
2:B:1084:A:H2'	2:B:1085:A:C8	2.34	0.63
2:B:1397:C:H2'	2:B:1398:U:O4'	1.99	0.63
2:B:3346:U:H2'	2:B:3347:A:C8	2.34	0.63
2:B:3366:G:H5"	28:BA:61:LYS:CE	2.27	0.63
2:B:3370:A:OP2	7:G:383:LEU:HA	1.99	0.63
12:L:170:CYS:HB3	12:L:175:VAL:O	1.98	0.63
14:N:25:ALA:O	14:N:122:PRO:HG2	1.99	0.63
15:O:104:PHE:O	15:O:127:PHE:HB2	1.97	0.63
17:Q:87:ALA:HB1	17:Q:97:VAL:HG11	1.79	0.63
17:Q:157:ARG:NH2	32:FA:124:ILE:HG21	2.13	0.63
24:X:82:ASP:HA	24:X:87:THR:HA	1.80	0.63
29:CA:80:ASN:O	29:CA:125:ARG:HA	1.99	0.63
34:HA:17:VAL:HG12	34:HA:100:ILE:CD1	2.29	0.63
55:CB:93:LEU:HG	55:CB:172:ILE:HG23	1.80	0.63
57:EB:12:ALA:HB3	57:EB:13:PRO:HD3	1.78	0.63
57:EB:30:SER:O	57:EB:31:SER:HB2	1.98	0.63
58:FB:82:VAL:HG21	58:FB:166:TYR:HE1	1.64	0.63
72:TB:14:ILE:HG13	72:TB:27:ILE:HG21	1.80	0.63
1:A:11:A:C2'	1:A:12:U:H5'	2.29	0.63
1:A:230:C:H3'	1:A:231:U:H5"	1.79	0.63
1:A:285:G:H2'	1:A:286:C:C6	2.33	0.63
2:B:126:U:H2'	2:B:127:G:O4'	1.99	0.63
2:B:1629:U:O2'	2:B:1630:U:H4'	1.99	0.63
2:B:2271:A:H3'	2:B:2272:G:C5'	2.24	0.63
2:B:2604:U:H2'	2:B:2605:G:O4'	1.97	0.63
2:B:2747:A:N1	9:I:36:LEU:HD11	2.13	0.63
6:F:96:LEU:HD13	6:F:108:PRO:HD2	1.80	0.63
12:L:143:ILE:HG23	12:L:175:VAL:HG21	1.80	0.63
14:N:139:ARG:HD2	14:N:173:PHE:CD2	2.33	0.63
27:AA:93:LEU:HB3	28:BA:20:LEU:HB3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:KA:90:PRO:HD2	37:KA:93:THR:HG23	1.81	0.63
40:NA:23:ALA:HB1	40:NA:24:PRO:HD2	1.79	0.63
53:AB:73:VAL:HG12	53:AB:79:TYR:CE2	2.34	0.63
54:BB:43:PRO:HB2	54:BB:46:VAL:HG23	1.81	0.63
70:RB:37:VAL:O	70:RB:41:ILE:HD13	1.98	0.63
1:A:88:U:H4'	1:A:171:A:H4'	1.80	0.63
2:B:258:G:OP1	17:Q:81:LYS:HE3	1.99	0.63
2:B:904:A:H5'	2:B:1536:G:O2'	1.98	0.63
2:B:1439:U:H4'	8:H:95:ARG:HD3	1.81	0.63
2:B:1472:U:O2'	23:W:26:PRO:HB3	1.99	0.63
2:B:1881:A:H2'	2:B:1882:G:C8	2.34	0.63
2:B:2085:U:H3'	2:B:2086:A:C5'	2.29	0.63
2:B:2203:U:H2'	2:B:2204:C:C6	2.34	0.63
2:B:2515:A:H5"	19:S:28:TRP:CD1	2.34	0.63
5:E:94:ASN:CG	5:E:124:LEU:HB2	2.23	0.63
8:H:122:THR:O	8:H:126:ILE:HG13	1.98	0.63
11:K:86:VAL:HG13	11:K:135:ALA:C	2.22	0.63
17:Q:128:ARG:HH22	39:MA:110:ALA:HA	1.63	0.63
18:R:45:LEU:HD21	18:R:55:ARG:CD	2.29	0.63
21:U:95:LEU:HD23	21:U:148:LEU:HD22	1.79	0.63
22:V:32:LEU:O	22:V:36:LEU:HG	1.98	0.63
23:W:17:VAL:HG23	23:W:18:GLY:H	1.64	0.63
23:W:39:ASN:HA	23:W:42:ARG:HD3	1.81	0.63
24:X:27:MET:HE1	25:Y:152:ALA:HA	1.79	0.63
27:AA:76:ALA:HA	27:AA:102:ILE:HA	1.80	0.63
35:IA:14:ILE:O	35:IA:70:ARG:HA	1.98	0.63
35:IA:72:ARG:CG	35:IA:96:VAL:HG11	2.29	0.63
48:VA:26:PHE:HD1	48:VA:187:VAL:HG11	1.63	0.63
50:XA:102:PHE:CE1	50:XA:131:GLN:HB3	2.33	0.63
57:EB:159:VAL:O	57:EB:163:ASP:HB2	1.98	0.63
61:IB:97:TYR:O	61:IB:99:ARG:HG3	1.98	0.63
63:KB:54:LEU:HB3	63:KB:60:VAL:HB	1.80	0.63
82:DC:157:ILE:HD11	82:DC:181:THR:HB	1.81	0.63
82:DC:463:LEU:HD21	82:DC:467:GLY:HA3	1.81	0.63
82:DC:629:ASP:O	82:DC:647:ILE:HG13	1.98	0.63
82:DC:727:PRO:HD2	82:DC:774:VAL:HG21	1.81	0.63
1:A:606:A:H4'	1:A:607:G:H3'	1.81	0.63
1:A:1413:U:H5'	67:OB:3:ARG:HH12	1.62	0.63
1:A:1498:G:C2'	1:A:1499:G:H5"	2.26	0.63
2:B:80:G:O2'	2:B:326:U:H4'	1.99	0.63
2:B:744:A:O4'	22:V:141:ARG:HB3	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1129:A:H5"	14:N:13:LYS:HZ3	1.64	0.63
2:B:1649:U:O2'	6:F:68:LYS:HD2	1.98	0.63
2:B:1711:C:C5'	31:EA:38:PHE:HB3	2.28	0.63
2:B:1742:U:H2'	2:B:1743:G:H8	1.61	0.63
2:B:1768:U:H2'	2:B:1769:G:H5"	1.80	0.63
2:B:1868:G:H1'	2:B:2119:A:H5'	1.81	0.63
2:B:2803:A:OP1	46:TA:59:HIS:HB2	1.98	0.63
10:J:53:VAL:HG23	10:J:68:PRO:HD3	1.80	0.63
14:N:43:VAL:HA	14:N:139:ARG:HH22	1.63	0.63
17:Q:54:LEU:HD12	17:Q:75:PHE:CZ	2.34	0.63
17:Q:66:ASN:ND2	32:FA:105:LEU:HD21	2.12	0.63
19:S:146:ALA:HB2	39:MA:100:VAL:HG23	1.80	0.63
22:V:27:LYS:HA	22:V:30:VAL:HB	1.81	0.63
22:V:89:ASP:HB2	22:V:109:GLY:C	2.23	0.63
24:X:4:PHE:H	24:X:100:VAL:CG2	2.11	0.63
44:RA:93:LYS:HA	44:RA:105:PRO:HD3	1.80	0.63
72:TB:13:ALA:HB3	72:TB:27:ILE:HG22	1.80	0.63
82:DC:288:ILE:HB	82:DC:320:LEU:HG	1.79	0.63
1:A:1235:C:H2'	1:A:1236:A:H8	1.63	0.63
1:A:1525:A:H2'	1:A:1526:A:C8	2.34	0.63
2:B:122:A:H62	2:B:148:G:N2	1.97	0.63
2:B:175:C:H2'	2:B:176:G:H8	1.63	0.63
2:B:317:A:H2'	2:B:318:A:O4'	1.99	0.63
2:B:1268:G:H21	2:B:1273:A:H62	1.45	0.63
2:B:1642:A:H4'	38:LA:69:HIS:HE1	1.64	0.63
2:B:1729:A:H3'	2:B:1730:G:H5'	1.79	0.63
2:B:1863:G:H1'	2:B:1867:A:H62	1.63	0.63
2:B:2155:G:H2'	2:B:2156:C:C6	2.33	0.63
2:B:3034:C:N3	13:M:120:ASP:HA	2.14	0.63
2:B:3190:C:H2'	2:B:3191:G:C8	2.33	0.63
4:D:4:U:H2'	4:D:5:G:C8	2.34	0.63
11:K:58:ALA:O	11:K:62:ILE:HG23	1.98	0.63
11:K:224:ILE:HD13	24:X:39:SER:CB	2.28	0.63
14:N:115:MET:HG2	14:N:118:ALA:HA	1.81	0.63
17:Q:102:GLN:HB2	17:Q:104:ARG:HH12	1.63	0.63
24:X:12:ARG:NE	24:X:22:PRO:HD2	2.13	0.63
24:X:68:HIS:HB2	24:X:73:LYS:HZ1	1.64	0.63
31:EA:51:LEU:HB2	31:EA:65:ARG:HD2	1.81	0.63
37:KA:90:PRO:HD2	37:KA:93:THR:CG2	2.29	0.63
49:WA:46:LYS:HB2	49:WA:58:VAL:CG1	2.29	0.63
55:CB:36:ALA:HB3	55:CB:45:LYS:HE2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:24:LYS:HA	60:HB:63:TYR:HA	1.81	0.63
63:KB:91:LEU:HB3	63:KB:122:ILE:HG12	1.80	0.63
2:B:973:A:C4	2:B:974:G:H1'	2.34	0.63
2:B:1403:C:OP1	36:JA:11:LYS:HE3	1.98	0.63
2:B:1729:A:N6	47:UA:42:CYS:HA	2.14	0.63
2:B:1856:C:H1'	38:LA:7:PHE:CE2	2.34	0.63
2:B:1913:A:C2	2:B:2120:A:H2'	2.34	0.63
2:B:2786:G:N2	32:FA:58:MET:HE2	2.14	0.63
2:B:2951:G:O2'	2:B:2952:G:H5'	1.99	0.63
2:B:3001:C:H2'	2:B:3002:C:H6	1.63	0.63
2:B:3216:G:H2'	2:B:3219:G:H1'	1.80	0.63
2:B:3379:C:H5"	7:G:315:GLY:HA2	1.79	0.63
5:E:184:LEU:O	5:E:187:VAL:HG12	1.99	0.63
7:G:165:GLN:HE21	7:G:168:LYS:HG3	1.64	0.63
20:T:16:VAL:HG23	20:T:43:ILE:HG12	1.80	0.63
21:U:126:ARG:HD2	21:U:138:LYS:HB2	1.80	0.63
25:Y:130:ARG:HB2	25:Y:130:ARG:HH11	1.61	0.63
26:Z:73:GLY:HA2	26:Z:103:TYR:OH	1.98	0.63
71:SB:34:ILE:HD11	71:SB:55:LEU:HD12	1.81	0.63
73:UB:76:LEU:CB	73:UB:80:GLY:H	2.12	0.63
74:VB:105:ARG:HG2	74:VB:105:ARG:HH11	1.64	0.63
75:WB:93:SER:HB2	75:WB:100:ILE:H	1.64	0.63
1:A:1214:U:H2'	1:A:1215:C:C6	2.33	0.62
2:B:351:A:N3	3:C:53:A:H1'	2.14	0.62
2:B:1472:U:H2'	2:B:1473:G:H8	1.63	0.62
2:B:3182:G:H5"	20:T:37:ARG:HH22	1.64	0.62
2:B:3211:C:H2'	2:B:3212:C:C6	2.34	0.62
2:B:3312:U:C5'	7:G:25:ILE:HG23	2.29	0.62
7:G:114:VAL:HG22	7:G:163:HIS:CE1	2.33	0.62
10:J:67:GLY:CA	10:J:74:VAL:HB	2.29	0.62
13:M:165:CYS:HB3	13:M:178:GLY:HA2	1.80	0.62
16:P:78:SER:HB2	16:P:137:GLN:OE1	1.99	0.62
17:Q:124:ILE:HG22	17:Q:126:PHE:CE1	2.34	0.62
19:S:38:ARG:NH1	19:S:60:VAL:HG13	2.14	0.62
24:X:9:VAL:HG22	24:X:61:ILE:CD1	2.29	0.62
24:X:107:TYR:HE1	24:X:118:PHE:HA	1.64	0.62
30:DA:28:ARG:NH2	30:DA:29:VAL:HG22	2.14	0.62
40:NA:25:LYS:HE3	40:NA:27:SER:OG	1.99	0.62
40:NA:50:LEU:HD21	40:NA:58:ILE:HG21	1.81	0.62
42:PA:28:ASN:HD22	42:PA:40:GLN:HB3	1.63	0.62
61:IB:80:MET:HB3	61:IB:83:THR:O	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:NB:128:LYS:HB2	66:NB:137:ARG:NH2	2.14	0.62
71:SB:64:GLU:OE1	77:YB:3:LEU:HB2	1.98	0.62
72:TB:89:TRP:HA	72:TB:89:TRP:HE3	1.63	0.62
78:ZB:16:LEU:HB2	78:ZB:27:GLN:CB	2.29	0.62
78:ZB:16:LEU:HB2	78:ZB:27:GLN:HB3	1.80	0.62
82:DC:222:ILE:H	82:DC:222:ILE:CD1	2.13	0.62
1:A:381:C:H5"	54:BB:10:LYS:HD3	1.80	0.62
1:A:409:C:H5'	1:A:1732:A:H4'	1.81	0.62
1:A:854:U:H2'	1:A:855:A:O4'	1.98	0.62
2:B:212:G:C8	8:H:223:PRO:HG3	2.34	0.62
2:B:316:U:C5	40:NA:27:SER:HB2	2.34	0.62
2:B:778:U:H2'	2:B:779:G:C8	2.35	0.62
2:B:1069:C:O2'	2:B:1070:U:H5'	1.99	0.62
2:B:1463:U:H3	2:B:1467:A:H62	1.45	0.62
2:B:1475:A:H2'	2:B:1476:G:O4'	1.99	0.62
2:B:2788:C:H2'	2:B:2789:U:C6	2.34	0.62
2:B:3040:A:OP1	27:AA:12:ARG:HB2	1.98	0.62
9:I:22:ARG:HG2	9:I:28:THR:OG1	1.99	0.62
11:K:83:LEU:HD13	11:K:84:VAL:N	2.14	0.62
13:M:27:VAL:HG11	13:M:79:ILE:HG12	1.80	0.62
14:N:85:PHE:HA	14:N:140:THR:HG22	1.81	0.62
17:Q:109:PHE:CD2	40:NA:20:MET:HE1	2.34	0.62
19:S:146:ALA:HA	19:S:149:ASN:HB2	1.81	0.62
29:CA:139:ILE:HD11	39:MA:33:VAL:HG21	1.81	0.62
39:MA:86:ARG:O	39:MA:90:ARG:HG2	1.98	0.62
54:BB:179:LYS:HB2	54:BB:195:ILE:HD12	1.81	0.62
60:HB:72:GLY:O	60:HB:76:LEU:HD23	1.99	0.62
61:IB:36:LYS:HG2	61:IB:60:PHE:O	1.99	0.62
61:IB:78:THR:OG1	61:IB:119:VAL:HG22	1.99	0.62
65:MB:32:ASP:HA	65:MB:35:LYS:HB2	1.79	0.62
71:SB:67:ASP:HA	71:SB:70:ASN:ND2	2.13	0.62
78:ZB:50:GLU:O	78:ZB:51:ASN:HB2	1.98	0.62
82:DC:17:THR:HG21	82:DC:92:LYS:HD2	1.81	0.62
82:DC:152:LYS:HG3	82:DC:200:VAL:HG23	1.80	0.62
82:DC:226:ALA:HA	82:DC:240:MET:CE	2.29	0.62
1:A:1592:A:H2'	1:A:1593:A:H8	1.64	0.62
2:B:277:G:H1'	19:S:93:LYS:HE3	1.81	0.62
2:B:700:C:H2'	2:B:701:G:H8	1.64	0.62
2:B:1256:G:O4'	16:P:128:VAL:HG22	1.99	0.62
2:B:1695:U:H1'	2:B:1749:A:H61	1.65	0.62
2:B:2131:A:H61	47:UA:18:TYR:HA	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3007:U:H5'	20:T:73:PHE:CD1	2.35	0.62
5:E:4:ILE:HG21	5:E:201:VAL:HG21	1.82	0.62
13:M:103:ILE:HG13	13:M:136:PHE:CZ	2.34	0.62
19:S:57:GLN:O	19:S:142:ILE:HD11	1.98	0.62
19:S:66:VAL:HG22	19:S:102:ALA:HB2	1.81	0.62
20:T:74:ARG:HB2	20:T:145:VAL:HG23	1.80	0.62
20:T:173:ALA:HA	20:T:176:LYS:HE3	1.81	0.62
24:X:79:VAL:HG23	24:X:90:MET:HB2	1.81	0.62
32:FA:102:ILE:HD12	32:FA:125:VAL:HG22	1.80	0.62
32:FA:135:GLU:HA	32:FA:138:ILE:HD12	1.82	0.62
39:MA:92:LEU:HB3	39:MA:97:ALA:CB	2.28	0.62
47:UA:8:VAL:O	47:UA:11:THR:HG22	1.98	0.62
55:CB:182:ALA:O	55:CB:193:THR:HG21	1.99	0.62
59:GB:84:GLY:O	59:GB:107:ARG:HD3	1.98	0.62
63:KB:26:PHE:CE2	63:KB:66:ILE:HD11	2.35	0.62
65:MB:90:ILE:HG12	65:MB:107:ILE:HG22	1.81	0.62
72:TB:38:LEU:HD23	72:TB:41:MET:HE2	1.82	0.62
73:UB:76:LEU:HD13	73:UB:79:ASN:CB	2.30	0.62
1:A:430:G:H2'	1:A:431:C:C6	2.35	0.62
1:A:545:A:H4'	1:A:546:U:H5'	1.81	0.62
1:A:1740:A:H2'	1:A:1741:U:C6	2.34	0.62
2:B:153:U:O2'	2:B:154:U:H5'	1.99	0.62
2:B:370:U:H4'	2:B:404:G:H5'	1.79	0.62
2:B:1287:A:O2'	2:B:1288:U:H5'	2.00	0.62
2:B:2588:U:H2'	2:B:2589:G:C8	2.34	0.62
2:B:2674:A:N6	15:O:21:ILE:HG23	2.13	0.62
4:D:27:A:H1'	4:D:57:G:N2	2.13	0.62
4:D:89:G:H5'	24:X:84:ARG:HD3	1.80	0.62
8:H:295:ILE:O	8:H:299:ILE:HB	1.99	0.62
17:Q:56:PRO:HG3	17:Q:74:GLY:O	2.00	0.62
17:Q:75:PHE:HD2	17:Q:96:ALA:O	1.83	0.62
25:Y:20:ARG:HB3	25:Y:20:ARG:NH1	2.15	0.62
30:DA:28:ARG:NH1	30:DA:28:ARG:HB3	2.14	0.62
46:TA:3:ASN:HA	46:TA:92:GLU:HG3	1.82	0.62
57:EB:38:LEU:HA	57:EB:41:LEU:HD12	1.80	0.62
57:EB:74:GLN:O	57:EB:78:THR:HG23	1.99	0.62
57:EB:86:GLN:HG2	57:EB:87:ASP:H	1.62	0.62
60:HB:12:HIS:CD2	60:HB:76:LEU:HD13	2.34	0.62
66:NB:101:SER:O	66:NB:105:LEU:HD13	1.99	0.62
70:RB:52:LYS:CB	70:RB:93:LEU:HD23	2.29	0.62
74:VB:91:LEU:HB3	74:VB:96:LEU:HB2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:488:G:H2'	1:A:489:C:H5'	1.79	0.62
1:A:629:U:H2'	1:A:630:A:H5'	1.82	0.62
2:B:156:G:C4	17:Q:99:HIS:HB2	2.34	0.62
2:B:2395:G:H4'	7:G:258:ALA:CB	2.28	0.62
2:B:2628:A:H2'	2:B:2629:U:H5"	1.79	0.62
2:B:2975:U:H2'	2:B:2976:A:H8	1.63	0.62
2:B:3305:A:H4'	7:G:272:TYR:OH	1.98	0.62
2:B:3312:U:H5'	7:G:25:ILE:HG23	1.81	0.62
2:B:3325:G:H1'	35:IA:105:GLN:HG2	1.81	0.62
12:L:143:ILE:HG12	12:L:175:VAL:HG11	1.80	0.62
20:T:90:HIS:HA	20:T:95:GLY:HA3	1.81	0.62
41:OA:55:ARG:NH1	41:OA:55:ARG:HB2	2.15	0.62
46:TA:23:HIS:CB	46:TA:72:LEU:HB3	2.30	0.62
54:BB:94:ALA:CB	74:VB:17:LEU:HB3	2.29	0.62
56:DB:56:ASN:HA	56:DB:62:PRO:HA	1.81	0.62
61:IB:66:ILE:HG12	61:IB:128:CYS:SG	2.38	0.62
82:DC:610:ASP:HB3	82:DC:615:ARG:HD3	1.82	0.62
1:A:190:C:O2'	1:A:191:C:H5'	1.99	0.62
1:A:466:U:H2'	1:A:467:G:O4'	2.00	0.62
1:A:629:U:OP1	63:KB:124:ARG:HG2	1.99	0.62
1:A:762:A:H4'	59:GB:71:PHE:CE1	2.35	0.62
2:B:805:G:H5"	8:H:75:PRO:HD3	1.80	0.62
2:B:1077:U:H2'	2:B:1078:U:H6	1.64	0.62
2:B:1139:G:O2'	11:K:94:LYS:HG3	1.99	0.62
2:B:2585:G:O2'	2:B:2586:G:H5"	2.00	0.62
3:C:64:U:H2'	3:C:65:A:C8	2.34	0.62
5:E:36:VAL:HB	5:E:183:ILE:CG2	2.29	0.62
9:I:33:ARG:NE	9:I:37:VAL:HG21	2.13	0.62
10:J:10:TYR:HB3	36:JA:88:HIS:CE1	2.34	0.62
10:J:38:THR:HG22	10:J:39:VAL:H	1.64	0.62
11:K:143:THR:O	11:K:147:LEU:HG	1.99	0.62
11:K:239:LEU:HD13	11:K:240:VAL:HG13	1.79	0.62
13:M:97:PHE:HB3	13:M:118:LEU:H	1.65	0.62
14:N:206:LEU:O	14:N:210:ILE:HG13	1.99	0.62
17:Q:85:LEU:CD1	17:Q:89:TYR:HB3	2.28	0.62
25:Y:35:LYS:HB2	25:Y:38:ASP:OD2	2.00	0.62
28:BA:56:ARG:O	28:BA:60:LYS:HA	2.00	0.62
30:DA:119:ILE:CG2	30:DA:124:GLY:HA3	2.30	0.62
35:IA:40:ALA:O	35:IA:44:MET:HB2	1.99	0.62
41:OA:37:CYS:SG	41:OA:39:TYR:HB2	2.39	0.62
53:AB:164:VAL:O	53:AB:168:ILE:HG13	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:102:ARG:O	55:CB:106:LYS:HD2	1.99	0.62
57:EB:185:ILE:HD13	57:EB:185:ILE:H	1.65	0.62
1:A:127:G:N1	56:DB:195:VAL:HG13	2.14	0.62
1:A:1403:C:H2'	1:A:1404:C:C6	2.35	0.62
1:A:1586:A:H61	1:A:1610:G:H1'	1.64	0.62
2:B:813:G:H4'	41:OA:45:ARG:NH2	2.15	0.62
2:B:1054:A:H5"	2:B:2637:A:N6	2.15	0.62
2:B:3011:A:N6	7:G:13:HIS:HA	2.14	0.62
2:B:3302:U:H3	2:B:3312:U:H3	1.47	0.62
3:C:23:U:OP2	3:C:23:U:H6	1.83	0.62
3:C:115:C:H3'	3:C:116:G:H5"	1.82	0.62
21:U:86:LYS:HA	21:U:89:LYS:HB2	1.80	0.62
37:KA:49:ILE:HG22	37:KA:100:ILE:HG12	1.80	0.62
40:NA:58:ILE:HG13	40:NA:59:ASP:N	2.14	0.62
46:TA:71:ARG:HD3	46:TA:80:ARG:HD2	1.82	0.62
48:VA:186:THR:HG22	48:VA:187:VAL:H	1.65	0.62
50:XA:57:LEU:HD11	50:XA:176:LEU:HB2	1.81	0.62
56:DB:215:ARG:HA	56:DB:218:GLU:HB2	1.82	0.62
57:EB:43:PHE:HB2	57:EB:61:PHE:O	2.00	0.62
58:FB:155:SER:O	58:FB:159:GLN:HG3	1.99	0.62
59:GB:38:ASN:HB2	59:GB:41:GLU:HG3	1.79	0.62
68:PB:52:VAL:HG13	68:PB:61:LEU:HD11	1.82	0.62
74:VB:81:GLU:HA	74:VB:84:LYS:HE3	1.79	0.62
78:ZB:32:PHE:H	78:ZB:32:PHE:HD2	1.48	0.62
82:DC:286:THR:O	82:DC:290:ASN:HB2	1.99	0.62
82:DC:720:ALA:O	82:DC:721:ASP:HB2	2.00	0.62
83:EC:6852:U:H2'	83:EC:6853:G:C8	2.35	0.62
1:A:35:U:H2'	1:A:36:C:C6	2.34	0.62
1:A:78:A:C2	56:DB:178:LEU:HD23	2.34	0.62
1:A:1667:A:H4'	2:B:1935:G:O2'	1.99	0.62
2:B:528:U:H2'	2:B:529:A:C8	2.34	0.62
2:B:603:A:H8	2:B:603:A:O5'	1.83	0.62
6:F:68:LYS:HG2	6:F:69:TYR:H	1.63	0.62
7:G:246:LEU:H	7:G:248:LYS:HE3	1.65	0.62
11:K:90:LYS:HD3	11:K:133:TYR:CD1	2.35	0.62
11:K:90:LYS:HG2	11:K:91:GLY:H	1.64	0.62
12:L:46:LEU:HA	12:L:49:TYR:CE1	2.34	0.62
18:R:55:ARG:HD2	24:X:70:THR:HB	1.82	0.62
22:V:180:ARG:HH11	22:V:185:LYS:CG	2.13	0.62
43:QA:36:ARG:HB2	43:QA:36:ARG:NH1	2.15	0.62
48:VA:29:GLY:HA2	48:VA:84:VAL:HG22	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:25:PHE:HA	53:AB:28:GLU:HB3	1.80	0.62
66:NB:102:LYS:HA	66:NB:105:LEU:HD22	1.81	0.62
72:TB:3:ARG:HD3	72:TB:29:PRO:HD3	1.81	0.62
72:TB:55:ASP:OD2	72:TB:59:GLY:HA2	2.00	0.62
74:VB:114:ARG:O	74:VB:118:ILE:HG12	2.00	0.62
82:DC:296:ILE:HB	82:DC:297:PRO:CD	2.26	0.62
82:DC:617:ARG:HH21	82:DC:627:VAL:HG21	1.63	0.62
83:EC:6818:G:H2'	83:EC:6819:G:C8	2.34	0.62
1:A:312:A:C2	1:A:314:C:H2'	2.35	0.62
2:B:67:A:N6	2:B:271:C:H4'	2.15	0.62
2:B:1637:A:H2'	2:B:1638:A:C8	2.35	0.62
2:B:1714:A:N6	2:B:1730:G:H1'	2.15	0.62
2:B:2393:G:H2'	2:B:2982:A:H61	1.64	0.62
2:B:2407:C:H4'	2:B:2620:G:C4'	2.30	0.62
2:B:2524:A:H1'	2:B:2525:G:C8	2.34	0.62
6:F:58:LEU:HD23	6:F:77:ILE:HA	1.82	0.62
10:J:51:ARG:HG2	10:J:51:ARG:HH11	1.64	0.62
11:K:140:SER:O	11:K:143:THR:HB	1.99	0.62
13:M:49:ASN:ND2	13:M:52:LEU:HB3	2.15	0.62
22:V:124:LEU:HA	22:V:127:LEU:HB3	1.81	0.62
67:OB:93:LEU:O	67:OB:94:SER:C	2.37	0.62
82:DC:634:TRP:HA	82:DC:660:LYS:HE3	1.82	0.62
1:A:632:U:O2'	1:A:1103:U:H5"	1.99	0.62
1:A:1525:A:H2'	1:A:1526:A:H8	1.65	0.62
2:B:1655:G:H5"	38:LA:58:ARG:NH2	2.15	0.62
2:B:2533:G:H2'	2:B:2534:G:C8	2.35	0.62
6:F:22:LEU:CD2	6:F:191:LEU:HD21	2.30	0.62
6:F:104:LEU:HD23	6:F:148:VAL:HG11	1.82	0.62
15:O:90:GLN:HG2	15:O:170:ASP:HB2	1.82	0.62
22:V:67:ILE:HA	22:V:140:LEU:CD1	2.30	0.62
24:X:10:ILE:HD13	25:Y:148:PRO:HG2	1.81	0.62
31:EA:109:GLU:HA	31:EA:112:LYS:HD2	1.80	0.62
37:KA:18:ARG:HA	37:KA:22:VAL:O	1.99	0.62
50:XA:82:GLY:HA3	50:XA:170:ILE:HG21	1.81	0.62
50:XA:197:ILE:HG13	50:XA:201:LEU:HD12	1.80	0.62
54:BB:65:LEU:HD11	54:BB:80:THR:HG23	1.82	0.62
54:BB:192:ILE:HG23	54:BB:228:ILE:HD11	1.82	0.62
67:OB:41:ILE:HG22	67:OB:43:SER:H	1.64	0.62
82:DC:288:ILE:HD13	82:DC:323:VAL:HG21	1.82	0.62
1:A:32:U:H3	1:A:468:A:H62	1.47	0.61
1:A:185:U:C2'	1:A:186:C:H5"	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:855:A:H3'	1:A:856:A:H5"	1.82	0.61
1:A:1076:A:H2'	1:A:1077:C:C6	2.34	0.61
1:A:1542:G:C2	1:A:1568:C:H1'	2.35	0.61
2:B:577:C:H2'	2:B:579:G:H5"	1.82	0.61
2:B:681:U:H1'	2:B:696:C:H5	1.65	0.61
2:B:714:G:H22	32:FA:72:VAL:HG11	1.64	0.61
2:B:858:A:H4'	2:B:1791:C:H5'	1.82	0.61
3:C:107:G:H2'	3:C:108:C:C6	2.35	0.61
5:E:32:VAL:HG12	5:E:208:SER:HA	1.82	0.61
7:G:114:VAL:HG13	7:G:163:HIS:CB	2.30	0.61
10:J:155:LEU:O	10:J:159:LEU:HG	1.99	0.61
11:K:138:TYR:CE2	11:K:233:GLU:HG2	2.35	0.61
11:K:239:LEU:CD1	11:K:240:VAL:HG13	2.30	0.61
14:N:53:VAL:HG21	14:N:166:ILE:CD1	2.29	0.61
14:N:191:LYS:CE	14:N:198:LYS:HG3	2.30	0.61
17:Q:48:PRO:HD2	39:MA:115:LYS:HD3	1.81	0.61
32:FA:39:HIS:O	32:FA:42:ARG:HG2	2.00	0.61
32:FA:122:PRO:HA	32:FA:142:GLY:C	2.24	0.61
40:NA:11:LEU:H	40:NA:11:LEU:HD22	1.64	0.61
49:WA:26:SER:HB2	49:WA:32:LEU:HD23	1.82	0.61
59:GB:110:GLN:HE22	59:GB:125:ALA:CB	2.10	0.61
67:OB:57:LEU:HA	67:OB:60:ARG:HG2	1.81	0.61
82:DC:231:LYS:HG3	82:DC:232:LYS:H	1.65	0.61
82:DC:545:LEU:HD12	82:DC:549:HIS:HB2	1.81	0.61
2:B:1108:U:H2'	2:B:1109:U:H6	1.65	0.61
2:B:1410:U:H2'	2:B:1411:C:C6	2.35	0.61
2:B:1517:G:H2'	2:B:1518:U:C6	2.35	0.61
2:B:1590:G:H3'	2:B:1591:G:H8	1.63	0.61
2:B:1922:A:H62	2:B:1929:G:H21	1.47	0.61
2:B:2298:U:H3'	2:B:2299:A:H8	1.66	0.61
2:B:3283:U:H2'	2:B:3284:G:C8	2.35	0.61
9:I:108:ARG:N	9:I:251:PRO:HB2	2.15	0.61
13:M:64:HIS:CE1	20:T:132:GLY:HA3	2.36	0.61
16:P:128:VAL:O	16:P:132:ILE:HG13	2.01	0.61
17:Q:12:ASN:HB3	17:Q:14:PHE:CE1	2.35	0.61
17:Q:74:GLY:H	17:Q:98:ASP:CG	2.07	0.61
21:U:94:LEU:HD23	21:U:148:LEU:HD23	1.82	0.61
22:V:145:ASN:HA	22:V:150:VAL:HG11	1.81	0.61
27:AA:39:VAL:HG22	27:AA:58:VAL:HG12	1.82	0.61
63:KB:98:VAL:CG1	63:KB:115:LEU:HB2	2.29	0.61
82:DC:190:SER:HB3	82:DC:201:GLN:NE2	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:606:ILE:HG21	82:DC:619:MET:HE2	1.82	0.61
1:A:36:C:H5”	1:A:530:C:H4’	1.81	0.61
2:B:269:G:N2	2:B:294:U:H2’	2.15	0.61
2:B:2590:A:H2’	2:B:2591:A:C8	2.35	0.61
2:B:2799:A:H5”	2:B:2800:G:O5’	2.00	0.61
5:E:201:VAL:HB	5:E:204:LEU:HD21	1.83	0.61
6:F:28:LYS:HB3	6:F:123:ARG:HD3	1.81	0.61
7:G:57:VAL:HG23	7:G:358:TRP:HE3	1.64	0.61
7:G:162:VAL:HG11	7:G:181:ILE:HD11	1.82	0.61
8:H:29:PRO:HG2	8:H:279:HIS:HA	1.82	0.61
10:J:170:LYS:HB2	10:J:173:MET:HB2	1.82	0.61
11:K:152:GLY:O	11:K:163:LEU:HG	1.99	0.61
14:N:42:THR:HG23	14:N:44:ASP:H	1.66	0.61
20:T:15:LEU:HD11	20:T:128:ARG:HB3	1.82	0.61
27:AA:39:VAL:HG21	27:AA:51:ALA:O	2.01	0.61
29:CA:86:VAL:CG1	29:CA:90:ALA:HB3	2.30	0.61
30:DA:59:VAL:HG12	30:DA:103:LYS:C	2.26	0.61
40:NA:64:SER:HB3	40:NA:68:ARG:HB2	1.82	0.61
61:IB:6:THR:O	61:IB:7:VAL:HG12	2.00	0.61
61:IB:53:TYR:CG	61:IB:113:PRO:HG2	2.36	0.61
82:DC:77:LEU:HB3	82:DC:100:ILE:HD12	1.83	0.61
1:A:320:U:HO2’	1:A:321:C:H6	1.47	0.61
1:A:1000:C:H4’	83:EC:6949:G:H4’	1.82	0.61
1:A:1504:G:O3’	69:QB:41:SER:HB3	2.01	0.61
2:B:29:C:C3’	2:B:30:G:H5”	2.30	0.61
2:B:432:G:H2’	2:B:433:A:O4’	2.01	0.61
2:B:941:G:C2	2:B:942:U:H1’	2.35	0.61
2:B:1078:U:H1’	2:B:1082:U:C2	2.36	0.61
2:B:1682:U:N3	26:Z:82:LYS:HA	2.15	0.61
2:B:2587:U:H4’	12:L:48:ARG:NH2	2.14	0.61
2:B:2714:G:H4’	2:B:2715:A:H5”	1.81	0.61
2:B:2770:G:H5’	46:TA:80:ARG:O	2.01	0.61
2:B:2803:A:OP1	46:TA:60:LYS:HD3	2.00	0.61
2:B:2922:G:H3’	2:B:2923:U:C5’	2.30	0.61
6:F:2:GLY:HA2	6:F:207:VAL:HA	1.83	0.61
11:K:109:THR:HB	22:V:3:ILE:HG23	1.83	0.61
13:M:153:ASP:O	13:M:157:ASN:HB2	2.01	0.61
19:S:9:GLU:HA	19:S:12:ARG:HE	1.65	0.61
20:T:55:HIS:HA	20:T:58:LEU:HB3	1.82	0.61
28:BA:56:ARG:HH22	28:BA:61:LYS:HB2	1.64	0.61
36:JA:4:LEU:HD23	36:JA:4:LEU:H	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:KA:11:GLY:CA	37:KA:32:ILE:HG22	2.30	0.61
43:QA:9:ILE:O	43:QA:13:MET:HE3	2.01	0.61
52:ZA:184:VAL:HG11	52:ZA:198:THR:HG21	1.82	0.61
60:HB:1:MET:SD	60:HB:44:LYS:HB2	2.40	0.61
61:IB:78:THR:HA	61:IB:84:ILE:HG22	1.81	0.61
1:A:1357:A:H2'	1:A:1358:G:C8	2.35	0.61
2:B:23:A:O2'	3:C:41:A:H1'	2.01	0.61
2:B:86:G:N2	2:B:98:G:H2'	2.15	0.61
2:B:568:G:H2'	2:B:569:A:C8	2.35	0.61
2:B:1133:A:C2'	2:B:1134:G:H5'	2.30	0.61
2:B:2198:A:H2'	2:B:2199:G:C5'	2.29	0.61
2:B:2235:C:H2'	2:B:2236:G:C8	2.35	0.61
2:B:3133:C:H2'	2:B:3134:A:H5"	1.81	0.61
6:F:31:THR:HG22	6:F:121:GLY:O	2.00	0.61
12:L:128:LYS:HG3	12:L:129:PRO:HD2	1.83	0.61
15:O:50:ALA:H	15:O:64:LYS:H	1.48	0.61
19:S:135:VAL:CG1	19:S:151:ILE:HG21	2.30	0.61
19:S:140:LYS:HB3	19:S:144:ARG:NE	2.16	0.61
22:V:23:ASN:OD1	22:V:26:LEU:HB3	1.99	0.61
31:EA:129:TRP:HZ2	38:LA:100:ILE:HD12	1.65	0.61
34:HA:86:ARG:HD2	47:UA:44:LYS:HE2	1.83	0.61
37:KA:51:TYR:HB2	37:KA:98:VAL:HA	1.81	0.61
41:OA:55:ARG:HB2	41:OA:55:ARG:CZ	2.31	0.61
44:RA:103:LEU:HD12	44:RA:121:LEU:HD21	1.81	0.61
46:TA:31:GLY:C	46:TA:33:ALA:H	2.08	0.61
59:GB:139:GLN:HE22	74:VB:63:GLN:HG3	1.64	0.61
60:HB:13:GLN:HA	60:HB:80:LEU:HD11	1.80	0.61
73:UB:131:SER:O	73:UB:135:LEU:HG	2.00	0.61
1:A:415:C:C2'	1:A:416:A:H5"	2.31	0.61
1:A:918:U:H2'	1:A:919:A:O4'	2.00	0.61
1:A:1760:G:O2'	1:A:1761:U:H5'	1.99	0.61
2:B:636:C:C4	2:B:2378:C:H1'	2.35	0.61
2:B:796:U:H5"	17:Q:4:SER:OG	2.00	0.61
2:B:1179:A:H5'	2:B:1328:C:H4'	1.83	0.61
2:B:1200:A:C5'	2:B:1201:C:H4'	2.30	0.61
2:B:3327:G:H2'	2:B:3328:G:C8	2.31	0.61
4:D:76:A:H3'	4:D:76:A:OP2	2.01	0.61
5:E:120:VAL:HB	5:E:121:PRO:CD	2.28	0.61
7:G:149:ALA:HA	7:G:152:LYS:CD	2.30	0.61
12:L:165:PHE:HZ	19:S:3:ALA:HB1	1.64	0.61
13:M:41:ILE:CG2	13:M:43:VAL:HG13	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:6:ALA:O	14:N:10:ARG:HB2	2.01	0.61
14:N:42:THR:CG2	14:N:45:GLU:HG3	2.25	0.61
17:Q:42:ARG:CG	17:Q:51:LEU:HD22	2.30	0.61
25:Y:56:PHE:CE1	25:Y:78:LYS:HD2	2.35	0.61
50:XA:83:GLN:O	50:XA:86:VAL:HG22	2.00	0.61
56:DB:135:PRO:CB	56:DB:141:ILE:HG12	2.30	0.61
58:FB:170:SER:H	58:FB:181:GLY:HA2	1.64	0.61
61:IB:67:ARG:HD3	61:IB:67:ARG:N	2.14	0.61
66:NB:128:LYS:CB	66:NB:137:ARG:HH22	2.13	0.61
68:PB:75:ASN:HB3	68:PB:78:HIS:HD2	1.65	0.61
73:UB:93:LEU:HA	73:UB:96:VAL:HG22	1.83	0.61
78:ZB:10:ALA:HA	78:ZB:32:PHE:HA	1.83	0.61
1:A:74:U:H1'	1:A:76:A:OP2	2.00	0.61
1:A:632:U:H2'	1:A:633:U:C6	2.35	0.61
1:A:707:A:H3'	1:A:708:C:H5"	1.82	0.61
1:A:760:A:H2'	1:A:761:G:O4'	2.01	0.61
1:A:877:G:H2'	1:A:878:G:H5'	1.83	0.61
1:A:1674:C:H2'	1:A:1675:C:C6	2.35	0.61
2:B:716:A:N7	32:FA:116:GLY:HA2	2.15	0.61
2:B:1063:G:N1	25:Y:109:VAL:HG13	2.15	0.61
2:B:1460:A:H2'	2:B:1461:A:C8	2.35	0.61
2:B:1532:C:H2'	2:B:1533:U:C6	2.36	0.61
2:B:1896:A:H2	27:AA:83:LYS:HD3	1.65	0.61
2:B:2393:G:O6	2:B:2982:A:H2'	2.01	0.61
2:B:2884:C:H2'	2:B:2885:C:C6	2.35	0.61
2:B:2987:A:H2'	2:B:2988:C:C6	2.36	0.61
2:B:3042:U:H2'	2:B:3043:C:C6	2.35	0.61
3:C:76:C:H2'	3:C:77:A:O4'	2.00	0.61
9:I:65:ILE:HG12	9:I:74:VAL:HG22	1.83	0.61
11:K:86:VAL:CG2	11:K:136:TYR:HB3	2.28	0.61
11:K:92:ILE:HA	11:K:95:ILE:HD12	1.83	0.61
20:T:10:ASP:HA	20:T:36:VAL:HG22	1.82	0.61
22:V:179:ARG:HH21	22:V:182:LYS:HE3	1.65	0.61
31:EA:22:LYS:HD2	31:EA:130:PHE:HA	1.82	0.61
49:WA:109:ASP:HB2	49:WA:127:ARG:NE	2.14	0.61
55:CB:51:VAL:HA	55:CB:131:GLN:OE1	2.00	0.61
58:FB:159:GLN:HE22	58:FB:189:LEU:HD11	1.66	0.61
59:GB:130:THR:HA	59:GB:142:ASN:HB2	1.81	0.61
61:IB:27:THR:HG23	61:IB:30:ARG:H	1.65	0.61
71:SB:36:VAL:HB	71:SB:51:VAL:HB	1.81	0.61
73:UB:19:ARG:O	73:UB:23:ARG:HB2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:YB:33:LEU:HD23	77:YB:81:ARG:HA	1.82	0.61
78:ZB:44:VAL:HG21	78:ZB:48:VAL:CG2	2.31	0.61
82:DC:109:VAL:HG12	82:DC:110:ASP:H	1.65	0.61
1:A:460:A:H3'	1:A:461:G:H8	1.66	0.61
1:A:906:A:H5'	83:EC:6943:A:H61	1.65	0.61
1:A:1583:A:H5'	66:NB:135:ARG:HH12	1.66	0.61
1:A:1592:A:H2'	1:A:1593:A:C8	2.35	0.61
2:B:77:A:H2'	2:B:78:U:C6	2.35	0.61
2:B:353:G:N2	2:B:364:G:H2'	2.15	0.61
2:B:729:C:H2'	2:B:730:C:O4'	2.01	0.61
2:B:852:U:C5	47:UA:2:ALA:HA	2.35	0.61
2:B:1578:C:H2'	2:B:1579:C:C2	2.35	0.61
2:B:1718:G:H2'	2:B:1719:G:O4'	2.00	0.61
2:B:1796:G:H4'	6:F:22:LEU:HD23	1.83	0.61
2:B:2250:G:H3'	2:B:2251:G:H8	1.65	0.61
2:B:2414:G:H2'	2:B:2415:C:O4'	2.01	0.61
2:B:2443:A:H2'	2:B:2444:C:O4'	2.01	0.61
2:B:2780:A:O2'	17:Q:181:GLY:HA3	2.00	0.61
17:Q:4:SER:OG	17:Q:7:LEU:HD11	2.00	0.61
22:V:174:ARG:HB2	32:FA:56:VAL:HG11	1.82	0.61
24:X:27:MET:HB2	24:X:41:TYR:HD2	1.65	0.61
30:DA:48:LEU:HD23	30:DA:122:LYS:HD2	1.81	0.61
40:NA:60:LEU:O	40:NA:63:ASN:HB2	2.01	0.61
47:UA:82:THR:O	47:UA:86:LEU:HG	2.00	0.61
48:VA:106:ALA:HA	48:VA:182:THR:HG21	1.82	0.61
54:BB:150:PRO:HB2	54:BB:154:ILE:HD12	1.82	0.61
58:FB:3:ILE:HD12	58:FB:31:ARG:HA	1.82	0.61
59:GB:108:ARG:O	59:GB:111:THR:HG22	2.01	0.61
73:UB:90:ASP:OD2	80:BC:12:GLY:HA2	1.99	0.61
1:A:78:A:H2'	1:A:79:C:C6	2.34	0.61
1:A:740:A:H2'	1:A:741:C:H5"	1.82	0.61
1:A:753:A:H2'	1:A:754:A:O4'	2.00	0.61
2:B:30:G:H2'	2:B:31:C:O4'	2.00	0.61
2:B:359:U:H4'	2:B:817:A:N6	2.16	0.61
2:B:1311:G:H2'	2:B:1312:C:H6	1.66	0.61
2:B:1318:A:H8	2:B:1318:A:OP1	1.84	0.61
2:B:1448:U:H4'	21:U:66:SER:HB2	1.82	0.61
2:B:1774:C:H2'	2:B:1775:G:C4'	2.31	0.61
2:B:1927:G:N7	47:UA:16:VAL:HG12	2.16	0.61
2:B:1932:A:H2	2:B:2124:G:H5"	1.66	0.61
2:B:2356:A:N6	2:B:2983:C:H5	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2767:U:OP1	46:TA:37:ALA:HB2	2.00	0.61
2:B:3294:A:H2'	2:B:3295:A:O4'	2.00	0.61
3:C:63:G:H1	3:C:97:A:H61	1.48	0.61
6:F:22:LEU:HD13	6:F:52:SER:CB	2.31	0.61
6:F:144:ASN:HB3	6:F:160:SER:H	1.65	0.61
7:G:25:ILE:H	7:G:25:ILE:CD1	2.13	0.61
13:M:71:VAL:HG22	13:M:74:LEU:HD12	1.81	0.61
13:M:176:LEU:HD12	44:RA:78:ILE:HG21	1.82	0.61
16:P:106:LEU:HB3	16:P:110:ILE:HD11	1.83	0.61
24:X:24:LEU:HD22	25:Y:148:PRO:HG3	1.81	0.61
24:X:91:TYR:CZ	24:X:136:LYS:HD3	2.36	0.61
25:Y:66:ASN:CG	33:GA:35:VAL:HA	2.26	0.61
34:HA:44:ILE:HG21	34:HA:53:LYS:HG3	1.80	0.61
50:XA:62:ARG:HH21	71:SB:39:VAL:HG22	1.66	0.61
54:BB:54:TYR:HA	74:VB:22:GLN:OE1	2.01	0.61
58:FB:76:THR:HG22	58:FB:108:PRO:HD2	1.82	0.61
58:FB:137:LYS:O	58:FB:141:ARG:HG3	2.00	0.61
60:HB:85:HIS:HD2	60:HB:88:PRO:HD2	1.65	0.61
69:QB:47:PRO:HG2	69:QB:53:TRP:HB2	1.81	0.61
82:DC:314:LEU:HD22	82:DC:318:ALA:HB3	1.82	0.61
82:DC:515:ASP:O	82:DC:518:VAL:HG12	2.00	0.61
82:DC:619:MET:HA	82:DC:623:TYR:CD2	2.30	0.61
82:DC:747:LEU:CD1	82:DC:752:GLY:HA3	2.27	0.61
1:A:375:U:O2'	1:A:602:U:H4'	2.01	0.61
1:A:924:A:H2'	1:A:925:G:C8	2.35	0.61
2:B:899:U:H2'	2:B:900:G:H8	1.66	0.61
2:B:2562:A:H2'	2:B:2563:G:O4'	2.00	0.61
2:B:2767:U:H2'	2:B:2768:U:C6	2.36	0.61
2:B:3270:U:C5	10:J:46:ARG:HD2	2.36	0.61
3:C:43:A:H2'	3:C:44:A:C8	2.36	0.61
5:E:111:ILE:HG23	5:E:138:VAL:HG21	1.83	0.61
9:I:56:THR:OG1	9:I:59:ASP:HB3	2.01	0.61
12:L:187:GLY:HA2	12:L:190:VAL:HG12	1.83	0.61
18:R:102:LYS:O	18:R:106:ARG:HG2	2.00	0.61
31:EA:77:TYR:HB3	34:HA:35:ARG:NE	2.16	0.61
32:FA:148:ILE:HG22	32:FA:149:ALA:N	2.16	0.61
39:MA:23:ASP:O	39:MA:27:GLU:HG2	2.01	0.61
48:VA:11:TYR:HA	48:VA:14:LYS:CE	2.31	0.61
48:VA:30:VAL:HG21	48:VA:33:VAL:HB	1.82	0.61
48:VA:64:ARG:HD3	48:VA:67:LEU:HD13	1.83	0.61
54:BB:90:ILE:HD11	54:BB:101:LEU:HG	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:OB:41:ILE:HG21	67:OB:46:LEU:HB2	1.81	0.61
82:DC:181:THR:O	82:DC:185:VAL:HG23	2.01	0.61
1:A:301:A:H2'	1:A:302:U:C6	2.36	0.60
1:A:513:U:H2'	1:A:514:G:C8	2.36	0.60
1:A:834:G:H2'	1:A:835:U:C5	2.36	0.60
2:B:208:C:O2'	2:B:209:A:H5'	2.00	0.60
2:B:305:U:H2'	2:B:2776:C:O2'	2.00	0.60
2:B:1481:A:O2'	2:B:1858:A:H1'	2.00	0.60
2:B:2575:G:H2'	2:B:2576:G:C8	2.35	0.60
2:B:2612:U:H2'	2:B:2613:U:O4'	2.01	0.60
2:B:3314:A:H2'	2:B:3315:G:C8	2.36	0.60
2:B:3369:G:H2'	7:G:380:MET:CE	2.31	0.60
4:D:84:A:H2'	4:D:85:G:C8	2.35	0.60
7:G:67:PHE:CD2	27:AA:88:ARG:HD3	2.35	0.60
8:H:34:ILE:HG22	8:H:121:ALA:HB2	1.83	0.60
12:L:143:ILE:HG23	12:L:175:VAL:CG2	2.31	0.60
21:U:177:ALA:HA	21:U:180:LYS:HE2	1.83	0.60
22:V:83:VAL:O	22:V:103:ALA:HA	2.00	0.60
27:AA:18:PRO:HA	27:AA:51:ALA:CA	2.28	0.60
30:DA:37:LYS:H	30:DA:37:LYS:HD3	1.65	0.60
31:EA:108:GLU:O	31:EA:112:LYS:HG3	2.01	0.60
38:LA:44:CYS:HB3	38:LA:48:GLY:H	1.66	0.60
49:WA:101:GLN:HG2	49:WA:138:GLY:HA3	1.81	0.60
54:BB:9:LEU:HD13	54:BB:30:ARG:NH1	2.16	0.60
54:BB:47:PHE:O	54:BB:51:ARG:HB2	2.01	0.60
55:CB:62:VAL:HG13	55:CB:89:ILE:HD13	1.82	0.60
72:TB:38:LEU:CD2	72:TB:41:MET:HE2	2.30	0.60
73:UB:12:ALA:HA	73:UB:15:LEU:HD12	1.83	0.60
1:A:1459:C:C4	68:PB:139:LYS:HG3	2.36	0.60
2:B:336:A:H1'	2:B:691:A:N6	2.16	0.60
2:B:362:U:H5'	41:OA:53:ALA:HB2	1.83	0.60
2:B:956:U:H2'	2:B:957:C:C6	2.35	0.60
2:B:1113:G:H5"	32:FA:19:LYS:C	2.26	0.60
2:B:1500:G:H2'	2:B:1501:U:O4'	2.00	0.60
2:B:1591:G:H2'	2:B:1592:G:C8	2.36	0.60
2:B:1711:C:H2'	2:B:1712:G:O4'	2.01	0.60
2:B:2279:A:H62	2:B:2286:U:H3	1.47	0.60
2:B:3275:U:H3'	2:B:3276:G:C5'	2.30	0.60
6:F:6:ARG:O	6:F:10:LYS:HG3	2.01	0.60
7:G:43:LEU:HD22	7:G:194:TRP:HH2	1.66	0.60
16:P:114:ARG:HE	16:P:132:ILE:HD11	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:42:ARG:O	17:Q:46:ILE:HB	2.01	0.60
20:T:147:TRP:CH2	20:T:150:GLU:HA	2.36	0.60
22:V:64:VAL:HA	22:V:67:ILE:CD1	2.31	0.60
23:W:144:GLN:O	23:W:148:ASP:HB2	2.00	0.60
23:W:160:GLU:HA	23:W:163:ARG:HG2	1.83	0.60
50:XA:122:ILE:HA	50:XA:144:ILE:O	2.01	0.60
54:BB:127:LYS:HE3	54:BB:142:HIS:HA	1.82	0.60
73:UB:125:VAL:O	73:UB:132:LEU:HD23	2.01	0.60
1:A:1163:A:H2'	1:A:1164:G:O4'	2.01	0.60
1:A:1591:C:H2'	1:A:1592:A:H8	1.65	0.60
2:B:616:G:H1'	2:B:3274:A:H61	1.67	0.60
2:B:1047:A:H1'	2:B:2634:U:H5'	1.83	0.60
2:B:1459:C:H5'	35:IA:33:VAL:CG2	2.30	0.60
2:B:1523:U:O2'	29:CA:111:ASN:HB3	2.02	0.60
2:B:1564:U:H3	2:B:1576:G:H1	1.50	0.60
2:B:2741:C:H4'	46:TA:19:LYS:HA	1.83	0.60
2:B:2921:U:H2'	2:B:2923:U:H5"	1.83	0.60
2:B:3279:A:H2'	2:B:3280:U:C5'	2.31	0.60
6:F:5:ILE:HG21	6:F:210:PRO:HD2	1.83	0.60
6:F:56:ALA:HB1	6:F:170:ALA:O	2.01	0.60
7:G:160:VAL:HB	7:G:183:LEU:HD21	1.84	0.60
7:G:262:TRP:CD1	7:G:262:TRP:H	2.19	0.60
7:G:358:TRP:C	7:G:359:ILE:HD12	2.27	0.60
17:Q:49:ARG:HH11	39:MA:115:LYS:HZ3	1.48	0.60
17:Q:98:ASP:CG	17:Q:101:ARG:HB3	2.26	0.60
21:U:24:VAL:O	21:U:143:PRO:HA	2.01	0.60
27:AA:80:ARG:NH2	27:AA:95:PHE:HB3	2.09	0.60
40:NA:38:LYS:HE3	40:NA:41:ARG:NH1	2.16	0.60
49:WA:85:TRP:HZ3	67:OB:29:GLN:HB3	1.66	0.60
49:WA:240:VAL:HG11	49:WA:254:ALA:HB1	1.83	0.60
52:ZA:63:VAL:HG23	52:ZA:134:LEU:HD12	1.83	0.60
52:ZA:86:VAL:O	52:ZA:97:ARG:HB2	2.01	0.60
54:BB:201:HIS:HB2	54:BB:206:ASP:HA	1.83	0.60
60:HB:85:HIS:HA	60:HB:88:PRO:HG2	1.83	0.60
82:DC:27:HIS:HD1	82:DC:28:VAL:HG12	1.66	0.60
82:DC:77:LEU:CB	82:DC:100:ILE:HD12	2.31	0.60
2:B:31:C:H5"	19:S:95:GLN:HB2	1.84	0.60
2:B:965:A:H5'	32:FA:41:HIS:HE2	1.67	0.60
2:B:1473:G:H2'	2:B:1474:A:O4'	2.02	0.60
2:B:1533:U:H2'	2:B:1534:A:H8	1.66	0.60
2:B:2592:G:H4'	2:B:2594:C:N3	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:160:ILE:O	12:L:164:VAL:HG13	2.02	0.60
28:BA:13:ILE:HD12	28:BA:32:GLN:HA	1.83	0.60
31:EA:46:ILE:HA	31:EA:70:PRO:HA	1.83	0.60
43:QA:21:ARG:HD3	43:QA:21:ARG:C	2.27	0.60
46:TA:43:TYR:HA	46:TA:55:LYS:HE3	1.81	0.60
55:CB:97:LEU:CD1	55:CB:114:ILE:HD11	2.30	0.60
61:IB:57:LYS:HB3	61:IB:131:ILE:HG23	1.81	0.60
65:MB:34:VAL:HA	65:MB:37:ALA:CB	2.32	0.60
73:UB:52:ILE:O	73:UB:74:VAL:HG13	2.01	0.60
82:DC:634:TRP:HE1	82:DC:648:ASP:HB2	1.67	0.60
1:A:487:G:H22	1:A:501:U:H1'	1.66	0.60
1:A:590:C:H2'	1:A:591:A:C8	2.37	0.60
1:A:626:U:H2'	1:A:627:C:C6	2.36	0.60
1:A:1113:A:N6	1:A:1131:A:H5"	2.17	0.60
1:A:1290:U:H2'	1:A:1291:G:C8	2.36	0.60
1:A:1637:C:H5'	83:EC:6905:G:O6	2.02	0.60
2:B:220:G:O4'	8:H:187:LEU:HD11	2.00	0.60
2:B:585:A:H2'	2:B:586:C:C5	2.36	0.60
2:B:797:U:H5"	17:Q:2:ALA:N	2.15	0.60
2:B:994:G:H22	2:B:1053:A:H2'	1.67	0.60
2:B:1308:A:C2	2:B:1311:G:H4'	2.36	0.60
2:B:1642:A:H4'	38:LA:69:HIS:CE1	2.37	0.60
2:B:1794:G:C5'	6:F:188:LYS:HA	2.32	0.60
2:B:1840:U:C4	2:B:1850:A:H4'	2.37	0.60
2:B:2915:U:OP1	7:G:9:PRO:HD3	2.01	0.60
2:B:2958:A:H2'	2:B:2959:C:C6	2.36	0.60
2:B:3029:A:H8	2:B:3029:A:O5'	1.83	0.60
5:E:174:MET:HE2	5:E:179:LEU:HD21	1.82	0.60
8:H:116:ASN:HA	8:H:119:ARG:NH1	2.16	0.60
9:I:102:GLY:O	9:I:105:ILE:HG22	2.01	0.60
12:L:211:LEU:O	12:L:215:VAL:HG23	2.02	0.60
17:Q:53:LEU:HD22	17:Q:94:GLY:HA2	1.83	0.60
19:S:116:LEU:HG	19:S:133:ILE:HG23	1.82	0.60
24:X:38:LYS:HE2	24:X:58:ILE:HG21	1.83	0.60
52:ZA:241:ASP:HA	52:ZA:244:SER:HB2	1.83	0.60
53:AB:37:VAL:HG12	53:AB:50:ILE:HA	1.82	0.60
55:CB:93:LEU:O	55:CB:97:LEU:HG	2.02	0.60
67:OB:25:THR:HA	67:OB:58:MET:HE2	1.83	0.60
74:VB:12:VAL:HG22	74:VB:23:PHE:CB	2.32	0.60
74:VB:13:ILE:O	74:VB:22:GLN:HG2	2.00	0.60
82:DC:732:GLU:HA	82:DC:768:VAL:O	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:406:U:H2'	1:A:407:A:C8	2.36	0.60
1:A:626:U:H2'	1:A:627:C:H6	1.65	0.60
1:A:1407:U:H2'	1:A:1408:G:C8	2.37	0.60
2:B:366:A:H5"	8:H:95:ARG:HH22	1.65	0.60
2:B:750:G:H5'	33:GA:44:LYS:HG3	1.82	0.60
2:B:1193:A:H2'	2:B:1194:G:O4'	2.02	0.60
2:B:1311:G:H2'	2:B:1312:C:C6	2.37	0.60
2:B:2076:G:C2'	2:B:2077:U:H5"	2.32	0.60
2:B:2157:G:N2	2:B:2177:G:H1'	2.17	0.60
2:B:2244:A:H5"	6:F:243:THR:OG1	2.00	0.60
2:B:2762:A:O2'	2:B:2763:U:H5'	2.02	0.60
3:C:35:C:H2'	3:C:36:G:C8	2.36	0.60
7:G:48:GLY:CA	7:G:338:LEU:HD21	2.31	0.60
7:G:336:VAL:HG12	7:G:337:THR:N	2.17	0.60
9:I:131:LEU:HD23	9:I:131:LEU:H	1.66	0.60
13:M:47:LYS:HE2	18:R:5:SER:HB2	1.83	0.60
13:M:100:ASN:HD22	13:M:115:ARG:CG	2.15	0.60
17:Q:8:PRO:N	22:V:164:ARG:HG2	2.16	0.60
20:T:70:PRO:HB2	20:T:72:HIS:HE2	1.67	0.60
21:U:168:LEU:HD21	21:U:176:ILE:HD11	1.82	0.60
45:SA:1:MET:HE2	45:SA:6:ARG:HB2	1.83	0.60
82:DC:613:LYS:HD3	82:DC:614:ALA:N	2.17	0.60
2:B:871:U:H1'	2:B:2324:A:H1'	1.84	0.60
2:B:954:U:O5'	33:GA:8:THR:HB	2.02	0.60
2:B:1371:G:H2'	2:B:1372:C:C6	2.36	0.60
2:B:2661:G:H2'	2:B:2662:G:C8	2.36	0.60
2:B:3288:G:O2'	2:B:3289:G:H8	1.85	0.60
2:B:3311:C:H2'	2:B:3312:U:C5'	2.30	0.60
3:C:37:A:H2	39:MA:86:ARG:NE	2.00	0.60
3:C:144:G:H2'	3:C:145:U:C6	2.36	0.60
7:G:126:LYS:HB3	7:G:128:LYS:HG2	1.83	0.60
7:G:220:VAL:HA	7:G:274:SER:HA	1.84	0.60
8:H:76:ARG:HB2	8:H:76:ARG:NH1	2.16	0.60
13:M:47:LYS:HB2	18:R:7:VAL:CG2	2.32	0.60
13:M:100:ASN:HD22	13:M:115:ARG:HG2	1.66	0.60
14:N:39:LYS:HA	14:N:86:HIS:NE2	2.16	0.60
28:BA:9:SER:HB2	28:BA:52:THR:HA	1.82	0.60
28:BA:28:ILE:HG22	28:BA:30:ARG:HG3	1.82	0.60
34:HA:74:ASN:OD1	34:HA:86:ARG:HB2	2.01	0.60
48:VA:29:GLY:CA	48:VA:84:VAL:HG22	2.32	0.60
48:VA:112:GLY:H	48:VA:165:VAL:HB	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:102:PHE:HE2	50:XA:135:GLU:HG3	1.67	0.60
50:XA:148:ASP:HB2	50:XA:164:ASN:ND2	2.16	0.60
54:BB:129:VAL:HG12	54:BB:156:VAL:CG2	2.31	0.60
74:VB:87:PRO:HD2	74:VB:90:ARG:HD2	1.84	0.60
78:ZB:40:ILE:HD13	78:ZB:56:LEU:HD11	1.82	0.60
82:DC:501:LEU:CD2	82:DC:504:LEU:HD23	2.31	0.60
83:EC:6818:G:H2'	83:EC:6819:G:H8	1.65	0.60
83:EC:6824:C:H2'	83:EC:6825:A:C8	2.36	0.60
83:EC:6903:U:H3'	83:EC:6904:U:H5'	1.84	0.60
1:A:1087:A:H5'	1:A:1298:U:C4	2.36	0.60
2:B:407:A:H61	3:C:15:G:H2'	1.66	0.60
2:B:524:U:H2'	2:B:525:C:H5'	1.84	0.60
2:B:1055:A:H2'	2:B:1056:U:O4'	2.01	0.60
2:B:1059:G:H5"	25:Y:84:TYR:HH	1.66	0.60
2:B:2366:C:H2'	2:B:2367:A:H8	1.65	0.60
3:C:8:C:H2'	3:C:9:A:H8	1.65	0.60
3:C:43:A:OP2	41:OA:62:GLY:HA3	2.02	0.60
5:E:152:ARG:NH1	5:E:178:VAL:HG11	2.17	0.60
7:G:227:GLU:HB3	7:G:232:ARG:HG3	1.82	0.60
7:G:292:ALA:HA	7:G:303:LYS:O	2.02	0.60
9:I:125:VAL:HG21	9:I:199:ILE:HG21	1.83	0.60
12:L:95:ASN:O	12:L:98:ARG:HG3	2.00	0.60
18:R:15:VAL:HG23	18:R:19:ARG:HG2	1.83	0.60
20:T:76:PRO:HG3	20:T:142:SER:OG	2.02	0.60
20:T:119:VAL:HG11	24:X:167:ARG:HA	1.84	0.60
21:U:87:SER:O	21:U:91:VAL:HG23	2.01	0.60
26:Z:34:ALA:HB1	26:Z:56:VAL:HG12	1.84	0.60
48:VA:61:ARG:NH2	48:VA:77:LEU:HA	2.16	0.60
50:XA:98:ILE:HD13	50:XA:102:PHE:HA	1.83	0.60
50:XA:197:ILE:HD13	50:XA:197:ILE:N	2.16	0.60
58:FB:195:ARG:O	58:FB:199:LYS:HG2	2.02	0.60
61:IB:72:THR:O	61:IB:88:ARG:HG2	2.02	0.60
65:MB:30:THR:OG1	65:MB:86:VAL:HG21	2.02	0.60
70:RB:50:LEU:HD11	70:RB:93:LEU:HD22	1.84	0.60
1:A:1217:A:H5"	60:HB:1:MET:HG3	1.82	0.60
2:B:175:C:H2'	2:B:176:G:C8	2.37	0.60
2:B:192:C:H2'	2:B:193:C:C6	2.36	0.60
2:B:1410:U:O3'	36:JA:75:LEU:HD11	2.02	0.60
2:B:2193:U:O2	2:B:2313:A:C8	2.55	0.60
2:B:2415:C:H5"	6:F:2:GLY:HA2	1.82	0.60
2:B:2939:G:OP2	7:G:2:SER:HA	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3094:A:H2'	2:B:3095:U:C6	2.37	0.60
2:B:3132:C:H2'	2:B:3133:C:C6	2.37	0.60
4:D:116:C:H1'	9:I:72:ASP:O	2.02	0.60
8:H:269:SER:HG	8:H:274:TYR:HD1	1.48	0.60
10:J:108:LYS:HB3	10:J:108:LYS:NZ	2.16	0.60
11:K:80:GLN:HB2	25:Y:136:ARG:O	2.02	0.60
11:K:144:ILE:HA	11:K:147:LEU:HD12	1.83	0.60
17:Q:122:LYS:HG3	17:Q:145:PHE:HZ	1.66	0.60
18:R:109:ARG:O	18:R:112:LEU:HD12	2.02	0.60
19:S:14:LYS:HA	19:S:19:LEU:HD23	1.82	0.60
19:S:116:LEU:HD23	19:S:133:ILE:HG13	1.83	0.60
19:S:159:ARG:C	19:S:159:ARG:HD3	2.27	0.60
20:T:22:VAL:O	20:T:25:LYS:HB2	2.01	0.60
21:U:126:ARG:HH21	21:U:126:ARG:HB2	1.67	0.60
22:V:44:PHE:O	22:V:48:VAL:HG23	2.02	0.60
34:HA:23:TYR:HA	34:HA:92:ILE:HA	1.82	0.60
43:QA:24:PRO:HB2	43:QA:27:ILE:CD1	2.28	0.60
48:VA:65:GLY:HA2	48:VA:73:PHE:CD2	2.36	0.60
50:XA:139:VAL:HG23	52:ZA:62:PRO:HG3	1.83	0.60
58:FB:189:LEU:O	58:FB:193:LEU:HB2	2.00	0.60
60:HB:86:ILE:HG23	60:HB:87:VAL:HG12	1.84	0.60
61:IB:110:HIS:CD2	61:IB:131:ILE:HG21	2.36	0.60
74:VB:29:HIS:HB2	74:VB:32:ARG:HB3	1.83	0.60
1:A:1081:A:H2'	1:A:1083:G:N7	2.17	0.60
1:A:1583:A:C5'	66:NB:135:ARG:HH22	2.15	0.60
2:B:58:G:C5'	19:S:154:PRO:HB2	2.32	0.60
2:B:254:A:H2'	2:B:255:A:H8	1.65	0.60
2:B:841:A:H2'	2:B:842:G:O4'	2.02	0.60
2:B:1701:C:H2'	2:B:1702:U:O4'	2.01	0.60
2:B:1830:G:H22	3:C:114:G:C5'	2.08	0.60
2:B:2139:A:N6	41:OA:3:LYS:HB2	2.17	0.60
2:B:2541:U:H1'	2:B:2542:U:O5'	2.01	0.60
2:B:2853:A:C5'	14:N:3:ARG:HH21	2.08	0.60
2:B:2922:G:H2'	2:B:2923:U:C4'	2.26	0.60
2:B:3010:U:H5"	7:G:14:LEU:CD1	2.31	0.60
2:B:3084:C:H2'	2:B:3085:G:H5'	1.83	0.60
2:B:3303:G:H1'	2:B:3304:U:C6	2.36	0.60
2:B:3312:U:H4'	7:G:25:ILE:HG21	1.84	0.60
6:F:84:THR:HG23	47:UA:63:THR:O	2.02	0.60
8:H:246:ARG:HG3	8:H:248:VAL:HG23	1.84	0.60
10:J:30:LEU:HD21	10:J:57:HIS:CE1	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:15:LEU:HG	20:T:123:ALA:O	2.02	0.60
22:V:19:PRO:C	22:V:21:SER:H	2.09	0.60
22:V:88:THR:HA	22:V:110:ALA:HB2	1.84	0.60
30:DA:109:LEU:HD22	30:DA:115:ARG:NH2	2.16	0.60
48:VA:115:ALA:O	48:VA:162:GLY:HA2	2.01	0.60
52:ZA:129:ILE:O	52:ZA:133:LYS:HG2	2.01	0.60
56:DB:162:VAL:HG12	56:DB:169:TYR:O	2.01	0.60
56:DB:194:LYS:O	56:DB:198:ALA:HB2	2.02	0.60
60:HB:1:MET:HE1	60:HB:41:TYR:HA	1.83	0.60
82:DC:117:ALA:O	82:DC:121:VAL:HG22	2.02	0.60
1:A:17:C:H2'	1:A:18:C:H6	1.66	0.59
1:A:55:A:N1	1:A:403:G:H1'	2.17	0.59
1:A:162:A:H5'	56:DB:83:CYS:HA	1.83	0.59
1:A:828:U:H2'	1:A:829:A:H5"	1.84	0.59
2:B:34:A:H2'	2:B:35:A:C8	2.37	0.59
2:B:93:C:C2	32:FA:55:LYS:HE2	2.36	0.59
2:B:790:U:H2'	2:B:791:A:C8	2.37	0.59
2:B:818:C:H2'	2:B:819:U:C6	2.37	0.59
2:B:2356:A:N6	2:B:2983:C:C5	2.70	0.59
2:B:2796:G:H2'	46:TA:62:ALA:HB1	1.82	0.59
2:B:3321:C:OP1	7:G:174:LYS:HE2	2.01	0.59
7:G:144:ILE:H	7:G:144:ILE:CD1	2.14	0.59
7:G:358:TRP:HZ2	7:G:371:GLN:CD	2.10	0.59
10:J:158:TYR:CE1	18:R:115:PHE:HA	2.36	0.59
11:K:160:ARG:HH22	11:K:206:LYS:HD3	1.65	0.59
12:L:242:ALA:O	12:L:246:MET:HB2	2.01	0.59
15:O:114:ILE:HG22	15:O:115:LYS:H	1.67	0.59
17:Q:67:ARG:HG2	32:FA:105:LEU:O	2.02	0.59
18:R:19:ARG:HD3	18:R:20:VAL:H	1.65	0.59
19:S:31:ARG:HA	19:S:65:ARG:NH1	2.17	0.59
20:T:61:ALA:HA	20:T:70:PRO:CG	2.32	0.59
22:V:179:ARG:NH2	22:V:182:LYS:HE3	2.17	0.59
36:JA:2:ALA:O	36:JA:90:LYS:HA	2.02	0.59
37:KA:24:ASN:ND2	37:KA:27:VAL:H	1.99	0.59
52:ZA:69:ILE:HG22	52:ZA:72:LEU:HD23	1.84	0.59
52:ZA:229:LEU:HD21	71:SB:14:PRO:HG2	1.84	0.59
54:BB:192:ILE:HD13	54:BB:238:LEU:HD22	1.84	0.59
57:EB:8:ILE:CD1	57:EB:42:GLN:HA	2.27	0.59
59:GB:171:ARG:HH11	59:GB:174:ARG:HB2	1.66	0.59
68:PB:45:LEU:HD21	68:PB:81:ILE:HD13	1.84	0.59
75:WB:100:ILE:HD13	75:WB:101:TYR:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:129:VAL:HG23	82:DC:157:ILE:HG12	1.82	0.59
82:DC:155:VAL:HG12	82:DC:209:VAL:HG13	1.84	0.59
82:DC:489:VAL:HG11	82:DC:538:LEU:HD22	1.83	0.59
83:EC:6777:C:H41	83:EC:6813:A:H5"	1.67	0.59
1:A:153:G:C8	74:VB:128:LYS:HD3	2.37	0.59
1:A:959:U:H6	63:KB:61:THR:HB	1.66	0.59
1:A:1048:G:H5"	77:YB:68:GLY:C	2.27	0.59
1:A:1553:G:N2	1:A:1555:A:H3'	2.17	0.59
2:B:6:A:H2'	2:B:7:C:C6	2.37	0.59
2:B:665:A:H2'	2:B:666:A:C8	2.37	0.59
2:B:726:G:N2	2:B:744:A:H62	2.00	0.59
2:B:903:U:H2'	2:B:904:A:C8	2.38	0.59
2:B:1058:U:H2'	2:B:1059:G:H8	1.67	0.59
2:B:1433:A:O4'	36:JA:27:ARG:HD2	2.01	0.59
2:B:1566:A:H2'	2:B:1567:U:H5"	1.84	0.59
2:B:1757:A:H5"	26:Z:94:ARG:HH22	1.67	0.59
2:B:3146:G:H4'	7:G:100:ARG:NH1	2.17	0.59
2:B:3174:A:H3'	2:B:3175:U:C6	2.37	0.59
2:B:3312:U:C3'	2:B:3313:U:H5"	2.31	0.59
6:F:45:VAL:HG13	6:F:85:GLY:H	1.67	0.59
8:H:158:SER:HA	8:H:213:ASN:CB	2.31	0.59
8:H:359:LEU:HD21	24:X:64:ILE:HA	1.83	0.59
10:J:31:ARG:HG3	10:J:34:LEU:HB2	1.85	0.59
19:S:15:GLN:HG2	40:NA:52:PRO:HD2	1.84	0.59
20:T:82:LYS:C	20:T:84:LEU:H	2.10	0.59
22:V:40:THR:O	22:V:41:ASP:HB3	2.01	0.59
24:X:4:PHE:H	24:X:100:VAL:HG21	1.66	0.59
32:FA:111:LYS:CE	32:FA:113:LEU:HD21	2.32	0.59
48:VA:39:HIS:CE1	48:VA:40:GLU:HG3	2.37	0.59
48:VA:119:ILE:HB	48:VA:159:VAL:HG12	1.83	0.59
61:IB:33:ARG:HG2	61:IB:49:ILE:O	2.01	0.59
73:UB:102:VAL:HG12	73:UB:127:VAL:HG12	1.85	0.59
82:DC:75:ILE:H	82:DC:75:ILE:HD12	1.67	0.59
1:A:744:U:H2'	1:A:745:U:O4'	2.02	0.59
1:A:1104:U:H2'	1:A:1105:C:C6	2.37	0.59
1:A:1144:U:H2'	1:A:1145:U:H6	1.67	0.59
2:B:43:A:H5"	19:S:83:LYS:HG2	1.84	0.59
2:B:120:G:H5'	12:L:129:PRO:CG	2.32	0.59
2:B:932:U:H4'	2:B:934:G:H5'	1.84	0.59
2:B:1304:A:N6	2:B:2860:U:H5"	2.17	0.59
2:B:2407:C:H1'	2:B:2818:U:O2	2.00	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2656:A:H4'	46:TA:98:LYS:CE	2.31	0.59
2:B:3302:U:H2'	2:B:3303:G:H8	1.66	0.59
7:G:89:VAL:HG23	7:G:159:ARG:O	2.02	0.59
7:G:367:LYS:HA	28:BA:17:ARG:NH2	2.17	0.59
10:J:39:VAL:HB	10:J:87:THR:OG1	2.02	0.59
13:M:41:ILE:HD11	13:M:67:ALA:HB1	1.82	0.59
17:Q:6:ASN:HB2	32:FA:48:TYR:CD1	2.37	0.59
18:R:19:ARG:HB3	18:R:35:ILE:HD13	1.85	0.59
27:AA:85:TRP:CZ2	27:AA:93:LEU:HG	2.38	0.59
30:DA:115:ARG:HB3	30:DA:115:ARG:NH1	2.14	0.59
41:OA:18:LEU:HD11	43:QA:9:ILE:HG12	1.85	0.59
48:VA:120:TRP:HB2	48:VA:157:LYS:NZ	2.17	0.59
52:ZA:125:ILE:O	52:ZA:129:ILE:HG13	2.01	0.59
54:BB:95:THR:HA	74:VB:16:PRO:HG2	1.84	0.59
58:FB:64:ASN:HA	58:FB:75:LYS:HA	1.84	0.59
59:GB:110:GLN:NE2	59:GB:125:ALA:HB3	2.12	0.59
67:OB:21:TYR:H	67:OB:22:PRO:HD2	1.66	0.59
70:RB:26:LEU:HB2	70:RB:89:ARG:HB2	1.84	0.59
82:DC:352:ARG:NH2	82:DC:356:LEU:HD21	2.17	0.59
82:DC:635:CYS:SG	82:DC:664:VAL:HG13	2.41	0.59
83:EC:6906:G:O2'	83:EC:6907:G:H5'	2.02	0.59
83:EC:6910:A:H8	83:EC:6910:A:O5'	1.85	0.59
1:A:11:A:H2'	1:A:12:U:H5'	1.84	0.59
1:A:966:A:H2'	1:A:967:A:C8	2.36	0.59
1:A:1116:A:O2'	1:A:1117:U:H5'	2.02	0.59
1:A:1299:G:H2'	1:A:1300:A:C8	2.37	0.59
2:B:230:U:H2'	2:B:231:G:C8	2.37	0.59
2:B:340:C:H2'	2:B:341:G:O4'	2.02	0.59
2:B:349:A:H2	3:C:22:U:HO2'	1.50	0.59
2:B:389:A:H2'	2:B:390:G:O4'	2.02	0.59
2:B:741:U:H4'	22:V:74:GLU:CG	2.32	0.59
2:B:917:A:H2'	2:B:918:C:C6	2.38	0.59
2:B:1238:C:H2'	2:B:1239:C:O4'	2.02	0.59
2:B:1304:A:C2'	2:B:2939:G:H1'	2.28	0.59
2:B:1451:C:H2'	2:B:1880:U:H5	1.67	0.59
5:E:100:ILE:HG13	5:E:128:LEU:HB2	1.84	0.59
8:H:263:GLY:O	8:H:276:LEU:HD23	2.03	0.59
24:X:77:VAL:HB	24:X:92:LYS:O	2.01	0.59
26:Z:41:ILE:HG23	26:Z:75:TYR:OH	2.01	0.59
27:AA:27:ASP:HB3	27:AA:101:VAL:HG12	1.85	0.59
31:EA:26:VAL:HG12	31:EA:89:VAL:CG2	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:MA:9:LEU:HD13	39:MA:17:LEU:HD22	1.84	0.59
50:XA:17:LEU:HA	50:XA:172:LEU:HD21	1.84	0.59
50:XA:189:VAL:HG13	50:XA:190:ASP:N	2.15	0.59
67:OB:91:LEU:O	67:OB:92:ASP:C	2.45	0.59
82:DC:218:TRP:HZ3	82:DC:220:PHE:HD2	1.50	0.59
83:EC:6938:A:H2'	83:EC:6939:C:H5'	1.83	0.59
1:A:478:A:H5'	59:GB:127:VAL:CG2	2.24	0.59
1:A:1291:G:H1	1:A:1324:G:N2	1.92	0.59
2:B:884:A:H4'	2:B:885:U:H5'	1.84	0.59
2:B:901:G:H5"	41:OA:13:ASN:ND2	2.18	0.59
2:B:1294:A:O2'	2:B:1295:G:H8	1.80	0.59
2:B:1458:U:H5'	35:IA:30:PRO:HB3	1.84	0.59
2:B:1662:G:H22	2:B:1787:A:H2	1.50	0.59
2:B:1899:G:H1	2:B:2335:G:H5'	1.66	0.59
2:B:2203:U:H5'	6:F:239:ALA:HA	1.83	0.59
2:B:2331:C:O2'	2:B:2332:A:H5'	2.02	0.59
2:B:3025:C:OP1	13:M:96:HIS:HB2	2.03	0.59
2:B:3275:U:H3'	2:B:3276:G:H5"	1.83	0.59
3:C:11:C:H2'	3:C:12:A:C8	2.38	0.59
3:C:27:U:H4'	8:H:51:ALA:HB3	1.83	0.59
5:E:65:ILE:HG23	5:E:109:ALA:HB3	1.83	0.59
6:F:104:LEU:HD11	6:F:164:GLY:HA3	1.84	0.59
7:G:144:ILE:HD12	7:G:144:ILE:N	2.15	0.59
9:I:200:PHE:HB3	9:I:237:GLU:HG3	1.83	0.59
10:J:91:VAL:HG21	10:J:145:LEU:HD11	1.82	0.59
11:K:154:GLY:O	11:K:160:ARG:HA	2.03	0.59
17:Q:57:VAL:H	17:Q:112:ASN:HD21	1.50	0.59
19:S:12:ARG:HD2	19:S:13:LYS:NZ	2.18	0.59
20:T:185:ALA:O	20:T:191:ALA:HB2	2.02	0.59
21:U:24:VAL:CG1	21:U:87:SER:HA	2.31	0.59
23:W:172:ARG:O	23:W:176:ARG:HG2	2.01	0.59
24:X:94:ILE:HG21	24:X:105:THR:HB	1.85	0.59
36:JA:103:LYS:HG3	36:JA:104:ASN:N	2.17	0.59
37:KA:59:VAL:CG2	37:KA:60:ARG:H	2.08	0.59
48:VA:130:PRO:HA	48:VA:150:ILE:HD11	1.84	0.59
54:BB:34:GLY:HA3	54:BB:83:PRO:HG3	1.83	0.59
56:DB:77:LEU:HD23	56:DB:77:LEU:H	1.67	0.59
58:FB:152:ILE:HG22	58:FB:153:GLU:H	1.67	0.59
78:ZB:28:VAL:HG21	78:ZB:48:VAL:HG21	1.84	0.59
82:DC:164:LEU:HA	82:DC:168:GLN:HA	1.84	0.59
82:DC:568:GLU:O	82:DC:569:SER:HB3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:629:ASP:HB3	82:DC:647:ILE:CG2	2.32	0.59
82:DC:727:PRO:HB2	82:DC:774:VAL:HG11	1.84	0.59
1:A:1650:U:H2'	1:A:1651:A:H8	1.66	0.59
2:B:10:C:H2'	2:B:11:A:H4'	1.84	0.59
2:B:80:G:H4'	2:B:326:U:O2'	2.01	0.59
2:B:1133:A:H2'	2:B:1134:G:H5'	1.85	0.59
2:B:1470:U:H2'	2:B:1471:U:H6	1.67	0.59
2:B:1851:G:H2'	2:B:1852:G:O4'	2.03	0.59
2:B:3037:U:H2'	2:B:3038:U:C6	2.37	0.59
2:B:3187:A:H3'	18:R:8:LYS:HE3	1.85	0.59
2:B:3305:A:H5'	7:G:334:ARG:HH22	1.66	0.59
3:C:56:G:H2'	3:C:57:C:C6	2.38	0.59
5:E:194:LEU:HD23	5:E:195:LYS:N	2.17	0.59
6:F:82:VAL:N	47:UA:65:ALA:HB3	2.18	0.59
9:I:152:ARG:HG3	9:I:154:THR:HG23	1.85	0.59
9:I:155:THR:HG22	9:I:179:ARG:HH11	1.67	0.59
10:J:52:VAL:HB	10:J:66:SER:O	2.03	0.59
17:Q:168:ARG:HA	17:Q:171:ARG:HB2	1.83	0.59
19:S:136:ASP:HB3	19:S:142:ILE:CD1	2.31	0.59
36:JA:63:THR:HA	36:JA:66:LEU:HD12	1.84	0.59
42:PA:28:ASN:ND2	42:PA:40:GLN:HB3	2.17	0.59
48:VA:27:VAL:CG1	48:VA:84:VAL:HG11	2.33	0.59
53:AB:95:GLY:HA3	53:AB:129:SER:CB	2.32	0.59
53:AB:135:GLU:HA	53:AB:152:PHE:O	2.01	0.59
68:PB:115:ARG:O	68:PB:119:ILE:HD13	2.03	0.59
72:TB:14:ILE:HD11	72:TB:27:ILE:HD13	1.84	0.59
82:DC:222:ILE:HD13	82:DC:222:ILE:N	2.16	0.59
82:DC:357:TYR:HA	82:DC:478:MET:HA	1.84	0.59
82:DC:718:LEU:HA	82:DC:722:PRO:HG3	1.85	0.59
1:A:1722:A:H4'	56:DB:75:LEU:HD13	1.85	0.59
2:B:8:C:H1'	3:C:152:G:N2	2.18	0.59
2:B:1114:U:H5"	32:FA:22:ILE:HB	1.83	0.59
2:B:1818:U:H2'	2:B:1819:U:C5'	2.22	0.59
2:B:1883:A:OP1	35:IA:34:LYS:HD3	2.03	0.59
2:B:2116:G:N2	2:B:3064:U:H5'	2.18	0.59
2:B:2795:U:OP2	46:TA:63:LYS:HG2	2.02	0.59
2:B:2853:A:H5'	14:N:3:ARG:NH2	2.10	0.59
2:B:3006:A:OP1	20:T:148:LYS:HD2	2.02	0.59
2:B:3085:G:OP1	28:BA:34:SER:HB2	2.03	0.59
2:B:3108:G:H5"	44:RA:102:ARG:NH2	2.17	0.59
5:E:9:VAL:HG11	5:E:180:VAL:HG13	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:58:ARG:HG3	7:G:72:VAL:HG23	1.84	0.59
8:H:23:PRO:HG3	8:H:258:LEU:CD2	2.33	0.59
12:L:24:ASN:N	12:L:25:PRO:HD2	2.17	0.59
34:HA:54:SER:OG	38:LA:94:LEU:HD21	2.02	0.59
39:MA:85:THR:O	39:MA:89:ARG:HB2	2.03	0.59
44:RA:115:CYS:SG	44:RA:118:THR:HG22	2.43	0.59
54:BB:176:ASP:HB2	54:BB:179:LYS:HZ2	1.68	0.59
55:CB:70:VAL:CG2	66:NB:47:LYS:HD3	2.32	0.59
55:CB:70:VAL:HG22	66:NB:47:LYS:HD3	1.84	0.59
56:DB:109:LEU:HD22	56:DB:111:LEU:HG	1.84	0.59
73:UB:87:VAL:HA	73:UB:124:VAL:HG23	1.83	0.59
82:DC:135:VAL:HG23	82:DC:135:VAL:O	2.01	0.59
1:A:1569:A:H2'	1:A:1570:A:C8	2.38	0.59
2:B:159:A:H61	2:B:262:U:H3	1.50	0.59
2:B:1067:U:H5"	25:Y:106:LEU:HD11	1.84	0.59
2:B:1362:G:H4'	11:K:160:ARG:N	2.18	0.59
2:B:1774:C:H2'	2:B:1775:G:O4'	2.03	0.59
2:B:2127:U:H1'	2:B:2301:U:OP1	2.03	0.59
2:B:2407:C:H2'	2:B:2408:U:C6	2.38	0.59
2:B:3035:A:C4	13:M:121:LYS:HB3	2.38	0.59
3:C:26:U:H2'	3:C:27:U:H6	1.68	0.59
4:D:58:C:H5"	9:I:25:GLU:HG3	1.84	0.59
8:H:33:ASP:HB2	22:V:22:ASP:HB2	1.84	0.59
10:J:51:ARG:NH2	10:J:163:PHE:HB2	2.17	0.59
31:EA:84:ARG:HD2	31:EA:85:TYR:N	2.17	0.59
46:TA:23:HIS:HB3	46:TA:72:LEU:HB3	1.84	0.59
46:TA:24:LYS:O	46:TA:72:LEU:HA	2.03	0.59
53:AB:32:GLU:HA	53:AB:54:ARG:HB2	1.84	0.59
53:AB:158:ILE:HG13	53:AB:163:PRO:HB2	1.85	0.59
60:HB:43:ILE:O	60:HB:47:GLN:HB2	2.02	0.59
74:VB:15:ASN:HB3	74:VB:18:LEU:HB2	1.84	0.59
82:DC:662:SER:HB3	82:DC:705:ILE:HB	1.85	0.59
1:A:686:C:H2'	1:A:687:G:C8	2.37	0.59
1:A:1682:U:H4'	56:DB:65:GLN:CD	2.27	0.59
2:B:7:C:H2'	2:B:8:C:C6	2.34	0.59
2:B:117:U:H1'	2:B:119:U:OP2	2.02	0.59
2:B:255:A:H2'	2:B:256:G:C8	2.38	0.59
2:B:1007:U:H2'	2:B:1008:U:C6	2.37	0.59
2:B:1107:C:H2'	2:B:1108:U:C6	2.38	0.59
2:B:1752:A:H2'	2:B:1753:G:C8	2.38	0.59
2:B:3192:U:H2'	2:B:3193:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:82:PRO:HB2	7:G:168:LYS:HG3	1.83	0.59
12:L:92:LYS:NZ	12:L:92:LYS:HB3	2.17	0.59
17:Q:157:ARG:NH2	32:FA:101:VAL:HG13	2.18	0.59
22:V:54:LEU:HD13	22:V:58:ASN:HB3	1.85	0.59
24:X:26:ARG:NH2	24:X:64:ILE:HD11	2.16	0.59
27:AA:79:VAL:HG12	27:AA:122:CYS:SG	2.43	0.59
27:AA:101:VAL:HB	27:AA:109:MET:CE	2.33	0.59
34:HA:77:LEU:HD23	34:HA:88:GLY:CA	2.30	0.59
40:NA:37:THR:O	40:NA:41:ARG:HB2	2.02	0.59
47:UA:56:THR:HA	47:UA:63:THR:HA	1.84	0.59
49:WA:109:ASP:O	49:WA:127:ARG:HG3	2.02	0.59
50:XA:155:PHE:CE2	71:SB:61:SER:HB3	2.38	0.59
52:ZA:179:VAL:HB	52:ZA:196:VAL:O	2.03	0.59
54:BB:169:ILE:H	54:BB:169:ILE:HD12	1.67	0.59
58:FB:151:LYS:O	58:FB:151:LYS:HD3	2.02	0.59
73:UB:56:LYS:O	80:BC:8:LEU:HD11	2.03	0.59
73:UB:114:LYS:N	73:UB:117:ILE:HD11	2.17	0.59
75:WB:93:SER:OG	75:WB:99:ALA:HA	2.02	0.59
77:YB:51:GLN:O	77:YB:66:PRO:HB3	2.02	0.59
82:DC:320:LEU:O	82:DC:324:MET:HG2	2.03	0.59
1:A:36:C:H2'	1:A:37:U:C6	2.38	0.59
1:A:1036:A:C5'	72:TB:3:ARG:HH22	2.15	0.59
1:A:1735:U:H2'	1:A:1736:G:C8	2.37	0.59
2:B:594:U:H4'	11:K:30:ARG:HH12	1.66	0.59
2:B:1127:G:P	14:N:98:ARG:HE	2.26	0.59
2:B:1173:U:H2'	2:B:1180:A:N7	2.17	0.59
2:B:1282:G:H4'	48:VA:82:GLY:CA	2.33	0.59
2:B:1591:G:O2'	2:B:1592:G:H5'	2.03	0.59
2:B:1919:G:C2'	2:B:1933:A:H61	2.16	0.59
2:B:2202:C:H5"	6:F:226:SER:N	2.18	0.59
2:B:2477:G:H5"	2:B:2478:C:C5	2.38	0.59
4:D:85:G:H1	4:D:95:A:H61	1.50	0.59
7:G:51:ALA:HA	7:G:314:TYR:CD2	2.38	0.59
8:H:58:HIS:HA	8:H:90:PHE:CE1	2.38	0.59
10:J:40:LEU:HD11	10:J:65:ILE:HG21	1.84	0.59
12:L:148:ALA:HA	12:L:201:THR:CG2	2.32	0.59
14:N:52:LEU:HD12	14:N:152:LEU:HD22	1.85	0.59
17:Q:57:VAL:HG13	17:Q:147:ILE:HG21	1.84	0.59
22:V:88:THR:HA	22:V:107:THR:HG23	1.85	0.59
23:W:14:VAL:CG2	23:W:42:ARG:HG3	2.33	0.59
29:CA:142:ILE:OXT	29:CA:142:ILE:HD13	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DA:48:LEU:HD22	30:DA:118:LEU:HG	1.85	0.59
35:IA:30:PRO:O	35:IA:33:VAL:HG12	2.03	0.59
46:TA:8:ARG:HD3	46:TA:10:THR:OG1	2.03	0.59
52:ZA:147:ASN:HB3	71:SB:3:ASN:HA	1.84	0.59
59:GB:77:ILE:HG21	59:GB:91:LYS:HG3	1.85	0.59
61:IB:45:PRO:HD2	61:IB:60:PHE:CE2	2.38	0.59
72:TB:11:LEU:HD12	72:TB:74:VAL:HB	1.84	0.59
72:TB:104:LEU:HB2	72:TB:124:LYS:O	2.02	0.59
1:A:130:C:H4'	1:A:176:C:H5'	1.85	0.58
2:B:965:A:H2'	2:B:966:U:C6	2.38	0.58
2:B:1319:G:H2'	2:B:1320:C:C6	2.38	0.58
2:B:1380:G:H4'	8:H:195:ARG:HH22	1.68	0.58
2:B:1426:C:H3'	32:FA:4:ARG:HH12	1.67	0.58
2:B:1504:A:H5"	21:U:23:ARG:NH1	2.18	0.58
2:B:1651:U:C5'	6:F:71:LEU:HB2	2.31	0.58
2:B:1831:U:H2'	2:B:1832:C:C6	2.37	0.58
2:B:1898:G:H1'	27:AA:18:PRO:CD	2.31	0.58
2:B:2117:A:H2'	2:B:2118:C:O4'	2.03	0.58
2:B:2143:A:O2'	2:B:2144:A:H2'	2.03	0.58
2:B:2536:A:H3'	2:B:2537:U:C5'	2.32	0.58
5:E:87:VAL:HG21	5:E:116:LEU:HD13	1.83	0.58
7:G:48:GLY:N	7:G:338:LEU:HD21	2.18	0.58
7:G:221:THR:HB	7:G:273:HIS:HB2	1.83	0.58
10:J:20:LYS:HD2	10:J:22:ARG:HG3	1.85	0.58
19:S:99:ARG:HH22	19:S:166:ALA:HB3	1.67	0.58
20:T:62:THR:HG22	20:T:65:ASN:H	1.68	0.58
22:V:30:VAL:HG13	22:V:49:LEU:CD2	2.26	0.58
31:EA:81:LEU:HD13	38:LA:93:PHE:HD2	1.68	0.58
34:HA:52:ARG:O	34:HA:56:LEU:HG	2.03	0.58
37:KA:91:ALA:HA	37:KA:94:PHE:CZ	2.38	0.58
39:MA:101:THR:C	39:MA:103:LYS:H	2.10	0.58
49:WA:193:ILE:HG22	49:WA:194:GLY:H	1.68	0.58
52:ZA:67:GLN:HA	52:ZA:70:ASP:HB2	1.84	0.58
54:BB:31:PRO:HB2	54:BB:38:LEU:CD2	2.31	0.58
54:BB:44:LEU:HG	54:BB:82:TYR:HB3	1.85	0.58
55:CB:172:ILE:O	55:CB:176:THR:HG23	2.02	0.58
66:NB:109:PHE:CD2	66:NB:117:LEU:HD21	2.38	0.58
82:DC:110:ASP:HB3	82:DC:537:HIS:HB2	1.83	0.58
1:A:401:A:C2'	1:A:402:C:H4'	2.33	0.58
1:A:1316:G:H2'	1:A:1317:C:C6	2.38	0.58
1:A:1485:C:N3	1:A:1592:A:H1'	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1580:C:H4'	66:NB:137:ARG:HB3	1.84	0.58
2:B:953:G:O2'	2:B:1115:G:H4'	2.03	0.58
2:B:1128:U:H3	2:B:2863:G:N2	2.01	0.58
2:B:1186:G:H2'	2:B:1187:C:C6	2.38	0.58
2:B:1348:U:H4'	2:B:1349:G:H5"	1.85	0.58
2:B:1399:A:C2	3:C:8:C:H4'	2.38	0.58
2:B:1822:C:H2'	2:B:1823:A:C8	2.39	0.58
2:B:2201:G:H21	6:F:224:THR:HG21	1.69	0.58
2:B:2948:C:H2'	2:B:2949:U:C6	2.38	0.58
3:C:34:U:H5'	41:OA:78:PHE:CZ	2.38	0.58
3:C:57:C:H4'	3:C:63:G:C8	2.37	0.58
5:E:125:GLY:HA2	5:E:129:SER:HB2	1.85	0.58
6:F:39:GLY:HA3	12:L:36:ILE:HG21	1.85	0.58
7:G:347:SER:O	7:G:348:ARG:HB2	2.03	0.58
10:J:76:LEU:HD12	10:J:134:ARG:CG	2.33	0.58
10:J:132:ALA:HA	10:J:135:VAL:HB	1.84	0.58
11:K:79:ALA:HA	25:Y:138:SER:H	1.67	0.58
20:T:142:SER:HA	20:T:145:VAL:CG2	2.34	0.58
24:X:75:PHE:CD2	24:X:102:ALA:HB2	2.38	0.58
37:KA:50:ALA:HB2	37:KA:68:TRP:CE3	2.38	0.58
39:MA:25:LYS:HE3	39:MA:51:ILE:CD1	2.29	0.58
48:VA:172:LEU:HA	48:VA:175:LEU:HG	1.85	0.58
49:WA:85:TRP:CZ3	67:OB:29:GLN:HB3	2.37	0.58
56:DB:175:ILE:HG22	56:DB:178:LEU:HB2	1.83	0.58
70:RB:20:ILE:HD12	70:RB:21:LYS:N	2.17	0.58
72:TB:97:ARG:NH1	72:TB:97:ARG:HB2	2.17	0.58
73:UB:107:PHE:HE2	73:UB:120:VAL:HG12	1.68	0.58
74:VB:29:HIS:HB2	74:VB:32:ARG:CB	2.32	0.58
82:DC:746:VAL:HA	82:DC:749:LYS:HZ2	1.68	0.58
1:A:449:C:H2'	1:A:450:U:C6	2.38	0.58
1:A:991:G:H4'	1:A:1786:G:C4'	2.28	0.58
1:A:1352:G:H4'	66:NB:3:ALA:CB	2.33	0.58
2:B:253:A:H2'	2:B:254:A:C8	2.38	0.58
2:B:370:U:H4'	2:B:404:G:C4'	2.32	0.58
2:B:412:G:H5"	21:U:30:ARG:HD2	1.85	0.58
2:B:860:G:N3	2:B:2133:U:H1'	2.17	0.58
2:B:2203:U:H2'	2:B:2204:C:H6	1.68	0.58
3:C:28:C:O3'	17:Q:26:PHE:HB2	2.03	0.58
3:C:29:U:H2'	3:C:30:C:C6	2.39	0.58
6:F:103:PRO:HB3	6:F:160:SER:O	2.03	0.58
8:H:76:ARG:HD3	8:H:86:GLY:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:329:PRO:HD3	11:K:41:ARG:HH22	1.68	0.58
12:L:71:VAL:HG12	12:L:75:ILE:HB	1.83	0.58
13:M:167:VAL:HG12	13:M:170:LYS:HG3	1.85	0.58
19:S:10:LEU:HD11	19:S:19:LEU:HD11	1.85	0.58
19:S:73:ARG:CB	19:S:89:VAL:HG13	2.33	0.58
20:T:74:ARG:HG3	20:T:146:GLY:HA3	1.86	0.58
21:U:126:ARG:HD3	21:U:140:GLU:CB	2.28	0.58
33:GA:12:GLN:HA	33:GA:15:LYS:HE3	1.85	0.58
47:UA:23:ARG:O	47:UA:26:VAL:HB	2.02	0.58
54:BB:47:PHE:HA	54:BB:51:ARG:HB2	1.84	0.58
55:CB:48:PHE:HB3	55:CB:67:PRO:HB3	1.84	0.58
56:DB:137:ARG:HB3	56:DB:140:ASN:CB	2.33	0.58
59:GB:77:ILE:HG23	59:GB:86:LEU:HD23	1.84	0.58
1:A:448:C:O3'	54:BB:29:PRO:HA	2.03	0.58
2:B:280:U:H2'	2:B:282:G:OP2	2.04	0.58
2:B:1480:G:H21	2:B:1872:C:H5	1.51	0.58
2:B:1822:C:H5"	38:LA:66:SER:CB	2.33	0.58
2:B:1832:C:H4'	3:C:113:U:H5'	1.84	0.58
2:B:2051:G:H2'	2:B:2052:G:C8	2.38	0.58
2:B:2086:A:H5"	2:B:2087:C:H5'	1.85	0.58
2:B:2130:G:H2'	2:B:2131:A:C4'	2.32	0.58
2:B:2748:A:H4'	9:I:145:PHE:CE1	2.38	0.58
2:B:3375:A:O2'	2:B:3378:C:H5'	2.02	0.58
4:D:79:A:H3'	4:D:80:G:H8	1.69	0.58
4:D:96:U:H5"	24:X:43:TYR:CE2	2.38	0.58
4:D:99:G:H2'	4:D:100:C:C6	2.38	0.58
6:F:20:THR:O	6:F:21:ARG:HB3	2.02	0.58
7:G:321:PHE:HE1	7:G:323:MET:HE2	1.68	0.58
8:H:23:PRO:HD2	8:H:26:PHE:HE2	1.68	0.58
9:I:58:LYS:HD3	9:I:93:THR:HB	1.84	0.58
9:I:293:LEU:HD22	14:N:210:ILE:HD13	1.85	0.58
10:J:42:LEU:O	10:J:49:GLY:HA2	2.03	0.58
13:M:36:LYS:HD2	13:M:78:MET:HE2	1.85	0.58
16:P:60:VAL:O	16:P:75:PRO:HD2	2.03	0.58
17:Q:167:PHE:CE1	17:Q:168:ARG:HG2	2.39	0.58
19:S:26:ARG:HB3	19:S:30:TYR:CE2	2.38	0.58
22:V:24:VAL:O	22:V:28:LEU:HG	2.03	0.58
23:W:19:LYS:HA	23:W:22:VAL:HG23	1.84	0.58
26:Z:37:LEU:C	26:Z:39:ASP:H	2.10	0.58
37:KA:18:ARG:HA	37:KA:23:ASN:HA	1.85	0.58
48:VA:11:TYR:CZ	48:VA:15:LEU:HD23	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:206:PRO:HG3	49:WA:247:PRO:HA	1.84	0.58
50:XA:183:ARG:HH12	50:XA:191:ARG:HA	1.67	0.58
54:BB:37:LYS:HB2	54:BB:40:GLU:HG2	1.85	0.58
56:DB:77:LEU:HD12	56:DB:84:TYR:CD2	2.38	0.58
66:NB:25:GLY:HA3	66:NB:64:ASP:CG	2.27	0.58
68:PB:41:ARG:NE	69:QB:46:PRO:HD3	2.18	0.58
72:TB:94:LEU:CG	72:TB:102:VAL:HG23	2.32	0.58
82:DC:25:ILE:CD1	82:DC:142:VAL:HG12	2.33	0.58
82:DC:210:ALA:HB2	82:DC:337:MET:HE2	1.85	0.58
1:A:555:A:H2'	1:A:556:A:C8	2.39	0.58
1:A:685:A:H2'	1:A:686:C:O4'	2.02	0.58
1:A:1186:U:H2'	1:A:1187:U:O4'	2.03	0.58
1:A:1387:G:H1'	1:A:1410:A:H61	1.69	0.58
2:B:44:U:H2'	2:B:45:A:O4'	2.04	0.58
2:B:960:U:O2'	2:B:961:C:H5'	2.03	0.58
2:B:1073:U:H3	2:B:1085:A:H61	1.52	0.58
2:B:1083:G:H2'	2:B:1084:A:C8	2.39	0.58
2:B:1092:C:H4'	25:Y:120:LYS:NZ	2.18	0.58
2:B:1731:A:H2'	2:B:1732:U:O4'	2.04	0.58
2:B:1910:A:H2	2:B:2333:C:O2	1.87	0.58
2:B:2197:C:H41	2:B:2241:U:H3'	1.69	0.58
2:B:3113:A:H5"	2:B:3118:C:N4	2.18	0.58
7:G:336:VAL:HG12	7:G:337:THR:H	1.69	0.58
10:J:158:TYR:HD1	18:R:118:PHE:CD1	2.22	0.58
11:K:157:ASN:O	11:K:158:LYS:HB3	2.01	0.58
12:L:247:ASP:O	12:L:251:LYS:HB3	2.02	0.58
13:M:103:ILE:HG21	13:M:110:LYS:NZ	2.18	0.58
14:N:36:LEU:HD21	14:N:69:ARG:HH11	1.68	0.58
17:Q:106:GLN:HB3	40:NA:18:THR:CG2	2.33	0.58
21:U:159:LYS:HD3	21:U:159:LYS:H	1.68	0.58
27:AA:33:ASN:HD21	27:AA:64:LYS:N	2.01	0.58
31:EA:83:THR:HB	34:HA:58:TYR:OH	2.04	0.58
37:KA:59:VAL:HG22	37:KA:62:SER:C	2.29	0.58
63:KB:113:PHE:CE1	63:KB:117:LEU:HD11	2.38	0.58
72:TB:52:TYR:HA	72:TB:61:ILE:HG12	1.84	0.58
1:A:7:G:H2'	1:A:8:U:H5"	1.86	0.58
1:A:93:A:H8	1:A:399:A:H5"	1.68	0.58
1:A:933:A:N1	1:A:944:A:N1	2.51	0.58
1:A:1326:A:H5"	53:AB:156:PHE:CE1	2.39	0.58
1:A:1419:G:H1'	79:AC:55:PHE:O	2.03	0.58
1:A:1679:G:H21	1:A:1722:A:H62	1.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:106:A:H5'	2:B:684:G:O2'	2.03	0.58
2:B:610:G:H4'	8:H:315:LYS:HZ1	1.69	0.58
2:B:1280:C:H2'	2:B:1281:G:H8	1.68	0.58
2:B:1359:C:H2'	2:B:1360:C:H6	1.67	0.58
2:B:1927:G:OP1	47:UA:6:LYS:HB3	2.03	0.58
2:B:2081:U:H2'	2:B:2082:U:H4'	1.85	0.58
2:B:2213:A:H1'	2:B:2602:G:H5'	1.85	0.58
2:B:2367:A:H3'	2:B:2368:A:H8	1.68	0.58
2:B:2393:G:H2'	2:B:2982:A:N6	2.18	0.58
2:B:2724:U:H5"	25:Y:54:HIS:CD2	2.38	0.58
2:B:3148:U:H4'	7:G:104:THR:HB	1.84	0.58
9:I:204:VAL:O	9:I:208:MET:HG3	2.04	0.58
11:K:161:VAL:CG1	11:K:162:PRO:HD2	2.31	0.58
12:L:168:ALA:HB3	40:NA:47:ILE:HD11	1.85	0.58
18:R:39:ILE:HB	18:R:43:LYS:O	2.02	0.58
20:T:18:ARG:HB2	20:T:123:ALA:HA	1.84	0.58
20:T:148:LYS:HE3	20:T:148:LYS:H	1.69	0.58
21:U:119:VAL:HG23	21:U:145:HIS:O	2.04	0.58
46:TA:78:LYS:NZ	46:TA:78:LYS:HB3	2.19	0.58
49:WA:13:LEU:HD21	49:WA:55:GLY:H	1.69	0.58
49:WA:103:PHE:CE1	49:WA:138:GLY:HA2	2.36	0.58
50:XA:153:SER:O	50:XA:156:VAL:HG22	2.03	0.58
50:XA:169:SER:O	50:XA:173:ILE:HG12	2.03	0.58
53:AB:47:GLU:HG2	53:AB:49:ILE:HD11	1.86	0.58
56:DB:211:LEU:O	56:DB:215:ARG:HB2	2.03	0.58
58:FB:22:ARG:HD2	58:FB:25:ARG:NH2	2.19	0.58
58:FB:72:ILE:HG12	58:FB:112:TRP:CH2	2.38	0.58
58:FB:121:LEU:HD21	58:FB:160:PHE:HB3	1.86	0.58
67:OB:69:ILE:HD13	67:OB:69:ILE:N	2.16	0.58
69:QB:86:ARG:HE	69:QB:89:ARG:HE	1.50	0.58
74:VB:41:ARG:HA	74:VB:44:LEU:HD12	1.86	0.58
78:ZB:27:GLN:HG2	78:ZB:43:ASN:OD1	2.04	0.58
82:DC:597:VAL:HG11	82:DC:625:TRP:CZ2	2.38	0.58
1:A:20:G:H5'	1:A:571:G:C8	2.38	0.58
1:A:172:C:H2'	1:A:173:A:C8	2.38	0.58
1:A:829:A:H4'	1:A:830:U:H5'	1.84	0.58
1:A:1586:A:H1'	1:A:1611:A:C6	2.39	0.58
2:B:1545:A:H2'	2:B:1547:G:OP2	2.03	0.58
2:B:1702:U:H2'	2:B:1703:U:H6	1.69	0.58
2:B:1841:A:C3'	2:B:1842:A:H5"	2.30	0.58
2:B:2102:U:C5'	23:W:88:ARG:HH21	2.16	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2242:A:H5'	6:F:243:THR:CG2	2.34	0.58
2:B:2752:U:H6	2:B:2752:U:H5'	1.69	0.58
2:B:3205:G:H2'	2:B:3206:C:C5	2.39	0.58
2:B:3206:C:H5"	2:B:3207:U:O4'	2.04	0.58
2:B:3269:U:H3	10:J:134:ARG:HH21	1.51	0.58
6:F:112:ILE:CG1	6:F:135:ILE:HG23	2.33	0.58
7:G:67:PHE:CZ	27:AA:88:ARG:HB2	2.38	0.58
8:H:334:PHE:HZ	8:H:340:GLY:HA3	1.68	0.58
13:M:64:HIS:HE1	20:T:132:GLY:HA3	1.69	0.58
14:N:99:ILE:HD13	14:N:101:LYS:HE3	1.84	0.58
20:T:14:HIS:HB3	20:T:123:ALA:HB1	1.85	0.58
20:T:62:THR:H	20:T:70:PRO:CD	2.15	0.58
22:V:177:GLY:O	22:V:186:VAL:HA	2.03	0.58
24:X:155:ARG:HD3	24:X:172:TYR:CE2	2.38	0.58
29:CA:107:VAL:HG13	29:CA:126:LEU:HA	1.84	0.58
31:EA:7:ALA:HA	31:EA:89:VAL:CG1	2.33	0.58
52:ZA:101:VAL:HG22	52:ZA:115:ILE:HG12	1.85	0.58
53:AB:171:ALA:HB3	53:AB:186:VAL:HB	1.86	0.58
56:DB:5:ILE:HD11	56:DB:111:LEU:HD12	1.85	0.58
58:FB:39:GLY:O	58:FB:59:ARG:HB3	2.04	0.58
73:UB:128:SER:HB2	73:UB:143:PRO:HG2	1.85	0.58
82:DC:496:LYS:HE3	82:DC:554:LEU:O	2.04	0.58
82:DC:696:ASP:CG	82:DC:698:ILE:HG22	2.29	0.58
1:A:180:A:H2'	1:A:181:A:H5'	1.84	0.58
1:A:479:C:H5'	59:GB:124:HIS:CB	2.33	0.58
1:A:758:U:H4'	59:GB:7:THR:HB	1.86	0.58
1:A:856:A:N6	57:EB:116:ARG:HA	2.19	0.58
2:B:199:A:C6	2:B:201:A:H1'	2.38	0.58
2:B:873:C:H2'	2:B:875:G:C1'	2.33	0.58
2:B:1145:G:H1'	2:B:1160:C:N3	2.18	0.58
2:B:1585:C:H2'	2:B:1586:G:C8	2.39	0.58
2:B:1655:G:H2'	2:B:1656:A:C8	2.38	0.58
2:B:1741:A:H4'	38:LA:38:LEU:HD21	1.85	0.58
2:B:2661:G:H2'	2:B:2662:G:H8	1.67	0.58
2:B:2854:U:OP1	14:N:6:ALA:HB2	2.02	0.58
2:B:3303:G:O2'	2:B:3304:U:H5"	2.02	0.58
4:D:74:C:C2'	4:D:75:G:H5'	2.33	0.58
10:J:55:LEU:N	10:J:65:ILE:HG22	2.18	0.58
13:M:36:LYS:HE3	13:M:74:LEU:HD22	1.85	0.58
27:AA:20:GLY:HA2	27:AA:35:TYR:CE2	2.39	0.58
35:IA:71:LEU:HD23	35:IA:72:ARG:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:105:MET:HE1	53:AB:118:ALA:HB1	1.85	0.58
53:AB:137:VAL:HG22	53:AB:151:LYS:HA	1.85	0.58
73:UB:88:PRO:HD2	73:UB:124:VAL:HB	1.86	0.58
82:DC:22:MET:SD	82:DC:102:LEU:HD13	2.43	0.58
82:DC:279:ASP:HB3	82:DC:280:PRO:HD3	1.85	0.58
1:A:1169:G:H21	1:A:1576:A:N6	2.00	0.58
1:A:1440:C:H2'	1:A:1441:C:O4'	2.04	0.58
2:B:321:C:H5"	19:S:156:HIS:HE2	1.67	0.58
2:B:597:G:H4'	8:H:326:ARG:HA	1.86	0.58
2:B:647:A:H5'	2:B:650:C:H41	1.69	0.58
2:B:886:C:H4'	2:B:1850:A:N3	2.19	0.58
2:B:996:A:C2	2:B:997:A:H1'	2.38	0.58
2:B:1210:U:H2'	2:B:1211:U:C5	2.39	0.58
2:B:1235:U:C4'	2:B:1236:G:H5'	2.25	0.58
2:B:1825:G:OP2	42:PA:49:SER:HB3	2.04	0.58
2:B:2754:G:C3'	2:B:2755:C:H5"	2.34	0.58
2:B:2937:G:H2'	2:B:2938:G:O4'	2.03	0.58
3:C:42:G:H21	41:OA:21:ARG:HA	1.67	0.58
8:H:107:ARG:HB3	8:H:109:TRP:CZ3	2.39	0.58
10:J:20:LYS:HD3	10:J:21:THR:N	2.18	0.58
12:L:225:LYS:O	12:L:229:VAL:HG23	2.04	0.58
13:M:4:ILE:HG23	13:M:5:GLN:N	2.19	0.58
22:V:26:LEU:O	22:V:30:VAL:HG23	2.03	0.58
31:EA:10:VAL:HG11	31:EA:22:LYS:HD3	1.85	0.58
32:FA:71:PRO:HB2	32:FA:109:TYR:HA	1.85	0.58
47:UA:29:LEU:HD13	47:UA:69:TYR:HD2	1.68	0.58
48:VA:64:ARG:CD	48:VA:67:LEU:HD13	2.34	0.58
67:OB:71:PHE:O	67:OB:72:LYS:HB3	2.04	0.58
72:TB:98:GLN:HG3	72:TB:99:PHE:CD1	2.38	0.58
1:A:1109:G:H2'	1:A:1110:G:O4'	2.04	0.58
1:A:1605:G:C8	66:NB:127:LYS:HD2	2.39	0.58
2:B:2527:G:H2'	2:B:2528:G:O4'	2.04	0.58
2:B:2652:U:H5'	46:TA:65:THR:HG21	1.85	0.58
2:B:2896:A:H4'	44:RA:95:VAL:CG1	2.34	0.58
2:B:2945:G:H5'	2:B:2945:G:N3	2.19	0.58
2:B:3049:A:C6	7:G:75:ALA:HB2	2.39	0.58
2:B:3068:U:OP1	23:W:58:HIS:HA	2.04	0.58
3:C:91:C:H2'	3:C:92:A:H8	1.69	0.58
4:D:8:G:H5'	9:I:71:GLY:HA2	1.86	0.58
6:F:112:ILE:HG23	6:F:133:TYR:HB2	1.86	0.58
8:H:219:LEU:HD23	8:H:222:VAL:HG11	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:58:LYS:NZ	9:I:158:ARG:HH12	2.02	0.58
10:J:40:LEU:HD12	10:J:52:VAL:HG23	1.86	0.58
19:S:62:TYR:HB2	19:S:134:LEU:HD11	1.84	0.58
21:U:3:ARG:HA	21:U:3:ARG:HE	1.69	0.58
53:AB:177:MET:SD	53:AB:182:LEU:HD13	2.44	0.58
54:BB:6:LYS:N	54:BB:6:LYS:HD2	2.19	0.58
54:BB:193:GLY:CA	54:BB:212:ASP:HA	2.33	0.58
63:KB:18:TYR:CE1	72:TB:55:ASP:HA	2.39	0.58
77:YB:35:VAL:HG22	77:YB:79:PHE:CB	2.34	0.58
82:DC:176:GLN:O	82:DC:180:ARG:HG3	2.02	0.58
82:DC:307:LEU:HD23	82:DC:326:LYS:HZ3	1.69	0.58
82:DC:440:ARG:NH1	82:DC:440:ARG:HB3	2.18	0.58
1:A:42:G:C8	1:A:437:A:H2'	2.39	0.57
1:A:1345:A:H2'	1:A:1348:A:N6	2.19	0.57
1:A:1490:C:H5	1:A:1514:U:O4	1.86	0.57
1:A:1715:G:C2'	1:A:1716:C:H4'	2.34	0.57
2:B:733:G:H1'	2:B:736:A:N6	2.19	0.57
2:B:777:U:H2'	2:B:778:U:O4'	2.04	0.57
2:B:1051:U:H4'	25:Y:19:PHE:HB2	1.86	0.57
2:B:1520:G:H2'	2:B:1521:G:O4'	2.04	0.57
2:B:2394:G:H2'	2:B:2395:G:H5'	1.85	0.57
2:B:2470:C:H5'	5:E:26:ARG:HB3	1.86	0.57
2:B:2765:C:H5"	46:TA:39:GLY:HA3	1.85	0.57
2:B:2861:U:H2'	2:B:2862:U:O4'	2.03	0.57
6:F:92:LYS:HA	6:F:103:PRO:HD2	1.86	0.57
6:F:227:ARG:HA	6:F:238:ILE:CG2	2.34	0.57
7:G:133:TYR:HA	7:G:136:LYS:HE2	1.84	0.57
11:K:85:PHE:HB2	11:K:116:PHE:CD1	2.39	0.57
18:R:80:THR:HA	18:R:83:LYS:HB3	1.85	0.57
29:CA:126:LEU:H	29:CA:126:LEU:HD23	1.69	0.57
30:DA:60:ARG:NH2	30:DA:64:LYS:HE3	2.20	0.57
31:EA:129:TRP:CZ2	38:LA:100:ILE:HD12	2.39	0.57
36:JA:96:ILE:CD1	36:JA:109:LEU:HG	2.34	0.57
41:OA:10:LYS:H	41:OA:10:LYS:HD2	1.67	0.57
49:WA:10:ARG:HA	49:WA:10:ARG:NE	2.19	0.57
49:WA:52:GLN:HG2	49:WA:53:LYS:HG2	1.86	0.57
49:WA:174:ASN:HA	49:WA:198:ASN:HB2	1.85	0.57
50:XA:54:TRP:HH2	50:XA:191:ARG:HH12	1.52	0.57
50:XA:102:PHE:CZ	50:XA:131:GLN:HB3	2.39	0.57
53:AB:168:ILE:HG22	53:AB:189:MET:HB2	1.86	0.57
72:TB:50:PHE:HB3	72:TB:63:VAL:HG13	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:EC:6872:A:H3'	83:EC:6873:A:C5'	2.30	0.57
1:A:344:A:O2'	1:A:345:U:H5'	2.03	0.57
1:A:348:U:C4'	58:FB:14:THR:HA	2.34	0.57
1:A:573:C:C2	1:A:574:G:H1'	2.39	0.57
1:A:1611:A:H2'	1:A:1612:U:O4'	2.04	0.57
1:A:1711:C:H2'	1:A:1712:A:O4'	2.03	0.57
2:B:1270:A:H4'	82:DC:744:TYR:HD1	1.69	0.57
2:B:1272:C:H2'	2:B:1273:A:O4'	2.04	0.57
2:B:1564:U:H2'	2:B:1565:G:O4'	2.04	0.57
2:B:2271:A:H5"	2:B:2272:G:H21	1.69	0.57
2:B:3139:A:O2'	7:G:20:LYS:HD3	2.04	0.57
8:H:65:TRP:HB3	8:H:69:ARG:HG3	1.86	0.57
9:I:33:ARG:HG2	9:I:37:VAL:CG2	2.34	0.57
12:L:143:ILE:HD11	12:L:151:VAL:HG11	1.84	0.57
22:V:65:SER:HA	22:V:93:ILE:HD13	1.85	0.57
26:Z:71:PHE:HA	26:Z:75:TYR:HD2	1.65	0.57
34:HA:30:THR:O	34:HA:34:LEU:HD13	2.05	0.57
48:VA:15:LEU:HD12	48:VA:16:ARG:N	2.19	0.57
49:WA:316:MET:HE2	49:WA:316:MET:HA	1.86	0.57
54:BB:35:PRO:HD2	54:BB:83:PRO:HG2	1.86	0.57
63:KB:121:ARG:O	63:KB:125:LEU:HD23	2.03	0.57
65:MB:29:SER:OG	65:MB:31:GLU:HG2	2.03	0.57
65:MB:85:ILE:HD12	65:MB:114:HIS:HB2	1.85	0.57
67:OB:93:LEU:C	67:OB:95:ARG:H	2.10	0.57
74:VB:81:GLU:HA	74:VB:84:LYS:HG2	1.85	0.57
1:A:479:C:H4'	59:GB:120:LYS:HZ1	1.70	0.57
1:A:749:U:H3	1:A:800:U:H3	1.52	0.57
1:A:1232:U:H4'	60:HB:2:LEU:HD21	1.87	0.57
1:A:1589:C:H2'	1:A:1590:G:C8	2.39	0.57
2:B:811:U:H2'	2:B:812:G:H8	1.69	0.57
2:B:1734:G:H2'	2:B:1735:G:C8	2.39	0.57
2:B:1940:G:OP1	23:W:80:LYS:HE3	2.04	0.57
3:C:91:C:OP1	3:C:91:C:H3'	2.03	0.57
6:F:3:ARG:CB	6:F:207:VAL:HG23	2.33	0.57
8:H:269:SER:C	8:H:271:LYS:H	2.10	0.57
13:M:94:TYR:O	44:RA:78:ILE:HG12	2.04	0.57
19:S:56:LYS:HG2	19:S:59:PHE:HE2	1.68	0.57
32:FA:102:ILE:HB	32:FA:125:VAL:HA	1.86	0.57
38:LA:16:ARG:HB3	38:LA:37:LYS:HD3	1.86	0.57
50:XA:22:THR:HG22	50:XA:169:SER:CA	2.28	0.57
50:XA:54:TRP:O	50:XA:58:VAL:HG23	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:40:ARG:HB2	53:AB:47:GLU:HB3	1.86	0.57
55:CB:187:ILE:HD12	55:CB:187:ILE:N	2.15	0.57
66:NB:60:PHE:HA	66:NB:63:ILE:HG12	1.85	0.57
66:NB:104:GLU:HA	66:NB:107:LYS:HD2	1.85	0.57
73:UB:50:LYS:HG3	73:UB:102:VAL:O	2.04	0.57
74:VB:39:GLU:HG2	74:VB:43:LYS:HE2	1.85	0.57
82:DC:320:LEU:CD2	82:DC:324:MET:HE3	2.34	0.57
1:A:29:U:H2'	1:A:30:G:H8	1.67	0.57
1:A:161:U:H5'	56:DB:84:TYR:HA	1.85	0.57
1:A:514:G:OP1	59:GB:132:ARG:HG3	2.04	0.57
1:A:839:U:H2'	1:A:840:U:H5"	1.86	0.57
1:A:911:U:H5"	2:B:2207:A:C5'	2.34	0.57
1:A:968:U:H4'	1:A:1102:G:N2	2.19	0.57
1:A:1357:A:H2'	1:A:1358:G:H8	1.69	0.57
2:B:1237:G:H5'	16:P:58:VAL:CG1	2.34	0.57
2:B:1284:C:H2'	2:B:1285:G:H5'	1.86	0.57
2:B:1807:G:H2'	2:B:1808:G:O4'	2.04	0.57
2:B:1898:G:H2'	2:B:1899:G:H5'	1.85	0.57
2:B:2776:C:H5'	2:B:2777:G:C4	2.39	0.57
2:B:3030:G:H3'	2:B:3031:G:C8	2.39	0.57
2:B:3362:A:H2'	2:B:3363:U:O4'	2.04	0.57
7:G:67:PHE:HE1	27:AA:89:ASP:OD1	1.87	0.57
8:H:193:LYS:HA	8:H:198:ARG:HA	1.87	0.57
9:I:39:GLN:O	9:I:41:LYS:HD2	2.04	0.57
9:I:120:LYS:HD2	9:I:120:LYS:N	2.18	0.57
20:T:85:ARG:HH11	20:T:90:HIS:CD2	2.21	0.57
37:KA:12:LYS:NZ	37:KA:97:SER:HB2	2.20	0.57
48:VA:45:LEU:HB3	48:VA:49:ALA:H	1.70	0.57
49:WA:88:THR:HG22	49:WA:104:VAL:HG22	1.85	0.57
54:BB:9:LEU:O	54:BB:27:TYR:HB3	2.04	0.57
58:FB:76:THR:HG22	58:FB:108:PRO:CG	2.34	0.57
63:KB:18:TYR:HE1	72:TB:55:ASP:HA	1.70	0.57
82:DC:743:ILE:HG22	82:DC:788:THR:HG21	1.85	0.57
1:A:976:G:H3'	1:A:1023:A:C2	2.39	0.57
1:A:1159:C:H4'	1:A:1580:C:OP1	2.04	0.57
2:B:189:G:H2'	2:B:224:C:OP2	2.03	0.57
2:B:366:A:H2'	2:B:367:A:O4'	2.04	0.57
2:B:629:U:H2'	2:B:630:A:C8	2.39	0.57
2:B:700:C:OP1	17:Q:65:TYR:HE2	1.88	0.57
2:B:744:A:H4'	22:V:142:GLY:O	2.04	0.57
2:B:873:C:H2'	2:B:875:G:O4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:931:C:H3'	2:B:932:U:H2'	1.87	0.57
2:B:1421:G:H2'	2:B:1422:G:H8	1.69	0.57
2:B:1797:A:H1'	6:F:21:ARG:HD3	1.85	0.57
2:B:1841:A:H1'	2:B:1848:G:O4'	2.05	0.57
2:B:2153:U:OP1	6:F:246:LEU:HB3	2.03	0.57
2:B:2994:A:H4'	21:U:77:GLY:O	2.05	0.57
2:B:3334:U:H4'	2:B:3335:A:H5"	1.87	0.57
4:D:59:U:H2'	4:D:60:G:O4'	2.05	0.57
7:G:113:GLU:HB3	7:G:176:ALA:HB2	1.86	0.57
8:H:334:PHE:CZ	8:H:340:GLY:HA3	2.40	0.57
9:I:22:ARG:HB2	9:I:30:TYR:OH	2.04	0.57
9:I:290:ILE:HG22	14:N:206:LEU:HD13	1.85	0.57
12:L:67:ILE:HG12	12:L:237:ILE:HB	1.85	0.57
12:L:161:GLU:HG3	19:S:22:LEU:HG	1.86	0.57
17:Q:47:ALA:HB1	17:Q:48:PRO:CD	2.28	0.57
23:W:4:LEU:HD11	23:W:29:THR:OG1	2.04	0.57
23:W:21:LYS:HD3	23:W:53:LYS:HD3	1.85	0.57
29:CA:64:GLU:HB2	29:CA:85:GLN:O	2.04	0.57
30:DA:28:ARG:HH21	30:DA:49:PRO:HG2	1.70	0.57
50:XA:11:PRO:HB3	67:OB:117:LEU:HD12	1.86	0.57
54:BB:162:ILE:HG22	54:BB:164:LEU:H	1.69	0.57
59:GB:125:ALA:O	59:GB:129:ILE:HG13	2.04	0.57
63:KB:78:ASN:HB3	63:KB:80:LEU:HD23	1.86	0.57
69:QB:61:VAL:HG21	69:QB:104:VAL:HG11	1.85	0.57
80:BC:49:LEU:HD23	80:BC:49:LEU:H	1.70	0.57
1:A:397:A:H4'	58:FB:51:GLY:N	2.20	0.57
1:A:1223:A:H2'	1:A:1224:A:C8	2.40	0.57
2:B:118:U:H5'	2:B:151:A:H2	1.69	0.57
2:B:366:A:H5"	8:H:95:ARG:NH2	2.20	0.57
2:B:814:U:H5"	41:OA:35:SER:HB3	1.86	0.57
2:B:1076:C:C1'	33:GA:42:ASN:HB2	2.34	0.57
2:B:1305:U:OP1	2:B:1305:U:H2'	2.05	0.57
2:B:1456:A:C6	2:B:1477:A:H4'	2.40	0.57
2:B:1638:A:N3	2:B:1709:C:H1'	2.19	0.57
2:B:2131:A:H61	47:UA:18:TYR:H	1.51	0.57
2:B:2514:U:C6	12:L:68:ARG:HB3	2.40	0.57
2:B:3034:C:H2'	2:B:3035:A:H5'	1.87	0.57
6:F:15:ILE:C	6:F:17:THR:H	2.13	0.57
7:G:158:VAL:HG12	7:G:159:ARG:H	1.69	0.57
8:H:42:VAL:HA	8:H:45:ASN:ND2	2.20	0.57
14:N:75:TYR:O	14:N:79:VAL:HG23	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:152:THR:O	17:Q:153:ASP:HB2	2.04	0.57
24:X:10:ILE:HG23	25:Y:148:PRO:HB3	1.86	0.57
24:X:12:ARG:O	24:X:12:ARG:HG3	2.04	0.57
24:X:158:LYS:HE3	24:X:158:LYS:C	2.29	0.57
27:AA:102:ILE:HG13	27:AA:102:ILE:O	2.03	0.57
29:CA:113:LEU:HD11	29:CA:121:LYS:NZ	2.20	0.57
39:MA:21:LEU:HD11	39:MA:55:LEU:CD2	2.34	0.57
54:BB:8:HIS:N	54:BB:30:ARG:HG3	2.20	0.57
54:BB:234:PRO:HB3	54:BB:238:LEU:HD11	1.86	0.57
64:LB:130:GLY:C	64:LB:134:GLY:HA2	2.30	0.57
68:PB:92:ILE:HG21	68:PB:115:ARG:HH21	1.69	0.57
73:UB:96:VAL:HG23	73:UB:97:ASP:N	2.18	0.57
73:UB:134:ALA:HA	73:UB:139:LYS:HD2	1.87	0.57
82:DC:241:MET:HA	82:DC:244:LEU:HD12	1.86	0.57
1:A:320:U:O2'	1:A:321:C:H5"	2.03	0.57
1:A:1071:U:H2'	1:A:1072:C:C6	2.40	0.57
1:A:1524:A:H2'	1:A:1525:A:C8	2.40	0.57
1:A:1542:G:N1	1:A:1568:C:H1'	2.20	0.57
1:A:1764:C:H2'	1:A:1767:G:N7	2.20	0.57
2:B:337:G:H21	8:H:50:TYR:HB2	1.70	0.57
2:B:502:U:H2'	2:B:503:C:H5"	1.87	0.57
2:B:565:U:H2'	2:B:566:G:C8	2.40	0.57
2:B:680:G:H5"	8:H:114:ASN:HD21	1.68	0.57
2:B:772:U:H2'	2:B:773:G:C8	2.39	0.57
2:B:2108:C:H1'	2:B:3344:A:H1'	1.87	0.57
2:B:2967:A:H5"	6:F:213:GLY:C	2.30	0.57
2:B:3007:U:H5"	20:T:73:PHE:HA	1.84	0.57
2:B:3039:C:H1'	27:AA:9:THR:HB	1.85	0.57
2:B:3147:G:H4'	7:G:102:LEU:O	2.04	0.57
2:B:3298:C:H2'	2:B:3299:A:H8	1.69	0.57
3:C:30:C:OP1	17:Q:27:ASP:HB2	2.03	0.57
5:E:198:TRP:C	5:E:200:ASN:H	2.12	0.57
7:G:59:ASP:HA	7:G:70:ARG:O	2.05	0.57
8:H:5:GLN:HE22	8:H:21:PRO:HB3	1.70	0.57
15:O:87:LYS:HE2	15:O:106:ILE:HA	1.85	0.57
18:R:21:VAL:HG23	18:R:33:ALA:HB3	1.87	0.57
20:T:149:TYR:HB3	20:T:153:VAL:HG23	1.86	0.57
24:X:92:LYS:HE2	24:X:110:MET:HE3	1.85	0.57
41:OA:17:THR:HG22	41:OA:18:LEU:H	1.70	0.57
48:VA:5:ARG:CA	48:VA:8:LYS:HD3	2.24	0.57
49:WA:20:VAL:HB	49:WA:304:GLY:HA3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:203:THR:OG1	49:WA:245:PHE:HB2	2.05	0.57
54:BB:126:VAL:HG23	54:BB:157:ASN:H	1.68	0.57
56:DB:186:ARG:O	56:DB:190:GLN:HG2	2.05	0.57
59:GB:92:LYS:O	59:GB:93:LEU:HB3	2.05	0.57
70:RB:28:SER:HB2	70:RB:34:LEU:HD23	1.87	0.57
72:TB:53:ILE:HG22	72:TB:60:LYS:O	2.05	0.57
82:DC:281:ILE:HA	82:DC:284:LEU:HD12	1.86	0.57
82:DC:489:VAL:O	82:DC:531:ALA:HA	2.05	0.57
1:A:310:C:C4'	73:UB:33:LEU:HD11	2.27	0.57
1:A:1272:U:H4'	82:DC:655:TYR:OH	2.05	0.57
2:B:129:U:OP2	39:MA:74:LYS:HD3	2.05	0.57
2:B:649:A:H2'	2:B:650:C:C6	2.40	0.57
2:B:2131:A:H2'	2:B:2132:C:H5'	1.86	0.57
2:B:2456:A:H1'	2:B:2482:U:H1'	1.86	0.57
2:B:2760:C:C4	46:TA:63:LYS:HE3	2.39	0.57
2:B:2841:G:H22	2:B:2846:U:H5"	1.69	0.57
9:I:108:ARG:O	9:I:112:LYS:HG2	2.04	0.57
9:I:226:TYR:HE2	9:I:236:LEU:HD22	1.70	0.57
14:N:52:LEU:HA	14:N:165:ILE:HA	1.87	0.57
17:Q:57:VAL:HG12	17:Q:69:VAL:CG2	2.35	0.57
27:AA:93:LEU:CB	28:BA:20:LEU:HD22	2.35	0.57
31:EA:83:THR:O	34:HA:62:LEU:HD21	2.05	0.57
41:OA:16:HIS:HB3	41:OA:25:ARG:O	2.04	0.57
53:AB:21:LEU:HA	53:AB:24:PHE:HB3	1.87	0.57
55:CB:32:GLU:HG3	55:CB:33:VAL:N	2.20	0.57
55:CB:100:ASN:N	55:CB:103:ASN:HB2	2.20	0.57
67:OB:90:ALA:O	67:OB:91:LEU:C	2.47	0.57
74:VB:48:TYR:O	74:VB:49:LYS:HB2	2.04	0.57
75:WB:67:ASP:C	75:WB:69:LEU:H	2.11	0.57
78:ZB:32:PHE:HD2	78:ZB:32:PHE:N	2.03	0.57
82:DC:608:PRO:HG2	82:DC:640:GLY:O	2.05	0.57
1:A:109:G:H5"	1:A:755:A:OP1	2.05	0.57
1:A:138:A:H2'	1:A:139:C:H5'	1.86	0.57
1:A:627:C:H4'	63:KB:117:LEU:CD2	2.34	0.57
1:A:1000:C:OP1	83:EC:6947:A:H1'	2.05	0.57
1:A:1099:U:H2'	1:A:1100:G:H21	1.67	0.57
2:B:314:U:H2'	2:B:315:C:C5	2.40	0.57
2:B:825:U:H4'	2:B:1587:A:C2	2.40	0.57
2:B:899:U:H2'	2:B:900:G:C8	2.40	0.57
2:B:1040:A:C2'	14:N:198:LYS:HE2	2.34	0.57
2:B:1231:A:C5'	48:VA:35:SER:HB2	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1263:A:C6	16:P:136:ALA:HB2	2.40	0.57
2:B:1485:G:N2	2:B:1857:C:H42	1.89	0.57
2:B:1510:G:H2'	2:B:1512:U:C4	2.39	0.57
2:B:1886:A:O4'	2:B:3307:A:H5'	2.05	0.57
2:B:2421:U:H4'	46:TA:53:GLN:HB2	1.87	0.57
2:B:2716:U:H2'	2:B:2717:U:C6	2.40	0.57
2:B:3330:A:H4'	7:G:366:GLY:HA3	1.85	0.57
7:G:168:LYS:HD3	7:G:319:ASN:OD1	2.05	0.57
8:H:80:GLY:HA2	8:H:85:SER:HB2	1.87	0.57
8:H:317:PRO:O	8:H:318:LEU:HB2	2.04	0.57
9:I:86:TYR:CE2	9:I:247:ILE:HG12	2.40	0.57
10:J:71:VAL:HG21	10:J:159:LEU:HB3	1.86	0.57
11:K:66:LYS:O	11:K:70:LYS:HG3	2.04	0.57
14:N:68:ALA:HB2	14:N:158:LYS:CB	2.34	0.57
19:S:114:ARG:HA	19:S:114:ARG:CZ	2.35	0.57
32:FA:105:LEU:C	32:FA:107:ALA:H	2.12	0.57
34:HA:18:ILE:HG13	34:HA:23:TYR:CZ	2.39	0.57
46:TA:65:THR:HB	46:TA:88:CYS:O	2.05	0.57
52:ZA:41:LEU:CD1	52:ZA:63:VAL:HG12	2.27	0.57
53:AB:162:GLN:N	53:AB:163:PRO:CD	2.68	0.57
54:BB:180:LEU:HD22	54:BB:192:ILE:HG22	1.87	0.57
55:CB:97:LEU:HD23	55:CB:176:THR:HA	1.87	0.57
72:TB:28:ARG:HG3	72:TB:29:PRO:HA	1.87	0.57
74:VB:88:THR:O	74:VB:92:VAL:HG23	2.04	0.57
82:DC:127:VAL:HB	82:DC:155:VAL:HA	1.86	0.57
82:DC:593:ILE:HB	82:DC:598:SER:OG	2.05	0.57
82:DC:747:LEU:HB3	82:DC:752:GLY:O	2.05	0.57
82:DC:810:ASP:C	82:DC:812:THR:H	2.12	0.57
1:A:329:G:H5'	58:FB:99:ALA:HB3	1.87	0.57
2:B:148:G:H5"	19:S:55:ALA:CB	2.35	0.57
2:B:749:C:H4'	33:GA:43:HIS:CE1	2.40	0.57
2:B:924:G:O5'	2:B:924:G:H8	1.87	0.57
2:B:1259:A:O2'	2:B:1280:C:H4'	2.05	0.57
2:B:1467:A:H1'	2:B:1469:C:OP2	2.05	0.57
2:B:2268:U:H3'	2:B:2269:U:O4'	2.04	0.57
2:B:2754:G:H3'	2:B:2755:C:H5"	1.86	0.57
2:B:2897:A:H5"	44:RA:125:LYS:CG	2.34	0.57
2:B:2967:A:H4'	6:F:206:PRO:CG	2.34	0.57
8:H:170:LYS:HG3	8:H:175:HIS:ND1	2.20	0.57
8:H:185:LYS:HD2	8:H:199:TRP:CE3	2.40	0.57
8:H:234:ASN:ND2	8:H:236:LEU:HB2	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:68:THR:O	25:Y:31:LEU:HD22	2.05	0.57
10:J:54:TYR:HA	10:J:65:ILE:CG2	2.35	0.57
11:K:102:VAL:HG13	11:K:126:LEU:CD2	2.34	0.57
12:L:98:ARG:HH11	12:L:98:ARG:HB2	1.70	0.57
12:L:178:ALA:HB2	12:L:218:ILE:CG2	2.34	0.57
15:O:35:LYS:O	15:O:39:GLN:HG2	2.04	0.57
18:R:23:ILE:HG21	18:R:28:SER:HB2	1.87	0.57
19:S:133:ILE:HD12	19:S:134:LEU:H	1.69	0.57
20:T:136:THR:HG22	20:T:137:THR:N	2.19	0.57
23:W:150:GLN:HA	23:W:153:LYS:HB3	1.86	0.57
39:MA:5:LYS:O	39:MA:9:LEU:HD23	2.04	0.57
71:SB:34:ILE:CB	71:SB:53:TYR:HB2	2.21	0.57
73:UB:13:ARG:NH1	73:UB:13:ARG:HB2	2.20	0.57
82:DC:24:VAL:HG11	82:DC:32:LYS:HB2	1.87	0.57
82:DC:440:ARG:HG2	82:DC:440:ARG:O	2.05	0.57
1:A:64:U:H2'	1:A:65:A:H5"	1.86	0.56
1:A:1552:U:H5	65:MB:43:ARG:NE	2.02	0.56
1:A:1596:C:H4'	1:A:1599:C:H41	1.70	0.56
1:A:1770:U:H2'	1:A:1771:U:C6	2.40	0.56
2:B:250:U:C5'	2:B:251:G:H5"	2.35	0.56
2:B:563:U:H2'	2:B:564:G:H8	1.70	0.56
2:B:835:G:H5"	2:B:1928:G:OP1	2.05	0.56
2:B:885:U:C5'	2:B:1851:G:H4'	2.31	0.56
2:B:975:C:H5"	22:V:54:LEU:CD2	2.35	0.56
2:B:1718:G:H1'	2:B:1731:A:N3	2.20	0.56
2:B:1938:U:O2'	23:W:79:GLY:HA3	2.05	0.56
2:B:2155:G:H2'	2:B:2156:C:H6	1.69	0.56
2:B:2375:G:H4'	2:B:2376:G:OP2	2.04	0.56
2:B:2878:G:H5"	7:G:5:LYS:HE2	1.86	0.56
2:B:3375:A:H5'	35:IA:18:LYS:HB3	1.86	0.56
7:G:119:TYR:CD1	7:G:125:SER:HB2	2.40	0.56
11:K:154:GLY:HA3	11:K:201:PHE:CZ	2.40	0.56
15:O:80:LEU:CD1	15:O:129:VAL:HG11	2.34	0.56
20:T:12:LYS:HB2	20:T:37:ARG:HD2	1.86	0.56
20:T:34:VAL:HG21	20:T:112:TYR:CE1	2.40	0.56
22:V:19:PRO:HD3	22:V:53:PHE:HD1	1.70	0.56
22:V:64:VAL:CG1	22:V:90:ASP:H	2.15	0.56
22:V:138:LEU:HD22	22:V:139:ILE:N	2.17	0.56
29:CA:115:ARG:HB2	29:CA:119:THR:O	2.05	0.56
30:DA:56:VAL:HG22	30:DA:105:VAL:H	1.70	0.56
39:MA:86:ARG:HA	39:MA:89:ARG:NH1	2.09	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:QA:27:ILE:HG23	43:QA:30:ARG:HH21	1.70	0.56
52:ZA:228:ASN:HB2	71:SB:1:MET:H3	1.70	0.56
54:BB:201:HIS:HB3	54:BB:205:PHE:O	2.05	0.56
54:BB:240:LYS:H	54:BB:240:LYS:HD3	1.68	0.56
54:BB:251:GLU:O	54:BB:255:ARG:HG3	2.04	0.56
66:NB:37:THR:HA	66:NB:49:TYR:OH	2.05	0.56
69:QB:22:LEU:HB3	69:QB:55:TYR:CD1	2.40	0.56
75:WB:59:TYR:O	75:WB:64:VAL:HG11	2.05	0.56
82:DC:307:LEU:CD2	82:DC:326:LYS:HZ3	2.17	0.56
1:A:873:U:O2'	1:A:1047:G:H5"	2.06	0.56
1:A:1211:A:H1'	65:MB:99:GLY:O	2.06	0.56
2:B:148:G:H1'	2:B:149:U:C5	2.41	0.56
2:B:185:C:H2'	2:B:186:U:H5'	1.86	0.56
2:B:380:U:H2'	2:B:381:U:O4'	2.05	0.56
2:B:582:G:H2'	2:B:583:G:H8	1.69	0.56
2:B:712:G:H2'	2:B:713:U:C6	2.40	0.56
2:B:984:G:C2'	11:K:101:LYS:HG3	2.29	0.56
2:B:1043:C:H2'	2:B:1044:U:C6	2.40	0.56
2:B:1184:A:H2'	2:B:1185:C:C6	2.40	0.56
2:B:1470:U:H2'	2:B:1471:U:C6	2.39	0.56
2:B:1534:A:H2'	2:B:1535:A:C8	2.40	0.56
2:B:1550:C:O2'	2:B:1551:C:H5'	2.05	0.56
2:B:1646:G:H1'	2:B:1808:G:H22	1.70	0.56
2:B:1670:C:O2'	2:B:1860:G:H5"	2.05	0.56
2:B:1797:A:H1'	6:F:21:ARG:CD	2.34	0.56
2:B:2476:C:H2'	2:B:2477:G:C4'	2.35	0.56
2:B:2607:G:N2	19:S:78:GLY:HA3	2.20	0.56
6:F:115:ASN:HA	6:F:128:ARG:CG	2.35	0.56
8:H:4:PRO:HD2	8:H:22:LEU:HD22	1.85	0.56
8:H:40:THR:O	8:H:44:LYS:HB2	2.05	0.56
13:M:48:VAL:HG13	13:M:49:ASN:H	1.70	0.56
14:N:77:THR:HA	14:N:81:GLY:O	2.05	0.56
17:Q:24:VAL:HG11	19:S:203:ARG:HH21	1.71	0.56
19:S:136:ASP:OD1	19:S:139:HIS:HB2	2.05	0.56
25:Y:27:LEU:O	25:Y:27:LEU:HD13	2.06	0.56
28:BA:20:LEU:HD21	28:BA:28:ILE:HG23	1.87	0.56
44:RA:102:ARG:O	44:RA:103:LEU:HD23	2.05	0.56
48:VA:28:VAL:CG1	48:VA:87:VAL:HG21	2.35	0.56
49:WA:17:ASN:HB3	49:WA:39:ASP:HB3	1.87	0.56
49:WA:245:PHE:CD2	49:WA:252:LEU:HD13	2.40	0.56
50:XA:30:GLN:OE1	50:XA:149:LEU:HB3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:76:LEU:HD12	56:DB:94:ARG:HB2	1.87	0.56
59:GB:12:TYR:CD1	59:GB:40:LYS:HG3	2.40	0.56
82:DC:569:SER:O	82:DC:592:PRO:HD3	2.04	0.56
1:A:88:U:H4'	1:A:171:A:C4'	2.35	0.56
1:A:158:U:O2'	1:A:159:U:H3'	2.05	0.56
1:A:866:G:H5"	63:KB:3:ARG:N	2.12	0.56
1:A:927:C:H2'	1:A:928:U:H4'	1.86	0.56
1:A:1765:A:H3'	1:A:1766:A:H5"	1.87	0.56
2:B:24:G:H2'	2:B:25:U:H5'	1.87	0.56
2:B:238:A:H2'	2:B:239:G:H5'	1.87	0.56
2:B:290:G:H2'	2:B:291:C:C6	2.40	0.56
2:B:814:U:H5"	41:OA:35:SER:CB	2.35	0.56
2:B:1046:A:O2'	14:N:18:PRO:HG3	2.05	0.56
2:B:1261:G:H4'	2:B:1278:A:C2	2.40	0.56
2:B:1458:U:H5"	35:IA:33:VAL:HG11	1.86	0.56
2:B:1836:C:H2'	2:B:1837:U:C6	2.37	0.56
2:B:2149:A:H2'	2:B:2150:G:H5'	1.87	0.56
2:B:2571:U:H4'	2:B:2572:C:C5'	2.34	0.56
2:B:2880:U:H1'	7:G:250:ALA:HB3	1.86	0.56
2:B:3038:U:H2'	2:B:3039:C:C6	2.41	0.56
2:B:3380:U:H2'	2:B:3381:U:C6	2.40	0.56
6:F:22:LEU:HD13	6:F:52:SER:HB2	1.88	0.56
7:G:4:ARG:O	7:G:5:LYS:HB3	2.02	0.56
7:G:94:GLU:HG2	7:G:156:SER:HB2	1.87	0.56
9:I:104:LEU:HB2	9:I:247:ILE:HD13	1.86	0.56
10:J:45:GLY:C	10:J:47:PHE:H	2.13	0.56
13:M:44:THR:HB	13:M:56:ALA:N	2.12	0.56
13:M:132:VAL:HA	13:M:148:GLY:HA3	1.86	0.56
14:N:30:LYS:N	14:N:30:LYS:HD2	2.21	0.56
14:N:183:LYS:HB2	14:N:183:LYS:NZ	2.21	0.56
17:Q:124:ILE:HG22	17:Q:126:PHE:HE1	1.69	0.56
18:R:45:LEU:HA	18:R:57:ALA:HA	1.88	0.56
18:R:102:LYS:HA	18:R:105:GLN:HB2	1.87	0.56
20:T:15:LEU:CD1	20:T:128:ARG:HB3	2.34	0.56
21:U:47:TYR:O	21:U:51:VAL:HG23	2.04	0.56
27:AA:89:ASP:HB2	27:AA:91:VAL:HG22	1.85	0.56
29:CA:86:VAL:HG12	29:CA:120:LYS:HD3	1.88	0.56
33:GA:17:HIS:HA	33:GA:20:GLY:HA2	1.86	0.56
34:HA:26:GLY:H	34:HA:89:VAL:HG13	1.68	0.56
39:MA:50:SER:O	39:MA:54:VAL:HG23	2.04	0.56
49:WA:199:ILE:HG21	49:WA:213:SER:HB2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:185:GLY:N	54:BB:189:LEU:HD13	2.20	0.56
55:CB:113:ILE:HG21	55:CB:190:ILE:HB	1.87	0.56
57:EB:64:VAL:HA	57:EB:67:LEU:HD12	1.87	0.56
58:FB:5:ARG:HD3	58:FB:30:GLY:HA3	1.86	0.56
59:GB:176:ASN:O	59:GB:180:LYS:HB2	2.04	0.56
65:MB:37:ALA:HB1	65:MB:38:PRO:HD2	1.87	0.56
68:PB:72:ILE:HG12	68:PB:79:TYR:CD2	2.40	0.56
71:SB:58:TYR:OH	72:TB:20:THR:HA	2.04	0.56
75:WB:68:ARG:HD2	83:EC:6867:C:H6	1.70	0.56
79:AC:23:VAL:HG23	79:AC:38:ILE:HD12	1.87	0.56
82:DC:18:ASN:O	82:DC:98:PHE:HA	2.05	0.56
82:DC:28:VAL:HG13	82:DC:29:ASP:H	1.69	0.56
82:DC:289:MET:CG	82:DC:320:LEU:HD12	2.29	0.56
82:DC:536:LEU:O	82:DC:540:ILE:HG12	2.05	0.56
82:DC:734:GLN:HG3	82:DC:765:LEU:HG	1.86	0.56
1:A:343:C:H2'	1:A:344:A:C8	2.41	0.56
1:A:602:U:OP1	73:UB:32:ARG:HB2	2.06	0.56
1:A:638:U:H1'	57:EB:112:ARG:NH2	2.19	0.56
1:A:884:A:H2'	1:A:885:G:C8	2.41	0.56
1:A:1116:A:HO2'	1:A:1117:U:H5'	1.71	0.56
1:A:1280:C:H1'	70:RB:70:THR:HB	1.86	0.56
2:B:39:A:H1'	2:B:94:G:N2	2.19	0.56
2:B:792:G:H2'	2:B:793:C:C6	2.40	0.56
2:B:2361:A:C2'	2:B:2362:C:H5'	2.35	0.56
2:B:2389:C:H2'	2:B:2390:A:C8	2.41	0.56
2:B:2716:U:H2'	2:B:2717:U:H6	1.71	0.56
4:D:11:A:N6	25:Y:20:ARG:HD2	2.20	0.56
5:E:134:PHE:HE1	5:E:137:PRO:HD3	1.70	0.56
8:H:23:PRO:HG3	8:H:258:LEU:CG	2.36	0.56
9:I:69:ILE:HG12	25:Y:31:LEU:CB	2.35	0.56
10:J:148:GLU:HA	10:J:151:LYS:HE2	1.86	0.56
11:K:108:LEU:CD1	11:K:134:VAL:HG11	2.35	0.56
18:R:17:VAL:O	18:R:72:LEU:HB3	2.05	0.56
18:R:36:VAL:HG11	18:R:55:ARG:CZ	2.35	0.56
18:R:116:GLU:HA	18:R:119:GLN:HB2	1.87	0.56
18:R:127:LYS:N	20:T:190:VAL:HG21	2.21	0.56
20:T:27:LEU:CD2	20:T:102:LEU:HB2	2.36	0.56
30:DA:56:VAL:CG2	30:DA:104:LEU:HB3	2.36	0.56
48:VA:71:PRO:C	48:VA:73:PHE:H	2.14	0.56
50:XA:191:ARG:HG3	50:XA:192:THR:H	1.71	0.56
52:ZA:169:LEU:HD22	52:ZA:196:VAL:HG21	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:235:LEU:HD22	71:SB:52:THR:HB	1.86	0.56
53:AB:75:LYS:CB	60:HB:22:VAL:HG11	2.36	0.56
53:AB:113:LEU:HD23	53:AB:114:ALA:N	2.21	0.56
55:CB:186:ASN:HD22	55:CB:188:LYS:HD2	1.70	0.56
59:GB:140:ILE:HG12	59:GB:159:ALA:HB3	1.87	0.56
63:KB:22:ALA:HB1	63:KB:23:PRO:CA	2.30	0.56
67:OB:38:ILE:HG23	67:OB:39:ALA:H	1.71	0.56
80:BC:29:LYS:HB2	80:BC:31:LYS:NZ	2.20	0.56
82:DC:434:VAL:HG12	82:DC:445:ILE:HG23	1.88	0.56
82:DC:523:SER:HB3	82:DC:529:ILE:HG12	1.88	0.56
1:A:588:U:H2'	1:A:589:C:O4'	2.05	0.56
1:A:624:G:H2'	1:A:625:C:C6	2.41	0.56
2:B:195:U:H2'	2:B:196:G:O4'	2.06	0.56
2:B:363:G:OP2	41:OA:52:LYS:HB2	2.06	0.56
2:B:507:U:H2'	2:B:508:U:C6	2.40	0.56
2:B:914:A:C2	6:F:208:ASP:HB3	2.33	0.56
2:B:1289:G:H2'	2:B:1290:A:H8	1.70	0.56
2:B:1634:G:H2'	2:B:1635:G:C8	2.41	0.56
2:B:1705:U:H2'	2:B:1786:G:O2'	2.05	0.56
2:B:2144:A:H1'	2:B:2281:A:N6	2.20	0.56
2:B:2949:U:H4'	7:G:241:LYS:HE2	1.88	0.56
2:B:3259:U:H5'	2:B:3259:U:H6	1.71	0.56
4:D:62:U:H2'	4:D:63:A:H5'	1.87	0.56
4:D:75:G:C2'	4:D:76:A:H2'	2.27	0.56
6:F:40:TYR:HB3	6:F:91:GLY:HA3	1.87	0.56
7:G:332:ARG:O	7:G:333:LYS:HB2	2.06	0.56
7:G:361:THR:HG22	7:G:371:GLN:OE1	2.05	0.56
12:L:156:ASP:HB2	12:L:183:LYS:HD3	1.88	0.56
22:V:82:VAL:HG22	22:V:102:ALA:HB3	1.86	0.56
22:V:111:ARG:HA	22:V:121:CYS:SG	2.45	0.56
24:X:79:VAL:HA	24:X:124:LEU:HG	1.87	0.56
30:DA:48:LEU:CD2	30:DA:122:LYS:HD2	2.36	0.56
31:EA:36:HIS:C	31:EA:38:PHE:H	2.12	0.56
33:GA:14:ARG:O	33:GA:18:ARG:HB2	2.06	0.56
34:HA:14:LEU:O	34:HA:17:VAL:HG22	2.06	0.56
37:KA:75:HIS:H	37:KA:81:VAL:HA	1.69	0.56
48:VA:145:ILE:HG21	82:DC:201:GLN:NE2	2.16	0.56
49:WA:255:ALA:HB2	49:WA:292:LEU:HD22	1.86	0.56
59:GB:28:LEU:HD13	59:GB:28:LEU:O	2.05	0.56
60:HB:1:MET:HE2	60:HB:3:MET:HE2	1.87	0.56
60:HB:14:TYR:CE1	60:HB:18:GLU:HG3	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:RB:68:ARG:HA	70:RB:78:THR:O	2.04	0.56
75:WB:85:LYS:O	75:WB:86:GLU:HB2	2.04	0.56
82:DC:653:VAL:HG13	82:DC:693:LEU:CD1	2.35	0.56
1:A:199:G:O2'	1:A:200:A:H5'	2.05	0.56
1:A:473:A:H4'	1:A:768:C:O2	2.06	0.56
1:A:1367:G:H2'	1:A:1368:G:H8	1.69	0.56
2:B:76:G:N7	17:Q:101:ARG:HG3	2.21	0.56
2:B:161:G:H2'	2:B:162:G:O4'	2.06	0.56
2:B:637:C:H2'	2:B:638:C:C5	2.41	0.56
2:B:877:C:O2'	2:B:880:G:H1'	2.05	0.56
2:B:1185:C:OP1	18:R:42:LYS:HB2	2.06	0.56
2:B:1566:A:C3'	2:B:1567:U:H5"	2.36	0.56
2:B:1629:U:H4'	31:EA:115:LYS:HE2	1.86	0.56
2:B:1647:A:N6	2:B:1808:G:H1'	2.19	0.56
2:B:2335:G:C1'	2:B:2337:C:H41	2.19	0.56
2:B:2424:A:H1'	19:S:78:GLY:H	1.69	0.56
2:B:2894:C:H2'	2:B:2895:G:C8	2.37	0.56
2:B:3064:U:H2'	2:B:3065:G:C8	2.40	0.56
6:F:83:HIS:HB3	47:UA:41:PHE:CZ	2.41	0.56
7:G:50:LYS:HE3	7:G:328:ILE:O	2.06	0.56
8:H:52:VAL:H	8:H:103:THR:HB	1.69	0.56
8:H:181:VAL:C	8:H:183:LYS:H	2.14	0.56
8:H:286:VAL:HA	8:H:289:ILE:HD12	1.87	0.56
10:J:145:LEU:O	10:J:149:ILE:HG13	2.06	0.56
11:K:86:VAL:HG13	11:K:136:TYR:N	2.20	0.56
13:M:72:LYS:HD3	13:M:72:LYS:C	2.31	0.56
16:P:94:LYS:CD	16:P:99:LYS:HG2	2.36	0.56
17:Q:49:ARG:HH11	39:MA:115:LYS:NZ	2.03	0.56
25:Y:89:LEU:HD21	25:Y:91:LEU:HG	1.86	0.56
27:AA:52:ALA:HB2	27:AA:58:VAL:HG11	1.87	0.56
30:DA:23:PRO:HD2	30:DA:26:GLN:CD	2.31	0.56
33:GA:28:LYS:O	33:GA:29:TYR:HB2	2.04	0.56
37:KA:18:ARG:CA	37:KA:23:ASN:HA	2.35	0.56
37:KA:26:ASN:HA	37:KA:88:ASN:OD1	2.05	0.56
39:MA:6:ALA:O	39:MA:10:ARG:HG2	2.06	0.56
50:XA:147:THR:HB	50:XA:151:SER:HB2	1.88	0.56
53:AB:212:LYS:HB3	53:AB:212:LYS:NZ	2.20	0.56
54:BB:89:VAL:CG1	54:BB:119:ALA:HA	2.30	0.56
58:FB:48:THR:HG21	58:FB:54:LYS:HE3	1.87	0.56
63:KB:57:ALA:HA	77:YB:54:VAL:HG13	1.87	0.56
65:MB:60:LEU:HA	65:MB:76:VAL:CG2	2.29	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:MB:75:PRO:HG3	65:MB:93:VAL:HB	1.88	0.56
66:NB:103:ASN:HA	66:NB:106:LYS:HZ2	1.71	0.56
68:PB:92:ILE:O	68:PB:92:ILE:HD13	2.05	0.56
82:DC:412:ARG:HG2	82:DC:428:ILE:HG12	1.86	0.56
82:DC:501:LEU:N	82:DC:502:PRO:CD	2.69	0.56
2:B:226:C:H2'	2:B:227:G:O4'	2.05	0.56
2:B:654:C:H2'	2:B:655:C:C6	2.41	0.56
2:B:901:G:H5"	41:OA:13:ASN:HD22	1.71	0.56
2:B:966:U:H2'	2:B:967:A:C8	2.41	0.56
2:B:997:A:H3'	2:B:998:A:H8	1.71	0.56
2:B:1830:G:H2'	2:B:1831:U:O4'	2.06	0.56
2:B:2793:G:H5"	46:TA:66:LYS:HG2	1.87	0.56
2:B:2985:C:H2'	2:B:2986:U:H6	1.69	0.56
2:B:3190:C:H2'	2:B:3191:G:H8	1.69	0.56
2:B:3308:C:H3'	2:B:3309:G:H21	1.71	0.56
5:E:124:LEU:HD21	5:E:135:PRO:HD2	1.88	0.56
20:T:124:LEU:HD23	24:X:168:PRO:HG3	1.88	0.56
25:Y:91:LEU:CD2	25:Y:95:HIS:HB3	2.35	0.56
32:FA:75:LEU:HG	32:FA:114:GLY:HA2	1.87	0.56
36:JA:64:LYS:HG2	36:JA:65:PHE:CD2	2.40	0.56
71:SB:37:ALA:HA	71:SB:49:GLU:O	2.06	0.56
82:DC:137:VAL:HG13	82:DC:138:GLN:H	1.71	0.56
82:DC:740:VAL:O	82:DC:743:ILE:HG23	2.04	0.56
83:EC:6892:U:O2	83:EC:6892:U:H2'	2.06	0.56
1:A:127:G:N7	56:DB:198:ALA:HB1	2.19	0.56
1:A:329:G:H2'	1:A:330:G:C8	2.41	0.56
1:A:1352:G:H2'	1:A:1353:U:C6	2.41	0.56
1:A:1449:U:H2'	1:A:1450:U:C6	2.41	0.56
2:B:78:U:H2'	2:B:79:U:H5'	1.87	0.56
2:B:1008:U:H4'	14:N:34:TYR:CD1	2.41	0.56
2:B:2147:A:OP1	6:F:200:ARG:HG3	2.05	0.56
2:B:2909:U:H3'	2:B:2910:A:H5"	1.87	0.56
2:B:3377:G:OP1	2:B:3377:G:H2'	2.05	0.56
3:C:51:G:H1'	3:C:52:A:N7	2.21	0.56
7:G:199:PHE:N	7:G:201:LYS:HD3	2.21	0.56
9:I:104:LEU:HA	9:I:247:ILE:CG2	2.33	0.56
9:I:279:LYS:HA	9:I:282:ARG:HD2	1.88	0.56
11:K:81:HIS:CD2	11:K:138:TYR:HB3	2.39	0.56
14:N:191:LYS:HG2	14:N:198:LYS:HB2	1.86	0.56
19:S:35:VAL:HA	19:S:65:ARG:NE	2.12	0.56
20:T:74:ARG:CB	20:T:145:VAL:HG23	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:75:GLU:HG3	21:U:76:PHE:CD1	2.41	0.56
22:V:36:LEU:O	22:V:40:THR:HG23	2.06	0.56
24:X:26:ARG:HH11	25:Y:150:THR:HG21	1.71	0.56
24:X:66:GLU:HB3	24:X:69:PRO:HG3	1.88	0.56
25:Y:74:VAL:HG12	25:Y:75:ILE:H	1.70	0.56
27:AA:23:MET:HE1	27:AA:100:GLY:HA3	1.88	0.56
31:EA:72:ILE:CD1	31:EA:100:THR:HG21	2.36	0.56
34:HA:98:SER:HB2	34:HA:100:ILE:HG12	1.86	0.56
38:LA:5:VAL:HG21	38:LA:31:ARG:HD3	1.86	0.56
49:WA:201:THR:HB	49:WA:241:PHE:O	2.06	0.56
50:XA:77:SER:HB3	50:XA:99:ALA:HA	1.87	0.56
54:BB:178:GLY:CA	54:BB:195:ILE:HB	2.35	0.56
58:FB:137:LYS:HD3	58:FB:137:LYS:N	2.13	0.56
63:KB:66:ILE:HG23	63:KB:67:THR:HG23	1.87	0.56
65:MB:14:THR:HB	65:MB:22:LEU:HB2	1.87	0.56
69:QB:97:SER:OG	69:QB:100:ILE:HB	2.05	0.56
82:DC:511:LEU:HD11	82:DC:541:CYS:HB3	1.87	0.56
1:A:180:A:C2'	1:A:181:A:H5'	2.36	0.56
1:A:633:U:O2'	1:A:1102:G:H4'	2.05	0.56
1:A:1583:A:H5"	66:NB:135:ARG:HH22	1.71	0.56
1:A:1583:A:N6	1:A:1612:U:H5	2.04	0.56
2:B:13:A:C2	29:CA:39:LYS:HA	2.34	0.56
2:B:336:A:H2'	2:B:337:G:C8	2.41	0.56
2:B:641:C:H5	36:JA:38:ILE:CD1	2.18	0.56
2:B:761:A:O2'	2:B:762:U:H5'	2.05	0.56
2:B:1076:C:O4'	33:GA:42:ASN:HB2	2.06	0.56
2:B:1160:C:C5	2:B:1366:A:H1'	2.41	0.56
2:B:1856:C:H1'	38:LA:7:PHE:HE2	1.70	0.56
2:B:2690:G:H3'	2:B:2690:G:N3	2.21	0.56
2:B:2880:U:H2'	2:B:2881:C:C6	2.41	0.56
2:B:3045:G:H2'	2:B:3046:A:O4'	2.06	0.56
2:B:3206:C:H5"	2:B:3207:U:C4'	2.36	0.56
3:C:91:C:O2	30:DA:25:SER:HB2	2.06	0.56
6:F:3:ARG:CG	6:F:4:VAL:H	2.06	0.56
6:F:22:LEU:HD12	6:F:23:ARG:H	1.71	0.56
6:F:40:TYR:O	12:L:37:GLY:HA3	2.06	0.56
6:F:57:PRO:O	6:F:78:ALA:HB2	2.05	0.56
7:G:280:HIS:HB3	7:G:324:VAL:HG21	1.88	0.56
11:K:35:ALA:O	11:K:39:GLU:HG3	2.05	0.56
19:S:63:ARG:HA	19:S:131:GLU:HA	1.88	0.56
19:S:122:ASN:HB2	19:S:129:TYR:CD2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:18:ARG:CZ	20:T:128:ARG:HD2	2.36	0.56
23:W:9:ARG:HA	23:W:19:LYS:HE2	1.88	0.56
23:W:23:TRP:CE3	23:W:51:VAL:HG22	2.41	0.56
23:W:140:GLU:O	23:W:144:GLN:HB2	2.06	0.56
30:DA:58:VAL:HA	30:DA:104:LEU:HD23	1.87	0.56
32:FA:96:LYS:C	32:FA:98:THR:H	2.14	0.56
34:HA:18:ILE:HG13	34:HA:23:TYR:OH	2.06	0.56
40:NA:60:LEU:CA	40:NA:63:ASN:HD22	2.15	0.56
46:TA:36:PHE:HA	46:TA:41:ARG:CD	2.36	0.56
50:XA:148:ASP:HB2	50:XA:164:ASN:HD22	1.70	0.56
55:CB:157:ARG:N	55:CB:157:ARG:HD2	2.20	0.56
58:FB:22:ARG:HB2	58:FB:25:ARG:HH21	1.68	0.56
59:GB:135:ALA:HB2	59:GB:159:ALA:HB2	1.87	0.56
82:DC:399:ARG:HG3	82:DC:453:ILE:HG13	1.88	0.56
83:EC:6947:A:C2'	83:EC:6948:U:H4'	2.35	0.56
1:A:67:A:O5'	1:A:67:A:H8	1.89	0.56
1:A:315:A:H4'	1:A:316:A:H4'	1.88	0.56
1:A:635:A:H5"	72:TB:3:ARG:O	2.05	0.56
1:A:1025:A:C2	1:A:1789:G:H1'	2.40	0.56
1:A:1042:G:C3'	1:A:1043:A:H5"	2.34	0.56
1:A:1769:U:H5"	64:LB:137:LEU:O	2.05	0.56
2:B:199:A:H5"	30:DA:60:ARG:HD3	1.87	0.56
2:B:571:U:O2'	2:B:572:A:H5'	2.05	0.56
2:B:664:U:H4'	8:H:106:TRP:O	2.06	0.56
2:B:693:A:O2'	8:H:234:ASN:HB3	2.06	0.56
2:B:884:A:OP2	41:OA:4:GLY:HA3	2.06	0.56
2:B:985:U:O2	2:B:1099:A:H2	1.88	0.56
2:B:1280:C:H2'	2:B:1281:G:C8	2.41	0.56
2:B:1317:A:C4'	20:T:18:ARG:HH22	2.09	0.56
2:B:2128:C:H2'	2:B:2129:U:O4'	2.05	0.56
2:B:2225:U:H2'	2:B:2226:U:H6	1.71	0.56
2:B:2896:A:H4'	44:RA:95:VAL:HG11	1.88	0.56
4:D:9:C:H3'	4:D:10:C:C6	2.41	0.56
5:E:6:SER:O	5:E:9:VAL:HG12	2.06	0.56
7:G:112:ASP:O	7:G:116:ARG:HG3	2.06	0.56
8:H:198:ARG:HH11	30:DA:12:ARG:NH2	2.01	0.56
10:J:31:ARG:HH12	10:J:81:ALA:HB1	1.69	0.56
11:K:100:ARG:O	11:K:104:GLN:HG3	2.05	0.56
12:L:78:PHE:O	12:L:79:GLN:CG	2.54	0.56
18:R:106:ARG:HA	18:R:109:ARG:HD2	1.88	0.56
22:V:18:ALA:HA	22:V:53:PHE:CD1	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:180:ARG:NH1	22:V:185:LYS:HG3	2.18	0.56
23:W:51:VAL:HG23	23:W:53:LYS:H	1.70	0.56
28:BA:50:ALA:HA	28:BA:55:PHE:CD1	2.41	0.56
29:CA:107:VAL:HG11	29:CA:124:VAL:CG1	2.36	0.56
37:KA:51:TYR:O	37:KA:66:VAL:HG13	2.06	0.56
44:RA:91:CYS:HB3	44:RA:124:LYS:HD3	1.88	0.56
50:XA:74:VAL:HG23	50:XA:118:PRO:HB3	1.87	0.56
55:CB:36:ALA:HA	55:CB:40:ILE:CG2	2.36	0.56
55:CB:44:ASN:HA	66:NB:46:PHE:CE2	2.40	0.56
57:EB:93:LEU:HD13	57:EB:125:ILE:HG23	1.87	0.56
67:OB:86:PRO:O	67:OB:87:GLU:C	2.48	0.56
69:QB:35:ASP:HA	69:QB:53:TRP:HE1	1.70	0.56
69:QB:111:ILE:HG23	69:QB:113:ILE:HG13	1.87	0.56
70:RB:52:LYS:HA	70:RB:92:ASP:O	2.06	0.56
72:TB:50:PHE:HA	72:TB:63:VAL:HA	1.86	0.56
72:TB:52:TYR:CZ	72:TB:54:ASP:HA	2.41	0.56
82:DC:566:THR:HG22	82:DC:725:GLN:HB2	1.88	0.56
82:DC:739:ALA:O	82:DC:788:THR:HG21	2.06	0.56
1:A:115:G:H5'	61:IB:129:ARG:NE	2.20	0.55
1:A:1755:A:H2'	1:A:1756:A:O4'	2.06	0.55
2:B:31:C:H2'	2:B:32:U:O4'	2.05	0.55
2:B:114:A:H2'	2:B:115:A:O4'	2.07	0.55
2:B:316:U:O2'	40:NA:30:LYS:HD3	2.06	0.55
2:B:610:G:H4'	8:H:315:LYS:NZ	2.21	0.55
2:B:636:C:O5'	2:B:636:C:H6	1.89	0.55
2:B:638:C:H2'	2:B:639:G:C8	2.41	0.55
2:B:1259:A:N7	48:VA:38:MET:HE3	2.21	0.55
2:B:1355:A:H4'	2:B:1356:U:H5'	1.87	0.55
2:B:1719:G:H1'	2:B:1731:A:O2'	2.06	0.55
2:B:1901:A:H5"	2:B:2919:A:OP1	2.05	0.55
2:B:2153:U:O2'	2:B:2154:U:H5'	2.06	0.55
2:B:2163:C:OP1	6:F:231:SER:HA	2.05	0.55
6:F:56:ALA:HB2	6:F:130:SER:OG	2.06	0.55
6:F:62:VAL:HA	6:F:73:GLU:HA	1.88	0.55
9:I:195:LEU:O	9:I:199:ILE:HG13	2.05	0.55
13:M:26:LYS:HE2	13:M:33:THR:HG21	1.87	0.55
13:M:92:TYR:CZ	13:M:101:VAL:HB	2.41	0.55
20:T:27:LEU:HD21	20:T:102:LEU:HD13	1.87	0.55
22:V:175:ALA:O	32:FA:51:GLY:HA2	2.05	0.55
24:X:38:LYS:HD3	24:X:58:ILE:HD13	1.86	0.55
24:X:42:TRP:O	24:X:46:GLN:HG2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DA:27:ARG:CA	30:DA:30:LEU:HB3	2.27	0.55
30:DA:109:LEU:HD13	30:DA:115:ARG:HH22	1.70	0.55
57:EB:125:ILE:HG21	57:EB:176:LEU:HD13	1.88	0.55
68:PB:3:LEU:O	68:PB:3:LEU:HD22	2.06	0.55
68:PB:27:LYS:HE2	68:PB:55:HIS:HA	1.87	0.55
70:RB:28:SER:OG	70:RB:112:VAL:HG22	2.05	0.55
77:YB:33:LEU:HB3	77:YB:35:VAL:HG23	1.88	0.55
82:DC:131:THR:HG23	82:DC:178:PHE:CE1	2.42	0.55
82:DC:453:ILE:N	82:DC:453:ILE:HD12	2.19	0.55
83:EC:6771:U:H5'	83:EC:6819:G:N2	2.21	0.55
1:A:93:A:H61	1:A:396:G:H1'	1.70	0.55
1:A:297:U:O2'	54:BB:33:ALA:HA	2.05	0.55
1:A:862:A:H62	63:KB:70:LYS:HZ1	1.53	0.55
1:A:1387:G:H1'	1:A:1410:A:N6	2.21	0.55
2:B:1316:C:N4	20:T:131:PRO:HD3	2.21	0.55
2:B:1324:U:C5'	24:X:2:ALA:N	2.67	0.55
2:B:1460:A:H2'	2:B:1461:A:H8	1.69	0.55
2:B:1845:G:H2'	41:OA:5:THR:HG22	1.88	0.55
2:B:2129:U:H2'	2:B:2130:G:C8	2.41	0.55
2:B:2615:G:H2'	2:B:2616:C:H6	1.70	0.55
2:B:2642:A:H5'	33:GA:7:HIS:CB	2.35	0.55
2:B:3066:U:H2'	2:B:3067:C:C6	2.41	0.55
4:D:36:C:H2'	4:D:37:G:C8	2.41	0.55
6:F:40:TYR:CB	6:F:91:GLY:HA3	2.36	0.55
6:F:112:ILE:HA	6:F:134:VAL:O	2.07	0.55
11:K:221:LYS:HB2	11:K:227:GLY:HA3	1.88	0.55
11:K:236:ILE:O	11:K:239:LEU:HB3	2.06	0.55
13:M:172:ILE:HD13	13:M:172:ILE:H	1.71	0.55
17:Q:47:ALA:CB	17:Q:48:PRO:CD	2.83	0.55
19:S:65:ARG:HB3	19:S:129:TYR:CD1	2.41	0.55
20:T:55:HIS:HA	20:T:58:LEU:CB	2.36	0.55
27:AA:78:VAL:HG13	27:AA:99:ALA:O	2.05	0.55
40:NA:50:LEU:HG	40:NA:54:GLU:CB	2.36	0.55
41:OA:28:HIS:CE1	41:OA:30:GLN:HB2	2.42	0.55
52:ZA:188:LEU:CD1	52:ZA:196:VAL:HG11	2.33	0.55
53:AB:24:PHE:CZ	53:AB:72:LEU:HD13	2.39	0.55
57:EB:86:GLN:HG2	57:EB:87:ASP:N	2.20	0.55
63:KB:91:LEU:HD21	63:KB:121:ARG:HD2	1.89	0.55
65:MB:34:VAL:O	65:MB:42:ARG:HG2	2.05	0.55
68:PB:32:LEU:HB2	68:PB:43:SER:CB	2.36	0.55
75:WB:59:TYR:CE2	75:WB:100:ILE:HG12	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:27:HIS:ND1	82:DC:28:VAL:HG12	2.21	0.55
1:A:189:C:C3'	1:A:190:C:H5"	2.35	0.55
1:A:249:U:H3	61:IB:17:PRO:HG2	1.71	0.55
1:A:767:U:N3	59:GB:143:ILE:HD11	2.20	0.55
1:A:971:A:H2'	1:A:972:G:O4'	2.06	0.55
1:A:1198:G:C3'	1:A:1199:G:H5'	2.34	0.55
2:B:59:G:C4'	2:B:60:A:H4'	2.34	0.55
2:B:795:G:C2'	2:B:796:U:H5'	2.36	0.55
2:B:1074:U:H2'	2:B:1076:C:C5	2.41	0.55
2:B:1115:G:H5"	2:B:1116:G:H5'	1.88	0.55
2:B:1364:C:H5"	22:V:3:ILE:HB	1.87	0.55
2:B:1393:A:H2'	2:B:1394:A:C8	2.40	0.55
2:B:2330:C:H2'	2:B:2331:C:C6	2.41	0.55
2:B:2930:A:H2'	2:B:2931:C:O4'	2.07	0.55
2:B:3260:G:O2'	18:R:126:GLN:HG3	2.06	0.55
2:B:3267:A:C5	10:J:73:GLY:HA3	2.41	0.55
4:D:4:U:H4'	4:D:26:C:H4'	1.88	0.55
6:F:65:ASP:HB3	6:F:70:ARG:HB3	1.88	0.55
9:I:108:ARG:HG2	9:I:251:PRO:O	2.07	0.55
12:L:150:LEU:HD22	12:L:151:VAL:H	1.71	0.55
12:L:153:ILE:HG23	12:L:166:LEU:CD1	2.36	0.55
12:L:185:ARG:HA	12:L:188:THR:OG1	2.06	0.55
19:S:44:ARG:NH2	19:S:47:LYS:HD2	2.20	0.55
19:S:54:LYS:HB2	19:S:59:PHE:CZ	2.41	0.55
19:S:114:ARG:HG2	19:S:137:PRO:HG3	1.88	0.55
21:U:41:LEU:HB3	21:U:112:LEU:O	2.06	0.55
27:AA:34:LEU:HD23	27:AA:61:THR:O	2.05	0.55
32:FA:131:SER:HB3	32:FA:134:ALA:HB2	1.87	0.55
37:KA:29:LEU:HD13	37:KA:75:HIS:NE2	2.21	0.55
40:NA:8:ALA:O	40:NA:13:LYS:HG3	2.06	0.55
57:EB:24:PHE:CZ	57:EB:77:LEU:HD11	2.41	0.55
63:KB:99:ARG:O	63:KB:103:GLU:HG2	2.06	0.55
63:KB:123:HIS:CE1	63:KB:141:TYR:HD2	2.25	0.55
66:NB:103:ASN:HA	66:NB:106:LYS:NZ	2.21	0.55
82:DC:338:ILE:HA	82:DC:342:LEU:HD12	1.87	0.55
82:DC:418:TYR:HD2	82:DC:477:ASN:HD21	1.54	0.55
1:A:19:A:H4'	1:A:571:G:H2'	1.87	0.55
1:A:197:A:N6	58:FB:141:ARG:HH22	2.04	0.55
1:A:654:C:H5'	1:A:655:G:OP2	2.06	0.55
1:A:803:A:O2'	57:EB:103:SER:HB2	2.07	0.55
1:A:960:U:H4'	63:KB:51:GLY:C	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1149:G:H1	1:A:1628:U:H3	1.55	0.55
1:A:1215:C:OP1	1:A:1246:C:H4'	2.05	0.55
2:B:231:G:H2'	2:B:232:G:C8	2.41	0.55
2:B:268:A:OP1	19:S:47:LYS:HE2	2.07	0.55
2:B:693:A:H2'	2:B:694:C:O4'	2.06	0.55
2:B:1666:G:H4'	2:B:1742:U:O2'	2.05	0.55
2:B:1854:C:H2'	2:B:1855:U:O4'	2.06	0.55
2:B:1861:G:H4'	23:W:63:THR:HG21	1.87	0.55
2:B:2896:A:O3'	44:RA:95:VAL:HG21	2.07	0.55
3:C:61:A:OP2	39:MA:48:ARG:HD3	2.07	0.55
6:F:45:VAL:HB	6:F:88:ILE:HD12	1.87	0.55
6:F:198:LYS:HA	6:F:198:LYS:HE3	1.86	0.55
6:F:229:ALA:H	6:F:234:LYS:HE3	1.71	0.55
7:G:303:LYS:HB3	7:G:372:THR:HG22	1.86	0.55
10:J:64:LEU:HD21	10:J:106:PHE:HE2	1.70	0.55
10:J:68:PRO:HB2	10:J:71:VAL:HG22	1.88	0.55
12:L:46:LEU:HA	12:L:49:TYR:HE1	1.71	0.55
16:P:124:THR:HB	16:P:127:SER:HB2	1.88	0.55
17:Q:118:GLU:O	17:Q:122:LYS:HG2	2.07	0.55
18:R:81:VAL:O	18:R:85:TRP:HB2	2.06	0.55
22:V:68:ALA:HA	22:V:71:LEU:HD12	1.87	0.55
22:V:70:ALA:HA	22:V:73:GLN:NE2	2.20	0.55
32:FA:21:ARG:HA	32:FA:24:LYS:HG2	1.86	0.55
34:HA:53:LYS:O	34:HA:57:GLU:HG3	2.05	0.55
46:TA:67:LYS:HG3	46:TA:87:ARG:CG	2.29	0.55
48:VA:30:VAL:CG2	48:VA:31:ASP:H	2.14	0.55
56:DB:69:LEU:O	56:DB:99:GLY:HA3	2.07	0.55
57:EB:81:LEU:HD13	57:EB:90:VAL:HG11	1.88	0.55
63:KB:114:ARG:O	63:KB:118:ILE:HG13	2.07	0.55
77:YB:20:LYS:O	77:YB:26:GLN:HA	2.06	0.55
1:A:139:C:H42	1:A:175:G:H21	1.54	0.55
1:A:621:A:N3	1:A:1107:G:H1'	2.21	0.55
1:A:843:U:H2'	1:A:844:A:H8	1.70	0.55
2:B:577:C:C2'	2:B:579:G:H5"	2.35	0.55
2:B:646:A:H2'	2:B:647:A:O4'	2.06	0.55
2:B:714:G:C4	32:FA:113:LEU:HD11	2.41	0.55
2:B:965:A:H2'	2:B:966:U:H6	1.70	0.55
2:B:1317:A:H4'	20:T:18:ARG:NH2	2.07	0.55
2:B:2140:U:O2'	2:B:2141:U:H5'	2.07	0.55
2:B:2748:A:N3	9:I:36:LEU:HG	2.21	0.55
2:B:2968:G:H2'	2:B:2969:A:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:91:C:H4'	30:DA:24:SER:H	1.71	0.55
4:D:56:A:C2	15:O:138:VAL:HG21	2.41	0.55
6:F:115:ASN:OD1	6:F:124:GLY:HA2	2.06	0.55
7:G:66:LYS:HG2	7:G:70:ARG:NH2	2.22	0.55
13:M:133:THR:O	13:M:146:LEU:HA	2.06	0.55
15:O:36:VAL:HG11	15:O:109:HIS:CD2	2.41	0.55
24:X:80:ARG:O	24:X:122:HIS:HB2	2.06	0.55
26:Z:34:ALA:O	26:Z:38:ILE:HG22	2.06	0.55
27:AA:10:LYS:HD2	27:AA:13:ILE:CD1	2.36	0.55
27:AA:78:VAL:HA	27:AA:100:GLY:HA2	1.87	0.55
31:EA:14:VAL:HG13	38:LA:89:ILE:HB	1.87	0.55
31:EA:106:GLN:O	31:EA:110:ALA:HB2	2.07	0.55
48:VA:128:MET:SD	48:VA:150:ILE:HD12	2.46	0.55
54:BB:133:LYS:O	54:BB:134:LYS:HB2	2.06	0.55
63:KB:102:LEU:HD23	63:KB:108:ASP:HB2	1.88	0.55
65:MB:60:LEU:HD22	65:MB:76:VAL:HG21	1.89	0.55
68:PB:28:ILE:O	68:PB:28:ILE:HD13	2.06	0.55
83:EC:6824:C:H2'	83:EC:6825:A:H8	1.70	0.55
1:A:330:G:O2'	1:A:331:A:H5'	2.06	0.55
1:A:969:C:H4'	1:A:1104:U:O4'	2.07	0.55
1:A:1219:A:H62	1:A:1264:G:H21	1.54	0.55
1:A:1676:U:H5"	58:FB:58:LEU:HD22	1.89	0.55
2:B:145:G:H5'	19:S:56:LYS:HA	1.87	0.55
2:B:872:U:O2'	2:B:873:C:H5'	2.07	0.55
2:B:1115:G:H5"	2:B:1116:G:C5'	2.37	0.55
2:B:1129:A:H2'	2:B:1130:A:C8	2.41	0.55
2:B:1255:C:H1'	16:P:131:GLU:HG3	1.89	0.55
2:B:1541:G:H1'	2:B:1557:A:C2	2.40	0.55
2:B:1661:G:C2'	2:B:1662:G:H5'	2.36	0.55
2:B:2249:G:H2'	2:B:2250:G:C8	2.41	0.55
2:B:2345:A:H5"	35:IA:24:SER:HB3	1.87	0.55
2:B:2394:G:N3	7:G:259:HIS:HA	2.21	0.55
2:B:2895:G:H5'	2:B:3107:U:O2'	2.06	0.55
2:B:2909:U:H2'	2:B:2910:A:H5"	1.89	0.55
2:B:2922:G:C2'	2:B:2923:U:H4'	2.29	0.55
2:B:3078:U:H4'	2:B:3079:U:H5"	1.86	0.55
3:C:141:C:H2'	3:C:142:C:C6	2.42	0.55
6:F:48:ILE:O	6:F:48:ILE:HG13	2.05	0.55
8:H:156:LEU:HD22	8:H:251:THR:CG2	2.36	0.55
8:H:330:TYR:HA	11:K:45:LEU:HD11	1.89	0.55
10:J:72:ASN:H	10:J:72:ASN:ND2	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:73:SER:HA	13:M:76:ASP:HB3	1.89	0.55
13:M:90:MET:HG2	13:M:181:VAL:CA	2.35	0.55
19:S:18:VAL:O	19:S:22:LEU:HD22	2.05	0.55
30:DA:27:ARG:HG2	30:DA:78:PHE:CE1	2.41	0.55
32:FA:55:LYS:HE3	46:TA:42:ARG:HH22	1.72	0.55
53:AB:118:ALA:O	53:AB:122:VAL:HG23	2.07	0.55
57:EB:97:ARG:O	57:EB:98:ILE:HB	2.06	0.55
59:GB:78:ARG:O	59:GB:82:ARG:HB2	2.06	0.55
60:HB:39:ASN:O	60:HB:43:ILE:HG13	2.06	0.55
65:MB:34:VAL:HA	65:MB:37:ALA:HB3	1.87	0.55
67:OB:90:ALA:O	67:OB:91:LEU:O	2.24	0.55
68:PB:41:ARG:CZ	69:QB:46:PRO:HD3	2.36	0.55
74:VB:91:LEU:HA	74:VB:94:TYR:CD2	2.42	0.55
82:DC:77:LEU:HB2	82:DC:100:ILE:CB	2.35	0.55
82:DC:420:PRO:HG2	82:DC:476:HIS:HA	1.88	0.55
82:DC:702:GLY:C	82:DC:704:GLN:H	2.14	0.55
1:A:1727:G:N2	58:FB:32:GLN:HE22	2.03	0.55
2:B:424:G:H2'	2:B:425:G:C8	2.41	0.55
2:B:578:A:N6	11:K:52:GLN:HE22	2.05	0.55
2:B:805:G:C5'	8:H:74:ILE:HA	2.36	0.55
2:B:858:A:H5"	2:B:1790:G:N3	2.22	0.55
2:B:1112:A:H2'	2:B:1113:G:O4'	2.07	0.55
2:B:1263:A:N6	16:P:136:ALA:HB2	2.22	0.55
2:B:2746:A:H61	9:I:32:GLN:NE2	2.04	0.55
2:B:2897:A:H5"	44:RA:125:LYS:HG3	1.89	0.55
2:B:2999:U:H2'	2:B:3000:A:C8	2.41	0.55
3:C:36:G:H2'	3:C:37:A:C2	2.41	0.55
5:E:104:SER:HB3	5:E:128:LEU:HD21	1.89	0.55
7:G:55:THR:HB	7:G:360:ASP:HB2	1.89	0.55
10:J:131:LYS:C	10:J:133:GLU:H	2.15	0.55
11:K:144:ILE:HA	11:K:147:LEU:CD1	2.36	0.55
14:N:166:ILE:HG21	25:Y:160:ILE:HG22	1.86	0.55
15:O:54:VAL:HG22	15:O:59:ILE:HD11	1.88	0.55
19:S:190:THR:O	19:S:194:GLN:HG2	2.06	0.55
21:U:146:ILE:HD12	21:U:146:ILE:N	2.22	0.55
22:V:76:ALA:C	22:V:78:ASN:H	2.15	0.55
22:V:82:VAL:O	22:V:139:ILE:HG23	2.07	0.55
23:W:41:ILE:HG23	23:W:50:ILE:HD13	1.89	0.55
24:X:42:TRP:NE1	24:X:53:LYS:HG3	2.22	0.55
27:AA:37:ILE:HG13	27:AA:59:MET:O	2.07	0.55
28:BA:21:PHE:CD2	28:BA:29:PHE:HB2	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:83:VAL:HA	29:CA:122:ALA:O	2.07	0.55
29:CA:109:LYS:HE2	29:CA:111:ASN:HD21	1.71	0.55
41:OA:17:THR:HG22	41:OA:18:LEU:HD22	1.88	0.55
41:OA:63:ARG:O	41:OA:64:MET:HG3	2.06	0.55
43:QA:21:ARG:HD3	43:QA:22:PRO:N	2.21	0.55
53:AB:25:PHE:CD1	53:AB:29:LEU:HG	2.42	0.55
71:SB:20:THR:HA	72:TB:23:ARG:NH1	2.21	0.55
74:VB:87:PRO:O	74:VB:91:LEU:HG	2.07	0.55
75:WB:54:VAL:HG11	75:WB:88:ILE:HB	1.89	0.55
82:DC:335:LEU:HA	82:DC:338:ILE:CD1	2.30	0.55
82:DC:468:THR:HG21	82:DC:478:MET:H	1.71	0.55
82:DC:784:LEU:CD2	82:DC:794:PRO:HB3	2.37	0.55
1:A:318:U:H5"	58:FB:11:ARG:NH1	2.21	0.55
1:A:336:G:H2'	1:A:338:C:H5	1.71	0.55
1:A:611:U:H2'	1:A:612:U:H5'	1.88	0.55
1:A:969:C:O2'	1:A:1104:U:H4'	2.06	0.55
1:A:1582:U:H5"	66:NB:135:ARG:HH11	1.72	0.55
2:B:48:A:H8	2:B:48:A:OP1	1.89	0.55
2:B:346:C:OP1	8:H:53:SER:HB2	2.07	0.55
2:B:905:U:H2'	2:B:910:G:H4'	1.89	0.55
2:B:1254:C:H1'	16:P:135:THR:OG1	2.07	0.55
2:B:1639:C:OP1	38:LA:52:GLN:HG3	2.07	0.55
2:B:2131:A:H61	47:UA:18:TYR:CA	2.20	0.55
2:B:2600:C:H2'	2:B:2601:A:C8	2.41	0.55
2:B:2818:U:H5"	33:GA:2:ALA:N	2.22	0.55
2:B:3108:G:H3'	2:B:3109:G:H5"	1.89	0.55
3:C:140:G:H2'	3:C:141:C:H5'	1.88	0.55
7:G:60:LEU:HB2	7:G:72:VAL:HG11	1.89	0.55
7:G:214:MET:O	7:G:341:SER:HB2	2.07	0.55
17:Q:48:PRO:HB3	17:Q:137:GLN:HB3	1.88	0.55
18:R:46:ILE:HD11	18:R:58:ILE:HG22	1.87	0.55
23:W:67:ALA:O	23:W:71:ARG:HG3	2.07	0.55
24:X:26:ARG:HH12	24:X:28:ARG:NH2	1.82	0.55
28:BA:31:PHE:CE1	28:BA:37:ALA:HA	2.42	0.55
34:HA:31:VAL:HG12	34:HA:35:ARG:CD	2.36	0.55
34:HA:42:ILE:HA	34:HA:90:VAL:O	2.05	0.55
50:XA:73:VAL:O	50:XA:95:ALA:HB1	2.07	0.55
56:DB:135:PRO:HB3	56:DB:141:ILE:HG12	1.87	0.55
63:KB:61:THR:HG22	77:YB:32:PHE:CE2	2.42	0.55
67:OB:116:LYS:C	67:OB:117:LEU:HD13	2.32	0.55
70:RB:34:LEU:CD1	70:RB:89:ARG:HD2	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:RB:106:ILE:HG13	70:RB:107:THR:N	2.21	0.55
82:DC:468:THR:CG2	82:DC:478:MET:HE3	2.36	0.55
82:DC:760:ARG:HD2	82:DC:763:THR:OG1	2.06	0.55
83:EC:6886:A:C2'	83:EC:6887:G:H5'	2.32	0.55
1:A:16:G:H2'	1:A:17:C:C6	2.42	0.55
1:A:397:A:H4'	58:FB:50:GLY:C	2.32	0.55
1:A:429:G:OP1	1:A:439:U:H2'	2.06	0.55
1:A:1665:U:H1'	1:A:1737:G:N2	2.21	0.55
2:B:277:G:H5"	46:TA:49:GLY:HA2	1.88	0.55
2:B:374:A:O2'	2:B:376:G:H5'	2.07	0.55
2:B:821:U:H2'	2:B:822:G:C8	2.41	0.55
2:B:829:U:H1'	2:B:866:A:N1	2.22	0.55
2:B:1146:C:H5"	36:JA:47:ARG:HG3	1.89	0.55
2:B:1383:G:H2'	2:B:1384:U:O4'	2.07	0.55
2:B:2266:U:H2'	2:B:2267:C:O4'	2.07	0.55
7:G:49:TYR:HB2	7:G:80:ASP:HB3	1.88	0.55
7:G:338:LEU:HD22	7:G:338:LEU:N	2.21	0.55
8:H:2:SER:O	8:H:4:PRO:HD3	2.06	0.55
13:M:100:ASN:HB3	13:M:115:ARG:H	1.70	0.55
14:N:43:VAL:HG12	14:N:171:TRP:HD1	1.72	0.55
20:T:9:ILE:HA	20:T:118:VAL:HG22	1.89	0.55
21:U:169:THR:H	21:U:172:GLN:HE21	1.53	0.55
27:AA:79:VAL:HB	27:AA:118:VAL:HG13	1.89	0.55
31:EA:53:VAL:HG23	31:EA:57:HIS:CD2	2.42	0.55
31:EA:83:THR:C	34:HA:62:LEU:HD21	2.32	0.55
32:FA:60:TYR:CD1	32:FA:63:LYS:HB2	2.41	0.55
41:OA:4:GLY:O	41:OA:8:PHE:HD1	1.90	0.55
47:UA:54:ILE:HG23	47:UA:63:THR:CG2	2.37	0.55
50:XA:139:VAL:HG13	50:XA:141:ILE:HG13	1.87	0.55
57:EB:130:VAL:HG21	57:EB:154:LEU:HD21	1.89	0.55
59:GB:92:LYS:HA	59:GB:92:LYS:HE3	1.87	0.55
60:HB:54:TYR:HB3	60:HB:72:GLY:HA3	1.89	0.55
66:NB:42:GLU:HG3	66:NB:45:ARG:NH2	2.21	0.55
67:OB:46:LEU:H	67:OB:46:LEU:HD12	1.72	0.55
69:QB:13:ASP:HA	69:QB:16:ASN:HD22	1.72	0.55
82:DC:508:LEU:HD23	82:DC:545:LEU:HD21	1.89	0.55
82:DC:574:THR:HG23	82:DC:689:LEU:HD12	1.88	0.55
1:A:75:U:H3'	1:A:76:A:H5"	1.89	0.55
1:A:312:A:N3	1:A:314:C:H2'	2.22	0.55
1:A:373:G:O5'	61:IB:96:LYS:HA	2.06	0.55
2:B:47:C:O5'	2:B:48:A:H2'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:69:C:H2'	2:B:70:A:O4'	2.06	0.55
2:B:279:U:H2'	2:B:280:U:C4'	2.37	0.55
2:B:623:U:H4'	37:KA:86:ARG:NH2	2.22	0.55
2:B:797:U:H2'	2:B:798:G:C8	2.41	0.55
2:B:879:U:O2'	21:U:131:ARG:HB3	2.07	0.55
2:B:951:A:H2'	2:B:952:A:C8	2.42	0.55
2:B:973:A:H2'	2:B:974:G:C4'	2.36	0.55
2:B:1125:U:OP1	14:N:15:LYS:HB2	2.07	0.55
2:B:1306:G:N1	2:B:2367:A:H1'	2.21	0.55
2:B:1317:A:OP2	2:B:1317:A:H3'	2.07	0.55
2:B:1729:A:H3'	2:B:1730:G:C5'	2.37	0.55
2:B:1908:A:H2	2:B:2336:U:H5'	1.72	0.55
2:B:2424:A:H62	2:B:2605:G:N2	1.95	0.55
2:B:2641:U:H4'	33:GA:7:HIS:NE2	2.22	0.55
2:B:2662:G:H2'	2:B:2663:G:H8	1.69	0.55
2:B:2686:A:H2'	2:B:2687:G:O4'	2.07	0.55
2:B:2755:C:O2'	2:B:2756:C:H5'	2.06	0.55
2:B:2841:G:H3'	2:B:2842:U:C5'	2.37	0.55
2:B:3055:U:H1'	2:B:3057:U:OP1	2.07	0.55
2:B:3072:C:H2'	2:B:3073:A:O4'	2.07	0.55
2:B:3122:A:O2'	2:B:3123:A:H5'	2.06	0.55
2:B:3314:A:H2'	2:B:3315:G:H8	1.70	0.55
2:B:3354:U:H5"	2:B:3356:G:H5'	1.89	0.55
3:C:22:U:H5'	30:DA:16:ARG:CD	2.36	0.55
6:F:21:ARG:HD2	6:F:22:LEU:N	2.22	0.55
8:H:31:ARG:HD2	22:V:24:VAL:HB	1.88	0.55
8:H:280:ILE:O	22:V:123:THR:HB	2.07	0.55
15:O:114:ILE:HG22	15:O:115:LYS:N	2.22	0.55
16:P:122:GLY:O	16:P:123:ARG:HD3	2.07	0.55
19:S:84:PRO:HA	19:S:87:GLN:CG	2.36	0.55
22:V:23:ASN:CG	22:V:26:LEU:HB3	2.32	0.55
22:V:84:VAL:HG22	22:V:141:ARG:HH21	1.72	0.55
22:V:173:GLU:HA	32:FA:51:GLY:C	2.32	0.55
28:BA:56:ARG:HA	28:BA:56:ARG:NE	2.22	0.55
38:LA:3:GLN:CG	38:LA:30:LEU:HB3	2.37	0.55
49:WA:191:ASP:O	53:AB:222:VAL:HA	2.07	0.55
53:AB:122:VAL:O	53:AB:126:VAL:HG23	2.07	0.55
55:CB:163:SER:HA	78:ZB:54:LEU:CD1	2.37	0.55
56:DB:49:VAL:HB	56:DB:115:LYS:HB3	1.89	0.55
57:EB:56:LYS:HD2	57:EB:88:ARG:HH12	1.71	0.55
58:FB:21:PHE:O	58:FB:22:ARG:HG2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:129:ILE:O	59:GB:142:ASN:HA	2.07	0.55
65:MB:25:LEU:HD22	65:MB:87:PRO:HG2	1.89	0.55
72:TB:111:MET:HE1	72:TB:119:LYS:HD2	1.87	0.55
82:DC:379:MET:HB2	82:DC:401:PHE:HB2	1.89	0.55
1:A:1080:U:H2'	1:A:1081:A:H5'	1.89	0.54
1:A:1656:U:O5'	1:A:1657:U:H5"	2.07	0.54
1:A:1731:A:H2'	1:A:1732:A:O4'	2.06	0.54
2:B:640:U:H2'	2:B:641:C:C6	2.42	0.54
2:B:1449:A:H1'	2:B:2983:C:C5	2.42	0.54
2:B:1520:G:H5"	29:CA:69:SER:CB	2.31	0.54
2:B:3030:G:H3'	2:B:3031:G:H8	1.72	0.54
7:G:209:PHE:HB3	7:G:213:GLU:OE2	2.05	0.54
8:H:65:TRP:HE3	8:H:71:VAL:HG11	1.71	0.54
13:M:22:SER:H	18:R:8:LYS:CG	2.20	0.54
17:Q:46:ILE:CG2	17:Q:49:ARG:HB2	2.36	0.54
20:T:126:VAL:HG13	20:T:127:LEU:H	1.72	0.54
21:U:94:LEU:HD23	21:U:148:LEU:CD2	2.37	0.54
27:AA:104:ASN:HD21	27:AA:106:LYS:HG3	1.72	0.54
34:HA:53:LYS:HG2	34:HA:57:GLU:OE1	2.06	0.54
48:VA:43:LYS:HA	48:VA:46:ARG:HG2	1.88	0.54
48:VA:142:PRO:HA	82:DC:183:GLU:CD	2.32	0.54
49:WA:10:ARG:HA	49:WA:10:ARG:HE	1.72	0.54
55:CB:128:ASN:HD22	55:CB:129:PRO:HD2	1.71	0.54
55:CB:148:ARG:HB3	78:ZB:22:ARG:HH22	1.72	0.54
57:EB:17:GLU:HG3	57:EB:43:PHE:CZ	2.41	0.54
59:GB:140:ILE:HG12	59:GB:159:ALA:CB	2.37	0.54
60:HB:87:VAL:H	60:HB:88:PRO:HD3	1.69	0.54
67:OB:88:VAL:O	67:OB:89:SER:C	2.50	0.54
68:PB:126:ARG:HE	68:PB:133:VAL:HA	1.72	0.54
82:DC:28:VAL:HG13	82:DC:29:ASP:N	2.22	0.54
82:DC:323:VAL:HG12	82:DC:324:MET:HE2	1.88	0.54
82:DC:728:VAL:HG21	82:DC:802:SER:HB2	1.88	0.54
82:DC:744:TYR:HA	82:DC:747:LEU:HD23	1.89	0.54
82:DC:804:LEU:HD11	82:DC:814:LYS:CB	2.35	0.54
83:EC:6912:G:H2'	83:EC:6913:U:C4'	2.37	0.54
1:A:112:A:O2'	61:IB:67:ARG:HG2	2.07	0.54
1:A:230:C:H3'	1:A:231:U:C5'	2.36	0.54
1:A:317:C:H4'	1:A:354:C:O2'	2.07	0.54
1:A:354:C:OP1	58:FB:16:ALA:HB2	2.08	0.54
1:A:680:U:C2'	1:A:681:U:H5'	2.35	0.54
2:B:389:A:H1'	21:U:101:ASN:OD1	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:714:G:N2	32:FA:72:VAL:HG11	2.21	0.54
2:B:1052:U:O2	4:D:103:A:H4'	2.06	0.54
2:B:1311:G:O5'	2:B:1311:G:H8	1.90	0.54
2:B:1370:G:P	32:FA:16:SER:HB2	2.46	0.54
2:B:1686:U:H5	26:Z:82:LYS:HE2	1.71	0.54
2:B:1694:U:H4'	38:LA:24:LYS:HG3	1.88	0.54
2:B:2076:G:C3'	2:B:2077:U:H5"	2.37	0.54
2:B:2132:C:H2'	2:B:2133:U:H6	1.70	0.54
2:B:2544:U:H2'	2:B:2545:C:C6	2.42	0.54
2:B:2574:G:C8	31:EA:56:LYS:HD3	2.42	0.54
2:B:2885:C:H2'	2:B:2886:U:C6	2.42	0.54
2:B:3320:A:H2'	2:B:3321:C:O4'	2.08	0.54
4:D:23:A:H2'	4:D:24:A:C8	2.42	0.54
6:F:112:ILE:HG13	6:F:135:ILE:HG23	1.90	0.54
7:G:122:TRP:HA	7:G:125:SER:HB3	1.90	0.54
8:H:153:SER:HA	8:H:252:GLU:HB2	1.89	0.54
13:M:117:PHE:O	13:M:118:LEU:HB2	2.08	0.54
14:N:87:LEU:HD11	14:N:136:PHE:CE2	2.43	0.54
16:P:106:LEU:N	16:P:142:ARG:HG3	2.20	0.54
20:T:20:ALA:O	20:T:84:LEU:HD21	2.08	0.54
22:V:65:SER:HB3	22:V:90:ASP:OD2	2.06	0.54
24:X:29:ILE:CG2	24:X:37:ALA:HA	2.37	0.54
25:Y:57:TYR:OH	25:Y:87:LYS:HD3	2.07	0.54
25:Y:76:ILE:HG22	25:Y:77:ASN:H	1.72	0.54
29:CA:43:ALA:N	29:CA:44:PRO:HD3	2.23	0.54
30:DA:23:PRO:HD2	30:DA:26:GLN:NE2	2.22	0.54
38:LA:54:ILE:HD11	38:LA:78:GLY:HA2	1.89	0.54
39:MA:89:ARG:HB3	39:MA:89:ARG:NH1	2.19	0.54
48:VA:77:LEU:HB3	48:VA:78:PRO:CD	2.38	0.54
52:ZA:38:VAL:HG22	52:ZA:39:THR:N	2.22	0.54
56:DB:220:LYS:HE3	56:DB:220:LYS:O	2.08	0.54
57:EB:138:LYS:HB2	72:TB:54:ASP:HB3	1.88	0.54
66:NB:97:VAL:HG12	66:NB:98:ASP:N	2.22	0.54
73:UB:52:ILE:HD11	73:UB:77:ILE:HG12	1.89	0.54
77:YB:35:VAL:HG22	77:YB:79:PHE:HB2	1.89	0.54
82:DC:734:GLN:HE21	82:DC:765:LEU:HG	1.72	0.54
1:A:445:A:H1'	1:A:525:A:OP1	2.08	0.54
1:A:1569:A:H2'	1:A:1570:A:H8	1.73	0.54
2:B:44:U:H4'	46:TA:54:THR:CG2	2.37	0.54
2:B:65:A:HO2'	17:Q:99:HIS:HE2	1.55	0.54
2:B:130:A:H2'	2:B:131:C:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:221:A:OP1	8:H:199:TRP:HZ2	1.90	0.54
2:B:348:A:H4'	2:B:367:A:N6	2.20	0.54
2:B:421:G:H3'	2:B:421:G:N3	2.23	0.54
2:B:759:U:C2'	2:B:760:G:H5'	2.37	0.54
2:B:794:U:H4'	2:B:1372:C:OP1	2.07	0.54
2:B:839:C:H1'	2:B:1724:U:OP2	2.07	0.54
2:B:1708:C:H2'	2:B:1709:C:C6	2.42	0.54
2:B:1801:U:H2'	2:B:1802:C:C6	2.42	0.54
2:B:2232:A:H1'	2:B:2429:G:O4'	2.08	0.54
2:B:2401:A:O3'	8:H:68:GLY:HA2	2.07	0.54
2:B:3369:G:H2'	7:G:380:MET:HE3	1.88	0.54
3:C:51:G:H4'	43:QA:21:ARG:NH1	2.22	0.54
6:F:41:ILE:HG12	6:F:42:ARG:N	2.22	0.54
7:G:102:LEU:O	7:G:103:THR:HG23	2.08	0.54
9:I:163:LEU:HD11	9:I:173:VAL:HG11	1.88	0.54
12:L:203:VAL:CG2	12:L:208:GLU:HA	2.35	0.54
14:N:97:LEU:HD21	14:N:126:ALA:HB2	1.88	0.54
23:W:183:ALA:HA	23:W:186:LYS:HB3	1.88	0.54
25:Y:27:LEU:HA	25:Y:30:TYR:CD2	2.43	0.54
26:Z:78:TYR:O	26:Z:82:LYS:HB2	2.07	0.54
30:DA:24:SER:C	30:DA:26:GLN:H	2.15	0.54
31:EA:4:PHE:O	31:EA:9:LYS:HG2	2.07	0.54
49:WA:115:ILE:HG13	49:WA:121:MET:O	2.06	0.54
49:WA:214:ALA:HB2	49:WA:220:ILE:HG12	1.89	0.54
52:ZA:227:PRO:HA	52:ZA:230:TRP:CG	2.42	0.54
54:BB:71:LYS:HA	54:BB:76:VAL:O	2.07	0.54
63:KB:146:ALA:O	63:KB:150:VAL:HG12	2.07	0.54
66:NB:7:VAL:HG12	66:NB:95:LYS:CE	2.37	0.54
77:YB:50:ALA:O	77:YB:51:GLN:HB2	2.07	0.54
1:A:214:G:H21	1:A:251:A:H62	1.54	0.54
1:A:385:A:H5"	58:FB:22:ARG:CB	2.36	0.54
1:A:757:A:H5"	54:BB:22:LYS:HE2	1.88	0.54
1:A:1340:U:C6	1:A:1378:U:H4'	2.41	0.54
1:A:1535:U:N3	55:CB:187:ILE:HA	2.22	0.54
2:B:123:A:OP1	12:L:105:LYS:HG2	2.08	0.54
2:B:127:G:H2'	2:B:128:G:O4'	2.07	0.54
2:B:737:G:H2'	2:B:738:A:C8	2.42	0.54
2:B:1358:C:H2'	2:B:1359:C:H6	1.73	0.54
2:B:2424:A:H1'	19:S:78:GLY:N	2.22	0.54
2:B:2628:A:C3'	2:B:2629:U:H5"	2.37	0.54
2:B:3061:G:H2'	2:B:3062:G:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3236:U:H2'	2:B:3237:U:C6	2.42	0.54
7:G:48:GLY:HA3	7:G:338:LEU:HD21	1.89	0.54
7:G:172:ALA:O	7:G:174:LYS:HE3	2.08	0.54
8:H:31:ARG:CZ	22:V:23:ASN:HA	2.37	0.54
8:H:39:PHE:HE1	8:H:236:LEU:HA	1.73	0.54
12:L:78:PHE:O	12:L:79:GLN:HG3	2.07	0.54
13:M:86:TYR:N	13:M:187:ILE:HG13	2.22	0.54
17:Q:101:ARG:HG2	17:Q:102:GLN:N	2.23	0.54
20:T:126:VAL:HG21	24:X:170:THR:HG22	1.89	0.54
22:V:152:HIS:HB3	22:V:162:ALA:HB3	1.88	0.54
39:MA:10:ARG:HD3	39:MA:57:VAL:CG1	2.38	0.54
46:TA:67:LYS:CG	46:TA:87:ARG:HG3	2.29	0.54
48:VA:165:VAL:CG1	48:VA:170:ALA:HB2	2.37	0.54
52:ZA:65:GLU:HB2	52:ZA:68:ILE:HG13	1.88	0.54
52:ZA:178:ILE:HG23	52:ZA:196:VAL:HG12	1.89	0.54
69:QB:35:ASP:H	69:QB:53:TRP:HZ2	1.54	0.54
74:VB:23:PHE:HE2	74:VB:75:VAL:HG12	1.73	0.54
77:YB:14:SER:HA	77:YB:17:ARG:HG2	1.89	0.54
82:DC:86:VAL:HA	82:DC:89:ILE:HD12	1.89	0.54
1:A:302:U:H1'	1:A:334:G:H22	1.72	0.54
1:A:310:C:H4'	73:UB:33:LEU:HD21	1.90	0.54
2:B:208:C:H2'	2:B:209:A:H5'	1.88	0.54
2:B:282:G:O6	19:S:181:ASN:HB3	2.07	0.54
2:B:365:A:H1'	8:H:82:THR:O	2.08	0.54
2:B:818:C:H4'	41:OA:10:LYS:HD3	1.88	0.54
2:B:1344:G:C2	2:B:1345:G:H1'	2.42	0.54
2:B:1383:G:OP1	8:H:203:ARG:HB2	2.07	0.54
2:B:1391:C:O2	36:JA:103:LYS:HB3	2.08	0.54
2:B:2128:C:H4'	2:B:2280:A:O2'	2.06	0.54
2:B:2228:A:H2'	2:B:2229:A:C8	2.43	0.54
2:B:2434:U:H5"	19:S:24:ARG:HD2	1.88	0.54
2:B:2533:G:H2'	2:B:2534:G:H8	1.72	0.54
2:B:2842:U:H3'	2:B:2844:C:H41	1.72	0.54
2:B:2895:G:H5"	44:RA:102:ARG:HH21	1.72	0.54
2:B:3054:U:H2'	2:B:3055:U:C5	2.43	0.54
7:G:56:ILE:HG22	7:G:76:VAL:HG22	1.90	0.54
7:G:111:SER:HB2	7:G:163:HIS:HE1	1.71	0.54
7:G:339:ARG:NE	7:G:342:LEU:HD21	2.22	0.54
8:H:283:THR:HB	8:H:289:ILE:HD11	1.89	0.54
11:K:40:LYS:O	11:K:44:ILE:HG13	2.07	0.54
11:K:91:GLY:O	11:K:92:ILE:HG13	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:72:PRO:HB2	12:L:74:THR:HG22	1.89	0.54
12:L:153:ILE:CD1	12:L:177:TYR:HB2	2.38	0.54
12:L:162:LEU:HD23	19:S:7:LEU:HD22	1.90	0.54
15:O:135:GLY:O	15:O:138:VAL:HG23	2.08	0.54
19:S:102:ALA:O	19:S:106:VAL:HG22	2.07	0.54
19:S:136:ASP:O	19:S:142:ILE:HB	2.07	0.54
21:U:126:ARG:HA	21:U:140:GLU:CA	2.34	0.54
25:Y:105:PHE:O	25:Y:109:VAL:HG23	2.07	0.54
50:XA:50:VAL:HG22	67:OB:109:LEU:CD2	2.38	0.54
54:BB:123:LEU:HB3	54:BB:159:THR:OG1	2.08	0.54
56:DB:122:GLU:O	56:DB:126:ASP:HB3	2.08	0.54
57:EB:172:VAL:O	57:EB:176:LEU:HG	2.07	0.54
66:NB:35:PRO:CD	69:QB:8:ASP:HA	2.38	0.54
70:RB:71:PRO:CA	79:AC:40:ARG:HH22	2.20	0.54
72:TB:79:PHE:O	72:TB:125:ILE:HG22	2.06	0.54
74:VB:106:GLN:O	74:VB:110:GLN:HG3	2.08	0.54
75:WB:41:ILE:HD11	75:WB:43:ASP:HB2	1.89	0.54
79:AC:5:ASN:HA	79:AC:7:TRP:CZ3	2.41	0.54
82:DC:488:VAL:HG12	82:DC:796:MET:HB2	1.88	0.54
1:A:67:A:O2'	1:A:69:G:H5"	2.08	0.54
1:A:788:A:C6	54:BB:19:LEU:HD13	2.42	0.54
1:A:1180:C:H2'	1:A:1181:U:O4'	2.07	0.54
2:B:337:G:H1'	8:H:48:GLN:HB3	1.89	0.54
2:B:500:C:C5'	10:J:82:ARG:HG3	2.35	0.54
2:B:588:G:H21	2:B:611:A:H5"	1.71	0.54
2:B:750:G:C5'	33:GA:44:LYS:HG3	2.37	0.54
2:B:1215:U:H3	2:B:1290:A:H61	1.56	0.54
2:B:1456:A:C8	35:IA:26:LYS:HE2	2.43	0.54
2:B:1804:A:H1'	38:LA:78:GLY:O	2.07	0.54
2:B:2416:U:H1'	2:B:2967:A:N3	2.22	0.54
2:B:2754:G:H3'	2:B:2755:C:C5'	2.37	0.54
2:B:2882:U:O4'	7:G:264:VAL:HG12	2.07	0.54
2:B:3150:A:H4'	7:G:129:ALA:HA	1.89	0.54
2:B:3343:G:C4'	2:B:3362:A:H61	2.11	0.54
3:C:45:C:C5'	43:QA:15:LYS:HG3	2.36	0.54
8:H:3:ARG:HD3	8:H:22:LEU:HD23	1.89	0.54
12:L:185:ARG:O	12:L:189:LEU:HG	2.08	0.54
13:M:165:CYS:CB	13:M:179:ILE:H	2.21	0.54
17:Q:122:LYS:HG3	17:Q:145:PHE:CZ	2.42	0.54
20:T:54:TYR:CE2	20:T:145:VAL:HB	2.42	0.54
21:U:20:SER:HA	21:U:145:HIS:CE1	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:117:ARG:HH21	24:X:119:ARG:HH21	1.53	0.54
27:AA:19:VAL:HG22	27:AA:36:ILE:HG22	1.88	0.54
31:EA:14:VAL:O	38:LA:89:ILE:HD12	2.07	0.54
34:HA:16:LEU:HD21	34:HA:96:GLY:O	2.07	0.54
34:HA:17:VAL:HG23	34:HA:18:ILE:HD12	1.90	0.54
36:JA:66:LEU:CD2	36:JA:72:LYS:HG3	2.32	0.54
36:JA:120:THR:C	36:JA:122:PRO:HD3	2.31	0.54
38:LA:3:GLN:HG2	38:LA:30:LEU:N	2.22	0.54
40:NA:56:ARG:O	40:NA:60:LEU:HB2	2.07	0.54
40:NA:89:GLU:O	40:NA:93:ILE:HG12	2.07	0.54
41:OA:47:TYR:HD1	41:OA:49:TRP:HE1	1.54	0.54
50:XA:112:THR:O	50:XA:115:PHE:HB2	2.08	0.54
56:DB:6:SER:OG	56:DB:112:VAL:HG22	2.07	0.54
56:DB:57:ASP:OD2	56:DB:61:PHE:HB2	2.06	0.54
63:KB:98:VAL:HG12	63:KB:115:LEU:HB2	1.90	0.54
72:TB:10:ALA:HB1	72:TB:27:ILE:HD12	1.89	0.54
73:UB:103:LEU:HD13	73:UB:104:LEU:N	2.23	0.54
82:DC:17:THR:HG22	82:DC:346:VAL:HG21	1.88	0.54
82:DC:155:VAL:H	82:DC:202:VAL:HG21	1.72	0.54
82:DC:495:VAL:HG11	82:DC:501:LEU:HA	1.89	0.54
1:A:140:A:H4’	1:A:141:U:H5’	1.90	0.54
1:A:482:U:H2’	1:A:483:A:C8	2.43	0.54
1:A:532:U:C4’	74:VB:62:THR:HG21	2.37	0.54
2:B:412:G:H2’	2:B:413:U:C6	2.43	0.54
2:B:1169:A:H4’	11:K:219:LYS:HD3	1.90	0.54
2:B:1293:U:H2’	2:B:1294:A:C8	2.43	0.54
2:B:1894:U:H2’	2:B:1895:A:H5”	1.89	0.54
3:C:37:A:H5”	3:C:39:G:C5’	2.38	0.54
4:D:55:A:H2’	4:D:56:A:C8	2.43	0.54
5:E:110:PHE:HB3	5:E:135:PRO:HA	1.89	0.54
6:F:58:LEU:CD2	6:F:77:ILE:HA	2.37	0.54
7:G:232:ARG:HD2	7:G:268:GLY:O	2.07	0.54
8:H:34:ILE:HG12	8:H:120:TYR:CE1	2.42	0.54
8:H:309:ARG:HB3	8:H:312:VAL:CG1	2.38	0.54
9:I:205:SER:HA	9:I:208:MET:SD	2.48	0.54
12:L:190:VAL:O	12:L:191:ASN:HB2	2.08	0.54
13:M:85:GLY:HA3	13:M:187:ILE:HB	1.90	0.54
17:Q:67:ARG:CB	32:FA:105:LEU:HG	2.32	0.54
19:S:27:VAL:HG23	19:S:129:TYR:HE2	1.73	0.54
19:S:139:HIS:O	19:S:143:ARG:HG3	2.08	0.54
19:S:150:TRP:HE3	19:S:156:HIS:HE1	1.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:59:PRO:CB	21:U:78:VAL:HG21	2.38	0.54
22:V:138:LEU:HD11	22:V:140:LEU:HG	1.88	0.54
31:EA:22:LYS:CE	31:EA:129:TRP:HB3	2.36	0.54
35:IA:29:ALA:HB3	35:IA:60:TRP:CZ2	2.43	0.54
36:JA:9:ILE:H	36:JA:9:ILE:HD12	1.73	0.54
36:JA:18:LYS:O	36:JA:50:ILE:HD12	2.07	0.54
40:NA:15:LYS:HE2	40:NA:17:VAL:HG22	1.90	0.54
53:AB:40:ARG:HG2	70:RB:110:PRO:HB3	1.89	0.54
54:BB:87:MET:HA	54:BB:87:MET:HE2	1.89	0.54
54:BB:87:MET:HE1	54:BB:236:ILE:HD13	1.89	0.54
55:CB:37:GLN:HB3	66:NB:53:LEU:HD22	1.89	0.54
55:CB:44:ASN:O	55:CB:45:LYS:HB2	2.07	0.54
57:EB:39:ARG:HG3	57:EB:40:PRO:HD3	1.90	0.54
69:QB:77:ASN:O	69:QB:81:GLY:HA3	2.08	0.54
70:RB:52:LYS:HB3	70:RB:93:LEU:CD2	2.34	0.54
71:SB:25:LYS:HG3	71:SB:27:ASP:OD2	2.08	0.54
73:UB:87:VAL:HA	73:UB:124:VAL:CG2	2.37	0.54
78:ZB:26:THR:O	78:ZB:44:VAL:HG22	2.07	0.54
82:DC:545:LEU:HD12	82:DC:549:HIS:CB	2.38	0.54
1:A:98:U:H2'	1:A:99:C:C6	2.43	0.54
1:A:391:A:H4'	1:A:1730:A:O3'	2.08	0.54
1:A:740:A:C3'	1:A:741:C:H5"	2.38	0.54
1:A:752:A:H2	1:A:797:G:H22	1.55	0.54
1:A:1542:G:N2	1:A:1568:C:H1'	2.23	0.54
2:B:58:G:H5'	19:S:154:PRO:HB2	1.89	0.54
2:B:562:C:H5"	24:X:71:LYS:CG	2.38	0.54
2:B:578:A:C4'	8:H:324:LEU:HD21	2.36	0.54
2:B:1315:U:H4'	2:B:1317:A:H5"	1.88	0.54
2:B:1796:G:C1'	6:F:190:ARG:HH12	2.21	0.54
2:B:2927:C:H2'	2:B:2928:C:C6	2.43	0.54
7:G:116:ARG:O	7:G:175:LYS:HE2	2.08	0.54
7:G:149:ALA:HA	7:G:152:LYS:HD2	1.88	0.54
8:H:104:LYS:HA	8:H:104:LYS:HZ3	1.71	0.54
10:J:110:LYS:O	10:J:114:LYS:HG2	2.08	0.54
14:N:166:ILE:CG2	25:Y:160:ILE:HG22	2.38	0.54
15:O:15:GLU:HB3	15:O:130:VAL:O	2.08	0.54
15:O:27:GLY:O	15:O:30:LEU:HB3	2.08	0.54
17:Q:107:GLU:OE1	17:Q:108:ILE:HD13	2.07	0.54
21:U:26:PHE:CE1	21:U:120:ASN:HA	2.40	0.54
24:X:10:ILE:HG23	24:X:25:PHE:O	2.08	0.54
24:X:82:ASP:O	24:X:120:SER:HB3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:58:TYR:HD1	34:HA:61:MET:HE3	1.73	0.54
36:JA:21:HIS:CG	36:JA:24:ARG:HD2	2.43	0.54
38:LA:57:LEU:HD22	38:LA:61:GLN:O	2.07	0.54
46:TA:35:LEU:O	46:TA:36:PHE:HB2	2.06	0.54
52:ZA:226:THR:O	52:ZA:230:TRP:N	2.41	0.54
53:AB:92:GLN:NE2	53:AB:92:GLN:H	2.06	0.54
60:HB:93:GLN:HG3	60:HB:94:GLU:H	1.72	0.54
67:OB:93:LEU:O	67:OB:95:ARG:N	2.41	0.54
69:QB:27:LYS:NZ	69:QB:27:LYS:HB3	2.23	0.54
80:BC:49:LEU:HD21	80:BC:55:ARG:HB2	1.89	0.54
82:DC:319:LEU:O	82:DC:323:VAL:HG23	2.07	0.54
2:B:232:G:H2'	2:B:233:C:C6	2.42	0.54
2:B:610:G:N3	8:H:313:LEU:HB2	2.23	0.54
2:B:1254:C:C4'	16:P:135:THR:HG21	2.38	0.54
2:B:1649:U:H2'	2:B:1650:G:O4'	2.08	0.54
2:B:1666:G:O2'	2:B:1743:G:H5'	2.07	0.54
2:B:1683:A:H2'	2:B:1684:U:H6	1.73	0.54
2:B:1801:U:H2'	2:B:1802:C:H6	1.73	0.54
2:B:1896:A:H61	2:B:2339:C:H42	1.53	0.54
2:B:2538:U:O2'	2:B:2539:C:H5'	2.07	0.54
2:B:2641:U:H4'	33:GA:7:HIS:CD2	2.43	0.54
2:B:2948:C:O2'	7:G:242:THR:HA	2.07	0.54
2:B:3099:C:N4	2:B:3135:U:H3	2.05	0.54
2:B:3183:A:O2'	2:B:3184:A:H5'	2.08	0.54
3:C:131:A:C2'	3:C:132:G:H5'	2.38	0.54
4:D:56:A:H2	15:O:138:VAL:HG21	1.72	0.54
8:H:133:SER:O	8:H:137:ALA:HB2	2.07	0.54
8:H:238:LEU:HD23	8:H:248:VAL:HG21	1.89	0.54
11:K:222:HIS:HE1	11:K:224:ILE:HD12	1.73	0.54
12:L:116:VAL:HG22	12:L:121:SER:HB2	1.90	0.54
12:L:163:VAL:O	12:L:163:VAL:HG13	2.08	0.54
14:N:53:VAL:HA	14:N:133:GLN:O	2.08	0.54
14:N:168:SER:HA	25:Y:160:ILE:O	2.08	0.54
18:R:123:LEU:HD13	20:T:194:LEU:HD23	1.88	0.54
19:S:114:ARG:HG3	19:S:151:ILE:HG22	1.88	0.54
23:W:120:TYR:O	23:W:124:TYR:HB2	2.07	0.54
32:FA:75:LEU:HG	32:FA:114:GLY:CA	2.38	0.54
37:KA:52:VAL:HA	37:KA:66:VAL:HG22	1.90	0.54
39:MA:45:LYS:NZ	39:MA:45:LYS:HB3	2.22	0.54
40:NA:40:VAL:O	40:NA:44:VAL:HG23	2.08	0.54
46:TA:70:LEU:HD23	46:TA:91:PHE:HZ	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:73:LEU:HD23	49:WA:80:ALA:HB2	1.90	0.54
49:WA:152:SER:H	49:WA:173:GLY:HA2	1.73	0.54
54:BB:64:ILE:HG23	54:BB:69:HIS:HD2	1.72	0.54
55:CB:92:ARG:NH2	55:CB:169:ASN:HA	2.18	0.54
56:DB:73:ILE:HD12	56:DB:75:LEU:HD21	1.90	0.54
63:KB:98:VAL:HG21	63:KB:118:ILE:HD12	1.89	0.54
65:MB:87:PRO:HG3	65:MB:112:LEU:HD21	1.90	0.54
71:SB:53:TYR:CE1	71:SB:72:LEU:HB3	2.43	0.54
73:UB:125:VAL:C	73:UB:132:LEU:HD23	2.33	0.54
74:VB:94:TYR:HD2	74:VB:96:LEU:HD13	1.73	0.54
1:A:93:A:C8	1:A:399:A:H5"	2.43	0.54
1:A:241:U:OP1	56:DB:216:LEU:HD21	2.08	0.54
1:A:307:G:OP1	61:IB:103:ARG:HD3	2.08	0.54
1:A:462:G:H2'	1:A:463:U:H6	1.68	0.54
1:A:648:G:H2'	1:A:649:U:C6	2.43	0.54
1:A:1048:G:O3'	77:YB:69:GLY:HA3	2.08	0.54
2:B:759:U:O2'	2:B:760:G:H5'	2.08	0.54
2:B:905:U:O2	2:B:911:C:H5'	2.07	0.54
2:B:1436:U:O5'	2:B:1437:C:H5"	2.07	0.54
2:B:2442:G:H2'	2:B:2443:A:C5'	2.23	0.54
2:B:2694:A:H2'	2:B:2695:A:O4'	2.07	0.54
2:B:2703:A:H5"	2:B:2704:A:H5'	1.88	0.54
2:B:3013:U:H5"	2:B:3130:A:O2'	2.08	0.54
2:B:3099:C:H2'	2:B:3100:U:C6	2.42	0.54
2:B:3133:C:C3'	2:B:3134:A:H5"	2.38	0.54
5:E:114:GLU:N	5:E:139:SER:HB2	2.21	0.54
6:F:227:ARG:CB	6:F:239:ALA:HB2	2.25	0.54
7:G:114:VAL:HG13	7:G:163:HIS:CG	2.42	0.54
7:G:382:THR:O	7:G:383:LEU:HD23	2.08	0.54
8:H:11:LEU:HD21	8:H:155:ASP:CB	2.37	0.54
8:H:334:PHE:HA	8:H:339:LEU:CD1	2.36	0.54
9:I:41:LYS:NZ	25:Y:93:VAL:HG11	2.22	0.54
10:J:66:SER:HB3	10:J:76:LEU:HD23	1.90	0.54
12:L:149:LYS:N	12:L:201:THR:HA	2.20	0.54
13:M:106:LYS:HB3	13:M:111:PHE:HE2	1.72	0.54
15:O:96:PHE:CE1	15:O:159:THR:HB	2.42	0.54
28:BA:47:ARG:HH11	28:BA:58:HIS:HB2	1.73	0.54
28:BA:49:ILE:HG22	28:BA:51:TRP:CD1	2.42	0.54
29:CA:139:ILE:HG23	29:CA:140:GLY:H	1.73	0.54
38:LA:8:ARG:HD3	38:LA:32:ALA:O	2.07	0.54
46:TA:17:CYS:HA	46:TA:19:LYS:NZ	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:41:THR:CG2	49:WA:62:LYS:HA	2.38	0.54
52:ZA:82:ASN:HD22	52:ZA:83:ILE:H	1.56	0.54
53:AB:138:VAL:HG22	53:AB:184:ILE:HD12	1.90	0.54
55:CB:116:HIS:HB3	75:WB:98:GLN:HE21	1.73	0.54
58:FB:10:LYS:HG3	58:FB:11:ARG:H	1.71	0.54
67:OB:19:ARG:HG3	67:OB:20:TYR:CD1	2.35	0.54
67:OB:41:ILE:HG22	67:OB:42:GLN:N	2.23	0.54
82:DC:143:LEU:HD11	82:DC:189:VAL:CG2	2.37	0.54
82:DC:159:LYS:HG2	84:DC:901:GDP:C6	2.43	0.54
82:DC:797:VAL:HA	86:DC:903:SO1:H54	1.90	0.54
1:A:1034:C:O3’	63:KB:2:GLY:HA3	2.08	0.53
1:A:1072:C:OP1	77:YB:22:LYS:HD3	2.09	0.53
2:B:60:A:H2’	2:B:61:A:C8	2.42	0.53
2:B:74:G:OP1	17:Q:104:ARG:HB3	2.08	0.53
2:B:210:U:H4’	8:H:217:LYS:O	2.08	0.53
2:B:506:U:H2’	2:B:507:U:O4’	2.07	0.53
2:B:1368:U:C2’	2:B:1369:A:H5’	2.38	0.53
2:B:1731:A:C2’	2:B:1732:U:H5’	2.38	0.53
2:B:2350:C:H2’	2:B:2351:U:O4’	2.08	0.53
2:B:2372:A:H4’	2:B:2373:A:H5’	1.90	0.53
2:B:2547:A:H5’	6:F:93:LYS:NZ	2.23	0.53
2:B:2618:G:H3’	14:N:116:ARG:HH21	1.73	0.53
2:B:2699:G:H1’	25:Y:8:ARG:NH1	2.23	0.53
2:B:2896:A:H5”	44:RA:124:LYS:HZ1	1.70	0.53
2:B:3149:G:H2’	2:B:3150:A:C8	2.43	0.53
2:B:3207:U:O2’	2:B:3208:G:H3’	2.07	0.53
2:B:3369:G:H5”	28:BA:56:ARG:NH1	2.23	0.53
7:G:168:LYS:HB3	7:G:319:ASN:ND2	2.23	0.53
7:G:212:ASN:OD1	7:G:354:VAL:HG22	2.07	0.53
9:I:17:GLN:HG3	25:Y:22:HIS:N	2.17	0.53
12:L:210:ALA:O	12:L:214:LEU:HD13	2.08	0.53
13:M:103:ILE:HD11	13:M:134:ILE:HG22	1.89	0.53
17:Q:21:ARG:O	19:S:196:THR:HG23	2.07	0.53
24:X:105:THR:O	24:X:109:ASP:HB2	2.07	0.53
32:FA:149:ALA:HB3	40:NA:15:LYS:N	2.23	0.53
41:OA:25:ARG:O	41:OA:25:ARG:HG2	2.08	0.53
49:WA:33:LEU:HD22	49:WA:47:LEU:HD21	1.90	0.53
49:WA:164:ASP:O	49:WA:165:ASP:HB3	2.07	0.53
52:ZA:37:PRO:CD	52:ZA:46:LYS:HD2	2.37	0.53
57:EB:74:GLN:HE21	57:EB:78:THR:CG2	2.22	0.53
59:GB:117:GLY:O	59:GB:118:LEU:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:NB:82:ARG:HH22	66:NB:116:LEU:HD13	1.73	0.53
69:QB:10:ALA:O	69:QB:14:PHE:HB2	2.08	0.53
70:RB:23:ARG:HA	70:RB:91:ILE:O	2.08	0.53
71:SB:16:LYS:HB3	71:SB:21:ASN:O	2.08	0.53
74:VB:91:LEU:CD2	74:VB:96:LEU:HD22	2.25	0.53
78:ZB:32:PHE:N	78:ZB:32:PHE:CD2	2.74	0.53
82:DC:387:PRO:CA	82:DC:394:PHE:HB3	2.38	0.53
82:DC:601:ILE:HG21	82:DC:642:GLY:O	2.08	0.53
1:A:61:A:H3'	1:A:61:A:N3	2.23	0.53
1:A:355:G:H2'	1:A:356:G:H8	1.73	0.53
1:A:373:G:H2'	1:A:374:U:H6	1.74	0.53
1:A:829:A:H1'	1:A:830:U:OP2	2.08	0.53
1:A:854:U:H2'	1:A:855:A:C4'	2.38	0.53
1:A:977:A:C2	1:A:1788:G:H1'	2.41	0.53
2:B:645:A:H2'	36:JA:39:ASP:CG	2.33	0.53
2:B:1123:U:H5'	4:D:81:U:H5"	1.90	0.53
2:B:1456:A:H62	35:IA:64:VAL:HG22	1.74	0.53
2:B:1523:U:H4'	29:CA:112:THR:O	2.08	0.53
2:B:1718:G:H2'	2:B:1719:G:C8	2.43	0.53
2:B:3004:C:H2'	2:B:3005:A:H5'	1.90	0.53
5:E:138:VAL:HG11	5:E:144:LEU:HA	1.90	0.53
6:F:77:ILE:HD11	6:F:115:ASN:HD22	1.73	0.53
7:G:57:VAL:HG12	7:G:357:LYS:HB2	1.90	0.53
7:G:78:VAL:HG11	7:G:311:PHE:HE2	1.72	0.53
7:G:133:TYR:CE1	7:G:136:LYS:HG3	2.43	0.53
7:G:135:ALA:HA	7:G:138:ALA:HB3	1.89	0.53
12:L:97:TYR:HB3	12:L:132:VAL:H	1.73	0.53
12:L:133:LYS:HB2	12:L:199:ALA:HB3	1.91	0.53
15:O:171:VAL:HG13	15:O:172:LEU:H	1.72	0.53
19:S:44:ARG:HD3	19:S:119:TYR:HE2	1.73	0.53
25:Y:27:LEU:HD22	25:Y:30:TYR:CD2	2.42	0.53
28:BA:9:SER:HA	28:BA:52:THR:HB	1.90	0.53
30:DA:125:LYS:O	30:DA:126:LEU:HB2	2.08	0.53
35:IA:20:LEU:HD13	35:IA:28:ARG:HG2	1.89	0.53
38:LA:3:GLN:HG2	38:LA:30:LEU:HB3	1.89	0.53
46:TA:5:PRO:HG3	46:TA:97:LYS:HE2	1.89	0.53
48:VA:8:LYS:H	48:VA:8:LYS:HD2	1.73	0.53
53:AB:210:GLU:CD	53:AB:211:PRO:HD2	2.33	0.53
54:BB:95:THR:HG22	74:VB:16:PRO:CD	2.33	0.53
60:HB:54:TYR:HA	60:HB:71:GLU:HG3	1.90	0.53
79:AC:23:VAL:CG2	79:AC:38:ILE:HD12	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:171:LYS:HD3	82:DC:279:ASP:CA	2.37	0.53
82:DC:541:CYS:O	82:DC:545:LEU:HB2	2.09	0.53
83:EC:6764:C:H2'	83:EC:6765:A:C8	2.43	0.53
1:A:385:A:H5"	58:FB:22:ARG:HB2	1.90	0.53
1:A:1605:G:H5"	66:NB:127:LYS:HB3	1.90	0.53
1:A:1643:U:H2'	1:A:1644:C:O4'	2.08	0.53
2:B:129:U:H5	39:MA:74:LYS:HD2	1.74	0.53
2:B:649:A:H2'	2:B:650:C:H6	1.73	0.53
2:B:707:U:H4'	2:B:779:G:H21	1.73	0.53
2:B:916:G:N2	2:B:924:G:H5'	2.24	0.53
2:B:956:U:H2'	2:B:957:C:H6	1.73	0.53
2:B:980:A:H61	2:B:1104:G:H21	1.56	0.53
2:B:1068:C:OP1	25:Y:110:LYS:HE3	2.09	0.53
2:B:1472:U:H5'	23:W:4:LEU:HB2	1.90	0.53
2:B:1782:U:H2'	2:B:1783:U:O4'	2.08	0.53
2:B:2781:U:H4'	17:Q:185:LYS:HD3	1.90	0.53
2:B:2995:A:H2	2:B:3143:C:C4	2.26	0.53
2:B:3113:A:H2'	2:B:3114:A:O4'	2.08	0.53
3:C:26:U:H2'	3:C:27:U:C6	2.43	0.53
3:C:94:C:C5'	41:OA:76:ASN:HD21	2.15	0.53
6:F:116:VAL:CG1	6:F:126:LEU:HB2	2.38	0.53
7:G:122:TRP:HA	7:G:125:SER:CB	2.38	0.53
10:J:165:LEU:O	37:KA:6:ARG:HB3	2.08	0.53
11:K:90:LYS:HE2	11:K:95:ILE:HG12	1.90	0.53
15:O:9:MET:O	15:O:134:PRO:HD2	2.08	0.53
19:S:10:LEU:HD11	19:S:19:LEU:CD1	2.38	0.53
20:T:35:VAL:HG12	20:T:36:VAL:N	2.22	0.53
20:T:161:LYS:O	20:T:165:ALA:HB2	2.08	0.53
22:V:71:LEU:HD13	22:V:97:PRO:CG	2.38	0.53
22:V:173:GLU:HA	32:FA:51:GLY:O	2.07	0.53
24:X:129:ILE:HD11	24:X:134:ASP:HB3	1.90	0.53
25:Y:52:MET:HG2	25:Y:53:PRO:CD	2.34	0.53
36:JA:89:THR:HB	36:JA:116:GLY:O	2.08	0.53
38:LA:20:ILE:H	38:LA:20:ILE:CD1	2.19	0.53
47:UA:4:ARG:HH11	47:UA:4:ARG:HB2	1.73	0.53
49:WA:303:ALA:O	49:WA:310:ILE:HA	2.08	0.53
55:CB:99:MET:O	55:CB:100:ASN:HB2	2.08	0.53
60:HB:15:LEU:HD13	60:HB:21:VAL:CG2	2.36	0.53
60:HB:17:GLN:HA	60:HB:89:GLY:H	1.73	0.53
82:DC:408:GLY:H	82:DC:431:ILE:HB	1.73	0.53
83:EC:6828:G:H2'	83:EC:6829:A:H8	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:416:A:H5'	1:A:417:A:C8	2.43	0.53
1:A:962:C:OP2	63:KB:70:LYS:HD3	2.09	0.53
1:A:1468:U:C1'	69:QB:88:VAL:HG23	2.38	0.53
2:B:360:G:H2'	2:B:361:A:C8	2.43	0.53
2:B:519:A:H2	24:X:65:ASN:HD22	1.55	0.53
2:B:628:A:H4'	2:B:1399:A:C6	2.43	0.53
2:B:994:G:N2	2:B:1053:A:H2'	2.23	0.53
2:B:1138:U:H4'	11:K:97:PRO:CG	2.30	0.53
2:B:1198:C:H2'	2:B:1199:C:C6	2.43	0.53
2:B:1924:U:H2'	2:B:1926:C:C5	2.44	0.53
2:B:2833:A:H2'	2:B:2834:G:C8	2.43	0.53
2:B:3365:U:O2'	2:B:3366:G:H5'	2.09	0.53
7:G:303:LYS:HD3	7:G:372:THR:HG22	1.89	0.53
13:M:17:THR:OG1	13:M:28:VAL:HB	2.09	0.53
13:M:19:SER:HA	18:R:6:ILE:HB	1.88	0.53
14:N:189:GLU:CA	14:N:200:LEU:HB3	2.37	0.53
21:U:116:HIS:HB3	21:U:149:VAL:CB	2.37	0.53
24:X:26:ARG:NH1	24:X:28:ARG:HD2	2.24	0.53
24:X:29:ILE:HG13	24:X:37:ALA:O	2.09	0.53
48:VA:15:LEU:HB2	48:VA:86:PHE:CE2	2.43	0.53
53:AB:21:LEU:HA	53:AB:24:PHE:CB	2.39	0.53
53:AB:49:ILE:HD12	53:AB:49:ILE:N	2.24	0.53
54:BB:45:ILE:HD12	54:BB:80:THR:CG2	2.39	0.53
55:CB:55:ASP:HB2	55:CB:138:THR:HB	1.91	0.53
55:CB:57:SER:OG	78:ZB:53:ILE:HB	2.08	0.53
55:CB:119:ASP:O	55:CB:123:VAL:HG23	2.08	0.53
59:GB:60:LEU:HD21	59:GB:93:LEU:HD21	1.90	0.53
60:HB:3:MET:HE1	60:HB:45:ALA:CB	2.38	0.53
60:HB:52:LYS:HG3	60:HB:54:TYR:CE2	2.44	0.53
65:MB:124:THR:HB	65:MB:127:ARG:HE	1.73	0.53
66:NB:35:PRO:HG2	66:NB:38:LEU:CG	2.38	0.53
82:DC:4:PHE:HD2	82:DC:45:ILE:HG12	1.73	0.53
82:DC:155:VAL:O	82:DC:209:VAL:HA	2.07	0.53
82:DC:388:THR:CG2	82:DC:395:TYR:HE2	2.22	0.53
1:A:100:A:O2'	1:A:101:U:H5'	2.07	0.53
1:A:1456:C:H3'	1:A:1457:C:C5'	2.38	0.53
1:A:1460:A:H2'	1:A:1461:C:H5'	1.89	0.53
2:B:355:A:N6	2:B:364:G:H1'	2.23	0.53
2:B:1002:A:H61	2:B:1050:U:H1'	1.73	0.53
2:B:1887:A:H1'	7:G:226:PHE:CE2	2.44	0.53
2:B:2642:A:H5'	33:GA:7:HIS:HB3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2796:G:C8	46:TA:62:ALA:HB1	2.43	0.53
2:B:2806:U:H2'	2:B:2807:U:O4'	2.08	0.53
2:B:2877:G:H2'	2:B:2878:G:C8	2.43	0.53
2:B:2883:U:H2'	2:B:2884:C:O4'	2.09	0.53
2:B:2908:G:C4'	44:RA:114:LYS:HZ2	2.17	0.53
2:B:3111:U:O4	2:B:3121:U:H5	1.92	0.53
3:C:91:C:O3'	30:DA:23:PRO:HB2	2.07	0.53
5:E:70:ASP:H	5:E:73:ASP:HB3	1.73	0.53
8:H:280:ILE:HG13	22:V:104:LEU:C	2.34	0.53
14:N:99:ILE:HG23	14:N:101:LYS:HZ2	1.74	0.53
14:N:153:ARG:O	14:N:156:ARG:HG2	2.09	0.53
17:Q:37:ASN:HA	17:Q:40:ALA:HB3	1.90	0.53
19:S:99:ARG:HB2	19:S:167:THR:HG21	1.89	0.53
22:V:55:SER:H	22:V:58:ASN:HB2	1.73	0.53
22:V:173:GLU:HG2	32:FA:52:TYR:CA	2.37	0.53
32:FA:28:HIS:CD2	32:FA:32:ARG:HG3	2.43	0.53
32:FA:77:LYS:HB3	32:FA:80:THR:HG23	1.91	0.53
32:FA:124:ILE:HG12	32:FA:144:VAL:CG2	2.39	0.53
37:KA:13:HIS:HA	37:KA:30:ILE:HD12	1.90	0.53
40:NA:50:LEU:HD21	40:NA:58:ILE:CG2	2.38	0.53
50:XA:57:LEU:HG	50:XA:177:LEU:HD23	1.89	0.53
50:XA:206:ASP:HA	50:XA:207:PRO:C	2.33	0.53
52:ZA:116:LYS:HB2	52:ZA:131:ILE:CD1	2.38	0.53
54:BB:73:ASP:HA	54:BB:164:LEU:HD22	1.90	0.53
54:BB:113:ARG:HH11	54:BB:113:ARG:HG3	1.73	0.53
59:GB:119:ALA:HB2	59:GB:128:LEU:HD12	1.91	0.53
60:HB:4:PRO:HG2	60:HB:7:ASP:OD1	2.08	0.53
60:HB:24:LYS:HG2	60:HB:25:LYS:H	1.72	0.53
63:KB:143:SER:HA	63:KB:146:ALA:CB	2.38	0.53
70:RB:82:TYR:CB	79:AC:52:PHE:HB3	2.32	0.53
72:TB:45:GLY:O	72:TB:68:ARG:HD2	2.08	0.53
82:DC:815:ALA:HA	82:DC:818:ILE:HD12	1.90	0.53
1:A:126:A:H62	1:A:291:G:N2	2.03	0.53
1:A:318:U:H2'	1:A:319:U:H5'	1.90	0.53
1:A:687:G:H5'	72:TB:119:LYS:HE2	1.90	0.53
1:A:1359:C:O2'	69:QB:4:VAL:HG12	2.09	0.53
1:A:1488:G:H3'	1:A:1515:A:H61	1.73	0.53
2:B:19:U:H2'	2:B:20:A:H8	1.74	0.53
2:B:365:A:OP1	8:H:84:ARG:HD3	2.09	0.53
2:B:860:G:H2'	2:B:2133:U:O2'	2.09	0.53
2:B:882:A:H5"	2:B:1847:A:H61	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:916:G:O6	6:F:207:VAL:HG11	2.08	0.53
2:B:957:C:H2'	2:B:958:C:C6	2.44	0.53
2:B:1381:A:H5"	8:H:197:ARG:HH12	1.73	0.53
2:B:1566:A:H3'	2:B:1567:U:H5"	1.91	0.53
2:B:1741:A:O2'	2:B:1785:U:H4'	2.08	0.53
2:B:1941:C:H42	2:B:2107:A:H61	1.55	0.53
2:B:2110:G:H5"	2:B:3364:C:OP1	2.08	0.53
2:B:2115:G:H8	2:B:2115:G:O5'	1.91	0.53
2:B:2212:C:H1'	2:B:2233:A:N6	2.20	0.53
2:B:2549:G:O2'	2:B:2550:U:H5'	2.08	0.53
2:B:3000:A:H2'	2:B:3001:C:C6	2.43	0.53
2:B:3191:G:OP1	20:T:172:ARG:HG2	2.09	0.53
2:B:3300:U:H2'	2:B:3301:U:C6	2.44	0.53
3:C:100:U:H2'	3:C:101:U:O4'	2.09	0.53
7:G:116:ARG:NE	7:G:174:LYS:HB3	2.23	0.53
7:G:280:HIS:HB3	7:G:324:VAL:CG2	2.39	0.53
8:H:76:ARG:HB2	8:H:76:ARG:HH11	1.74	0.53
9:I:69:ILE:HA	25:Y:31:LEU:CD1	2.32	0.53
10:J:42:LEU:HB2	10:J:50:LYS:H	1.74	0.53
13:M:89:LYS:HE3	13:M:183:HIS:HB3	1.90	0.53
14:N:86:HIS:HB3	14:N:139:ARG:HG2	1.90	0.53
17:Q:53:LEU:HD22	17:Q:94:GLY:CA	2.39	0.53
17:Q:76:THR:CG2	17:Q:102:GLN:HA	2.37	0.53
21:U:30:ARG:HB3	21:U:30:ARG:HH11	1.73	0.53
24:X:92:LYS:HB2	24:X:106:LEU:HD23	1.90	0.53
55:CB:197:GLU:HG3	55:CB:208:SER:HB2	1.90	0.53
57:EB:24:PHE:HZ	57:EB:77:LEU:HD11	1.73	0.53
67:OB:23:LYS:HD3	67:OB:34:LEU:HD11	1.89	0.53
82:DC:82:SER:HB3	82:DC:85:ASP:CG	2.34	0.53
83:EC:6910:A:H2'	83:EC:6947:A:C2	2.43	0.53
1:A:200:A:H2'	1:A:201:G:O4'	2.08	0.53
1:A:320:U:O2'	1:A:321:C:H6	1.91	0.53
1:A:332:U:H2'	1:A:334:G:OP2	2.09	0.53
1:A:617:U:H5'	1:A:1031:U:C4'	2.38	0.53
1:A:806:A:H3'	1:A:807:A:C5'	2.31	0.53
1:A:845:G:H2'	1:A:846:G:C5'	2.34	0.53
2:B:34:A:H3'	2:B:48:A:H61	1.73	0.53
2:B:39:A:H1'	2:B:94:G:H21	1.73	0.53
2:B:149:U:H5"	19:S:54:LYS:CB	2.39	0.53
2:B:155:G:H21	40:NA:26:ILE:CG2	2.21	0.53
2:B:317:A:H3'	2:B:318:A:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:384:A:H61	21:U:90:PHE:HE2	1.57	0.53
2:B:423:A:H2'	2:B:424:G:H5'	1.89	0.53
2:B:563:U:H2'	2:B:564:G:C8	2.44	0.53
2:B:651:G:O3'	2:B:1436:U:H4'	2.08	0.53
2:B:666:A:H2'	2:B:667:C:O4'	2.09	0.53
2:B:987:U:H2'	2:B:988:U:C6	2.44	0.53
2:B:1084:A:H5"	25:Y:35:LYS:HE2	1.89	0.53
2:B:2892:A:H2'	2:B:2893:C:O4'	2.08	0.53
2:B:2996:U:O4	2:B:3143:C:H5"	2.09	0.53
2:B:3080:G:H2'	2:B:3081:C:H6	1.73	0.53
2:B:3082:C:O2'	2:B:3083:G:H5'	2.09	0.53
3:C:41:A:OP1	41:OA:64:MET:HA	2.09	0.53
3:C:53:A:H2'	3:C:54:A:H8	1.74	0.53
3:C:115:C:O5'	3:C:115:C:H6	1.92	0.53
5:E:174:MET:HE2	5:E:179:LEU:HD11	1.90	0.53
7:G:126:LYS:CB	7:G:128:LYS:HG2	2.38	0.53
11:K:82:LYS:HA	11:K:119:VAL:HB	1.89	0.53
12:L:152:LEU:HD12	12:L:198:ALA:HB3	1.89	0.53
15:O:50:ALA:HB2	15:O:63:GLU:HB3	1.91	0.53
17:Q:99:HIS:C	17:Q:99:HIS:ND1	2.67	0.53
19:S:36:ILE:HG23	19:S:106:VAL:HG12	1.90	0.53
19:S:73:ARG:HD2	19:S:88:GLY:O	2.08	0.53
23:W:43:LYS:HA	23:W:46:LYS:HE3	1.91	0.53
23:W:86:GLU:HA	23:W:90:PRO:HA	1.91	0.53
27:AA:19:VAL:HG13	27:AA:37:ILE:CA	2.38	0.53
31:EA:64:LYS:HD3	31:EA:67:LYS:HE2	1.91	0.53
31:EA:68:ILE:HG22	31:EA:69:LYS:N	2.24	0.53
32:FA:147:LEU:HB2	40:NA:7:ILE:HG22	1.91	0.53
34:HA:66:LYS:HD2	34:HA:66:LYS:N	2.23	0.53
40:NA:34:SER:HB3	40:NA:37:THR:OG1	2.08	0.53
42:PA:26:LYS:HE2	42:PA:26:LYS:HA	1.89	0.53
53:AB:101:GLN:O	53:AB:105:MET:HB2	2.09	0.53
53:AB:158:ILE:HD13	53:AB:158:ILE:O	2.08	0.53
54:BB:196:VAL:HB	54:BB:209:HIS:HB2	1.91	0.53
55:CB:182:ALA:C	55:CB:186:ASN:HD21	2.16	0.53
61:IB:111:VAL:O	61:IB:111:VAL:HG13	2.09	0.53
67:OB:21:TYR:N	67:OB:22:PRO:CD	2.72	0.53
68:PB:72:ILE:HG12	68:PB:79:TYR:CG	2.44	0.53
72:TB:95:PRO:HD3	72:TB:130:TYR:CD1	2.44	0.53
73:UB:14:LYS:O	73:UB:18:HIS:HB2	2.09	0.53
73:UB:52:ILE:HD12	73:UB:52:ILE:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:244:LEU:HA	82:DC:272:ALA:HB3	1.89	0.53
83:EC:6854:U:H2'	83:EC:6855:A:C8	2.44	0.53
1:A:5:U:O2'	1:A:553:G:H4'	2.09	0.53
1:A:390:G:H8	1:A:1731:A:H4'	1.74	0.53
1:A:573:C:H2'	1:A:574:G:O4'	2.09	0.53
1:A:599:A:H2'	1:A:600:U:C6	2.43	0.53
1:A:807:A:H62	57:EB:104:ARG:CZ	2.22	0.53
2:B:224:C:O2	30:DA:102:SER:HB2	2.08	0.53
2:B:288:C:H2'	2:B:289:A:C8	2.43	0.53
2:B:413:U:H1'	21:U:118:GLN:HB2	1.90	0.53
2:B:519:A:N1	24:X:65:ASN:HB2	2.24	0.53
2:B:542:G:H22	2:B:549:U:H3	1.56	0.53
2:B:726:G:H21	2:B:744:A:N6	2.06	0.53
2:B:882:A:C2'	2:B:883:A:H5"	2.35	0.53
2:B:929:A:H1'	41:OA:49:TRP:HE3	1.74	0.53
2:B:1029:G:H2'	2:B:1030:A:C8	2.44	0.53
2:B:1422:G:H21	10:J:5:LYS:HB2	1.74	0.53
2:B:1455:U:O2'	35:IA:26:LYS:HG3	2.07	0.53
2:B:1553:U:C4'	2:B:1554:U:H5'	2.37	0.53
2:B:1712:G:H2'	2:B:1713:G:C8	2.44	0.53
2:B:1947:G:H1	2:B:2101:C:H42	1.55	0.53
2:B:2196:C:O3'	2:B:2270:A:H2'	2.09	0.53
2:B:2335:G:H1'	2:B:2337:C:H41	1.74	0.53
2:B:2549:G:H2'	12:L:33:ASN:HD22	1.72	0.53
2:B:2737:C:H4'	25:Y:68:THR:HG21	1.90	0.53
2:B:2806:U:H2'	2:B:2807:U:C6	2.43	0.53
2:B:3262:U:H2'	2:B:3263:G:C5'	2.39	0.53
3:C:40:A:H2'	3:C:41:A:C8	2.44	0.53
7:G:90:VAL:HG22	7:G:104:THR:HA	1.90	0.53
15:O:96:PHE:HE1	15:O:159:THR:HB	1.74	0.53
17:Q:79:GLU:HG2	17:Q:109:PHE:CE2	2.44	0.53
18:R:99:TRP:O	18:R:103:ILE:HB	2.08	0.53
18:R:127:LYS:HB2	20:T:190:VAL:CG2	2.39	0.53
24:X:94:ILE:CD1	24:X:106:LEU:HB2	2.39	0.53
38:LA:97:GLU:O	38:LA:101:VAL:HG23	2.08	0.53
48:VA:64:ARG:HH11	48:VA:67:LEU:HD22	1.74	0.53
50:XA:139:VAL:CG2	52:ZA:62:PRO:HG3	2.39	0.53
54:BB:121:TYR:CG	54:BB:161:LYS:HE3	2.44	0.53
63:KB:99:ARG:CZ	63:KB:143:SER:HB2	2.39	0.53
63:KB:142:GLU:C	63:KB:144:ALA:H	2.17	0.53
65:MB:16:SER:HB3	65:MB:21:ASP:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:MB:85:ILE:HD13	65:MB:111:MET:SD	2.49	0.53
70:RB:36:ASN:O	70:RB:40:ASN:HB2	2.09	0.53
82:DC:511:LEU:HD22	82:DC:545:LEU:HD22	1.90	0.53
82:DC:566:THR:CG2	82:DC:725:GLN:HB2	2.39	0.53
82:DC:601:ILE:HG23	82:DC:636:PHE:CD1	2.34	0.53
82:DC:742:GLY:O	82:DC:746:VAL:HG23	2.09	0.53
1:A:14:C:O2'	1:A:619:A:H2	1.92	0.53
1:A:154:G:N7	74:VB:128:LYS:NZ	2.57	0.53
1:A:950:C:H2'	1:A:951:A:O4'	2.09	0.53
1:A:1107:G:H3'	1:A:1108:G:H21	1.72	0.53
1:A:1459:C:N4	68:PB:139:LYS:HG3	2.24	0.53
1:A:1591:C:H2'	1:A:1592:A:C8	2.42	0.53
2:B:90:C:H4'	2:B:282:G:OP1	2.09	0.53
2:B:277:G:H2'	2:B:278:U:C6	2.43	0.53
2:B:522:A:C3'	2:B:523:A:H5"	2.32	0.53
2:B:681:U:O2	2:B:696:C:H5	1.92	0.53
2:B:996:A:H2	4:D:79:A:C2	2.26	0.53
2:B:1128:U:H3	2:B:2863:G:H22	1.56	0.53
2:B:1288:U:H1'	2:B:1289:G:C8	2.43	0.53
2:B:1636:U:H2'	2:B:1637:A:O4'	2.09	0.53
2:B:1814:A:H4'	2:B:1815:U:O4'	2.09	0.53
2:B:1861:G:H2'	2:B:1862:U:C5	2.44	0.53
2:B:2901:G:O5'	2:B:2901:G:H8	1.92	0.53
4:D:5:G:H2'	4:D:6:C:C6	2.44	0.53
6:F:92:LYS:HA	6:F:102:LEU:HB2	1.90	0.53
7:G:229:VAL:HG11	7:G:249:VAL:HG23	1.90	0.53
7:G:332:ARG:HG2	7:G:332:ARG:HH11	1.73	0.53
9:I:39:GLN:HE22	9:I:48:LYS:HE3	1.73	0.53
9:I:86:TYR:CZ	9:I:247:ILE:HG12	2.44	0.53
9:I:99:TYR:CD2	9:I:164:LYS:HB3	2.44	0.53
11:K:47:ARG:HH21	11:K:179:LEU:HD11	1.74	0.53
11:K:235:PHE:HE2	24:X:34:GLU:HB3	1.74	0.53
12:L:134:TYR:H	12:L:134:TYR:HD2	1.57	0.53
13:M:173:ARG:HA	44:RA:91:CYS:SG	2.49	0.53
15:O:49:LYS:HD3	15:O:62:ASN:HB3	1.90	0.53
16:P:104:ILE:HD12	16:P:104:ILE:O	2.09	0.53
20:T:88:VAL:HG12	20:T:89:SER:N	2.23	0.53
24:X:107:TYR:CE1	24:X:118:PHE:HA	2.44	0.53
32:FA:148:ILE:HG22	32:FA:149:ALA:H	1.72	0.53
37:KA:42:GLN:HA	37:KA:45:LEU:HG	1.91	0.53
38:LA:19:LYS:NZ	38:LA:35:VAL:HB	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:101:VAL:O	48:VA:101:VAL:HG12	2.09	0.53
49:WA:16:HIS:ND1	49:WA:37:SER:HB2	2.24	0.53
50:XA:178:ALA:HA	50:XA:181:VAL:HG22	1.91	0.53
52:ZA:39:THR:O	52:ZA:43:ARG:HG3	2.09	0.53
52:ZA:83:ILE:HG22	52:ZA:83:ILE:O	2.08	0.53
53:AB:113:LEU:HD22	53:AB:118:ALA:HB2	1.90	0.53
55:CB:59:VAL:C	55:CB:61:TYR:H	2.17	0.53
58:FB:182:TYR:OH	58:FB:184:LEU:HD12	2.09	0.53
1:A:147:A:H2'	1:A:148:A:H8	1.74	0.53
1:A:182:A:H2'	1:A:183:U:C6	2.44	0.53
1:A:344:A:C2'	1:A:345:U:H5'	2.39	0.53
1:A:968:U:H4'	1:A:1102:G:H22	1.74	0.53
1:A:1102:G:H2'	1:A:1103:U:O4'	2.08	0.53
2:B:141:C:H2'	2:B:142:C:C6	2.44	0.53
2:B:307:A:H2'	2:B:308:A:C8	2.44	0.53
2:B:500:C:H2'	2:B:501:A:H8	1.74	0.53
2:B:1103:A:C3'	2:B:1104:G:H5'	2.38	0.53
2:B:1689:U:H5"	23:W:61:SER:OG	2.09	0.53
2:B:2156:C:OP2	6:F:250:GLN:HB2	2.09	0.53
4:D:81:U:H2'	4:D:82:G:H8	1.74	0.53
7:G:147:GLU:O	7:G:151:ILE:HG13	2.09	0.53
7:G:227:GLU:HB3	7:G:232:ARG:CG	2.39	0.53
8:H:207:VAL:HG21	8:H:219:LEU:HD13	1.90	0.53
9:I:252:ALA:O	9:I:253:PHE:HB3	2.09	0.53
11:K:224:ILE:HG12	24:X:36:ILE:CA	2.35	0.53
12:L:75:ILE:C	12:L:77:GLN:H	2.17	0.53
12:L:153:ILE:O	12:L:179:ILE:HA	2.08	0.53
13:M:92:TYR:HA	13:M:179:ILE:HG12	1.91	0.53
15:O:15:GLU:HG2	15:O:16:LYS:HG2	1.91	0.53
17:Q:59:ARG:HA	17:Q:69:VAL:CA	2.25	0.53
18:R:28:SER:OG	18:R:53:VAL:HG11	2.09	0.53
24:X:92:LYS:HD2	24:X:106:LEU:HD22	1.90	0.53
26:Z:38:ILE:HB	26:Z:56:VAL:CG2	2.39	0.53
35:IA:31:ARG:O	35:IA:31:ARG:HD3	2.09	0.53
36:JA:40:SER:O	36:JA:44:ARG:HG3	2.08	0.53
47:UA:28:LYS:HB2	47:UA:28:LYS:NZ	2.24	0.53
47:UA:38:ASP:HA	47:UA:45:LYS:HB3	1.91	0.53
54:BB:234:PRO:C	54:BB:236:ILE:H	2.17	0.53
55:CB:123:VAL:CG1	75:WB:102:THR:HG22	2.37	0.53
69:QB:101:ASN:O	69:QB:105:LEU:HG	2.08	0.53
74:VB:12:VAL:HA	74:VB:22:GLN:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:304:U:H2'	1:A:305:C:O4'	2.08	0.52
1:A:519:C:H3'	1:A:520:A:H8	1.74	0.52
2:B:316:U:O4	40:NA:28:TYR:HA	2.09	0.52
2:B:578:A:H61	11:K:52:GLN:HE22	1.57	0.52
2:B:1168:U:O2'	2:B:1169:A:H5'	2.09	0.52
2:B:1652:G:H1'	38:LA:80:ARG:NH2	2.24	0.52
2:B:1863:G:H5"	23:W:82:LYS:HD3	1.91	0.52
2:B:1923:C:O5'	45:SA:25:LYS:HG3	2.09	0.52
2:B:2394:G:H2'	2:B:2395:G:O4'	2.09	0.52
2:B:2649:A:H2'	2:B:2650:U:H5'	1.91	0.52
2:B:3184:A:H2'	2:B:3185:U:H5'	1.91	0.52
2:B:3236:U:H2'	2:B:3237:U:H6	1.74	0.52
2:B:3270:U:H4'	21:U:171:ARG:HA	1.91	0.52
3:C:70:G:H5"	30:DA:28:ARG:NE	2.23	0.52
6:F:48:ILE:HD11	6:F:57:PRO:HB2	1.89	0.52
6:F:184:ARG:HA	6:F:187:HIS:CD2	2.44	0.52
7:G:41:VAL:HB	7:G:194:TRP:CE3	2.44	0.52
7:G:149:ALA:HA	7:G:152:LYS:CG	2.39	0.52
7:G:256:HIS:HA	7:G:257:PRO:C	2.35	0.52
8:H:45:ASN:HA	8:H:110:ASN:HA	1.91	0.52
8:H:82:THR:HG23	8:H:85:SER:H	1.73	0.52
18:R:38:ILE:HD12	18:R:44:VAL:CG1	2.33	0.52
21:U:60:PHE:CE2	21:U:82:ARG:HB2	2.43	0.52
21:U:172:GLN:HE22	37:KA:60:ARG:HD2	1.73	0.52
22:V:64:VAL:HG12	22:V:90:ASP:N	2.17	0.52
24:X:80:ARG:HD2	25:Y:154:VAL:O	2.09	0.52
27:AA:93:LEU:CA	28:BA:20:LEU:HB3	2.39	0.52
48:VA:77:LEU:HB3	48:VA:78:PRO:HD3	1.90	0.52
49:WA:131:ILE:O	49:WA:144:LEU:HB2	2.09	0.52
49:WA:136:ILE:H	49:WA:136:ILE:CD1	2.19	0.52
52:ZA:106:ASP:C	52:ZA:108:ASN:H	2.17	0.52
52:ZA:139:ILE:HG21	52:ZA:193:VAL:HG22	1.90	0.52
52:ZA:144:TRP:CD2	52:ZA:173:PRO:HG3	2.43	0.52
58:FB:8:ARG:HG2	58:FB:24:LYS:NZ	2.24	0.52
58:FB:104:ILE:HG12	58:FB:165:LEU:O	2.08	0.52
58:FB:135:LYS:C	58:FB:135:LYS:HD3	2.33	0.52
65:MB:55:GLY:O	65:MB:59:LYS:HG2	2.09	0.52
69:QB:67:MET:HB3	69:QB:68:ARG:HH21	1.74	0.52
70:RB:109:GLU:HG3	70:RB:110:PRO:HD2	1.91	0.52
72:TB:8:ALA:HA	72:TB:74:VAL:HG11	1.91	0.52
73:UB:57:LEU:H	73:UB:57:LEU:CD2	2.20	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:152:LYS:HG3	82:DC:200:VAL:CG2	2.39	0.52
82:DC:436:LEU:O	82:DC:442:VAL:HA	2.09	0.52
1:A:60:U:H5'	1:A:61:A:OP2	2.09	0.52
1:A:777:C:N4	74:VB:10:ARG:HB3	2.24	0.52
1:A:778:G:C2'	1:A:779:U:H5'	2.39	0.52
1:A:808:U:H2'	1:A:809:A:C8	2.44	0.52
1:A:887:A:O2'	1:A:888:U:H5'	2.09	0.52
1:A:961:U:H4'	63:KB:47:PRO:HB3	1.90	0.52
1:A:1075:C:H3'	1:A:1076:A:H5"	1.91	0.52
1:A:1113:A:C6	1:A:1131:A:H5"	2.44	0.52
1:A:1149:G:H21	1:A:1765:A:H1'	1.73	0.52
1:A:1370:U:H1'	1:A:1371:A:OP2	2.09	0.52
2:B:1058:U:H2'	2:B:1059:G:C8	2.44	0.52
2:B:1399:A:N1	3:C:8:C:H4'	2.24	0.52
2:B:1768:U:H2'	2:B:1769:G:O4'	2.09	0.52
2:B:1905:G:N2	2:B:1907:C:H5'	2.24	0.52
2:B:2769:A:H4'	46:TA:80:ARG:HB2	1.91	0.52
2:B:3141:A:H3'	2:B:3142:A:H4'	1.92	0.52
2:B:3191:G:C2	2:B:3192:U:H1'	2.44	0.52
2:B:3226:A:H1'	2:B:3260:G:N2	2.24	0.52
2:B:3257:C:H2'	2:B:3258:U:H6	1.74	0.52
3:C:36:G:H3'	39:MA:86:ARG:HD2	1.91	0.52
7:G:116:ARG:CZ	7:G:174:LYS:HB3	2.39	0.52
9:I:108:ARG:CA	9:I:251:PRO:HB2	2.39	0.52
9:I:119:TYR:CE1	9:I:135:VAL:HG23	2.44	0.52
10:J:125:GLN:HA	21:U:180:LYS:HE3	1.90	0.52
12:L:163:VAL:HG22	12:L:166:LEU:HG	1.91	0.52
13:M:18:VAL:HG22	13:M:27:VAL:HG13	1.92	0.52
18:R:58:ILE:HG12	18:R:59:ASN:H	1.74	0.52
18:R:123:LEU:HD13	20:T:194:LEU:CD2	2.40	0.52
20:T:108:ILE:HB	20:T:160:ARG:HD2	1.92	0.52
21:U:57:ALA:HB1	21:U:82:ARG:O	2.09	0.52
21:U:114:VAL:HA	21:U:150:VAL:HA	1.91	0.52
24:X:26:ARG:HH12	24:X:28:ARG:HD2	1.74	0.52
25:Y:36:VAL:O	25:Y:36:VAL:HG12	2.08	0.52
31:EA:11:ALA:O	31:EA:23:VAL:HG22	2.09	0.52
34:HA:51:LEU:HD11	38:LA:91:ARG:HG3	1.91	0.52
39:MA:92:LEU:C	39:MA:97:ALA:HB2	2.35	0.52
46:TA:98:LYS:HG2	46:TA:99:GLN:H	1.75	0.52
47:UA:38:ASP:HA	47:UA:45:LYS:HA	1.92	0.52
55:CB:164:PRO:HA	55:CB:167:ARG:HE	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:EB:20:VAL:HG22	57:EB:85:PHE:HD1	1.74	0.52
57:EB:81:LEU:C	57:EB:83:LYS:H	2.16	0.52
61:IB:67:ARG:HD3	61:IB:67:ARG:H	1.74	0.52
63:KB:71:ILE:O	63:KB:75:LEU:HD13	2.10	0.52
65:MB:52:LYS:HB2	65:MB:53:PRO:CD	2.35	0.52
67:OB:44:LYS:O	67:OB:47:ARG:HB3	2.09	0.52
69:QB:94:ILE:HG13	69:QB:95:ASP:N	2.24	0.52
73:UB:128:SER:CB	73:UB:143:PRO:HG2	2.38	0.52
77:YB:14:SER:HA	77:YB:17:ARG:CG	2.39	0.52
82:DC:160:VAL:HG13	82:DC:178:PHE:CZ	2.43	0.52
82:DC:433:ARG:O	82:DC:457:VAL:HG12	2.08	0.52
82:DC:565:GLU:N	82:DC:681:MET:HA	2.23	0.52
1:A:1177:C:H41	68:PB:139:LYS:HD2	1.73	0.52
1:A:1319:A:C3'	1:A:1320:U:H5"	2.37	0.52
2:B:41:G:OP2	2:B:42:C:H5	1.92	0.52
2:B:185:C:C2'	2:B:186:U:H5'	2.39	0.52
2:B:370:U:H4'	2:B:404:G:C5'	2.39	0.52
2:B:408:A:H62	3:C:15:G:H21	1.57	0.52
2:B:416:A:H2'	2:B:417:A:C8	2.43	0.52
2:B:947:G:H2'	2:B:948:C:H6	1.69	0.52
2:B:1447:G:H5"	21:U:67:ILE:HD11	1.91	0.52
2:B:1451:C:H2'	2:B:1880:U:C5	2.43	0.52
2:B:1491:A:H61	2:B:1837:U:H3	1.57	0.52
2:B:1794:G:H5'	6:F:188:LYS:CA	2.38	0.52
2:B:1887:A:H1'	7:G:226:PHE:CZ	2.44	0.52
2:B:1915:A:H2'	2:B:1916:U:C6	2.45	0.52
2:B:2154:U:H4'	6:F:240:ALA:HB2	1.91	0.52
2:B:2407:C:H4'	2:B:2620:G:H4'	1.91	0.52
2:B:2672:G:O2'	2:B:2673:A:H5'	2.10	0.52
2:B:2852:C:H2'	14:N:67:ALA:HB2	1.91	0.52
2:B:3044:G:O2'	7:G:13:HIS:HB2	2.10	0.52
3:C:69:U:H2'	3:C:70:G:H5'	1.91	0.52
3:C:74:U:OP1	30:DA:76:LEU:HG	2.09	0.52
4:D:27:A:H1'	4:D:57:G:H21	1.73	0.52
6:F:42:ARG:HA	6:F:89:TYR:CD1	2.44	0.52
8:H:22:LEU:HD11	8:H:27:SER:OG	2.08	0.52
8:H:207:VAL:HG21	8:H:219:LEU:CD1	2.39	0.52
11:K:140:SER:O	11:K:144:ILE:HG13	2.08	0.52
14:N:82:ARG:NH1	14:N:82:ARG:HB2	2.25	0.52
24:X:42:TRP:CZ2	24:X:58:ILE:HG13	2.44	0.52
25:Y:156:TYR:O	25:Y:157:GLU:HG3	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:99:VAL:HG13	29:CA:103:TYR:CD2	2.44	0.52
30:DA:61:GLY:O	30:DA:64:LYS:HB2	2.08	0.52
31:EA:21:LYS:HE2	31:EA:21:LYS:N	2.25	0.52
35:IA:80:ASN:HD22	35:IA:88:PRO:HA	1.73	0.52
36:JA:76:VAL:HG12	36:JA:77:ALA:N	2.24	0.52
48:VA:49:ALA:HA	48:VA:88:PHE:O	2.10	0.52
50:XA:143:VAL:O	50:XA:157:ASP:HB2	2.10	0.52
53:AB:69:LEU:HD23	53:AB:72:LEU:HD12	1.90	0.52
54:BB:88:ASP:O	54:BB:100:ARG:HG3	2.09	0.52
58:FB:22:ARG:HG3	58:FB:23:LYS:O	2.10	0.52
58:FB:43:ILE:HG12	58:FB:57:ALA:HA	1.90	0.52
73:UB:53:VAL:O	73:UB:99:ASN:HA	2.09	0.52
1:A:139:C:H1'	1:A:140:A:OP2	2.10	0.52
1:A:400:A:N6	58:FB:29:LEU:HD13	2.25	0.52
1:A:450:U:H5"	54:BB:7:LYS:HE3	1.92	0.52
1:A:740:A:H3'	1:A:741:C:H5"	1.91	0.52
1:A:1179:G:H2'	1:A:1180:C:O4'	2.10	0.52
1:A:1538:U:O2'	1:A:1539:G:H5'	2.10	0.52
1:A:1629:G:H2'	1:A:1630:U:C6	2.44	0.52
2:B:87:U:H5"	22:V:172:PHE:CZ	2.45	0.52
2:B:118:U:H2'	2:B:119:U:O4'	2.10	0.52
2:B:231:G:H2'	2:B:232:G:H8	1.73	0.52
2:B:615:U:H2'	2:B:616:G:C8	2.45	0.52
2:B:728:G:H21	22:V:138:LEU:HD23	1.75	0.52
2:B:975:C:H5"	22:V:54:LEU:HD22	1.92	0.52
2:B:1100:U:H2'	2:B:1101:G:C8	2.44	0.52
2:B:1121:U:H2'	2:B:1122:U:C6	2.45	0.52
2:B:1180:A:H5"	37:KA:77:ASN:HB2	1.91	0.52
2:B:1529:A:H1'	2:B:1588:A:C2	2.44	0.52
2:B:1567:U:H2'	2:B:1570:U:O4	2.09	0.52
2:B:2506:U:O2	2:B:2506:U:H2'	2.09	0.52
2:B:2714:G:N3	2:B:2751:G:H2'	2.25	0.52
2:B:3324:C:H4'	35:IA:13:THR:HB	1.91	0.52
3:C:75:G:H4'	43:QA:29:LEU:HG	1.90	0.52
3:C:147:U:H2'	3:C:148:G:O4'	2.09	0.52
4:D:74:C:H2'	4:D:75:G:H5'	1.90	0.52
4:D:76:A:H61	4:D:102:A:H3'	1.73	0.52
7:G:189:SER:O	7:G:193:ASP:HB2	2.09	0.52
7:G:315:GLY:O	7:G:316:GLU:HG3	2.09	0.52
8:H:156:LEU:C	8:H:156:LEU:HD23	2.34	0.52
10:J:59:GLU:H	10:J:59:GLU:CD	2.17	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:25:GLN:C	11:K:27:ALA:H	2.16	0.52
12:L:221:ASN:C	12:L:225:LYS:HG3	2.35	0.52
16:P:102:GLY:HA3	16:P:140:GLY:H	1.72	0.52
17:Q:79:GLU:HG3	17:Q:103:ASN:OD1	2.09	0.52
20:T:8:VAL:HG13	20:T:34:VAL:HG23	1.91	0.52
25:Y:27:LEU:HA	25:Y:30:TYR:CE2	2.45	0.52
25:Y:93:VAL:HA	25:Y:96:ILE:HG22	1.92	0.52
35:IA:62:ARG:HB3	35:IA:66:GLY:O	2.10	0.52
36:JA:3:SER:O	36:JA:5:PRO:HD3	2.10	0.52
37:KA:29:LEU:O	37:KA:30:ILE:HD13	2.08	0.52
44:RA:79:GLU:O	44:RA:83:LYS:HG3	2.09	0.52
48:VA:33:VAL:CG2	48:VA:34:SER:H	2.18	0.52
48:VA:122:ARG:HA	48:VA:155:ASP:CG	2.35	0.52
52:ZA:145:GLY:O	72:TB:98:GLN:HB3	2.08	0.52
56:DB:74:LYS:HA	56:DB:95:LYS:O	2.10	0.52
65:MB:44:ARG:CZ	65:MB:52:LYS:HD2	2.40	0.52
67:OB:34:LEU:O	67:OB:38:ILE:HG22	2.08	0.52
82:DC:225:PHE:HZ	82:DC:328:LEU:HD11	1.73	0.52
82:DC:612:PHE:O	82:DC:631:ARG:HG2	2.09	0.52
1:A:213:A:H2'	1:A:214:G:O4'	2.10	0.52
1:A:219:A:N6	1:A:829:A:H2	2.07	0.52
1:A:811:A:H62	57:EB:113:PRO:HD3	1.74	0.52
1:A:1048:G:H5"	77:YB:69:GLY:N	2.24	0.52
1:A:1392:U:H2'	1:A:1393:C:C6	2.45	0.52
1:A:1474:G:H2'	1:A:1475:A:C8	2.45	0.52
1:A:1721:A:H2'	1:A:1722:A:C8	2.44	0.52
1:A:1723:U:H2'	1:A:1724:U:O4'	2.10	0.52
2:B:49:A:N3	2:B:279:U:H4'	2.24	0.52
2:B:181:U:N3	2:B:182:U:H1'	2.24	0.52
2:B:660:A:H5"	8:H:100:PHE:CD1	2.44	0.52
2:B:1672:U:OP1	23:W:64:ARG:HG2	2.10	0.52
2:B:1711:C:H4'	31:EA:37:PRO:O	2.10	0.52
2:B:2118:C:H3'	2:B:2119:A:C8	2.44	0.52
2:B:2576:G:H2'	2:B:2577:C:C6	2.45	0.52
2:B:2642:A:O2'	2:B:2643:A:H5'	2.09	0.52
2:B:3005:A:H5"	20:T:149:TYR:OH	2.09	0.52
2:B:3229:G:H1'	18:R:129:TYR:HE2	1.73	0.52
2:B:3375:A:N3	2:B:3378:C:H5"	2.25	0.52
2:B:3391:A:H2'	2:B:3392:U:C6	2.45	0.52
3:C:38:U:H1'	39:MA:83:LYS:HG3	1.92	0.52
6:F:209:HIS:ND1	6:F:210:PRO:HD2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:46:PHE:HB3	7:G:338:LEU:HD23	1.90	0.52
10:J:13:GLU:CD	36:JA:88:HIS:HA	2.35	0.52
10:J:38:THR:HG23	10:J:90:LYS:HA	1.89	0.52
11:K:59:GLU:O	11:K:63:ILE:HG12	2.10	0.52
12:L:134:TYR:HB3	12:L:190:VAL:HG21	1.92	0.52
13:M:49:ASN:HD21	13:M:52:LEU:CB	2.19	0.52
13:M:102:ASN:HA	13:M:136:PHE:CZ	2.45	0.52
18:R:101:LYS:O	18:R:105:GLN:HG3	2.09	0.52
19:S:114:ARG:HB2	19:S:135:VAL:HB	1.90	0.52
20:T:8:VAL:O	20:T:118:VAL:HG22	2.08	0.52
20:T:85:ARG:HH11	20:T:90:HIS:HD2	1.55	0.52
21:U:28:ASN:HD21	21:U:84:PRO:HB3	1.75	0.52
21:U:88:VAL:HA	21:U:91:VAL:CB	2.38	0.52
24:X:93:GLU:OE2	24:X:135:VAL:HG13	2.08	0.52
26:Z:96:VAL:HG12	26:Z:97:SER:N	2.23	0.52
29:CA:109:LYS:HE2	29:CA:111:ASN:ND2	2.25	0.52
38:LA:81:CYS:O	38:LA:82:ALA:HB3	2.09	0.52
47:UA:79:VAL:O	47:UA:83:ILE:HD13	2.09	0.52
49:WA:54:PHE:HE2	49:WA:302:PHE:HE1	1.58	0.52
50:XA:179:ARG:O	50:XA:183:ARG:HG3	2.09	0.52
50:XA:184:LEU:O	50:XA:185:ARG:HB2	2.08	0.52
54:BB:173:ILE:N	54:BB:173:ILE:HD12	2.23	0.52
55:CB:102:ARG:HG3	55:CB:103:ASN:ND2	2.24	0.52
56:DB:147:LEU:O	56:DB:151:ASP:HB2	2.10	0.52
58:FB:83:TYR:HB2	58:FB:196:LEU:HD13	1.90	0.52
61:IB:133:LYS:HD3	61:IB:134:THR:CG2	2.39	0.52
63:KB:98:VAL:HG21	63:KB:118:ILE:CD1	2.39	0.52
66:NB:17:THR:O	66:NB:69:VAL:HA	2.08	0.52
73:UB:66:SER:O	73:UB:67:ALA:HB2	2.09	0.52
75:WB:76:ALA:O	75:WB:80:LEU:HG	2.10	0.52
82:DC:634:TRP:HZ3	82:DC:663:VAL:HB	1.73	0.52
1:A:143:G:H2'	1:A:144:U:C5'	2.35	0.52
1:A:157:A:H2'	1:A:158:U:H5"	1.92	0.52
1:A:397:A:H5"	58:FB:47:ARG:HH11	1.74	0.52
1:A:400:A:H61	58:FB:29:LEU:HD22	1.75	0.52
1:A:766:U:H2'	1:A:769:A:N6	2.24	0.52
1:A:1069:A:O2'	1:A:1070:C:H5'	2.10	0.52
1:A:1419:G:H2'	1:A:1420:C:H5'	1.90	0.52
2:B:59:G:H2'	3:C:33:A:H2'	1.92	0.52
2:B:299:G:N1	40:NA:30:LYS:HB3	2.25	0.52
2:B:817:A:C6	41:OA:14:LYS:HG2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:971:G:O2'	2:B:1371:G:H1'	2.10	0.52
2:B:1165:A:H2'	2:B:1166:G:C8	2.44	0.52
2:B:1404:G:N2	2:B:1406:A:H3'	2.25	0.52
2:B:1875:G:P	23:W:19:LYS:H	2.33	0.52
2:B:2131:A:H61	47:UA:18:TYR:N	2.08	0.52
2:B:2138:A:H2'	41:OA:3:LYS:HE2	1.92	0.52
2:B:2747:A:C2	9:I:36:LEU:HD11	2.44	0.52
2:B:2909:U:C3'	2:B:2910:A:H5"	2.39	0.52
2:B:3133:C:H3'	2:B:3134:A:H5"	1.92	0.52
4:D:2:G:H2'	4:D:3:U:H5'	1.92	0.52
4:D:76:A:N6	4:D:102:A:H3'	2.24	0.52
6:F:29:LEU:HB2	6:F:163:ARG:HH22	1.73	0.52
8:H:93:MET:HG2	8:H:93:MET:O	2.09	0.52
11:K:90:LYS:HB2	11:K:133:TYR:HA	1.91	0.52
13:M:95:ALA:O	44:RA:77:ILE:HD12	2.10	0.52
14:N:21:ARG:HG3	14:N:22:TYR:CE1	2.43	0.52
14:N:193:ASP:HB3	14:N:197:VAL:HA	1.91	0.52
17:Q:57:VAL:HG22	17:Q:147:ILE:HG13	1.90	0.52
18:R:23:ILE:HA	18:R:63:VAL:HG23	1.92	0.52
19:S:114:ARG:HG2	19:S:137:PRO:CG	2.39	0.52
22:V:29:LEU:HD23	22:V:32:LEU:HD22	1.91	0.52
23:W:175:GLN:HA	23:W:178:ALA:HB2	1.92	0.52
24:X:10:ILE:HG21	25:Y:148:PRO:CG	2.40	0.52
25:Y:116:ARG:O	25:Y:120:LYS:HE3	2.09	0.52
35:IA:37:LYS:HE3	35:IA:51:LEU:CD1	2.39	0.52
39:MA:21:LEU:HB2	39:MA:54:VAL:HG11	1.91	0.52
41:OA:45:ARG:HE	41:OA:47:TYR:HE2	1.56	0.52
45:SA:21:ARG:HG3	45:SA:22:ALA:N	2.25	0.52
48:VA:145:ILE:CG1	82:DC:186:ASN:HB3	2.39	0.52
54:BB:213:SER:C	54:BB:215:ASP:H	2.17	0.52
55:CB:84:LYS:NZ	55:CB:84:LYS:HB2	2.25	0.52
58:FB:25:ARG:HG3	58:FB:27:PHE:CZ	2.43	0.52
63:KB:107:LYS:CE	63:KB:109:LYS:HD3	2.36	0.52
72:TB:13:ALA:CB	72:TB:27:ILE:HG22	2.39	0.52
73:UB:70:LYS:HB3	73:UB:93:LEU:HD11	1.92	0.52
77:YB:35:VAL:HA	77:YB:78:SER:O	2.09	0.52
82:DC:4:PHE:O	82:DC:48:ALA:HA	2.10	0.52
82:DC:121:VAL:HG12	82:DC:399:ARG:HB2	1.90	0.52
82:DC:388:THR:HG21	82:DC:395:TYR:HE2	1.74	0.52
1:A:1113:A:H61	1:A:1131:A:H5"	1.75	0.52
2:B:290:G:H5"	19:S:98:LEU:HD21	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:388:G:H4'	21:U:18:ARG:N	2.23	0.52
2:B:550:A:O2'	2:B:551:A:H5'	2.09	0.52
2:B:627:U:OP2	36:JA:15:LYS:HE3	2.09	0.52
2:B:790:U:C5'	8:H:112:LYS:HD3	2.39	0.52
2:B:841:A:H4'	23:W:126:GLU:HG2	1.92	0.52
2:B:858:A:H5"	2:B:1790:G:H21	1.75	0.52
2:B:1258:U:H1'	48:VA:42:ARG:CZ	2.40	0.52
2:B:1505:C:P	21:U:127:ARG:HH12	2.33	0.52
2:B:1604:G:H4'	2:B:1835:A:O2'	2.10	0.52
2:B:1669:C:H2'	2:B:1670:C:O4'	2.10	0.52
2:B:1758:G:H2'	2:B:1759:C:C6	2.44	0.52
2:B:2570:U:H4'	2:B:2571:U:H2'	1.91	0.52
2:B:3072:C:O2'	2:B:3336:A:H4'	2.10	0.52
4:D:6:C:H2'	4:D:7:G:H4'	1.90	0.52
4:D:37:G:H2'	4:D:38:U:C6	2.44	0.52
8:H:220:ARG:HH12	30:DA:4:GLN:HB2	1.73	0.52
17:Q:57:VAL:HG12	17:Q:69:VAL:HG22	1.90	0.52
19:S:68:ARG:NH2	19:S:128:LYS:HE3	2.20	0.52
41:OA:8:PHE:O	41:OA:11:ARG:HB2	2.09	0.52
59:GB:161:THR:HA	59:GB:167:ALA:HB2	1.91	0.52
61:IB:34:TRP:CH2	61:IB:36:LYS:HD3	2.39	0.52
61:IB:109:VAL:HG21	61:IB:125:VAL:HG11	1.92	0.52
71:SB:38:LYS:HD2	71:SB:49:GLU:CG	2.40	0.52
73:UB:92:CYS:O	73:UB:96:VAL:HG13	2.08	0.52
82:DC:102:LEU:HD12	82:DC:103:ILE:N	2.25	0.52
82:DC:106:PRO:HG3	82:DC:114:GLU:CB	2.27	0.52
1:A:748:U:C4'	72:TB:123:GLY:HA2	2.37	0.52
1:A:1060:U:H3'	1:A:1061:A:C5'	2.40	0.52
1:A:1724:U:H2'	1:A:1725:U:C5	2.45	0.52
2:B:142:C:H2'	2:B:143:G:C8	2.45	0.52
2:B:405:U:C2'	2:B:406:G:H5'	2.39	0.52
2:B:1752:A:H2'	2:B:1753:G:H8	1.75	0.52
2:B:1904:C:H2'	2:B:1905:G:C8	2.45	0.52
2:B:2149:A:N1	2:B:2188:A:H4'	2.25	0.52
2:B:2245:C:H3'	2:B:2246:G:O4'	2.10	0.52
2:B:2628:A:C2'	2:B:2629:U:H5"	2.40	0.52
2:B:2896:A:H5"	44:RA:124:LYS:HZ2	1.71	0.52
2:B:3315:G:H2'	7:G:123:TYR:CE1	2.45	0.52
2:B:3327:G:N2	2:B:3380:U:H1'	2.25	0.52
3:C:41:A:O3'	41:OA:59:THR:HA	2.09	0.52
5:E:68:PHE:HB3	5:E:85:MET:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:40:TYR:HA	6:F:91:GLY:HA3	1.91	0.52
7:G:111:SER:HB2	7:G:163:HIS:CE1	2.44	0.52
8:H:313:LEU:HD22	8:H:315:LYS:HD3	1.91	0.52
10:J:135:VAL:O	10:J:138:GLN:HB3	2.10	0.52
13:M:48:VAL:HG12	13:M:52:LEU:O	2.10	0.52
15:O:115:LYS:HB2	15:O:115:LYS:NZ	2.25	0.52
22:V:157:PRO:HD3	32:FA:47:LYS:HG3	1.91	0.52
24:X:145:THR:OG1	24:X:148:LEU:HB2	2.09	0.52
38:LA:95:ILE:O	38:LA:99:LYS:HB2	2.10	0.52
40:NA:9:ILE:HD12	40:NA:10:GLY:N	2.24	0.52
47:UA:28:LYS:HB2	47:UA:28:LYS:HZ3	1.75	0.52
50:XA:31:VAL:C	50:XA:33:GLN:H	2.18	0.52
61:IB:45:PRO:HG2	61:IB:48:ALA:CB	2.40	0.52
65:MB:67:ALA:HB2	65:MB:73:PRO:HA	1.92	0.52
75:WB:95:HIS:CE1	75:WB:98:GLN:HB2	2.45	0.52
82:DC:159:LYS:O	82:DC:162:ARG:HG2	2.10	0.52
82:DC:501:LEU:O	82:DC:504:LEU:HB3	2.10	0.52
1:A:639:U:C5	57:EB:118:LEU:HG	2.45	0.52
1:A:925:G:H2'	1:A:926:A:C8	2.44	0.52
1:A:1367:G:H2'	1:A:1368:G:C8	2.45	0.52
2:B:51:A:H2'	2:B:52:A:H8	1.74	0.52
2:B:67:A:H62	2:B:271:C:H4'	1.75	0.52
2:B:116:A:O2'	2:B:117:U:H3'	2.10	0.52
2:B:288:C:H4'	19:S:171:SER:O	2.10	0.52
2:B:294:U:H5"	40:NA:53:TYR:CE2	2.44	0.52
2:B:502:U:C2'	2:B:503:C:H5"	2.40	0.52
2:B:669:U:O2'	2:B:1110:U:H4'	2.10	0.52
2:B:692:A:C4'	8:H:46:LYS:HG2	2.34	0.52
2:B:791:A:H2'	2:B:792:G:O4'	2.09	0.52
2:B:1478:C:O2'	2:B:1479:U:H5'	2.09	0.52
2:B:1538:G:N2	2:B:1583:A:H62	1.97	0.52
2:B:1910:A:H2'	2:B:1911:A:C8	2.43	0.52
2:B:2103:U:H5"	23:W:85:ARG:HH12	1.73	0.52
2:B:2215:A:H1'	2:B:2430:A:O2'	2.10	0.52
2:B:2375:G:H1'	2:B:2377:G:OP2	2.09	0.52
2:B:2637:A:C2'	2:B:2638:C:H5"	2.40	0.52
2:B:2660:G:H2'	2:B:2661:G:H8	1.72	0.52
2:B:2760:C:H2'	2:B:2761:G:C8	2.44	0.52
2:B:3231:U:H2'	2:B:3232:G:C8	2.44	0.52
3:C:75:G:N3	43:QA:26:TRP:HB2	2.25	0.52
6:F:225:ILE:HG22	6:F:238:ILE:HA	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:79:VAL:HG12	7:G:322:ILE:O	2.08	0.52
12:L:248:LYS:O	12:L:252:ASN:HB2	2.10	0.52
21:U:105:LYS:HD3	21:U:107:LEU:HD22	1.92	0.52
24:X:24:LEU:CD2	25:Y:148:PRO:HG3	2.40	0.52
36:JA:82:LEU:HD13	36:JA:82:LEU:C	2.35	0.52
46:TA:11:TYR:HA	46:TA:19:LYS:O	2.09	0.52
46:TA:70:LEU:HD12	46:TA:83:LEU:HD13	1.91	0.52
48:VA:64:ARG:O	48:VA:67:LEU:HB2	2.10	0.52
49:WA:197:SER:OG	49:WA:216:LYS:HB3	2.10	0.52
53:AB:77:PHE:HB2	53:AB:79:TYR:CE2	2.45	0.52
54:BB:178:GLY:HA2	54:BB:195:ILE:HB	1.92	0.52
57:EB:182:VAL:HG12	57:EB:183:PHE:H	1.75	0.52
58:FB:3:ILE:CD1	58:FB:31:ARG:HA	2.39	0.52
58:FB:47:ARG:HD2	58:FB:47:ARG:C	2.35	0.52
66:NB:31:VAL:HG12	66:NB:32:ASN:OD1	2.10	0.52
72:TB:20:THR:OG1	72:TB:22:LYS:HD3	2.09	0.52
79:AC:36:LEU:HD12	79:AC:38:ILE:N	2.22	0.52
82:DC:31:GLY:HA3	82:DC:158:ASN:ND2	2.25	0.52
1:A:573:C:OP1	1:A:1137:A:H3'	2.10	0.52
1:A:1126:G:H5"	45:SA:11:ARG:NE	2.24	0.52
1:A:1249:U:H2'	1:A:1250:U:H5'	1.91	0.52
2:B:2436:U:H2'	2:B:2437:G:H5'	1.91	0.52
2:B:3040:A:H5"	27:AA:12:ARG:CG	2.40	0.52
2:B:3066:U:H2'	2:B:3067:C:H6	1.74	0.52
2:B:3104:U:H3'	2:B:3128:G:N1	2.24	0.52
2:B:3182:G:H4'	20:T:161:LYS:CD	2.36	0.52
6:F:116:VAL:O	6:F:125:ALA:HB3	2.10	0.52
10:J:175:LYS:HB3	18:R:112:LEU:O	2.09	0.52
17:Q:93:ILE:HD11	39:MA:114:ARG:HH21	1.75	0.52
18:R:84:LYS:HA	18:R:87:ALA:HB3	1.92	0.52
24:X:132:THR:O	24:X:133:ALA:HB3	2.10	0.52
27:AA:19:VAL:HG23	27:AA:50:PRO:O	2.10	0.52
38:LA:31:ARG:HD3	38:LA:32:ALA:H	1.75	0.52
40:NA:57:LEU:HA	40:NA:60:LEU:CB	2.38	0.52
48:VA:5:ARG:HA	48:VA:8:LYS:CD	2.26	0.52
48:VA:27:VAL:HG12	48:VA:84:VAL:HG11	1.92	0.52
48:VA:55:LYS:O	48:VA:58:MET:HB2	2.10	0.52
53:AB:98:ALA:CA	53:AB:188:ILE:HD12	2.34	0.52
54:BB:68:ARG:HH11	54:BB:76:VAL:CG1	2.23	0.52
55:CB:71:ALA:C	55:CB:91:GLU:HG3	2.35	0.52
57:EB:126:LEU:HD12	57:EB:173:TYR:CE2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:46:LEU:O	60:HB:50:THR:HG23	2.10	0.52
61:IB:2:SER:N	61:IB:82:ARG:HA	2.24	0.52
61:IB:38:ALA:HB3	61:IB:42:PHE:HB2	1.91	0.52
66:NB:51:PRO:O	66:NB:55:VAL:HG12	2.09	0.52
68:PB:72:ILE:HG23	68:PB:79:TYR:HB2	1.92	0.52
75:WB:90:LYS:NZ	75:WB:105:THR:HG21	2.24	0.52
82:DC:169:VAL:HB	82:DC:174:LEU:HD13	1.91	0.52
1:A:596:C:H2'	1:A:597:G:H8	1.75	0.51
1:A:780:A:C8	74:VB:8:ARG:HB3	2.45	0.51
2:B:282:G:N1	19:S:181:ASN:HB3	2.25	0.51
2:B:904:A:H5"	2:B:1537:A:C5'	2.34	0.51
2:B:1434:G:O2'	2:B:1435:A:H5'	2.10	0.51
2:B:1592:G:H3'	2:B:1593:A:C5'	2.40	0.51
2:B:2247:G:H21	2:B:2271:A:H2'	1.75	0.51
2:B:2786:G:H22	32:FA:58:MET:HE2	1.75	0.51
5:E:209:SER:O	5:E:210:MET:HB3	2.10	0.51
8:H:42:VAL:HG13	8:H:118:LYS:NZ	2.25	0.51
10:J:40:LEU:HB2	10:J:52:VAL:HG23	1.91	0.51
13:M:88:TYR:CD1	13:M:154:VAL:HG12	2.45	0.51
18:R:49:PRO:HB3	18:R:78:THR:CG2	2.38	0.51
21:U:32:THR:HA	21:U:58:ILE:HD13	1.92	0.51
25:Y:112:ASN:O	25:Y:116:ARG:HB2	2.10	0.51
30:DA:87:LYS:HB3	30:DA:95:VAL:O	2.11	0.51
39:MA:5:LYS:HE3	39:MA:7:TYR:CD2	2.45	0.51
40:NA:73:ALA:O	40:NA:77:LEU:HB2	2.09	0.51
48:VA:104:ARG:HB2	48:VA:184:GLY:HA3	1.91	0.51
58:FB:26:LYS:HZ2	58:FB:49:ARG:HB2	1.73	0.51
61:IB:75:VAL:HG21	61:IB:117:VAL:CG1	2.40	0.51
61:IB:83:THR:HA	61:IB:111:VAL:HG12	1.93	0.51
75:WB:41:ILE:HG13	75:WB:43:ASP:H	1.74	0.51
82:DC:142:VAL:HA	82:DC:145:GLN:HB2	1.93	0.51
82:DC:829:LYS:HE3	82:DC:831:GLU:HG2	1.91	0.51
1:A:343:C:H2'	1:A:344:A:H8	1.73	0.51
1:A:606:A:H1'	1:A:609:U:OP1	2.11	0.51
1:A:875:G:H4'	1:A:936:G:O2'	2.10	0.51
2:B:371:G:H4'	2:B:396:A:H61	1.76	0.51
2:B:561:C:O2'	2:B:562:C:H5'	2.11	0.51
2:B:630:A:H2'	2:B:631:U:O4'	2.10	0.51
2:B:774:G:H2'	2:B:774:G:N3	2.25	0.51
2:B:964:G:H1'	32:FA:40:HIS:CD2	2.45	0.51
2:B:1164:G:N2	2:B:1335:C:O2	2.30	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1184:A:O3'	18:R:43:LYS:HE2	2.11	0.51
2:B:1282:G:H4'	48:VA:82:GLY:C	2.34	0.51
2:B:1309:U:H5"	2:B:1311:G:OP1	2.10	0.51
2:B:1338:C:H5"	36:JA:60:ASN:HD21	1.73	0.51
2:B:1438:U:H2'	2:B:1439:U:O4'	2.10	0.51
2:B:1646:G:H1'	2:B:1808:G:N2	2.25	0.51
2:B:1840:U:C5	2:B:1850:A:H4'	2.45	0.51
2:B:2138:A:H2'	41:OA:3:LYS:CG	2.40	0.51
2:B:2200:U:H3	2:B:2244:A:H61	1.57	0.51
2:B:2344:U:H2'	2:B:2345:A:C8	2.45	0.51
2:B:2727:A:N1	32:FA:43:ILE:HG23	2.26	0.51
2:B:2922:G:H1'	2:B:2951:G:N2	2.25	0.51
4:D:15:C:H5'	9:I:16:PHE:HE1	1.73	0.51
4:D:15:C:H5'	9:I:16:PHE:CE1	2.45	0.51
6:F:103:PRO:HB3	6:F:161:ASP:HA	1.92	0.51
8:H:280:ILE:HD11	22:V:105:ARG:HA	1.92	0.51
9:I:99:TYR:CE2	9:I:164:LYS:HB3	2.45	0.51
10:J:37:GLY:O	10:J:91:VAL:HG22	2.11	0.51
12:L:221:ASN:O	12:L:225:LYS:HE2	2.09	0.51
18:R:50:LYS:HE3	18:R:82:SER:OG	2.10	0.51
24:X:38:LYS:HD3	24:X:58:ILE:CD1	2.40	0.51
27:AA:33:ASN:HD21	27:AA:64:LYS:H	1.57	0.51
30:DA:115:ARG:O	30:DA:119:ILE:HG13	2.10	0.51
39:MA:54:VAL:O	39:MA:58:ILE:HG13	2.09	0.51
40:NA:95:ALA:O	40:NA:99:ARG:HB2	2.09	0.51
48:VA:64:ARG:HA	48:VA:67:LEU:HD12	1.91	0.51
53:AB:92:GLN:O	53:AB:93:ASP:O	2.27	0.51
54:BB:150:PRO:CG	54:BB:151:ASP:H	2.21	0.51
54:BB:152:PRO:HG3	56:DB:208:TYR:OH	2.10	0.51
56:DB:162:VAL:O	56:DB:168:THR:HA	2.11	0.51
58:FB:76:THR:HG22	58:FB:108:PRO:CD	2.40	0.51
63:KB:70:LYS:O	63:KB:74:ILE:HG13	2.10	0.51
63:KB:100:LYS:HE2	63:KB:104:ARG:HH11	1.76	0.51
66:NB:42:GLU:HG3	66:NB:45:ARG:HH21	1.76	0.51
68:PB:46:VAL:HG13	68:PB:72:ILE:HB	1.93	0.51
74:VB:105:ARG:O	74:VB:109:LYS:HG3	2.10	0.51
82:DC:155:VAL:HG23	82:DC:202:VAL:HG21	1.91	0.51
82:DC:309:GLY:H	82:DC:312:LYS:HE3	1.75	0.51
1:A:397:A:O2'	58:FB:50:GLY:HA2	2.11	0.51
1:A:751:G:H2'	1:A:752:A:O4'	2.11	0.51
1:A:1316:G:H4'	67:OB:10:LYS:CE	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:14:U:H3'	2:B:14:U:OP2	2.10	0.51
2:B:94:G:H4'	32:FA:53:PHE:CE2	2.45	0.51
2:B:748:U:OP1	33:GA:31:SER:HB3	2.10	0.51
2:B:1117:G:O5'	33:GA:5:LYS:HB3	2.11	0.51
2:B:1347:U:H2'	2:B:1355:A:N6	2.26	0.51
2:B:1391:C:C2	36:JA:103:LYS:HB3	2.45	0.51
2:B:1669:C:OP1	38:LA:24:LYS:HD3	2.09	0.51
2:B:1768:U:C3'	2:B:1769:G:H5"	2.39	0.51
2:B:2434:U:H4'	2:B:2435:G:O5'	2.10	0.51
2:B:2774:C:H2'	2:B:2775:U:C6	2.45	0.51
2:B:2778:G:H3'	2:B:2779:A:H5"	1.91	0.51
2:B:2838:A:H62	2:B:2850:G:N2	2.07	0.51
2:B:3160:U:H2'	2:B:3161:C:C6	2.46	0.51
2:B:3242:G:N7	7:G:150:ARG:HD2	2.25	0.51
6:F:41:ILE:HD11	6:F:64:ARG:HG3	1.91	0.51
7:G:129:ALA:O	7:G:130:PHE:HB2	2.10	0.51
9:I:234:ASP:O	9:I:237:GLU:HB3	2.10	0.51
11:K:54:GLU:OE2	11:K:190:THR:HG21	2.09	0.51
11:K:102:VAL:HG12	11:K:130:ILE:HD13	1.91	0.51
12:L:150:LEU:HD22	12:L:151:VAL:N	2.26	0.51
15:O:171:VAL:HG13	15:O:172:LEU:N	2.26	0.51
17:Q:56:PRO:HD2	17:Q:73:ARG:O	2.10	0.51
18:R:85:TRP:HE1	18:R:91:CYS:HB2	1.74	0.51
19:S:150:TRP:CD1	19:S:150:TRP:H	2.28	0.51
26:Z:33:TYR:O	26:Z:37:LEU:HB2	2.10	0.51
31:EA:112:LYS:O	31:EA:115:LYS:HB3	2.10	0.51
35:IA:55:LEU:O	35:IA:59:ILE:HG13	2.11	0.51
36:JA:89:THR:HA	36:JA:117:ILE:HG22	1.92	0.51
39:MA:6:ALA:HB1	39:MA:10:ARG:HH12	1.74	0.51
49:WA:16:HIS:CD2	49:WA:20:VAL:HG22	2.46	0.51
49:WA:26:SER:HB2	49:WA:73:LEU:HD13	1.92	0.51
50:XA:174:TRP:HA	50:XA:177:LEU:HD12	1.91	0.51
50:XA:180:GLU:HA	50:XA:183:ARG:HD3	1.93	0.51
61:IB:107:VAL:CG1	61:IB:108:PRO:HD2	2.38	0.51
61:IB:123:VAL:HG23	61:IB:142:VAL:HA	1.91	0.51
68:PB:54:LEU:H	68:PB:54:LEU:HD22	1.76	0.51
69:QB:121:GLY:O	69:QB:122:ARG:HD2	2.10	0.51
83:EC:6774:U:H5	83:EC:6775:U:H3	1.57	0.51
1:A:463:U:H2'	1:A:464:A:O4'	2.10	0.51
1:A:1304:G:H5'	1:A:1322:A:OP2	2.10	0.51
2:B:135:C:C5	39:MA:94:LYS:HD2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:135:C:O2	39:MA:93:THR:HB	2.11	0.51
2:B:754:G:H2'	2:B:755:A:C8	2.45	0.51
2:B:884:A:H2'	41:OA:2:GLY:N	2.25	0.51
2:B:1210:U:H5'	13:M:63:LYS:HE3	1.92	0.51
2:B:2145:A:H4'	2:B:2958:A:O3'	2.10	0.51
2:B:2407:C:H4'	2:B:2620:G:O4'	2.10	0.51
2:B:2666:C:H1'	2:B:2691:A:C2	2.46	0.51
2:B:2814:G:OP2	8:H:73:ARG:NH2	2.43	0.51
2:B:3334:U:C5	28:BA:50:ALA:HB3	2.45	0.51
4:D:55:A:C4	15:O:9:MET:HB3	2.46	0.51
7:G:144:ILE:O	7:G:148:LEU:HB2	2.11	0.51
8:H:23:PRO:HG2	8:H:25:VAL:HG23	1.92	0.51
16:P:114:ARG:NH1	16:P:118:ASP:O	2.44	0.51
20:T:19:LEU:O	20:T:23:VAL:HG23	2.10	0.51
20:T:61:ALA:HB1	20:T:66:LYS:HG3	1.91	0.51
21:U:30:ARG:O	21:U:34:GLN:HB2	2.10	0.51
24:X:91:TYR:OH	24:X:136:LYS:HD3	2.11	0.51
25:Y:96:ILE:HG13	25:Y:97:LYS:H	1.76	0.51
31:EA:104:PRO:HA	31:EA:107:ARG:HB2	1.92	0.51
41:OA:24:ARG:CZ	41:OA:24:ARG:HA	2.40	0.51
42:PA:47:GLY:HA3	42:PA:50:SER:O	2.10	0.51
43:QA:15:LYS:O	43:QA:19:GLN:HG3	2.10	0.51
49:WA:176:LYS:HG2	49:WA:197:SER:O	2.11	0.51
52:ZA:148:LEU:HB2	52:ZA:174:ARG:NH2	2.24	0.51
55:CB:132:VAL:HG11	55:CB:199:ILE:HG12	1.93	0.51
58:FB:82:VAL:HB	58:FB:196:LEU:HD21	1.92	0.51
58:FB:176:SER:O	58:FB:178:ARG:HG2	2.11	0.51
61:IB:149:ALA:O	61:IB:152:GLN:HG3	2.11	0.51
75:WB:68:ARG:HA	83:EC:6867:C:O2'	2.10	0.51
82:DC:740:VAL:HA	82:DC:743:ILE:CG2	2.41	0.51
1:A:398:G:H5"	58:FB:49:ARG:CG	2.38	0.51
1:A:562:G:H21	80:BC:14:VAL:HG11	1.74	0.51
1:A:567:A:H61	1:A:580:A:H61	1.58	0.51
1:A:855:A:H3'	1:A:856:A:C5'	2.41	0.51
2:B:118:U:H3'	2:B:119:U:C6	2.46	0.51
2:B:155:G:H21	40:NA:26:ILE:HG21	1.75	0.51
2:B:289:A:O2'	2:B:290:G:H5'	2.10	0.51
2:B:351:A:H61	43:QA:38:ASN:HA	1.72	0.51
2:B:705:A:H62	32:FA:74:ASN:HB3	1.75	0.51
2:B:1268:G:O2'	2:B:1269:U:H5'	2.11	0.51
2:B:1364:C:H5"	22:V:3:ILE:CG1	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1535:A:N6	2:B:1586:G:H21	2.02	0.51
2:B:1682:U:H3	26:Z:82:LYS:HA	1.76	0.51
2:B:1705:U:N3	2:B:1786:G:H4'	2.25	0.51
2:B:1723:A:OP1	23:W:128:LYS:HE3	2.10	0.51
2:B:1919:G:H1'	2:B:1934:G:N2	2.25	0.51
2:B:2932:U:H5"	27:AA:41:GLY:HA2	1.92	0.51
2:B:2966:G:H5"	6:F:218:HIS:HE1	1.74	0.51
2:B:3040:A:O2'	2:B:3041:U:H5'	2.10	0.51
2:B:3105:U:H2'	2:B:3106:A:O4'	2.10	0.51
3:C:73:U:H2'	3:C:74:U:O4'	2.10	0.51
4:D:15:C:O3'	9:I:8:LYS:HD3	2.11	0.51
6:F:150:LEU:HD12	6:F:154:ALA:HB3	1.92	0.51
7:G:158:VAL:HG12	7:G:159:ARG:N	2.25	0.51
9:I:146:LEU:HD12	9:I:147:ASP:H	1.73	0.51
10:J:96:VAL:HG11	10:J:141:VAL:HG13	1.93	0.51
13:M:73:SER:HA	13:M:76:ASP:CB	2.41	0.51
13:M:150:SER:O	13:M:154:VAL:HG23	2.09	0.51
16:P:94:LYS:HD2	16:P:99:LYS:HG2	1.93	0.51
17:Q:106:GLN:HB3	40:NA:18:THR:HG23	1.92	0.51
18:R:94:TRP:CD2	18:R:100:ALA:HB2	2.46	0.51
19:S:143:ARG:HA	19:S:152:CYS:SG	2.50	0.51
21:U:126:ARG:CD	21:U:138:LYS:HB2	2.40	0.51
31:EA:134:LEU:HB3	31:EA:136:PHE:CE1	2.46	0.51
34:HA:16:LEU:HA	34:HA:19:LYS:HB2	1.93	0.51
36:JA:8:LYS:O	36:JA:10:VAL:HG23	2.10	0.51
37:KA:69:GLY:HA2	37:KA:85:PHE:HA	1.93	0.51
40:NA:9:ILE:HG22	40:NA:13:LYS:HD3	1.92	0.51
46:TA:65:THR:HG21	46:TA:89:LYS:HG2	1.92	0.51
48:VA:58:MET:HA	48:VA:61:ARG:CB	2.37	0.51
49:WA:5:GLU:HB2	49:WA:316:MET:O	2.10	0.51
49:WA:141:LEU:H	49:WA:141:LEU:HD23	1.75	0.51
53:AB:223:LYS:N	53:AB:223:LYS:HE2	2.26	0.51
57:EB:91:ILE:HD11	57:EB:128:ASP:O	2.10	0.51
65:MB:85:ILE:HG21	65:MB:111:MET:HG3	1.92	0.51
69:QB:77:ASN:HB3	69:QB:95:ASP:HA	1.93	0.51
69:QB:100:ILE:O	69:QB:104:VAL:HG23	2.11	0.51
70:RB:51:VAL:CG1	70:RB:94:GLU:HB2	2.40	0.51
75:WB:62:VAL:O	75:WB:66:VAL:HG23	2.10	0.51
82:DC:22:MET:C	82:DC:122:THR:HG21	2.35	0.51
82:DC:504:LEU:O	82:DC:508:LEU:HG	2.11	0.51
82:DC:740:VAL:HA	82:DC:743:ILE:HG23	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:11:A:O2'	1:A:12:U:H5'	2.11	0.51
1:A:301:A:H2'	1:A:302:U:H6	1.76	0.51
1:A:569:C:H2'	1:A:570:A:O4'	2.11	0.51
1:A:1390:U:O2'	1:A:1391:A:H8	1.94	0.51
1:A:1753:A:H2'	1:A:1754:A:C8	2.45	0.51
2:B:126:U:H1'	19:S:57:GLN:NE2	2.24	0.51
2:B:276:U:H2'	2:B:277:G:O4'	2.10	0.51
2:B:277:G:O2'	19:S:93:LYS:HE3	2.11	0.51
2:B:403:C:H2'	2:B:404:G:H5"	1.93	0.51
2:B:886:C:H5'	2:B:1850:A:O2'	2.11	0.51
2:B:2723:U:H5'	25:Y:89:LEU:CB	2.41	0.51
2:B:3118:C:H2'	2:B:3119:U:C6	2.45	0.51
2:B:3246:G:H4'	2:B:3247:G:C8	2.45	0.51
3:C:35:C:H2'	3:C:36:G:H8	1.76	0.51
3:C:37:A:P	39:MA:86:ARG:HB2	2.50	0.51
6:F:101:VAL:HG23	6:F:164:GLY:C	2.35	0.51
7:G:296:THR:HG22	7:G:297:SER:N	2.20	0.51
8:H:93:MET:H	8:H:93:MET:HE2	1.76	0.51
13:M:84:LYS:HD3	13:M:191:LEU:OXT	2.10	0.51
15:O:94:ARG:O	15:O:95:ASN:HB2	2.09	0.51
16:P:58:VAL:HB	16:P:79:SER:OG	2.09	0.51
16:P:109:ILE:HG23	16:P:110:ILE:CD1	2.38	0.51
20:T:47:PHE:CZ	20:T:140:LYS:HG2	2.45	0.51
21:U:127:ARG:HB3	21:U:139:TYR:O	2.10	0.51
22:V:84:VAL:CG2	22:V:141:ARG:HH21	2.24	0.51
44:RA:97:ARG:HE	44:RA:122:ARG:HD3	1.76	0.51
44:RA:98:LYS:HZ2	44:RA:115:CYS:HB2	1.75	0.51
50:XA:135:GLU:OE1	50:XA:135:GLU:HA	2.10	0.51
54:BB:123:LEU:HD21	54:BB:235:TYR:CB	2.41	0.51
54:BB:196:VAL:HG12	54:BB:197:HIS:ND1	2.26	0.51
55:CB:148:ARG:HB3	78:ZB:22:ARG:NH2	2.25	0.51
65:MB:110:GLU:HB2	68:PB:119:ILE:HD11	1.92	0.51
69:QB:73:VAL:HG12	69:QB:77:ASN:ND2	2.25	0.51
82:DC:153:PRO:CD	82:DC:200:VAL:HG22	2.36	0.51
82:DC:586:ILE:CD1	82:DC:708:THR:HG22	2.40	0.51
83:EC:6926:U:H2'	83:EC:6927:U:C5	2.45	0.51
1:A:177:U:O2'	1:A:178:U:H5"	2.11	0.51
1:A:235:G:H2'	1:A:236:A:O4'	2.11	0.51
1:A:608:U:HO2'	1:A:609:U:H5	1.58	0.51
1:A:1753:A:H2'	1:A:1754:A:H8	1.76	0.51
2:B:95:A:C4	2:B:96:G:H1'	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:106:A:H2'	2:B:107:A:O4'	2.11	0.51
2:B:221:A:H1'	2:B:223:U:OP2	2.11	0.51
2:B:268:A:N1	2:B:295:A:H5'	2.25	0.51
2:B:345:G:OP1	8:H:99:MET:HE3	2.11	0.51
2:B:428:A:H4'	37:KA:88:ASN:HD22	1.76	0.51
2:B:858:A:O2'	2:B:859:G:H5'	2.10	0.51
2:B:1117:G:H5'	33:GA:5:LYS:HD3	1.92	0.51
2:B:1188:U:O2'	2:B:1189:C:H5'	2.11	0.51
2:B:1230:G:O2'	48:VA:35:SER:N	2.44	0.51
2:B:1242:G:N9	82:DC:754:VAL:HB	2.26	0.51
2:B:1791:C:H5"	47:UA:13:LYS:HZ2	1.75	0.51
2:B:2158:A:H4'	2:B:2159:U:H5"	1.93	0.51
2:B:2271:A:C3'	2:B:2272:G:H5'	2.41	0.51
2:B:2362:C:H2'	2:B:2363:A:O4'	2.10	0.51
2:B:2365:C:H5"	2:B:2986:U:H4'	1.92	0.51
2:B:2397:A:H3'	2:B:2397:A:N3	2.25	0.51
2:B:3365:U:C2'	2:B:3366:G:H5'	2.40	0.51
2:B:3392:U:H2'	2:B:3393:U:H6	1.73	0.51
5:E:64:SER:N	5:E:107:TYR:HA	2.26	0.51
5:E:114:GLU:HG3	5:E:115:VAL:N	2.26	0.51
9:I:53:VAL:HG23	9:I:146:LEU:HD13	1.92	0.51
12:L:82:LEU:HD21	12:L:87:ALA:HB2	1.93	0.51
13:M:109:ALA:O	13:M:110:LYS:HB2	2.11	0.51
14:N:52:LEU:HB2	14:N:152:LEU:HD13	1.93	0.51
21:U:28:ASN:ND2	21:U:84:PRO:HB3	2.26	0.51
23:W:164:LEU:O	23:W:167:ARG:HG3	2.11	0.51
27:AA:93:LEU:HB2	28:BA:20:LEU:HD22	1.92	0.51
40:NA:50:LEU:HD23	40:NA:55:ARG:HA	1.92	0.51
47:UA:36:ARG:O	47:UA:45:LYS:HB2	2.11	0.51
48:VA:53:MET:HA	48:VA:85:GLY:HA3	1.93	0.51
50:XA:45:VAL:HG12	50:XA:46:HIS:N	2.26	0.51
52:ZA:63:VAL:O	52:ZA:134:LEU:HD12	2.10	0.51
54:BB:42:LEU:HD21	54:BB:47:PHE:HB2	1.92	0.51
54:BB:129:VAL:HG12	54:BB:156:VAL:HG23	1.93	0.51
55:CB:146:THR:HG22	55:CB:157:ARG:HB3	1.91	0.51
55:CB:210:ALA:O	55:CB:214:LYS:HB2	2.11	0.51
60:HB:73:VAL:O	60:HB:77:ARG:HB2	2.11	0.51
63:KB:34:ILE:O	63:KB:38:VAL:HG23	2.11	0.51
66:NB:115:THR:HA	66:NB:118:ILE:CG2	2.35	0.51
68:PB:88:ARG:HH21	68:PB:108:LYS:HG3	1.76	0.51
68:PB:126:ARG:HA	68:PB:129:TRP:CE3	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:110:LYS:HA	69:QB:110:LYS:HE3	1.93	0.51
70:RB:21:LYS:HB2	70:RB:94:GLU:HG2	1.93	0.51
71:SB:9:VAL:O	71:SB:10:GLU:HB3	2.11	0.51
72:TB:88:LYS:O	72:TB:92:ASN:HB2	2.10	0.51
82:DC:190:SER:HB3	82:DC:201:GLN:HE21	1.75	0.51
83:EC:6767:G:C3'	83:EC:6768:U:H5"	2.39	0.51
1:A:64:U:C3'	1:A:65:A:H5"	2.40	0.51
1:A:430:G:H2'	1:A:431:C:H6	1.74	0.51
1:A:449:C:H2'	1:A:450:U:H6	1.76	0.51
1:A:869:A:H61	1:A:958:U:H3	1.59	0.51
1:A:1099:U:H5"	72:TB:71:LYS:NZ	2.25	0.51
1:A:1408:G:H2'	1:A:1409:G:C8	2.46	0.51
1:A:1759:C:H2'	1:A:1760:G:O4'	2.09	0.51
2:B:642:U:H2'	2:B:644:G:N7	2.26	0.51
2:B:773:G:C2	2:B:774:G:H1'	2.46	0.51
2:B:878:G:H5'	2:B:880:G:O4'	2.11	0.51
2:B:911:C:O2'	2:B:912:G:H5'	2.11	0.51
2:B:927:C:H2'	2:B:928:C:C6	2.46	0.51
2:B:1380:G:H5"	8:H:191:LYS:H	1.76	0.51
2:B:1535:A:H62	2:B:1586:G:N2	2.01	0.51
2:B:1639:C:H2'	2:B:1640:G:C8	2.46	0.51
2:B:1688:U:C4	26:Z:78:TYR:HB2	2.45	0.51
2:B:2394:G:O2'	7:G:258:ALA:HA	2.10	0.51
2:B:2624:G:O2'	2:B:2625:C:H5'	2.10	0.51
2:B:2775:U:H4'	2:B:2777:G:H1	1.73	0.51
2:B:2787:G:H4'	32:FA:57:GLY:C	2.36	0.51
2:B:2836:C:H2'	2:B:2837:A:H5'	1.92	0.51
2:B:3376:A:OP1	35:IA:18:LYS:HD2	2.11	0.51
3:C:125:U:O2	3:C:125:U:H3'	2.11	0.51
7:G:249:VAL:HG12	7:G:251:CYS:O	2.10	0.51
7:G:356:LEU:H	7:G:356:LEU:HD23	1.76	0.51
8:H:38:VAL:HG11	8:H:121:ALA:HB3	1.93	0.51
9:I:183:TRP:HB2	9:I:190:ILE:HD13	1.92	0.51
11:K:179:LEU:H	11:K:179:LEU:HD13	1.75	0.51
12:L:92:LYS:HB3	12:L:92:LYS:HZ2	1.75	0.51
13:M:36:LYS:HD2	13:M:78:MET:HE1	1.92	0.51
22:V:163:PRO:HG2	22:V:165:ILE:CG2	2.41	0.51
40:NA:39:PHE:O	40:NA:43:LEU:HD23	2.10	0.51
44:RA:79:GLU:HG3	44:RA:82:LEU:H	1.75	0.51
49:WA:242:SER:HB3	49:WA:292:LEU:HD23	1.92	0.51
50:XA:62:ARG:HD2	71:SB:36:VAL:CG1	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:54:GLU:HA	52:ZA:57:PHE:CD2	2.46	0.51
54:BB:82:TYR:CD1	54:BB:83:PRO:HD2	2.46	0.51
54:BB:128:LYS:O	54:BB:139:VAL:HA	2.11	0.51
69:QB:37:VAL:HG11	69:QB:100:ILE:HD11	1.92	0.51
70:RB:30:LYS:HD3	70:RB:33:GLN:HB2	1.93	0.51
71:SB:72:LEU:O	71:SB:76:ASP:HB2	2.10	0.51
1:A:478:A:H2'	1:A:479:C:C6	2.46	0.51
1:A:1316:G:H2'	1:A:1317:C:H6	1.76	0.51
1:A:1675:C:H2'	1:A:1676:U:O4'	2.10	0.51
2:B:209:A:C2	8:H:223:PRO:HD3	2.46	0.51
2:B:916:G:O2'	2:B:917:A:H5"	2.11	0.51
2:B:1074:U:H1'	33:GA:46:ALA:HB2	1.93	0.51
2:B:1186:G:H2'	2:B:1187:C:H6	1.76	0.51
2:B:1338:C:H4'	36:JA:60:ASN:ND2	2.26	0.51
2:B:1487:G:H2'	2:B:1488:G:H5"	1.92	0.51
2:B:1525:G:H3'	2:B:1526:U:C6	2.45	0.51
2:B:1533:U:H2'	2:B:1534:A:C8	2.44	0.51
2:B:1640:G:H2'	2:B:1641:U:C6	2.46	0.51
2:B:1665:C:O5'	2:B:1665:C:H6	1.92	0.51
2:B:2744:U:H2'	2:B:2745:G:C8	2.46	0.51
4:D:24:A:H2'	4:D:25:G:C8	2.46	0.51
6:F:68:LYS:HZ1	6:F:70:ARG:HD3	1.74	0.51
7:G:78:VAL:HG21	7:G:311:PHE:CZ	2.44	0.51
7:G:340:LYS:HG2	7:G:341:SER:H	1.76	0.51
8:H:359:LEU:CD2	24:X:64:ILE:HA	2.41	0.51
11:K:224:ILE:HG21	24:X:39:SER:OG	2.11	0.51
12:L:187:GLY:HA2	12:L:190:VAL:CG1	2.40	0.51
13:M:49:ASN:H	13:M:49:ASN:HD22	1.58	0.51
15:O:8:PRO:HG2	15:O:10:ARG:HG2	1.92	0.51
17:Q:147:ILE:HG23	17:Q:150:PRO:CD	2.41	0.51
19:S:6:TYR:CD2	40:NA:40:VAL:HG13	2.45	0.51
19:S:47:LYS:HA	19:S:50:ARG:HG2	1.93	0.51
19:S:117:ASN:OD1	19:S:165:THR:HB	2.11	0.51
20:T:23:VAL:O	20:T:27:LEU:HG	2.10	0.51
21:U:17:ALA:HB2	21:U:98:ALA:HA	1.93	0.51
21:U:72:GLN:CD	21:U:83:TRP:HZ2	2.18	0.51
25:Y:39:ILE:HD12	25:Y:102:ARG:HB2	1.93	0.51
31:EA:36:HIS:N	31:EA:37:PRO:HD3	2.26	0.51
36:JA:78:ASN:HA	36:JA:108:ILE:HD13	1.92	0.51
46:TA:61:LYS:NZ	46:TA:61:LYS:HB2	2.26	0.51
50:XA:62:ARG:NH2	71:SB:39:VAL:HG22	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:15:PRO:HG2	54:BB:18:TRP:CD2	2.46	0.51
56:DB:75:LEU:O	56:DB:94:ARG:HG3	2.10	0.51
59:GB:135:ALA:HA	59:GB:139:GLN:O	2.10	0.51
67:OB:113:LEU:HD12	67:OB:114:GLY:N	2.26	0.51
68:PB:41:ARG:HD3	69:QB:45:MET:HA	1.92	0.51
69:QB:28:LEU:HD23	69:QB:54:PHE:HD2	1.76	0.51
74:VB:50:ALA:HB1	74:VB:54:ALA:CB	2.32	0.51
82:DC:586:ILE:HD12	82:DC:709:MET:HA	1.93	0.51
1:A:219:A:H3'	1:A:831:U:O2	2.11	0.51
1:A:258:C:H4'	58:FB:64:ASN:HB2	1.93	0.51
1:A:740:A:C2'	1:A:741:C:H5"	2.41	0.51
1:A:815:G:H2'	1:A:815:G:N3	2.25	0.51
1:A:1060:U:H3'	1:A:1061:A:H5"	1.92	0.51
1:A:1087:A:H2	1:A:1142:A:H4'	1.76	0.51
1:A:1661:U:H2'	1:A:1662:G:C8	2.46	0.51
1:A:1727:G:H2'	1:A:1728:A:C8	2.46	0.51
1:A:1765:A:H3'	1:A:1766:A:C5'	2.41	0.51
2:B:335:G:H2'	2:B:336:A:H8	1.73	0.51
2:B:351:A:H1'	3:C:53:A:O2'	2.11	0.51
2:B:669:U:H5"	22:V:153:PHE:HZ	1.76	0.51
2:B:1076:C:H1'	33:GA:42:ASN:HB2	1.93	0.51
2:B:1084:A:H2'	2:B:1085:A:H8	1.76	0.51
2:B:1256:G:H4'	16:P:127:SER:CB	2.39	0.51
2:B:1372:C:OP2	32:FA:7:LYS:HG2	2.11	0.51
2:B:2968:G:N7	6:F:214:GLY:HA2	2.26	0.51
2:B:3037:U:H5"	7:G:348:ARG:HD2	1.93	0.51
2:B:3113:A:H5"	2:B:3118:C:H41	1.74	0.51
2:B:3321:C:OP1	7:G:172:ALA:HA	2.11	0.51
5:E:103:LEU:HB3	5:E:110:PHE:HZ	1.76	0.51
7:G:93:VAL:HG13	7:G:95:THR:HG22	1.93	0.51
7:G:141:GLY:HA2	7:G:144:ILE:HB	1.93	0.51
9:I:69:ILE:HD13	25:Y:32:LYS:HG2	1.93	0.51
9:I:152:ARG:CG	9:I:154:THR:HG23	2.41	0.51
10:J:170:LYS:O	10:J:174:LEU:HB2	2.11	0.51
11:K:224:ILE:CG1	24:X:36:ILE:HG12	2.41	0.51
15:O:74:PRO:O	15:O:78:GLU:HG3	2.11	0.51
18:R:95:ALA:HA	18:R:100:ALA:CB	2.42	0.51
19:S:114:ARG:HA	19:S:114:ARG:NE	2.26	0.51
20:T:76:PRO:HB3	20:T:138:LEU:HD23	1.93	0.51
22:V:33:TYR:HA	22:V:36:LEU:HG	1.93	0.51
26:Z:90:ARG:NH1	26:Z:94:ARG:HA	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:21:LYS:HG2	31:EA:46:ILE:HD12	1.93	0.51
34:HA:44:ILE:HG21	34:HA:53:LYS:HA	1.92	0.51
39:MA:63:ARG:O	39:MA:67:ARG:HG3	2.11	0.51
41:OA:47:TYR:HB3	41:OA:49:TRP:NE1	2.26	0.51
47:UA:32:GLN:HA	47:UA:37:TYR:HE2	1.76	0.51
48:VA:176:LEU:HB2	48:VA:178:ILE:HD13	1.92	0.51
50:XA:118:PRO:HG2	50:XA:141:ILE:HD13	1.93	0.51
52:ZA:237:VAL:HA	71:SB:33:GLN:NE2	2.15	0.51
53:AB:140:GLY:HA3	53:AB:182:LEU:HG	1.91	0.51
54:BB:77:ARG:CZ	54:BB:77:ARG:HA	2.41	0.51
58:FB:46:VAL:CG2	58:FB:54:LYS:HB3	2.40	0.51
73:UB:74:VAL:O	73:UB:82:LYS:HA	2.10	0.51
82:DC:32:LYS:HB2	82:DC:128:VAL:HG21	1.92	0.51
83:EC:6764:C:H2'	83:EC:6765:A:H8	1.76	0.51
1:A:7:G:H4'	1:A:573:C:H4'	1.93	0.50
1:A:20:G:H5'	1:A:571:G:N7	2.26	0.50
1:A:158:U:H2'	1:A:160:C:OP2	2.11	0.50
1:A:318:U:C2'	1:A:319:U:H5'	2.41	0.50
1:A:480:G:H2'	1:A:481:A:O4'	2.11	0.50
1:A:613:G:H5'	1:A:1099:U:C2	2.46	0.50
1:A:629:U:H1'	2:B:846:A:N7	2.26	0.50
1:A:856:A:N7	57:EB:97:ARG:HB2	2.25	0.50
1:A:1773:C:H5'	45:SA:4:LYS:CB	2.39	0.50
2:B:181:U:H2'	2:B:182:U:C4'	2.31	0.50
2:B:347:G:H2'	2:B:348:A:H8	1.76	0.50
2:B:648:C:N4	2:B:2375:G:H5'	2.26	0.50
2:B:804:C:O2'	8:H:74:ILE:HG22	2.10	0.50
2:B:1219:C:OP1	48:VA:8:LYS:HE2	2.11	0.50
2:B:1546:A:H5"	19:S:105:ARG:NH2	2.21	0.50
2:B:1658:G:H1'	2:B:1796:G:C4	2.46	0.50
2:B:1664:G:H2'	2:B:1665:C:C6	2.46	0.50
2:B:1796:G:H1'	6:F:190:ARG:HH12	1.73	0.50
2:B:2363:A:H2'	2:B:2364:G:C8	2.47	0.50
2:B:2638:C:H2'	2:B:2639:G:O4'	2.11	0.50
2:B:2818:U:O2'	2:B:2870:C:N4	2.44	0.50
6:F:5:ILE:HB	6:F:209:HIS:CD2	2.46	0.50
6:F:82:VAL:HG22	47:UA:65:ALA:CB	2.41	0.50
6:F:184:ARG:HA	6:F:187:HIS:HB2	1.93	0.50
6:F:187:HIS:O	6:F:190:ARG:HB3	2.10	0.50
6:F:227:ARG:HA	6:F:238:ILE:HG22	1.93	0.50
7:G:44:THR:HG21	7:G:184:ASN:OD1	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:296:GLN:HA	8:H:299:ILE:CB	2.41	0.50
9:I:148:ILE:HG12	9:I:159:VAL:HG11	1.92	0.50
9:I:183:TRP:HA	9:I:190:ILE:HA	1.92	0.50
15:O:143:ARG:HG2	15:O:144:CYS:N	2.26	0.50
16:P:106:LEU:HD12	16:P:142:ARG:HE	1.76	0.50
16:P:135:THR:HG22	16:P:147:ASN:HA	1.94	0.50
17:Q:91:ARG:HH11	17:Q:91:ARG:CB	2.21	0.50
20:T:119:VAL:O	24:X:164:SER:HB3	2.11	0.50
27:AA:21:ALA:O	27:AA:35:TYR:HA	2.11	0.50
36:JA:6:HIS:HE1	36:JA:9:ILE:HD11	1.76	0.50
37:KA:16:TYR:HB2	37:KA:23:ASN:HB2	1.92	0.50
50:XA:181:VAL:HG23	50:XA:182:LEU:HG	1.94	0.50
53:AB:95:GLY:O	53:AB:126:VAL:HG13	2.11	0.50
54:BB:67:GLN:NE2	54:BB:69:HIS:NE2	2.59	0.50
54:BB:71:LYS:CB	54:BB:76:VAL:HA	2.40	0.50
54:BB:155:LYS:HE2	54:BB:155:LYS:CA	2.39	0.50
57:EB:30:SER:O	57:EB:32:PRO:HD2	2.10	0.50
59:GB:83:VAL:HG23	59:GB:85:VAL:HG23	1.92	0.50
60:HB:59:PHE:CE2	60:HB:62:GLN:HA	2.46	0.50
61:IB:64:VAL:HA	61:IB:129:ARG:CD	2.39	0.50
74:VB:4:ALA:HB3	74:VB:30:PRO:HD2	1.91	0.50
82:DC:286:THR:HA	82:DC:290:ASN:OD1	2.11	0.50
1:A:446:A:N6	1:A:461:G:H21	2.10	0.50
1:A:709:C:H3’	1:A:710:U:C5’	2.41	0.50
1:A:817:A:H1’	57:EB:110:GLN:CG	2.41	0.50
1:A:1468:U:O4’	69:QB:88:VAL:HG23	2.11	0.50
1:A:1483:A:H2’	1:A:1484:G:O4’	2.10	0.50
2:B:36:C:H4’	2:B:808:A:N1	2.26	0.50
2:B:81:C:H2’	2:B:82:C:C6	2.46	0.50
2:B:128:G:H5”	29:CA:45:LYS:NZ	2.26	0.50
2:B:428:A:H1’	37:KA:25:PRO:HB3	1.92	0.50
2:B:711:A:H3’	2:B:712:G:O4’	2.12	0.50
2:B:878:G:H5’	2:B:880:G:C1’	2.41	0.50
2:B:1226:G:C5’	2:B:3117:C:H1’	2.41	0.50
2:B:1257:C:H1’	16:P:123:ARG:NE	2.25	0.50
2:B:1566:A:C2’	2:B:1567:U:H5”	2.41	0.50
2:B:1645:U:O2’	2:B:1819:U:H4’	2.11	0.50
2:B:1678:G:C8	26:Z:77:LYS:HE2	2.46	0.50
2:B:1768:U:C2’	2:B:1769:G:H5”	2.41	0.50
2:B:2335:G:N1	2:B:2339:C:O2	2.39	0.50
2:B:2403:G:HO2’	2:B:2405:C:H5	1.57	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2693:C:O2'	2:B:2706:G:H5"	2.12	0.50
2:B:2775:U:H4'	2:B:2777:G:C2	2.47	0.50
2:B:2858:U:H2'	2:B:2859:U:C2	2.47	0.50
2:B:3325:G:H5'	35:IA:104:LEU:O	2.12	0.50
3:C:4:C:H5'	21:U:61:ARG:HB2	1.93	0.50
7:G:46:PHE:CE2	7:G:81:THR:HB	2.46	0.50
8:H:26:PHE:HD1	8:H:127:ALA:HA	1.75	0.50
9:I:108:ARG:HA	9:I:251:PRO:HB2	1.93	0.50
13:M:88:TYR:CE2	13:M:155:SER:HA	2.46	0.50
14:N:49:CYS:HA	14:N:138:VAL:O	2.12	0.50
18:R:58:ILE:HG12	18:R:59:ASN:N	2.26	0.50
18:R:94:TRP:HZ3	18:R:99:TRP:HB3	1.76	0.50
19:S:140:LYS:HB3	19:S:144:ARG:HE	1.77	0.50
23:W:23:TRP:HB3	23:W:51:VAL:CG2	2.38	0.50
23:W:58:HIS:O	23:W:60:LYS:HD3	2.10	0.50
24:X:148:LEU:HG	24:X:150:PHE:CD2	2.46	0.50
31:EA:81:LEU:HD13	38:LA:93:PHE:CD2	2.45	0.50
34:HA:58:TYR:O	34:HA:61:MET:HG2	2.12	0.50
48:VA:15:LEU:HB2	48:VA:86:PHE:HE2	1.75	0.50
48:VA:28:VAL:HG13	48:VA:87:VAL:HG21	1.93	0.50
49:WA:205:SER:HB2	49:WA:206:PRO:CD	2.40	0.50
49:WA:253:ALA:CB	49:WA:262:VAL:HG22	2.41	0.50
52:ZA:40:LYS:O	52:ZA:44:LEU:HG	2.10	0.50
52:ZA:122:ALA:HA	52:ZA:125:ILE:HD12	1.93	0.50
53:AB:75:LYS:HB2	60:HB:22:VAL:HG11	1.93	0.50
54:BB:68:ARG:HD3	54:BB:76:VAL:HG11	1.94	0.50
56:DB:219:ARG:HD2	56:DB:219:ARG:O	2.10	0.50
63:KB:43:LYS:HB3	63:KB:45:LEU:HD13	1.94	0.50
69:QB:13:ASP:OD2	69:QB:13:ASP:N	2.45	0.50
72:TB:40:VAL:HA	72:TB:43:LYS:HB2	1.92	0.50
72:TB:44:HIS:HB2	72:TB:46:TYR:CD2	2.45	0.50
72:TB:65:LEU:H	72:TB:65:LEU:CD1	2.23	0.50
73:UB:74:VAL:HG12	73:UB:75:GLN:N	2.26	0.50
74:VB:20:ARG:NE	74:VB:74:LEU:HD22	2.26	0.50
82:DC:42:ARG:HE	82:DC:329:PRO:HB3	1.77	0.50
1:A:4:C:H41	1:A:606:A:H2	1.59	0.50
1:A:299:A:O2'	1:A:300:A:H5'	2.12	0.50
1:A:478:A:O3'	59:GB:124:HIS:HB2	2.11	0.50
1:A:1329:A:H2'	1:A:1330:G:O4'	2.10	0.50
1:A:1579:U:O2'	66:NB:139:GLN:HA	2.11	0.50
2:B:628:A:H2'	2:B:629:U:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:829:U:H1'	2:B:866:A:C6	2.47	0.50
2:B:1055:A:H1'	4:D:80:G:H21	1.76	0.50
2:B:1095:U:O2'	25:Y:126:VAL:HB	2.11	0.50
2:B:1123:U:C2'	2:B:1124:U:H5'	2.42	0.50
2:B:1169:A:H2'	2:B:1170:A:O4'	2.11	0.50
2:B:1513:G:N1	2:B:1515:A:H1'	2.26	0.50
2:B:1631:C:H3'	31:EA:48:ARG:NH2	2.25	0.50
2:B:1793:C:C5	6:F:179:LEU:HB2	2.47	0.50
2:B:2389:C:H1'	21:U:69:ARG:HH22	1.77	0.50
2:B:2527:G:O2'	12:L:244:ALA:HB3	2.11	0.50
2:B:2577:C:H2'	2:B:2578:U:C6	2.47	0.50
2:B:2664:C:OP2	15:O:142:LYS:HE3	2.11	0.50
2:B:2762:A:C2'	2:B:2763:U:H5'	2.41	0.50
3:C:37:A:H5"	3:C:39:G:H5'	1.92	0.50
4:D:1:G:N3	4:D:1:G:H2'	2.25	0.50
4:D:49:G:N7	9:I:58:LYS:HG3	2.25	0.50
11:K:224:ILE:HA	24:X:36:ILE:HG12	1.92	0.50
13:M:110:LYS:CB	13:M:128:VAL:HB	2.41	0.50
16:P:82:ILE:HD13	16:P:137:GLN:NE2	2.25	0.50
17:Q:115:ARG:HH12	17:Q:145:PHE:CB	2.25	0.50
21:U:21:TYR:CE1	21:U:123:PRO:HD2	2.46	0.50
21:U:86:LYS:HA	21:U:89:LYS:CB	2.40	0.50
26:Z:54:VAL:HG12	26:Z:67:SER:OG	2.11	0.50
32:FA:111:LYS:HE3	32:FA:113:LEU:HD21	1.92	0.50
40:NA:61:ILE:C	40:NA:63:ASN:N	2.69	0.50
55:CB:57:SER:O	55:CB:58:LEU:HB2	2.12	0.50
58:FB:26:LYS:HZ1	58:FB:49:ARG:HB2	1.76	0.50
65:MB:47:ARG:NH2	65:MB:47:ARG:HB3	2.27	0.50
78:ZB:65:ARG:CZ	78:ZB:65:ARG:HA	2.41	0.50
82:DC:821:ALA:HA	82:DC:824:LYS:HE2	1.93	0.50
1:A:1275:A:C2	53:AB:180:GLY:HA2	2.38	0.50
1:A:1450:U:H2'	1:A:1451:C:C6	2.46	0.50
2:B:86:G:H21	2:B:98:G:H2'	1.76	0.50
2:B:604:G:H2'	2:B:605:U:C6	2.47	0.50
2:B:678:G:H2'	2:B:679:U:O4'	2.10	0.50
2:B:1092:C:H4'	25:Y:120:LYS:HZ3	1.75	0.50
2:B:1474:A:H2'	2:B:1475:A:C8	2.46	0.50
2:B:1523:U:H6	2:B:1523:U:OP2	1.94	0.50
2:B:1727:G:H1'	2:B:1731:A:O4'	2.09	0.50
2:B:2372:A:H4'	2:B:2373:A:C8	2.39	0.50
2:B:2372:A:C4'	2:B:2373:A:H5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2406:C:H1'	2:B:2819:A:C4	2.46	0.50
2:B:2407:C:H5"	2:B:2620:G:O2'	2.12	0.50
2:B:2849:C:H2'	2:B:2850:G:O4'	2.11	0.50
4:D:98:C:H3'	4:D:99:G:H5"	1.93	0.50
7:G:109:HIS:C	7:G:110:LEU:HD12	2.37	0.50
10:J:20:LYS:HD3	10:J:20:LYS:C	2.36	0.50
10:J:54:TYR:HA	10:J:65:ILE:HG21	1.93	0.50
11:K:233:GLU:HG3	24:X:35:VAL:HG13	1.93	0.50
19:S:38:ARG:HG2	19:S:61:ILE:O	2.12	0.50
21:U:18:ARG:HA	21:U:146:ILE:O	2.12	0.50
48:VA:8:LYS:H	48:VA:8:LYS:CD	2.24	0.50
49:WA:26:SER:OG	49:WA:77:GLY:HA3	2.10	0.50
53:AB:105:MET:HG2	53:AB:122:VAL:HG21	1.94	0.50
54:BB:56:LEU:HD13	74:VB:58:PHE:HZ	1.76	0.50
54:BB:156:VAL:O	54:BB:157:ASN:HB2	2.12	0.50
56:DB:74:LYS:HG2	56:DB:96:SER:HA	1.92	0.50
57:EB:142:TYR:O	72:TB:49:GLU:HB2	2.11	0.50
57:EB:162:ILE:C	57:EB:164:TYR:H	2.19	0.50
68:PB:12:GLN:HG2	68:PB:59:GLY:O	2.11	0.50
69:QB:130:ARG:O	69:QB:134:ARG:HG3	2.11	0.50
82:DC:454:ILE:HG13	82:DC:455:GLY:N	2.24	0.50
1:A:453:U:H3'	1:A:453:U:O2	2.10	0.50
1:A:1487:A:C5'	1:A:1593:A:H4'	2.41	0.50
1:A:1514:U:H4'	1:A:1515:A:O4'	2.12	0.50
2:B:73:C:C2	40:NA:17:VAL:HG21	2.46	0.50
2:B:160:G:H2'	2:B:161:G:H5'	1.94	0.50
2:B:208:C:H2'	2:B:209:A:C5'	2.42	0.50
2:B:288:C:H5"	19:S:170:LYS:O	2.12	0.50
2:B:582:G:H2'	2:B:583:G:C8	2.47	0.50
2:B:1738:C:H2'	2:B:1739:U:C6	2.46	0.50
2:B:1885:U:H4'	2:B:1886:A:H5'	1.93	0.50
2:B:1923:C:H5"	45:SA:25:LYS:C	2.36	0.50
2:B:2352:A:H5"	21:U:83:TRP:O	2.11	0.50
2:B:2966:G:H5"	6:F:218:HIS:CE1	2.47	0.50
2:B:2994:A:H4'	21:U:77:GLY:C	2.36	0.50
5:E:147:LYS:O	5:E:151:VAL:HG12	2.11	0.50
6:F:5:ILE:HG22	6:F:209:HIS:HA	1.94	0.50
6:F:54:ARG:HG2	6:F:55:GLY:N	2.24	0.50
9:I:108:ARG:HG2	9:I:251:PRO:C	2.36	0.50
9:I:155:THR:N	9:I:179:ARG:HD2	2.26	0.50
10:J:65:ILE:C	10:J:65:ILE:HD12	2.36	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:10:ARG:NH2	14:N:161:GLY:HA3	2.27	0.50
15:O:12:LEU:CD1	15:O:131:MET:HE3	2.41	0.50
17:Q:76:THR:HG21	17:Q:102:GLN:HA	1.93	0.50
18:R:41:GLN:HE22	18:R:42:LYS:NZ	2.09	0.50
34:HA:30:THR:HG22	34:HA:91:SER:HB3	1.92	0.50
58:FB:46:VAL:HG22	58:FB:54:LYS:O	2.12	0.50
59:GB:85:VAL:HG11	59:GB:104:PHE:CD1	2.47	0.50
59:GB:126:ARG:HD3	80:BC:33:ARG:HD3	1.93	0.50
61:IB:83:THR:CA	61:IB:111:VAL:HG12	2.40	0.50
66:NB:86:ALA:HB3	66:NB:116:LEU:O	2.11	0.50
67:OB:80:ARG:O	67:OB:81:LYS:C	2.55	0.50
70:RB:102:ARG:O	70:RB:106:ILE:HG22	2.12	0.50
71:SB:38:LYS:CD	71:SB:49:GLU:HG3	2.39	0.50
73:UB:127:VAL:C	73:UB:129:GLY:H	2.18	0.50
82:DC:381:TYR:OH	82:DC:466:THR:HB	2.11	0.50
82:DC:694:HIS:HE1	82:DC:699:DDE:HD2	1.77	0.50
1:A:54:C:H2'	1:A:55:A:C8	2.47	0.50
1:A:415:C:O2'	1:A:416:A:H5"	2.11	0.50
1:A:606:A:H4'	1:A:607:G:C5'	2.41	0.50
1:A:694:U:H5	57:EB:95:GLU:HG3	1.77	0.50
1:A:867:G:H5'	63:KB:4:MET:CE	2.40	0.50
1:A:1069:A:C2'	1:A:1070:C:H5'	2.41	0.50
1:A:1135:U:H2'	1:A:1136:U:C6	2.47	0.50
1:A:1506:G:H2'	1:A:1507:G:C8	2.46	0.50
2:B:269:G:H5"	19:S:14:LYS:NZ	2.26	0.50
2:B:344:A:H3'	2:B:345:G:H8	1.76	0.50
2:B:594:U:H4'	11:K:30:ARG:NH1	2.26	0.50
2:B:795:G:O2'	2:B:796:U:H5'	2.12	0.50
2:B:1158:A:H2'	2:B:1159:A:H4'	1.94	0.50
2:B:1214:U:H2'	2:B:1215:U:O4'	2.12	0.50
2:B:1247:U:H2'	2:B:1268:G:O6	2.12	0.50
2:B:1354:G:C5	2:B:1357:G:H4'	2.47	0.50
2:B:1362:G:H5"	11:K:160:ARG:O	2.11	0.50
2:B:1422:G:H2'	2:B:1423:C:C6	2.46	0.50
2:B:1738:C:O2'	38:LA:52:GLN:HA	2.12	0.50
2:B:2730:G:H4'	22:V:184:PHE:CD1	2.39	0.50
2:B:2909:U:C2'	2:B:2910:A:H5"	2.40	0.50
3:C:38:U:O2	39:MA:83:LYS:HG3	2.12	0.50
5:E:65:ILE:HG23	5:E:109:ALA:CB	2.41	0.50
9:I:226:TYR:CE2	9:I:236:LEU:HD22	2.46	0.50
10:J:92:SER:C	10:J:94:GLU:H	2.19	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:146:ILE:HG23	10:J:150:LYS:NZ	2.26	0.50
11:K:64:GLN:HG3	11:K:68:ASP:OD2	2.12	0.50
11:K:86:VAL:HA	11:K:136:TYR:HA	1.93	0.50
11:K:239:LEU:HD13	11:K:240:VAL:N	2.27	0.50
12:L:139:VAL:HG11	12:L:197:VAL:HB	1.93	0.50
14:N:145:LYS:O	14:N:149:VAL:HG23	2.12	0.50
17:Q:32:LYS:HA	17:Q:35:ARG:NE	2.27	0.50
18:R:18:GLY:HA2	18:R:72:LEU:HD12	1.94	0.50
19:S:99:ARG:CB	19:S:167:THR:HG21	2.42	0.50
22:V:32:LEU:HD23	22:V:32:LEU:C	2.36	0.50
23:W:184:LEU:O	23:W:184:LEU:HD13	2.11	0.50
27:AA:10:LYS:HE3	27:AA:11:PHE:O	2.11	0.50
37:KA:29:LEU:HD23	37:KA:82:ARG:HG2	1.94	0.50
38:LA:5:VAL:HG21	38:LA:32:ALA:N	2.25	0.50
39:MA:45:LYS:O	39:MA:48:ARG:HG2	2.11	0.50
46:TA:22:GLN:O	46:TA:75:VAL:HG13	2.12	0.50
57:EB:185:ILE:HD13	57:EB:185:ILE:N	2.27	0.50
58:FB:42:ARG:C	58:FB:43:ILE:HG13	2.36	0.50
66:NB:90:VAL:HB	66:NB:102:LYS:CE	2.39	0.50
82:DC:129:VAL:CG1	82:DC:135:VAL:HG12	2.42	0.50
1:A:7:G:H4'	1:A:573:C:C4'	2.42	0.50
1:A:1490:C:C5	1:A:1514:U:O4	2.65	0.50
2:B:407:A:N6	3:C:15:G:H2'	2.27	0.50
2:B:522:A:H3'	2:B:523:A:C5'	2.35	0.50
2:B:592:A:O2'	2:B:593:C:H5'	2.11	0.50
2:B:604:G:H2'	2:B:605:U:H6	1.77	0.50
2:B:1133:A:H2'	2:B:1134:G:C5'	2.42	0.50
2:B:1269:U:H1'	2:B:1272:C:H5	1.77	0.50
2:B:1347:U:H5"	8:H:303:GLY:CA	2.35	0.50
2:B:1584:U:H2'	2:B:1585:C:H6	1.77	0.50
2:B:1786:G:H2'	2:B:1787:A:C8	2.47	0.50
2:B:3009:G:N3	7:G:15:GLY:HA2	2.27	0.50
2:B:3383:G:H21	35:IA:105:GLN:NE2	2.09	0.50
7:G:43:LEU:CB	7:G:181:ILE:HG21	2.36	0.50
8:H:39:PHE:CD1	8:H:235:LEU:HG	2.46	0.50
9:I:282:ARG:O	9:I:286:VAL:HG23	2.11	0.50
20:T:18:ARG:CB	20:T:123:ALA:HA	2.42	0.50
20:T:37:ARG:NH1	20:T:161:LYS:NZ	2.60	0.50
22:V:55:SER:O	22:V:59:ARG:HG3	2.12	0.50
23:W:119:LEU:O	23:W:123:LEU:HG	2.11	0.50
30:DA:28:ARG:HG3	30:DA:75:ARG:CZ	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:49:TYR:HD2	31:EA:133:LYS:HE2	1.76	0.50
32:FA:126:LYS:HA	32:FA:146:GLU:O	2.11	0.50
48:VA:41:VAL:HA	48:VA:44:GLU:HG2	1.94	0.50
49:WA:236:ALA:O	49:WA:237:GLN:HB2	2.12	0.50
53:AB:58:VAL:O	53:AB:65:ARG:HB3	2.11	0.50
59:GB:39:LYS:HE2	59:GB:39:LYS:N	2.27	0.50
75:WB:71:ILE:CD1	75:WB:76:ALA:HA	2.40	0.50
82:DC:225:PHE:CE1	82:DC:328:LEU:HD21	2.47	0.50
82:DC:533:THR:H	82:DC:537:HIS:CD2	2.30	0.50
1:A:93:A:N6	1:A:396:G:H1'	2.27	0.50
1:A:746:A:H2'	1:A:747:C:O4'	2.12	0.50
1:A:861:U:H2'	1:A:862:A:H5'	1.92	0.50
1:A:928:U:H5'	1:A:944:A:C2'	2.42	0.50
1:A:1045:C:H2'	1:A:1046:G:C8	2.47	0.50
1:A:1177:C:H4'	1:A:1189:A:H61	1.76	0.50
2:B:290:G:H5"	19:S:98:LEU:HD22	1.93	0.50
2:B:599:C:H2'	2:B:600:G:O4'	2.11	0.50
2:B:806:A:N3	2:B:2812:C:O2'	2.42	0.50
2:B:1073:U:H1'	33:GA:50:THR:HG1	1.76	0.50
2:B:1247:U:O2	2:B:1267:U:O4	2.30	0.50
2:B:1299:U:H2'	2:B:1300:G:O4'	2.10	0.50
2:B:1320:C:H1'	24:X:115:ARG:NH2	2.27	0.50
2:B:1329:U:OP2	37:KA:82:ARG:NH2	2.44	0.50
2:B:1337:A:H2'	2:B:1338:C:C6	2.46	0.50
2:B:1358:C:H2'	2:B:1359:C:C6	2.46	0.50
2:B:1496:C:H2'	2:B:1497:C:O4'	2.12	0.50
2:B:1723:A:H3'	2:B:1724:U:C5'	2.42	0.50
2:B:2235:C:H2'	2:B:2236:G:H8	1.75	0.50
2:B:2345:A:H5"	35:IA:24:SER:CB	2.42	0.50
2:B:2692:A:H2'	2:B:2693:C:O4'	2.12	0.50
6:F:21:ARG:CZ	6:F:22:LEU:HG	2.42	0.50
6:F:199:THR:HG22	6:F:200:ARG:H	1.77	0.50
7:G:216:ASP:HB2	7:G:339:ARG:HE	1.77	0.50
7:G:248:LYS:HD2	7:G:248:LYS:N	2.26	0.50
9:I:41:LYS:HZ2	25:Y:93:VAL:HG11	1.76	0.50
17:Q:173:ALA:HA	17:Q:176:GLU:CD	2.37	0.50
20:T:151:ASP:HA	20:T:154:ALA:CB	2.42	0.50
20:T:158:ALA:O	20:T:162:VAL:HG23	2.12	0.50
25:Y:26:HIS:NE2	25:Y:29:THR:HG23	2.27	0.50
31:EA:8:GLY:C	31:EA:87:LEU:H	2.20	0.50
32:FA:19:LYS:HB3	32:FA:25:HIS:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:103:LYS:HG3	36:JA:104:ASN:H	1.76	0.50
46:TA:25:VAL:HG12	46:TA:93:LEU:HD12	1.94	0.50
49:WA:129:LYS:HD2	49:WA:147:HIS:O	2.11	0.50
49:WA:169:ILE:HG13	49:WA:181:TRP:HD1	1.76	0.50
52:ZA:66:PHE:CE2	52:ZA:67:GLN:HG3	2.47	0.50
54:BB:149:TYR:HB3	56:DB:208:TYR:HB2	1.93	0.50
54:BB:175:PHE:HZ	54:BB:225:VAL:HG11	1.76	0.50
59:GB:48:GLN:HA	59:GB:51:LYS:CE	2.42	0.50
59:GB:64:GLU:HA	59:GB:69:ARG:HD3	1.94	0.50
60:HB:39:ASN:ND2	60:HB:43:ILE:HD11	2.26	0.50
63:KB:21:ASN:O	63:KB:65:VAL:HG13	2.12	0.50
72:TB:79:PHE:HB2	72:TB:125:ILE:CG2	2.41	0.50
75:WB:54:VAL:HG13	75:WB:89:ILE:HG22	1.92	0.50
82:DC:823:ARG:HG2	82:DC:828:MET:SD	2.52	0.50
1:A:35:U:H5'	1:A:515:A:H4'	1.94	0.50
1:A:612:U:H2'	1:A:613:G:C8	2.47	0.50
1:A:1068:C:H2'	1:A:1069:A:C8	2.46	0.50
1:A:1673:G:H22	1:A:1728:A:H2	1.57	0.50
2:B:321:C:H5"	19:S:156:HIS:NE2	2.27	0.50
2:B:852:U:H2'	2:B:853:G:H8	1.77	0.50
2:B:952:A:H5"	33:GA:15:LYS:HD3	1.94	0.50
2:B:975:C:H2'	2:B:976:U:C6	2.47	0.50
2:B:1653:G:H2'	2:B:1654:A:O4'	2.12	0.50
2:B:2149:A:C2'	2:B:2150:G:H5'	2.42	0.50
2:B:2277:C:H2'	2:B:2278:C:C6	2.47	0.50
2:B:2838:A:H2'	2:B:2839:G:O4'	2.12	0.50
2:B:2853:A:H4'	14:N:64:ALA:HA	1.94	0.50
5:E:64:SER:C	5:E:65:ILE:HG13	2.37	0.50
6:F:19:HIS:HB2	6:F:191:LEU:HA	1.94	0.50
7:G:122:TRP:HA	7:G:125:SER:OG	2.12	0.50
9:I:293:LEU:HD22	14:N:210:ILE:HG21	1.94	0.50
11:K:163:LEU:HD13	11:K:181:ILE:CD1	2.37	0.50
14:N:60:LEU:CD1	14:N:129:VAL:HG21	2.42	0.50
17:Q:58:VAL:HA	17:Q:108:ILE:HG21	1.93	0.50
18:R:116:GLU:O	18:R:120:VAL:HG23	2.10	0.50
21:U:2:ALA:O	21:U:3:ARG:HB2	2.10	0.50
28:BA:16:GLY:C	28:BA:18:GLY:H	2.20	0.50
31:EA:49:TYR:CD2	31:EA:133:LYS:HE2	2.46	0.50
32:FA:72:VAL:HG23	32:FA:113:LEU:HG	1.93	0.50
36:JA:96:ILE:H	36:JA:121:ASN:ND2	2.10	0.50
49:WA:150:TRP:HB2	49:WA:174:ASN:HD22	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:58:LEU:HA	71:SB:12:TYR:CE1	2.45	0.50
52:ZA:238:SER:C	52:ZA:240:LEU:H	2.20	0.50
78:ZB:12:VAL:CG1	78:ZB:50:GLU:HA	2.42	0.50
82:DC:40:VAL:C	82:DC:42:ARG:H	2.20	0.50
82:DC:331:ALA:HA	82:DC:335:LEU:HG	1.93	0.50
82:DC:543:GLN:HA	82:DC:546:GLU:HB3	1.94	0.50
1:A:373:G:N2	1:A:604:A:H5'	2.26	0.49
1:A:962:C:OP1	63:KB:72:MET:HB3	2.12	0.49
1:A:1511:U:H2'	1:A:1512:G:C8	2.47	0.49
1:A:1529:C:OP1	55:CB:112:ARG:HD3	2.12	0.49
2:B:398:A:H5'	21:U:3:ARG:HD2	1.94	0.49
2:B:503:C:H2'	2:B:504:A:O4'	2.12	0.49
2:B:684:G:H5"	17:Q:35:ARG:CZ	2.42	0.49
2:B:735:A:H2'	2:B:736:A:O4'	2.12	0.49
2:B:882:A:H5'	2:B:1849:C:O2	2.12	0.49
2:B:1405:U:H5'	36:JA:58:GLY:HA2	1.93	0.49
2:B:1731:A:H2'	2:B:1732:U:C5'	2.42	0.49
2:B:2362:C:OP2	2:B:2362:C:C6	2.65	0.49
2:B:2397:A:OP1	2:B:2398:A:H4'	2.12	0.49
2:B:2561:A:C5	12:L:32:LYS:HD3	2.46	0.49
2:B:2607:G:H21	19:S:78:GLY:HA3	1.77	0.49
2:B:3040:A:H5"	27:AA:12:ARG:CB	2.42	0.49
4:D:62:U:H4'	9:I:285:ARG:HH21	1.77	0.49
4:D:89:G:C5'	24:X:84:ARG:HD3	2.40	0.49
5:E:94:ASN:HA	5:E:124:LEU:HD13	1.94	0.49
6:F:77:ILE:CG2	6:F:169:ILE:HD12	2.42	0.49
6:F:202:VAL:HG13	6:F:218:HIS:N	2.27	0.49
7:G:35:ASP:HA	7:G:184:ASN:ND2	2.26	0.49
8:H:116:ASN:HA	8:H:119:ARG:HH12	1.76	0.49
8:H:195:ARG:O	8:H:196:ASN:CB	2.60	0.49
12:L:139:VAL:HA	12:L:142:LEU:CD1	2.41	0.49
13:M:48:VAL:HG13	13:M:49:ASN:N	2.27	0.49
14:N:190:VAL:HA	14:N:198:LYS:O	2.12	0.49
15:O:100:GLY:HA2	15:O:155:THR:O	2.12	0.49
15:O:109:HIS:CE1	15:O:122:ILE:HA	2.46	0.49
20:T:62:THR:H	20:T:70:PRO:HD2	1.77	0.49
23:W:58:HIS:HB3	23:W:60:LYS:HZ2	1.77	0.49
44:RA:78:ILE:O	44:RA:82:LEU:HB3	2.12	0.49
47:UA:33:GLN:HB3	47:UA:69:TYR:O	2.12	0.49
48:VA:33:VAL:CG2	48:VA:185:LEU:HD21	2.42	0.49
57:EB:182:VAL:HG12	57:EB:183:PHE:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:5:ARG:HH12	58:FB:28:GLU:C	2.20	0.49
58:FB:57:ALA:HB1	58:FB:60:ILE:HD12	1.94	0.49
59:GB:102:GLU:HA	59:GB:105:LEU:HD12	1.93	0.49
63:KB:23:PRO:O	63:KB:24:ALA:CB	2.60	0.49
66:NB:50:GLU:N	66:NB:51:PRO:HD2	2.26	0.49
68:PB:104:ASN:O	68:PB:108:LYS:HD3	2.12	0.49
69:QB:14:PHE:HE1	69:QB:136:ALA:HB2	1.77	0.49
82:DC:598:SER:HA	82:DC:601:ILE:HD12	1.93	0.49
1:A:431:C:H2'	1:A:432:G:O4'	2.13	0.49
1:A:1293:U:H2'	1:A:1294:G:C8	2.47	0.49
1:A:1424:A:OP2	53:AB:151:LYS:HD2	2.12	0.49
2:B:65:A:HO2'	2:B:66:A:P	2.34	0.49
2:B:78:U:C2'	2:B:79:U:H5'	2.43	0.49
2:B:316:U:O2	40:NA:30:LYS:HG2	2.12	0.49
2:B:584:G:H2'	2:B:585:A:H8	1.74	0.49
2:B:1430:U:O4	32:FA:4:ARG:HA	2.12	0.49
2:B:1449:A:C5	2:B:1450:G:H1'	2.47	0.49
2:B:2057:G:H5"	2:B:2058:G:H5'	1.95	0.49
2:B:2199:G:H5"	2:B:2200:U:OP2	2.12	0.49
2:B:2275:A:N6	2:B:2311:G:H1'	2.26	0.49
2:B:2736:A:H2'	2:B:2737:C:O4'	2.11	0.49
2:B:2876:C:O2'	2:B:2877:G:H5'	2.12	0.49
2:B:3241:G:H2'	2:B:3242:G:H5'	1.94	0.49
2:B:3325:G:C5'	35:IA:104:LEU:H	2.25	0.49
2:B:3393:U:H2'	2:B:3394:U:C6	2.47	0.49
5:E:73:ASP:HA	5:E:144:LEU:CD1	2.42	0.49
7:G:25:ILE:HD13	7:G:25:ILE:N	2.22	0.49
8:H:280:ILE:HG13	22:V:104:LEU:O	2.12	0.49
13:M:3:TYR:CG	13:M:65:VAL:HG21	2.46	0.49
13:M:43:VAL:HA	13:M:57:VAL:HG22	1.94	0.49
17:Q:64:LYS:HG3	32:FA:69:TRP:CE2	2.47	0.49
23:W:4:LEU:HA	23:W:7:GLN:OE1	2.11	0.49
34:HA:103:THR:HG22	34:HA:104:LEU:HD12	1.93	0.49
38:LA:57:LEU:HD11	38:LA:65:VAL:HG21	1.92	0.49
40:NA:57:LEU:O	40:NA:61:ILE:HG13	2.11	0.49
46:TA:12:CYS:O	46:TA:18:ARG:HA	2.12	0.49
49:WA:49:GLY:HA2	49:WA:54:PHE:HD1	1.77	0.49
49:WA:205:SER:HB2	49:WA:206:PRO:HD2	1.95	0.49
52:ZA:41:LEU:HD23	52:ZA:61:LEU:HD13	1.95	0.49
59:GB:100:LYS:HE3	59:GB:102:GLU:HB2	1.94	0.49
61:IB:38:ALA:HB3	61:IB:42:PHE:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:PB:14:ILE:HD12	68:PB:22:VAL:O	2.11	0.49
70:RB:38:SER:O	70:RB:42:VAL:HG23	2.13	0.49
75:WB:46:LYS:O	75:WB:50:ILE:HG13	2.12	0.49
78:ZB:12:VAL:HG23	78:ZB:52:ASP:O	2.11	0.49
78:ZB:40:ILE:HD13	78:ZB:56:LEU:CD1	2.42	0.49
82:DC:18:ASN:HA	82:DC:98:PHE:CE1	2.47	0.49
82:DC:132:ILE:HD12	82:DC:133:GLU:HG3	1.94	0.49
82:DC:183:GLU:O	82:DC:187:VAL:HG23	2.12	0.49
1:A:417:A:H4'	1:A:418:G:C4	2.47	0.49
1:A:540:G:H4'	1:A:541:A:C2'	2.31	0.49
1:A:1104:U:H2'	1:A:1105:C:H6	1.76	0.49
1:A:1438:G:H2'	1:A:1439:C:O4'	2.11	0.49
1:A:1485:C:O4'	1:A:1606:C:H4'	2.12	0.49
1:A:1498:G:C3'	1:A:1499:G:H5"	2.42	0.49
2:B:91:G:C2'	2:B:93:C:H5"	2.38	0.49
2:B:325:A:H3'	2:B:326:U:C6	2.47	0.49
2:B:729:C:OP1	22:V:44:PHE:HB2	2.11	0.49
2:B:1140:G:H2'	2:B:1140:G:N3	2.27	0.49
2:B:2320:A:C2	47:UA:16:VAL:HB	2.47	0.49
2:B:2750:U:O2'	2:B:2751:G:H5'	2.13	0.49
2:B:2767:U:OP1	46:TA:34:SER:HB3	2.12	0.49
2:B:3133:C:C2'	2:B:3134:A:H5"	2.42	0.49
3:C:94:C:HO2'	3:C:95:G:H8	1.58	0.49
3:C:119:C:H2'	3:C:120:C:H6	1.74	0.49
4:D:65:G:H2'	4:D:66:A:H8	1.78	0.49
6:F:136:ILE:HG13	6:F:148:VAL:CG1	2.34	0.49
7:G:41:VAL:HG21	7:G:194:TRP:CB	2.42	0.49
7:G:204:ALA:O	7:G:208:VAL:HG23	2.13	0.49
8:H:166:VAL:O	8:H:170:LYS:HB2	2.12	0.49
9:I:219:PHE:CE2	9:I:223:PHE:HB2	2.47	0.49
10:J:165:LEU:HB2	37:KA:6:ARG:HG3	1.93	0.49
14:N:189:GLU:HA	14:N:200:LEU:HD23	1.93	0.49
15:O:108:GLU:HA	15:O:123:PHE:O	2.12	0.49
16:P:81:VAL:CG1	16:P:113:ALA:HB1	2.41	0.49
17:Q:56:PRO:O	17:Q:71:ALA:HA	2.11	0.49
18:R:120:VAL:O	18:R:124:ARG:HG3	2.11	0.49
32:FA:135:GLU:HA	32:FA:138:ILE:CD1	2.41	0.49
33:GA:59:LYS:HD3	33:GA:59:LYS:N	2.28	0.49
41:OA:64:MET:HB2	41:OA:68:LYS:HE3	1.93	0.49
46:TA:23:HIS:HA	46:TA:73:GLU:O	2.11	0.49
49:WA:199:ILE:HG22	49:WA:200:ASN:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:250:TYR:O	49:WA:265:LEU:HD23	2.11	0.49
52:ZA:41:LEU:O	52:ZA:45:VAL:HG23	2.13	0.49
53:AB:98:ALA:CB	53:AB:169:ASP:HB3	2.42	0.49
55:CB:30:PRO:O	55:CB:34:GLN:HG3	2.13	0.49
57:EB:63:PRO:O	57:EB:64:VAL:HB	2.13	0.49
70:RB:53:LYS:CG	70:RB:92:ASP:HB2	2.41	0.49
1:A:310:C:H4'	73:UB:33:LEU:CG	2.43	0.49
1:A:639:U:C6	57:EB:118:LEU:HG	2.46	0.49
1:A:1483:A:H4'	66:NB:71:GLY:HA2	1.93	0.49
2:B:510:G:H2'	2:B:511:G:O4'	2.13	0.49
2:B:603:A:H2'	2:B:604:G:H5'	1.95	0.49
2:B:796:U:H4'	17:Q:7:LEU:CD1	2.42	0.49
2:B:1172:G:N2	2:B:1179:A:H1'	2.26	0.49
2:B:1538:G:H21	2:B:1583:A:N6	1.98	0.49
2:B:1588:A:C2	43:QA:4:GLN:HG2	2.47	0.49
2:B:2186:U:H2'	2:B:2187:G:O4'	2.13	0.49
3:C:24:G:C8	30:DA:13:ARG:NH1	2.80	0.49
8:H:323:VAL:HA	8:H:326:ARG:HB2	1.94	0.49
9:I:205:SER:HA	9:I:208:MET:HB2	1.95	0.49
17:Q:166:ALA:HB1	32:FA:147:LEU:HD21	1.93	0.49
19:S:73:ARG:CG	19:S:92:LEU:HD13	2.41	0.49
19:S:138:GLN:O	19:S:143:ARG:HD2	2.13	0.49
20:T:13:GLY:HA3	20:T:125:ARG:NH2	2.27	0.49
22:V:127:LEU:HD13	22:V:128:ALA:N	2.27	0.49
44:RA:99:CYS:HB2	44:RA:114:LYS:NZ	2.26	0.49
49:WA:127:ARG:NH1	67:OB:33:ARG:HG3	2.27	0.49
50:XA:126:PRO:HG3	50:XA:147:THR:HG22	1.94	0.49
53:AB:113:LEU:HD23	53:AB:114:ALA:H	1.77	0.49
54:BB:122:LYS:HD3	54:BB:164:LEU:HD21	1.94	0.49
73:UB:19:ARG:HA	73:UB:19:ARG:CZ	2.42	0.49
78:ZB:12:VAL:HG12	78:ZB:50:GLU:HA	1.93	0.49
82:DC:773:PRO:HG3	82:DC:776:GLU:OE1	2.13	0.49
1:A:1754:A:H5"	73:UB:62:LYS:HB2	1.94	0.49
2:B:124:U:O4'	2:B:150:A:H1'	2.12	0.49
2:B:669:U:H5"	22:V:153:PHE:CZ	2.47	0.49
2:B:674:G:H5"	8:H:120:TYR:CE2	2.48	0.49
2:B:714:G:H2'	32:FA:113:LEU:HD13	1.94	0.49
2:B:730:C:H5'	22:V:136:ASN:HA	1.94	0.49
2:B:1190:A:H5"	2:B:1191:U:OP1	2.13	0.49
2:B:1341:U:O2'	2:B:1342:C:H5'	2.12	0.49
2:B:1540:U:H2'	2:B:1541:G:H8	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1731:A:H2'	2:B:1732:U:H5'	1.93	0.49
2:B:1896:A:C2	27:AA:83:LYS:HD3	2.47	0.49
2:B:2138:A:H2'	41:OA:3:LYS:HG2	1.94	0.49
2:B:2691:A:H3'	2:B:2692:A:C8	2.47	0.49
2:B:2787:G:H4'	32:FA:58:MET:N	2.28	0.49
2:B:2941:A:OP2	7:G:256:HIS:HD2	1.95	0.49
2:B:2991:A:OP2	7:G:20:LYS:HE2	2.13	0.49
2:B:3136:G:H2'	2:B:3137:C:C6	2.47	0.49
2:B:3182:G:C5'	20:T:160:ARG:HH22	2.21	0.49
2:B:3255:U:H2'	2:B:3256:G:C8	2.47	0.49
5:E:137:PRO:HD2	83:EC:6772:G:OP1	2.12	0.49
6:F:112:ILE:CG2	6:F:133:TYR:HB2	2.43	0.49
7:G:119:TYR:HE1	7:G:125:SER:HB2	1.76	0.49
7:G:205:VAL:HG21	7:G:322:ILE:HD11	1.93	0.49
9:I:39:GLN:HA	9:I:48:LYS:HD2	1.95	0.49
11:K:222:HIS:CE1	11:K:224:ILE:HD12	2.47	0.49
12:L:69:LEU:HD21	19:S:24:ARG:NH2	2.27	0.49
12:L:82:LEU:CD2	12:L:87:ALA:HB2	2.42	0.49
12:L:89:GLU:C	12:L:91:PHE:H	2.19	0.49
13:M:88:TYR:HB2	13:M:154:VAL:HG12	1.93	0.49
19:S:154:PRO:HA	19:S:157:LYS:HD2	1.94	0.49
22:V:127:LEU:O	22:V:127:LEU:HD22	2.13	0.49
24:X:119:ARG:HH11	24:X:119:ARG:HB3	1.77	0.49
26:Z:43:VAL:O	26:Z:44:GLU:HB3	2.13	0.49
27:AA:93:LEU:HB3	28:BA:20:LEU:HD22	1.95	0.49
31:EA:13:VAL:HB	31:EA:18:TYR:O	2.12	0.49
31:EA:89:VAL:HA	31:EA:92:PHE:CE1	2.47	0.49
38:LA:58:ARG:O	38:LA:59:PRO:C	2.56	0.49
40:NA:71:LYS:O	40:NA:75:LYS:HD3	2.13	0.49
48:VA:39:HIS:HA	48:VA:42:ARG:HD2	1.94	0.49
48:VA:55:LYS:HD3	48:VA:56:ASN:H	1.76	0.49
49:WA:41:THR:HG22	49:WA:62:LYS:HA	1.93	0.49
55:CB:36:ALA:HA	55:CB:40:ILE:HG23	1.94	0.49
57:EB:93:LEU:HD22	57:EB:125:ILE:HG23	1.94	0.49
57:EB:115:SER:C	57:EB:117:THR:H	2.21	0.49
58:FB:38:ILE:HA	58:FB:60:ILE:O	2.13	0.49
58:FB:168:CYS:HB3	58:FB:182:TYR:HE1	1.74	0.49
59:GB:36:LEU:HD22	59:GB:41:GLU:HB3	1.94	0.49
71:SB:41:GLU:H	71:SB:41:GLU:CD	2.21	0.49
72:TB:3:ARG:CD	72:TB:29:PRO:HD3	2.42	0.49
73:UB:54:LEU:HD12	73:UB:82:LYS:HG3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:564:G:H4'	1:A:566:C:C2	2.47	0.49
1:A:856:A:O2'	1:A:857:U:H5'	2.13	0.49
1:A:941:A:H4'	1:A:1027:A:N3	2.27	0.49
1:A:1625:C:H2'	1:A:1626:U:C6	2.48	0.49
2:B:661:G:N1	32:FA:17:ALA:HB3	2.27	0.49
2:B:821:U:H4'	2:B:912:G:OP1	2.13	0.49
2:B:824:C:C1'	2:B:1535:A:H1'	2.42	0.49
2:B:946:U:O2'	2:B:947:G:H5'	2.12	0.49
2:B:980:A:C6	2:B:1105:A:H1'	2.47	0.49
2:B:1126:G:H2'	2:B:1127:G:O4'	2.12	0.49
2:B:1220:U:H4'	2:B:1222:G:H1'	1.95	0.49
2:B:1698:C:H2'	2:B:1699:A:C8	2.47	0.49
2:B:2628:A:H3'	2:B:2629:U:H5"	1.94	0.49
2:B:2664:C:OP1	15:O:142:LYS:HG2	2.12	0.49
2:B:3027:A:H4'	82:DC:137:VAL:HG11	1.94	0.49
2:B:3133:C:H2'	2:B:3134:A:C5'	2.42	0.49
2:B:3270:U:C4'	21:U:171:ARG:HA	2.42	0.49
3:C:28:C:C4'	8:H:49:ALA:HB3	2.41	0.49
3:C:53:A:H2'	3:C:54:A:C8	2.48	0.49
6:F:5:ILE:HG21	6:F:210:PRO:CD	2.42	0.49
8:H:269:SER:OG	8:H:271:LYS:HB2	2.13	0.49
9:I:34:LYS:HD3	9:I:35:ARG:N	2.28	0.49
10:J:38:THR:HG22	10:J:39:VAL:N	2.28	0.49
13:M:47:LYS:CE	18:R:5:SER:HB2	2.43	0.49
13:M:103:ILE:HG21	13:M:110:LYS:HZ1	1.75	0.49
13:M:132:VAL:HA	13:M:148:GLY:CA	2.43	0.49
18:R:94:TRP:CZ3	18:R:99:TRP:HB3	2.47	0.49
18:R:100:ALA:HA	18:R:103:ILE:HB	1.94	0.49
19:S:66:VAL:CG2	19:S:102:ALA:HB2	2.42	0.49
24:X:11:GLY:O	24:X:24:LEU:HA	2.12	0.49
24:X:24:LEU:HD21	24:X:59:VAL:HG11	1.95	0.49
24:X:79:VAL:HG11	24:X:106:LEU:HD11	1.95	0.49
27:AA:86:ARG:HB2	27:AA:92:PHE:CZ	2.47	0.49
34:HA:40:LYS:C	34:HA:65:THR:HG23	2.37	0.49
37:KA:51:TYR:CB	37:KA:98:VAL:HA	2.42	0.49
41:OA:33:THR:HA	41:OA:39:TYR:O	2.12	0.49
43:QA:9:ILE:O	43:QA:12:LYS:HB2	2.12	0.49
48:VA:45:LEU:HB3	48:VA:49:ALA:N	2.28	0.49
50:XA:143:VAL:CB	50:XA:156:VAL:HA	2.43	0.49
52:ZA:35:TRP:CZ2	52:ZA:37:PRO:HB3	2.47	0.49
54:BB:121:TYR:HA	54:BB:162:ILE:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:142:PRO:HD2	55:CB:170:GLN:OE1	2.12	0.49
82:DC:227:THR:HG23	82:DC:237:LYS:HD3	1.94	0.49
82:DC:564:ARG:HD2	82:DC:681:MET:O	2.13	0.49
82:DC:675:PRO:HB3	82:DC:714:TYR:CD1	2.44	0.49
82:DC:739:ALA:O	82:DC:788:THR:CG2	2.61	0.49
82:DC:746:VAL:HA	82:DC:749:LYS:NZ	2.26	0.49
1:A:244:A:H5'	54:BB:155:LYS:NZ	2.28	0.49
1:A:872:G:N2	1:A:1047:G:H4'	2.27	0.49
1:A:1070:C:H2'	1:A:1071:U:O4'	2.13	0.49
2:B:209:A:H2	8:H:223:PRO:HD3	1.76	0.49
2:B:636:C:O2'	2:B:637:C:H5"	2.12	0.49
2:B:674:G:H2'	2:B:675:C:O4'	2.13	0.49
2:B:1048:A:C4'	2:B:2633:U:H4'	2.42	0.49
2:B:1123:U:H2'	2:B:1124:U:H5'	1.94	0.49
2:B:1240:A:C5'	16:P:98:VAL:HG12	2.40	0.49
2:B:1687:U:H1'	26:Z:75:TYR:CD1	2.47	0.49
2:B:1689:U:O2'	23:W:57:VAL:HB	2.13	0.49
2:B:1737:U:H2'	2:B:1738:C:C6	2.46	0.49
2:B:1768:U:H2'	2:B:1769:G:C5'	2.42	0.49
2:B:1917:C:H2'	2:B:1918:C:H6	1.78	0.49
2:B:2351:U:H2'	2:B:2352:A:C8	2.47	0.49
2:B:2614:G:H2'	2:B:2615:G:O4'	2.12	0.49
2:B:2817:A:H3'	2:B:2818:U:C5'	2.39	0.49
3:C:14:C:H2'	3:C:15:G:O4'	2.13	0.49
3:C:130:C:H2'	3:C:131:A:O4'	2.13	0.49
4:D:45:A:H5'	9:I:154:THR:HG21	1.94	0.49
9:I:290:ILE:HG22	14:N:206:LEU:CD1	2.43	0.49
11:K:233:GLU:HB2	24:X:35:VAL:CG2	2.34	0.49
21:U:177:ALA:O	21:U:180:LYS:HG2	2.13	0.49
34:HA:14:LEU:HA	34:HA:17:VAL:HG13	1.94	0.49
36:JA:6:HIS:CE1	36:JA:9:ILE:HD11	2.46	0.49
38:LA:76:TYR:HD1	38:LA:79:SER:HB2	1.78	0.49
44:RA:93:LYS:HB3	44:RA:103:LEU:O	2.13	0.49
49:WA:133:VAL:HB	49:WA:142:ALA:CB	2.38	0.49
49:WA:179:LYS:HB3	49:WA:188:ILE:CD1	2.42	0.49
50:XA:51:GLY:O	50:XA:55:GLU:HG3	2.13	0.49
52:ZA:144:TRP:CE2	52:ZA:173:PRO:HG3	2.48	0.49
56:DB:217:SER:HA	56:DB:220:LYS:HB3	1.95	0.49
57:EB:16:LEU:O	57:EB:20:VAL:HG23	2.13	0.49
70:RB:44:ASN:OD1	70:RB:103:ILE:HD12	2.12	0.49
75:WB:80:LEU:O	75:WB:84:GLU:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:131:THR:HG21	82:DC:163:ALA:CB	2.43	0.49
82:DC:436:LEU:HA	82:DC:454:ILE:CD1	2.41	0.49
82:DC:606:ILE:HG23	82:DC:615:ARG:HG3	1.93	0.49
1:A:811:A:N6	57:EB:113:PRO:HD3	2.27	0.49
1:A:1044:U:H3	1:A:1074:G:H1	1.61	0.49
2:B:225:C:H5"	30:DA:34:PRO:HB3	1.95	0.49
2:B:701:G:H2'	2:B:702:C:C6	2.48	0.49
2:B:947:G:H21	22:V:12:ARG:HH22	1.61	0.49
2:B:2138:A:H2'	41:OA:3:LYS:CE	2.42	0.49
2:B:2323:G:H5"	2:B:2324:A:OP2	2.13	0.49
2:B:2652:U:H4'	46:TA:89:LYS:CE	2.42	0.49
2:B:2735:U:H2'	2:B:2736:A:C8	2.48	0.49
2:B:3210:A:H2'	2:B:3211:C:O4'	2.12	0.49
4:D:62:U:C2'	4:D:63:A:H5'	2.42	0.49
7:G:165:GLN:HB3	7:G:168:LYS:CG	2.41	0.49
7:G:198:HIS:CA	7:G:201:LYS:HB2	2.40	0.49
8:H:132:ALA:HA	8:H:135:VAL:CB	2.42	0.49
9:I:296:GLN:NE2	14:N:218:ALA:HB1	2.28	0.49
16:P:76:SER:HB2	16:P:116:MET:HB3	1.94	0.49
17:Q:64:LYS:HA	32:FA:69:TRP:CE3	2.48	0.49
17:Q:77:LEU:HA	17:Q:80:VAL:CG2	2.38	0.49
17:Q:119:TYR:OH	39:MA:116:TYR:HE1	1.95	0.49
18:R:23:ILE:CG2	18:R:28:SER:HB2	2.42	0.49
20:T:34:VAL:HG23	20:T:34:VAL:O	2.13	0.49
22:V:88:THR:CA	22:V:110:ALA:HB2	2.42	0.49
22:V:176:ARG:HA	22:V:182:LYS:O	2.12	0.49
28:BA:21:PHE:CE1	28:BA:41:LYS:HE3	2.47	0.49
28:BA:50:ALA:HA	28:BA:55:PHE:CG	2.47	0.49
29:CA:114:VAL:HG12	43:QA:10:LYS:HZ2	1.78	0.49
31:EA:8:GLY:HA3	31:EA:87:LEU:HB3	1.95	0.49
43:QA:24:PRO:O	43:QA:27:ILE:HB	2.13	0.49
56:DB:214:LYS:O	56:DB:218:GLU:HG3	2.13	0.49
58:FB:152:ILE:HG22	58:FB:153:GLU:N	2.27	0.49
59:GB:83:VAL:HA	59:GB:149:ARG:CA	2.34	0.49
68:PB:100:THR:HG22	68:PB:108:LYS:HG2	1.95	0.49
82:DC:225:PHE:HZ	82:DC:328:LEU:HD21	1.76	0.49
82:DC:733:ILE:HG13	82:DC:794:PRO:HA	1.94	0.49
1:A:11:A:H5'	52:ZA:87:GLN:HB2	1.95	0.49
1:A:150:U:H2'	1:A:151:G:O4'	2.13	0.49
1:A:320:U:C2'	1:A:321:C:H5"	2.43	0.49
1:A:629:U:C1'	2:B:846:A:N7	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:846:G:H2'	1:A:847:A:O4'	2.13	0.49
1:A:969:C:H4'	1:A:1104:U:C4'	2.42	0.49
1:A:1315:U:H5"	1:A:1329:A:N3	2.28	0.49
1:A:1389:C:O2'	67:OB:52:GLY:HA3	2.13	0.49
1:A:1672:G:H2'	1:A:1673:G:C8	2.48	0.49
2:B:58:G:H5"	19:S:154:PRO:HB2	1.94	0.49
2:B:624:G:H2'	2:B:625:G:H8	1.78	0.49
2:B:784:A:H2'	22:V:69:ARG:HE	1.78	0.49
2:B:1456:A:N7	35:IA:26:LYS:HE2	2.27	0.49
2:B:1580:A:H1'	2:B:1581:C:C5	2.48	0.49
2:B:1650:G:H2'	2:B:1651:U:H6	1.76	0.49
2:B:2111:G:O2'	28:BA:44:LYS:HD2	2.12	0.49
2:B:2737:C:H2'	2:B:2738:A:O4'	2.13	0.49
2:B:2829:U:OP1	14:N:4:ARG:HA	2.13	0.49
2:B:3066:U:H3	2:B:3075:G:H1	1.61	0.49
2:B:3215:A:H3'	37:KA:2:ALA:HB2	1.95	0.49
4:D:29:C:OP2	15:O:137:ARG:HD3	2.13	0.49
5:E:21:ASN:O	5:E:22:GLU:HB3	2.13	0.49
6:F:123:ARG:HA	6:F:163:ARG:HH21	1.77	0.49
8:H:23:PRO:HG3	8:H:258:LEU:HD23	1.94	0.49
8:H:71:VAL:HG22	8:H:72:ALA:H	1.77	0.49
8:H:170:LYS:O	8:H:175:HIS:HB2	2.11	0.49
11:K:88:ARG:CA	11:K:134:VAL:HG12	2.38	0.49
12:L:160:ILE:HD12	19:S:21:PHE:CE2	2.47	0.49
19:S:18:VAL:O	19:S:21:PHE:HB3	2.13	0.49
21:U:148:LEU:O	21:U:148:LEU:HD12	2.13	0.49
34:HA:56:LEU:O	34:HA:60:ALA:HB2	2.13	0.49
35:IA:11:GLU:O	35:IA:106:THR:HA	2.12	0.49
39:MA:48:ARG:HA	39:MA:51:ILE:CD1	2.38	0.49
42:PA:46:ARG:HA	42:PA:51:LEU:HD12	1.94	0.49
47:UA:25:GLN:HA	47:UA:28:LYS:HZ3	1.78	0.49
48:VA:61:ARG:CA	48:VA:64:ARG:HB3	2.32	0.49
49:WA:238:ASP:HB3	49:WA:257:ALA:HB3	1.93	0.49
50:XA:171:GLY:HA3	50:XA:203:PHE:HD2	1.76	0.49
52:ZA:138:PRO:C	52:ZA:139:ILE:HD12	2.38	0.49
52:ZA:139:ILE:N	52:ZA:139:ILE:HD12	2.28	0.49
52:ZA:227:PRO:HA	52:ZA:230:TRP:CD2	2.47	0.49
54:BB:99:PHE:CD1	54:BB:113:ARG:HG2	2.47	0.49
55:CB:81:ARG:C	55:CB:83:ARG:H	2.20	0.49
57:EB:9:LEU:O	57:EB:10:SER:HB3	2.12	0.49
57:EB:92:PHE:O	57:EB:128:ASP:HB3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:27:PHE:O	60:HB:28:ASN:HB2	2.12	0.49
66:NB:55:VAL:HG13	66:NB:56:GLY:N	2.28	0.49
69:QB:84:LYS:O	69:QB:91:TYR:HA	2.12	0.49
71:SB:36:VAL:HG11	71:SB:78:LEU:HD13	1.94	0.49
80:BC:42:ARG:HA	80:BC:46:ASN:OD1	2.13	0.49
82:DC:250:PHE:HB3	82:DC:275:MET:HE1	1.95	0.49
1:A:218:A:H3'	1:A:219:A:H5"	1.95	0.49
1:A:517:U:H2'	1:A:518:A:O4'	2.13	0.49
1:A:531:C:C2'	1:A:532:U:H5"	2.40	0.49
1:A:954:G:H2'	1:A:955:A:H8	1.78	0.49
1:A:1313:A:N3	1:A:1315:U:H5'	2.28	0.49
2:B:325:A:H3'	2:B:326:U:H6	1.77	0.49
2:B:376:G:N2	2:B:401:U:H5"	2.27	0.49
2:B:513:G:H2'	2:B:514:G:C8	2.45	0.49
2:B:717:C:H3'	2:B:718:G:C8	2.48	0.49
2:B:879:U:C4'	21:U:132:ALA:HB3	2.34	0.49
2:B:1138:U:C4'	11:K:97:PRO:HG3	2.31	0.49
2:B:1275:C:H2'	2:B:1276:U:O4'	2.13	0.49
2:B:1547:G:H5"	19:S:104:GLU:OE1	2.13	0.49
2:B:1612:A:H5"	42:PA:51:LEU:HD13	1.93	0.49
2:B:1793:C:C6	6:F:179:LEU:HD13	2.47	0.49
2:B:2549:G:C5'	12:L:35:GLY:HA3	2.42	0.49
2:B:3056:U:H5'	2:B:3058:U:H1'	1.95	0.49
3:C:42:G:O2'	3:C:43:A:H5'	2.13	0.49
4:D:82:G:H2'	4:D:83:U:C6	2.48	0.49
8:H:192:GLY:O	8:H:197:ARG:HG2	2.12	0.49
9:I:95:TRP:CH2	9:I:181:PRO:HD3	2.48	0.49
10:J:166:LYS:HE2	37:KA:4:SER:CB	2.43	0.49
14:N:153:ARG:C	14:N:153:ARG:HE	2.20	0.49
17:Q:12:ASN:HB3	17:Q:14:PHE:HE1	1.76	0.49
18:R:95:ALA:HA	18:R:100:ALA:HB1	1.93	0.49
18:R:123:LEU:HD13	20:T:194:LEU:HG	1.94	0.49
21:U:150:VAL:HG23	21:U:150:VAL:O	2.12	0.49
22:V:80:THR:CG2	22:V:100:THR:HB	2.43	0.49
22:V:170:ARG:NH1	32:FA:59:ARG:HA	2.27	0.49
24:X:138:GLN:C	24:X:140:VAL:H	2.20	0.49
30:DA:18:ALA:O	30:DA:22:ALA:HB2	2.12	0.49
36:JA:78:ASN:H	36:JA:78:ASN:HD22	1.61	0.49
37:KA:47:LYS:HD2	37:KA:102:LEU:HA	1.95	0.49
49:WA:263:PHE:HD1	49:WA:270:LEU:HA	1.78	0.49
50:XA:30:GLN:HA	50:XA:149:LEU:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:191:ASP:OD2	53:AB:192:PRO:HD2	2.13	0.49
56:DB:57:ASP:HA	56:DB:106:LEU:HA	1.95	0.49
59:GB:14:THR:OG1	59:GB:15:PRO:HD2	2.13	0.49
59:GB:85:VAL:CG2	59:GB:107:ARG:HG3	2.40	0.49
69:QB:19:ALA:O	69:QB:23:GLN:HG3	2.13	0.49
69:QB:22:LEU:HD12	69:QB:28:LEU:HB3	1.94	0.49
70:RB:23:ARG:HB3	70:RB:117:VAL:CG1	2.43	0.49
70:RB:28:SER:CB	70:RB:112:VAL:HG22	2.43	0.49
72:TB:35:ILE:O	72:TB:39:GLN:HG2	2.12	0.49
72:TB:94:LEU:HA	72:TB:130:TYR:CE1	2.48	0.49
73:UB:89:ASN:HB3	73:UB:136:TRP:CE2	2.48	0.49
79:AC:10:HIS:O	79:AC:12:ARG:HD3	2.13	0.49
1:A:138:A:C2'	1:A:139:C:H5'	2.42	0.48
1:A:487:G:H2'	1:A:488:G:H5"	1.95	0.48
1:A:923:A:H4'	6:F:137:ILE:HB	1.94	0.48
1:A:1110:G:H1	1:A:1135:U:H3	1.61	0.48
2:B:60:A:H2'	2:B:61:A:H8	1.78	0.48
2:B:106:A:H5"	2:B:685:G:H5'	1.95	0.48
2:B:409:A:H1'	2:B:655:C:H1'	1.95	0.48
2:B:1483:G:H22	2:B:1872:C:N4	2.10	0.48
2:B:1678:G:H4'	2:B:1756:C:H4'	1.94	0.48
2:B:1941:C:H42	2:B:2107:A:N6	2.11	0.48
2:B:3198:U:H1'	13:M:21:LYS:HB2	1.94	0.48
2:B:3324:C:O2'	35:IA:105:GLN:HA	2.13	0.48
5:E:140:HIS:C	5:E:142:ASP:H	2.21	0.48
6:F:107:VAL:HB	6:F:108:PRO:HD2	1.94	0.48
6:F:147:ARG:HA	6:F:157:VAL:HA	1.94	0.48
6:F:209:HIS:CG	6:F:210:PRO:HD2	2.48	0.48
7:G:54:THR:O	7:G:76:VAL:HG23	2.13	0.48
7:G:385:LYS:O	7:G:387:LEU:N	2.46	0.48
8:H:130:ALA:HB2	8:H:149:PRO:HG3	1.94	0.48
9:I:13:SER:CA	9:I:16:PHE:HB2	2.40	0.48
17:Q:159:VAL:HG23	32:FA:99:ALA:HB2	1.94	0.48
19:S:56:LYS:HG2	19:S:59:PHE:CE2	2.48	0.48
23:W:86:GLU:O	23:W:90:PRO:HG3	2.13	0.48
25:Y:11:THR:HB	25:Y:15:PHE:CE1	2.48	0.48
26:Z:17:VAL:HA	26:Z:103:TYR:HB2	1.95	0.48
28:BA:5:ILE:HB	28:BA:10:GLY:C	2.37	0.48
29:CA:58:ASP:OD1	29:CA:61:LYS:HB2	2.13	0.48
37:KA:91:ALA:HA	37:KA:94:PHE:CE1	2.48	0.48
43:QA:16:ALA:HA	43:QA:19:GLN:OE1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:8:LYS:HD2	48:VA:8:LYS:N	2.28	0.48
49:WA:150:TRP:O	49:WA:173:GLY:HA3	2.13	0.48
50:XA:168:HIS:O	50:XA:169:SER:C	2.55	0.48
53:AB:72:LEU:HD23	60:HB:20:VAL:HG13	1.95	0.48
54:BB:70:VAL:HG22	54:BB:71:LYS:N	2.28	0.48
54:BB:142:HIS:CG	54:BB:226:PHE:HE2	2.31	0.48
55:CB:149:VAL:HG12	55:CB:156:ARG:O	2.13	0.48
59:GB:141:VAL:HG11	59:GB:146:PHE:CD2	2.48	0.48
65:MB:84:ILE:HG22	65:MB:85:ILE:H	1.77	0.48
66:NB:81:ILE:O	66:NB:85:ILE:HG13	2.13	0.48
68:PB:11:PHE:CZ	68:PB:59:GLY:HA3	2.48	0.48
70:RB:70:THR:C	70:RB:72:ASN:H	2.22	0.48
71:SB:24:ILE:HG21	71:SB:31:SER:CB	2.43	0.48
75:WB:88:ILE:CG2	75:WB:104:ALA:HB2	2.40	0.48
82:DC:81:MET:HB2	82:DC:96:ASN:ND2	2.14	0.48
82:DC:171:LYS:HG2	82:DC:278:LEU:HB2	1.95	0.48
82:DC:305:ILE:HG22	82:DC:306:VAL:N	2.27	0.48
1:A:70:C:H2'	1:A:71:A:H8	1.76	0.48
1:A:381:C:H5"	54:BB:10:LYS:CD	2.44	0.48
1:A:710:U:H2'	1:A:711:U:H5'	1.95	0.48
1:A:1339:C:O2	1:A:1339:C:H2'	2.13	0.48
2:B:279:U:H2'	2:B:280:U:O4'	2.13	0.48
2:B:637:C:H41	2:B:647:A:H4'	1.78	0.48
2:B:790:U:H5"	8:H:112:LYS:HD3	1.94	0.48
2:B:912:G:H2'	2:B:914:A:C8	2.48	0.48
2:B:944:C:H4'	36:JA:33:ARG:HD3	1.95	0.48
2:B:1364:C:H5"	22:V:3:ILE:HD13	1.94	0.48
2:B:1692:U:H1'	2:B:1755:C:C4'	2.43	0.48
2:B:3072:C:H4'	2:B:3336:A:C5'	2.43	0.48
2:B:3169:U:H3	2:B:3281:U:H3	1.60	0.48
3:C:131:A:O2'	3:C:132:G:H5'	2.12	0.48
4:D:74:C:H2'	4:D:75:G:O4'	2.13	0.48
4:D:79:A:H3'	4:D:80:G:C8	2.48	0.48
6:F:32:LEU:HD22	6:F:120:PRO:HB2	1.95	0.48
7:G:19:ARG:HG2	7:G:273:HIS:CE1	2.48	0.48
7:G:358:TRP:CG	28:BA:1:MET:HG2	2.48	0.48
8:H:186:LYS:CG	8:H:202:ARG:HH22	2.26	0.48
8:H:205:PRO:HB3	8:H:247:PHE:CD2	2.49	0.48
11:K:83:LEU:HD21	11:K:116:PHE:HB3	1.94	0.48
12:L:74:THR:HG23	12:L:75:ILE:HG13	1.95	0.48
14:N:157:TYR:CD1	14:N:157:TYR:N	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:110:ILE:HD12	16:P:110:ILE:N	2.28	0.48
17:Q:114:GLN:O	17:Q:118:GLU:HG3	2.13	0.48
18:R:24:LYS:HG2	18:R:62:GLN:O	2.13	0.48
19:S:140:LYS:HB3	19:S:144:ARG:CZ	2.42	0.48
19:S:145:ASP:HB3	19:S:147:ARG:HB2	1.95	0.48
19:S:191:TRP:CA	19:S:194:GLN:HG2	2.41	0.48
20:T:136:THR:HG22	20:T:137:THR:H	1.78	0.48
20:T:186:ALA:HA	20:T:191:ALA:HB1	1.96	0.48
22:V:152:HIS:HD2	22:V:164:ARG:HH21	1.60	0.48
23:W:81:ARG:C	23:W:83:GLY:H	2.21	0.48
25:Y:152:ALA:HB1	25:Y:153:PRO:CD	2.35	0.48
29:CA:58:ASP:H	29:CA:61:LYS:HB3	1.79	0.48
32:FA:94:ALA:HB1	32:FA:121:VAL:HG13	1.95	0.48
44:RA:80:PRO:HG2	48:VA:168:SER:HB3	1.95	0.48
49:WA:23:LEU:HD12	49:WA:292:LEU:HA	1.95	0.48
52:ZA:162:CYS:CB	52:ZA:213:ALA:HB2	2.40	0.48
52:ZA:237:VAL:HG12	52:ZA:241:ASP:HB2	1.95	0.48
54:BB:34:GLY:HA3	54:BB:83:PRO:CG	2.43	0.48
54:BB:92:LEU:HB2	54:BB:97:GLU:O	2.12	0.48
54:BB:118:GLU:HA	54:BB:121:TYR:CE1	2.47	0.48
54:BB:162:ILE:HG22	54:BB:163:ASP:N	2.29	0.48
68:PB:84:TRP:CD1	68:PB:84:TRP:H	2.30	0.48
75:WB:62:VAL:HG13	75:WB:76:ALA:CB	2.43	0.48
78:ZB:9:LEU:HB2	78:ZB:53:ILE:HG23	1.94	0.48
80:BC:39:LEU:O	80:BC:43:ARG:HB3	2.13	0.48
82:DC:111:PHE:C	82:DC:113:SER:N	2.69	0.48
82:DC:129:VAL:CG2	82:DC:157:ILE:HG12	2.43	0.48
82:DC:215:LEU:O	82:DC:321:LYS:HE2	2.13	0.48
82:DC:599:LEU:O	82:DC:603:ASN:HB2	2.14	0.48
1:A:3:U:H5'	52:ZA:179:VAL:CG1	2.43	0.48
1:A:66:U:C6	56:DB:173:PRO:HG3	2.48	0.48
1:A:570:A:C6	73:UB:114:LYS:HD3	2.49	0.48
1:A:777:C:H41	74:VB:10:ARG:HB3	1.78	0.48
1:A:817:A:H1'	57:EB:110:GLN:HG2	1.95	0.48
1:A:1435:G:H4'	1:A:1437:U:OP2	2.13	0.48
1:A:1674:C:H2'	1:A:1675:C:H6	1.79	0.48
2:B:47:C:H3'	2:B:48:A:H2'	1.95	0.48
2:B:91:G:C5	2:B:93:C:O4'	2.66	0.48
2:B:219:A:H8	2:B:1390:A:C5	2.31	0.48
2:B:511:G:H2'	2:B:512:U:C6	2.48	0.48
2:B:683:U:H2'	2:B:684:G:O4'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:715:A:OP2	32:FA:113:LEU:HB3	2.13	0.48
2:B:1092:C:H2'	2:B:1096:U:O4	2.12	0.48
2:B:1256:G:C1'	16:P:128:VAL:HG22	2.42	0.48
2:B:1508:C:C6	2:B:1880:U:H1'	2.48	0.48
2:B:1863:G:H1'	2:B:1867:A:N6	2.27	0.48
2:B:1903:U:H2'	2:B:1905:G:OP2	2.13	0.48
2:B:1972:A:OP1	42:PA:64:LYS:HD3	2.12	0.48
2:B:2267:C:C5	2:B:2269:U:C4	3.01	0.48
2:B:2570:U:H5"	2:B:2571:U:C5	2.49	0.48
2:B:3051:U:H1'	27:AA:92:PHE:CE1	2.48	0.48
2:B:3335:A:H2'	2:B:3336:A:C8	2.49	0.48
3:C:55:U:H3	3:C:62:C:H42	1.58	0.48
7:G:58:ARG:CA	7:G:357:LYS:HG2	2.41	0.48
8:H:196:ASN:ND2	30:DA:10:SER:HB2	2.26	0.48
15:O:100:GLY:HA2	15:O:155:THR:C	2.37	0.48
18:R:123:LEU:CD2	20:T:194:LEU:HG	2.34	0.48
19:S:65:ARG:HA	19:S:129:TYR:HA	1.94	0.48
20:T:27:LEU:HD11	20:T:102:LEU:HD22	1.96	0.48
22:V:67:ILE:HA	22:V:140:LEU:HD13	1.95	0.48
24:X:45:LEU:C	24:X:47:LYS:H	2.20	0.48
31:EA:2:ALA:HA	34:HA:37:GLY:HA3	1.94	0.48
31:EA:36:HIS:HA	31:EA:38:PHE:CZ	2.48	0.48
36:JA:66:LEU:HA	36:JA:72:LYS:HA	1.95	0.48
47:UA:26:VAL:O	47:UA:30:GLU:HB2	2.14	0.48
49:WA:262:VAL:HB	49:WA:272:ASP:HB3	1.95	0.48
59:GB:60:LEU:HD22	59:GB:93:LEU:HD11	1.94	0.48
60:HB:35:ILE:HG22	60:HB:37:THR:HG23	1.95	0.48
70:RB:26:LEU:HD23	70:RB:114:VAL:HG22	1.95	0.48
82:DC:24:VAL:HG23	82:DC:102:LEU:HD11	1.94	0.48
82:DC:410:LYS:HG2	82:DC:428:ILE:CG2	2.43	0.48
83:EC:6891:G:C2	83:EC:6938:A:N6	2.81	0.48
1:A:185:U:C3'	1:A:186:C:H5"	2.43	0.48
1:A:619:A:H5"	1:A:1141:G:H4'	1.94	0.48
1:A:694:U:H5'	1:A:695:U:H5	1.79	0.48
1:A:856:A:H61	57:EB:116:ARG:HA	1.77	0.48
1:A:977:A:H3'	1:A:978:A:H8	1.79	0.48
1:A:1203:A:H5'	1:A:1457:C:N4	2.21	0.48
1:A:1579:U:H1'	66:NB:139:GLN:HG3	1.94	0.48
1:A:1608:U:OP1	66:NB:72:GLY:HA2	2.12	0.48
2:B:880:G:C8	21:U:132:ALA:HB2	2.48	0.48
2:B:996:A:C2	4:D:79:A:H2	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1043:C:H2'	2:B:1044:U:H6	1.79	0.48
2:B:1105:A:H2'	2:B:1106:G:O4'	2.12	0.48
2:B:1182:A:H2'	2:B:1183:C:C6	2.48	0.48
2:B:1579:C:H5	29:CA:33:ARG:CZ	2.26	0.48
2:B:1682:U:O2	26:Z:82:LYS:HG3	2.13	0.48
2:B:1698:C:H2'	2:B:1699:A:H8	1.77	0.48
2:B:1900:A:H2	2:B:1907:C:H41	1.60	0.48
2:B:2338:C:O3'	27:AA:48:ARG:HA	2.13	0.48
2:B:2483:G:OP2	5:E:97:LYS:HD3	2.12	0.48
2:B:2549:G:N1	12:L:33:ASN:HA	2.29	0.48
2:B:2558:U:H5'	12:L:40:VAL:CG2	2.41	0.48
2:B:2651:G:H5"	2:B:2652:U:C1'	2.43	0.48
2:B:2698:G:C3'	2:B:2699:G:H5"	2.43	0.48
2:B:2843:U:H5"	2:B:2844:C:C5	2.48	0.48
2:B:2854:U:H4'	14:N:160:PRO:HD3	1.94	0.48
2:B:3093:C:H1'	27:AA:83:LYS:HZ1	1.78	0.48
3:C:145:U:O5'	3:C:145:U:H6	1.95	0.48
4:D:88:G:H5"	24:X:117:ARG:NH1	2.28	0.48
4:D:89:G:H5'	24:X:84:ARG:CD	2.43	0.48
5:E:77:ALA:HB1	5:E:82:VAL:HB	1.96	0.48
6:F:126:LEU:H	6:F:126:LEU:CD1	2.24	0.48
7:G:83:PRO:HB3	7:G:202:THR:OG1	2.13	0.48
7:G:113:GLU:HG2	7:G:166:ILE:HG22	1.95	0.48
7:G:262:TRP:CD1	20:T:65:ASN:HA	2.48	0.48
7:G:372:THR:OG1	7:G:375:GLU:HG3	2.14	0.48
8:H:4:PRO:CD	8:H:22:LEU:HD22	2.44	0.48
8:H:206:LEU:HB3	8:H:248:VAL:HG13	1.95	0.48
11:K:224:ILE:HG12	24:X:36:ILE:HG12	1.94	0.48
13:M:93:VAL:HG13	44:RA:82:LEU:CD1	2.43	0.48
13:M:165:CYS:HB3	13:M:179:ILE:H	1.78	0.48
14:N:191:LYS:CG	14:N:198:LYS:HB2	2.43	0.48
14:N:206:LEU:O	14:N:206:LEU:HD12	2.14	0.48
19:S:27:VAL:HA	19:S:129:TYR:CE2	2.48	0.48
20:T:142:SER:CA	20:T:145:VAL:HG22	2.43	0.48
20:T:142:SER:O	20:T:147:TRP:HB3	2.13	0.48
24:X:5:LYS:HD2	24:X:7:TYR:OH	2.12	0.48
29:CA:62:VAL:HG13	29:CA:90:ALA:HB2	1.96	0.48
31:EA:27:LYS:O	31:EA:42:LEU:HD13	2.12	0.48
34:HA:58:TYR:O	34:HA:62:LEU:HD12	2.13	0.48
36:JA:9:ILE:HG23	36:JA:63:THR:HB	1.96	0.48
37:KA:30:ILE:HG22	37:KA:31:LYS:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:MA:32:LYS:HE2	39:MA:44:ILE:HD11	1.96	0.48
53:AB:141:LYS:HB2	53:AB:144:ALA:O	2.13	0.48
55:CB:36:ALA:HB1	55:CB:42:LEU:CD2	2.42	0.48
58:FB:64:ASN:HD21	58:FB:73:SER:C	2.22	0.48
63:KB:53:LEU:O	63:KB:57:ALA:HB3	2.14	0.48
66:NB:97:VAL:HG12	66:NB:98:ASP:H	1.78	0.48
68:PB:88:ARG:NH2	68:PB:108:LYS:HG3	2.29	0.48
72:TB:17:ALA:HB2	72:TB:25:VAL:HG11	1.94	0.48
72:TB:30:SER:HA	72:TB:34:ILE:HD12	1.94	0.48
75:WB:100:ILE:HD13	75:WB:100:ILE:C	2.38	0.48
77:YB:33:LEU:HD23	77:YB:81:ARG:CA	2.43	0.48
82:DC:115:VAL:HB	82:DC:145:GLN:HE22	1.78	0.48
82:DC:733:ILE:N	82:DC:733:ILE:HD12	2.28	0.48
1:A:122:U:H2'	1:A:123:G:C8	2.47	0.48
1:A:244:A:H5'	54:BB:155:LYS:HZ2	1.79	0.48
1:A:338:C:H1'	58:FB:5:ARG:CB	2.40	0.48
1:A:740:A:H2'	1:A:741:C:C5'	2.43	0.48
1:A:1049:U:H4'	77:YB:70:LYS:HE3	1.94	0.48
2:B:119:U:H4'	2:B:120:G:H3'	1.96	0.48
2:B:293:C:H2'	2:B:294:U:O4'	2.14	0.48
2:B:599:C:C3'	2:B:600:G:H5"	2.42	0.48
2:B:795:G:H4'	2:B:1111:U:O3'	2.13	0.48
2:B:867:G:H2'	2:B:868:C:C6	2.48	0.48
2:B:1232:C:O2'	2:B:1233:G:H5'	2.14	0.48
2:B:1456:A:H8	35:IA:26:LYS:HB3	1.78	0.48
2:B:1657:C:N4	2:B:1797:A:H3'	2.29	0.48
2:B:2249:G:OP2	2:B:2273:G:H2'	2.12	0.48
2:B:2351:U:H2'	2:B:2352:A:H8	1.78	0.48
2:B:2358:A:H3'	2:B:2359:C:H6	1.78	0.48
2:B:2417:U:O2'	2:B:2418:G:H5'	2.13	0.48
2:B:2684:C:H2'	2:B:2685:C:C6	2.49	0.48
2:B:2967:A:C5'	6:F:213:GLY:HA3	2.35	0.48
2:B:2968:G:H2'	2:B:2969:A:C8	2.49	0.48
2:B:3039:C:O2	27:AA:9:THR:HG21	2.14	0.48
2:B:3185:U:O2	24:X:170:THR:HG23	2.14	0.48
2:B:3198:U:O4	13:M:26:LYS:HD2	2.12	0.48
2:B:3353:G:H1'	2:B:3356:G:C1'	2.44	0.48
2:B:3365:U:H5"	28:BA:59:HIS:NE2	2.27	0.48
3:C:142:C:H5"	19:S:60:VAL:HG22	1.92	0.48
4:D:74:C:H2'	4:D:75:G:C5'	2.44	0.48
7:G:77:THR:O	7:G:323:MET:HA	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:119:ARG:HB2	8:H:119:ARG:HH11	1.77	0.48
8:H:359:LEU:CG	24:X:64:ILE:HG12	2.42	0.48
11:K:83:LEU:HD13	11:K:83:LEU:C	2.38	0.48
11:K:84:VAL:HG12	11:K:138:TYR:HD1	1.78	0.48
12:L:153:ILE:HD12	12:L:177:TYR:HB2	1.94	0.48
12:L:183:LYS:HA	12:L:186:LEU:HD12	1.95	0.48
20:T:8:VAL:HB	20:T:116:LYS:O	2.13	0.48
32:FA:124:ILE:HG12	32:FA:144:VAL:HG21	1.93	0.48
41:OA:8:PHE:CA	41:OA:11:ARG:HD3	2.33	0.48
46:TA:67:LYS:HA	46:TA:87:ARG:HA	1.95	0.48
48:VA:38:MET:HA	48:VA:185:LEU:HD11	1.94	0.48
49:WA:233:THR:C	49:WA:234:LEU:HD12	2.38	0.48
50:XA:88:LYS:HD3	50:XA:201:LEU:CD2	2.43	0.48
52:ZA:140:ARG:HB3	52:ZA:221:THR:HB	1.95	0.48
57:EB:130:VAL:HB	57:EB:133:THR:OG1	2.13	0.48
61:IB:94:ILE:HD12	61:IB:94:ILE:N	2.28	0.48
70:RB:30:LYS:H	70:RB:30:LYS:HD2	1.79	0.48
73:UB:56:LYS:CD	73:UB:98:GLU:HG3	2.39	0.48
82:DC:39:LEU:HD21	82:DC:334:LEU:HB2	1.94	0.48
82:DC:646:VAL:HG21	82:DC:664:VAL:HG22	1.95	0.48
83:EC:6857:C:C2'	83:EC:6858:A:H5'	2.44	0.48
83:EC:6862:G:N2	83:EC:6863:C:H41	2.11	0.48
1:A:116:U:H2'	1:A:117:U:C6	2.48	0.48
1:A:256:A:H4'	58:FB:72:ILE:HG22	1.95	0.48
1:A:356:G:H2'	1:A:357:G:H8	1.79	0.48
1:A:385:A:H2'	1:A:386:G:H8	1.72	0.48
1:A:445:A:O4'	1:A:525:A:H5'	2.13	0.48
1:A:694:U:H3	57:EB:98:ILE:HD12	1.79	0.48
1:A:953:G:H1'	63:KB:114:ARG:HH21	1.78	0.48
1:A:976:G:H3'	1:A:1023:A:H2	1.79	0.48
1:A:1181:U:H2'	1:A:1182:U:O4'	2.14	0.48
1:A:1275:A:H4'	53:AB:145:ALA:HB1	1.95	0.48
1:A:1528:U:H5'	55:CB:108:LEU:HB3	1.95	0.48
2:B:170:G:H5"	39:MA:109:ILE:HG12	1.96	0.48
2:B:185:C:H2'	2:B:186:U:C5'	2.43	0.48
2:B:570:A:H2'	2:B:571:U:C6	2.48	0.48
2:B:627:U:O2'	2:B:1399:A:H1'	2.13	0.48
2:B:720:A:H3'	22:V:69:ARG:HH12	1.78	0.48
2:B:744:A:H2'	2:B:745:C:H5'	1.96	0.48
2:B:761:A:H2'	2:B:762:U:O4'	2.14	0.48
2:B:1046:A:O5'	2:B:1046:A:H8	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1463:U:H2'	2:B:1464:G:O4'	2.14	0.48
2:B:1797:A:H2'	2:B:1798:A:H8	1.79	0.48
2:B:2162:U:H2'	2:B:2163:C:O4'	2.13	0.48
2:B:2261:G:H5'	2:B:2261:G:H8	1.78	0.48
2:B:2268:U:H3'	2:B:2269:U:H4'	1.96	0.48
2:B:2482:U:H2'	2:B:2483:G:O4'	2.14	0.48
2:B:2674:A:H2'	2:B:2675:C:O4'	2.13	0.48
2:B:2676:A:H4'	2:B:2677:G:C5'	2.44	0.48
2:B:3108:G:H21	13:M:163:GLN:NE2	1.98	0.48
2:B:3312:U:H4'	7:G:25:ILE:CG2	2.43	0.48
6:F:78:ALA:O	6:F:169:ILE:HA	2.13	0.48
8:H:141:ARG:HG3	8:H:180:LYS:HG3	1.96	0.48
9:I:17:GLN:HG2	25:Y:20:ARG:O	2.14	0.48
9:I:95:TRP:HZ2	9:I:156:GLY:C	2.22	0.48
14:N:192:ASP:HA	14:N:197:VAL:HG23	1.95	0.48
17:Q:7:LEU:HB3	17:Q:8:PRO:HD2	1.95	0.48
18:R:47:ASP:HB2	18:R:55:ARG:HG2	1.95	0.48
18:R:123:LEU:HD21	20:T:193:GLN:HB2	1.94	0.48
20:T:53:LYS:HA	20:T:56:ASP:OD2	2.13	0.48
25:Y:75:ILE:HD12	25:Y:88:ARG:HG2	1.95	0.48
34:HA:33:SER:HB2	34:HA:93:LEU:HD11	1.95	0.48
37:KA:16:TYR:HB3	37:KA:24:ASN:O	2.14	0.48
46:TA:17:CYS:HA	46:TA:19:LYS:HZ3	1.78	0.48
49:WA:34:LEU:HD21	49:WA:80:ALA:HB1	1.95	0.48
50:XA:17:LEU:HA	50:XA:172:LEU:CD2	2.43	0.48
53:AB:98:ALA:HB3	53:AB:169:ASP:HB3	1.96	0.48
53:AB:161:GLY:C	53:AB:163:PRO:HD2	2.38	0.48
55:CB:51:VAL:HG13	55:CB:131:GLN:HA	1.95	0.48
56:DB:85:ARG:HH22	56:DB:87:ARG:HG3	1.79	0.48
57:EB:6:ALA:HB3	57:EB:9:LEU:HD13	1.96	0.48
57:EB:11:GLN:HG3	57:EB:13:PRO:CD	2.40	0.48
58:FB:147:ALA:C	58:FB:149:SER:H	2.22	0.48
66:NB:49:TYR:O	66:NB:53:LEU:HG	2.14	0.48
68:PB:15:LEU:H	68:PB:15:LEU:CD2	2.24	0.48
72:TB:24:GLN:HG2	77:YB:5:GLN:O	2.14	0.48
72:TB:70:ASN:HB2	72:TB:130:TYR:O	2.13	0.48
82:DC:4:PHE:CD2	82:DC:45:ILE:HG12	2.48	0.48
1:A:522:U:H5"	74:VB:37:LYS:HG3	1.95	0.48
1:A:1687:U:H2'	1:A:1688:U:O4'	2.14	0.48
2:B:96:G:OP1	32:FA:34:MET:HB2	2.13	0.48
2:B:929:A:H1'	41:OA:49:TRP:CZ3	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:958:C:H5”	2:B:2800:G:OP1	2.13	0.48
2:B:1116:G:OP2	2:B:1116:G:H4’	2.13	0.48
2:B:1363:A:OP1	11:K:160:ARG:HD3	2.13	0.48
2:B:1689:U:H2’	2:B:1690:C:O4’	2.13	0.48
2:B:2410:U:H3	2:B:2801:A:H2	1.60	0.48
2:B:2510:U:HO2’	2:B:2511:A:H8	1.60	0.48
2:B:2518:C:H2’	2:B:2519:A:C8	2.49	0.48
2:B:2855:U:P	14:N:160:PRO:HB3	2.53	0.48
2:B:3039:C:H1’	27:AA:9:THR:CB	2.44	0.48
2:B:3216:G:C2’	2:B:3219:G:H1’	2.43	0.48
2:B:3308:C:H3’	2:B:3309:G:N2	2.28	0.48
3:C:111:A:N7	41:OA:29:VAL:HG21	2.29	0.48
4:D:64:A:N6	14:N:200:LEU:HD11	2.29	0.48
9:I:177:GLU:HA	9:I:180:PHE:CD2	2.48	0.48
12:L:37:GLY:O	12:L:38:GLN:HB3	2.14	0.48
12:L:48:ARG:HH21	12:L:49:TYR:HB3	1.74	0.48
13:M:41:ILE:O	13:M:42:ASP:HB2	2.14	0.48
14:N:5:PRO:CG	14:N:7:ARG:NH1	2.77	0.48
17:Q:92:THR:HG21	39:MA:111:PHE:HB3	1.96	0.48
25:Y:82:ASN:ND2	25:Y:83:ARG:HD3	2.29	0.48
26:Z:37:LEU:HD23	26:Z:56:VAL:HG11	1.95	0.48
29:CA:107:VAL:HG12	29:CA:108:LEU:H	1.79	0.48
31:EA:57:HIS:NE2	31:EA:65:ARG:HG3	2.29	0.48
37:KA:49:ILE:CG2	37:KA:71:VAL:HG23	2.43	0.48
48:VA:27:VAL:HG13	48:VA:84:VAL:HG11	1.96	0.48
48:VA:120:TRP:HB2	48:VA:157:LYS:HZ2	1.79	0.48
50:XA:191:ARG:HG3	50:XA:192:THR:N	2.28	0.48
54:BB:162:ILE:HG22	54:BB:163:ASP:H	1.79	0.48
54:BB:201:HIS:CE1	54:BB:207:LEU:HB2	2.49	0.48
58:FB:97:THR:HA	58:FB:173:PRO:HG2	1.95	0.48
59:GB:137:GLY:O	59:GB:138:LYS:HB3	2.13	0.48
60:HB:24:LYS:HG2	60:HB:25:LYS:N	2.27	0.48
72:TB:75:ILE:HG22	72:TB:79:PHE:HE2	1.78	0.48
1:A:391:A:O4’	1:A:1731:A:H5’	2.14	0.48
1:A:408:C:H1’	1:A:1731:A:O2’	2.14	0.48
1:A:619:A:H1’	1:A:1140:G:H21	1.79	0.48
1:A:754:A:C3’	1:A:755:A:H5’	2.36	0.48
1:A:886:U:H2’	1:A:887:A:C8	2.48	0.48
1:A:975:C:H2’	1:A:976:G:C8	2.49	0.48
1:A:1112:G:H1’	1:A:1133:A:N6	2.28	0.48
1:A:1552:U:H2’	1:A:1553:G:O4’	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1715:G:C3’	1:A:1716:C:H4’	2.44	0.48
2:B:126:U:H5”	19:S:140:LYS:HB2	1.96	0.48
2:B:130:A:H61	2:B:138:U:H3	1.60	0.48
2:B:663:C:H2’	2:B:664:U:C6	2.48	0.48
2:B:1521:G:H5”	29:CA:71:THR:HG21	1.96	0.48
2:B:1725:C:H2’	2:B:1726:C:C5	2.47	0.48
2:B:2139:A:H62	41:OA:4:GLY:N	2.12	0.48
2:B:2982:A:C2’	2:B:2983:C:H5”	2.43	0.48
2:B:3004:C:H4’	7:G:99:LEU:C	2.39	0.48
2:B:3088:G:H2’	2:B:3089:C:O4’	2.14	0.48
2:B:3141:A:H5”	2:B:3142:A:H4’	1.95	0.48
3:C:73:U:OP1	30:DA:75:ARG:HB2	2.13	0.48
3:C:93:U:H2’	3:C:94:C:O4’	2.14	0.48
6:F:87:PHE:HB3	6:F:89:TYR:CE1	2.49	0.48
6:F:239:ALA:HB1	6:F:241:ARG:NH1	2.29	0.48
7:G:4:ARG:HD3	7:G:7:GLU:HA	1.95	0.48
7:G:339:ARG:CZ	7:G:342:LEU:HD21	2.44	0.48
9:I:63:GLN:HG2	9:I:77:ALA:HB1	1.94	0.48
9:I:164:LYS:HE3	9:I:195:LEU:HD21	1.96	0.48
15:O:115:LYS:HG2	15:O:116:TYR:H	1.79	0.48
17:Q:84:GLY:C	17:Q:85:LEU:HD23	2.38	0.48
22:V:82:VAL:HA	22:V:102:ALA:HB3	1.94	0.48
25:Y:74:VAL:HG12	25:Y:75:ILE:N	2.29	0.48
27:AA:93:LEU:HA	28:BA:20:LEU:HB3	1.94	0.48
31:EA:104:PRO:HA	31:EA:107:ARG:CG	2.43	0.48
32:FA:13:GLY:O	36:JA:36:LYS:HE2	2.14	0.48
37:KA:85:PHE:CE2	37:KA:88:ASN:HA	2.47	0.48
48:VA:12:PHE:CZ	48:VA:60:ARG:HG3	2.48	0.48
49:WA:8:VAL:HG12	49:WA:9:LEU:N	2.29	0.48
50:XA:93:THR:HG22	50:XA:181:VAL:HG21	1.95	0.48
50:XA:127:ARG:HG3	50:XA:127:ARG:HH11	1.79	0.48
52:ZA:230:TRP:HZ2	72:TB:46:TYR:CE1	2.32	0.48
68:PB:140:THR:HA	68:PB:143:ARG:HH11	1.78	0.48
72:TB:75:ILE:HG22	72:TB:79:PHE:CE2	2.49	0.48
73:UB:127:VAL:O	73:UB:130:VAL:HG22	2.14	0.48
82:DC:733:ILE:HD12	82:DC:733:ILE:H	1.78	0.48
1:A:348:U:H4’	58:FB:14:THR:HG22	1.94	0.48
1:A:390:G:H2’	1:A:391:A:O4’	2.14	0.48
1:A:845:G:C2’	1:A:846:G:H5”	2.35	0.48
1:A:856:A:N6	57:EB:116:ARG:HG3	2.29	0.48
1:A:954:G:H2’	1:A:955:A:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1293:U:H2'	1:A:1294:G:H8	1.78	0.48
1:A:1468:U:H1'	69:QB:88:VAL:HG23	1.95	0.48
1:A:1523:G:OP1	69:QB:78:LYS:HD3	2.14	0.48
1:A:1752:U:H2'	1:A:1753:A:H8	1.75	0.48
2:B:87:U:H5"	22:V:172:PHE:CE2	2.49	0.48
2:B:878:G:H5'	2:B:880:G:H1'	1.96	0.48
2:B:941:G:H1'	2:B:1435:A:H1'	1.96	0.48
2:B:1054:A:C5'	2:B:2637:A:H61	2.23	0.48
2:B:1805:C:H4'	38:LA:76:TYR:H	1.77	0.48
2:B:2122:G:H2'	2:B:2123:G:O4'	2.14	0.48
2:B:2151:C:H2'	2:B:2152:A:O4'	2.14	0.48
2:B:2304:C:H2'	2:B:2305:G:H5'	1.96	0.48
2:B:2392:C:H1'	7:G:266:ARG:NH2	2.21	0.48
2:B:2394:G:H2'	2:B:2395:G:C5'	2.43	0.48
2:B:2746:A:H5'	9:I:179:ARG:CG	2.34	0.48
3:C:69:U:C2'	3:C:70:G:H5'	2.44	0.48
4:D:27:A:H3'	9:I:57:ASN:HD22	1.79	0.48
4:D:118:A:H4'	9:I:79:TYR:HE2	1.79	0.48
7:G:67:PHE:CE2	27:AA:88:ARG:HB2	2.47	0.48
9:I:125:VAL:CG1	9:I:196:ARG:HG3	2.44	0.48
11:K:116:PHE:CE1	11:K:139:PRO:HG3	2.48	0.48
15:O:17:LEU:HG	15:O:19:LEU:HD21	1.96	0.48
17:Q:2:ALA:C	17:Q:3:ILE:HG13	2.39	0.48
19:S:49:ARG:HH11	19:S:49:ARG:HG3	1.79	0.48
20:T:39:GLU:C	20:T:41:LEU:H	2.20	0.48
21:U:28:ASN:OD1	21:U:84:PRO:HG3	2.14	0.48
24:X:27:MET:HE2	24:X:44:PHE:CB	2.44	0.48
30:DA:57:LEU:HD13	30:DA:66:GLN:O	2.13	0.48
30:DA:70:ILE:CD1	30:DA:82:VAL:HG22	2.39	0.48
31:EA:72:ILE:HG12	31:EA:111:LYS:HE2	1.94	0.48
34:HA:96:GLY:H	34:HA:100:ILE:HD11	1.76	0.48
36:JA:20:HIS:CD2	36:JA:42:VAL:HG21	2.49	0.48
46:TA:23:HIS:HD2	46:TA:72:LEU:O	1.96	0.48
54:BB:31:PRO:HG2	54:BB:38:LEU:HD13	1.96	0.48
59:GB:48:GLN:HA	59:GB:51:LYS:HE2	1.96	0.48
63:KB:48:SER:O	63:KB:52:VAL:HG23	2.13	0.48
66:NB:60:PHE:HA	66:NB:63:ILE:CG1	2.44	0.48
66:NB:116:LEU:O	66:NB:117:LEU:HD13	2.14	0.48
67:OB:29:GLN:HE21	67:OB:29:GLN:H	1.62	0.48
69:QB:57:ARG:O	69:QB:61:VAL:HG23	2.14	0.48
69:QB:112:GLY:O	69:QB:127:ASN:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:224:GLN:NE2	82:DC:328:LEU:CD2	2.76	0.48
82:DC:578:LYS:HE2	82:DC:583:HIS:N	2.29	0.48
1:A:206:A:C2'	1:A:207:U:H5'	2.44	0.48
1:A:208:U:H2'	1:A:209:U:C6	2.49	0.48
1:A:703:G:H2'	1:A:704:C:H5'	1.95	0.48
1:A:991:G:H4'	1:A:1786:G:C5'	2.44	0.48
1:A:1113:A:N1	1:A:1131:A:H5"	2.28	0.48
2:B:720:A:H5"	22:V:69:ARG:HH22	1.78	0.48
2:B:743:C:O2	22:V:141:ARG:HB2	2.14	0.48
2:B:941:G:H2'	2:B:942:U:O4'	2.14	0.48
2:B:1046:A:O5'	2:B:1046:A:C8	2.67	0.48
2:B:1057:A:H2'	2:B:1058:U:H5'	1.95	0.48
2:B:1078:U:H1'	2:B:1082:U:N3	2.29	0.48
2:B:1084:A:H5"	25:Y:35:LYS:CE	2.43	0.48
2:B:1235:U:OP2	16:P:77:ALA:HA	2.14	0.48
2:B:1323:G:H2'	2:B:1324:U:O4'	2.14	0.48
2:B:1438:U:H2'	2:B:1439:U:C6	2.49	0.48
2:B:1508:C:H3'	2:B:1509:A:H8	1.74	0.48
2:B:1523:U:H5'	2:B:1834:U:N3	2.29	0.48
2:B:1768:U:H2'	2:B:1769:G:C4'	2.44	0.48
2:B:2174:G:C8	2:B:2176:U:H1'	2.49	0.48
2:B:2944:U:H2'	2:B:2947:G:O6	2.14	0.48
2:B:2948:C:H5"	7:G:243:HIS:O	2.14	0.48
2:B:2999:U:H2'	2:B:3000:A:H8	1.78	0.48
2:B:3316:A:N1	7:G:124:LYS:HD2	2.29	0.48
4:D:73:C:O2	24:X:49:HIS:HB3	2.13	0.48
6:F:126:LEU:HD11	6:F:156:LYS:HZ3	1.79	0.48
6:F:145:LYS:HA	6:F:158:ILE:O	2.14	0.48
6:F:243:THR:HG23	6:F:243:THR:O	2.13	0.48
7:G:92:TYR:CD1	7:G:101:SER:HA	2.49	0.48
11:K:103:LEU:HD23	11:K:108:LEU:HD12	1.95	0.48
12:L:75:ILE:O	12:L:76:ALA:HB3	2.14	0.48
12:L:77:GLN:O	12:L:80:TYR:O	2.32	0.48
13:M:13:PRO:O	13:M:16:VAL:HG23	2.14	0.48
15:O:14:ILE:HD12	15:O:14:ILE:N	2.29	0.48
16:P:73:VAL:O	16:P:75:PRO:HD3	2.13	0.48
18:R:14:LEU:HB3	24:X:149:LYS:HB2	1.96	0.48
19:S:35:VAL:CA	19:S:65:ARG:HE	2.15	0.48
19:S:91:GLU:HB2	46:TA:50:PHE:CZ	2.31	0.48
20:T:125:ARG:HG2	20:T:126:VAL:H	1.78	0.48
20:T:147:TRP:CZ3	20:T:150:GLU:HA	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:65:ALA:HA	23:W:68:GLN:HB2	1.95	0.48
30:DA:31:LEU:HD13	30:DA:101:PRO:HG3	1.96	0.48
32:FA:79:TRP:HH2	32:FA:121:VAL:HG21	1.78	0.48
32:FA:120:ASN:HA	32:FA:141:ALA:HB1	1.96	0.48
40:NA:53:TYR:HA	40:NA:56:ARG:HB3	1.96	0.48
48:VA:53:MET:HE1	48:VA:83:ASN:HB3	1.96	0.48
53:AB:5:ILE:HB	53:AB:10:LYS:HE3	1.96	0.48
53:AB:168:ILE:HA	53:AB:189:MET:HA	1.95	0.48
53:AB:172:THR:HA	53:AB:184:ILE:O	2.13	0.48
54:BB:98:ASN:ND2	54:BB:119:ALA:HB2	2.28	0.48
54:BB:98:ASN:HD22	54:BB:119:ALA:HB2	1.78	0.48
57:EB:11:GLN:CG	57:EB:13:PRO:HD2	2.37	0.48
58:FB:38:ILE:HD11	58:FB:80:GLY:HA2	1.92	0.48
58:FB:38:ILE:HD12	58:FB:94:ASN:HB3	1.95	0.48
61:IB:110:HIS:HB3	61:IB:138:ASN:ND2	2.29	0.48
65:MB:93:VAL:HA	65:MB:106:GLU:HA	1.95	0.48
66:NB:40:GLU:CA	66:NB:41:PRO:C	2.84	0.48
67:OB:91:LEU:C	67:OB:93:LEU:N	2.63	0.48
70:RB:24:ILE:HG21	70:RB:91:ILE:HD12	1.96	0.48
82:DC:8:GLN:O	82:DC:12:LEU:HD13	2.13	0.48
82:DC:82:SER:O	82:DC:85:ASP:HB2	2.14	0.48
82:DC:144:ARG:HD3	82:DC:765:LEU:HD22	1.95	0.48
82:DC:365:ASN:HB3	82:DC:379:MET:HE2	1.96	0.48
83:EC:6902:U:H3	83:EC:6911:A:H61	1.62	0.48
1:A:393:C:H2'	1:A:394:C:C6	2.48	0.47
1:A:636:A:OP1	72:TB:6:VAL:HB	2.13	0.47
1:A:792:U:H2'	1:A:793:A:O4'	2.14	0.47
1:A:962:C:H2'	1:A:963:A:O4'	2.14	0.47
1:A:1048:G:O2'	1:A:1049:U:H5'	2.13	0.47
1:A:1138:A:O2'	1:A:1139:A:H5'	2.13	0.47
1:A:1390:U:OP1	67:OB:5:ARG:HD2	2.14	0.47
1:A:1546:G:H21	68:PB:87:ASN:CB	2.26	0.47
2:B:609:G:N7	8:H:308:LYS:HE3	2.28	0.47
2:B:680:G:H4'	2:B:789:A:H4'	1.96	0.47
2:B:865:U:H2'	2:B:866:A:H5'	1.96	0.47
2:B:1041:U:H2'	2:B:1042:U:H5'	1.95	0.47
2:B:1115:G:H3'	2:B:1115:G:N3	2.29	0.47
2:B:1222:G:H5"	48:VA:56:ASN:HB3	1.95	0.47
2:B:1690:C:OP1	23:W:60:LYS:HB2	2.14	0.47
2:B:2830:G:H2'	2:B:2831:G:O4'	2.14	0.47
6:F:126:LEU:HD12	6:F:126:LEU:N	2.24	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:148:LEU:O	7:G:152:LYS:HG3	2.14	0.47
9:I:229:ASP:O	9:I:230:ASP:HB3	2.13	0.47
11:K:223:PHE:CE2	24:X:35:VAL:HB	2.49	0.47
11:K:240:VAL:HA	11:K:243:MET:HB2	1.96	0.47
13:M:36:LYS:HE3	13:M:74:LEU:CD2	2.44	0.47
19:S:144:ARG:HG2	19:S:144:ARG:HH11	1.79	0.47
23:W:134:HIS:CD2	23:W:137:ALA:HB2	2.49	0.47
23:W:162:ARG:HA	23:W:166:ASN:OD1	2.14	0.47
27:AA:68:GLU:O	27:AA:69:LEU:HD12	2.14	0.47
29:CA:107:VAL:HA	29:CA:126:LEU:HA	1.96	0.47
32:FA:42:ARG:HG3	32:FA:43:ILE:HD12	1.96	0.47
32:FA:60:TYR:HB3	32:FA:63:LYS:HD2	1.96	0.47
36:JA:32:TRP:HH2	36:JA:52:GLN:HE21	1.60	0.47
39:MA:38:ARG:HB2	39:MA:38:ARG:NH1	2.28	0.47
39:MA:70:TYR:CD2	39:MA:77:PRO:HD3	2.49	0.47
45:SA:11:ARG:HH11	45:SA:11:ARG:CB	2.26	0.47
52:ZA:140:ARG:HB3	52:ZA:221:THR:OG1	2.14	0.47
54:BB:140:VAL:HG22	54:BB:146:THR:HB	1.96	0.47
55:CB:142:PRO:HA	55:CB:214:LYS:HE2	1.96	0.47
56:DB:135:PRO:HB2	56:DB:141:ILE:HG12	1.95	0.47
56:DB:195:VAL:O	56:DB:199:GLN:HG3	2.14	0.47
57:EB:131:PHE:N	57:EB:132:PRO:HD2	2.29	0.47
61:IB:57:LYS:CB	61:IB:131:ILE:HG23	2.44	0.47
61:IB:108:PRO:HB2	61:IB:135:VAL:HG22	1.96	0.47
66:NB:7:VAL:O	66:NB:7:VAL:HG23	2.14	0.47
66:NB:131:GLY:HA3	66:NB:136:SER:O	2.14	0.47
80:BC:38:LEU:O	80:BC:42:ARG:HB2	2.14	0.47
82:DC:143:LEU:HD11	82:DC:189:VAL:HG22	1.96	0.47
82:DC:147:LEU:HD22	82:DC:193:ALA:HB2	1.96	0.47
82:DC:218:TRP:HB2	82:DC:328:LEU:O	2.14	0.47
82:DC:836:GLN:CD	82:DC:836:GLN:H	2.22	0.47
1:A:15:U:H2'	1:A:16:G:O4'	2.13	0.47
1:A:262:U:H2'	1:A:263:C:C6	2.49	0.47
1:A:569:C:H4'	1:A:583:C:H5"	1.95	0.47
1:A:951:A:H2'	1:A:952:A:O4'	2.14	0.47
1:A:977:A:H61	1:A:1774:G:H1'	1.79	0.47
1:A:1334:U:O2	79:AC:56:ARG:HD3	2.14	0.47
1:A:1455:G:H2'	1:A:1456:C:H5'	1.96	0.47
2:B:349:A:H2	3:C:22:U:O2'	1.96	0.47
2:B:585:A:H2'	2:B:586:C:C6	2.49	0.47
2:B:807:A:H4'	2:B:2811:A:O2'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:853:G:H2'	2:B:854:G:O4'	2.14	0.47
2:B:1062:A:H4'	25:Y:105:PHE:CE2	2.49	0.47
2:B:1456:A:H62	35:IA:64:VAL:CG2	2.27	0.47
2:B:2165:G:H1'	2:B:2168:A:H62	1.79	0.47
2:B:2197:C:N4	2:B:2241:U:H3'	2.29	0.47
2:B:2809:C:C2	2:B:2810:C:H1'	2.48	0.47
2:B:3232:G:H2'	2:B:3233:C:H6	1.74	0.47
7:G:220:VAL:HG22	7:G:274:SER:OG	2.13	0.47
7:G:246:LEU:O	7:G:246:LEU:HD12	2.15	0.47
8:H:193:LYS:HG3	8:H:198:ARG:HG3	1.96	0.47
8:H:230:VAL:HG23	8:H:233:LEU:HD11	1.96	0.47
9:I:205:SER:HA	9:I:208:MET:CG	2.45	0.47
12:L:71:VAL:HG23	12:L:235:GLY:N	2.29	0.47
13:M:47:LYS:HE2	18:R:5:SER:CB	2.45	0.47
16:P:119:LYS:HG3	16:P:121:PHE:CE2	2.48	0.47
18:R:35:ILE:CG1	18:R:46:ILE:HG22	2.40	0.47
20:T:5:PRO:O	20:T:32:LYS:HB2	2.14	0.47
20:T:27:LEU:HD21	20:T:102:LEU:HB2	1.95	0.47
32:FA:2:PRO:C	32:FA:4:ARG:H	2.22	0.47
36:JA:94:ALA:O	36:JA:119:VAL:HA	2.15	0.47
37:KA:74:THR:HA	37:KA:81:VAL:HG12	1.94	0.47
40:NA:34:SER:O	40:NA:38:LYS:HB2	2.13	0.47
49:WA:112:SER:CB	49:WA:153:GLN:HA	2.43	0.47
49:WA:132:LYS:HE2	49:WA:143:THR:HG23	1.94	0.47
52:ZA:76:LEU:HD11	52:ZA:105:GLY:HA2	1.95	0.47
52:ZA:88:LYS:HG2	52:ZA:90:THR:HG23	1.96	0.47
53:AB:71:LEU:O	53:AB:75:LYS:HG2	2.14	0.47
56:DB:153:VAL:HG13	56:DB:156:PHE:HB2	1.96	0.47
60:HB:11:ILE:HD12	60:HB:46:LEU:HD22	1.96	0.47
66:NB:90:VAL:HG12	66:NB:102:LYS:HG3	1.96	0.47
69:QB:99:SER:HA	69:QB:102:ARG:HH11	1.79	0.47
70:RB:23:ARG:HB3	70:RB:117:VAL:HG13	1.96	0.47
72:TB:97:ARG:HB2	72:TB:97:ARG:HH11	1.78	0.47
74:VB:5:VAL:HA	74:VB:28:LEU:O	2.14	0.47
78:ZB:44:VAL:HG11	78:ZB:48:VAL:HG21	1.95	0.47
1:A:1529:C:H1'	69:QB:12:GLN:OE1	2.14	0.47
1:A:1649:G:N2	1:A:1751:C:O2	2.42	0.47
2:B:346:C:C4	3:C:25:G:H4'	2.49	0.47
2:B:592:A:OP2	10:J:17:ALA:N	2.47	0.47
2:B:646:A:O5'	2:B:646:A:H8	1.97	0.47
2:B:728:G:OP1	22:V:43:PRO:HB3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:852:U:H2'	2:B:853:G:C8	2.49	0.47
2:B:1194:G:H8	2:B:1194:G:O5'	1.97	0.47
2:B:1296:C:H2'	2:B:1297:C:C6	2.50	0.47
2:B:1915:A:H4'	23:W:84:THR:N	2.29	0.47
2:B:2369:G:H2'	2:B:2370:G:N9	2.27	0.47
2:B:2573:G:OP2	31:EA:58:GLY:HA3	2.14	0.47
2:B:2652:U:H2'	2:B:2653:C:H6	1.79	0.47
2:B:2687:G:OP1	9:I:8:LYS:HE3	2.14	0.47
2:B:3059:G:H22	2:B:3332:U:H4'	1.79	0.47
2:B:3133:C:H2'	2:B:3134:A:C4'	2.45	0.47
2:B:3329:U:H5'	7:G:309:GLY:CA	2.44	0.47
3:C:68:G:OP1	41:OA:86:ALA:HB3	2.13	0.47
4:D:8:G:H2'	4:D:9:C:C6	2.49	0.47
6:F:83:HIS:HA	47:UA:64:VAL:HG12	1.95	0.47
7:G:78:VAL:HG11	7:G:311:PHE:CE2	2.48	0.47
8:H:34:ILE:CG2	8:H:121:ALA:HB2	2.44	0.47
8:H:219:LEU:HD13	8:H:227:THR:HG22	1.95	0.47
9:I:98:ALA:HB1	9:I:162:ALA:HB2	1.96	0.47
10:J:47:PHE:CZ	10:J:75:PRO:HD2	2.49	0.47
11:K:104:GLN:HG2	22:V:6:THR:HG22	1.96	0.47
12:L:93:LEU:HD21	12:L:207:ASP:HB3	1.96	0.47
14:N:171:TRP:HA	14:N:178:ARG:HD2	1.96	0.47
19:S:142:ILE:O	19:S:148:TYR:HB2	2.15	0.47
20:T:46:GLU:C	20:T:48:PHE:N	2.72	0.47
24:X:13:ARG:HG3	24:X:51:VAL:HG11	1.96	0.47
27:AA:80:ARG:HE	27:AA:95:PHE:CB	2.26	0.47
29:CA:115:ARG:HB2	29:CA:119:THR:C	2.39	0.47
29:CA:139:ILE:HG21	29:CA:141:TYR:CE2	2.49	0.47
32:FA:121:VAL:HG12	32:FA:123:VAL:HG23	1.96	0.47
34:HA:26:GLY:O	34:HA:30:THR:HG23	2.14	0.47
35:IA:32:ALA:C	35:IA:34:LYS:H	2.22	0.47
38:LA:12:PRO:HG2	38:LA:13:TYR:CD2	2.49	0.47
53:AB:132:LYS:HD3	53:AB:192:PRO:HD2	1.96	0.47
56:DB:4:ASN:HA	56:DB:15:THR:HG22	1.96	0.47
56:DB:82:SER:O	56:DB:83:CYS:HB2	2.14	0.47
66:NB:49:TYR:C	66:NB:51:PRO:HD2	2.39	0.47
68:PB:11:PHE:CE1	68:PB:59:GLY:HA3	2.49	0.47
69:QB:4:VAL:HG11	69:QB:137:ALA:HB2	1.95	0.47
72:TB:81:VAL:HG11	72:TB:86:ILE:CG2	2.39	0.47
75:WB:54:VAL:HB	75:WB:55:PRO:HD3	1.95	0.47
77:YB:62:ILE:HD11	77:YB:64:CYS:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:365:ASN:CG	82:DC:475:ALA:HB2	2.39	0.47
1:A:407:A:H5'	56:DB:94:ARG:NH2	2.29	0.47
1:A:525:A:H2'	1:A:526:A:C8	2.49	0.47
1:A:1078:C:H2'	1:A:1079:U:C6	2.50	0.47
1:A:1165:G:H2'	1:A:1166:A:C8	2.50	0.47
1:A:1371:A:N3	1:A:1373:C:H5"	2.29	0.47
1:A:1524:A:C2	1:A:1590:G:H1'	2.49	0.47
1:A:1547:A:H2'	1:A:1548:G:O4'	2.14	0.47
1:A:1558:U:H4'	68:PB:135:GLY:CA	2.41	0.47
1:A:1617:U:H1'	78:ZB:23:GLY:HA3	1.95	0.47
2:B:19:U:H2'	2:B:20:A:C8	2.49	0.47
2:B:430:U:C4'	37:KA:90:PRO:HG3	2.45	0.47
2:B:792:G:H5"	32:FA:2:PRO:HG3	1.96	0.47
2:B:869:G:H2'	2:B:870:G:C8	2.48	0.47
2:B:980:A:H2'	2:B:981:U:O4'	2.14	0.47
2:B:987:U:OP1	11:K:125:GLU:HG3	2.14	0.47
2:B:1394:A:H2'	2:B:1395:G:O4'	2.14	0.47
2:B:1402:C:H2'	2:B:1403:C:C6	2.49	0.47
2:B:1646:G:H21	2:B:1809:A:H62	1.63	0.47
2:B:2146:C:H2'	2:B:2147:A:C8	2.49	0.47
2:B:2442:G:C2'	2:B:2443:A:H5"	2.23	0.47
2:B:2555:G:N2	31:EA:136:PHE:HA	2.29	0.47
2:B:2666:C:H1'	2:B:2691:A:N3	2.29	0.47
2:B:2947:G:C2	7:G:250:ALA:HB1	2.49	0.47
2:B:3133:C:H2'	2:B:3134:A:O4'	2.14	0.47
2:B:3187:A:H5"	18:R:8:LYS:HE3	1.95	0.47
2:B:3206:C:OP2	2:B:3207:U:H4'	2.14	0.47
2:B:3323:A:H2	35:IA:106:THR:CG2	2.27	0.47
2:B:3356:G:H2'	2:B:3357:U:C6	2.50	0.47
7:G:49:TYR:N	7:G:79:VAL:HG22	2.29	0.47
8:H:309:ARG:NH2	8:H:312:VAL:HB	2.30	0.47
9:I:232:ASP:H	9:I:235:SER:HB3	1.80	0.47
11:K:123:THR:O	11:K:126:LEU:HB2	2.15	0.47
12:L:238:LEU:HB3	12:L:242:ALA:HB3	1.95	0.47
16:P:106:LEU:HB3	16:P:110:ILE:CD1	2.44	0.47
17:Q:42:ARG:HE	17:Q:51:LEU:HB3	1.80	0.47
21:U:60:PHE:HE2	21:U:82:ARG:HB2	1.79	0.47
24:X:24:LEU:CD2	24:X:59:VAL:HG11	2.44	0.47
25:Y:39:ILE:HA	25:Y:62:GLY:O	2.13	0.47
30:DA:48:LEU:CD2	30:DA:118:LEU:HG	2.44	0.47
39:MA:9:LEU:HA	39:MA:17:LEU:HD21	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:NA:4:LYS:HA	40:NA:12:ASN:CB	2.43	0.47
46:TA:26:THR:OG1	46:TA:71:ARG:HB3	2.14	0.47
50:XA:39:ASN:HB2	67:OB:105:GLN:CD	2.39	0.47
50:XA:62:ARG:CD	71:SB:36:VAL:HG12	2.42	0.47
50:XA:125:ASP:OD2	50:XA:164:ASN:HB2	2.14	0.47
50:XA:175:TYR:CD2	50:XA:199:PRO:HG3	2.50	0.47
52:ZA:126:ARG:O	52:ZA:130:ILE:HD13	2.15	0.47
52:ZA:223:GLY:HA3	71:SB:25:LYS:NZ	2.30	0.47
55:CB:164:PRO:HG3	78:ZB:52:ASP:HB3	1.96	0.47
56:DB:75:LEU:H	56:DB:97:VAL:HG23	1.78	0.47
69:QB:86:ARG:HB2	69:QB:89:ARG:HB2	1.96	0.47
82:DC:250:PHE:HA	82:DC:257:TRP:HA	1.96	0.47
82:DC:320:LEU:HD23	82:DC:324:MET:HE3	1.96	0.47
82:DC:322:VAL:HG12	82:DC:326:LYS:HE3	1.97	0.47
82:DC:650:THR:HG22	82:DC:690:ASP:HA	1.95	0.47
83:EC:6883:A:H2'	83:EC:6884:G:C4'	2.45	0.47
1:A:62:A:H4'	1:A:269:G:C4'	2.30	0.47
1:A:322:G:H4'	1:A:323:A:OP1	2.14	0.47
1:A:639:U:OP1	57:EB:117:THR:HG23	2.14	0.47
1:A:965:U:H3'	1:A:966:A:C5'	2.42	0.47
1:A:1132:A:H2'	1:A:1133:A:H8	1.72	0.47
1:A:1374:C:H2'	1:A:1375:A:C8	2.49	0.47
1:A:1503:A:H2'	1:A:1504:G:O4'	2.15	0.47
1:A:1533:C:H5	75:WB:77:ARG:HH21	1.60	0.47
1:A:1600:A:H4'	1:A:1601:G:OP1	2.13	0.47
2:B:243:G:OP2	39:MA:115:LYS:HE3	2.15	0.47
2:B:360:G:H22	2:B:927:C:H1'	1.79	0.47
2:B:361:A:H5"	41:OA:36:SER:CA	2.44	0.47
2:B:749:C:H4'	33:GA:43:HIS:HE1	1.77	0.47
2:B:757:C:C3'	2:B:758:C:H5"	2.45	0.47
2:B:771:A:H2'	2:B:772:U:O4'	2.14	0.47
2:B:885:U:H5"	2:B:1851:G:C4'	2.39	0.47
2:B:1797:A:H2'	2:B:1798:A:C8	2.49	0.47
2:B:1879:A:H3'	2:B:1880:U:H5'	1.95	0.47
2:B:2130:G:N2	2:B:2132:C:H5"	2.29	0.47
2:B:2419:A:H2'	2:B:2420:C:C6	2.49	0.47
2:B:2484:A:H5"	5:E:130:LYS:HD2	1.96	0.47
2:B:2800:G:O2'	2:B:2801:A:H5'	2.15	0.47
2:B:3001:C:H2'	2:B:3002:C:O4'	2.14	0.47
2:B:3116:G:P	2:B:3116:G:H8	2.37	0.47
2:B:3188:G:H2'	2:B:3189:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3314:A:H5"	7:G:116:ARG:NH2	2.26	0.47
4:D:66:A:H2'	4:D:67:G:C8	2.50	0.47
4:D:96:U:O2'	4:D:97:A:H5'	2.13	0.47
7:G:194:TRP:HA	7:G:197:GLU:HB2	1.97	0.47
8:H:23:PRO:HB3	8:H:259:ASP:OD1	2.14	0.47
8:H:187:LEU:O	8:H:188:ARG:C	2.58	0.47
10:J:72:ASN:HD22	10:J:72:ASN:N	2.04	0.47
10:J:154:LEU:HA	10:J:157:GLN:OE1	2.14	0.47
11:K:137:GLY:O	11:K:139:PRO:HD3	2.14	0.47
12:L:128:LYS:CG	12:L:129:PRO:HD2	2.44	0.47
13:M:90:MET:SD	13:M:158:ALA:HB1	2.55	0.47
14:N:42:THR:HG22	14:N:45:GLU:CG	2.30	0.47
17:Q:113:VAL:O	17:Q:117:LYS:HD3	2.15	0.47
19:S:45:PRO:O	19:S:49:ARG:HB2	2.15	0.47
19:S:67:ARG:HA	19:S:126:THR:O	2.14	0.47
19:S:106:VAL:C	19:S:108:ARG:H	2.21	0.47
22:V:62:VAL:O	22:V:87:VAL:HA	2.15	0.47
23:W:175:GLN:HA	23:W:178:ALA:CB	2.45	0.47
25:Y:40:VAL:O	25:Y:61:THR:HG23	2.14	0.47
32:FA:19:LYS:O	32:FA:24:LYS:HA	2.14	0.47
32:FA:73:LEU:HD22	32:FA:109:TYR:CB	2.44	0.47
38:LA:22:VAL:HG13	38:LA:30:LEU:HD21	1.96	0.47
53:AB:47:GLU:HG2	53:AB:49:ILE:CD1	2.45	0.47
54:BB:42:LEU:HD23	54:BB:43:PRO:O	2.15	0.47
58:FB:29:LEU:CD2	58:FB:31:ARG:HH11	2.27	0.47
59:GB:34:PHE:CD2	59:GB:105:LEU:HD13	2.49	0.47
59:GB:66:ASP:O	59:GB:70:LEU:HG	2.14	0.47
69:QB:52:GLY:HA2	69:QB:55:TYR:CD2	2.49	0.47
71:SB:28:ASP:OD2	71:SB:30:ALA:HB3	2.14	0.47
75:WB:61:SER:C	75:WB:80:LEU:HD11	2.40	0.47
79:AC:24:CYS:O	79:AC:25:SER:HB2	2.15	0.47
82:DC:323:VAL:HG12	82:DC:324:MET:CE	2.44	0.47
82:DC:743:ILE:O	82:DC:747:LEU:HD22	2.14	0.47
1:A:919:A:H2'	1:A:920:U:C5	2.49	0.47
1:A:961:U:H4'	63:KB:47:PRO:CB	2.45	0.47
2:B:197:G:H2'	2:B:198:A:O4'	2.15	0.47
2:B:624:G:O2'	2:B:625:G:H5'	2.15	0.47
2:B:858:A:H2'	2:B:859:G:C8	2.50	0.47
2:B:996:A:C2	4:D:79:A:C2	3.02	0.47
2:B:1552:G:H5'	2:B:2171:G:C5'	2.43	0.47
2:B:1708:C:H2'	2:B:1709:C:H6	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1757:A:H5"	26:Z:94:ARG:NH2	2.29	0.47
2:B:2159:U:O5'	2:B:2159:U:H6	1.97	0.47
2:B:2175:U:C4	6:F:20:THR:HG21	2.50	0.47
2:B:2787:G:O3'	32:FA:57:GLY:HA2	2.15	0.47
2:B:2795:U:H5'	2:B:2796:G:C5'	2.44	0.47
2:B:3248:C:H4'	20:T:114:LYS:HD2	1.97	0.47
3:C:37:A:OP1	39:MA:86:ARG:HB2	2.14	0.47
3:C:131:A:H1'	29:CA:93:TYR:CZ	2.50	0.47
8:H:114:ASN:HB3	8:H:117:GLU:HB2	1.96	0.47
9:I:184:ASP:HB3	9:I:187:THR:CG2	2.43	0.47
11:K:55:TYR:CZ	11:K:141:TYR:HE2	2.33	0.47
13:M:180:TYR:CD2	44:RA:86:ALA:HA	2.49	0.47
17:Q:3:ILE:HD11	32:FA:34:MET:SD	2.55	0.47
17:Q:39:ARG:O	17:Q:51:LEU:HD11	2.15	0.47
23:W:163:ARG:O	23:W:167:ARG:HB3	2.14	0.47
36:JA:84:THR:OG1	36:JA:85:LEU:HD23	2.15	0.47
39:MA:85:THR:HB	39:MA:88:LEU:HD12	1.96	0.47
52:ZA:109:GLY:C	52:ZA:139:ILE:HD13	2.40	0.47
53:AB:12:VAL:HG22	70:RB:84:MET:SD	2.54	0.47
54:BB:42:LEU:HD22	54:BB:101:LEU:HD11	1.96	0.47
55:CB:215:ASP:HA	55:CB:218:GLU:HB2	1.95	0.47
56:DB:6:SER:HG	56:DB:112:VAL:HG22	1.78	0.47
56:DB:121:LEU:H	56:DB:125:THR:HB	1.80	0.47
56:DB:139:ASN:HA	56:DB:142:ARG:HB2	1.96	0.47
63:KB:62:GLN:HB2	63:KB:65:VAL:HG23	1.96	0.47
71:SB:69:LEU:HD23	71:SB:72:LEU:HD12	1.95	0.47
73:UB:38:PHE:CZ	73:UB:45:GLY:HA3	2.50	0.47
82:DC:96:ASN:HA	82:DC:98:PHE:CE2	2.49	0.47
82:DC:280:PRO:O	82:DC:284:LEU:HG	2.14	0.47
82:DC:488:VAL:HG12	82:DC:796:MET:CB	2.45	0.47
82:DC:644:ASN:HD22	82:DC:684:VAL:CB	2.25	0.47
82:DC:662:SER:CB	82:DC:705:ILE:HB	2.45	0.47
83:EC:6835:U:H5'	83:EC:6874:A:N7	2.30	0.47
1:A:35:U:H2'	1:A:36:C:H6	1.79	0.47
1:A:95:G:H3'	1:A:96:G:H8	1.79	0.47
1:A:102:U:H5'	58:FB:20:GLN:O	2.13	0.47
1:A:168:A:O2'	1:A:169:A:H5'	2.15	0.47
1:A:250:C:H6	1:A:250:C:H5'	1.79	0.47
1:A:302:U:H1'	1:A:334:G:N2	2.29	0.47
1:A:399:A:H4'	54:BB:3:ARG:HG2	1.96	0.47
1:A:810:G:N2	57:EB:108:GLN:HG3	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:862:A:H2	1:A:963:A:O2'	1.98	0.47
1:A:1146:G:H21	1:A:1635:A:H2	1.63	0.47
1:A:1629:G:H5"	1:A:1794:A:OP2	2.14	0.47
1:A:1635:A:H5'	1:A:1638:G:H4'	1.97	0.47
1:A:1676:U:H5"	58:FB:58:LEU:CD2	2.44	0.47
2:B:48:A:H5'	2:B:50:U:H1'	1.95	0.47
2:B:89:A:P	22:V:170:ARG:HD3	2.54	0.47
2:B:277:G:H2'	2:B:278:U:H6	1.79	0.47
2:B:546:C:C5'	2:B:547:G:H5'	2.27	0.47
2:B:576:C:H5"	11:K:142:SER:HB3	1.95	0.47
2:B:839:C:H4'	2:B:1724:U:H3'	1.97	0.47
2:B:914:A:C2	6:F:204:MET:HB3	2.49	0.47
2:B:938:C:H2'	2:B:939:U:C6	2.49	0.47
2:B:978:G:H1'	2:B:1104:G:N2	2.30	0.47
2:B:1076:C:H2'	2:B:1077:U:O4'	2.15	0.47
2:B:1364:C:H5"	22:V:3:ILE:CB	2.44	0.47
2:B:1405:U:P	36:JA:59:SER:H	2.38	0.47
2:B:1544:G:H5'	19:S:67:ARG:CZ	2.44	0.47
2:B:1940:G:H21	2:B:3362:A:C1'	2.19	0.47
2:B:2107:A:H2'	2:B:2108:C:C6	2.50	0.47
2:B:2177:G:C2	6:F:126:LEU:HG	2.50	0.47
2:B:2334:U:C2'	2:B:2335:G:H5"	2.39	0.47
2:B:2422:C:H2'	2:B:2423:U:H6	1.72	0.47
2:B:2624:G:H1'	2:B:2626:A:N6	2.30	0.47
2:B:2672:G:O3'	15:O:95:ASN:HA	2.14	0.47
2:B:2948:C:H2'	2:B:2949:U:H6	1.79	0.47
2:B:3000:A:C5'	2:B:3296:A:H5"	2.34	0.47
2:B:3015:G:H2'	2:B:3016:A:C8	2.50	0.47
2:B:3034:C:C2'	2:B:3035:A:H5'	2.44	0.47
2:B:3064:U:H2'	2:B:3065:G:H8	1.79	0.47
2:B:3136:G:OP1	7:G:31:ALA:HB1	2.15	0.47
2:B:3213:A:H2'	2:B:3214:U:O4'	2.15	0.47
3:C:52:A:OP1	43:QA:21:ARG:HG2	2.14	0.47
4:D:97:A:H1'	11:K:225:GLN:OE1	2.14	0.47
4:D:103:A:H2'	4:D:104:A:C8	2.49	0.47
4:D:109:G:H2'	4:D:110:G:O4'	2.14	0.47
4:D:118:A:H4'	9:I:79:TYR:CE2	2.49	0.47
9:I:113:LEU:HD22	9:I:142:PHE:CE1	2.50	0.47
9:I:289:LYS:HB2	14:N:206:LEU:HD21	1.97	0.47
13:M:47:LYS:HE2	18:R:7:VAL:HG23	1.97	0.47
13:M:132:VAL:CG2	13:M:146:LEU:HB3	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:98:ARG:HD3	14:N:119:TRP:CZ2	2.50	0.47
15:O:32:ARG:O	15:O:36:VAL:HG23	2.14	0.47
16:P:57:LYS:HD3	16:P:57:LYS:N	2.29	0.47
17:Q:59:ARG:N	17:Q:69:VAL:HG23	2.29	0.47
18:R:21:VAL:HG21	18:R:46:ILE:HG21	1.96	0.47
18:R:35:ILE:HD12	18:R:35:ILE:H	1.79	0.47
18:R:42:LYS:HB3	18:R:59:ASN:HD21	1.80	0.47
19:S:199:LEU:HB3	19:S:203:ARG:HD2	1.97	0.47
21:U:4:TYR:CE1	21:U:147:GLU:HB2	2.49	0.47
23:W:145:ALA:O	23:W:149:ALA:HB2	2.14	0.47
28:BA:6:ASP:HB3	28:BA:10:GLY:H	1.78	0.47
29:CA:85:GLN:HA	29:CA:120:LYS:O	2.15	0.47
29:CA:130:TYR:HB3	29:CA:131:ASP:H	1.62	0.47
30:DA:27:ARG:HA	30:DA:30:LEU:CB	2.31	0.47
31:EA:87:LEU:HG	31:EA:88:ASP:H	1.79	0.47
37:KA:85:PHE:HD2	37:KA:88:ASN:HA	1.75	0.47
38:LA:51:LEU:HD11	38:LA:56:THR:HG22	1.95	0.47
38:LA:65:VAL:HG12	38:LA:66:SER:N	2.28	0.47
39:MA:20:GLN:C	39:MA:24:LEU:HG	2.40	0.47
46:TA:65:THR:OG1	46:TA:87:ARG:HB3	2.13	0.47
48:VA:19:LEU:HA	48:VA:88:PHE:HE1	1.80	0.47
49:WA:112:SER:HB2	49:WA:153:GLN:HA	1.97	0.47
49:WA:176:LYS:HG2	49:WA:197:SER:C	2.40	0.47
49:WA:180:ALA:H	49:WA:188:ILE:CD1	2.27	0.47
50:XA:121:VAL:HG23	50:XA:141:ILE:HG21	1.95	0.47
50:XA:191:ARG:O	50:XA:193:GLN:N	2.48	0.47
52:ZA:147:ASN:CB	71:SB:3:ASN:HA	2.44	0.47
53:AB:75:LYS:HB3	60:HB:22:VAL:HG11	1.96	0.47
54:BB:15:PRO:HD3	54:BB:39:ARG:NH2	2.29	0.47
55:CB:57:SER:HB3	78:ZB:53:ILE:HD12	1.96	0.47
55:CB:110:ALA:O	55:CB:114:ILE:HG12	2.14	0.47
56:DB:116:LYS:HE3	56:DB:125:THR:CG2	2.45	0.47
57:EB:16:LEU:HD22	57:EB:85:PHE:HZ	1.79	0.47
57:EB:64:VAL:CG2	57:EB:96:ARG:HG2	2.44	0.47
58:FB:8:ARG:HG3	58:FB:8:ARG:HH21	1.80	0.47
61:IB:44:THR:HA	61:IB:60:PHE:CE1	2.50	0.47
63:KB:37:ILE:HD13	63:KB:71:ILE:HG12	1.95	0.47
63:KB:92:ILE:O	63:KB:96:VAL:HG23	2.14	0.47
67:OB:91:LEU:O	67:OB:93:LEU:N	2.48	0.47
69:QB:35:ASP:OD1	69:QB:36:ILE:HG23	2.15	0.47
70:RB:25:THR:O	70:RB:114:VAL:HA	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:RB:106:ILE:HG13	70:RB:107:THR:H	1.79	0.47
71:SB:14:PRO:HB3	71:SB:23:ILE:HG21	1.96	0.47
71:SB:51:VAL:HG11	71:SB:76:ASP:OD1	2.14	0.47
73:UB:132:LEU:HA	73:UB:135:LEU:HD12	1.97	0.47
74:VB:94:TYR:HB2	74:VB:95:GLY:H	1.56	0.47
82:DC:27:HIS:CD2	82:DC:136:CYS:HB2	2.49	0.47
82:DC:402:ALA:HA	82:DC:450:ALA:CB	2.45	0.47
82:DC:428:ILE:H	82:DC:428:ILE:HD12	1.80	0.47
82:DC:755:VAL:HB	82:DC:769:LYS:HB3	1.97	0.47
1:A:197:A:H61	58:FB:141:ARG:HH22	1.63	0.47
1:A:351:C:H4'	73:UB:13:ARG:NE	2.29	0.47
1:A:1419:G:O3'	79:AC:54:LYS:HE2	2.15	0.47
2:B:549:U:H2'	2:B:550:A:O4'	2.14	0.47
2:B:595:G:H1	2:B:609:G:H5"	1.80	0.47
2:B:637:C:H4'	2:B:638:C:OP1	2.14	0.47
2:B:660:A:H5'	8:H:100:PHE:CG	2.50	0.47
2:B:807:A:C8	2:B:2412:G:H1'	2.50	0.47
2:B:1106:G:H4'	33:GA:25:LYS:HE2	1.97	0.47
2:B:1156:C:H4'	4:D:86:U:OP1	2.15	0.47
2:B:1368:U:H2'	2:B:1369:A:H5'	1.97	0.47
2:B:2389:C:H4'	21:U:67:ILE:O	2.14	0.47
2:B:2424:A:HO2'	2:B:2425:G:H5'	1.80	0.47
2:B:2718:U:H2'	2:B:2719:U:O4'	2.15	0.47
2:B:3343:G:H4'	2:B:3362:A:N6	2.10	0.47
6:F:98:VAL:HG22	47:UA:83:ILE:HG21	1.97	0.47
7:G:122:TRP:HE1	7:G:127:LYS:HE3	1.75	0.47
7:G:303:LYS:HZ1	7:G:371:GLN:CG	2.26	0.47
8:H:31:ARG:CD	22:V:24:VAL:HB	2.45	0.47
8:H:95:ARG:HG2	8:H:95:ARG:HH11	1.79	0.47
9:I:19:PRO:HG2	9:I:24:ARG:HG2	1.97	0.47
9:I:194:LEU:HD23	9:I:197:SER:HB3	1.96	0.47
12:L:47:SER:HA	29:CA:27:ARG:HG3	1.96	0.47
14:N:49:CYS:SG	14:N:51:HIS:CE1	3.08	0.47
14:N:95:HIS:HB3	14:N:126:ALA:HB3	1.95	0.47
17:Q:60:ALA:HB3	17:Q:65:TYR:HB3	1.96	0.47
19:S:38:ARG:NH2	19:S:60:VAL:HA	2.30	0.47
19:S:154:PRO:HA	19:S:157:LYS:CD	2.45	0.47
24:X:27:MET:CE	25:Y:152:ALA:HA	2.45	0.47
24:X:117:ARG:HG3	24:X:119:ARG:NE	2.30	0.47
31:EA:121:ARG:HB3	31:EA:131:PHE:CE2	2.50	0.47
34:HA:61:MET:HG3	34:HA:62:LEU:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:75:LEU:HD23	36:JA:95:GLU:HB2	1.97	0.47
37:KA:12:LYS:HD3	37:KA:97:SER:HA	1.96	0.47
39:MA:92:LEU:HB3	39:MA:97:ALA:HB2	1.96	0.47
41:OA:12:HIS:ND1	41:OA:13:ASN:N	2.62	0.47
43:QA:12:LYS:O	43:QA:49:MET:HE1	2.15	0.47
48:VA:34:SER:HB3	48:VA:37:GLN:HG2	1.96	0.47
66:NB:47:LYS:HD2	66:NB:50:GLU:OE1	2.15	0.47
72:TB:11:LEU:HD11	72:TB:37:PHE:CZ	2.50	0.47
73:UB:21:ASN:O	73:UB:24:TRP:HB2	2.15	0.47
74:VB:37:LYS:HE3	74:VB:93:ARG:HD3	1.97	0.47
82:DC:277:ILE:C	82:DC:280:PRO:HD2	2.39	0.47
82:DC:289:MET:SD	82:DC:317:LYS:HA	2.54	0.47
82:DC:595:GLU:O	82:DC:599:LEU:HB2	2.14	0.47
82:DC:649:GLN:CD	82:DC:687:ASN:HB3	2.39	0.47
1:A:13:C:H5"	52:ZA:209:ASN:ND2	2.27	0.47
1:A:106:U:H2'	1:A:107:C:H5'	1.97	0.47
1:A:813:U:O2	23:W:163:ARG:HD2	2.14	0.47
1:A:818:C:H2'	1:A:819:G:H5'	1.96	0.47
1:A:867:G:H2'	1:A:868:G:O4'	2.15	0.47
1:A:1089:U:H2'	1:A:1090:C:C6	2.49	0.47
1:A:1414:U:H5'	67:OB:2:GLY:O	2.15	0.47
1:A:1434:U:C4'	79:AC:24:CYS:HB2	2.45	0.47
1:A:1435:G:C2	60:HB:59:PHE:HB2	2.50	0.47
2:B:5:G:H3'	2:B:6:A:H5"	1.97	0.47
2:B:93:C:C5	46:TA:42:ARG:CZ	2.98	0.47
2:B:878:G:H2'	2:B:2980:U:O2'	2.14	0.47
2:B:1155:C:H2'	2:B:1156:C:C6	2.50	0.47
2:B:1347:U:H2'	2:B:1355:A:H61	1.80	0.47
2:B:1372:C:P	32:FA:7:LYS:HG2	2.54	0.47
2:B:1456:A:C8	35:IA:26:LYS:HB3	2.50	0.47
2:B:2213:A:H1'	2:B:2602:G:C5'	2.45	0.47
2:B:2221:G:H1	40:NA:71:LYS:HD3	1.80	0.47
2:B:2389:C:H2'	2:B:2390:A:H8	1.80	0.47
2:B:2555:G:H21	31:EA:136:PHE:HA	1.80	0.47
2:B:2614:G:H2'	2:B:2615:G:C8	2.50	0.47
2:B:2838:A:OP1	14:N:154:ARG:NH2	2.48	0.47
3:C:49:G:N9	39:MA:42:PRO:HG3	2.29	0.47
3:C:72:A:H2'	3:C:73:U:O4'	2.14	0.47
5:E:134:PHE:CE1	5:E:137:PRO:HD3	2.50	0.47
7:G:166:ILE:HG21	7:G:174:LYS:O	2.15	0.47
8:H:11:LEU:HD21	8:H:155:ASP:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:53:VAL:CG2	9:I:146:LEU:HD13	2.45	0.47
11:K:90:LYS:HA	11:K:220:PHE:CE1	2.49	0.47
11:K:170:GLU:CD	11:K:179:LEU:HA	2.39	0.47
13:M:99:ILE:HG12	13:M:117:PHE:CE1	2.49	0.47
14:N:171:TRP:CH2	14:N:182:LEU:HD21	2.49	0.47
16:P:129:THR:C	16:P:131:GLU:H	2.22	0.47
17:Q:172:LEU:O	17:Q:176:GLU:HG3	2.15	0.47
18:R:20:VAL:HG11	18:R:68:LEU:HD12	1.97	0.47
19:S:139:HIS:HB3	19:S:142:ILE:HD13	1.96	0.47
20:T:75:ALA:O	20:T:79:ILE:HG13	2.14	0.47
20:T:85:ARG:NH1	20:T:90:HIS:HD2	2.13	0.47
21:U:138:LYS:HD2	21:U:140:GLU:HG2	1.96	0.47
24:X:14:LEU:O	24:X:22:PRO:HG2	2.14	0.47
29:CA:107:VAL:HG12	29:CA:108:LEU:N	2.29	0.47
30:DA:91:ASN:ND2	30:DA:93:ALA:HB2	2.30	0.47
40:NA:90:MET:HE2	40:NA:90:MET:HA	1.97	0.47
41:OA:2:GLY:HA2	41:OA:6:PRO:HG2	1.97	0.47
44:RA:111:ARG:HG3	44:RA:112:LYS:HE2	1.97	0.47
52:ZA:97:ARG:HH11	52:ZA:97:ARG:HG2	1.80	0.47
52:ZA:140:ARG:HB3	52:ZA:221:THR:CB	2.44	0.47
70:RB:24:ILE:HG22	70:RB:26:LEU:HG	1.96	0.47
70:RB:69:LYS:HD2	70:RB:78:THR:HB	1.96	0.47
73:UB:13:ARG:O	73:UB:17:VAL:HG23	2.15	0.47
73:UB:24:TRP:CH2	73:UB:33:LEU:HD13	2.50	0.47
79:AC:21:CYS:C	79:AC:23:VAL:H	2.23	0.47
82:DC:428:ILE:HD12	82:DC:428:ILE:N	2.30	0.47
82:DC:564:ARG:O	82:DC:725:GLN:HB3	2.15	0.47
82:DC:631:ARG:HB3	82:DC:631:ARG:HH11	1.79	0.47
1:A:11:A:H2'	1:A:12:U:C5'	2.44	0.47
1:A:263:C:H1'	1:A:292:U:O4'	2.15	0.47
1:A:393:C:H2'	1:A:394:C:H6	1.80	0.47
1:A:794:U:O2	1:A:794:U:H2'	2.15	0.47
1:A:796:A:H2'	1:A:797:G:C8	2.50	0.47
1:A:824:G:H2'	1:A:824:G:N3	2.30	0.47
1:A:1263:G:H5"	82:DC:613:LYS:HG3	1.97	0.47
1:A:1474:G:H5'	55:CB:102:ARG:HH11	1.80	0.47
2:B:128:G:H5"	29:CA:45:LYS:HE3	1.97	0.47
2:B:804:C:H2'	2:B:805:G:C8	2.49	0.47
2:B:1187:C:H5"	2:B:1211:U:O2'	2.15	0.47
2:B:1509:A:H2'	2:B:1510:G:C8	2.50	0.47
2:B:2497:U:H4'	2:B:2498:U:C5	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2740:A:H2'	2:B:2741:C:O4'	2.14	0.47
2:B:2747:A:H2'	2:B:2748:A:O4'	2.15	0.47
2:B:3035:A:H1'	13:M:121:LYS:C	2.40	0.47
2:B:3184:A:C2'	2:B:3185:U:H5'	2.45	0.47
6:F:28:LYS:HA	6:F:123:ARG:HB3	1.97	0.47
7:G:60:LEU:HB2	7:G:72:VAL:HG21	1.97	0.47
7:G:303:LYS:HD2	7:G:371:GLN:HB3	1.97	0.47
7:G:340:LYS:HG2	7:G:341:SER:N	2.30	0.47
8:H:107:ARG:HD2	8:H:109:TRP:HZ3	1.80	0.47
8:H:263:GLY:HA2	8:H:269:SER:HA	1.92	0.47
9:I:51:LEU:O	9:I:146:LEU:HA	2.14	0.47
9:I:107:ARG:O	9:I:111:GLN:HB2	2.15	0.47
9:I:114:GLY:C	9:I:115:LEU:HD22	2.40	0.47
10:J:51:ARG:HG2	10:J:51:ARG:NH1	2.30	0.47
10:J:72:ASN:HB3	10:J:159:LEU:O	2.15	0.47
14:N:77:THR:CG2	14:N:82:ARG:HB3	2.45	0.47
17:Q:167:PHE:CE2	32:FA:132:LYS:HB2	2.50	0.47
18:R:120:VAL:O	18:R:124:ARG:CG	2.63	0.47
18:R:123:LEU:HD13	20:T:194:LEU:CG	2.45	0.47
20:T:141:LEU:O	20:T:145:VAL:HG13	2.15	0.47
25:Y:50:LYS:O	25:Y:92:ARG:HD2	2.14	0.47
26:Z:30:PRO:HG2	26:Z:60:GLY:O	2.15	0.47
28:BA:20:LEU:HD23	28:BA:21:PHE:N	2.30	0.47
34:HA:30:THR:HG22	34:HA:91:SER:CB	2.45	0.47
40:NA:6:GLY:HA2	40:NA:15:LYS:HA	1.95	0.47
49:WA:37:SER:HB3	49:WA:39:ASP:OD1	2.15	0.47
50:XA:199:PRO:C	50:XA:201:LEU:H	2.22	0.47
53:AB:105:MET:CE	53:AB:118:ALA:HB1	2.44	0.47
55:CB:68:ILE:HD12	55:CB:70:VAL:O	2.15	0.47
55:CB:209:TYR:HE1	55:CB:213:LYS:HZ2	1.59	0.47
57:EB:74:GLN:HG2	57:EB:131:PHE:CE1	2.50	0.47
57:EB:110:GLN:O	57:EB:111:LYS:HB3	2.15	0.47
58:FB:76:THR:CG2	58:FB:108:PRO:HD2	2.43	0.47
67:OB:38:ILE:HG23	67:OB:39:ALA:N	2.30	0.47
67:OB:41:ILE:CG2	67:OB:46:LEU:HD22	2.40	0.47
71:SB:24:ILE:HG23	71:SB:28:ASP:HB3	1.97	0.47
72:TB:18:GLU:HB2	72:TB:69:LEU:HD23	1.97	0.47
78:ZB:17:GLY:H	78:ZB:27:GLN:HB2	1.78	0.47
82:DC:31:GLY:O	82:DC:35:LEU:HB2	2.15	0.47
82:DC:45:ILE:N	82:DC:77:LEU:HA	2.09	0.47
82:DC:213:SER:HB3	82:DC:218:TRP:NE1	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:612:PHE:CD2	82:DC:612:PHE:N	2.81	0.47
82:DC:727:PRO:HB2	82:DC:774:VAL:CG1	2.44	0.47
82:DC:814:LYS:O	82:DC:818:ILE:HG13	2.14	0.47
1:A:72:A:H3'	1:A:73:U:H5"	1.97	0.46
1:A:88:U:O3'	1:A:171:A:H4'	2.15	0.46
1:A:140:A:O4'	56:DB:179:VAL:HG21	2.16	0.46
1:A:252:U:H5"	54:BB:132:GLY:C	2.40	0.46
1:A:512:A:O2'	59:GB:131:GLN:NE2	2.47	0.46
1:A:606:A:H4'	1:A:607:G:H5"	1.96	0.46
1:A:742:U:O2'	1:A:743:U:H5'	2.14	0.46
1:A:1340:U:H5	66:NB:9:THR:HA	1.80	0.46
1:A:1586:A:H1'	1:A:1611:A:N1	2.29	0.46
1:A:1608:U:P	66:NB:15:SER:HB3	2.54	0.46
2:B:272:G:H2'	2:B:273:A:O4'	2.15	0.46
2:B:401:U:H4'	2:B:403:C:C2	2.49	0.46
2:B:581:U:C2'	2:B:582:G:H5'	2.45	0.46
2:B:680:G:H3'	2:B:681:U:H5"	1.96	0.46
2:B:1220:U:C6	2:B:1286:A:C6	3.04	0.46
2:B:1259:A:H62	48:VA:38:MET:CE	2.27	0.46
2:B:1313:G:H2'	2:B:1314:C:H6	1.79	0.46
2:B:1477:A:OP1	35:IA:64:VAL:HG22	2.14	0.46
2:B:1792:C:C5'	6:F:184:ARG:HD3	2.38	0.46
2:B:2669:G:H2'	2:B:2670:G:C8	2.50	0.46
2:B:2950:G:H4'	2:B:2951:G:N7	2.29	0.46
2:B:3069:G:H4'	23:W:59:SER:HB2	1.98	0.46
2:B:3139:A:H3'	2:B:3140:G:H8	1.80	0.46
4:D:100:C:H3'	4:D:101:G:C8	2.50	0.46
6:F:19:HIS:HB2	6:F:191:LEU:C	2.40	0.46
6:F:29:LEU:HB2	6:F:30:ARG:H	1.57	0.46
6:F:35:ALA:HA	12:L:36:ILE:HG23	1.95	0.46
7:G:149:ALA:O	7:G:152:LYS:HB2	2.14	0.46
8:H:77:VAL:HG21	8:H:84:ARG:HG3	1.97	0.46
8:H:359:LEU:HD21	24:X:63:GLN:O	2.14	0.46
9:I:69:ILE:HG12	25:Y:31:LEU:HB3	1.97	0.46
11:K:40:LYS:HB3	11:K:44:ILE:HD11	1.95	0.46
11:K:222:HIS:HB2	11:K:229:PHE:CE2	2.50	0.46
15:O:71:VAL:O	15:O:76:ALA:HB2	2.15	0.46
15:O:106:ILE:HD11	15:O:125:MET:H	1.80	0.46
17:Q:35:ARG:HB3	17:Q:39:ARG:NH2	2.31	0.46
17:Q:42:ARG:CG	17:Q:46:ILE:HD12	2.44	0.46
17:Q:119:TYR:HA	17:Q:122:LYS:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:19:ARG:CD	18:R:20:VAL:H	2.29	0.46
18:R:124:ARG:HG2	20:T:194:LEU:CD2	2.44	0.46
18:R:135:LEU:HD21	20:T:178:VAL:HA	1.97	0.46
20:T:39:GLU:HB2	20:T:139:GLY:HA3	1.97	0.46
22:V:143:PRO:HB2	22:V:146:SER:CB	2.34	0.46
27:AA:125:LEU:O	27:AA:127:PRO:HD3	2.15	0.46
37:KA:18:ARG:CB	37:KA:23:ASN:HA	2.45	0.46
41:OA:44:THR:HG22	41:OA:45:ARG:N	2.30	0.46
46:TA:65:THR:O	46:TA:66:LYS:HG3	2.16	0.46
49:WA:253:ALA:HB2	49:WA:262:VAL:HG22	1.96	0.46
49:WA:301:LEU:HB3	49:WA:313:TRP:O	2.16	0.46
53:AB:53:THR:HG22	53:AB:91:VAL:HG11	1.97	0.46
54:BB:48:LEU:HG	54:BB:52:LEU:HD12	1.97	0.46
59:GB:136:VAL:HG11	59:GB:149:ARG:HH21	1.81	0.46
61:IB:87:ARG:HG3	61:IB:104:HIS:CD2	2.50	0.46
68:PB:68:ARG:O	68:PB:72:ILE:HG13	2.15	0.46
69:QB:18:TYR:HD2	69:QB:59:ALA:HB1	1.79	0.46
69:QB:34:VAL:HG23	69:QB:53:TRP:CZ2	2.50	0.46
71:SB:28:ASP:C	71:SB:30:ALA:H	2.23	0.46
77:YB:35:VAL:HG22	77:YB:79:PHE:CA	2.45	0.46
82:DC:496:LYS:HB2	82:DC:553:PRO:HB2	1.96	0.46
82:DC:729:PHE:HB2	82:DC:772:LEU:HB3	1.97	0.46
82:DC:819:VAL:HA	82:DC:822:ALA:HB3	1.96	0.46
1:A:73:U:H5	56:DB:167:LYS:HE2	1.80	0.46
1:A:121:U:H2'	1:A:122:U:C6	2.50	0.46
1:A:830:U:H3'	1:A:831:U:H5"	1.97	0.46
1:A:887:A:H2'	1:A:888:U:O4'	2.15	0.46
1:A:955:A:H2'	1:A:956:C:O4'	2.15	0.46
1:A:968:U:H4'	1:A:1033:C:O2	2.14	0.46
1:A:1534:G:H1'	1:A:1535:U:O2	2.16	0.46
1:A:1740:A:H2'	1:A:1741:U:H6	1.79	0.46
2:B:43:A:H4'	19:S:84:PRO:HD2	1.98	0.46
2:B:300:G:H2'	2:B:301:G:H8	1.79	0.46
2:B:343:U:H6	8:H:95:ARG:HD2	1.80	0.46
2:B:374:A:N3	2:B:376:G:H5"	2.30	0.46
2:B:560:G:H5'	18:R:80:THR:OG1	2.14	0.46
2:B:576:C:H5"	11:K:142:SER:CB	2.45	0.46
2:B:868:C:H2'	2:B:869:G:H8	1.79	0.46
2:B:904:A:H2'	2:B:905:U:C5	2.50	0.46
2:B:1474:A:H2'	2:B:1475:A:H8	1.80	0.46
2:B:1492:G:O4'	2:B:1843:C:H4'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1604:G:O2'	2:B:1835:A:H4'	2.15	0.46
2:B:1745:C:H2'	2:B:1746:U:C6	2.50	0.46
2:B:1863:G:H2'	2:B:1864:A:H3'	1.97	0.46
2:B:1942:U:OP2	23:W:74:ARG:HD2	2.14	0.46
2:B:2134:G:H2'	2:B:2135:U:C6	2.50	0.46
2:B:2511:A:H5'	2:B:2511:A:H8	1.81	0.46
2:B:3027:A:H4'	82:DC:137:VAL:CG1	2.45	0.46
2:B:3170:A:H2'	2:B:3171:U:C5	2.50	0.46
6:F:225:ILE:CG2	6:F:238:ILE:HG12	2.45	0.46
7:G:11:HIS:HB3	7:G:233:TRP:O	2.15	0.46
8:H:152:VAL:HG11	8:H:156:LEU:CD1	2.42	0.46
9:I:294:ALA:HB2	14:N:210:ILE:HG12	1.97	0.46
12:L:161:GLU:CG	19:S:22:LEU:HG	2.45	0.46
17:Q:32:LYS:C	17:Q:32:LYS:HD3	2.40	0.46
18:R:78:THR:CA	18:R:81:VAL:HB	2.40	0.46
18:R:120:VAL:CG2	20:T:197:LEU:HD13	2.34	0.46
18:R:123:LEU:HB3	20:T:194:LEU:CD2	2.43	0.46
20:T:34:VAL:HB	20:T:103:LYS:O	2.16	0.46
20:T:127:LEU:CD2	24:X:156:VAL:HG12	2.42	0.46
21:U:4:TYR:OH	21:U:16:SER:HB3	2.15	0.46
21:U:71:ALA:HA	21:U:74:LYS:CG	2.24	0.46
24:X:77:VAL:HG11	24:X:106:LEU:CG	2.43	0.46
28:BA:57:LYS:HA	28:BA:60:LYS:HE2	1.96	0.46
34:HA:16:LEU:HD22	34:HA:98:SER:OG	2.15	0.46
35:IA:27:LYS:C	35:IA:30:PRO:HD2	2.40	0.46
36:JA:35:GLN:HG3	36:JA:42:VAL:HB	1.98	0.46
49:WA:267:PRO:HG2	49:WA:269:TYR:CE1	2.50	0.46
50:XA:18:LEU:HD23	67:OB:102:VAL:HG11	1.97	0.46
50:XA:112:THR:HG23	50:XA:115:PHE:HB2	1.96	0.46
52:ZA:53:ILE:HG23	52:ZA:56:ILE:HD12	1.96	0.46
53:AB:32:GLU:HG2	53:AB:58:VAL:HG22	1.97	0.46
53:AB:105:MET:HG2	53:AB:122:VAL:CG2	2.45	0.46
53:AB:132:LYS:HB3	53:AB:189:MET:HE2	1.97	0.46
58:FB:64:ASN:OD1	58:FB:73:SER:HB3	2.15	0.46
61:IB:127:GLN:HA	61:IB:137:PHE:CD1	2.49	0.46
72:TB:38:LEU:HA	72:TB:41:MET:HG3	1.95	0.46
73:UB:24:TRP:CE3	73:UB:24:TRP:HA	2.50	0.46
73:UB:127:VAL:O	73:UB:127:VAL:HG23	2.15	0.46
77:YB:21:LEU:HD22	77:YB:26:GLN:CD	2.40	0.46
77:YB:28:PRO:C	77:YB:30:SER:H	2.23	0.46
82:DC:124:GLY:HA3	82:DC:342:LEU:CD2	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:284:LEU:HD13	82:DC:324:MET:HE1	1.97	0.46
82:DC:314:LEU:HD22	82:DC:318:ALA:CB	2.45	0.46
82:DC:440:ARG:HB3	82:DC:440:ARG:CZ	2.45	0.46
1:A:17:C:H2'	1:A:18:C:C6	2.47	0.46
1:A:61:A:H2'	1:A:62:A:H5'	1.98	0.46
1:A:85:A:H4'	74:VB:120:GLY:O	2.15	0.46
1:A:395:U:H2'	1:A:396:G:O4'	2.15	0.46
1:A:825:U:H2'	1:A:826:U:C6	2.50	0.46
1:A:1058:U:C5	1:A:1061:A:N1	2.83	0.46
2:B:72:C:OP2	40:NA:13:LYS:HE3	2.15	0.46
2:B:144:A:H2'	2:B:145:G:H5'	1.97	0.46
2:B:212:G:N7	8:H:182:LEU:HD13	2.31	0.46
2:B:257:U:H5"	17:Q:86:THR:CG2	2.42	0.46
2:B:522:A:H62	2:B:570:A:H61	1.64	0.46
2:B:737:G:H2'	2:B:738:A:H8	1.80	0.46
2:B:1004:U:H2'	2:B:1005:G:O4'	2.16	0.46
2:B:1063:G:C6	25:Y:109:VAL:HG22	2.51	0.46
2:B:1070:U:C2'	2:B:1071:U:H5'	2.46	0.46
2:B:1119:C:H2'	2:B:1120:A:H8	1.79	0.46
2:B:1304:A:H62	2:B:2860:U:H5"	1.81	0.46
2:B:1709:C:H4'	31:EA:15:ARG:NH1	2.31	0.46
2:B:2076:G:H3'	2:B:2077:U:H5"	1.96	0.46
2:B:2359:C:H5"	2:B:2399:A:O3'	2.16	0.46
2:B:2558:U:C5'	12:L:40:VAL:HG21	2.39	0.46
2:B:2993:G:H2'	2:B:3142:A:N6	2.30	0.46
2:B:3000:A:H5'	2:B:3296:A:C5'	2.35	0.46
2:B:3021:A:N6	2:B:3032:A:H3'	2.29	0.46
4:D:48:U:C5	9:I:93:THR:HG21	2.50	0.46
8:H:103:THR:HA	8:H:107:ARG:HH21	1.80	0.46
9:I:109:THR:OG1	9:I:142:PHE:HE1	1.99	0.46
11:K:35:ALA:O	11:K:38:LYS:HB3	2.15	0.46
16:P:58:VAL:O	16:P:58:VAL:HG12	2.15	0.46
16:P:108:GLU:O	16:P:111:GLU:HB3	2.16	0.46
17:Q:60:ALA:HB3	17:Q:65:TYR:O	2.15	0.46
19:S:88:GLY:HA3	46:TA:50:PHE:CE1	2.50	0.46
20:T:108:ILE:HD13	20:T:117:ARG:HH11	1.80	0.46
22:V:18:ALA:HB1	22:V:27:LYS:NZ	2.31	0.46
23:W:10:LEU:HD13	23:W:41:ILE:HD11	1.97	0.46
30:DA:56:VAL:HG11	30:DA:104:LEU:HD13	1.97	0.46
30:DA:112:ASP:OD2	30:DA:115:ARG:HG3	2.16	0.46
31:EA:3:LYS:C	31:EA:5:LEU:H	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:44:ALA:CB	31:EA:72:ILE:HG22	2.45	0.46
42:PA:14:LEU:HD13	42:PA:52:TYR:CG	2.50	0.46
49:WA:263:PHE:CD1	49:WA:270:LEU:HA	2.50	0.46
52:ZA:129:ILE:HG22	52:ZA:133:LYS:HE3	1.97	0.46
54:BB:9:LEU:HG	54:BB:10:LYS:H	1.80	0.46
54:BB:122:LYS:HG2	54:BB:164:LEU:HD21	1.97	0.46
55:CB:33:VAL:HG13	66:NB:46:PHE:HE1	1.79	0.46
56:DB:52:ILE:HA	56:DB:110:ALA:O	2.15	0.46
58:FB:74:LYS:O	58:FB:109:PHE:CE1	2.69	0.46
68:PB:100:THR:HB	68:PB:105:VAL:HA	1.97	0.46
82:DC:244:LEU:HD13	82:DC:277:ILE:HD11	1.97	0.46
1:A:64:U:C2'	1:A:65:A:H5"	2.45	0.46
1:A:97:C:H2'	1:A:98:U:O4'	2.15	0.46
1:A:310:C:H2'	1:A:311:U:O4'	2.15	0.46
1:A:327:U:O2'	61:IB:12:ALA:HB3	2.15	0.46
1:A:777:C:H5	74:VB:10:ARG:NH1	2.13	0.46
1:A:1477:G:H5'	69:QB:45:MET:CB	2.45	0.46
1:A:1524:A:H4'	69:QB:93:HIS:CD2	2.51	0.46
2:B:135:C:C6	39:MA:94:LYS:HD2	2.50	0.46
2:B:199:A:N1	2:B:201:A:H1'	2.30	0.46
2:B:1465:A:H2'	2:B:1466:G:O4'	2.16	0.46
2:B:1647:A:H62	2:B:1808:G:C1'	2.25	0.46
2:B:1753:G:O2'	38:LA:27:GLY:HA2	2.16	0.46
2:B:1781:C:H2'	2:B:1782:U:O4'	2.15	0.46
2:B:2224:A:OP1	40:NA:74:LYS:HD3	2.15	0.46
2:B:2244:A:H1'	6:F:224:THR:OG1	2.16	0.46
2:B:2848:G:H5"	2:B:2906:C:H1'	1.96	0.46
2:B:3185:U:O2'	24:X:170:THR:HG21	2.15	0.46
4:D:113:C:H2'	4:D:114:U:O4'	2.15	0.46
5:E:64:SER:O	5:E:65:ILE:HG13	2.15	0.46
6:F:111:THR:CG2	6:F:166:ILE:HD12	2.46	0.46
6:F:129:ALA:O	6:F:169:ILE:HG13	2.14	0.46
6:F:229:ALA:HB3	6:F:234:LYS:HG2	1.96	0.46
8:H:82:THR:HG22	8:H:85:SER:HB3	1.96	0.46
9:I:55:PHE:CZ	9:I:158:ARG:HB2	2.51	0.46
9:I:91:GLY:HA2	9:I:94:ASN:HD21	1.80	0.46
9:I:107:ARG:HB3	9:I:251:PRO:HG3	1.97	0.46
11:K:107:ARG:HB3	11:K:204:PRO:CG	2.45	0.46
12:L:204:ARG:HB3	12:L:207:ASP:HB2	1.97	0.46
12:L:228:GLU:C	12:L:230:LYS:N	2.71	0.46
13:M:22:SER:OG	13:M:39:LYS:HE3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:97:PHE:CB	13:M:118:LEU:HA	2.46	0.46
13:M:138:THR:HG22	13:M:139:ASN:H	1.81	0.46
16:P:85:LEU:HD12	16:P:109:ILE:HD13	1.97	0.46
17:Q:68:LYS:HD3	17:Q:149:GLN:OE1	2.16	0.46
17:Q:89:TYR:O	17:Q:93:ILE:HG12	2.15	0.46
20:T:14:HIS:HD2	20:T:123:ALA:HB3	1.80	0.46
20:T:181:ALA:O	20:T:184:THR:HG22	2.14	0.46
21:U:60:PHE:HB3	21:U:64:ASN:HB3	1.96	0.46
30:DA:35:LEU:HD22	30:DA:39:LEU:HB3	1.97	0.46
31:EA:44:ALA:HB2	31:EA:72:ILE:HG22	1.98	0.46
32:FA:70:LYS:NZ	32:FA:70:LYS:HB2	2.31	0.46
47:UA:14:TYR:HA	47:UA:17:ARG:HH12	1.79	0.46
50:XA:101:ARG:HG3	50:XA:101:ARG:HH11	1.81	0.46
53:AB:217:ILE:HG22	53:AB:218:LEU:N	2.29	0.46
54:BB:90:ILE:CD1	54:BB:101:LEU:HG	2.45	0.46
54:BB:114:ILE:HG22	54:BB:237:SER:OG	2.15	0.46
54:BB:122:LYS:HG3	54:BB:162:ILE:HD12	1.96	0.46
55:CB:56:ALA:HB1	78:ZB:9:LEU:HD13	1.97	0.46
57:EB:86:GLN:O	57:EB:87:ASP:HB3	2.16	0.46
58:FB:85:PRO:HB2	61:IB:12:ALA:CB	2.35	0.46
65:MB:22:LEU:HA	65:MB:25:LEU:HD12	1.97	0.46
65:MB:108:ARG:O	65:MB:111:MET:HG2	2.16	0.46
70:RB:100:VAL:O	70:RB:104:THR:HG23	2.14	0.46
71:SB:34:ILE:O	71:SB:52:THR:HA	2.15	0.46
80:BC:41:THR:HA	80:BC:45:VAL:CG2	2.46	0.46
82:DC:120:ARG:HG2	82:DC:383:SER:OG	2.16	0.46
83:EC:6902:U:H2'	83:EC:6903:U:C6	2.48	0.46
83:EC:6910:A:C2'	83:EC:6947:A:H2	2.25	0.46
1:A:144:U:H5'	1:A:144:U:C6	2.45	0.46
1:A:1322:A:O2'	50:XA:104:PRO:HG2	2.16	0.46
2:B:5:G:H2'	2:B:6:A:H5"	1.98	0.46
2:B:44:U:H4'	46:TA:54:THR:CB	2.45	0.46
2:B:185:C:H4'	30:DA:122:LYS:HG2	1.97	0.46
2:B:429:U:H2'	2:B:430:U:H6	1.81	0.46
2:B:842:G:H2'	2:B:843:A:C8	2.51	0.46
2:B:983:A:H2	2:B:1100:U:O2	1.98	0.46
2:B:1173:U:C4	2:B:1180:A:N6	2.84	0.46
2:B:1308:A:OP2	2:B:2368:A:H4'	2.15	0.46
2:B:1446:A:H3'	21:U:65:SER:HB3	1.97	0.46
2:B:1724:U:H1'	2:B:1725:C:C6	2.51	0.46
2:B:1727:G:C1'	2:B:1731:A:H5'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1832:C:C4'	3:C:113:U:H5'	2.45	0.46
2:B:1889:G:H2'	2:B:1890:U:C6	2.51	0.46
2:B:2469:G:H22	2:B:2477:G:H1'	1.80	0.46
2:B:2808:A:H1'	2:B:2969:A:OP1	2.15	0.46
2:B:2821:C:H42	2:B:2869:U:H3	1.63	0.46
4:D:96:U:H5"	24:X:43:TYR:HE2	1.81	0.46
6:F:117:GLU:HA	6:F:125:ALA:CB	2.41	0.46
6:F:158:ILE:HD12	6:F:162:ALA:CB	2.46	0.46
8:H:29:PRO:HA	22:V:25:TYR:CZ	2.51	0.46
10:J:69:PHE:O	10:J:73:GLY:HA2	2.16	0.46
12:L:75:ILE:HG23	12:L:78:PHE:CD1	2.50	0.46
12:L:165:PHE:CZ	19:S:3:ALA:HB1	2.47	0.46
12:L:171:LYS:HE2	12:L:226:TYR:HD2	1.81	0.46
13:M:23:ARG:HA	13:M:45:PHE:CE2	2.50	0.46
17:Q:3:ILE:HD12	32:FA:41:HIS:CG	2.51	0.46
19:S:71:ARG:CB	19:S:92:LEU:HD23	2.21	0.46
20:T:37:ARG:HH12	20:T:161:LYS:NZ	2.14	0.46
20:T:51:LYS:HA	20:T:141:LEU:HD11	1.97	0.46
20:T:124:LEU:HD23	24:X:168:PRO:HG2	1.96	0.46
32:FA:49:HIS:N	32:FA:50:PRO:CD	2.79	0.46
40:NA:60:LEU:HB3	40:NA:69:ALA:CB	2.42	0.46
41:OA:10:LYS:H	41:OA:10:LYS:CD	2.29	0.46
48:VA:97:LYS:HE3	48:VA:101:VAL:HG21	1.97	0.46
49:WA:178:VAL:HB	49:WA:192:PHE:HB2	1.98	0.46
50:XA:62:ARG:HD3	71:SB:37:ALA:O	2.15	0.46
50:XA:85:ALA:CB	50:XA:202:TYR:HB3	2.45	0.46
54:BB:152:PRO:HG3	56:DB:208:TYR:CZ	2.50	0.46
55:CB:97:LEU:CD2	55:CB:176:THR:HA	2.45	0.46
55:CB:163:SER:HA	78:ZB:54:LEU:HD11	1.98	0.46
63:KB:23:PRO:O	63:KB:24:ALA:HB3	2.15	0.46
66:NB:48:VAL:HG22	66:NB:48:VAL:O	2.16	0.46
69:QB:57:ARG:HH21	69:QB:101:ASN:HD21	1.64	0.46
72:TB:8:ALA:CA	72:TB:74:VAL:HG11	2.45	0.46
72:TB:34:ILE:O	72:TB:38:LEU:HG	2.15	0.46
75:WB:51:LEU:N	75:WB:51:LEU:HD12	2.31	0.46
82:DC:293:LYS:HA	82:DC:296:ILE:HD12	1.98	0.46
82:DC:737:GLU:HG2	82:DC:766:PHE:HD2	1.81	0.46
1:A:210:A:H1'	58:FB:66:SER:HB2	1.98	0.46
1:A:238:U:OP1	1:A:834:G:H4'	2.16	0.46
1:A:381:C:H2'	1:A:382:C:H6	1.76	0.46
1:A:833:U:H5'	1:A:834:G:H5"	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:875:G:H1	1:A:952:A:H61	1.62	0.46
1:A:1035:G:OP1	63:KB:2:GLY:HA2	2.15	0.46
1:A:1160:A:H2'	1:A:1161:C:C6	2.51	0.46
1:A:1170:G:H2'	1:A:1170:G:N3	2.29	0.46
1:A:1196:A:H2'	1:A:1465:C:O2	2.15	0.46
1:A:1258:U:H3'	1:A:1258:U:O2	2.15	0.46
1:A:1388:A:H4'	1:A:1389:C:O4'	2.16	0.46
1:A:1717:G:H2'	1:A:1718:G:C8	2.50	0.46
2:B:757:C:H3'	2:B:758:C:H5"	1.97	0.46
2:B:896:A:C8	2:B:2134:G:C1'	2.93	0.46
2:B:2150:G:H2'	2:B:2151:C:C6	2.51	0.46
2:B:2450:G:O2'	2:B:2451:G:H5'	2.16	0.46
2:B:2746:A:P	9:I:179:ARG:HE	2.39	0.46
2:B:2881:C:C4'	7:G:249:VAL:HG13	2.45	0.46
2:B:3029:A:H2'	2:B:3030:G:O4'	2.16	0.46
2:B:3040:A:H5"	27:AA:12:ARG:CA	2.44	0.46
2:B:3163:A:H2'	2:B:3164:C:H5"	1.98	0.46
2:B:3316:A:C6	7:G:124:LYS:HD2	2.50	0.46
3:C:23:U:OP2	3:C:23:U:C6	2.66	0.46
3:C:65:A:H2'	3:C:66:A:O4'	2.16	0.46
7:G:66:LYS:HG2	7:G:70:ARG:HH21	1.81	0.46
7:G:261:MET:HE3	20:T:63:ALA:O	2.15	0.46
8:H:334:PHE:CE1	8:H:339:LEU:HB2	2.51	0.46
9:I:120:LYS:HD2	9:I:120:LYS:H	1.80	0.46
9:I:203:HIS:CE1	9:I:204:VAL:HG23	2.51	0.46
10:J:142:ASP:O	10:J:146:ILE:HG12	2.15	0.46
10:J:165:LEU:HB2	37:KA:6:ARG:CG	2.46	0.46
11:K:59:GLU:HB3	11:K:60:ARG:NH2	2.31	0.46
17:Q:47:ALA:HB3	39:MA:115:LYS:HZ2	1.79	0.46
22:V:81:VAL:HG12	22:V:138:LEU:HD12	1.98	0.46
29:CA:34:LEU:HD23	29:CA:35:PRO:O	2.15	0.46
31:EA:111:LYS:HA	31:EA:114:VAL:CG2	2.42	0.46
39:MA:21:LEU:HD12	39:MA:54:VAL:HG12	1.96	0.46
40:NA:50:LEU:HD23	40:NA:55:ARG:HG2	1.97	0.46
47:UA:59:CYS:C	47:UA:61:LYS:H	2.22	0.46
54:BB:146:THR:HG23	54:BB:146:THR:O	2.15	0.46
56:DB:72:ARG:HA	56:DB:97:VAL:O	2.16	0.46
59:GB:82:ARG:O	59:GB:149:ARG:HB2	2.15	0.46
61:IB:57:LYS:HA	61:IB:64:VAL:HG13	1.97	0.46
66:NB:35:PRO:HG3	69:QB:8:ASP:HA	1.96	0.46
67:OB:55:THR:HA	67:OB:58:MET:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:126:GLU:HG2	69:QB:127:ASN:N	2.30	0.46
82:DC:31:GLY:HA3	82:DC:158:ASN:HD22	1.78	0.46
82:DC:493:VAL:CG1	82:DC:554:LEU:HD22	2.45	0.46
82:DC:546:GLU:O	82:DC:551:GLY:HA2	2.16	0.46
82:DC:620:ALA:HA	82:DC:625:TRP:H	1.80	0.46
1:A:107:C:OP1	1:A:384:G:H5'	2.16	0.46
1:A:138:A:N6	1:A:266:A:N6	2.57	0.46
1:A:590:C:H2'	1:A:591:A:H8	1.78	0.46
1:A:788:A:OP2	54:BB:108:ARG:NH2	2.48	0.46
1:A:858:G:H5'	57:EB:116:ARG:NH2	2.31	0.46
1:A:1235:C:H2'	1:A:1236:A:C8	2.47	0.46
1:A:1337:A:H4'	66:NB:123:ARG:NH2	2.31	0.46
2:B:221:A:OP1	2:B:221:A:H3'	2.15	0.46
2:B:429:U:O2'	2:B:430:U:H5'	2.16	0.46
2:B:904:A:H5'	2:B:1537:A:H5'	1.96	0.46
2:B:1159:A:H2'	2:B:1160:C:C6	2.51	0.46
2:B:1379:G:H2'	2:B:1380:G:C8	2.50	0.46
2:B:1422:G:H2'	2:B:1423:C:H6	1.79	0.46
2:B:1487:G:H2'	2:B:1488:G:C5'	2.46	0.46
2:B:1578:C:H2'	2:B:1579:C:N3	2.29	0.46
2:B:1797:A:H4'	6:F:22:LEU:CA	2.41	0.46
2:B:1887:A:N7	2:B:2348:A:H2	2.13	0.46
2:B:2198:A:C8	2:B:2199:G:C8	3.04	0.46
2:B:2356:A:O2'	21:U:137:ASN:HB3	2.16	0.46
2:B:2567:C:C3'	2:B:2568:C:H5"	2.37	0.46
2:B:2942:C:OP1	2:B:2943:G:H5"	2.16	0.46
2:B:3243:A:H4'	7:G:95:THR:HB	1.98	0.46
2:B:3329:U:H5'	7:G:309:GLY:HA3	1.97	0.46
4:D:43:U:OP1	15:O:137:ARG:HD2	2.16	0.46
5:E:120:VAL:CB	5:E:121:PRO:HD3	2.36	0.46
8:H:74:ILE:HB	8:H:75:PRO:HD2	1.96	0.46
8:H:280:ILE:HD11	22:V:105:ARG:CG	2.43	0.46
9:I:231:ILE:HD13	9:I:239:ILE:CD1	2.46	0.46
9:I:235:SER:O	9:I:239:ILE:HG13	2.15	0.46
10:J:52:VAL:HG11	10:J:74:VAL:HG11	1.98	0.46
10:J:58:LEU:CG	10:J:64:LEU:HB2	2.43	0.46
12:L:221:ASN:O	12:L:225:LYS:HG3	2.16	0.46
12:L:247:ASP:HA	12:L:251:LYS:HB2	1.97	0.46
13:M:171:ASP:O	13:M:175:PHE:HD2	1.99	0.46
15:O:9:MET:CG	15:O:134:PRO:HB2	2.38	0.46
17:Q:58:VAL:CA	17:Q:69:VAL:HG23	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:113:VAL:HA	17:Q:116:LEU:HB2	1.98	0.46
18:R:23:ILE:HD12	18:R:23:ILE:H	1.81	0.46
22:V:60:PRO:HA	22:V:61:PRO:HD2	1.81	0.46
24:X:107:TYR:CE2	24:X:123:ILE:HD11	2.51	0.46
26:Z:19:VAL:CG1	26:Z:105:LEU:HD13	2.44	0.46
29:CA:109:LYS:HG3	29:CA:111:ASN:OD1	2.16	0.46
31:EA:23:VAL:CB	31:EA:43:VAL:HB	2.42	0.46
35:IA:102:LYS:C	35:IA:102:LYS:HD3	2.41	0.46
39:MA:5:LYS:HE3	39:MA:7:TYR:HD2	1.80	0.46
40:NA:51:SER:HB3	40:NA:54:GLU:HG3	1.97	0.46
46:TA:3:ASN:HD21	46:TA:97:LYS:HD3	1.80	0.46
48:VA:41:VAL:HA	48:VA:44:GLU:CG	2.44	0.46
49:WA:34:LEU:HB2	49:WA:73:LEU:HD11	1.98	0.46
49:WA:58:VAL:HG23	49:WA:59:ARG:N	2.31	0.46
49:WA:250:TYR:HB3	49:WA:265:LEU:HB2	1.98	0.46
52:ZA:65:GLU:H	52:ZA:134:LEU:HD11	1.76	0.46
52:ZA:212:LYS:O	52:ZA:216:VAL:HG23	2.16	0.46
54:BB:103:TYR:HA	54:BB:108:ARG:O	2.16	0.46
55:CB:77:TYR:HA	55:CB:83:ARG:HG3	1.97	0.46
55:CB:186:ASN:ND2	55:CB:188:LYS:HD2	2.31	0.46
56:DB:64:LYS:O	56:DB:67:VAL:HG22	2.16	0.46
65:MB:52:LYS:HE2	65:MB:53:PRO:HD3	1.98	0.46
66:NB:130:GLY:HA2	66:NB:138:PHE:CE2	2.50	0.46
73:UB:53:VAL:HA	73:UB:74:VAL:HG22	1.98	0.46
74:VB:13:ILE:HD12	74:VB:13:ILE:N	2.31	0.46
75:WB:50:ILE:HB	75:WB:51:LEU:HD12	1.98	0.46
79:AC:22:ARG:HG3	79:AC:38:ILE:CD1	2.45	0.46
82:DC:109:VAL:HG12	82:DC:110:ASP:N	2.28	0.46
82:DC:729:PHE:O	82:DC:771:TYR:HA	2.16	0.46
82:DC:789:GLY:C	82:DC:791:GLN:H	2.24	0.46
82:DC:831:GLU:O	82:DC:833:PRO:HD3	2.15	0.46
83:EC:6857:C:H2'	83:EC:6858:A:H5'	1.97	0.46
1:A:297:U:OP1	54:BB:37:LYS:HD3	2.16	0.46
1:A:333:A:H62	58:FB:27:PHE:HB2	1.80	0.46
1:A:1539:G:H3'	1:A:1540:G:C5'	2.46	0.46
1:A:1605:G:N7	66:NB:127:LYS:HD2	2.29	0.46
2:B:364:G:H4'	8:H:84:ARG:HB3	1.96	0.46
2:B:578:A:O2'	8:H:331:ALA:HB1	2.15	0.46
2:B:764:U:O2	2:B:764:U:H2'	2.16	0.46
2:B:841:A:O3'	23:W:126:GLU:HG2	2.16	0.46
2:B:874:U:O4	2:B:2950:G:H3'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:970:A:OP2	33:GA:19:ASN:HB2	2.16	0.46
2:B:989:A:H2	25:Y:101:CYS:HB2	1.81	0.46
2:B:1311:G:H1'	2:B:2381:G:O5'	2.16	0.46
2:B:1508:C:H2'	2:B:1509:A:O4'	2.16	0.46
2:B:1638:A:H2	2:B:1709:C:C2	2.34	0.46
2:B:1679:A:H2'	2:B:1680:G:H8	1.80	0.46
2:B:1883:A:H2'	2:B:1884:A:H8	1.80	0.46
2:B:2261:G:H5'	2:B:2261:G:C8	2.50	0.46
2:B:2372:A:C3'	2:B:2373:A:C5'	2.94	0.46
2:B:2771:U:H3'	2:B:2772:C:C5'	2.45	0.46
2:B:3201:C:H2'	2:B:3202:G:C8	2.51	0.46
2:B:3321:C:H2'	2:B:3322:A:O4'	2.15	0.46
3:C:118:C:H2'	3:C:119:C:H6	1.76	0.46
6:F:206:PRO:HG3	6:F:213:GLY:HA3	1.97	0.46
7:G:293:ASN:HB3	7:G:321:PHE:HZ	1.80	0.46
10:J:34:LEU:HG	10:J:54:TYR:CE1	2.51	0.46
12:L:98:ARG:HB2	12:L:98:ARG:NH1	2.29	0.46
19:S:139:HIS:HB3	19:S:142:ILE:CD1	2.45	0.46
21:U:18:ARG:NE	21:U:147:GLU:HB3	2.30	0.46
22:V:113:LYS:HD3	22:V:113:LYS:C	2.41	0.46
23:W:18:GLY:O	23:W:22:VAL:HG23	2.16	0.46
24:X:4:PHE:CE2	24:X:104:GLU:HG3	2.44	0.46
24:X:23:LYS:HG3	25:Y:146:ASN:HD22	1.81	0.46
30:DA:43:TYR:O	30:DA:124:GLY:HA2	2.16	0.46
35:IA:43:HIS:O	35:IA:44:MET:HG2	2.16	0.46
36:JA:19:ARG:NH1	36:JA:28:VAL:HG13	2.14	0.46
46:TA:65:THR:CG2	46:TA:89:LYS:HG2	2.46	0.46
46:TA:93:LEU:HD23	46:TA:93:LEU:H	1.80	0.46
52:ZA:77:GLN:OE1	52:ZA:190:LEU:HD22	2.16	0.46
54:BB:68:ARG:HH11	54:BB:76:VAL:HG11	1.81	0.46
57:EB:82:GLU:HG3	57:EB:90:VAL:HG23	1.98	0.46
57:EB:144:VAL:HG23	57:EB:144:VAL:O	2.16	0.46
70:RB:34:LEU:O	70:RB:34:LEU:HD13	2.15	0.46
1:A:49:C:OP1	1:A:388:G:H1'	2.16	0.46
1:A:180:A:H2'	1:A:181:A:C5'	2.46	0.46
1:A:428:A:O3'	1:A:439:U:H6	1.99	0.46
1:A:774:A:H2'	1:A:775:G:H5'	1.97	0.46
1:A:824:G:H5'	1:A:825:U:OP2	2.16	0.46
2:B:44:U:H5"	46:TA:54:THR:HG22	1.97	0.46
2:B:93:C:H3'	2:B:93:C:OP1	2.15	0.46
2:B:245:U:H2'	2:B:246:U:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:501:A:H4'	10:J:28:GLN:HE21	1.81	0.46
2:B:739:G:H2'	2:B:740:G:H8	1.81	0.46
2:B:841:A:H4'	23:W:126:GLU:CA	2.42	0.46
2:B:1116:G:O2'	2:B:1117:G:H4'	2.16	0.46
2:B:1360:C:H2'	2:B:1361:U:H6	1.80	0.46
2:B:1415:U:H2'	2:B:1416:C:O4'	2.15	0.46
2:B:1486:G:H21	38:LA:6:THR:HG22	1.81	0.46
2:B:1655:G:H4'	38:LA:59:PRO:HG2	1.96	0.46
2:B:1783:U:H2'	2:B:1784:G:C8	2.51	0.46
2:B:1804:A:H4'	38:LA:71:THR:HG21	1.98	0.46
2:B:1857:C:O2	38:LA:4:ARG:HB3	2.16	0.46
2:B:2138:A:H5'	41:OA:3:LYS:HE2	1.96	0.46
2:B:2201:G:N2	6:F:224:THR:HG21	2.30	0.46
2:B:2849:C:H2'	2:B:2850:G:C8	2.50	0.46
2:B:2875:U:O2	2:B:2875:U:H2'	2.15	0.46
2:B:3257:C:H2'	2:B:3258:U:C6	2.51	0.46
2:B:3273:A:H2'	2:B:3274:A:O4'	2.15	0.46
4:D:1:G:N3	9:I:266:ALA:HB2	2.30	0.46
5:E:74:VAL:HB	5:E:84:ALA:HB1	1.98	0.46
7:G:22:ALA:HB3	7:G:274:SER:OG	2.15	0.46
8:H:42:VAL:HG13	8:H:118:LYS:HZ1	1.80	0.46
12:L:46:LEU:HD23	12:L:49:TYR:CD1	2.51	0.46
13:M:106:LYS:O	13:M:107:ASP:HB2	2.16	0.46
16:P:123:ARG:HH22	48:VA:39:HIS:HB2	1.72	0.46
16:P:130:LYS:O	16:P:146:LYS:HG2	2.16	0.46
21:U:169:THR:O	21:U:173:ARG:HB2	2.15	0.46
24:X:14:LEU:HD21	25:Y:136:ARG:CZ	2.46	0.46
25:Y:66:ASN:HB2	33:GA:35:VAL:HG22	1.97	0.46
25:Y:80:VAL:CG1	25:Y:83:ARG:HG2	2.46	0.46
32:FA:6:THR:O	32:FA:10:LYS:HD3	2.15	0.46
34:HA:99:ASP:C	34:HA:101:LEU:H	2.24	0.46
36:JA:123:LYS:HA	36:JA:126:LEU:CD1	2.43	0.46
37:KA:13:HIS:HA	37:KA:30:ILE:CD1	2.46	0.46
38:LA:54:ILE:CG1	38:LA:71:THR:HG22	2.39	0.46
48:VA:110:ARG:HB3	48:VA:113:ALA:HB2	1.98	0.46
49:WA:124:SER:O	49:WA:131:ILE:HA	2.16	0.46
49:WA:216:LYS:HA	49:WA:239:GLU:HB2	1.97	0.46
52:ZA:157:LYS:HG3	72:TB:95:PRO:O	2.16	0.46
53:AB:163:PRO:HB3	53:AB:167:PHE:HD2	1.80	0.46
53:AB:168:ILE:HD13	53:AB:187:LYS:HG3	1.98	0.46
56:DB:74:LYS:NZ	56:DB:74:LYS:HB3	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:17:ARG:HD2	59:GB:20:GLU:OE1	2.15	0.46
63:KB:99:ARG:HG3	63:KB:115:LEU:HD21	1.97	0.46
78:ZB:13:ILE:HD13	78:ZB:31:GLU:HB2	1.97	0.46
82:DC:747:LEU:C	82:DC:749:LYS:H	2.23	0.46
1:A:147:A:OP2	1:A:166:C:H5	1.97	0.46
1:A:314:C:O2	1:A:354:C:N3	2.49	0.46
1:A:1065:A:H2'	1:A:1066:C:O4'	2.16	0.46
1:A:1119:G:H2'	1:A:1120:U:C6	2.51	0.46
1:A:1126:G:H2'	1:A:1127:G:O4'	2.16	0.46
1:A:1471:A:H5'	55:CB:184:PHE:CE2	2.51	0.46
1:A:1483:A:C2	1:A:1607:G:H1'	2.51	0.46
2:B:130:A:O5'	2:B:130:A:H8	1.99	0.46
2:B:573:C:H2'	2:B:574:U:C6	2.51	0.46
2:B:660:A:C2	2:B:942:U:H4'	2.51	0.46
2:B:742:G:OP1	22:V:73:GLN:HG2	2.16	0.46
2:B:833:G:OP1	23:W:84:THR:HG21	2.15	0.46
2:B:941:G:C1'	2:B:1435:A:H1'	2.46	0.46
2:B:1123:U:H2'	2:B:1124:U:C5'	2.46	0.46
2:B:1240:A:H3'	2:B:1241:U:C5'	2.38	0.46
2:B:1282:G:H5"	48:VA:82:GLY:O	2.16	0.46
2:B:1724:U:O4	23:W:125:LYS:HD2	2.16	0.46
2:B:2177:G:N2	6:F:126:LEU:HG	2.30	0.46
2:B:2320:A:H3'	2:B:2321:A:C8	2.51	0.46
2:B:2917:G:H2'	2:B:2918:G:O4'	2.16	0.46
2:B:2939:G:H2'	2:B:2940:A:O4'	2.16	0.46
2:B:3231:U:H2'	2:B:3232:G:N7	2.30	0.46
2:B:3246:G:OP1	2:B:3247:G:H1'	2.15	0.46
3:C:154:C:H5"	12:L:181:LYS:CB	2.39	0.46
4:D:4:U:C5'	4:D:26:C:H4'	2.47	0.46
6:F:126:LEU:HD11	6:F:156:LYS:NZ	2.30	0.46
8:H:59:GLN:HE21	8:H:59:GLN:HB2	1.64	0.46
8:H:241:GLY:C	8:H:243:HIS:H	2.23	0.46
9:I:58:LYS:HZ1	9:I:158:ARG:HH12	1.63	0.46
9:I:146:LEU:HD21	9:I:159:VAL:HG12	1.98	0.46
11:K:90:LYS:HD3	11:K:133:TYR:CE1	2.51	0.46
12:L:77:GLN:HA	12:L:80:TYR:HB3	1.97	0.46
12:L:153:ILE:HD13	12:L:166:LEU:HB3	1.97	0.46
13:M:8:GLN:HG2	13:M:68:LEU:CD1	2.45	0.46
13:M:138:THR:O	13:M:139:ASN:HB2	2.16	0.46
13:M:167:VAL:HG12	13:M:170:LYS:CG	2.46	0.46
13:M:168:ARG:O	13:M:170:LYS:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:92:ARG:O	16:P:93:LYS:HB2	2.15	0.46
17:Q:28:GLN:CG	19:S:201:ARG:HG3	2.44	0.46
18:R:24:LYS:NZ	18:R:24:LYS:HB3	2.31	0.46
21:U:31:GLU:HG3	21:U:60:PHE:CD1	2.50	0.46
25:Y:115:LYS:O	25:Y:119:ALA:HB3	2.16	0.46
27:AA:34:LEU:HD22	27:AA:60:ALA:HB1	1.97	0.46
28:BA:3:VAL:HA	28:BA:13:ILE:O	2.16	0.46
31:EA:26:VAL:HG21	31:EA:96:VAL:O	2.16	0.46
34:HA:82:GLY:O	34:HA:83:LYS:HD3	2.16	0.46
34:HA:103:THR:HG22	34:HA:104:LEU:CD1	2.46	0.46
37:KA:87:ASN:HD22	37:KA:87:ASN:HA	1.57	0.46
38:LA:66:SER:O	38:LA:70:LYS:HB2	2.16	0.46
40:NA:55:ARG:HA	40:NA:58:ILE:HG12	1.98	0.46
41:OA:76:ASN:HB3	41:OA:79:GLN:CG	2.46	0.46
46:TA:22:GLN:O	46:TA:75:VAL:HG22	2.16	0.46
48:VA:28:VAL:HG11	48:VA:87:VAL:HG21	1.98	0.46
49:WA:91:LEU:O	49:WA:99:THR:HA	2.16	0.46
50:XA:175:TYR:CE2	50:XA:199:PRO:HG3	2.50	0.46
52:ZA:169:LEU:CD2	52:ZA:188:LEU:HD11	2.46	0.46
54:BB:35:PRO:CD	54:BB:83:PRO:HG2	2.46	0.46
54:BB:154:ILE:HG12	54:BB:172:PHE:CD2	2.51	0.46
56:DB:192:ALA:O	56:DB:196:ARG:HB2	2.16	0.46
58:FB:5:ARG:HH11	58:FB:5:ARG:HG3	1.80	0.46
58:FB:41:LYS:HA	58:FB:59:ARG:O	2.16	0.46
59:GB:72:GLU:HA	59:GB:75:ALA:HB3	1.97	0.46
59:GB:179:ARG:O	59:GB:182:GLU:HG3	2.16	0.46
66:NB:60:PHE:HD2	66:NB:65:ILE:HG13	1.81	0.46
69:QB:78:LYS:HA	69:QB:93:HIS:CE1	2.51	0.46
70:RB:28:SER:CB	70:RB:34:LEU:HD23	2.46	0.46
73:UB:37:ALA:HB1	73:UB:45:GLY:H	1.80	0.46
75:WB:68:ARG:HD2	83:EC:6867:C:H1'	1.97	0.46
82:DC:77:LEU:HB2	82:DC:100:ILE:HD12	1.98	0.46
82:DC:103:ILE:CD1	82:DC:121:VAL:HG23	2.46	0.46
82:DC:293:LYS:HB3	82:DC:296:ILE:HD12	1.98	0.46
82:DC:677:PHE:N	82:DC:677:PHE:HD2	2.14	0.46
1:A:151:G:H21	56:DB:13:GLN:NE2	2.13	0.45
1:A:248:U:H5'	61:IB:36:LYS:HB2	1.99	0.45
1:A:361:C:H2'	1:A:362:G:C8	2.52	0.45
1:A:449:C:H4'	54:BB:7:LYS:O	2.17	0.45
1:A:574:G:N3	1:A:574:G:H2'	2.31	0.45
1:A:1125:A:H2'	1:A:1126:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1468:U:H4'	69:QB:88:VAL:HA	1.98	0.45
2:B:44:U:C5'	46:TA:54:THR:HG22	2.46	0.45
2:B:71:A:C4	2:B:2778:G:H4'	2.52	0.45
2:B:148:G:H1'	2:B:149:U:H5	1.80	0.45
2:B:519:A:C2	24:X:65:ASN:HB2	2.51	0.45
2:B:953:G:H4'	2:B:954:U:H6	1.81	0.45
2:B:1063:G:C2	25:Y:109:VAL:HG13	2.52	0.45
2:B:1097:G:C4'	25:Y:129:LYS:HE2	2.41	0.45
2:B:1833:G:H2'	2:B:1834:U:O4'	2.15	0.45
2:B:2195:C:H2'	2:B:2272:G:OP1	2.16	0.45
2:B:2290:C:H2'	2:B:2291:A:C1'	2.45	0.45
2:B:2361:A:O2'	2:B:2362:C:H5'	2.16	0.45
2:B:3059:G:H5'	35:IA:17:HIS:CE1	2.51	0.45
2:B:3146:G:O2'	2:B:3147:G:H5'	2.17	0.45
3:C:30:C:H2'	3:C:31:G:H8	1.81	0.45
6:F:77:ILE:CG1	6:F:115:ASN:HD22	2.27	0.45
6:F:79:ASN:HD21	6:F:98:VAL:HG12	1.81	0.45
6:F:117:GLU:CA	6:F:125:ALA:HB3	2.41	0.45
7:G:303:LYS:HD3	7:G:372:THR:CG2	2.46	0.45
8:H:29:PRO:HG3	8:H:279:HIS:ND1	2.31	0.45
8:H:288:ARG:HH11	8:H:288:ARG:HG2	1.80	0.45
9:I:8:LYS:HD2	9:I:8:LYS:N	2.31	0.45
11:K:179:LEU:HD13	11:K:179:LEU:N	2.31	0.45
16:P:85:LEU:HD21	16:P:106:LEU:HD13	1.98	0.45
17:Q:46:ILE:HG12	17:Q:49:ARG:HD2	1.97	0.45
17:Q:66:ASN:HD21	32:FA:105:LEU:HD21	1.81	0.45
17:Q:74:GLY:HA3	17:Q:97:VAL:C	2.40	0.45
20:T:148:LYS:H	20:T:148:LYS:CE	2.27	0.45
21:U:17:ALA:HB3	21:U:148:LEU:HD21	1.98	0.45
24:X:9:VAL:HG13	24:X:61:ILE:HD13	1.98	0.45
24:X:10:ILE:CG2	24:X:24:LEU:HD23	2.46	0.45
31:EA:68:ILE:HG22	31:EA:69:LYS:H	1.81	0.45
31:EA:100:THR:O	31:EA:107:ARG:HG2	2.16	0.45
32:FA:73:LEU:HD13	32:FA:109:TYR:HB3	1.98	0.45
37:KA:17:GLN:HB3	37:KA:24:ASN:CB	2.37	0.45
49:WA:115:ILE:HA	49:WA:121:MET:O	2.16	0.45
51:YA:39:GLU:O	51:YA:40:ASN:C	2.59	0.45
54:BB:183:VAL:HG12	54:BB:185:GLY:H	1.81	0.45
54:BB:206:ASP:O	54:BB:221:ARG:HA	2.16	0.45
54:BB:207:LEU:HA	54:BB:220:THR:O	2.16	0.45
56:DB:73:ILE:HG13	56:DB:73:ILE:O	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:76:THR:HG22	58:FB:108:PRO:HG2	1.98	0.45
60:HB:79:TYR:C	60:HB:81:ASN:H	2.24	0.45
68:PB:18:LEU:HD21	68:PB:70:VAL:HG13	1.97	0.45
71:SB:80:LYS:HB2	71:SB:80:LYS:NZ	2.31	0.45
72:TB:86:ILE:CA	72:TB:89:TRP:HB2	2.40	0.45
73:UB:108:GLY:C	73:UB:110:LYS:N	2.73	0.45
82:DC:45:ILE:HG13	82:DC:78:TYR:HB2	1.97	0.45
82:DC:277:ILE:O	82:DC:280:PRO:HD2	2.16	0.45
82:DC:334:LEU:O	82:DC:338:ILE:HG13	2.15	0.45
82:DC:460:ASP:C	82:DC:462:PHE:H	2.25	0.45
1:A:209:U:H5"	58:FB:170:SER:O	2.15	0.45
1:A:488:G:C2'	1:A:489:C:H5'	2.46	0.45
1:A:534:A:H3'	1:A:535:A:H8	1.81	0.45
1:A:629:U:H2'	1:A:630:A:C5'	2.46	0.45
1:A:889:U:C2'	1:A:890:C:H4'	2.40	0.45
1:A:1163:A:H4'	55:CB:166:ARG:HH21	1.81	0.45
1:A:1358:G:H2'	1:A:1359:C:C6	2.51	0.45
1:A:1750:A:H2'	1:A:1751:C:C6	2.50	0.45
2:B:22:G:H4'	41:OA:42:ALA:O	2.16	0.45
2:B:27:C:O2'	2:B:28:C:H5'	2.16	0.45
2:B:345:G:H5'	2:B:1429:G:O6	2.16	0.45
2:B:994:G:H5'	2:B:2637:A:HO2'	1.78	0.45
2:B:1324:U:C5'	24:X:1:MET:HA	2.46	0.45
2:B:1643:A:H5"	2:B:1644:C:C5	2.52	0.45
2:B:1826:C:OP2	42:PA:48:SER:HB3	2.15	0.45
2:B:2167:A:O2'	2:B:2168:A:H5'	2.16	0.45
2:B:2403:G:OP1	2:B:2403:G:H4'	2.17	0.45
2:B:3262:U:C2'	2:B:3263:G:H5"	2.45	0.45
7:G:58:ARG:HH11	7:G:58:ARG:HB2	1.81	0.45
7:G:303:LYS:NZ	7:G:371:GLN:HB3	2.31	0.45
8:H:150:LEU:HD21	8:H:172:VAL:HG22	1.97	0.45
8:H:179:LEU:HD22	8:H:183:LYS:HE3	1.98	0.45
9:I:104:LEU:CA	9:I:247:ILE:HG21	2.40	0.45
12:L:155:ASN:HB3	12:L:179:ILE:CG2	2.46	0.45
17:Q:32:LYS:HA	17:Q:35:ARG:CZ	2.46	0.45
26:Z:18:ASP:O	26:Z:104:ARG:HA	2.16	0.45
31:EA:14:VAL:HG11	38:LA:90:ILE:HG13	1.97	0.45
31:EA:111:LYS:CA	31:EA:114:VAL:HG22	2.43	0.45
39:MA:10:ARG:CD	39:MA:57:VAL:HG13	2.43	0.45
44:RA:98:LYS:HZ1	44:RA:118:THR:HB	1.81	0.45
46:TA:8:ARG:HD2	46:TA:72:LEU:CD1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:TA:91:PHE:CD2	46:TA:93:LEU:HD22	2.51	0.45
48:VA:109:ALA:HA	48:VA:181:PHE:CE1	2.51	0.45
48:VA:154:SER:C	48:VA:156:VAL:H	2.23	0.45
50:XA:59:LEU:HD11	71:SB:78:LEU:HB3	1.96	0.45
50:XA:144:ILE:HG12	50:XA:158:VAL:CG1	2.46	0.45
52:ZA:138:PRO:O	52:ZA:222:TYR:HE2	1.99	0.45
54:BB:102:VAL:HG12	54:BB:103:TYR:N	2.31	0.45
54:BB:259:GLN:HG3	54:BB:260:GLY:N	2.30	0.45
55:CB:42:LEU:HB2	55:CB:46:TRP:C	2.41	0.45
55:CB:133:VAL:HG22	55:CB:198:LEU:HD13	1.98	0.45
55:CB:197:GLU:CG	55:CB:208:SER:HB2	2.45	0.45
57:EB:74:GLN:HE21	57:EB:78:THR:HG22	1.80	0.45
57:EB:181:ILE:HD12	57:EB:181:ILE:N	2.31	0.45
59:GB:40:LYS:HA	59:GB:43:TYR:HD2	1.76	0.45
59:GB:119:ALA:HB1	59:GB:124:HIS:HB3	1.98	0.45
61:IB:108:PRO:HG3	61:IB:134:THR:HB	1.97	0.45
66:NB:67:VAL:HG21	66:NB:85:ILE:HG12	1.98	0.45
69:QB:113:ILE:O	69:QB:124:ILE:HD12	2.15	0.45
70:RB:67:THR:O	70:RB:79:TRP:HA	2.16	0.45
70:RB:99:ILE:O	70:RB:103:ILE:HG12	2.17	0.45
73:UB:107:PHE:CE1	73:UB:114:LYS:HD2	2.51	0.45
80:BC:10:ARG:HH11	80:BC:10:ARG:HG3	1.81	0.45
80:BC:38:LEU:HD21	80:BC:42:ARG:HH21	1.80	0.45
82:DC:119:LEU:HD11	82:DC:145:GLN:HB3	1.98	0.45
82:DC:218:TRP:CG	82:DC:324:MET:HB3	2.51	0.45
1:A:163:G:H4’	56:DB:53:SER:OG	2.16	0.45
1:A:243:G:H2’	1:A:244:A:O4’	2.16	0.45
1:A:252:U:H2’	1:A:253:A:C8	2.52	0.45
1:A:377:G:H4’	1:A:379:U:O4	2.17	0.45
1:A:606:A:C8	1:A:608:U:H2’	2.51	0.45
1:A:1225:U:C2	1:A:1230:A:H4’	2.52	0.45
2:B:5:G:C3’	2:B:6:A:H5”	2.46	0.45
2:B:93:C:OP1	2:B:2764:C:H1’	2.15	0.45
2:B:675:C:O2’	2:B:679:U:H5”	2.16	0.45
2:B:837:A:H2’	2:B:838:G:O4’	2.16	0.45
2:B:946:U:H3	2:B:1373:A:H61	1.63	0.45
2:B:971:G:H2’	2:B:972:A:O4’	2.16	0.45
2:B:1010:G:H1’	14:N:195:ALA:HB2	1.97	0.45
2:B:1022:U:H2’	2:B:1023:C:C6	2.52	0.45
2:B:1184:A:H2’	2:B:1185:C:H6	1.80	0.45
2:B:1662:G:H1	2:B:1787:A:H2	1.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1796:G:H4'	6:F:22:LEU:CD2	2.46	0.45
2:B:2277:C:H5'	2:B:2317:A:H4'	1.98	0.45
2:B:2700:G:N2	2:B:2755:C:N4	2.64	0.45
2:B:2771:U:H3'	2:B:2772:C:H5"	1.98	0.45
2:B:3034:C:O2'	13:M:122:LYS:HD2	2.16	0.45
2:B:3321:C:H2'	2:B:3322:A:C8	2.51	0.45
3:C:154:C:H2'	3:C:155:A:C8	2.52	0.45
8:H:126:ILE:C	8:H:128:ALA:H	2.24	0.45
8:H:169:LEU:HB3	8:H:174:ALA:HB3	1.98	0.45
9:I:110:LEU:HG	9:I:115:LEU:C	2.41	0.45
11:K:115:THR:HA	11:K:205:PHE:HD2	1.82	0.45
17:Q:170:LEU:HD21	40:NA:7:ILE:HB	1.99	0.45
21:U:31:GLU:HG3	21:U:60:PHE:CE1	2.52	0.45
21:U:149:VAL:O	21:U:149:VAL:HG12	2.15	0.45
30:DA:27:ARG:HD3	30:DA:75:ARG:O	2.17	0.45
49:WA:218:GLY:O	49:WA:236:ALA:HB3	2.16	0.45
50:XA:176:LEU:O	50:XA:179:ARG:HB3	2.16	0.45
52:ZA:82:ASN:CB	52:ZA:207:LEU:HD12	2.39	0.45
53:AB:74:GLN:HA	53:AB:79:TYR:HB2	1.97	0.45
59:GB:110:GLN:OE1	59:GB:129:ILE:HD12	2.16	0.45
70:RB:28:SER:HB2	70:RB:112:VAL:HG22	1.99	0.45
78:ZB:33:LEU:H	78:ZB:33:LEU:HD22	1.81	0.45
82:DC:485:VAL:HG12	82:DC:533:THR:HG23	1.99	0.45
1:A:96:G:H1	1:A:387:A:H61	1.63	0.45
1:A:633:U:H1'	1:A:1102:G:O2'	2.17	0.45
1:A:1116:A:H2'	1:A:1117:U:O4'	2.16	0.45
1:A:1563:C:OP1	69:QB:84:LYS:HD3	2.16	0.45
2:B:655:C:O5'	36:JA:27:ARG:HB3	2.16	0.45
2:B:841:A:C4'	23:W:126:GLU:HA	2.42	0.45
2:B:885:U:H4'	2:B:1851:G:H4'	1.98	0.45
2:B:964:G:H4'	32:FA:30:GLY:CA	2.46	0.45
2:B:1072:G:H21	33:GA:50:THR:CG2	2.30	0.45
2:B:1133:A:O2'	2:B:1134:G:H5'	2.17	0.45
2:B:1162:U:O2'	36:JA:12:LYS:HD3	2.16	0.45
2:B:1240:A:C3'	2:B:1241:U:H5"	2.38	0.45
2:B:1270:A:O2'	82:DC:744:TYR:HE1	2.00	0.45
2:B:1289:G:H2'	2:B:1290:A:C8	2.49	0.45
2:B:1452:A:N3	2:B:2347:U:H1'	2.32	0.45
2:B:2338:C:H5"	27:AA:47:ASN:O	2.15	0.45
2:B:3113:A:H3'	2:B:3114:A:C8	2.51	0.45
2:B:3217:C:C5	21:U:182:ILE:HG12	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3386:G:H2'	2:B:3387:U:C6	2.50	0.45
3:C:140:G:C2'	3:C:141:C:H5'	2.47	0.45
7:G:219:ALA:HB3	7:G:329:PRO:HG2	1.98	0.45
8:H:82:THR:HG23	8:H:85:SER:N	2.30	0.45
8:H:177:ASP:OD2	8:H:205:PRO:HD3	2.15	0.45
11:K:178:ILE:N	11:K:178:ILE:HD12	2.31	0.45
12:L:94:PHE:HA	12:L:97:TYR:CD2	2.43	0.45
12:L:100:GLU:OE2	12:L:108:ARG:HB2	2.17	0.45
13:M:104:VAL:O	13:M:105:GLU:HG3	2.16	0.45
14:N:216:TYR:O	14:N:217:PHE:HB2	2.16	0.45
27:AA:93:LEU:HD23	27:AA:93:LEU:H	1.81	0.45
34:HA:30:THR:HG21	34:HA:89:VAL:HG21	1.97	0.45
46:TA:27:GLN:HB2	46:TA:93:LEU:CD1	2.46	0.45
48:VA:134:SER:HA	48:VA:137:GLN:OE1	2.17	0.45
50:XA:82:GLY:CA	50:XA:170:ILE:HG21	2.45	0.45
50:XA:120:LEU:HD11	50:XA:144:ILE:CD1	2.46	0.45
55:CB:42:LEU:HB2	55:CB:46:TRP:O	2.16	0.45
61:IB:29:LYS:HE2	61:IB:32:LYS:HA	1.97	0.45
66:NB:7:VAL:CG2	66:NB:22:VAL:HB	2.42	0.45
67:OB:29:GLN:HA	67:OB:32:LYS:HE2	1.98	0.45
71:SB:18:SER:N	71:SB:54:ALA:HB3	2.31	0.45
72:TB:73:GLY:HA3	72:TB:128:PHE:CZ	2.51	0.45
82:DC:32:LYS:HB3	82:DC:128:VAL:HG21	1.97	0.45
82:DC:488:VAL:HG11	82:DC:794:PRO:HB2	1.97	0.45
82:DC:490:GLN:O	82:DC:559:PRO:HG3	2.16	0.45
82:DC:578:LYS:HA	82:DC:585:ARG:HA	1.98	0.45
83:EC:6809:G:H4'	83:EC:6853:G:H4'	1.99	0.45
83:EC:6854:U:H2'	83:EC:6855:A:H8	1.81	0.45
1:A:381:C:OP1	59:GB:2:PRO:HA	2.17	0.45
1:A:445:A:H1'	1:A:525:A:P	2.57	0.45
1:A:792:U:H3'	1:A:793:A:H8	1.82	0.45
1:A:1345:A:O2'	1:A:1346:A:H5"	2.17	0.45
1:A:1608:U:H5"	66:NB:72:GLY:C	2.42	0.45
2:B:113:C:OP1	19:S:147:ARG:HD3	2.16	0.45
2:B:294:U:O2'	2:B:295:A:H5"	2.17	0.45
2:B:796:U:H4'	17:Q:7:LEU:HD13	1.97	0.45
2:B:800:G:H3'	2:B:801:A:C8	2.52	0.45
2:B:1263:A:C4'	2:B:1264:G:H8	2.23	0.45
2:B:1416:C:H2'	2:B:1417:G:C4	2.50	0.45
2:B:1490:A:H2'	2:B:1491:A:O4'	2.17	0.45
2:B:1923:C:C5'	45:SA:25:LYS:HA	2.38	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2196:C:H1'	2:B:2271:A:O2'	2.16	0.45
2:B:2204:C:H2'	2:B:2206:G:H1	1.82	0.45
2:B:2296:A:H2'	2:B:2297:U:H5'	1.99	0.45
2:B:2912:G:H2'	2:B:2913:C:C6	2.52	0.45
2:B:3111:U:O4	2:B:3121:U:C5	2.70	0.45
2:B:3343:G:H2'	2:B:3361:G:H21	1.77	0.45
3:C:29:U:H5"	17:Q:27:ASP:CB	2.44	0.45
4:D:9:C:H3'	4:D:10:C:H6	1.80	0.45
7:G:47:LEU:HD12	7:G:84:VAL:HG11	1.99	0.45
7:G:238:LEU:HD11	7:G:250:ALA:HB2	1.98	0.45
7:G:350:ALA:O	7:G:351:LEU:CB	2.64	0.45
7:G:358:TRP:CZ2	7:G:360:ASP:HA	2.50	0.45
8:H:181:VAL:HG12	8:H:182:LEU:H	1.80	0.45
11:K:120:THR:HB	25:Y:132:PRO:CB	2.36	0.45
11:K:239:LEU:O	11:K:243:MET:HG3	2.16	0.45
12:L:46:LEU:O	12:L:50:VAL:HG13	2.16	0.45
17:Q:75:PHE:CE2	17:Q:96:ALA:HB3	2.51	0.45
18:R:34:ALA:HB1	18:R:70:PHE:HZ	1.81	0.45
22:V:147:ARG:O	22:V:150:VAL:HG22	2.17	0.45
24:X:10:ILE:HG22	24:X:11:GLY:N	2.32	0.45
27:AA:93:LEU:CB	28:BA:20:LEU:HB3	2.45	0.45
28:BA:4:GLU:HG3	28:BA:30:ARG:HD3	1.98	0.45
30:DA:28:ARG:HB3	30:DA:28:ARG:HH11	1.80	0.45
34:HA:73:GLY:H	34:HA:76:GLU:CG	2.30	0.45
36:JA:35:GLN:HB3	36:JA:43:ARG:HB2	1.96	0.45
36:JA:96:ILE:HB	36:JA:121:ASN:HD21	1.82	0.45
49:WA:227:ALA:O	49:WA:228:LYS:HB2	2.16	0.45
50:XA:59:LEU:HD22	71:SB:79:LEU:HG	1.98	0.45
50:XA:126:PRO:HG2	50:XA:152:PRO:HD2	1.98	0.45
52:ZA:156:THR:CG2	72:TB:99:PHE:CZ	3.00	0.45
53:AB:69:LEU:HD23	53:AB:72:LEU:CD1	2.47	0.45
54:BB:206:ASP:HB2	54:BB:222:LEU:CG	2.36	0.45
61:IB:35:TYR:CD2	61:IB:49:ILE:HG23	2.51	0.45
66:NB:25:GLY:HA3	66:NB:64:ASP:OD2	2.16	0.45
68:PB:25:ASN:HA	75:WB:40:VAL:HG11	1.99	0.45
72:TB:81:VAL:HA	72:TB:85:ASP:HB2	1.97	0.45
75:WB:90:LYS:HZ2	75:WB:105:THR:HG21	1.81	0.45
82:DC:398:GLY:C	82:DC:453:ILE:HG23	2.41	0.45
82:DC:576:LEU:HG	82:DC:840:ASP:O	2.16	0.45
82:DC:650:THR:HG22	82:DC:689:LEU:O	2.17	0.45
1:A:155:U:H4'	56:DB:59:GLN:N	2.26	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:444:C:N4	1:A:458:G:H2'	2.32	0.45
1:A:449:C:H5"	54:BB:30:ARG:HB2	1.96	0.45
1:A:1356:U:H2'	1:A:1357:A:C8	2.51	0.45
2:B:229:G:H4'	8:H:220:ARG:NH2	2.30	0.45
2:B:361:A:H4'	41:OA:35:SER:C	2.42	0.45
2:B:422:A:H2	2:B:2363:A:H4'	1.74	0.45
2:B:674:G:H4'	8:H:120:TYR:CG	2.52	0.45
2:B:681:U:P	8:H:115:HIS:HB2	2.56	0.45
2:B:816:A:H1'	2:B:819:U:O4	2.16	0.45
2:B:932:U:C4'	2:B:934:G:H5'	2.46	0.45
2:B:1222:G:H2'	2:B:1285:G:N2	2.31	0.45
2:B:1486:G:N3	38:LA:6:THR:HG22	2.32	0.45
2:B:2589:G:H2'	2:B:2590:A:H8	1.81	0.45
2:B:2828:G:O3'	14:N:4:ARG:HG3	2.16	0.45
2:B:3267:A:C6	10:J:73:GLY:HA3	2.52	0.45
4:D:117:A:C1'	9:I:74:VAL:HB	2.46	0.45
6:F:60:LYS:HD2	6:F:73:GLU:HB3	1.97	0.45
14:N:102:MET:CB	14:N:112:GLN:N	2.73	0.45
15:O:117:ASP:HB2	15:O:118:PRO:CD	2.46	0.45
17:Q:91:ARG:HE	17:Q:97:VAL:HB	1.81	0.45
20:T:53:LYS:O	20:T:56:ASP:HB2	2.17	0.45
21:U:51:VAL:HG13	21:U:56:ARG:O	2.17	0.45
22:V:176:ARG:HB2	32:FA:53:PHE:O	2.17	0.45
23:W:177:VAL:O	23:W:177:VAL:HG12	2.16	0.45
24:X:87:THR:HG23	25:Y:156:TYR:CZ	2.52	0.45
24:X:137:ARG:HB3	24:X:140:VAL:HG23	1.98	0.45
32:FA:123:VAL:H	32:FA:143:GLY:HA2	1.82	0.45
33:GA:5:LYS:HE2	33:GA:8:THR:OG1	2.16	0.45
36:JA:2:ALA:CB	36:JA:90:LYS:HG2	2.42	0.45
36:JA:35:GLN:HA	36:JA:35:GLN:HE21	1.81	0.45
36:JA:79:VAL:O	36:JA:82:LEU:HB3	2.17	0.45
48:VA:145:ILE:CG2	48:VA:148:GLY:HA2	2.44	0.45
50:XA:126:PRO:CD	50:XA:147:THR:HG22	2.47	0.45
52:ZA:66:PHE:H	52:ZA:66:PHE:HD1	1.65	0.45
53:AB:31:GLU:O	53:AB:54:ARG:HD2	2.16	0.45
55:CB:89:ILE:O	55:CB:93:LEU:HB2	2.17	0.45
55:CB:124:LEU:C	55:CB:126:ASP:H	2.24	0.45
56:DB:77:LEU:HD23	56:DB:77:LEU:N	2.32	0.45
56:DB:85:ARG:NH2	56:DB:87:ARG:NH1	2.65	0.45
56:DB:178:LEU:O	56:DB:183:ARG:HD2	2.16	0.45
59:GB:47:PHE:CE2	59:GB:51:LYS:HD3	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:MB:86:VAL:O	65:MB:89:MET:HG2	2.16	0.45
69:QB:35:ASP:CA	69:QB:53:TRP:HE1	2.29	0.45
73:UB:137:LYS:HB2	73:UB:139:LYS:HG3	1.98	0.45
1:A:64:U:H3'	1:A:65:A:H5"	1.98	0.45
1:A:514:G:O2'	1:A:515:A:H5'	2.17	0.45
1:A:1073:G:H5"	63:KB:9:LYS:O	2.17	0.45
1:A:1263:G:H2'	1:A:1264:G:O4'	2.17	0.45
2:B:10:C:H2'	2:B:11:A:O4'	2.16	0.45
2:B:47:C:H2'	2:B:48:A:C8	2.51	0.45
2:B:79:U:H2'	2:B:80:G:H8	1.82	0.45
2:B:362:U:O2'	2:B:929:A:H5'	2.16	0.45
2:B:728:G:C2	22:V:138:LEU:HD23	2.52	0.45
2:B:790:U:H4'	8:H:112:LYS:O	2.17	0.45
2:B:871:U:H2'	2:B:872:U:H6	1.78	0.45
2:B:1408:G:H2'	2:B:1409:G:C8	2.52	0.45
2:B:2349:U:O2'	2:B:2350:C:H5'	2.16	0.45
2:B:3182:G:H5"	20:T:37:ARG:NH2	2.31	0.45
2:B:3343:G:H1'	2:B:3362:A:N1	2.32	0.45
2:B:3369:G:H2'	7:G:380:MET:HE1	1.99	0.45
4:D:64:A:C2	9:I:290:ILE:HG21	2.52	0.45
6:F:30:ARG:HG3	6:F:63:PHE:CD2	2.51	0.45
6:F:180:LEU:HD11	47:UA:23:ARG:HG2	1.98	0.45
6:F:189:TYR:HA	6:F:192:LYS:HB2	1.98	0.45
7:G:43:LEU:HD23	7:G:208:VAL:HG22	1.98	0.45
7:G:144:ILE:O	7:G:148:LEU:HD13	2.17	0.45
7:G:217:ALA:HB1	7:G:337:THR:O	2.17	0.45
9:I:34:LYS:O	9:I:38:THR:HG23	2.17	0.45
9:I:58:LYS:HD3	9:I:93:THR:CB	2.46	0.45
11:K:62:ILE:O	11:K:66:LYS:HG3	2.17	0.45
15:O:55:ARG:HA	15:O:59:ILE:H	1.82	0.45
17:Q:115:ARG:NH2	17:Q:145:PHE:HB2	2.32	0.45
21:U:86:LYS:HG3	21:U:89:LYS:HD3	1.99	0.45
21:U:126:ARG:HA	21:U:140:GLU:HB3	1.97	0.45
24:X:12:ARG:O	24:X:13:ARG:HB2	2.16	0.45
31:EA:129:TRP:CZ3	38:LA:97:GLU:HG2	2.52	0.45
32:FA:100:PRO:CB	32:FA:123:VAL:HG13	2.42	0.45
39:MA:48:ARG:HG3	39:MA:49:LYS:CD	2.47	0.45
44:RA:93:LYS:HD2	44:RA:102:ARG:CG	2.44	0.45
48:VA:5:ARG:HG2	48:VA:8:LYS:HB2	1.99	0.45
52:ZA:165:VAL:HG11	52:ZA:210:THR:HA	1.98	0.45
54:BB:94:ALA:C	54:BB:95:THR:HG23	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:106:LYS:HB2	54:BB:108:ARG:HG3	1.99	0.45
56:DB:109:LEU:HD23	56:DB:110:ALA:N	2.32	0.45
58:FB:36:THR:CG2	58:FB:96:LEU:HB2	2.43	0.45
61:IB:58:CYS:SG	61:IB:59:PRO:HD2	2.57	0.45
63:KB:142:GLU:C	63:KB:144:ALA:N	2.74	0.45
67:OB:115:LEU:C	67:OB:115:LEU:HD13	2.42	0.45
68:PB:52:VAL:CG1	68:PB:61:LEU:HD11	2.47	0.45
70:RB:68:ARG:HD2	70:RB:78:THR:O	2.16	0.45
1:A:158:U:HO2'	1:A:159:U:H3'	1.82	0.45
1:A:472:U:H2'	1:A:473:A:C8	2.52	0.45
1:A:546:U:H2'	1:A:547:U:C6	2.52	0.45
1:A:572:C:H2'	1:A:573:C:C6	2.52	0.45
1:A:777:C:H5	74:VB:10:ARG:HH11	1.65	0.45
1:A:1025:A:H2'	1:A:1026:A:H3'	1.98	0.45
1:A:1477:G:H5'	69:QB:45:MET:HB2	1.99	0.45
1:A:1528:U:OP1	55:CB:109:LYS:HA	2.17	0.45
1:A:1534:G:C8	75:WB:73:GLY:HA3	2.52	0.45
1:A:1590:G:H2'	1:A:1591:C:C6	2.52	0.45
2:B:155:G:C5'	2:B:156:G:H2'	2.47	0.45
2:B:215:G:H2'	2:B:216:G:C8	2.52	0.45
2:B:729:C:O2'	2:B:730:C:H5'	2.17	0.45
2:B:796:U:H2'	2:B:797:U:N1	2.32	0.45
2:B:947:G:H5"	36:JA:55:ILE:HB	1.99	0.45
2:B:1212:A:H2	2:B:1293:U:O2	1.99	0.45
2:B:1558:A:P	2:B:1558:A:H8	2.40	0.45
2:B:1584:U:H2'	2:B:1585:C:C6	2.50	0.45
2:B:1656:A:H4'	2:B:1657:C:H5'	1.99	0.45
2:B:1774:C:H2'	2:B:1775:G:C5'	2.47	0.45
2:B:2187:G:N7	6:F:200:ARG:HD3	2.32	0.45
2:B:2407:C:H2'	2:B:2408:U:H6	1.81	0.45
2:B:2428:U:H2'	2:B:2429:G:H8	1.82	0.45
2:B:2484:A:H5"	5:E:130:LYS:NZ	2.32	0.45
2:B:2642:A:H5'	33:GA:7:HIS:HB2	1.98	0.45
2:B:2768:U:H2'	2:B:2769:A:H8	1.82	0.45
2:B:2844:C:O2'	2:B:2845:A:H5'	2.17	0.45
2:B:2967:A:H5"	6:F:214:GLY:N	2.32	0.45
2:B:3109:G:H21	13:M:156:GLN:HE22	1.65	0.45
2:B:3206:C:O2'	18:R:64:VAL:HG11	2.17	0.45
2:B:3305:A:H5'	7:G:334:ARG:NH2	2.31	0.45
3:C:38:U:C2	39:MA:83:LYS:HA	2.51	0.45
6:F:43:GLY:HA3	6:F:88:ILE:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:158:ILE:HD12	6:F:162:ALA:HB1	1.98	0.45
8:H:52:VAL:CG1	8:H:103:THR:H	2.30	0.45
9:I:160:PHE:HB3	9:I:180:PHE:CE1	2.52	0.45
9:I:212:ALA:HB2	9:I:219:PHE:CE1	2.52	0.45
11:K:24:GLU:C	11:K:26:VAL:H	2.25	0.45
14:N:36:LEU:HD21	14:N:69:ARG:NH1	2.32	0.45
15:O:135:GLY:O	15:O:139:THR:HG23	2.16	0.45
17:Q:167:PHE:CD1	17:Q:168:ARG:HG2	2.51	0.45
28:BA:9:SER:CB	28:BA:52:THR:HA	2.47	0.45
31:EA:121:ARG:HB3	31:EA:131:PHE:CZ	2.52	0.45
35:IA:10:ARG:HB2	35:IA:12:TYR:CE2	2.52	0.45
37:KA:32:ILE:O	37:KA:35:VAL:HG22	2.17	0.45
49:WA:61:PHE:HZ	49:WA:94:VAL:HA	1.82	0.45
50:XA:29:VAL:O	50:XA:29:VAL:HG13	2.16	0.45
52:ZA:37:PRO:HD2	52:ZA:46:LYS:HD2	1.99	0.45
53:AB:5:ILE:CB	53:AB:10:LYS:HE3	2.46	0.45
53:AB:76:ARG:HB2	60:HB:65:TYR:OH	2.17	0.45
56:DB:55:GLY:HA3	56:DB:63:MET:HE3	1.97	0.45
56:DB:58:LYS:C	56:DB:60:GLY:H	2.25	0.45
57:EB:89:HIS:CE1	57:EB:165:LYS:HG2	2.52	0.45
59:GB:76:LEU:O	59:GB:80:LEU:HG	2.16	0.45
67:OB:57:LEU:HD22	67:OB:60:ARG:HD3	1.99	0.45
68:PB:42:TYR:HD1	68:PB:85:PHE:CD1	2.35	0.45
70:RB:51:VAL:HG13	70:RB:94:GLU:HB2	1.99	0.45
77:YB:33:LEU:HD23	77:YB:81:ARG:N	2.32	0.45
82:DC:108:HIS:HB2	82:DC:109:VAL:H	1.62	0.45
82:DC:632:LYS:CB	82:DC:648:ASP:HB3	2.26	0.45
1:A:103:A:P	58:FB:19:ALA:HB3	2.57	0.45
1:A:328:A:H5'	61:IB:12:ALA:HB1	1.99	0.45
1:A:403:G:H2'	1:A:403:G:N3	2.31	0.45
1:A:426:G:H2'	1:A:426:G:N3	2.31	0.45
1:A:627:C:C4	1:A:628:G:C5	3.05	0.45
1:A:967:A:H2'	1:A:968:U:O4'	2.17	0.45
1:A:1469:A:H2'	1:A:1470:C:C6	2.52	0.45
1:A:1746:A:H2'	1:A:1747:G:O4'	2.17	0.45
2:B:95:A:H2'	2:B:96:G:C4'	2.47	0.45
2:B:374:A:C4'	2:B:375:A:H5'	2.43	0.45
2:B:716:A:N7	32:FA:117:ARG:HG3	2.32	0.45
2:B:759:U:H2'	2:B:760:G:O4'	2.17	0.45
2:B:965:A:C5'	32:FA:41:HIS:HE2	2.30	0.45
2:B:1066:G:H2'	2:B:1067:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1169:A:H2'	2:B:1170:A:C8	2.52	0.45
2:B:1309:U:C6	2:B:1311:G:OP2	2.70	0.45
2:B:1387:G:O2'	36:JA:77:ALA:CB	2.65	0.45
2:B:1563:C:H2'	2:B:1564:U:O4'	2.17	0.45
2:B:1838:G:H4'	2:B:1839:A:C5	2.52	0.45
2:B:1894:U:H2'	2:B:1895:A:C4'	2.47	0.45
2:B:2170:U:H2'	2:B:2171:G:H8	1.81	0.45
2:B:2281:A:O2'	2:B:2282:U:H5"	2.17	0.45
2:B:2408:U:O2'	2:B:2409:G:H5'	2.17	0.45
2:B:2424:A:H2'	2:B:2425:G:O4'	2.17	0.45
2:B:2789:U:H2'	2:B:2790:A:O4'	2.16	0.45
6:F:230:VAL:C	6:F:232:GLY:H	2.25	0.45
11:K:104:GLN:CG	22:V:6:THR:HG22	2.47	0.45
14:N:43:VAL:HG12	14:N:171:TRP:CD1	2.49	0.45
17:Q:119:TYR:HE1	39:MA:118:ILE:HD11	1.82	0.45
23:W:91:SER:HA	23:W:94:VAL:CG2	2.47	0.45
25:Y:38:ASP:N	25:Y:63:VAL:HG13	2.32	0.45
25:Y:39:ILE:HG22	25:Y:99:SER:CB	2.46	0.45
27:AA:26:ALA:O	27:AA:114:ILE:HA	2.16	0.45
32:FA:131:SER:HB3	32:FA:134:ALA:CB	2.47	0.45
36:JA:19:ARG:CB	36:JA:32:TRP:HA	2.44	0.45
37:KA:103:TYR:HA	37:KA:104:PRO:C	2.41	0.45
39:MA:28:LEU:O	39:MA:32:LYS:HB2	2.17	0.45
48:VA:15:LEU:CB	48:VA:86:PHE:HE2	2.30	0.45
48:VA:28:VAL:O	48:VA:84:VAL:HA	2.17	0.45
48:VA:133:THR:HG23	48:VA:150:ILE:HG12	1.98	0.45
49:WA:251:TRP:CZ2	49:WA:271:VAL:HG11	2.51	0.45
50:XA:121:VAL:HG23	50:XA:141:ILE:CG2	2.46	0.45
50:XA:171:GLY:HA3	50:XA:203:PHE:CD2	2.52	0.45
52:ZA:99:LYS:HA	52:ZA:117:THR:HA	1.99	0.45
54:BB:181:VAL:HG11	54:BB:225:VAL:HG13	1.98	0.45
54:BB:200:ARG:O	54:BB:201:HIS:HB2	2.16	0.45
55:CB:90:ILE:O	55:CB:94:THR:HG23	2.16	0.45
55:CB:122:ASN:O	55:CB:126:ASP:HA	2.16	0.45
56:DB:85:ARG:NH1	56:DB:86:PRO:O	2.50	0.45
58:FB:185:GLU:C	58:FB:189:LEU:HB2	2.42	0.45
59:GB:56:ALA:O	59:GB:60:LEU:HD23	2.17	0.45
68:PB:54:LEU:HD22	68:PB:54:LEU:N	2.31	0.45
72:TB:89:TRP:O	72:TB:93:LEU:HD23	2.16	0.45
74:VB:105:ARG:HG2	74:VB:105:ARG:NH1	2.31	0.45
77:YB:19:HIS:O	77:YB:23:THR:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:BC:35:TYR:O	80:BC:39:LEU:HD23	2.16	0.45
82:DC:436:LEU:HD23	82:DC:437:MET:H	1.82	0.45
82:DC:488:VAL:HG12	82:DC:796:MET:HG3	1.99	0.45
82:DC:664:VAL:HA	82:DC:667:PHE:HB3	1.99	0.45
82:DC:734:GLN:NE2	82:DC:765:LEU:HG	2.31	0.45
1:A:50:C:O2'	1:A:51:A:H5'	2.17	0.45
1:A:333:A:H8	58:FB:49:ARG:HB3	1.81	0.45
1:A:398:G:OP2	58:FB:47:ARG:NH1	2.49	0.45
1:A:629:U:C2'	1:A:630:A:H5'	2.46	0.45
1:A:883:C:H2'	1:A:884:A:C8	2.52	0.45
1:A:948:G:H2'	1:A:949:C:C6	2.52	0.45
1:A:1314:U:C5'	1:A:1315:U:H5	2.30	0.45
1:A:1489:U:H5'	1:A:1494:C:H1'	1.99	0.45
2:B:84:U:O5'	2:B:85:A:H2'	2.16	0.45
2:B:101:G:H2'	2:B:102:C:O4'	2.17	0.45
2:B:138:U:H2'	2:B:139:G:H8	1.81	0.45
2:B:577:C:O2'	2:B:579:G:H5"	2.15	0.45
2:B:729:C:H1'	22:V:79:LYS:HE3	1.99	0.45
2:B:892:U:H2'	2:B:893:C:C6	2.52	0.45
2:B:924:G:H8	2:B:924:G:P	2.40	0.45
2:B:924:G:C5	2:B:2809:C:H1'	2.52	0.45
2:B:1095:U:C2	25:Y:127:GLN:HA	2.52	0.45
2:B:1195:A:C4	2:B:1309:U:H1'	2.51	0.45
2:B:1352:A:H1'	2:B:1353:U:C5'	2.47	0.45
2:B:1427:U:O2'	2:B:1428:A:H5'	2.17	0.45
2:B:1446:A:H61	2:B:2356:A:H3'	1.81	0.45
2:B:1494:U:C5'	2:B:1495:U:H5'	2.47	0.45
2:B:1769:G:H2'	2:B:1770:G:H8	1.82	0.45
2:B:1887:A:H5'	7:G:226:PHE:O	2.17	0.45
2:B:1915:A:H4'	23:W:83:GLY:C	2.42	0.45
2:B:1940:G:H2'	2:B:1941:C:C6	2.52	0.45
2:B:2158:A:H4'	2:B:2159:U:C5'	2.47	0.45
2:B:2224:A:H2'	2:B:2225:U:O4'	2.17	0.45
2:B:2609:A:H2'	2:B:2610:G:C8	2.52	0.45
2:B:2815:G:O5'	2:B:2815:G:H8	2.00	0.45
2:B:3325:G:H4'	35:IA:104:LEU:N	2.32	0.45
2:B:3331:U:H2'	2:B:3332:U:O4'	2.17	0.45
3:C:129:C:H2'	3:C:130:C:C6	2.52	0.45
4:D:8:G:H2'	4:D:9:C:H6	1.80	0.45
5:E:111:ILE:HG23	5:E:138:VAL:CG2	2.46	0.45
7:G:153:LYS:NZ	7:G:153:LYS:HB3	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:223:PRO:C	8:H:225:VAL:H	2.25	0.45
10:J:165:LEU:O	10:J:166:LYS:HD3	2.17	0.45
11:K:119:VAL:O	11:K:119:VAL:HG12	2.16	0.45
11:K:135:ALA:HA	11:K:230:GLY:H	1.82	0.45
13:M:103:ILE:HG13	13:M:136:PHE:HZ	1.77	0.45
13:M:170:LYS:HB3	13:M:175:PHE:CE2	2.52	0.45
15:O:71:VAL:HB	15:O:76:ALA:HB2	1.99	0.45
19:S:73:ARG:O	19:S:75:VAL:N	2.47	0.45
19:S:168:GLY:O	19:S:172:ARG:HD3	2.17	0.45
19:S:199:LEU:HB3	19:S:203:ARG:NE	2.32	0.45
27:AA:13:ILE:HD13	27:AA:121:GLU:OE2	2.17	0.45
32:FA:129:PHE:N	32:FA:129:PHE:CD2	2.85	0.45
35:IA:23:VAL:HG21	35:IA:31:ARG:HH11	1.82	0.45
35:IA:29:ALA:HB3	35:IA:60:TRP:CH2	2.52	0.45
36:JA:25:TYR:HB2	36:JA:28:VAL:HG23	1.99	0.45
37:KA:13:HIS:CE1	37:KA:89:LEU:CD1	3.00	0.45
42:PA:14:LEU:HD13	42:PA:52:TYR:CD2	2.52	0.45
47:UA:37:TYR:O	47:UA:47:VAL:HB	2.16	0.45
48:VA:33:VAL:HG22	48:VA:34:SER:N	2.18	0.45
50:XA:75:ALA:HB1	50:XA:174:TRP:CZ3	2.52	0.45
50:XA:129:ASP:C	50:XA:131:GLN:H	2.23	0.45
54:BB:196:VAL:HB	54:BB:209:HIS:CB	2.47	0.45
55:CB:78:ALA:O	55:CB:79:ASN:C	2.60	0.45
55:CB:80:LYS:O	55:CB:83:ARG:HB2	2.16	0.45
58:FB:147:ALA:O	58:FB:148:ALA:HB3	2.17	0.45
68:PB:115:ARG:O	68:PB:119:ILE:HB	2.17	0.45
68:PB:145:ARG:HA	68:PB:145:ARG:HE	1.81	0.45
72:TB:44:HIS:HB2	72:TB:46:TYR:HE2	1.76	0.45
73:UB:89:ASN:HB2	73:UB:92:CYS:SG	2.57	0.45
78:ZB:17:GLY:O	78:ZB:18:ARG:HG2	2.16	0.45
82:DC:147:LEU:CD2	82:DC:189:VAL:HA	2.44	0.45
1:A:279:G:H2'	1:A:280:U:H4'	1.98	0.44
1:A:319:U:H4'	1:A:323:A:H1'	1.99	0.44
1:A:325:G:H2'	1:A:326:G:C8	2.53	0.44
1:A:338:C:H2'	1:A:339:C:C6	2.52	0.44
1:A:448:C:O2'	1:A:449:C:H5'	2.17	0.44
1:A:475:A:H3'	1:A:476:U:C6	2.53	0.44
1:A:1049:U:H5"	77:YB:70:LYS:CG	2.46	0.44
1:A:1279:C:H2'	1:A:1280:C:C6	2.52	0.44
1:A:1387:G:C8	67:OB:44:LYS:NZ	2.84	0.44
1:A:1516:A:O2'	1:A:1517:U:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1588:G:O2'	1:A:1589:C:H5'	2.17	0.44
1:A:1630:U:H2'	1:A:1632:C:H5	1.81	0.44
2:B:69:C:O2'	2:B:101:G:H1'	2.17	0.44
2:B:289:A:OP1	19:S:171:SER:HA	2.17	0.44
2:B:421:G:OP1	2:B:2386:A:H5'	2.17	0.44
2:B:714:G:N7	32:FA:111:LYS:HE2	2.32	0.44
2:B:769:G:H2'	2:B:770:G:H5'	1.97	0.44
2:B:1123:U:C5'	4:D:81:U:H5"	2.47	0.44
2:B:1125:U:OP1	14:N:15:LYS:CB	2.65	0.44
2:B:1308:A:N6	2:B:2367:A:C2	2.85	0.44
2:B:1450:G:H1	2:B:2354:C:H42	1.64	0.44
2:B:1517:G:H2'	2:B:1518:U:H6	1.81	0.44
2:B:1670:C:H4'	2:B:1859:A:O2'	2.17	0.44
2:B:1867:A:H2'	2:B:1868:G:H8	1.82	0.44
2:B:2184:U:H5'	6:F:211:HIS:HE2	1.82	0.44
2:B:2320:A:N1	47:UA:16:VAL:HB	2.32	0.44
2:B:2394:G:H2'	2:B:2395:G:C4'	2.47	0.44
2:B:2628:A:H2'	2:B:2629:U:C5'	2.46	0.44
2:B:2889:C:C2'	2:B:2890:A:H5'	2.47	0.44
2:B:3226:A:H1'	2:B:3260:G:H22	1.82	0.44
4:D:89:G:H5"	24:X:84:ARG:NH1	2.32	0.44
5:E:73:ASP:HA	5:E:144:LEU:HD13	1.99	0.44
6:F:80:GLU:HB2	6:F:168:VAL:CG1	2.47	0.44
7:G:37:ARG:HA	7:G:186:GLY:CA	2.35	0.44
7:G:350:ALA:O	7:G:351:LEU:HB2	2.17	0.44
13:M:4:ILE:HG23	13:M:5:GLN:H	1.82	0.44
17:Q:28:GLN:OE1	19:S:200:TRP:HB3	2.17	0.44
17:Q:46:ILE:O	17:Q:49:ARG:NE	2.51	0.44
18:R:23:ILE:HD12	18:R:23:ILE:N	2.32	0.44
19:S:39:ALA:O	19:S:61:ILE:HB	2.17	0.44
20:T:74:ARG:HG3	20:T:146:GLY:C	2.41	0.44
20:T:110:PRO:HB2	20:T:111:PRO:HD3	1.99	0.44
20:T:189:ASP:O	20:T:193:GLN:HG2	2.17	0.44
22:V:33:TYR:HA	22:V:36:LEU:CD1	2.47	0.44
22:V:90:ASP:OD1	22:V:92:ARG:HG3	2.17	0.44
23:W:118:HIS:O	23:W:122:VAL:HG23	2.17	0.44
24:X:14:LEU:HD23	24:X:15:PRO:HD3	1.98	0.44
29:CA:26:VAL:HG22	29:CA:28:THR:HG23	1.99	0.44
30:DA:11:ASP:OD2	30:DA:13:ARG:HB2	2.17	0.44
31:EA:129:TRP:CH2	38:LA:97:GLU:HG2	2.52	0.44
32:FA:118:ILE:HB	32:FA:119:PRO:HD2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:68:TYR:HB2	34:HA:105:ALA:HA	1.98	0.44
36:JA:53:PRO:HA	36:JA:57:TYR:CD2	2.53	0.44
48:VA:75:LYS:O	48:VA:76:LEU:HG	2.17	0.44
49:WA:203:THR:HB	49:WA:243:LEU:HB3	1.99	0.44
50:XA:64:ILE:HA	50:XA:67:ILE:HG12	1.98	0.44
52:ZA:76:LEU:CD1	52:ZA:105:GLY:HA2	2.47	0.44
52:ZA:160:GLY:HA3	52:ZA:216:VAL:HB	1.99	0.44
52:ZA:162:CYS:SG	52:ZA:212:LYS:HB3	2.56	0.44
53:AB:24:PHE:O	53:AB:28:GLU:HB2	2.18	0.44
54:BB:193:GLY:HA3	54:BB:212:ASP:CA	2.41	0.44
55:CB:25:LEU:HD12	66:NB:61:SER:OG	2.17	0.44
55:CB:201:ALA:HB1	55:CB:211:ILE:HD11	1.99	0.44
57:EB:17:GLU:HG3	57:EB:43:PHE:CE1	2.52	0.44
57:EB:62:VAL:CG1	57:EB:67:LEU:HG	2.47	0.44
61:IB:53:TYR:CD1	61:IB:113:PRO:HG2	2.52	0.44
69:QB:83:ALA:CB	69:QB:91:TYR:HB3	2.46	0.44
82:DC:127:VAL:HG12	82:DC:129:VAL:HG13	1.99	0.44
82:DC:674:GLY:HA3	82:DC:679:GLU:O	2.18	0.44
82:DC:724:ILE:HG12	82:DC:818:ILE:HD12	1.99	0.44
83:EC:6891:G:N2	83:EC:6938:A:N6	2.64	0.44
1:A:40:A:H2'	1:A:41:A:O4'	2.17	0.44
1:A:123:G:H21	54:BB:146:THR:HG21	1.81	0.44
1:A:306:U:H2'	1:A:307:G:H8	1.83	0.44
1:A:551:G:H2'	1:A:552:G:C8	2.52	0.44
1:A:750:U:H2'	1:A:751:G:O4'	2.18	0.44
1:A:1163:A:H4'	55:CB:166:ARG:NH2	2.31	0.44
1:A:1574:G:H5"	1:A:1575:G:OP1	2.17	0.44
1:A:1645:G:H2'	1:A:1646:C:H6	1.83	0.44
2:B:29:C:OP1	19:S:189:LYS:HB3	2.17	0.44
2:B:135:C:O2'	39:MA:94:LYS:HB3	2.16	0.44
2:B:397:A:H4'	2:B:399:A:OP1	2.17	0.44
2:B:705:A:N6	32:FA:113:LEU:HB2	2.32	0.44
2:B:715:A:H5'	2:B:753:C:H4'	1.99	0.44
2:B:948:C:H2'	2:B:949:C:C6	2.52	0.44
2:B:1492:G:P	2:B:1493:G:H22	2.40	0.44
2:B:1690:C:H2'	2:B:1691:U:O4'	2.17	0.44
2:B:1747:G:O2'	2:B:1748:G:H5'	2.18	0.44
2:B:1887:A:H5"	7:G:227:GLU:CD	2.41	0.44
2:B:1887:A:C5'	7:G:227:GLU:HA	2.47	0.44
2:B:2107:A:H2'	2:B:2108:C:H6	1.82	0.44
2:B:2210:G:H2'	2:B:2211:U:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2844:C:H42	2:B:2898:G:H22	1.65	0.44
2:B:3223:A:H2'	2:B:3224:G:O4'	2.17	0.44
2:B:3238:G:N2	2:B:3250:U:H1'	2.32	0.44
2:B:3301:U:O2'	2:B:3302:U:H5'	2.17	0.44
4:D:91:G:H2'	4:D:92:A:C8	2.52	0.44
7:G:111:SER:O	7:G:114:VAL:HG23	2.17	0.44
8:H:26:PHE:CD1	8:H:127:ALA:HA	2.52	0.44
8:H:29:PRO:HD3	8:H:279:HIS:CG	2.53	0.44
8:H:313:LEU:HD23	8:H:314:LYS:N	2.32	0.44
9:I:166:ALA:HB1	9:I:171:LEU:HD12	1.98	0.44
9:I:194:LEU:HD22	9:I:198:TYR:CD2	2.53	0.44
11:K:184:LEU:O	11:K:188:ILE:HG12	2.17	0.44
12:L:137:ASN:ND2	19:S:3:ALA:HB3	2.31	0.44
17:Q:24:VAL:HB	17:Q:26:PHE:CZ	2.52	0.44
18:R:45:LEU:CD2	18:R:55:ARG:HD3	2.38	0.44
23:W:45:VAL:HG22	23:W:50:ILE:CB	2.42	0.44
30:DA:81:GLN:CG	30:DA:96:PRO:HB2	2.47	0.44
31:EA:21:LYS:HG2	31:EA:46:ILE:CD1	2.48	0.44
31:EA:26:VAL:HG23	31:EA:27:LYS:N	2.32	0.44
32:FA:111:LYS:HD2	32:FA:129:PHE:HB2	1.99	0.44
38:LA:92:ALA:O	38:LA:96:GLU:HG2	2.17	0.44
39:MA:100:VAL:CG2	39:MA:101:THR:H	2.22	0.44
39:MA:103:LYS:O	39:MA:107:LYS:HG3	2.17	0.44
49:WA:16:HIS:HE1	49:WA:43:ILE:HB	1.81	0.44
50:XA:41:ARG:O	50:XA:43:ASP:N	2.50	0.44
54:BB:230:GLU:CD	54:BB:231:GLN:H	2.26	0.44
56:DB:174:LYS:HD2	56:DB:175:ILE:H	1.83	0.44
58:FB:24:LYS:C	58:FB:25:ARG:HD3	2.41	0.44
66:NB:33:GLY:C	69:QB:7:ARG:HD3	2.42	0.44
68:PB:138:THR:HA	68:PB:141:THR:OG1	2.17	0.44
68:PB:140:THR:O	68:PB:143:ARG:HD3	2.17	0.44
69:QB:124:ILE:HD11	69:QB:128:GLY:CA	2.45	0.44
71:SB:23:ILE:HG22	71:SB:24:ILE:N	2.33	0.44
73:UB:133:LEU:HD21	73:UB:137:LYS:HE3	1.99	0.44
82:DC:131:THR:HG21	82:DC:163:ALA:HB2	1.98	0.44
1:A:786:C:OP1	54:BB:240:LYS:HE3	2.18	0.44
1:A:962:C:OP1	63:KB:70:LYS:HB3	2.18	0.44
1:A:962:C:H3'	1:A:963:A:C8	2.52	0.44
1:A:976:G:N2	1:A:1027:A:H61	2.16	0.44
1:A:1456:C:H3'	1:A:1457:C:H5'	1.99	0.44
2:B:320:G:H2'	2:B:321:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:354:U:H2'	2:B:355:A:H8	1.82	0.44
2:B:382:U:O2'	21:U:100:ALA:HB3	2.17	0.44
2:B:430:U:H4'	37:KA:90:PRO:HG3	1.99	0.44
2:B:637:C:H2'	2:B:638:C:C6	2.52	0.44
2:B:655:C:OP1	36:JA:25:TYR:HB3	2.18	0.44
2:B:757:C:H2'	2:B:758:C:H5"	1.98	0.44
2:B:784:A:N3	22:V:93:ILE:HG22	2.32	0.44
2:B:858:A:H5"	2:B:1790:G:N2	2.32	0.44
2:B:882:A:H5"	2:B:1847:A:N6	2.33	0.44
2:B:909:G:N7	2:B:925:A:C2	2.85	0.44
2:B:2217:U:H2'	2:B:2218:G:H8	1.83	0.44
2:B:2563:G:H5"	12:L:27:THR:HG23	1.99	0.44
2:B:2745:G:N1	2:B:2747:A:H5"	2.32	0.44
2:B:2774:C:H2'	2:B:2775:U:H6	1.82	0.44
2:B:2909:U:H2'	2:B:2910:A:C5'	2.47	0.44
3:C:51:G:H1'	3:C:52:A:C8	2.52	0.44
4:D:46:A:H2'	4:D:47:C:C6	2.52	0.44
4:D:100:C:H2'	4:D:101:G:O4'	2.16	0.44
7:G:225:GLY:HA2	7:G:269:GLN:HE22	1.83	0.44
10:J:122:PHE:HA	10:J:123:PRO:HA	1.78	0.44
12:L:147:LYS:O	12:L:201:THR:HB	2.17	0.44
12:L:226:TYR:HA	12:L:229:VAL:HB	2.00	0.44
13:M:160:ASP:O	13:M:164:ILE:HB	2.18	0.44
14:N:86:HIS:HB3	14:N:139:ARG:CG	2.47	0.44
17:Q:7:LEU:C	22:V:164:ARG:HG2	2.42	0.44
17:Q:47:ALA:HB3	39:MA:115:LYS:NZ	2.32	0.44
18:R:17:VAL:C	18:R:72:LEU:HB3	2.43	0.44
21:U:59:PRO:HB2	21:U:78:VAL:HG21	1.97	0.44
28:BA:19:THR:HB	28:BA:31:PHE:HB2	1.98	0.44
32:FA:138:ILE:HG22	32:FA:143:GLY:C	2.42	0.44
34:HA:51:LEU:CD1	38:LA:91:ARG:HG3	2.46	0.44
34:HA:89:VAL:HG13	34:HA:89:VAL:O	2.16	0.44
36:JA:11:LYS:O	36:JA:12:LYS:HB2	2.18	0.44
41:OA:19:CYS:HB2	41:OA:27:PHE:HB2	2.00	0.44
41:OA:21:ARG:HB2	41:OA:39:TYR:HD2	1.82	0.44
44:RA:93:LYS:HD3	44:RA:103:LEU:N	2.33	0.44
48:VA:64:ARG:NH1	48:VA:67:LEU:HD22	2.31	0.44
50:XA:126:PRO:CG	50:XA:151:SER:HB3	2.47	0.44
52:ZA:139:ILE:HG21	52:ZA:193:VAL:CG2	2.48	0.44
57:EB:46:ILE:CD1	57:EB:60:ILE:HA	2.47	0.44
59:GB:85:VAL:HG11	59:GB:104:PHE:CE1	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:87:VAL:HG22	60:HB:87:VAL:O	2.16	0.44
61:IB:96:LYS:O	61:IB:98:ASN:OD1	2.34	0.44
65:MB:34:VAL:HA	65:MB:37:ALA:HB2	1.98	0.44
66:NB:35:PRO:HD2	69:QB:7:ARG:O	2.17	0.44
69:QB:33:TYR:HE1	69:QB:100:ILE:HD13	1.82	0.44
69:QB:130:ARG:NH1	69:QB:134:ARG:HD3	2.31	0.44
73:UB:29:TYR:CZ	73:UB:33:LEU:HD12	2.52	0.44
74:VB:22:GLN:HA	74:VB:74:LEU:HD23	1.98	0.44
82:DC:463:LEU:HD11	82:DC:467:GLY:HA3	2.00	0.44
82:DC:655:TYR:HB2	82:DC:693:LEU:HD22	1.99	0.44
1:A:152:U:H3'	1:A:153:G:H5"	2.00	0.44
1:A:256:A:C1'	58:FB:72:ILE:HA	2.43	0.44
1:A:1632:C:H2'	1:A:1633:A:C8	2.53	0.44
2:B:109:A:N6	2:B:323:A:H1'	2.33	0.44
2:B:556:U:H5'	2:B:557:A:C4	2.52	0.44
2:B:756:U:H2'	2:B:757:C:C6	2.52	0.44
2:B:975:C:H5	22:V:14:GLY:O	2.00	0.44
2:B:1453:A:H2'	2:B:1453:A:N3	2.32	0.44
2:B:1635:G:OP2	31:EA:73:LYS:HD2	2.18	0.44
2:B:2300:G:H5"	2:B:2327:U:O2'	2.18	0.44
2:B:2367:A:H3'	2:B:2368:A:C8	2.50	0.44
2:B:2766:U:C5'	46:TA:40:LYS:HB2	2.47	0.44
2:B:2845:A:H2	2:B:2850:G:H1	1.65	0.44
2:B:3110:C:H2'	2:B:3111:U:C6	2.52	0.44
2:B:3163:A:C2'	2:B:3164:C:H5"	2.47	0.44
2:B:3262:U:H2'	2:B:3263:G:O4'	2.18	0.44
7:G:45:SER:HA	7:G:338:LEU:O	2.18	0.44
7:G:303:LYS:CD	7:G:371:GLN:HB3	2.46	0.44
9:I:40:HIS:CD2	9:I:42:ALA:HB3	2.52	0.44
10:J:47:PHE:O	10:J:50:LYS:HG3	2.17	0.44
14:N:166:ILE:HG22	14:N:167:LEU:N	2.32	0.44
18:R:98:SER:O	18:R:102:LYS:HB2	2.18	0.44
19:S:68:ARG:HH21	19:S:128:LYS:CE	2.23	0.44
21:U:126:ARG:HB2	21:U:126:ARG:NH2	2.32	0.44
24:X:24:LEU:CD2	24:X:59:VAL:HG21	2.47	0.44
25:Y:20:ARG:HB3	25:Y:20:ARG:CZ	2.48	0.44
25:Y:89:LEU:HD22	25:Y:90:ASN:C	2.43	0.44
27:AA:34:LEU:HD22	27:AA:60:ALA:CB	2.47	0.44
35:IA:25:PHE:O	35:IA:64:VAL:HB	2.17	0.44
36:JA:102:ALA:O	36:JA:106:VAL:HB	2.17	0.44
41:OA:53:ALA:HA	41:OA:56:ARG:HD2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:75:ALA:HB2	49:WA:117:LYS:HB2	2.00	0.44
50:XA:123:VAL:O	50:XA:146:LEU:HG	2.18	0.44
53:AB:102:ALA:CB	53:AB:171:ALA:HB1	2.48	0.44
53:AB:168:ILE:HG22	53:AB:189:MET:CB	2.46	0.44
54:BB:29:PRO:O	54:BB:31:PRO:HD3	2.18	0.44
54:BB:66:MET:O	54:BB:67:GLN:HG3	2.16	0.44
56:DB:161:GLU:HG3	56:DB:170:THR:N	2.32	0.44
57:EB:133:THR:HG21	57:EB:159:VAL:HG12	1.99	0.44
65:MB:44:ARG:O	65:MB:44:ARG:HD3	2.17	0.44
65:MB:126:VAL:HG13	65:MB:127:ARG:N	2.30	0.44
66:NB:39:VAL:CG1	66:NB:42:GLU:H	2.29	0.44
68:PB:75:ASN:HB3	68:PB:78:HIS:CD2	2.49	0.44
70:RB:26:LEU:O	70:RB:88:LYS:HA	2.17	0.44
71:SB:18:SER:H	71:SB:54:ALA:HB3	1.81	0.44
74:VB:23:PHE:CE2	74:VB:75:VAL:HG12	2.53	0.44
82:DC:318:ALA:O	82:DC:322:VAL:HG23	2.18	0.44
82:DC:532:GLY:HA3	82:DC:538:LEU:HD13	2.00	0.44
1:A:399:A:OP1	58:FB:27:PHE:HD1	2.01	0.44
1:A:421:A:O2'	1:A:422:G:H5'	2.17	0.44
1:A:941:A:H2'	1:A:942:G:H5'	1.98	0.44
1:A:1387:G:OP2	67:OB:44:LYS:HE3	2.17	0.44
1:A:1608:U:OP1	66:NB:15:SER:HB3	2.17	0.44
2:B:10:C:C4'	12:L:55:TYR:HB2	2.46	0.44
2:B:29:C:OP1	19:S:189:LYS:CB	2.66	0.44
2:B:99:A:H2'	2:B:100:A:C8	2.52	0.44
2:B:132:C:C2'	2:B:133:U:H5"	2.47	0.44
2:B:198:A:H5"	30:DA:61:GLY:O	2.18	0.44
2:B:726:G:N1	2:B:742:G:H2'	2.32	0.44
2:B:795:G:H2'	2:B:796:U:H5'	1.99	0.44
2:B:912:G:N7	6:F:9:ARG:NH1	2.65	0.44
2:B:1405:U:C5'	36:JA:58:GLY:HA2	2.47	0.44
2:B:1441:G:H4'	3:C:15:G:H4'	1.99	0.44
2:B:1779:C:H3'	2:B:1780:G:C5'	2.48	0.44
2:B:1822:C:H2'	2:B:1823:A:H8	1.80	0.44
2:B:1843:C:H3'	2:B:1844:C:H6	1.78	0.44
2:B:1883:A:H2'	2:B:1884:A:C8	2.52	0.44
2:B:1955:U:H2'	2:B:1956:A:O4'	2.18	0.44
2:B:2480:A:OP2	5:E:105:LYS:HE3	2.17	0.44
2:B:2655:U:H2'	46:TA:3:ASN:O	2.17	0.44
2:B:2947:G:N3	7:G:250:ALA:HB1	2.33	0.44
2:B:3043:C:H4'	7:G:9:PRO:HB2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:46:G:OP1	43:QA:15:LYS:HG2	2.18	0.44
4:D:3:U:O2'	4:D:4:U:H5'	2.18	0.44
6:F:39:GLY:CA	12:L:36:ILE:HG21	2.47	0.44
6:F:242:ARG:O	6:F:243:THR:HB	2.18	0.44
7:G:167:ARG:HH11	7:G:167:ARG:HG3	1.82	0.44
8:H:126:ILE:HG13	8:H:238:LEU:HD13	1.99	0.44
9:I:45:ASN:HD22	9:I:45:ASN:HA	1.61	0.44
9:I:140:ARG:HA	9:I:141:PRO:HD2	1.71	0.44
13:M:189:GLU:C	13:M:191:LEU:H	2.26	0.44
14:N:46:PHE:CD1	14:N:140:THR:HA	2.53	0.44
14:N:165:ILE:HD13	14:N:165:ILE:O	2.18	0.44
15:O:101:ASN:HB3	15:O:130:VAL:HA	1.99	0.44
16:P:114:ARG:HE	16:P:132:ILE:CD1	2.29	0.44
19:S:175:ASN:HB2	19:S:180:PHE:CE2	2.52	0.44
20:T:126:VAL:HG13	20:T:127:LEU:N	2.31	0.44
21:U:146:ILE:HD12	21:U:146:ILE:H	1.82	0.44
22:V:2:GLY:C	22:V:3:ILE:HD12	2.42	0.44
22:V:75:GLY:O	22:V:79:LYS:HD3	2.17	0.44
46:TA:28:TYR:HD1	46:TA:71:ARG:HH21	1.66	0.44
49:WA:234:LEU:HD12	49:WA:234:LEU:N	2.32	0.44
49:WA:264:SER:O	49:WA:268:GLN:HA	2.17	0.44
53:AB:42:THR:HB	53:AB:43:PRO:HD2	1.98	0.44
53:AB:137:VAL:HB	53:AB:185:LYS:HB3	1.99	0.44
55:CB:25:LEU:H	55:CB:25:LEU:HD22	1.83	0.44
56:DB:21:GLU:N	56:DB:21:GLU:OE1	2.50	0.44
57:EB:117:THR:HB	57:EB:120:ALA:CB	2.47	0.44
72:TB:80:ASN:ND2	72:TB:124:LYS:HG2	2.32	0.44
72:TB:90:THR:HB	72:TB:94:LEU:HD12	2.00	0.44
78:ZB:28:VAL:HG21	78:ZB:48:VAL:HG11	1.99	0.44
82:DC:155:VAL:N	82:DC:202:VAL:HG21	2.32	0.44
82:DC:411:VAL:O	82:DC:428:ILE:HA	2.18	0.44
82:DC:515:ASP:HB3	82:DC:518:VAL:CB	2.45	0.44
82:DC:668:GLN:O	82:DC:672:LYS:HB3	2.18	0.44
82:DC:677:PHE:N	82:DC:677:PHE:CD2	2.85	0.44
1:A:121:U:H2'	1:A:122:U:O4'	2.17	0.44
1:A:177:U:H1'	56:DB:191:ARG:NH1	2.32	0.44
1:A:374:U:O2	1:A:603:U:H4'	2.18	0.44
1:A:694:U:H5'	1:A:695:U:C5	2.52	0.44
1:A:1032:G:H2'	1:A:1033:C:C6	2.52	0.44
1:A:1585:U:H3	1:A:1611:A:H2	1.64	0.44
1:A:1682:U:HO2'	1:A:1683:C:H5'	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:93:C:O2'	32:FA:55:LYS:HG3	2.17	0.44
2:B:170:G:H2'	2:B:171:G:O4'	2.17	0.44
2:B:428:A:H4'	37:KA:88:ASN:ND2	2.33	0.44
2:B:868:C:H2'	2:B:869:G:C8	2.52	0.44
2:B:879:U:O2	2:B:879:U:H3'	2.16	0.44
2:B:1195:A:H4'	2:B:1320:C:OP1	2.18	0.44
2:B:1709:C:H4'	31:EA:15:ARG:HH12	1.83	0.44
2:B:1855:U:H2'	2:B:1856:C:C5	2.52	0.44
2:B:2359:C:O2	2:B:2359:C:H2'	2.18	0.44
2:B:2745:G:C6	2:B:2747:A:H5"	2.52	0.44
2:B:2897:A:O2'	2:B:2898:G:H2'	2.17	0.44
2:B:3053:G:H2'	2:B:3054:U:O4'	2.18	0.44
2:B:3108:G:H2'	2:B:3109:G:C5'	2.42	0.44
3:C:140:G:H2'	3:C:141:C:C5'	2.48	0.44
3:C:154:C:C5'	12:L:181:LYS:HB3	2.38	0.44
5:E:136:THR:O	5:E:138:VAL:HG23	2.17	0.44
6:F:65:ASP:CB	6:F:70:ARG:HB3	2.48	0.44
6:F:136:ILE:HG21	6:F:139:HIS:NE2	2.32	0.44
8:H:188:ARG:HG2	8:H:193:LYS:N	2.33	0.44
9:I:40:HIS:ND1	25:Y:69:LYS:HD3	2.33	0.44
9:I:292:ALA:HA	9:I:297:GLN:HA	1.99	0.44
12:L:160:ILE:HD12	19:S:21:PHE:HE2	1.83	0.44
13:M:110:LYS:HB3	13:M:128:VAL:CB	2.45	0.44
14:N:153:ARG:O	14:N:157:TYR:HE1	2.01	0.44
17:Q:158:ALA:CB	32:FA:97:GLU:HA	2.47	0.44
19:S:71:ARG:O	19:S:92:LEU:CB	2.66	0.44
20:T:27:LEU:HD22	20:T:102:LEU:HB2	1.99	0.44
22:V:88:THR:HA	22:V:107:THR:CG2	2.47	0.44
23:W:174:ALA:O	23:W:178:ALA:HB2	2.17	0.44
29:CA:87:SER:O	29:CA:89:LYS:N	2.49	0.44
30:DA:39:LEU:HD23	30:DA:42:GLN:CG	2.41	0.44
35:IA:25:PHE:CB	35:IA:65:LYS:HB3	2.41	0.44
35:IA:79:ARG:HG2	35:IA:89:LEU:CD2	2.47	0.44
50:XA:126:PRO:HA	50:XA:133:ILE:HD11	1.99	0.44
59:GB:85:VAL:HG22	59:GB:107:ARG:CG	2.45	0.44
60:HB:11:ILE:HG13	60:HB:12:HIS:N	2.32	0.44
65:MB:25:LEU:HB3	65:MB:87:PRO:HG2	1.99	0.44
65:MB:48:GLY:O	65:MB:52:LYS:HD3	2.18	0.44
69:QB:64:HIS:CD2	69:QB:68:ARG:HD2	2.52	0.44
70:RB:35:GLU:OE1	70:RB:38:SER:HB3	2.16	0.44
79:AC:5:ASN:HA	79:AC:7:TRP:CE3	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:78:TYR:HE2	82:DC:80:GLU:OE1	2.01	0.44
82:DC:223:ARG:HG2	82:DC:223:ARG:HH11	1.82	0.44
82:DC:420:PRO:CG	82:DC:476:HIS:HA	2.48	0.44
83:EC:6948:U:H2'	83:EC:6949:G:C8	2.53	0.44
1:A:386:G:H2'	1:A:387:A:C8	2.53	0.44
1:A:595:G:H2'	1:A:596:C:O4'	2.17	0.44
1:A:762:A:H2'	1:A:763:G:C8	2.52	0.44
1:A:976:G:H1	1:A:1023:A:HO2'	1.65	0.44
1:A:1506:G:H2'	1:A:1507:G:H8	1.81	0.44
2:B:18:G:H2'	2:B:19:U:O4'	2.17	0.44
2:B:519:A:C6	2:B:522:A:H4'	2.52	0.44
2:B:642:U:H2'	2:B:644:G:OP2	2.17	0.44
2:B:692:A:H2'	2:B:693:A:O4'	2.17	0.44
2:B:980:A:H3'	2:B:981:U:C6	2.53	0.44
2:B:1119:C:H2'	2:B:1120:A:C8	2.51	0.44
2:B:1209:G:H2'	2:B:1210:U:O4'	2.17	0.44
2:B:1259:A:H1'	2:B:1280:C:O2'	2.17	0.44
2:B:1691:U:O2'	2:B:1692:U:H5'	2.17	0.44
2:B:1741:A:H3'	2:B:1742:U:H6	1.82	0.44
2:B:1910:A:C2	2:B:2333:C:O2	2.68	0.44
2:B:2213:A:H2'	2:B:2214:A:O4'	2.17	0.44
2:B:2394:G:O2'	2:B:2395:G:H5'	2.18	0.44
2:B:2551:U:C4	6:F:95:SER:HB3	2.52	0.44
2:B:2681:U:H2'	2:B:2682:C:O4'	2.18	0.44
2:B:2889:C:O2'	2:B:2890:A:H5'	2.16	0.44
2:B:3342:A:H2'	2:B:3342:A:N3	2.33	0.44
3:C:37:A:H5"	3:C:39:G:O5'	2.18	0.44
5:E:98:LYS:HA	5:E:101:LYS:HD2	1.99	0.44
5:E:176:GLU:O	5:E:180:VAL:HG23	2.18	0.44
7:G:49:TYR:CZ	7:G:335:ILE:HD13	2.53	0.44
7:G:219:ALA:O	7:G:274:SER:HA	2.18	0.44
8:H:316:ASN:C	8:H:316:ASN:HD22	2.26	0.44
9:I:39:GLN:HG3	9:I:43:LYS:HB2	1.98	0.44
9:I:279:LYS:HG2	9:I:282:ARG:HD2	1.99	0.44
14:N:33:ILE:HD11	14:N:35:ASP:C	2.43	0.44
14:N:91:VAL:HB	14:N:127:ALA:HB1	2.00	0.44
16:P:114:ARG:CZ	16:P:121:PHE:HD2	2.30	0.44
18:R:123:LEU:HD22	20:T:194:LEU:CG	2.39	0.44
18:R:124:ARG:HG2	20:T:194:LEU:HD21	1.98	0.44
20:T:6:VAL:HG22	20:T:32:LYS:HD3	1.98	0.44
23:W:11:ALA:O	23:W:14:VAL:HG12	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:4:PHE:HB3	24:X:31:ALA:N	2.33	0.44
24:X:14:LEU:HD11	25:Y:136:ARG:HH21	1.81	0.44
24:X:152:LEU:N	24:X:153:PRO:HD3	2.30	0.44
36:JA:3:SER:HA	36:JA:90:LYS:O	2.17	0.44
41:OA:25:ARG:O	41:OA:25:ARG:CG	2.66	0.44
42:PA:69:LEU:HD22	42:PA:70:PRO:HD2	2.00	0.44
43:QA:26:TRP:CD2	43:QA:27:ILE:HD12	2.53	0.44
46:TA:23:HIS:HB2	46:TA:72:LEU:HB3	1.99	0.44
46:TA:31:GLY:C	46:TA:33:ALA:N	2.76	0.44
46:TA:45:ARG:O	46:TA:48:SER:HB3	2.17	0.44
48:VA:142:PRO:HA	82:DC:183:GLU:OE2	2.17	0.44
49:WA:196:ASN:HB2	49:WA:217:ASP:HB3	2.00	0.44
50:XA:18:LEU:HD11	50:XA:50:VAL:HG11	1.99	0.44
54:BB:191:ARG:HD2	54:BB:218:PHE:CE2	2.53	0.44
55:CB:25:LEU:HD13	55:CB:25:LEU:N	2.32	0.44
55:CB:44:ASN:HA	66:NB:46:PHE:HE2	1.82	0.44
55:CB:77:TYR:CD2	55:CB:87:CYS:HB2	2.53	0.44
55:CB:98:MET:SD	55:CB:107:LYS:HG3	2.57	0.44
59:GB:156:ILE:O	59:GB:157:ASP:HB2	2.18	0.44
63:KB:43:LYS:HA	63:KB:43:LYS:CE	2.45	0.44
66:NB:39:VAL:HG22	66:NB:48:VAL:HG11	1.99	0.44
66:NB:90:VAL:HA	66:NB:93:HIS:HB2	1.98	0.44
73:UB:69:ARG:O	73:UB:70:LYS:HB2	2.18	0.44
77:YB:36:LYS:HD3	77:YB:43:ILE:CG2	2.47	0.44
82:DC:131:THR:CG2	82:DC:177:THR:HG21	2.47	0.44
1:A:330:G:N2	1:A:331:A:H1'	2.33	0.44
1:A:1204:A:H3'	1:A:1205:C:C6	2.52	0.44
1:A:1525:A:OP1	69:QB:82:GLY:HA2	2.18	0.44
1:A:1533:C:H4'	1:A:1539:G:N1	2.31	0.44
1:A:1583:A:H62	1:A:1612:U:H5	1.65	0.44
1:A:1687:U:O2	1:A:1714:A:H2	2.00	0.44
2:B:70:A:H2	2:B:72:C:N4	2.05	0.44
2:B:656:A:P	36:JA:27:ARG:HA	2.58	0.44
2:B:842:G:H2'	2:B:843:A:O4'	2.18	0.44
2:B:887:G:H2'	2:B:888:A:O4'	2.18	0.44
2:B:1108:U:H2'	2:B:1109:U:C6	2.49	0.44
2:B:1382:G:O2'	2:B:1383:G:H5'	2.18	0.44
2:B:1488:G:H5'	2:B:1838:G:C6	2.53	0.44
2:B:2134:G:H2'	2:B:2135:U:H6	1.82	0.44
2:B:2424:A:O2'	2:B:2425:G:H5'	2.18	0.44
2:B:2571:U:C4'	2:B:2572:C:H5'	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2575:G:N7	31:EA:56:LYS:HE3	2.32	0.44
2:B:2681:U:O3'	15:O:48:SER:HB3	2.18	0.44
2:B:2766:U:H5'	46:TA:40:LYS:HB2	1.99	0.44
2:B:2971:A:H3'	2:B:2971:A:N3	2.33	0.44
2:B:3236:U:H3	2:B:3251:U:H3	1.64	0.44
3:C:91:C:H2'	3:C:92:A:C8	2.52	0.44
3:C:141:C:H2'	3:C:142:C:H6	1.82	0.44
6:F:77:ILE:HD11	6:F:115:ASN:ND2	2.31	0.44
6:F:143:GLU:O	6:F:145:LYS:HG2	2.17	0.44
8:H:5:GLN:NE2	8:H:21:PRO:HB3	2.31	0.44
8:H:49:ALA:HB2	17:Q:26:PHE:CD1	2.53	0.44
10:J:13:GLU:OE1	36:JA:88:HIS:HA	2.17	0.44
12:L:136:LEU:HA	12:L:197:VAL:HG21	1.99	0.44
13:M:44:THR:O	13:M:55:VAL:HG12	2.18	0.44
14:N:47:PRO:HD2	14:N:140:THR:O	2.18	0.44
14:N:174:THR:HG22	14:N:176:LEU:N	2.21	0.44
15:O:166:LYS:O	15:O:167:TYR:CB	2.66	0.44
18:R:45:LEU:HD12	18:R:57:ALA:HB2	1.99	0.44
18:R:113:THR:HG22	18:R:116:GLU:H	1.83	0.44
39:MA:25:LYS:HD2	39:MA:51:ILE:HG23	2.00	0.44
41:OA:24:ARG:HA	41:OA:24:ARG:NE	2.32	0.44
41:OA:72:ARG:O	41:OA:75:LYS:HB2	2.18	0.44
42:PA:27:ILE:HD12	42:PA:39:ARG:HG2	2.00	0.44
46:TA:95:GLY:O	46:TA:96:GLU:HB2	2.17	0.44
47:UA:49:ARG:HH21	47:UA:52:ALA:HB2	1.83	0.44
47:UA:56:THR:HG22	47:UA:63:THR:OG1	2.18	0.44
49:WA:180:ALA:HB3	49:WA:190:ALA:HB3	1.98	0.44
51:YA:52:THR:C	51:YA:54:LEU:H	2.26	0.44
54:BB:12:LEU:HD11	59:GB:5:PRO:CD	2.48	0.44
54:BB:201:HIS:NE2	54:BB:207:LEU:HD12	2.33	0.44
55:CB:57:SER:C	55:CB:59:VAL:H	2.26	0.44
56:DB:50:PHE:HA	56:DB:112:VAL:O	2.18	0.44
57:EB:49:ILE:CD1	57:EB:172:VAL:HG22	2.48	0.44
58:FB:29:LEU:HG	58:FB:31:ARG:NH1	2.32	0.44
58:FB:37:LYS:HD2	58:FB:93:THR:O	2.18	0.44
58:FB:88:ASN:HD21	61:IB:11:ARG:HH22	1.65	0.44
58:FB:159:GLN:NE2	58:FB:189:LEU:HD11	2.32	0.44
61:IB:128:CYS:SG	61:IB:138:ASN:CB	3.05	0.44
63:KB:91:LEU:O	63:KB:122:ILE:HD11	2.18	0.44
68:PB:38:VAL:HG13	68:PB:42:TYR:HB3	1.99	0.44
68:PB:123:ARG:O	68:PB:133:VAL:HG21	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:17:ALA:CB	72:TB:25:VAL:HG11	2.48	0.44
76:XB:90:GLU:C	76:XB:92:ARG:H	2.26	0.44
82:DC:17:THR:CG2	82:DC:92:LYS:HD2	2.47	0.44
82:DC:89:ILE:CG1	82:DC:340:LEU:HA	2.44	0.44
82:DC:115:VAL:HG11	82:DC:142:VAL:HG13	2.00	0.44
82:DC:617:ARG:HH21	82:DC:627:VAL:CG2	2.29	0.44
82:DC:666:ALA:HB3	82:DC:709:MET:HB3	1.99	0.44
83:EC:6770:U:H5	83:EC:6772:G:H5"	1.83	0.44
1:A:290:G:H2'	1:A:291:G:O4'	2.18	0.44
1:A:336:G:O2'	1:A:337:G:H5'	2.18	0.44
1:A:393:C:H4'	1:A:1673:G:O2'	2.18	0.44
1:A:1280:C:H4'	70:RB:69:LYS:CB	2.43	0.44
1:A:1543:A:H1'	1:A:1569:A:C2	2.53	0.44
2:B:271:C:H2'	2:B:272:G:O4'	2.18	0.44
2:B:708:G:N2	2:B:710:A:H3'	2.33	0.44
2:B:782:U:H2'	2:B:783:A:O4'	2.17	0.44
2:B:1077:U:H1'	2:B:1083:G:N2	2.32	0.44
2:B:1222:G:N7	48:VA:59:VAL:HG11	2.33	0.44
2:B:1445:U:O3'	2:B:2984:C:H4'	2.18	0.44
2:B:1566:A:C2	2:B:1573:G:N7	2.86	0.44
2:B:1665:C:H2'	2:B:1666:G:C8	2.53	0.44
2:B:1727:G:O3'	2:B:1730:G:H4'	2.18	0.44
2:B:2157:G:C5	6:F:150:LEU:HD13	2.53	0.44
2:B:2477:G:H2'	2:B:2477:G:N3	2.33	0.44
2:B:2628:A:O4'	2:B:2798:C:H3'	2.18	0.44
2:B:2744:U:H2'	2:B:2745:G:C4	2.53	0.44
2:B:2768:U:H2'	2:B:2769:A:C8	2.53	0.44
2:B:2836:C:C2'	2:B:2837:A:H5'	2.48	0.44
2:B:2881:C:H4'	7:G:249:VAL:CG1	2.47	0.44
2:B:2914:G:OP1	7:G:9:PRO:HB3	2.17	0.44
2:B:3191:G:H5"	20:T:176:LYS:CG	2.33	0.44
2:B:3378:C:O3'	7:G:313:HIS:HA	2.18	0.44
5:E:20:SER:HB3	5:E:30:GLU:OE2	2.18	0.44
6:F:33:ASP:CG	6:F:36:GLU:HG3	2.43	0.44
7:G:54:THR:HG23	7:G:76:VAL:CG2	2.48	0.44
9:I:190:ILE:HG13	9:I:191:ASP:N	2.33	0.44
11:K:92:ILE:CA	11:K:95:ILE:HD12	2.46	0.44
12:L:46:LEU:HD13	29:CA:29:SER:C	2.42	0.44
14:N:77:THR:HA	14:N:81:GLY:C	2.43	0.44
14:N:191:LYS:O	14:N:197:VAL:HG22	2.17	0.44
15:O:20:ASN:HB2	15:O:68:HIS:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:106:LEU:O	16:P:107:ASP:HB2	2.17	0.44
17:Q:119:TYR:CE1	39:MA:118:ILE:HD11	2.53	0.44
18:R:128:ARG:HD2	18:R:128:ARG:C	2.43	0.44
20:T:16:VAL:HG13	20:T:80:PHE:CE1	2.52	0.44
20:T:47:PHE:CE1	20:T:140:LYS:HE2	2.52	0.44
21:U:114:VAL:CB	21:U:150:VAL:HA	2.48	0.44
21:U:166:VAL:HG23	37:KA:60:ARG:C	2.43	0.44
22:V:153:PHE:HE2	22:V:164:ARG:HH22	1.64	0.44
25:Y:60:LYS:N	25:Y:60:LYS:HE3	2.32	0.44
26:Z:70:LYS:O	26:Z:71:PHE:HB2	2.18	0.44
31:EA:76:ASN:HB3	31:EA:79:HIS:HB2	1.99	0.44
32:FA:70:LYS:N	32:FA:71:PRO:HD3	2.33	0.44
32:FA:82:ILE:N	32:FA:82:ILE:HD12	2.32	0.44
36:JA:19:ARG:HD3	36:JA:28:VAL:HG13	2.00	0.44
36:JA:35:GLN:CB	36:JA:43:ARG:HB2	2.48	0.44
38:LA:58:ARG:HB3	38:LA:61:GLN:HB2	2.00	0.44
39:MA:57:VAL:O	39:MA:61:GLN:HG3	2.18	0.44
46:TA:28:TYR:CZ	46:TA:30:ALA:HA	2.53	0.44
47:UA:23:ARG:HA	47:UA:26:VAL:CG2	2.47	0.44
47:UA:57:CYS:HB3	47:UA:62:LYS:H	1.81	0.44
52:ZA:53:ILE:H	52:ZA:53:ILE:HG13	1.52	0.44
54:BB:12:LEU:HD11	59:GB:5:PRO:HD3	1.99	0.44
55:CB:84:LYS:HD3	55:CB:92:ARG:NH1	2.32	0.44
55:CB:114:ILE:HD13	55:CB:114:ILE:HA	1.91	0.44
55:CB:206:SER:HA	55:CB:211:ILE:HG21	2.00	0.44
56:DB:142:ARG:HH21	56:DB:152:ASP:HA	1.83	0.44
58:FB:112:TRP:O	58:FB:116:HIS:HB2	2.18	0.44
59:GB:36:LEU:HD22	59:GB:41:GLU:CB	2.48	0.44
60:HB:87:VAL:N	60:HB:88:PRO:CD	2.77	0.44
61:IB:128:CYS:SG	61:IB:138:ASN:HB3	2.58	0.44
65:MB:37:ALA:O	65:MB:42:ARG:HD2	2.18	0.44
66:NB:18:ALA:HA	66:NB:68:ARG:O	2.18	0.44
72:TB:95:PRO:HD3	72:TB:130:TYR:CE1	2.53	0.44
82:DC:115:VAL:CG1	82:DC:142:VAL:HG13	2.48	0.44
82:DC:115:VAL:O	82:DC:119:LEU:HG	2.17	0.44
82:DC:218:TRP:CZ3	82:DC:220:PHE:HD2	2.34	0.44
82:DC:257:TRP:HZ3	82:DC:272:ALA:HB1	1.82	0.44
82:DC:576:LEU:HD13	82:DC:587:TYR:CE1	2.46	0.44
82:DC:588:LEU:HD13	82:DC:686:VAL:CG1	2.42	0.44
82:DC:718:LEU:HB3	82:DC:835:TRP:HD1	1.81	0.44
1:A:43:A:H1'	1:A:378:A:N3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:105:A:O2'	1:A:106:U:H5'	2.18	0.43
1:A:244:A:OP1	54:BB:155:LYS:HD2	2.17	0.43
1:A:325:G:H4'	61:IB:80:MET:HE3	2.00	0.43
1:A:534:A:H3'	1:A:535:A:C8	2.53	0.43
1:A:799:A:O2'	1:A:800:U:H5'	2.18	0.43
1:A:959:U:O2	1:A:959:U:H2'	2.17	0.43
1:A:966:A:H2'	1:A:967:A:H8	1.81	0.43
1:A:1388:A:H5"	67:OB:48:ASN:CG	2.43	0.43
1:A:1519:U:H2'	1:A:1520:U:C6	2.51	0.43
2:B:44:U:H4'	46:TA:54:THR:HB	2.00	0.43
2:B:88:A:H3'	2:B:89:A:C8	2.49	0.43
2:B:110:G:H5"	17:Q:91:ARG:HD2	2.00	0.43
2:B:222:A:H2'	2:B:223:U:C6	2.53	0.43
2:B:311:C:N4	2:B:2778:G:H1	2.15	0.43
2:B:388:G:H2'	2:B:389:A:O4'	2.18	0.43
2:B:597:G:H5'	11:K:41:ARG:HD2	2.00	0.43
2:B:680:G:C3'	2:B:681:U:H5"	2.48	0.43
2:B:707:U:C4'	2:B:779:G:H21	2.31	0.43
2:B:786:A:C3'	22:V:147:ARG:HG2	2.47	0.43
2:B:908:G:H1	2:B:2414:G:H5"	1.83	0.43
2:B:951:A:N6	2:B:1369:A:H1'	2.32	0.43
2:B:953:G:H4'	2:B:954:U:C6	2.53	0.43
2:B:981:U:H2'	2:B:982:C:O4'	2.17	0.43
2:B:1070:U:O2'	2:B:1071:U:H5'	2.18	0.43
2:B:1106:G:H4'	33:GA:25:LYS:CE	2.47	0.43
2:B:1129:A:H5"	14:N:13:LYS:HZ2	1.78	0.43
2:B:1369:A:H2'	2:B:1370:G:H5'	2.00	0.43
2:B:1755:C:H2'	2:B:1756:C:O4'	2.17	0.43
2:B:1794:G:O2'	2:B:1796:G:N2	2.50	0.43
2:B:1896:A:H1'	2:B:3052:G:O2'	2.18	0.43
2:B:2881:C:H4'	7:G:249:VAL:HG13	2.00	0.43
2:B:2990:G:O2'	2:B:2991:A:H5'	2.17	0.43
3:C:3:A:H2'	3:C:4:C:O4'	2.18	0.43
6:F:104:LEU:CD2	6:F:148:VAL:HG11	2.47	0.43
7:G:93:VAL:O	7:G:99:LEU:HA	2.18	0.43
7:G:377:HIS:HA	7:G:381:GLY:H	1.83	0.43
8:H:179:LEU:HD23	8:H:182:LEU:HD23	2.00	0.43
8:H:195:ARG:O	8:H:196:ASN:HB2	2.18	0.43
8:H:296:GLN:HA	8:H:299:ILE:CG2	2.48	0.43
9:I:113:LEU:HD22	9:I:142:PHE:CZ	2.52	0.43
10:J:165:LEU:HD11	10:J:171:PRO:HG3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:229:PHE:C	11:K:229:PHE:CD1	2.95	0.43
12:L:75:ILE:HG22	12:L:76:ALA:N	2.29	0.43
12:L:81:THR:OG1	12:L:82:LEU:N	2.52	0.43
14:N:60:LEU:HD11	14:N:129:VAL:HG21	2.01	0.43
24:X:80:ARG:CG	25:Y:156:TYR:HB2	2.47	0.43
25:Y:82:ASN:O	33:GA:21:ILE:HA	2.18	0.43
29:CA:65:GLN:HE22	39:MA:35:LYS:HD3	1.82	0.43
29:CA:77:GLU:HA	29:CA:133:LEU:CD2	2.44	0.43
32:FA:127:ALA:O	32:FA:147:LEU:HA	2.18	0.43
37:KA:85:PHE:HB2	37:KA:87:ASN:O	2.18	0.43
37:KA:90:PRO:HD2	37:KA:93:THR:HG21	2.00	0.43
38:LA:51:LEU:HD21	38:LA:56:THR:HG21	2.00	0.43
40:NA:96:ALA:O	40:NA:97:SER:HB2	2.18	0.43
44:RA:78:ILE:HG22	44:RA:82:LEU:HD12	2.00	0.43
48:VA:26:PHE:CE2	48:VA:96:ILE:HD11	2.53	0.43
54:BB:18:TRP:HE3	54:BB:20:LEU:HD11	1.83	0.43
54:BB:64:ILE:HG23	54:BB:69:HIS:CD2	2.51	0.43
54:BB:256:ARG:NH2	54:BB:259:GLN:HE22	2.16	0.43
55:CB:89:ILE:HD11	55:CB:134:VAL:HG22	2.00	0.43
56:DB:119:GLN:HG3	56:DB:120:GLU:H	1.82	0.43
59:GB:63:ASP:C	59:GB:65:LYS:H	2.25	0.43
59:GB:111:THR:O	59:GB:115:LYS:HB2	2.17	0.43
61:IB:75:VAL:HG13	61:IB:84:ILE:HD12	2.00	0.43
65:MB:81:ARG:HB2	65:MB:117:GLY:CA	2.48	0.43
66:NB:10:PHE:HA	66:NB:18:ALA:O	2.18	0.43
66:NB:45:ARG:HG3	66:NB:49:TYR:CE2	2.52	0.43
77:YB:33:LEU:HA	77:YB:80:ARG:O	2.18	0.43
81:CC:144:CYS:O	81:CC:145:HIS:C	2.61	0.43
82:DC:86:VAL:HA	82:DC:89:ILE:CD1	2.48	0.43
82:DC:482:LYS:O	82:DC:484:SER:N	2.51	0.43
82:DC:630:ALA:O	82:DC:633:ILE:HG12	2.18	0.43
1:A:147:A:H2'	1:A:148:A:C8	2.53	0.43
1:A:325:G:H5"	61:IB:132:SER:OG	2.18	0.43
1:A:611:U:C2'	1:A:612:U:H5'	2.47	0.43
1:A:627:C:N4	1:A:628:G:C6	2.86	0.43
1:A:635:A:O3'	72:TB:6:VAL:HG21	2.19	0.43
1:A:637:C:H2'	1:A:638:U:O2	2.18	0.43
1:A:765:G:N1	59:GB:149:ARG:HG3	2.33	0.43
1:A:792:U:H3'	1:A:793:A:C8	2.53	0.43
1:A:955:A:H2	1:A:1047:G:O4'	2.01	0.43
1:A:1238:A:H2'	1:A:1239:U:H5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1313:A:C4	1:A:1315:U:H5'	2.53	0.43
1:A:1338:C:H1'	1:A:1410:A:C5	2.53	0.43
1:A:1452:U:H2'	1:A:1453:G:C8	2.54	0.43
1:A:1535:U:H5"	55:CB:187:ILE:HD11	2.00	0.43
1:A:1623:C:O2'	1:A:1624:C:H5'	2.18	0.43
1:A:1638:G:OP2	83:EC:6952:U:H2'	2.17	0.43
2:B:798:G:OP1	32:FA:32:ARG:HG2	2.19	0.43
2:B:892:U:H2'	2:B:893:C:H6	1.83	0.43
2:B:1008:U:H3	2:B:1042:U:H3	1.65	0.43
2:B:1255:C:O2'	2:B:1256:G:H5'	2.18	0.43
2:B:1405:U:O4'	36:JA:57:TYR:HB3	2.18	0.43
2:B:1424:C:H2'	2:B:1425:U:O4'	2.18	0.43
2:B:1471:U:H5"	23:W:5:ARG:HB2	2.00	0.43
2:B:1631:C:H5"	2:B:1632:A:H5"	2.00	0.43
2:B:2251:G:H3'	2:B:2252:A:C8	2.48	0.43
2:B:2854:U:H2'	2:B:2855:U:H6	1.82	0.43
2:B:3359:A:H2'	2:B:3359:A:N3	2.33	0.43
2:B:3382:U:O2'	2:B:3383:G:H5'	2.18	0.43
4:D:7:G:OP1	9:I:33:ARG:HD2	2.18	0.43
6:F:206:PRO:HA	6:F:212:GLY:HA3	2.01	0.43
8:H:11:LEU:HD21	8:H:155:ASP:HB3	2.00	0.43
9:I:68:THR:HG21	9:I:73:VAL:CG2	2.48	0.43
10:J:150:LYS:HD2	10:J:150:LYS:N	2.33	0.43
11:K:79:ALA:HA	25:Y:138:SER:N	2.33	0.43
11:K:198:ALA:O	11:K:202:LEU:N	2.36	0.43
12:L:47:SER:N	29:CA:27:ARG:HB2	2.33	0.43
14:N:115:MET:CG	14:N:118:ALA:HA	2.46	0.43
14:N:129:VAL:HA	14:N:133:GLN:OE1	2.18	0.43
16:P:87:GLU:HG2	16:P:89:PRO:HD2	2.00	0.43
16:P:114:ARG:HB2	16:P:129:THR:HG23	1.99	0.43
17:Q:104:ARG:HH11	17:Q:104:ARG:HG3	1.83	0.43
19:S:48:ALA:O	19:S:53:TYR:N	2.51	0.43
19:S:140:LYS:O	19:S:144:ARG:HG3	2.18	0.43
22:V:38:ARG:HG3	22:V:39:ARG:N	2.34	0.43
25:Y:92:ARG:HB3	25:Y:94:GLU:OE1	2.18	0.43
27:AA:37:ILE:HD11	27:AA:59:MET:HB2	2.00	0.43
29:CA:66:PRO:HG3	29:CA:84:PHE:CD1	2.52	0.43
39:MA:6:ALA:HB1	39:MA:10:ARG:NH1	2.33	0.43
41:OA:24:ARG:O	41:OA:25:ARG:HB3	2.18	0.43
46:TA:21:THR:HG22	46:TA:22:GLN:H	1.83	0.43
46:TA:68:VAL:CB	46:TA:85:LEU:HB3	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:UA:55:TRP:HH2	47:UA:69:TYR:O	2.01	0.43
49:WA:85:TRP:HA	49:WA:109:ASP:HB3	2.00	0.43
50:XA:129:ASP:C	50:XA:131:GLN:N	2.76	0.43
53:AB:5:ILE:HG22	53:AB:10:LYS:HB2	2.00	0.43
53:AB:19:ALA:O	53:AB:22:ASN:HB2	2.19	0.43
53:AB:156:PHE:CD2	53:AB:189:MET:HE1	2.43	0.43
54:BB:179:LYS:O	54:BB:181:VAL:HG23	2.18	0.43
55:CB:99:MET:N	55:CB:103:ASN:HB3	2.33	0.43
59:GB:76:LEU:HG	59:GB:80:LEU:HD11	1.99	0.43
69:QB:25:GLN:NE2	69:QB:111:ILE:HD12	2.33	0.43
70:RB:26:LEU:HD23	70:RB:114:VAL:CG2	2.48	0.43
74:VB:75:VAL:HG13	74:VB:75:VAL:O	2.18	0.43
82:DC:45:ILE:CG2	82:DC:438:MET:HE1	2.41	0.43
82:DC:285:PHE:HA	82:DC:320:LEU:CD1	2.40	0.43
82:DC:616:ALA:CB	82:DC:631:ARG:HG3	2.48	0.43
1:A:317:C:H4’	1:A:354:C:C1’	2.44	0.43
1:A:318:U:H2’	1:A:319:U:C5’	2.48	0.43
1:A:513:U:H4’	59:GB:131:GLN:HB3	2.00	0.43
1:A:1025:A:H4’	1:A:1774:G:O5’	2.18	0.43
1:A:1050:G:H2’	1:A:1051:G:O4’	2.19	0.43
1:A:1535:U:C2	55:CB:187:ILE:HA	2.52	0.43
1:A:1603:U:H2’	1:A:1604:U:C6	2.52	0.43
2:B:26:A:H2	2:B:328:U:H1’	1.83	0.43
2:B:93:C:H6	2:B:93:C:H5’	1.83	0.43
2:B:126:U:H4’	19:S:139:HIS:CE1	2.54	0.43
2:B:338:A:H2	2:B:1380:G:N2	2.16	0.43
2:B:347:G:OP1	8:H:56:ALA:HA	2.18	0.43
2:B:995:U:H2’	2:B:996:A:H8	1.82	0.43
2:B:1033:U:H2’	2:B:1034:U:C6	2.54	0.43
2:B:1203:A:N6	2:B:1300:G:H2’	2.33	0.43
2:B:1252:A:N1	2:B:1263:A:H2’	2.33	0.43
2:B:1300:G:O5’	2:B:1301:A:H2’	2.18	0.43
2:B:1348:U:H4’	2:B:1349:G:O5’	2.18	0.43
2:B:1348:U:C4’	2:B:1349:G:H5”	2.47	0.43
2:B:2341:A:H2’	2:B:2342:U:C6	2.54	0.43
2:B:2637:A:C2’	2:B:2638:C:C5’	2.97	0.43
2:B:3111:U:C2’	2:B:3112:G:H5’	2.48	0.43
7:G:58:ARG:HA	7:G:357:LYS:H	1.83	0.43
7:G:146:ARG:HA	7:G:146:ARG:HE	1.83	0.43
8:H:247:PHE:CE1	8:H:249:ILE:HG23	2.53	0.43
12:L:33:ASN:OD1	12:L:38:GLN:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:126:VAL:HG22	13:M:164:ILE:HG13	2.00	0.43
14:N:200:LEU:HD13	14:N:209:ASN:HD22	1.84	0.43
16:P:117:ARG:O	16:P:118:ASP:C	2.61	0.43
17:Q:3:ILE:HD12	32:FA:41:HIS:ND1	2.33	0.43
17:Q:95:ILE:N	17:Q:95:ILE:HD12	2.33	0.43
17:Q:157:ARG:HH21	32:FA:124:ILE:HG21	1.81	0.43
18:R:49:PRO:HG2	18:R:50:LYS:NZ	2.34	0.43
21:U:64:ASN:HA	21:U:67:ILE:HD12	2.00	0.43
21:U:165:VAL:HG13	21:U:165:VAL:O	2.18	0.43
22:V:17:THR:O	22:V:18:ALA:HB2	2.18	0.43
22:V:185:LYS:HA	22:V:185:LYS:HE2	2.00	0.43
32:FA:6:THR:C	32:FA:8:THR:H	2.26	0.43
33:GA:51:ALA:O	33:GA:55:ALA:HB2	2.18	0.43
43:QA:31:THR:O	43:QA:32:ASN:HB2	2.17	0.43
46:TA:73:GLU:HG2	46:TA:80:ARG:CG	2.48	0.43
52:ZA:63:VAL:HG23	52:ZA:134:LEU:CD1	2.47	0.43
54:BB:37:LYS:HB2	54:BB:40:GLU:CG	2.47	0.43
56:DB:141:ILE:HG21	56:DB:157:VAL:HB	2.00	0.43
57:EB:91:ILE:CD1	57:EB:129:LEU:HA	2.45	0.43
58:FB:11:ARG:HA	58:FB:16:ALA:O	2.18	0.43
58:FB:197:THR:HA	58:FB:200:LYS:HB2	2.00	0.43
68:PB:76:PRO:C	68:PB:78:HIS:H	2.27	0.43
73:UB:69:ARG:HD2	73:UB:116:ASP:OD1	2.18	0.43
73:UB:93:LEU:HA	73:UB:96:VAL:CG2	2.47	0.43
75:WB:65:LEU:O	75:WB:70:LYS:HB3	2.19	0.43
77:YB:55:THR:HB	77:YB:60:SER:HA	2.00	0.43
82:DC:18:ASN:O	82:DC:19:VAL:HG23	2.17	0.43
1:A:1182:U:O5’	1:A:1182:U:H6	2.02	0.43
1:A:1244:A:H3’	1:A:1244:A:N3	2.34	0.43
1:A:1318:G:H8	1:A:1318:G:O5’	2.01	0.43
1:A:1793:G:O2’	1:A:1794:A:H3’	2.19	0.43
2:B:347:G:H2’	2:B:348:A:C8	2.53	0.43
2:B:517:G:H2’	2:B:518:G:H5’	1.99	0.43
2:B:817:A:C5	41:OA:14:LYS:HG2	2.52	0.43
2:B:885:U:O3’	2:B:1851:G:H5”	2.19	0.43
2:B:1282:G:H4’	48:VA:82:GLY:HA2	1.99	0.43
2:B:1415:U:C2’	2:B:1416:C:H5’	2.49	0.43
2:B:1694:U:H5”	38:LA:24:LYS:CG	2.48	0.43
2:B:1785:U:H2’	2:B:1786:G:H8	1.76	0.43
2:B:1845:G:H3’	2:B:1846:C:H5’	2.00	0.43
2:B:2372:A:C3’	2:B:2373:A:H5’	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3055:U:O3'	2:B:3056:U:H3'	2.18	0.43
3:C:142:C:H2'	3:C:143:U:C6	2.53	0.43
6:F:82:VAL:HG12	6:F:86:GLN:HE22	1.83	0.43
8:H:300:ARG:HB2	8:H:301:PRO:CD	2.46	0.43
9:I:222:LEU:O	9:I:223:PHE:HB2	2.19	0.43
10:J:110:LYS:HB3	10:J:113:LYS:HB3	2.01	0.43
11:K:80:GLN:HB2	11:K:80:GLN:HE21	1.67	0.43
11:K:207:LEU:CD2	11:K:240:VAL:HG12	2.46	0.43
12:L:46:LEU:HD23	12:L:49:TYR:HD1	1.82	0.43
19:S:47:LYS:O	19:S:50:ARG:HG2	2.16	0.43
22:V:170:ARG:C	22:V:172:PHE:H	2.25	0.43
22:V:171:LYS:HA	32:FA:56:VAL:HG13	2.00	0.43
30:DA:106:ILE:HG21	30:DA:109:LEU:HD23	1.99	0.43
32:FA:112:ILE:HB	32:FA:130:VAL:HG12	1.99	0.43
34:HA:73:GLY:H	34:HA:76:GLU:HG3	1.82	0.43
35:IA:38:LYS:HD3	35:IA:38:LYS:C	2.43	0.43
41:OA:29:VAL:O	41:OA:32:LYS:HG2	2.18	0.43
49:WA:22:SER:CB	49:WA:70:ASP:HA	2.48	0.43
49:WA:66:HIS:ND1	49:WA:67:ILE:N	2.66	0.43
52:ZA:156:THR:CG2	72:TB:99:PHE:HZ	2.32	0.43
52:ZA:169:LEU:HD21	52:ZA:188:LEU:HD11	2.00	0.43
53:AB:53:THR:HG21	53:AB:100:ALA:HB1	2.00	0.43
54:BB:207:LEU:HB3	54:BB:219:VAL:HG11	2.00	0.43
55:CB:25:LEU:HD23	55:CB:27:THR:H	1.83	0.43
56:DB:153:VAL:O	56:DB:154:ARG:HB3	2.19	0.43
57:EB:49:ILE:HD11	57:EB:172:VAL:HG22	2.00	0.43
59:GB:20:GLU:HG2	59:GB:22:SER:OG	2.18	0.43
61:IB:76:VAL:HG11	61:IB:106:ASN:HD21	1.83	0.43
63:KB:120:SER:O	63:KB:124:ARG:HG3	2.18	0.43
66:NB:115:THR:O	66:NB:116:LEU:C	2.60	0.43
66:NB:117:LEU:HD22	66:NB:117:LEU:N	2.33	0.43
69:QB:28:LEU:HD13	69:QB:29:GLU:H	1.83	0.43
73:UB:51:GLY:HA2	73:UB:77:ILE:CG1	2.31	0.43
82:DC:4:PHE:HB2	82:DC:9:MET:HE1	1.99	0.43
82:DC:98:PHE:CZ	82:DC:339:VAL:HG11	2.53	0.43
82:DC:296:ILE:CB	82:DC:297:PRO:CD	2.91	0.43
82:DC:382:VAL:HG21	82:DC:396:ALA:HB1	2.01	0.43
82:DC:434:VAL:HG12	82:DC:445:ILE:CG2	2.47	0.43
1:A:54:C:H2'	1:A:55:A:H8	1.84	0.43
1:A:119:A:H61	54:BB:7:LYS:HD3	1.83	0.43
1:A:284:G:O2'	1:A:285:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:324:U:H2'	1:A:325:G:C8	2.54	0.43
1:A:380:U:O5'	1:A:381:C:H5	2.02	0.43
1:A:748:U:OP1	72:TB:80:ASN:HB3	2.18	0.43
1:A:1055:U:O2'	1:A:1056:U:H5'	2.18	0.43
1:A:1341:A:N1	1:A:1384:A:C2	2.87	0.43
1:A:1783:C:H2'	1:A:1784:C:C6	2.52	0.43
2:B:132:C:H2'	2:B:133:U:H5"	2.01	0.43
2:B:149:U:H2'	2:B:150:A:H5"	2.00	0.43
2:B:190:U:OP1	30:DA:37:LYS:HB3	2.19	0.43
2:B:367:A:C2'	2:B:368:G:H5'	2.47	0.43
2:B:442:G:H22	2:B:493:G:H5"	1.84	0.43
2:B:524:U:H3'	2:B:525:C:H6	1.84	0.43
2:B:869:G:O2'	2:B:870:G:H5'	2.18	0.43
2:B:881:C:H2'	2:B:882:A:C8	2.53	0.43
2:B:1097:G:O3'	25:Y:129:LYS:HG2	2.18	0.43
2:B:1715:A:C6	34:HA:85:PHE:HB3	2.53	0.43
2:B:1937:U:H2'	2:B:1938:U:C6	2.54	0.43
2:B:2354:C:H2'	2:B:2355:G:O4'	2.18	0.43
2:B:2703:A:C2	9:I:150:LEU:HD21	2.53	0.43
2:B:2808:A:H4'	2:B:2810:C:OP2	2.19	0.43
2:B:2882:U:H4'	7:G:263:SER:C	2.44	0.43
2:B:3206:C:H5'	24:X:157:GLN:HE22	1.82	0.43
2:B:3282:U:H2'	2:B:3283:U:C6	2.53	0.43
4:D:65:G:H4'	14:N:204:GLY:C	2.43	0.43
7:G:113:GLU:HB3	7:G:176:ALA:CB	2.47	0.43
7:G:305:ILE:HG12	7:G:321:PHE:CE2	2.53	0.43
7:G:356:LEU:HB2	7:G:359:ILE:HD11	1.99	0.43
8:H:289:ILE:HD13	22:V:125:ASP:OD1	2.18	0.43
11:K:88:ARG:CG	11:K:112:ASN:H	2.31	0.43
12:L:55:TYR:CE2	12:L:56:VAL:HG23	2.54	0.43
13:M:49:ASN:O	13:M:51:GLN:N	2.51	0.43
14:N:60:LEU:HG	14:N:129:VAL:CG2	2.49	0.43
14:N:193:ASP:HB3	14:N:197:VAL:CA	2.48	0.43
17:Q:2:ALA:HB1	32:FA:35:ALA:HB2	2.01	0.43
17:Q:56:PRO:HB3	17:Q:75:PHE:CE1	2.54	0.43
21:U:27:LYS:H	21:U:27:LYS:CD	2.29	0.43
23:W:19:LYS:HA	23:W:22:VAL:CG2	2.48	0.43
23:W:165:LYS:HA	23:W:165:LYS:HE3	2.00	0.43
25:Y:30:TYR:HE1	25:Y:94:GLU:HG3	1.84	0.43
27:AA:37:ILE:HG13	27:AA:59:MET:HB2	1.99	0.43
29:CA:99:VAL:HA	29:CA:103:TYR:HD2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:113:LEU:HG	29:CA:123:TYR:CE2	2.44	0.43
30:DA:18:ALA:HA	30:DA:21:THR:OG1	2.19	0.43
31:EA:10:VAL:CG1	31:EA:22:LYS:HD3	2.49	0.43
31:EA:13:VAL:CB	31:EA:19:ALA:HA	2.47	0.43
36:JA:65:PHE:HB2	36:JA:72:LYS:HG2	1.98	0.43
37:KA:32:ILE:HG21	37:KA:100:ILE:HD12	1.99	0.43
49:WA:306:THR:C	49:WA:308:ASN:H	2.26	0.43
50:XA:20:ALA:HB3	50:XA:22:THR:HG23	1.99	0.43
50:XA:140:ASN:HA	71:SB:31:SER:O	2.19	0.43
50:XA:183:ARG:CB	50:XA:184:LEU:HD12	2.48	0.43
53:AB:20:GLU:HA	60:HB:61:TRP:NE1	2.34	0.43
53:AB:72:LEU:HD23	60:HB:20:VAL:CG1	2.48	0.43
54:BB:208:VAL:O	54:BB:219:VAL:HG13	2.19	0.43
55:CB:161:ASP:HB3	78:ZB:54:LEU:HG	1.99	0.43
57:EB:135:ILE:HG12	57:EB:154:LEU:HD23	2.01	0.43
58:FB:97:THR:O	58:FB:169:ILE:HB	2.18	0.43
66:NB:139:GLN:HG2	66:NB:140:LYS:N	2.33	0.43
72:TB:81:VAL:CG1	72:TB:86:ILE:HG13	2.48	0.43
73:UB:24:TRP:HA	73:UB:24:TRP:HE3	1.83	0.43
73:UB:32:ARG:NH1	73:UB:32:ARG:HB3	2.33	0.43
73:UB:137:LYS:CD	73:UB:139:LYS:HE2	2.45	0.43
75:WB:71:ILE:HB	75:WB:75:LEU:HB2	2.01	0.43
1:A:67:A:H2'	1:A:69:G:O4'	2.18	0.43
1:A:68:A:OP2	1:A:69:G:H5'	2.19	0.43
1:A:464:A:H4'	1:A:528:U:H3	1.83	0.43
1:A:607:G:H5'	1:A:613:G:H22	1.82	0.43
1:A:1197:C:H4'	70:RB:77:LYS:HE2	1.99	0.43
1:A:1321:A:H4'	1:A:1322:A:O5'	2.19	0.43
1:A:1675:C:H1'	58:FB:32:GLN:NE2	2.33	0.43
2:B:39:A:O5'	2:B:40:A:H4'	2.18	0.43
2:B:407:A:H2'	2:B:408:A:C8	2.54	0.43
2:B:408:A:H62	3:C:15:G:N2	2.17	0.43
2:B:677:A:H2'	2:B:785:G:O6	2.18	0.43
2:B:1108:U:O2'	2:B:1109:U:H5'	2.19	0.43
2:B:1128:U:C4	2:B:1129:A:C6	3.06	0.43
2:B:1220:U:H4'	2:B:1222:G:C1'	2.49	0.43
2:B:1390:A:H5'	2:B:1390:A:N3	2.34	0.43
2:B:1439:U:C4'	8:H:95:ARG:HD3	2.46	0.43
2:B:1490:A:H2'	2:B:1491:A:C8	2.53	0.43
2:B:1552:G:H4'	2:B:2171:G:H5"	2.00	0.43
2:B:1851:G:O2'	41:OA:6:PRO:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1912:U:C4	2:B:1913:A:C6	3.06	0.43
2:B:2079:G:H2'	2:B:2080:C:O4'	2.19	0.43
2:B:2148:U:H5	2:B:2187:G:N3	2.16	0.43
2:B:2155:G:H5"	6:F:241:ARG:NH2	2.32	0.43
2:B:2549:G:H5"	12:L:35:GLY:HA3	1.99	0.43
2:B:2619:G:H3'	2:B:2620:G:C8	2.53	0.43
2:B:2815:G:H1'	2:B:2818:U:C5	2.53	0.43
2:B:2881:C:H2'	2:B:2882:U:C6	2.54	0.43
2:B:2988:C:OP1	20:T:64:PHE:HE1	2.00	0.43
2:B:3038:U:H2'	2:B:3039:C:H6	1.83	0.43
2:B:3135:U:C4	2:B:3136:G:C5	3.07	0.43
2:B:3164:C:O2'	2:B:3165:A:H8	2.01	0.43
2:B:3309:G:H4'	21:U:70:THR:O	2.19	0.43
5:E:74:VAL:O	5:E:78:LYS:HG3	2.18	0.43
6:F:120:PRO:HB3	6:F:161:ASP:O	2.19	0.43
7:G:229:VAL:HA	7:G:232:ARG:HB2	2.00	0.43
7:G:295:ALA:HB1	7:G:300:ARG:N	2.33	0.43
9:I:69:ILE:HD11	25:Y:32:LYS:HA	1.99	0.43
13:M:189:GLU:HG3	13:M:190:ASP:N	2.34	0.43
14:N:152:LEU:O	14:N:156:ARG:HB3	2.18	0.43
15:O:84:LEU:HB3	15:O:89:TYR:CD1	2.53	0.43
17:Q:131:LYS:O	17:Q:132:ALA:C	2.61	0.43
17:Q:165:SER:C	17:Q:167:PHE:H	2.27	0.43
20:T:13:GLY:HA3	20:T:125:ARG:CZ	2.49	0.43
20:T:171:LYS:HA	20:T:174:PHE:HB2	2.00	0.43
25:Y:130:ARG:HH11	25:Y:130:ARG:CB	2.31	0.43
34:HA:41:LEU:HD12	34:HA:92:ILE:CD1	2.45	0.43
34:HA:44:ILE:CG2	34:HA:53:LYS:HG3	2.47	0.43
36:JA:25:TYR:HB3	36:JA:27:ARG:HG2	2.00	0.43
38:LA:5:VAL:CG1	38:LA:32:ALA:HB2	2.46	0.43
38:LA:42:PRO:CB	38:LA:51:LEU:HD13	2.41	0.43
39:MA:21:LEU:HD12	39:MA:54:VAL:CG1	2.48	0.43
47:UA:25:GLN:NE2	47:UA:28:LYS:HD2	2.33	0.43
47:UA:55:TRP:O	47:UA:64:VAL:HG22	2.19	0.43
48:VA:22:TYR:CD2	48:VA:88:PHE:HB3	2.53	0.43
48:VA:26:PHE:HE2	48:VA:96:ILE:HD11	1.82	0.43
49:WA:193:ILE:HG22	49:WA:194:GLY:N	2.32	0.43
50:XA:155:PHE:CZ	71:SB:61:SER:HB3	2.54	0.43
52:ZA:56:ILE:CG2	52:ZA:61:LEU:HB2	2.40	0.43
53:AB:116:ARG:O	53:AB:120:TYR:HD2	2.01	0.43
53:AB:207:THR:HB	67:OB:40:THR:OG1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:131:LEU:HD13	54:BB:137:PRO:HB3	2.01	0.43
54:BB:175:PHE:CZ	54:BB:225:VAL:HG11	2.54	0.43
56:DB:3:LEU:HD13	56:DB:111:LEU:CD1	2.49	0.43
56:DB:67:VAL:H	56:DB:100:ALA:CB	2.26	0.43
57:EB:74:GLN:HG2	57:EB:131:PHE:CD1	2.53	0.43
59:GB:30:LEU:CD2	59:GB:102:GLU:HG3	2.48	0.43
61:IB:83:THR:HA	61:IB:111:VAL:H	1.84	0.43
61:IB:125:VAL:HB	61:IB:138:ASN:C	2.43	0.43
65:MB:85:ILE:HD11	65:MB:119:PHE:CZ	2.53	0.43
65:MB:94:VAL:HG12	65:MB:96:ILE:HG13	2.00	0.43
66:NB:93:HIS:ND1	66:NB:97:VAL:HG11	2.34	0.43
69:QB:15:ILE:HA	69:QB:18:TYR:HB3	2.00	0.43
69:QB:41:SER:O	69:QB:84:LYS:HD2	2.18	0.43
72:TB:22:LYS:O	72:TB:23:ARG:HD2	2.18	0.43
72:TB:76:SER:OG	72:TB:77:PRO:HA	2.19	0.43
82:DC:225:PHE:O	82:DC:229:TYR:HB2	2.18	0.43
82:DC:226:ALA:O	82:DC:230:ALA:HB2	2.18	0.43
82:DC:237:LYS:O	82:DC:241:MET:HG2	2.18	0.43
82:DC:365:ASN:ND2	82:DC:377:ASP:HB3	2.34	0.43
1:A:319:U:H4’	1:A:323:A:C1’	2.48	0.43
1:A:1116:A:C2’	1:A:1117:U:H5’	2.48	0.43
1:A:1441:C:H5”	82:DC:656:LEU:HD13	2.01	0.43
1:A:1484:G:H2’	1:A:1485:C:C6	2.54	0.43
2:B:3:U:H3	3:C:156:U:H3	1.67	0.43
2:B:188:U:O2	2:B:223:U:H4’	2.18	0.43
2:B:195:U:H2’	2:B:196:G:C5’	2.49	0.43
2:B:786:A:H5”	22:V:147:ARG:HG2	2.00	0.43
2:B:986:U:H2’	2:B:987:U:C6	2.54	0.43
2:B:1130:A:N6	14:N:115:MET:HE1	2.28	0.43
2:B:1234:G:H5”	16:P:118:ASP:CB	2.35	0.43
2:B:1247:U:H3	2:B:1274:A:H61	1.66	0.43
2:B:1259:A:H62	48:VA:38:MET:HG2	1.83	0.43
2:B:1305:U:C4	7:G:256:HIS:HB3	2.54	0.43
2:B:1368:U:O2’	2:B:1369:A:H5’	2.19	0.43
2:B:1403:C:H2’	2:B:1404:G:O4’	2.19	0.43
2:B:1458:U:C5’	35:IA:30:PRO:HB3	2.49	0.43
2:B:1769:G:H2’	2:B:1770:G:C8	2.53	0.43
2:B:2193:U:C4	2:B:2243:A:N6	2.87	0.43
2:B:2424:A:O2’	19:S:77:LYS:HA	2.18	0.43
2:B:2471:U:H2’	2:B:2472:U:H5”	2.01	0.43
2:B:2939:G:N7	7:G:3:HIS:HB3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2988:C:H5”	20:T:65:ASN:HB2	2.01	0.43
3:C:14:C:H5”	21:U:123:PRO:CD	2.45	0.43
4:D:9:C:H2’	4:D:10:C:O4’	2.18	0.43
4:D:98:C:C3’	4:D:99:G:H5”	2.49	0.43
5:E:94:ASN:CB	5:E:124:LEU:HB2	2.49	0.43
7:G:46:PHE:HZ	7:G:204:ALA:HA	1.84	0.43
7:G:165:GLN:HE21	7:G:168:LYS:CG	2.31	0.43
8:H:103:THR:HG23	8:H:107:ARG:HH21	1.83	0.43
8:H:136:LEU:HD13	8:H:143:GLU:HG3	2.00	0.43
8:H:151:VAL:HA	8:H:250:TRP:O	2.19	0.43
8:H:179:LEU:O	8:H:183:LYS:HB2	2.18	0.43
8:H:219:LEU:HB2	8:H:227:THR:HG23	2.00	0.43
9:I:47:PRO:HB2	9:I:49:TYR:CE2	2.54	0.43
9:I:291:ALA:HA	9:I:295:GLY:HA3	2.00	0.43
10:J:158:TYR:CD1	18:R:115:PHE:HD2	2.37	0.43
11:K:24:GLU:O	11:K:25:GLN:HB3	2.17	0.43
11:K:88:ARG:NH1	11:K:103:LEU:HD13	2.34	0.43
13:M:71:VAL:CA	13:M:74:LEU:HB2	2.45	0.43
13:M:80:THR:HG22	13:M:84:LYS:HE2	2.00	0.43
13:M:99:ILE:O	13:M:101:VAL:HG23	2.18	0.43
13:M:123:ILE:HD12	13:M:123:ILE:N	2.33	0.43
15:O:47:GLN:HA	15:O:67:VAL:CG1	2.39	0.43
15:O:50:ALA:HB3	15:O:63:GLU:H	1.83	0.43
17:Q:115:ARG:NH1	17:Q:145:PHE:O	2.52	0.43
19:S:68:ARG:CZ	19:S:123:GLN:HB2	2.49	0.43
20:T:188:SER:N	20:T:191:ALA:HB3	2.26	0.43
23:W:45:VAL:HA	23:W:50:ILE:O	2.19	0.43
25:Y:143:THR:HG23	25:Y:144:GLU:H	1.83	0.43
27:AA:7:GLN:HE22	27:AA:127:PRO:HG2	1.83	0.43
28:BA:33:ASN:OD1	28:BA:35:LYS:HB3	2.19	0.43
29:CA:81:ILE:CG2	29:CA:123:TYR:HB3	2.48	0.43
32:FA:96:LYS:O	32:FA:97:GLU:HB2	2.18	0.43
35:IA:5:LYS:O	35:IA:8:VAL:HG23	2.19	0.43
38:LA:101:VAL:O	38:LA:105:VAL:HG23	2.18	0.43
41:OA:64:MET:SD	41:OA:67:LEU:HG	2.59	0.43
47:UA:19:GLY:H	47:UA:22:LEU:HD12	1.84	0.43
49:WA:202:LEU:CA	49:WA:243:LEU:HD12	2.49	0.43
50:XA:174:TRP:O	50:XA:177:LEU:HB2	2.19	0.43
53:AB:17:PHE:HB2	53:AB:77:PHE:CZ	2.53	0.43
53:AB:93:ASP:CG	53:AB:129:SER:HB3	2.43	0.43
53:AB:215:GLU:N	53:AB:216:PRO:HD3	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:104:ASP:HB3	54:BB:105:VAL:H	1.69	0.43
55:CB:97:LEU:HD23	55:CB:176:THR:CB	2.48	0.43
57:EB:118:LEU:HD13	57:EB:119:THR:N	2.33	0.43
63:KB:26:PHE:CD2	63:KB:66:ILE:HD11	2.54	0.43
63:KB:86:GLU:HG3	63:KB:87:ASP:N	2.33	0.43
67:OB:5:ARG:HG2	67:OB:9:VAL:HG11	2.00	0.43
73:UB:4:GLY:O	73:UB:5:LYS:C	2.61	0.43
74:VB:78:SER:C	74:VB:80:ALA:H	2.26	0.43
82:DC:365:ASN:O	82:DC:369:ILE:HG12	2.18	0.43
82:DC:530:VAL:HG12	82:DC:538:LEU:HD11	1.99	0.43
82:DC:578:LYS:HB3	82:DC:585:ARG:CG	2.33	0.43
83:EC:6906:G:H2'	83:EC:6907:G:C8	2.54	0.43
1:A:320:U:C3'	1:A:321:C:H5"	2.48	0.43
1:A:531:C:H3'	1:A:532:U:C5'	2.49	0.43
1:A:556:A:H1'	1:A:590:C:H1'	2.01	0.43
1:A:842:C:H2'	1:A:843:U:O4'	2.19	0.43
1:A:952:A:H2'	1:A:953:G:C8	2.53	0.43
1:A:1280:C:H2'	1:A:1281:G:C8	2.54	0.43
2:B:660:A:H5'	8:H:100:PHE:CB	2.49	0.43
2:B:750:G:OP1	33:GA:40:ARG:HG2	2.19	0.43
2:B:750:G:C4'	33:GA:44:LYS:HG3	2.46	0.43
2:B:786:A:C5'	22:V:147:ARG:HG2	2.48	0.43
2:B:894:G:N2	2:B:1660:C:H5'	2.34	0.43
2:B:901:G:H2'	2:B:902:G:O4'	2.19	0.43
2:B:912:G:H5"	2:B:913:A:OP1	2.17	0.43
2:B:924:G:O5'	2:B:924:G:C8	2.70	0.43
2:B:924:G:N7	2:B:2809:C:H1'	2.34	0.43
2:B:937:G:C6	2:B:2410:U:H5"	2.54	0.43
2:B:1186:G:O2'	2:B:1187:C:H5'	2.19	0.43
2:B:1282:G:H5'	48:VA:83:ASN:HA	2.00	0.43
2:B:1311:G:O5'	2:B:1311:G:C8	2.70	0.43
2:B:1446:A:H5'	2:B:1448:U:H1'	1.99	0.43
2:B:1726:C:O5'	2:B:1726:C:H6	2.01	0.43
2:B:1953:G:H2'	2:B:1953:G:N3	2.34	0.43
2:B:2163:C:O2'	6:F:11:GLY:HA3	2.19	0.43
2:B:2888:U:C4'	2:B:2889:C:H5	2.32	0.43
2:B:2964:G:N2	2:B:2966:G:H3'	2.34	0.43
2:B:3058:U:H3'	2:B:3058:U:O2	2.19	0.43
2:B:3366:G:OP1	28:BA:59:HIS:HB3	2.19	0.43
5:E:93:LEU:HD22	5:E:99:LEU:CG	2.45	0.43
5:E:110:PHE:O	5:E:136:THR:HG22	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:225:ILE:HG22	6:F:238:ILE:HG12	2.01	0.43
6:F:252:THR:O	6:F:252:THR:HG23	2.18	0.43
7:G:196:ARG:HD2	7:G:199:PHE:CE2	2.54	0.43
7:G:358:TRP:O	7:G:359:ILE:HD12	2.19	0.43
8:H:34:ILE:HG21	8:H:120:TYR:HD1	1.84	0.43
9:I:273:ARG:HG2	9:I:274:GLN:N	2.32	0.43
11:K:84:VAL:HG12	11:K:138:TYR:CD1	2.54	0.43
13:M:24:ILE:CG1	13:M:39:LYS:HD2	2.49	0.43
16:P:110:ILE:HG22	16:P:129:THR:CG2	2.48	0.43
17:Q:57:VAL:O	17:Q:58:VAL:HB	2.18	0.43
17:Q:75:PHE:H	17:Q:97:VAL:HA	1.84	0.43
17:Q:168:ARG:HA	17:Q:168:ARG:HE	1.83	0.43
18:R:44:VAL:CG2	18:R:60:LEU:HD21	2.45	0.43
18:R:55:ARG:CD	24:X:70:THR:HB	2.47	0.43
19:S:53:TYR:CE1	19:S:55:ALA:HA	2.53	0.43
19:S:73:ARG:HB2	19:S:89:VAL:CG1	2.40	0.43
21:U:114:VAL:CB	21:U:150:VAL:HG12	2.39	0.43
21:U:168:LEU:CD2	21:U:176:ILE:HD11	2.48	0.43
22:V:4:ASP:HB3	22:V:6:THR:HG23	2.00	0.43
23:W:3:ASN:OD1	23:W:5:ARG:HB3	2.18	0.43
23:W:109:TYR:C	23:W:115:ILE:HG22	2.44	0.43
29:CA:109:LYS:CE	29:CA:111:ASN:HD21	2.32	0.43
31:EA:81:LEU:HD23	34:HA:59:TYR:OH	2.18	0.43
43:QA:26:TRP:CE3	43:QA:27:ILE:HD12	2.54	0.43
48:VA:27:VAL:HG12	48:VA:188:VAL:HB	2.01	0.43
48:VA:104:ARG:CA	48:VA:184:GLY:HA3	2.48	0.43
49:WA:264:SER:HB2	49:WA:271:VAL:HG21	1.98	0.43
50:XA:189:VAL:CG1	50:XA:190:ASP:H	2.22	0.43
52:ZA:59:HIS:CD2	52:ZA:239:PRO:HD3	2.53	0.43
52:ZA:170:ILE:HB	52:ZA:197:TYR:HB2	2.00	0.43
54:BB:181:VAL:O	54:BB:192:ILE:HA	2.18	0.43
55:CB:166:ARG:O	55:CB:166:ARG:HD3	2.19	0.43
55:CB:200:ASN:HB3	55:CB:207:THR:OG1	2.19	0.43
55:CB:220:VAL:HA	55:CB:223:SER:HB2	2.01	0.43
56:DB:36:VAL:HG12	56:DB:37:ASP:N	2.34	0.43
68:PB:17:LEU:HD22	68:PB:66:LEU:HD22	2.01	0.43
68:PB:22:VAL:HG12	68:PB:23:ASP:N	2.34	0.43
71:SB:14:PRO:HB3	71:SB:23:ILE:CG2	2.49	0.43
82:DC:224:GLN:HE21	82:DC:328:LEU:CD2	2.32	0.43
82:DC:382:VAL:HG13	82:DC:397:PHE:O	2.18	0.43
82:DC:655:TYR:HD2	82:DC:693:LEU:HD13	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:EC:6886:A:C2'	83:EC:6887:G:C5'	2.95	0.43
1:A:40:A:H62	1:A:467:G:N2	2.07	0.43
1:A:57:G:O2'	1:A:58:U:H5'	2.19	0.43
1:A:228:G:H5'	1:A:228:G:H8	1.84	0.43
1:A:404:G:H2'	1:A:405:C:C6	2.54	0.43
1:A:567:A:N6	1:A:580:A:H61	2.17	0.43
1:A:629:U:H3	1:A:970:A:H62	1.67	0.43
1:A:870:C:O2'	1:A:871:G:H5'	2.19	0.43
1:A:1376:C:O2'	1:A:1377:U:H5'	2.19	0.43
1:A:1483:A:N3	1:A:1607:G:H1'	2.34	0.43
1:A:1586:A:N6	1:A:1610:G:H1'	2.33	0.43
1:A:1739:C:H2'	1:A:1740:A:H8	1.81	0.43
2:B:58:G:N2	2:B:60:A:C2	2.87	0.43
2:B:289:A:H4'	19:S:96:ARG:O	2.18	0.43
2:B:299:G:H2'	2:B:300:G:O4'	2.19	0.43
2:B:415:G:H2'	2:B:416:A:H8	1.84	0.43
2:B:782:U:C2'	2:B:783:A:H5'	2.48	0.43
2:B:997:A:H2'	2:B:998:A:O4'	2.19	0.43
2:B:1082:U:H2'	2:B:1083:G:O4'	2.18	0.43
2:B:1439:U:H2'	2:B:1440:G:C8	2.54	0.43
2:B:1604:G:H4'	2:B:1835:A:O3'	2.19	0.43
2:B:2198:A:C8	2:B:2199:G:H8	2.37	0.43
2:B:2442:G:H21	2:B:2506:U:H1'	1.83	0.43
2:B:2619:G:H3'	2:B:2620:G:H8	1.84	0.43
2:B:3114:A:H3'	2:B:3115:C:H6	1.84	0.43
2:B:3154:C:H5"	2:B:3155:U:H5'	1.99	0.43
2:B:3188:G:OP1	13:M:22:SER:HB2	2.19	0.43
2:B:3215:A:OP1	37:KA:2:ALA:HB2	2.18	0.43
2:B:3243:A:O5'	2:B:3243:A:H8	2.02	0.43
3:C:136:G:O2'	3:C:137:C:H5'	2.19	0.43
3:C:142:C:C5'	19:S:60:VAL:HG21	2.46	0.43
5:E:100:ILE:HG13	5:E:128:LEU:CB	2.49	0.43
5:E:103:LEU:HD13	5:E:107:TYR:CD1	2.54	0.43
6:F:103:PRO:HB2	6:F:106:SER:HB2	2.00	0.43
7:G:67:PHE:HA	7:G:70:ARG:HE	1.84	0.43
7:G:87:VAL:HG12	7:G:110:LEU:HG	2.01	0.43
7:G:149:ALA:HA	7:G:152:LYS:HG3	2.01	0.43
8:H:39:PHE:CE1	8:H:236:LEU:HD23	2.54	0.43
10:J:52:VAL:HA	10:J:67:GLY:O	2.19	0.43
10:J:129:GLU:HG3	10:J:130:ILE:H	1.82	0.43
12:L:52:TRP:HA	12:L:53:PRO:HD3	1.78	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:141:ARG:NE	15:O:144:CYS:HB2	2.34	0.43
16:P:122:GLY:HA2	48:VA:43:LYS:CD	2.44	0.43
17:Q:4:SER:O	17:Q:5:LYS:HB2	2.19	0.43
20:T:76:PRO:HD3	20:T:142:SER:HB3	2.00	0.43
21:U:67:ILE:HG22	21:U:68:GLY:N	2.34	0.43
23:W:58:HIS:HB3	23:W:60:LYS:HZ3	1.82	0.43
24:X:8:GLN:HG3	24:X:26:ARG:HE	1.84	0.43
27:AA:95:PHE:CD1	28:BA:22:VAL:HB	2.54	0.43
28:BA:31:PHE:CD1	28:BA:37:ALA:HA	2.54	0.43
31:EA:2:ALA:HA	34:HA:37:GLY:CA	2.49	0.43
31:EA:29:HIS:HB3	31:EA:40:HIS:CE1	2.54	0.43
32:FA:78:LEU:C	32:FA:80:THR:H	2.25	0.43
36:JA:112:ALA:HA	36:JA:117:ILE:HD11	1.99	0.43
39:MA:51:ILE:HG22	39:MA:55:LEU:CD1	2.49	0.43
48:VA:26:PHE:HB2	48:VA:87:VAL:HB	1.99	0.43
48:VA:63:ILE:C	48:VA:66:PHE:HB3	2.43	0.43
48:VA:119:ILE:HB	48:VA:159:VAL:CG1	2.48	0.43
48:VA:134:SER:HA	48:VA:137:GLN:HB2	2.01	0.43
49:WA:17:ASN:CB	49:WA:39:ASP:HB3	2.48	0.43
49:WA:125:GLY:HA3	49:WA:151:VAL:HG11	2.00	0.43
53:AB:8:LYS:HE2	70:RB:61:LYS:HD3	2.01	0.43
53:AB:150:MET:N	53:AB:150:MET:SD	2.92	0.43
54:BB:43:PRO:HA	54:BB:82:TYR:O	2.19	0.43
54:BB:86:PHE:CE1	54:BB:87:MET:HG2	2.54	0.43
54:BB:160:VAL:HG22	54:BB:172:PHE:HB3	2.01	0.43
55:CB:97:LEU:HD23	55:CB:176:THR:HG22	2.01	0.43
66:NB:67:VAL:HG21	66:NB:85:ILE:CG1	2.48	0.43
74:VB:8:ARG:HB2	74:VB:26:ASP:HB3	2.01	0.43
82:DC:139:THR:O	82:DC:143:LEU:HB2	2.19	0.43
82:DC:281:ILE:O	82:DC:284:LEU:HB2	2.18	0.43
82:DC:413:ILE:HB	82:DC:427:PHE:HB2	2.01	0.43
82:DC:486:SER:HA	82:DC:487:PRO:HD3	1.82	0.43
1:A:1119:G:H2'	1:A:1120:U:O4'	2.19	0.43
1:A:1482:C:O2	66:NB:73:GLY:HA2	2.18	0.43
2:B:78:U:H3	2:B:325:A:N6	2.10	0.43
2:B:307:A:H2'	2:B:308:A:H8	1.83	0.43
2:B:537:A:H2'	2:B:538:G:O4'	2.18	0.43
2:B:730:C:H2'	2:B:731:U:C6	2.54	0.43
2:B:876:A:H4'	2:B:1890:U:H5"	2.00	0.43
2:B:970:A:OP1	33:GA:18:ARG:HG3	2.19	0.43
2:B:975:C:H2'	2:B:976:U:H6	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1088:U:H2'	2:B:1089:G:O4'	2.19	0.43
2:B:1487:G:H2'	2:B:1488:G:C4'	2.49	0.43
2:B:1487:G:H2'	2:B:1488:G:O4'	2.18	0.43
2:B:1660:C:O2'	2:B:1661:G:H5'	2.19	0.43
2:B:1706:C:H2'	2:B:1707:A:O4'	2.19	0.43
2:B:1796:G:H1'	6:F:190:ARG:NH1	2.33	0.43
2:B:1952:G:H2'	2:B:1953:G:H5"	2.01	0.43
2:B:2173:U:H2'	2:B:2174:G:C8	2.54	0.43
2:B:2618:G:OP1	14:N:116:ARG:HG3	2.18	0.43
2:B:2714:G:H5'	2:B:2716:U:C6	2.54	0.43
2:B:2857:C:H2'	2:B:2858:U:H6	1.79	0.43
2:B:3229:G:H1'	18:R:129:TYR:CE2	2.51	0.43
4:D:30:G:H1'	4:D:50:U:O4	2.18	0.43
4:D:77:G:N2	4:D:101:G:H2'	2.34	0.43
5:E:114:GLU:HG3	5:E:115:VAL:H	1.83	0.43
8:H:27:SER:O	8:H:279:HIS:HD2	2.02	0.43
9:I:39:GLN:NE2	9:I:48:LYS:HE3	2.34	0.43
10:J:60:ASP:O	10:J:61:ASN:HB2	2.18	0.43
12:L:98:ARG:HG2	12:L:189:LEU:HB2	2.00	0.43
13:M:41:ILE:HG13	13:M:71:VAL:HG21	2.01	0.43
17:Q:12:ASN:HB3	17:Q:14:PHE:CD1	2.54	0.43
18:R:98:SER:O	18:R:102:LYS:N	2.48	0.43
19:S:103:GLU:HA	19:S:106:VAL:CG2	2.49	0.43
22:V:170:ARG:HH12	32:FA:59:ARG:HA	1.83	0.43
23:W:143:ILE:HG23	23:W:146:LYS:HE3	2.00	0.43
24:X:16:THR:HB	24:X:19:VAL:H	1.83	0.43
24:X:27:MET:HE2	24:X:44:PHE:HB3	1.99	0.43
24:X:141:LYS:HG3	24:X:144:LEU:HD12	2.01	0.43
26:Z:37:LEU:C	26:Z:39:ASP:N	2.77	0.43
32:FA:104:THR:HG21	32:FA:112:ILE:HD11	2.01	0.43
36:JA:13:HIS:CE1	36:JA:15:LYS:HB3	2.54	0.43
48:VA:186:THR:HG22	48:VA:187:VAL:N	2.30	0.43
50:XA:191:ARG:CG	50:XA:192:THR:H	2.30	0.43
52:ZA:162:CYS:SG	52:ZA:209:ASN:HA	2.58	0.43
53:AB:104:SER:O	53:AB:108:LYS:HG3	2.19	0.43
54:BB:42:LEU:HD23	54:BB:42:LEU:C	2.44	0.43
56:DB:93:LYS:HG2	56:DB:94:ARG:H	1.84	0.43
56:DB:214:LYS:O	56:DB:218:GLU:N	2.51	0.43
57:EB:98:ILE:HD11	57:EB:121:VAL:HB	2.00	0.43
58:FB:65:PHE:O	58:FB:109:PHE:HZ	2.02	0.43
61:IB:58:CYS:O	61:IB:62:GLY:HA3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:NB:109:PHE:HD2	66:NB:117:LEU:HD21	1.83	0.43
70:RB:65:ILE:HD11	79:AC:34:TYR:CE2	2.54	0.43
82:DC:75:ILE:HD11	82:DC:104:ASP:HB2	1.99	0.43
82:DC:511:LEU:O	82:DC:518:VAL:HG11	2.19	0.43
82:DC:612:PHE:HB3	82:DC:615:ARG:HH21	1.83	0.43
1:A:71:A:C2'	1:A:72:A:H4'	2.28	0.42
1:A:72:A:N6	56:DB:169:TYR:HB2	2.33	0.42
1:A:291:G:H2'	1:A:292:U:C5	2.53	0.42
1:A:317:C:O2'	1:A:354:C:H4'	2.19	0.42
1:A:385:A:H5'	58:FB:21:PHE:CZ	2.54	0.42
1:A:882:U:H3	1:A:946:U:H3	1.64	0.42
1:A:1192:C:H3'	1:A:1193:A:C8	2.54	0.42
1:A:1196:A:H1'	1:A:1602:C:O2'	2.18	0.42
1:A:1350:U:H2'	1:A:1351:G:C8	2.54	0.42
1:A:1404:C:H2'	1:A:1405:G:C8	2.53	0.42
1:A:1434:U:H4'	79:AC:24:CYS:HB2	2.01	0.42
1:A:1545:A:H2'	1:A:1546:G:H8	1.79	0.42
1:A:1560:U:H2'	1:A:1561:U:O4'	2.19	0.42
2:B:129:U:H2'	2:B:130:A:C8	2.54	0.42
2:B:417:A:H2'	2:B:418:A:O4'	2.19	0.42
2:B:527:A:H2'	2:B:528:U:C6	2.53	0.42
2:B:697:A:H2'	2:B:698:U:C6	2.54	0.42
2:B:707:U:C5'	2:B:779:G:H21	2.32	0.42
2:B:1019:G:O2'	83:EC:6927:U:H2'	2.19	0.42
2:B:1072:G:H21	33:GA:50:THR:HG21	1.83	0.42
2:B:1262:G:H2'	2:B:1264:G:O4'	2.19	0.42
2:B:1337:A:H2'	2:B:1338:C:O4'	2.19	0.42
2:B:1650:G:H5'	6:F:68:LYS:NZ	2.34	0.42
2:B:1831:U:OP1	29:CA:91:ASN:HA	2.19	0.42
2:B:2149:A:H2'	2:B:2150:G:C5'	2.48	0.42
2:B:2617:U:H4'	2:B:2644:C:H5	1.80	0.42
2:B:2664:C:H2'	2:B:2665:U:C6	2.54	0.42
2:B:2866:U:H4'	2:B:2867:C:H5'	2.00	0.42
2:B:2999:U:O3'	2:B:3296:A:H4'	2.19	0.42
2:B:3137:C:H5"	7:G:276:THR:CB	2.48	0.42
2:B:3273:A:H4'	10:J:44:ALA:HB1	1.97	0.42
2:B:3294:A:H5'	2:B:3294:A:H8	1.84	0.42
4:D:49:G:H4'	4:D:50:U:O4'	2.19	0.42
6:F:68:LYS:CE	6:F:70:ARG:HB2	2.49	0.42
6:F:149:ARG:HA	6:F:154:ALA:O	2.19	0.42
7:G:54:THR:HA	7:G:364:LYS:HZ1	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:166:ILE:HG12	7:G:174:LYS:C	2.44	0.42
8:H:31:ARG:HD3	22:V:25:TYR:H	1.84	0.42
8:H:325:LEU:HD23	8:H:331:ALA:HB3	2.00	0.42
9:I:17:GLN:HG3	25:Y:22:HIS:CB	2.47	0.42
9:I:205:SER:HB2	9:I:233:ALA:HB1	2.01	0.42
10:J:40:LEU:HD21	10:J:54:TYR:HB2	2.00	0.42
10:J:75:PRO:HB2	10:J:134:ARG:HH12	1.84	0.42
10:J:170:LYS:HD2	10:J:173:MET:SD	2.59	0.42
11:K:106:LEU:HD12	11:K:130:ILE:HD11	2.00	0.42
17:Q:76:THR:HG21	17:Q:102:GLN:C	2.44	0.42
21:U:169:THR:H	21:U:172:GLN:NE2	2.16	0.42
22:V:26:LEU:HD11	22:V:52:LEU:O	2.19	0.42
22:V:65:SER:HB2	22:V:93:ILE:HG21	2.01	0.42
24:X:24:LEU:HD21	25:Y:141:VAL:HG11	2.01	0.42
24:X:77:VAL:HG11	24:X:106:LEU:CD2	2.49	0.42
35:IA:35:GLU:O	35:IA:38:LYS:HB3	2.18	0.42
35:IA:54:GLU:HB2	35:IA:95:PRO:HG3	2.01	0.42
36:JA:8:LYS:HE3	36:JA:9:ILE:N	2.34	0.42
36:JA:8:LYS:HG3	36:JA:10:VAL:HG22	2.00	0.42
48:VA:121:VAL:HG12	48:VA:156:VAL:O	2.19	0.42
48:VA:183:PHE:HB3	48:VA:184:GLY:H	1.52	0.42
49:WA:199:ILE:HG22	49:WA:200:ASN:H	1.84	0.42
50:XA:184:LEU:HD12	50:XA:184:LEU:N	2.34	0.42
52:ZA:51:THR:O	52:ZA:72:LEU:HD12	2.19	0.42
55:CB:46:TRP:HE1	55:CB:122:ASN:ND2	2.11	0.42
55:CB:69:PHE:HB3	66:NB:46:PHE:HB2	2.00	0.42
55:CB:145:ASP:O	55:CB:160:VAL:HG22	2.18	0.42
60:HB:59:PHE:CD2	60:HB:62:GLN:HA	2.54	0.42
61:IB:76:VAL:CG1	61:IB:106:ASN:HD21	2.32	0.42
65:MB:63:ALA:O	65:MB:73:PRO:HB3	2.18	0.42
70:RB:63:LEU:HD11	70:RB:86:ILE:HD11	2.01	0.42
73:UB:90:ASP:CG	80:BC:12:GLY:HA2	2.44	0.42
75:WB:92:ILE:HD11	75:WB:100:ILE:HD12	2.00	0.42
78:ZB:26:THR:HB	78:ZB:44:VAL:CG2	2.49	0.42
82:DC:331:ALA:HB1	82:DC:335:LEU:HD12	2.01	0.42
82:DC:380:LEU:O	82:DC:469:LEU:HB2	2.19	0.42
82:DC:655:TYR:H	82:DC:693:LEU:CD1	2.31	0.42
1:A:21:U:H2'	1:A:22:A:H8	1.79	0.42
1:A:256:A:H2'	1:A:257:A:O4'	2.19	0.42
1:A:319:U:H4'	1:A:323:A:N9	2.33	0.42
1:A:460:A:C6	1:A:461:G:H1'	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:606:A:C4'	1:A:607:G:H3'	2.48	0.42
1:A:703:G:C2'	1:A:704:C:H5'	2.49	0.42
1:A:780:A:O2'	74:VB:8:ARG:HA	2.19	0.42
1:A:941:A:H1'	1:A:976:G:O2'	2.18	0.42
1:A:976:G:P	63:KB:109:LYS:HE2	2.59	0.42
1:A:1413:U:H4'	1:A:1414:U:OP2	2.19	0.42
1:A:1441:C:H2'	1:A:1442:U:C6	2.54	0.42
2:B:199:A:OP1	30:DA:60:ARG:HA	2.20	0.42
2:B:378:A:H4'	30:DA:91:ASN:HB3	2.01	0.42
2:B:524:U:C5	2:B:568:G:N2	2.80	0.42
2:B:635:G:H2'	2:B:636:C:H5"	2.01	0.42
2:B:790:U:H2'	2:B:791:A:H8	1.84	0.42
2:B:821:U:H5'	2:B:912:G:H5'	2.02	0.42
2:B:837:A:H3'	2:B:838:G:H8	1.84	0.42
2:B:892:U:H4'	2:B:2134:G:OP1	2.20	0.42
2:B:978:G:H5"	2:B:979:U:OP1	2.18	0.42
2:B:997:A:H3'	2:B:998:A:C8	2.51	0.42
2:B:1153:A:O2'	2:B:1154:A:H5'	2.20	0.42
2:B:1220:U:H3'	2:B:1221:A:N3	2.33	0.42
2:B:1694:U:H5"	38:LA:24:LYS:HG2	2.00	0.42
2:B:1768:U:H3'	2:B:1769:G:H5"	2.01	0.42
2:B:1870:C:H5"	2:B:3076:C:O2'	2.19	0.42
2:B:2061:G:O2'	2:B:2062:G:H5'	2.19	0.42
2:B:2339:C:O2	2:B:2340:U:H1'	2.19	0.42
2:B:2376:G:H2'	2:B:2377:G:C8	2.54	0.42
2:B:2469:G:H22	2:B:2477:G:C1'	2.32	0.42
2:B:2624:G:C2'	2:B:2625:C:H5'	2.50	0.42
2:B:2987:A:O2'	7:G:260:VAL:N	2.52	0.42
2:B:3279:A:H5'	2:B:3279:A:C8	2.48	0.42
2:B:3370:A:H2'	2:B:3371:G:O4'	2.19	0.42
3:C:140:G:N2	19:S:110:ALA:HA	2.34	0.42
5:E:117:ILE:O	5:E:117:ILE:HD13	2.19	0.42
6:F:40:TYR:CA	6:F:91:GLY:HA3	2.49	0.42
7:G:11:HIS:CD2	7:G:235:THR:HA	2.54	0.42
7:G:52:GLY:HA3	7:G:311:PHE:CE1	2.54	0.42
7:G:141:GLY:CA	7:G:144:ILE:HB	2.50	0.42
7:G:321:PHE:CE1	7:G:323:MET:HE2	2.50	0.42
8:H:99:MET:HG2	8:H:100:PHE:N	2.34	0.42
8:H:246:ARG:HD2	8:H:247:PHE:H	1.83	0.42
8:H:296:GLN:CA	8:H:299:ILE:HB	2.47	0.42
8:H:299:ILE:HG23	8:H:300:ARG:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:219:PHE:HE2	9:I:223:PHE:HB2	1.82	0.42
13:M:3:TYR:CD2	13:M:65:VAL:HG21	2.54	0.42
14:N:77:THR:HG22	14:N:82:ARG:CB	2.46	0.42
15:O:137:ARG:HG2	15:O:141:ARG:NH1	2.27	0.42
16:P:133:LEU:HB3	16:P:142:ARG:NH2	2.29	0.42
17:Q:170:LEU:CD2	40:NA:7:ILE:HD12	2.49	0.42
18:R:98:SER:HA	18:R:101:LYS:CB	2.32	0.42
20:T:70:PRO:HB2	20:T:72:HIS:NE2	2.33	0.42
20:T:168:TYR:O	20:T:172:ARG:HB2	2.20	0.42
24:X:14:LEU:HD21	25:Y:136:ARG:HG3	2.02	0.42
25:Y:17:ARG:HH11	25:Y:17:ARG:HG3	1.84	0.42
25:Y:80:VAL:HG11	25:Y:83:ARG:HE	1.83	0.42
26:Z:14:THR:HG22	26:Z:16:THR:HG23	2.00	0.42
27:AA:93:LEU:HA	28:BA:20:LEU:O	2.19	0.42
28:BA:59:HIS:O	28:BA:61:LYS:N	2.52	0.42
29:CA:135:ILE:O	29:CA:139:ILE:HG22	2.19	0.42
30:DA:28:ARG:HH12	30:DA:29:VAL:HG22	1.82	0.42
32:FA:74:ASN:HD22	32:FA:115:LYS:HB2	1.84	0.42
34:HA:25:LEU:CD2	34:HA:81:VAL:HG11	2.46	0.42
36:JA:64:LYS:O	36:JA:65:PHE:HB2	2.19	0.42
47:UA:4:ARG:HH11	47:UA:4:ARG:CB	2.31	0.42
48:VA:135:PHE:HB3	48:VA:172:LEU:HD23	2.00	0.42
50:XA:169:SER:O	50:XA:170:ILE:C	2.62	0.42
50:XA:178:ALA:O	50:XA:179:ARG:C	2.62	0.42
52:ZA:162:CYS:HB3	52:ZA:209:ASN:O	2.18	0.42
52:ZA:228:ASN:HD22	71:SB:1:MET:HG2	1.83	0.42
53:AB:217:ILE:HG22	53:AB:218:LEU:H	1.84	0.42
57:EB:125:ILE:O	57:EB:129:LEU:HG	2.19	0.42
58:FB:104:ILE:HD11	58:FB:165:LEU:HB2	2.00	0.42
61:IB:99:ARG:NH1	73:UB:7:ARG:HA	2.31	0.42
65:MB:90:ILE:HA	65:MB:107:ILE:CG2	2.49	0.42
72:TB:83:ILE:O	72:TB:83:ILE:HG13	2.19	0.42
82:DC:32:LYS:HB3	82:DC:128:VAL:HG11	2.01	0.42
82:DC:203:TYR:C	82:DC:205:ALA:H	2.26	0.42
82:DC:365:ASN:HB3	82:DC:379:MET:CE	2.48	0.42
82:DC:389:SER:C	82:DC:391:LYS:H	2.27	0.42
82:DC:510:ARG:O	82:DC:514:SER:HB2	2.19	0.42
82:DC:662:SER:HB2	82:DC:705:ILE:CD1	2.48	0.42
82:DC:723:LYS:HA	82:DC:808:PRO:HD3	2.00	0.42
1:A:162:A:C5'	56:DB:83:CYS:HA	2.48	0.42
1:A:461:G:H5'	54:BB:27:TYR:OH	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:640:U:H2'	1:A:641:G:O4'	2.19	0.42
1:A:867:G:P	63:KB:3:ARG:HD3	2.59	0.42
1:A:1263:G:H5'	82:DC:613:LYS:HE2	2.00	0.42
1:A:1263:G:OP1	82:DC:613:LYS:HG2	2.20	0.42
1:A:1477:G:H5"	69:QB:45:MET:O	2.19	0.42
1:A:1510:U:O2'	1:A:1511:U:H5'	2.20	0.42
2:B:58:G:N2	2:B:60:A:H2	2.16	0.42
2:B:149:U:C2'	2:B:150:A:H5"	2.48	0.42
2:B:162:G:O2'	2:B:163:C:H5'	2.19	0.42
2:B:217:U:H4'	30:DA:100:HIS:NE2	2.33	0.42
2:B:672:A:H2'	2:B:673:U:C6	2.54	0.42
2:B:784:A:C5	22:V:93:ILE:HG22	2.55	0.42
2:B:855:U:H5"	23:W:95:TRP:CG	2.54	0.42
2:B:1102:A:C2	2:B:1105:A:H5'	2.54	0.42
2:B:1360:C:H2'	2:B:1361:U:C6	2.54	0.42
2:B:1387:G:O2'	36:JA:77:ALA:HB1	2.19	0.42
2:B:1503:A:H2'	2:B:1504:A:O4'	2.20	0.42
2:B:1717:U:H2'	2:B:1718:G:C8	2.54	0.42
2:B:1726:C:P	47:UA:36:ARG:HH12	2.41	0.42
2:B:1899:G:H22	2:B:2335:G:C5'	2.32	0.42
2:B:1949:G:OP1	23:W:101:VAL:HG13	2.19	0.42
2:B:2153:U:O3'	6:F:243:THR:HA	2.19	0.42
2:B:2878:G:OP1	2:B:2924:U:H4'	2.19	0.42
2:B:2987:A:H4'	7:G:259:HIS:HB3	2.01	0.42
2:B:3383:G:H2'	2:B:3383:G:N3	2.34	0.42
3:C:56:G:H2'	3:C:57:C:O4'	2.19	0.42
4:D:6:C:OP2	9:I:27:LYS:HE2	2.19	0.42
4:D:65:G:H2'	4:D:66:A:C8	2.53	0.42
6:F:60:LYS:CD	6:F:73:GLU:HB3	2.49	0.42
6:F:123:ARG:HA	6:F:163:ARG:NH2	2.35	0.42
8:H:319:LYS:O	8:H:320:ASN:HB2	2.19	0.42
9:I:296:GLN:O	9:I:297:GLN:HB2	2.17	0.42
10:J:68:PRO:C	10:J:70:LYS:H	2.27	0.42
10:J:82:ARG:HD2	37:KA:104:PRO:CB	2.47	0.42
10:J:152:THR:HA	10:J:153:PRO:HD3	1.81	0.42
10:J:166:LYS:H	10:J:169:ASP:HB2	1.85	0.42
14:N:163:GLN:O	14:N:164:LYS:HB3	2.19	0.42
14:N:218:ALA:O	14:N:219:ALA:HB3	2.20	0.42
16:P:78:SER:O	16:P:82:ILE:HG12	2.18	0.42
16:P:110:ILE:HG21	16:P:142:ARG:NH2	2.34	0.42
19:S:84:PRO:HB3	46:TA:51:GLY:CA	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:14:SER:HA	21:U:151:THR:HA	2.00	0.42
21:U:113:TYR:HB3	21:U:153:LYS:HB2	2.00	0.42
24:X:80:ARG:HG3	25:Y:156:TYR:CB	2.48	0.42
28:BA:56:ARG:NH2	28:BA:61:LYS:HB2	2.32	0.42
30:DA:116:LYS:HA	30:DA:119:ILE:HD12	2.00	0.42
35:IA:15:ASN:HB3	35:IA:18:LYS:HG2	2.02	0.42
36:JA:61:LYS:HA	36:JA:64:LYS:CB	2.49	0.42
37:KA:49:ILE:HG22	37:KA:100:ILE:HG23	2.01	0.42
38:LA:70:LYS:HB3	38:LA:71:THR:H	1.64	0.42
46:TA:27:GLN:H	46:TA:93:LEU:HD11	1.84	0.42
47:UA:24:ARG:HH22	47:UA:28:LYS:HE2	1.84	0.42
47:UA:83:ILE:O	47:UA:87:ARG:HB2	2.19	0.42
49:WA:60:SER:HB2	66:NB:94:GLN:HE22	1.85	0.42
50:XA:153:SER:C	50:XA:156:VAL:HG22	2.44	0.42
52:ZA:53:ILE:HG23	52:ZA:72:LEU:HD23	2.00	0.42
53:AB:17:PHE:CD1	53:AB:17:PHE:C	2.97	0.42
53:AB:140:GLY:HA3	53:AB:182:LEU:CD1	2.50	0.42
54:BB:159:THR:HB	54:BB:227:VAL:HG23	2.01	0.42
55:CB:208:SER:OG	55:CB:211:ILE:HG12	2.20	0.42
56:DB:64:LYS:HD2	56:DB:81:VAL:CG2	2.50	0.42
73:UB:56:LYS:N	73:UB:98:GLU:HG2	2.34	0.42
74:VB:27:VAL:HG12	74:VB:29:HIS:HD2	1.84	0.42
75:WB:80:LEU:HD13	75:WB:101:TYR:CD2	2.54	0.42
79:AC:22:ARG:HG3	79:AC:38:ILE:HD11	2.01	0.42
82:DC:70:ILE:HD13	82:DC:71:LYS:HG3	2.00	0.42
82:DC:267:LYS:HA	82:DC:268:PRO:HD3	1.72	0.42
1:A:115:G:OP1	61:IB:67:ARG:HD2	2.20	0.42
1:A:211:U:H5"	61:IB:20:PHE:HB2	2.00	0.42
1:A:382:C:H6	1:A:382:C:O5'	2.02	0.42
1:A:798:C:H2'	1:A:799:A:C8	2.54	0.42
1:A:1370:U:H4'	1:A:1371:A:C5'	2.49	0.42
1:A:1586:A:H1'	1:A:1611:A:N6	2.35	0.42
1:A:1653:C:H2'	1:A:1654:G:O4'	2.20	0.42
2:B:365:A:H3'	2:B:366:A:H8	1.84	0.42
2:B:523:A:H2'	2:B:524:U:H5'	2.00	0.42
2:B:640:U:H2'	2:B:641:C:C5	2.54	0.42
2:B:989:A:O2'	2:B:990:U:H5'	2.20	0.42
2:B:1004:U:N3	2:B:1049:C:H1'	2.34	0.42
2:B:1210:U:H2'	2:B:1211:U:C6	2.54	0.42
2:B:1338:C:H5"	36:JA:60:ASN:ND2	2.34	0.42
2:B:1894:U:H2'	2:B:1895:A:C5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2057:G:H21	2:B:2077:U:H5	1.67	0.42
2:B:2550:U:O4	12:L:36:ILE:HG22	2.19	0.42
2:B:2675:C:N3	15:O:22:SER:HB2	2.34	0.42
2:B:2815:G:O2'	2:B:2817:A:H5"	2.20	0.42
2:B:2999:U:O2'	2:B:3296:A:H5'	2.18	0.42
2:B:3107:U:H2'	2:B:3108:G:O4'	2.20	0.42
4:D:112:G:H2'	4:D:113:C:C6	2.54	0.42
6:F:39:GLY:HA2	6:F:93:LYS:HB2	2.00	0.42
6:F:118:GLU:HB3	6:F:156:LYS:NZ	2.34	0.42
7:G:56:ILE:HD11	7:G:356:LEU:HB3	2.00	0.42
7:G:256:HIS:HA	7:G:258:ALA:N	2.34	0.42
7:G:356:LEU:HD12	7:G:359:ILE:CD1	2.49	0.42
8:H:206:LEU:CD1	8:H:237:GLN:HB3	2.50	0.42
8:H:334:PHE:CD1	8:H:339:LEU:HB2	2.55	0.42
9:I:212:ALA:HB2	9:I:219:PHE:HE1	1.84	0.42
11:K:90:LYS:HG2	11:K:95:ILE:HD11	2.00	0.42
12:L:134:TYR:CD2	12:L:134:TYR:N	2.88	0.42
15:O:9:MET:HE2	15:O:134:PRO:CG	2.42	0.42
17:Q:157:ARG:HE	32:FA:124:ILE:HD12	1.84	0.42
18:R:50:LYS:HZ3	18:R:85:TRP:CG	2.38	0.42
25:Y:48:ILE:HG22	25:Y:49:GLN:N	2.34	0.42
25:Y:63:VAL:O	25:Y:75:ILE:HG22	2.20	0.42
26:Z:37:LEU:HD23	26:Z:56:VAL:CG1	2.49	0.42
30:DA:26:GLN:O	30:DA:30:LEU:HB2	2.20	0.42
32:FA:7:LYS:CA	32:FA:10:LYS:HB2	2.46	0.42
39:MA:9:LEU:HD11	39:MA:54:VAL:HG22	2.00	0.42
45:SA:21:ARG:O	45:SA:25:LYS:HB3	2.19	0.42
46:TA:53:GLN:NE2	46:TA:57:VAL:HG13	2.35	0.42
47:UA:86:LEU:HA	47:UA:89:MET:HB2	2.01	0.42
48:VA:33:VAL:CG2	48:VA:38:MET:HB2	2.49	0.42
49:WA:179:LYS:HG2	49:WA:191:ASP:OD1	2.19	0.42
49:WA:245:PHE:HE1	49:WA:250:TYR:HA	1.85	0.42
50:XA:98:ILE:HG22	50:XA:100:GLY:H	1.84	0.42
50:XA:111:ILE:O	50:XA:111:ILE:HG13	2.19	0.42
50:XA:133:ILE:HG23	50:XA:155:PHE:HB3	2.01	0.42
53:AB:13:ALA:O	53:AB:16:VAL:HB	2.19	0.42
54:BB:6:LYS:HD2	54:BB:6:LYS:H	1.83	0.42
54:BB:48:LEU:HA	54:BB:52:LEU:HD12	2.01	0.42
54:BB:113:ARG:HG3	54:BB:113:ARG:NH1	2.33	0.42
54:BB:193:GLY:O	54:BB:210:ILE:HG22	2.20	0.42
57:EB:36:ALA:HA	57:EB:39:ARG:HD3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:EB:86:GLN:C	57:EB:88:ARG:H	2.27	0.42
59:GB:133:HIS:C	59:GB:134:ILE:HG12	2.45	0.42
60:HB:52:LYS:HG3	60:HB:54:TYR:HE2	1.83	0.42
61:IB:42:PHE:CZ	61:IB:70:ILE:HD13	2.54	0.42
61:IB:64:VAL:HG12	61:IB:129:ARG:HH11	1.84	0.42
67:OB:23:LYS:O	67:OB:24:LEU:HB2	2.20	0.42
69:QB:47:PRO:CG	69:QB:53:TRP:HB2	2.49	0.42
70:RB:24:ILE:HD11	70:RB:93:LEU:CD1	2.49	0.42
74:VB:104:SER:O	74:VB:108:ARG:HG3	2.19	0.42
78:ZB:28:VAL:CG2	78:ZB:48:VAL:HG11	2.49	0.42
82:DC:810:ASP:C	82:DC:812:THR:N	2.77	0.42
1:A:20:G:H5”	1:A:571:G:C5	2.54	0.42
1:A:624:G:H2’	1:A:625:C:O4’	2.19	0.42
1:A:768:C:N1	59:GB:143:ILE:HD13	2.34	0.42
1:A:856:A:C6	57:EB:96:ARG:HB3	2.55	0.42
1:A:867:G:OP1	63:KB:3:ARG:HD3	2.19	0.42
1:A:1715:G:H3’	1:A:1716:C:H4’	2.00	0.42
1:A:1771:U:C2	1:A:1772:C:H1’	2.54	0.42
2:B:258:G:O2’	2:B:259:C:H5’	2.20	0.42
2:B:417:A:H2’	2:B:418:A:C8	2.54	0.42
2:B:498:A:H61	2:B:615:U:H3	1.67	0.42
2:B:685:G:OP1	17:Q:35:ARG:HG2	2.18	0.42
2:B:810:A:H2’	2:B:811:U:H6	1.79	0.42
2:B:871:U:OP1	2:B:2142:A:H2’	2.20	0.42
2:B:932:U:O5’	2:B:932:U:H6	2.03	0.42
2:B:1231:A:H2’	2:B:1277:C:H41	1.84	0.42
2:B:1308:A:N1	2:B:2381:G:H1’	2.35	0.42
2:B:1398:U:H5”	3:C:9:A:OP1	2.19	0.42
2:B:1468:A:N1	2:B:1881:A:H5’	2.34	0.42
2:B:1494:U:O2	2:B:1496:C:C4	2.73	0.42
2:B:2302:G:H2’	2:B:2303:A:O4’	2.18	0.42
2:B:2595:A:H2’	2:B:2596:U:H5’	2.00	0.42
2:B:2649:A:C2’	2:B:2650:U:H5’	2.50	0.42
2:B:2655:U:H5’	46:TA:3:ASN:O	2.20	0.42
2:B:2878:G:O2’	2:B:2879:C:H5’	2.19	0.42
2:B:3323:A:H2	35:IA:106:THR:HG22	1.84	0.42
3:C:74:U:P	30:DA:76:LEU:HG	2.59	0.42
7:G:171:LEU:HD23	7:G:333:LYS:HE2	2.01	0.42
7:G:367:LYS:HD3	28:BA:17:ARG:HH21	1.83	0.42
8:H:179:LEU:HD23	8:H:179:LEU:HA	1.87	0.42
9:I:44:TYR:C	9:I:46:THR:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:84:VAL:O	11:K:116:PHE:HA	2.20	0.42
11:K:178:ILE:HD11	11:K:187:GLU:HG2	2.01	0.42
14:N:33:ILE:HD11	14:N:35:ASP:O	2.19	0.42
17:Q:128:ARG:NH1	39:MA:112:PRO:HG3	2.35	0.42
18:R:66:THR:HB	18:R:67:PRO:CD	2.43	0.42
19:S:8:GLU:HG3	19:S:50:ARG:NH2	2.26	0.42
19:S:99:ARG:HE	19:S:118:SER:HB3	1.84	0.42
20:T:152:VAL:O	20:T:155:LYS:HG2	2.20	0.42
20:T:172:ARG:HA	20:T:175:THR:HG23	2.01	0.42
23:W:86:GLU:CG	23:W:91:SER:HB2	2.47	0.42
24:X:11:GLY:CA	24:X:57:GLU:O	2.67	0.42
24:X:11:GLY:CA	24:X:59:VAL:HG23	2.40	0.42
25:Y:36:VAL:HA	25:Y:64:VAL:HG22	2.01	0.42
27:AA:37:ILE:CD1	27:AA:59:MET:HB2	2.48	0.42
30:DA:19:TYR:CE2	30:DA:30:LEU:HD21	2.54	0.42
36:JA:78:ASN:HA	36:JA:108:ILE:CD1	2.50	0.42
39:MA:21:LEU:HA	39:MA:24:LEU:HD12	2.01	0.42
44:RA:103:LEU:HD13	44:RA:109:ASN:O	2.20	0.42
48:VA:96:ILE:O	48:VA:100:ILE:HG12	2.19	0.42
49:WA:9:LEU:HA	49:WA:313:TRP:CD1	2.54	0.42
49:WA:83:ALA:HB2	49:WA:113:VAL:CG1	2.49	0.42
55:CB:88:PRO:HG2	55:CB:91:GLU:HB2	2.02	0.42
57:EB:39:ARG:CG	57:EB:40:PRO:HD3	2.50	0.42
58:FB:29:LEU:HG	58:FB:31:ARG:HH11	1.84	0.42
60:HB:1:MET:HE1	60:HB:41:TYR:CA	2.49	0.42
63:KB:113:PHE:O	63:KB:117:LEU:HG	2.20	0.42
68:PB:145:ARG:HA	68:PB:145:ARG:NE	2.35	0.42
69:QB:70:GLN:HA	69:QB:122:ARG:O	2.19	0.42
70:RB:50:LEU:CD1	70:RB:93:LEU:HD22	2.49	0.42
72:TB:11:LEU:CD1	72:TB:74:VAL:HB	2.50	0.42
73:UB:14:LYS:HE2	73:UB:14:LYS:HB2	1.84	0.42
74:VB:12:VAL:C	74:VB:13:ILE:HD12	2.44	0.42
75:WB:72:GLY:O	75:WB:76:ALA:HB2	2.19	0.42
82:DC:24:VAL:HG22	82:DC:126:LEU:HD23	2.00	0.42
82:DC:539:GLU:HA	82:DC:542:LEU:HD12	2.01	0.42
82:DC:634:TRP:NE1	82:DC:648:ASP:HB2	2.34	0.42
2:B:20:A:H1'	19:S:112:ASN:CB	2.42	0.42
2:B:590:G:N2	2:B:610:G:H2'	2.34	0.42
2:B:1076:C:H1'	33:GA:42:ASN:CG	2.45	0.42
2:B:1155:C:H2'	2:B:1156:C:H6	1.84	0.42
2:B:1791:C:H5"	47:UA:13:LYS:HZ1	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2206:G:H2'	2:B:2206:G:N3	2.35	0.42
2:B:2466:G:H2'	2:B:2467:G:H5'	2.00	0.42
2:B:2629:U:H2'	2:B:2630:C:C6	2.55	0.42
2:B:2797:C:C3'	2:B:2798:C:H5'	2.50	0.42
2:B:2882:U:O3'	7:G:263:SER:HB3	2.18	0.42
2:B:2883:U:O2'	2:B:2884:C:H5'	2.20	0.42
2:B:2934:A:H2'	2:B:2935:U:C4'	2.50	0.42
2:B:3029:A:O5'	2:B:3029:A:C8	2.70	0.42
2:B:3109:G:O2'	2:B:3110:C:H5'	2.19	0.42
2:B:3113:A:H8	2:B:3119:U:H3	1.65	0.42
7:G:261:MET:HA	20:T:64:PHE:O	2.20	0.42
7:G:310:GLY:HA2	7:G:315:GLY:O	2.19	0.42
7:G:313:HIS:O	7:G:333:LYS:HE3	2.20	0.42
8:H:198:ARG:NH1	30:DA:12:ARG:HH21	2.09	0.42
8:H:205:PRO:C	8:H:246:ARG:HH21	2.27	0.42
8:H:219:LEU:CD1	8:H:227:THR:HG22	2.49	0.42
9:I:247:ILE:C	9:I:249:ALA:H	2.28	0.42
10:J:54:TYR:HA	10:J:65:ILE:HG22	2.01	0.42
11:K:88:ARG:HH12	11:K:103:LEU:HD13	1.85	0.42
11:K:129:LEU:CD2	11:K:130:ILE:HG23	2.45	0.42
11:K:170:GLU:OE1	11:K:170:GLU:HA	2.18	0.42
13:M:137:SER:HB3	13:M:143:GLU:HB3	2.00	0.42
14:N:73:ASN:HA	14:N:76:MET:SD	2.59	0.42
17:Q:115:ARG:NH1	17:Q:145:PHE:HB2	2.35	0.42
18:R:113:THR:HG22	18:R:115:PHE:N	2.27	0.42
20:T:57:PHE:HE2	20:T:72:HIS:HA	1.79	0.42
24:X:12:ARG:NH1	24:X:21:GLU:HA	2.35	0.42
26:Z:49:ASN:C	26:Z:51:GLY:H	2.27	0.42
27:AA:19:VAL:HA	27:AA:36:ILE:HB	2.00	0.42
29:CA:42:ARG:C	29:CA:44:PRO:HD3	2.45	0.42
31:EA:22:LYS:O	31:EA:45:GLY:HA3	2.18	0.42
32:FA:60:TYR:CB	32:FA:63:LYS:HD2	2.49	0.42
35:IA:29:ALA:HB1	35:IA:60:TRP:CE2	2.54	0.42
48:VA:42:ARG:HH12	48:VA:51:VAL:HB	1.79	0.42
49:WA:16:HIS:CE1	49:WA:43:ILE:HB	2.54	0.42
50:XA:50:VAL:HG22	67:OB:109:LEU:HD22	2.02	0.42
52:ZA:37:PRO:HD3	52:ZA:46:LYS:HD2	2.01	0.42
59:GB:47:PHE:O	59:GB:51:LYS:HG3	2.19	0.42
65:MB:18:ARG:HB3	68:PB:95:GLY:HA3	2.02	0.42
65:MB:32:ASP:CA	65:MB:35:LYS:HB2	2.49	0.42
68:PB:12:GLN:HG3	68:PB:15:LEU:HD13	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SB:20:THR:O	71:SB:21:ASN:HB2	2.19	0.42
71:SB:71:ARG:HH22	72:TB:23:ARG:HG2	1.85	0.42
73:UB:86:PHE:O	73:UB:124:VAL:HG23	2.19	0.42
82:DC:189:VAL:C	82:DC:191:THR:H	2.28	0.42
82:DC:632:LYS:HB3	82:DC:648:ASP:CB	2.28	0.42
82:DC:724:ILE:O	82:DC:804:LEU:HB2	2.20	0.42
1:A:16:G:H2'	1:A:17:C:N1	2.35	0.42
1:A:325:G:H2'	1:A:326:G:H8	1.85	0.42
1:A:1136:U:H5'	73:UB:62:LYS:NZ	2.35	0.42
1:A:1166:A:H4'	1:A:1587:A:H4'	2.02	0.42
1:A:1634:C:O2'	1:A:1635:A:H5'	2.19	0.42
2:B:40:A:H2'	2:B:2410:U:H5	1.84	0.42
2:B:99:A:OP2	19:S:195:ASN:ND2	2.53	0.42
2:B:181:U:C2	2:B:182:U:H1'	2.55	0.42
2:B:559:A:H2'	2:B:560:G:O4'	2.20	0.42
2:B:665:A:C5'	19:S:199:LEU:HD21	2.40	0.42
2:B:874:U:P	7:G:241:LYS:HE3	2.59	0.42
2:B:934:G:H2'	2:B:935:U:C6	2.55	0.42
2:B:1259:A:H62	48:VA:38:MET:HE2	1.84	0.42
2:B:1377:G:H5'	2:B:1408:G:O2'	2.20	0.42
2:B:1430:U:H5	32:FA:3:SER:HB2	1.84	0.42
2:B:1547:G:OP1	19:S:104:GLU:HG3	2.20	0.42
2:B:2342:U:H2'	2:B:2343:C:C5	2.53	0.42
2:B:2403:G:H5"	2:B:2871:G:H5'	2.01	0.42
2:B:2529:A:H2'	2:B:2530:G:C8	2.54	0.42
2:B:2541:U:C1'	2:B:2542:U:O5'	2.68	0.42
2:B:2549:G:H3'	2:B:2550:U:O2	2.19	0.42
2:B:2581:U:O5'	2:B:2581:U:H6	2.01	0.42
2:B:3328:G:N2	2:B:3379:C:H1'	2.34	0.42
3:C:122:U:H3	3:C:131:A:H61	1.66	0.42
5:E:99:LEU:HD13	5:E:99:LEU:C	2.45	0.42
5:E:113:SER:HA	5:E:139:SER:CA	2.50	0.42
5:E:120:VAL:CG1	5:E:124:LEU:HD23	2.49	0.42
6:F:150:LEU:HB3	6:F:151:PRO:CD	2.50	0.42
7:G:332:ARG:H	7:G:332:ARG:HD3	1.84	0.42
7:G:373:PRO:O	7:G:376:LYS:HB3	2.19	0.42
8:H:119:ARG:HD2	8:H:271:LYS:HD3	2.00	0.42
8:H:222:VAL:HA	8:H:223:PRO:HD3	1.78	0.42
8:H:244:LEU:H	8:H:244:LEU:CD2	2.16	0.42
8:H:267:VAL:O	8:H:268:ALA:C	2.63	0.42
10:J:55:LEU:HB2	10:J:64:LEU:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:81:ALA:O	10:J:84:VAL:HB	2.19	0.42
11:K:90:LYS:HA	11:K:220:PHE:HE1	1.84	0.42
11:K:153:PHE:HB2	11:K:203:TRP:HB3	2.02	0.42
14:N:36:LEU:HD11	14:N:69:ARG:HD3	2.02	0.42
14:N:72:ALA:C	14:N:76:MET:HE3	2.44	0.42
15:O:96:PHE:CD1	15:O:102:PHE:HB3	2.54	0.42
15:O:161:SER:O	15:O:165:GLN:HG3	2.19	0.42
17:Q:17:HIS:HB2	17:Q:21:ARG:HH12	1.85	0.42
17:Q:115:ARG:NH1	17:Q:145:PHE:CB	2.82	0.42
18:R:20:VAL:CG2	18:R:68:LEU:HB2	2.49	0.42
19:S:27:VAL:HG22	19:S:31:ARG:HH21	1.85	0.42
19:S:58:GLY:HA2	19:S:136:ASP:OD1	2.19	0.42
19:S:145:ASP:C	19:S:147:ARG:H	2.26	0.42
20:T:108:ILE:HD13	20:T:117:ARG:NH1	2.34	0.42
21:U:126:ARG:HA	21:U:140:GLU:CB	2.50	0.42
22:V:60:PRO:O	22:V:61:PRO:C	2.63	0.42
22:V:62:VAL:HG13	22:V:66:ARG:HG2	2.01	0.42
22:V:72:LYS:NZ	22:V:72:LYS:HB3	2.34	0.42
31:EA:134:LEU:HD12	31:EA:136:PHE:CD1	2.55	0.42
35:IA:33:VAL:O	35:IA:33:VAL:HG13	2.18	0.42
38:LA:22:VAL:HG12	38:LA:30:LEU:HD11	2.01	0.42
40:NA:79:SER:OG	40:NA:81:THR:HG22	2.19	0.42
46:TA:68:VAL:HB	46:TA:85:LEU:CB	2.36	0.42
48:VA:65:GLY:HA2	48:VA:73:PHE:CG	2.54	0.42
49:WA:61:PHE:HB3	49:WA:92:TRP:CD2	2.55	0.42
50:XA:38:PHE:O	50:XA:39:ASN:HB3	2.19	0.42
53:AB:5:ILE:HG21	53:AB:10:LYS:HE3	2.01	0.42
54:BB:106:LYS:HG3	54:BB:108:ARG:HD3	2.01	0.42
55:CB:77:TYR:HA	55:CB:83:ARG:CG	2.50	0.42
55:CB:123:VAL:HG21	75:WB:100:ILE:CD1	2.46	0.42
58:FB:85:PRO:CB	61:IB:12:ALA:HB2	2.34	0.42
59:GB:59:LEU:HB3	59:GB:69:ARG:HG3	2.01	0.42
60:HB:3:MET:HE1	60:HB:45:ALA:HB2	2.01	0.42
65:MB:18:ARG:HB3	68:PB:95:GLY:CA	2.50	0.42
65:MB:92:SER:O	65:MB:107:ILE:HG12	2.19	0.42
80:BC:20:LYS:HA	80:BC:20:LYS:CE	2.39	0.42
82:DC:6:VAL:C	82:DC:9:MET:HG2	2.45	0.42
82:DC:225:PHE:HD1	82:DC:228:ARG:HD2	1.84	0.42
82:DC:329:PRO:O	82:DC:332:ASP:HB2	2.19	0.42
82:DC:488:VAL:HG12	82:DC:796:MET:H	1.84	0.42
82:DC:655:TYR:HB2	82:DC:693:LEU:CD2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:826:HIS:CB	82:DC:828:MET:HG3	2.45	0.42
83:EC:6771:U:H1'	83:EC:6821:U:OP2	2.19	0.42
1:A:43:A:H4'	1:A:99:C:OP1	2.20	0.42
1:A:179:A:H2'	1:A:180:A:O4'	2.19	0.42
1:A:556:A:N3	1:A:590:C:H1'	2.35	0.42
1:A:1241:G:O2'	65:MB:78:THR:HA	2.19	0.42
1:A:1329:A:H3'	1:A:1330:G:H8	1.85	0.42
1:A:1555:A:O2'	65:MB:82:ASN:HB2	2.19	0.42
2:B:136:G:H2'	2:B:137:G:O4'	2.19	0.42
2:B:284:A:N6	2:B:2785:A:H1'	2.34	0.42
2:B:561:C:OP1	18:R:76:ALA:HA	2.20	0.42
2:B:724:U:O2'	2:B:725:G:H5'	2.20	0.42
2:B:729:C:O2'	22:V:79:LYS:HE3	2.20	0.42
2:B:1123:U:C4	2:B:1124:U:C5	3.07	0.42
2:B:1191:U:OP2	20:T:49:ARG:HB2	2.20	0.42
2:B:1505:C:N3	2:B:1515:A:H1'	2.35	0.42
2:B:1639:C:H5"	38:LA:52:GLN:O	2.20	0.42
2:B:1867:A:H2'	2:B:1868:G:C8	2.55	0.42
2:B:2157:G:O2'	6:F:156:LYS:HD2	2.19	0.42
2:B:2210:G:N1	2:B:2236:G:C4	2.88	0.42
2:B:2349:U:H1'	2:B:3307:A:O2'	2.20	0.42
2:B:2384:A:H62	20:T:85:ARG:HH22	1.68	0.42
2:B:2450:G:H21	2:B:2451:G:H1'	1.85	0.42
2:B:2781:U:O3'	17:Q:185:LYS:HE2	2.20	0.42
2:B:3373:U:H2'	2:B:3374:U:C6	2.55	0.42
6:F:19:HIS:CB	6:F:191:LEU:HA	2.50	0.42
6:F:77:ILE:CD1	6:F:115:ASN:HD22	2.32	0.42
9:I:183:TRP:HB2	9:I:190:ILE:CD1	2.50	0.42
11:K:166:ASN:HA	11:K:169:ILE:CD1	2.49	0.42
12:L:36:ILE:HG22	12:L:37:GLY:N	2.35	0.42
12:L:40:VAL:O	12:L:42:PRO:HD3	2.20	0.42
12:L:204:ARG:C	12:L:206:GLU:H	2.28	0.42
14:N:11:TYR:O	14:N:13:LYS:HG3	2.18	0.42
17:Q:126:PHE:HD2	39:MA:115:LYS:HB3	1.84	0.42
17:Q:128:ARG:HH11	39:MA:112:PRO:HG3	1.85	0.42
30:DA:45:ILE:HB	30:DA:46:LYS:H	1.63	0.42
30:DA:60:ARG:HG3	30:DA:103:LYS:CD	2.29	0.42
32:FA:148:ILE:CG2	32:FA:149:ALA:H	2.32	0.42
35:IA:101:ALA:O	35:IA:102:LYS:HB2	2.20	0.42
36:JA:32:TRP:CH2	36:JA:52:GLN:HG2	2.55	0.42
46:TA:98:LYS:HG2	46:TA:99:GLN:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:55:LYS:C	48:VA:57:THR:H	2.28	0.42
48:VA:100:ILE:HD12	48:VA:187:VAL:HG21	2.00	0.42
52:ZA:44:LEU:CD1	52:ZA:50:ILE:HD11	2.49	0.42
53:AB:138:VAL:HG13	53:AB:184:ILE:HD13	2.02	0.42
55:CB:30:PRO:HB2	55:CB:33:VAL:CG2	2.50	0.42
55:CB:113:ILE:HG23	55:CB:191:ALA:HB2	2.02	0.42
59:GB:109:LEU:HD12	59:GB:146:PHE:HB2	2.02	0.42
59:GB:116:LEU:O	59:GB:118:LEU:HD13	2.20	0.42
60:HB:19:GLY:O	60:HB:67:THR:HA	2.19	0.42
63:KB:64:ARG:HD3	63:KB:64:ARG:HA	1.90	0.42
65:MB:8:LYS:NZ	65:MB:8:LYS:HB3	2.35	0.42
66:NB:41:PRO:O	66:NB:42:GLU:CB	2.64	0.42
68:PB:40:ARG:HG2	68:PB:40:ARG:HH11	1.84	0.42
68:PB:126:ARG:HB3	68:PB:133:VAL:CB	2.45	0.42
70:RB:62:VAL:HG22	70:RB:85:ARG:HG3	2.02	0.42
82:DC:175:TYR:OH	82:DC:271:ARG:NH1	2.52	0.42
82:DC:292:LYS:C	82:DC:294:ASP:H	2.28	0.42
82:DC:662:SER:HA	82:DC:665:ALA:HB2	2.02	0.42
82:DC:789:GLY:C	82:DC:791:GLN:N	2.76	0.42
83:EC:6859:U:C2	83:EC:6871:A:H2	2.38	0.42
1:A:260:U:H5	58:FB:43:ILE:O	2.03	0.42
1:A:774:A:H2'	1:A:775:G:C5'	2.50	0.42
1:A:858:G:H5'	57:EB:116:ARG:HH21	1.83	0.42
1:A:961:U:H2'	1:A:962:C:C6	2.55	0.42
1:A:1474:G:H2'	1:A:1475:A:H8	1.84	0.42
1:A:1725:U:H2'	1:A:1726:G:C8	2.55	0.42
2:B:145:G:C5'	19:S:56:LYS:HA	2.48	0.42
2:B:399:A:H2'	2:B:400:G:H5'	2.01	0.42
2:B:444:U:H2'	2:B:445:G:C8	2.55	0.42
2:B:786:A:H3'	22:V:147:ARG:CG	2.48	0.42
2:B:898:U:H2'	2:B:899:U:O4'	2.20	0.42
2:B:944:C:H2'	2:B:945:C:H6	1.84	0.42
2:B:1103:A:H62	22:V:10:HIS:CD2	2.38	0.42
2:B:1400:G:H2'	2:B:1401:A:O4'	2.20	0.42
2:B:1452:A:H1'	2:B:2346:C:O2'	2.20	0.42
2:B:1593:A:H2'	2:B:1594:A:O4'	2.19	0.42
2:B:1860:G:H2'	2:B:1861:G:O4'	2.20	0.42
2:B:2370:G:H2'	2:B:2371:G:O4'	2.19	0.42
2:B:2746:A:H61	9:I:32:GLN:HE22	1.68	0.42
2:B:2961:G:N7	6:F:216:HIS:HE1	2.18	0.42
3:C:58:G:H1'	3:C:59:A:H2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:112:ALA:HB2	5:E:135:PRO:CB	2.44	0.42
6:F:22:LEU:HD13	6:F:52:SER:HB3	2.01	0.42
6:F:181:LYS:HG2	6:F:183:GLY:H	1.83	0.42
6:F:230:VAL:HG23	6:F:233:GLN:H	1.84	0.42
7:G:85:VAL:HA	7:G:202:THR:HA	2.02	0.42
7:G:94:GLU:HG2	7:G:156:SER:CB	2.49	0.42
8:H:84:ARG:O	8:H:87:GLN:HB3	2.19	0.42
8:H:90:PHE:O	8:H:91:GLY:C	2.62	0.42
8:H:112:LYS:HE3	8:H:113:VAL:N	2.34	0.42
8:H:156:LEU:HD13	8:H:251:THR:HG22	2.02	0.42
8:H:316:ASN:C	8:H:316:ASN:ND2	2.76	0.42
8:H:353:ALA:O	8:H:357:GLU:HB2	2.20	0.42
9:I:276:LYS:HD2	9:I:276:LYS:H	1.84	0.42
18:R:47:ASP:CG	18:R:48:GLY:H	2.28	0.42
19:S:101:THR:O	19:S:105:ARG:HG3	2.19	0.42
19:S:145:ASP:C	19:S:147:ARG:N	2.78	0.42
20:T:35:VAL:HB	20:T:104:VAL:CG1	2.32	0.42
20:T:142:SER:HB2	20:T:147:TRP:CE3	2.55	0.42
23:W:168:ALA:O	23:W:172:ARG:HG3	2.20	0.42
27:AA:23:MET:HE1	27:AA:78:VAL:HG22	2.01	0.42
31:EA:104:PRO:HA	31:EA:107:ARG:HG3	2.02	0.42
32:FA:47:LYS:O	32:FA:48:TYR:CB	2.68	0.42
36:JA:43:ARG:HG2	36:JA:43:ARG:HH11	1.84	0.42
38:LA:19:LYS:HE2	38:LA:35:VAL:HB	2.02	0.42
46:TA:38:GLN:HA	46:TA:41:ARG:NH1	2.35	0.42
48:VA:28:VAL:C	48:VA:84:VAL:HG13	2.44	0.42
48:VA:45:LEU:HD13	48:VA:49:ALA:HB3	2.02	0.42
52:ZA:141:ARG:HE	52:ZA:151:PRO:HB2	1.85	0.42
54:BB:15:PRO:O	54:BB:18:TRP:HB2	2.20	0.42
55:CB:87:CYS:SG	55:CB:88:PRO:HD2	2.60	0.42
55:CB:92:ARG:HH21	55:CB:168:VAL:HG12	1.85	0.42
57:EB:96:ARG:O	57:EB:98:ILE:HG13	2.20	0.42
58:FB:68:ALA:C	58:FB:70:GLU:H	2.28	0.42
59:GB:27:GLU:HA	59:GB:30:LEU:HG	2.02	0.42
60:HB:54:TYR:HB3	60:HB:72:GLY:CA	2.48	0.42
66:NB:116:LEU:CB	66:NB:117:LEU:HD22	2.50	0.42
67:OB:81:LYS:O	67:OB:82:ASP:C	2.62	0.42
70:RB:58:LEU:HD12	70:RB:88:LYS:HD2	2.01	0.42
72:TB:106:THR:OG1	72:TB:111:MET:HE3	2.20	0.42
82:DC:110:ASP:HB3	82:DC:537:HIS:CB	2.49	0.42
82:DC:355:GLN:O	82:DC:479:LYS:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:544:ASP:O	82:DC:548:ASP:HB2	2.20	0.42
1:A:81:G:H2'	1:A:82:U:C6	2.55	0.42
1:A:130:C:H1'	1:A:177:U:OP1	2.20	0.42
1:A:1371:A:H1'	1:A:1373:C:OP2	2.20	0.42
2:B:225:C:O4'	30:DA:102:SER:HB3	2.20	0.42
2:B:271:C:H3'	2:B:272:G:C8	2.55	0.42
2:B:389:A:C3'	2:B:390:G:H5"	2.48	0.42
2:B:406:G:N2	3:C:16:G:H1'	2.35	0.42
2:B:509:U:H1'	37:KA:42:GLN:OE1	2.20	0.42
2:B:676:G:OP2	8:H:275:THR:HG21	2.20	0.42
2:B:909:G:N7	2:B:925:A:H2	2.18	0.42
2:B:1123:U:O2'	2:B:1124:U:H5'	2.20	0.42
2:B:1158:A:O2'	2:B:1159:A:H4'	2.19	0.42
2:B:1556:C:H2'	2:B:2169:G:C6	2.54	0.42
2:B:2174:G:H8	2:B:2174:G:OP1	2.03	0.42
2:B:2176:U:H5"	6:F:54:ARG:HH12	1.85	0.42
2:B:2319:U:H2'	2:B:2320:A:C8	2.54	0.42
2:B:2356:A:OP1	21:U:140:GLU:HG3	2.19	0.42
2:B:2685:C:H2'	2:B:2686:A:C8	2.55	0.42
2:B:3135:U:H3'	2:B:3136:G:H8	1.85	0.42
2:B:3172:A:H1'	20:T:101:ARG:NH2	2.35	0.42
2:B:3322:A:H2'	2:B:3323:A:H8	1.85	0.42
2:B:3355:U:H3'	2:B:3356:G:H5"	2.02	0.42
2:B:3380:U:H5'	7:G:316:GLU:OE1	2.20	0.42
4:D:3:U:H5'	4:D:24:A:H2	1.83	0.42
4:D:6:C:O2	9:I:72:ASP:HB2	2.20	0.42
6:F:68:LYS:HE3	6:F:69:TYR:O	2.20	0.42
9:I:276:LYS:HD2	9:I:276:LYS:N	2.34	0.42
10:J:146:ILE:HG23	10:J:150:LYS:HZ2	1.85	0.42
10:J:164:SER:HB2	37:KA:6:ARG:H	1.83	0.42
11:K:88:ARG:O	11:K:112:ASN:HA	2.18	0.42
11:K:145:ARG:HB3	11:K:145:ARG:CZ	2.49	0.42
12:L:98:ARG:HH11	12:L:98:ARG:CB	2.33	0.42
14:N:12:GLN:HA	14:N:59:GLN:OE1	2.20	0.42
14:N:31:ILE:HG13	14:N:69:ARG:HH21	1.84	0.42
18:R:99:TRP:O	18:R:103:ILE:HD13	2.20	0.42
19:S:15:GLN:HE22	40:NA:53:TYR:HD2	1.68	0.42
20:T:37:ARG:NH1	20:T:157:GLU:OE1	2.52	0.42
28:BA:23:ARG:HB3	28:BA:25:ASP:OD2	2.20	0.42
35:IA:32:ALA:O	35:IA:36:ILE:HG13	2.19	0.42
36:JA:98:HIS:CA	36:JA:125:ARG:HH12	2.26	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:MA:106:LYS:O	39:MA:109:ILE:HG22	2.20	0.42
44:RA:82:LEU:O	44:RA:82:LEU:HD13	2.20	0.42
46:TA:73:GLU:HG2	46:TA:80:ARG:CB	2.50	0.42
46:TA:73:GLU:HG2	46:TA:80:ARG:HG2	2.02	0.42
47:UA:35:ALA:O	47:UA:37:TYR:N	2.44	0.42
47:UA:51:ALA:H	47:UA:54:ILE:HB	1.85	0.42
49:WA:155:ARG:HG3	49:WA:202:LEU:HG	2.02	0.42
49:WA:155:ARG:HB2	49:WA:170:ILE:HD11	2.02	0.42
50:XA:140:ASN:OD1	71:SB:29:HIS:HA	2.20	0.42
52:ZA:126:ARG:HA	52:ZA:129:ILE:HD12	2.02	0.42
57:EB:20:VAL:HG22	57:EB:85:PHE:CD1	2.54	0.42
57:EB:28:GLU:O	57:EB:28:GLU:HG2	2.19	0.42
57:EB:91:ILE:HD11	57:EB:129:LEU:CA	2.48	0.42
58:FB:173:PRO:C	58:FB:175:GLN:H	2.27	0.42
59:GB:171:ARG:HA	59:GB:171:ARG:HE	1.85	0.42
61:IB:77:SER:O	61:IB:84:ILE:HB	2.20	0.42
63:KB:33:VAL:O	63:KB:37:ILE:HG13	2.20	0.42
63:KB:94:LYS:O	63:KB:98:VAL:HG23	2.20	0.42
66:NB:35:PRO:CG	69:QB:8:ASP:HA	2.50	0.42
71:SB:51:VAL:HG11	71:SB:78:LEU:HD11	2.01	0.42
71:SB:55:LEU:HD11	71:SB:69:LEU:HD11	2.02	0.42
73:UB:16:ARG:O	73:UB:20:ARG:HG3	2.19	0.42
82:DC:16:VAL:HG23	82:DC:346:VAL:HG22	2.02	0.42
82:DC:483:PHE:CE1	82:DC:517:CYS:HB2	2.55	0.42
82:DC:567:VAL:HG23	82:DC:592:PRO:HB3	2.00	0.42
82:DC:724:ILE:HG12	82:DC:815:ALA:HA	2.01	0.42
1:A:91:G:H2'	1:A:92:A:C8	2.55	0.41
1:A:788:A:OP2	54:BB:106:LYS:HE2	2.19	0.41
1:A:1370:U:H4'	1:A:1371:A:H5"	2.02	0.41
1:A:1500:C:H5"	69:QB:102:ARG:HD3	2.00	0.41
2:B:18:G:H2'	2:B:19:U:C6	2.55	0.41
2:B:58:G:H2'	2:B:59:G:C8	2.54	0.41
2:B:96:G:P	32:FA:34:MET:HB2	2.60	0.41
2:B:155:G:H5"	2:B:156:G:C8	2.55	0.41
2:B:209:A:H2'	8:H:162:THR:HB	2.02	0.41
2:B:822:G:O2'	2:B:823:C:H5'	2.20	0.41
2:B:1135:A:OP2	33:GA:5:LYS:HG3	2.19	0.41
2:B:1171:G:OP1	4:D:86:U:O2'	2.29	0.41
2:B:1321:G:H1'	24:X:111:ALA:O	2.20	0.41
2:B:1479:U:H3'	2:B:1480:G:C8	2.55	0.41
2:B:1526:U:OP2	2:B:1526:U:H6	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1729:A:C3'	2:B:1730:G:H5'	2.50	0.41
2:B:1899:G:H22	2:B:2335:G:H4'	1.85	0.41
2:B:1908:A:C2	2:B:2336:U:H5'	2.54	0.41
2:B:2372:A:H5'	2:B:2373:A:C8	2.55	0.41
2:B:2372:A:H3'	2:B:2373:A:C5'	2.50	0.41
2:B:2632:G:H5'	2:B:2698:G:H1'	2.02	0.41
2:B:2677:G:H2'	2:B:2677:G:N3	2.35	0.41
2:B:2795:U:H5'	2:B:2796:G:H5'	2.02	0.41
2:B:2853:A:H4'	14:N:64:ALA:CA	2.49	0.41
2:B:3108:G:H2'	2:B:3109:G:O4'	2.20	0.41
2:B:3127:A:H3'	2:B:3128:G:C8	2.55	0.41
2:B:3180:A:C2	20:T:164:SER:HA	2.54	0.41
2:B:3229:G:N2	18:R:128:ARG:HH22	2.17	0.41
3:C:75:G:H1'	43:QA:26:TRP:HB2	2.02	0.41
4:D:4:U:H5"	4:D:26:C:H4'	2.01	0.41
7:G:187:SER:HB3	7:G:190:GLU:OE1	2.20	0.41
7:G:238:LEU:HB3	7:G:242:THR:HG21	2.00	0.41
7:G:260:VAL:HG11	7:G:266:ARG:HH12	1.82	0.41
9:I:40:HIS:CD2	25:Y:69:LYS:H	2.37	0.41
9:I:253:PHE:CZ	9:I:255:PRO:HB3	2.55	0.41
12:L:157:VAL:HG12	12:L:159:PRO:HD2	2.02	0.41
13:M:90:MET:HE3	13:M:181:VAL:HG23	2.02	0.41
16:P:94:LYS:HD3	16:P:99:LYS:HG2	2.02	0.41
18:R:68:LEU:CD1	18:R:94:TRP:HB2	2.43	0.41
18:R:103:ILE:HG22	18:R:104:ALA:N	2.35	0.41
19:S:142:ILE:CD1	19:S:142:ILE:N	2.82	0.41
20:T:46:GLU:C	20:T:48:PHE:H	2.28	0.41
24:X:43:TYR:O	24:X:47:LYS:HD2	2.19	0.41
24:X:45:LEU:HD23	24:X:45:LEU:O	2.20	0.41
30:DA:28:ARG:NH1	30:DA:29:VAL:HG22	2.35	0.41
35:IA:37:LYS:HA	35:IA:49:VAL:HG11	2.02	0.41
39:MA:9:LEU:O	39:MA:17:LEU:HD21	2.19	0.41
39:MA:75:TYR:HB3	39:MA:76:GLN:H	1.67	0.41
41:OA:17:THR:O	41:OA:25:ARG:HA	2.20	0.41
42:PA:6:THR:HA	42:PA:54:LEU:HD13	2.02	0.41
42:PA:11:PHE:HA	42:PA:14:LEU:HD12	2.01	0.41
46:TA:28:TYR:CB	46:TA:69:VAL:HG11	2.50	0.41
48:VA:26:PHE:CD1	48:VA:187:VAL:HG11	2.50	0.41
48:VA:33:VAL:HG21	48:VA:38:MET:HB2	2.02	0.41
48:VA:89:THR:HG21	48:VA:96:ILE:CD1	2.46	0.41
48:VA:192:ASP:O	48:VA:193:ASN:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:93:THR:CG2	50:XA:181:VAL:HG21	2.50	0.41
50:XA:163:ASN:HB3	50:XA:169:SER:OG	2.20	0.41
52:ZA:138:PRO:HG2	52:ZA:222:TYR:CE2	2.55	0.41
56:DB:30:LYS:O	56:DB:102:VAL:HG23	2.20	0.41
57:EB:148:LYS:C	57:EB:149:ILE:HG13	2.45	0.41
60:HB:1:MET:CE	60:HB:41:TYR:HA	2.47	0.41
61:IB:110:HIS:HD2	61:IB:131:ILE:HG21	1.80	0.41
65:MB:21:ASP:O	65:MB:25:LEU:HG	2.19	0.41
66:NB:109:PHE:CG	66:NB:116:LEU:HG	2.55	0.41
67:OB:27:ASP:HB3	67:OB:30:THR:HG22	2.02	0.41
68:PB:45:LEU:HD22	68:PB:85:PHE:CE2	2.54	0.41
71:SB:74:GLN:C	71:SB:76:ASP:H	2.28	0.41
71:SB:81:ASN:HB3	71:SB:82:VAL:H	1.70	0.41
73:UB:121:ARG:HG3	73:UB:122:PHE:CE2	2.55	0.41
82:DC:171:LYS:HG2	82:DC:278:LEU:CB	2.50	0.41
82:DC:287:ALA:HA	82:DC:292:LYS:HD2	2.01	0.41
82:DC:406:LYS:O	82:DC:431:ILE:HD12	2.20	0.41
82:DC:418:TYR:HB2	82:DC:424:ASP:O	2.20	0.41
83:EC:6768:U:O2'	83:EC:6769:A:H5'	2.19	0.41
83:EC:6857:C:O2'	83:EC:6858:A:H5'	2.20	0.41
83:EC:6943:A:H3'	83:EC:6944:U:H5'	2.02	0.41
1:A:16:G:O3'	1:A:1109:G:H5'	2.20	0.41
1:A:92:A:H8	1:A:92:A:O5'	2.02	0.41
1:A:206:A:H2'	1:A:207:U:H5'	2.01	0.41
1:A:416:A:H5'	1:A:417:A:N7	2.35	0.41
1:A:449:C:H5"	54:BB:30:ARG:CB	2.49	0.41
1:A:598:U:H2'	1:A:599:A:C8	2.55	0.41
1:A:810:G:N3	57:EB:111:LYS:HG3	2.35	0.41
1:A:1319:A:H3'	1:A:1320:U:C5'	2.42	0.41
1:A:1749:A:C2'	1:A:1750:A:H5"	2.46	0.41
2:B:5:G:H2'	2:B:6:A:C5'	2.50	0.41
2:B:382:U:C4'	21:U:100:ALA:HB1	2.35	0.41
2:B:502:U:H6	2:B:502:U:O5'	2.03	0.41
2:B:508:U:H2'	2:B:509:U:C6	2.55	0.41
2:B:812:G:H2'	2:B:813:G:C8	2.54	0.41
2:B:1017:C:H2'	2:B:1017:C:O2	2.20	0.41
2:B:1544:G:O2'	2:B:2168:A:H1'	2.21	0.41
2:B:1605:A:H1'	2:B:1607:U:OP1	2.20	0.41
2:B:1887:A:H2'	2:B:1888:U:H5'	2.01	0.41
2:B:1922:A:H62	2:B:1929:G:N2	2.17	0.41
2:B:1938:U:O2'	2:B:1939:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2242:A:H4'	2:B:2244:A:H5'	2.02	0.41
2:B:2621:G:H2'	2:B:2622:C:H5'	2.02	0.41
2:B:2934:A:H2'	2:B:2935:U:H4'	2.01	0.41
2:B:2967:A:O3'	6:F:206:PRO:HG2	2.20	0.41
2:B:3288:G:HO2'	2:B:3289:G:H8	1.68	0.41
3:C:55:U:H3	3:C:62:C:N4	2.18	0.41
5:E:25:LYS:NZ	5:E:30:GLU:HB3	2.35	0.41
5:E:179:LEU:O	5:E:183:ILE:HG13	2.20	0.41
6:F:6:ARG:HB3	6:F:10:LYS:CE	2.41	0.41
6:F:117:GLU:HG3	6:F:119:LYS:O	2.19	0.41
6:F:202:VAL:HG13	6:F:218:HIS:H	1.86	0.41
8:H:285:ASP:O	8:H:289:ILE:HG13	2.20	0.41
9:I:113:LEU:HD23	9:I:115:LEU:HD23	2.02	0.41
9:I:155:THR:CB	9:I:179:ARG:HA	2.48	0.41
12:L:97:TYR:O	12:L:132:VAL:HG12	2.20	0.41
14:N:117:GLY:O	14:N:119:TRP:N	2.53	0.41
14:N:218:ALA:C	14:N:220:GLN:H	2.28	0.41
20:T:35:VAL:HG12	20:T:36:VAL:H	1.85	0.41
24:X:74:ASN:HB3	24:X:129:ILE:HG23	2.03	0.41
29:CA:91:ASN:N	29:CA:94:GLN:OE1	2.50	0.41
30:DA:3:LYS:HG3	30:DA:8:VAL:CG1	2.50	0.41
34:HA:78:GLY:HA2	34:HA:81:VAL:CG2	2.44	0.41
41:OA:24:ARG:HG3	41:OA:36:SER:OG	2.20	0.41
46:TA:7:THR:HB	46:TA:22:GLN:HG3	2.01	0.41
46:TA:58:PHE:HE2	46:TA:61:LYS:HD3	1.86	0.41
49:WA:123:ILE:HG22	49:WA:133:VAL:HG22	2.02	0.41
49:WA:170:ILE:HD13	49:WA:211:ILE:CD1	2.45	0.41
49:WA:240:VAL:CG1	49:WA:254:ALA:HB1	2.47	0.41
51:YA:158:SER:C	51:YA:160:HIS:H	2.27	0.41
52:ZA:35:TRP:CE3	52:ZA:37:PRO:HD3	2.55	0.41
55:CB:43:PHE:C	55:CB:45:LYS:H	2.28	0.41
55:CB:129:PRO:HG2	55:CB:130:ILE:H	1.84	0.41
63:KB:37:ILE:CG2	63:KB:71:ILE:HG23	2.50	0.41
63:KB:91:LEU:HD22	63:KB:122:ILE:HG13	2.02	0.41
68:PB:28:ILE:HD13	68:PB:28:ILE:C	2.45	0.41
69:QB:34:VAL:O	69:QB:35:ASP:OD1	2.38	0.41
78:ZB:65:ARG:O	78:ZB:66:LEU:HG	2.20	0.41
82:DC:228:ARG:C	82:DC:229:TYR:HD2	2.28	0.41
1:A:320:U:O2'	1:A:321:C:C6	2.70	0.41
1:A:443:C:H2'	1:A:444:C:O4'	2.20	0.41
1:A:568:G:O2'	1:A:569:C:H5'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1330:G:H2'	1:A:1331:A:O4'	2.20	0.41
1:A:1524:A:H4'	69:QB:93:HIS:CG	2.55	0.41
1:A:1669:U:H2'	1:A:1670:G:O4'	2.20	0.41
1:A:1671:A:N6	1:A:1730:A:O2'	2.53	0.41
1:A:1784:C:H6	1:A:1784:C:O5'	2.04	0.41
2:B:87:U:OP1	22:V:167:SER:HB3	2.20	0.41
2:B:282:G:N2	19:S:178:HIS:O	2.53	0.41
2:B:351:A:N6	43:QA:38:ASN:HA	2.35	0.41
2:B:562:C:H5"	24:X:71:LYS:HG3	2.01	0.41
2:B:675:C:H2'	2:B:676:G:O4'	2.20	0.41
2:B:741:U:O2'	22:V:73:GLN:HB3	2.20	0.41
2:B:884:A:OP2	2:B:2139:A:N6	2.53	0.41
2:B:911:C:N4	6:F:3:ARG:HD3	2.36	0.41
2:B:1552:G:H5'	2:B:2171:G:H5"	2.02	0.41
2:B:1652:G:H2'	2:B:1653:G:O4'	2.20	0.41
2:B:1710:C:H5'	31:EA:79:HIS:NE2	2.34	0.41
2:B:1813:A:H2'	2:B:1814:A:H5'	2.02	0.41
2:B:1888:U:H4'	7:G:248:LYS:HZ3	1.84	0.41
2:B:1913:A:N6	2:B:2120:A:C2	2.89	0.41
2:B:1915:A:O3'	23:W:84:THR:HB	2.20	0.41
2:B:2118:C:H2'	2:B:2119:A:H5'	2.01	0.41
2:B:2131:A:C2'	2:B:2132:C:H5'	2.50	0.41
2:B:2162:U:O2'	2:B:2163:C:H5'	2.20	0.41
2:B:2467:G:O6	5:E:105:LYS:HG2	2.19	0.41
2:B:2637:A:H2'	2:B:2638:C:H5'	2.01	0.41
2:B:3028:G:H5"	82:DC:28:VAL:HG11	2.02	0.41
2:B:3049:A:O4'	7:G:53:MET:HB2	2.19	0.41
2:B:3200:G:C2'	2:B:3201:C:H5'	2.50	0.41
3:C:113:U:H5"	43:QA:7:PHE:HB2	2.02	0.41
4:D:70:U:H2'	4:D:71:G:O4'	2.20	0.41
6:F:142:ASP:O	6:F:143:GLU:HB2	2.19	0.41
7:G:133:TYR:HD1	7:G:136:LYS:HE3	1.86	0.41
7:G:160:VAL:O	7:G:180:GLU:HA	2.20	0.41
7:G:198:HIS:HA	7:G:201:LYS:CB	2.47	0.41
7:G:261:MET:HG2	20:T:64:PHE:CA	2.43	0.41
8:H:209:TYR:HD2	8:H:211:GLU:H	1.67	0.41
9:I:24:ARG:HB3	9:I:24:ARG:HH11	1.84	0.41
9:I:125:VAL:CG2	9:I:199:ILE:HG21	2.49	0.41
12:L:97:TYR:HB3	12:L:132:VAL:N	2.35	0.41
13:M:189:GLU:HG3	13:M:190:ASP:H	1.85	0.41
14:N:72:ALA:O	14:N:76:MET:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:139:ARG:HD2	14:N:173:PHE:CE2	2.54	0.41
15:O:80:LEU:O	15:O:80:LEU:HD23	2.21	0.41
18:R:21:VAL:HB	18:R:63:VAL:CG2	2.50	0.41
18:R:85:TRP:NE1	18:R:91:CYS:HB2	2.35	0.41
19:S:43:THR:H	19:S:131:GLU:CD	2.28	0.41
19:S:48:ALA:O	19:S:52:GLY:N	2.53	0.41
22:V:125:ASP:O	22:V:129:VAL:HG23	2.19	0.41
29:CA:49:LYS:O	29:CA:50:ALA:HB3	2.20	0.41
31:EA:9:LYS:NZ	31:EA:86:THR:HB	2.36	0.41
31:EA:14:VAL:HG11	38:LA:90:ILE:CD1	2.50	0.41
39:MA:45:LYS:HA	39:MA:48:ARG:HG2	2.02	0.41
40:NA:58:ILE:HG13	40:NA:59:ASP:H	1.80	0.41
46:TA:17:CYS:O	46:TA:18:ARG:HB2	2.20	0.41
48:VA:104:ARG:H	48:VA:104:ARG:HG3	1.56	0.41
49:WA:28:GLY:HA3	49:WA:76:ASP:HA	2.03	0.41
49:WA:238:ASP:HB2	49:WA:256:THR:HB	2.02	0.41
50:XA:77:SER:HA	50:XA:124:THR:HG23	2.02	0.41
54:BB:18:TRP:CB	54:BB:20:LEU:HG	2.50	0.41
54:BB:68:ARG:HB3	54:BB:76:VAL:HG11	2.02	0.41
54:BB:129:VAL:HG12	54:BB:156:VAL:HG22	2.01	0.41
59:GB:28:LEU:HD13	59:GB:28:LEU:C	2.46	0.41
61:IB:78:THR:HA	61:IB:84:ILE:CG2	2.49	0.41
65:MB:98:ASN:OD1	65:MB:100:LYS:HG3	2.20	0.41
65:MB:108:ARG:C	65:MB:110:GLU:H	2.28	0.41
73:UB:86:PHE:N	73:UB:122:PHE:O	2.52	0.41
73:UB:117:ILE:HB	73:UB:120:VAL:HB	2.03	0.41
75:WB:71:ILE:HD12	75:WB:76:ALA:CA	2.48	0.41
82:DC:153:PRO:O	82:DC:202:VAL:HG13	2.20	0.41
82:DC:176:GLN:HA	82:DC:179:ALA:HB3	2.01	0.41
82:DC:402:ALA:HA	82:DC:450:ALA:HB2	2.02	0.41
82:DC:576:LEU:CD1	82:DC:587:TYR:HE1	2.27	0.41
83:EC:6891:G:N2	83:EC:6938:A:H62	2.18	0.41
1:A:251:A:H2'	1:A:252:U:H5'	2.03	0.41
1:A:881:A:C2'	1:A:882:U:H5'	2.51	0.41
1:A:1464:G:H5"	66:NB:141:SER:OG	2.20	0.41
1:A:1659:A:H2'	1:A:1660:A:C8	2.55	0.41
2:B:31:C:H2'	2:B:32:U:C6	2.55	0.41
2:B:360:G:H2'	2:B:361:A:N7	2.35	0.41
2:B:389:A:H5'	21:U:16:SER:O	2.21	0.41
2:B:570:A:H2'	2:B:571:U:O4'	2.20	0.41
2:B:603:A:C2'	2:B:604:G:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:938:C:H5”	2:B:962:A:C4	2.55	0.41
2:B:959:C:H2’	2:B:2801:A:N1	2.36	0.41
2:B:1164:G:H2’	2:B:1165:A:H8	1.84	0.41
2:B:1175:C:H2’	2:B:1176:C:H6	1.83	0.41
2:B:1263:A:H4’	2:B:1264:G:C8	2.36	0.41
2:B:1773:C:H6	2:B:1773:C:O5’	2.03	0.41
2:B:2170:U:O2’	2:B:2171:G:H5’	2.21	0.41
2:B:2350:C:H2’	2:B:2351:U:C6	2.56	0.41
2:B:2470:C:O2	2:B:2489:C:H5’	2.21	0.41
2:B:2524:A:H2	12:L:44:ARG:HG2	1.85	0.41
2:B:2875:U:C6	2:B:2945:G:O6	2.73	0.41
2:B:3013:U:H2’	2:B:3014:U:H6	1.85	0.41
2:B:3206:C:P	2:B:3207:U:H4’	2.60	0.41
2:B:3329:U:H5’	7:G:309:GLY:N	2.35	0.41
2:B:3334:U:O4’	2:B:3370:A:C2	2.73	0.41
3:C:75:G:N3	43:QA:26:TRP:CB	2.83	0.41
4:D:15:C:O2’	9:I:8:LYS:HB2	2.20	0.41
5:E:111:ILE:HD11	5:E:148:VAL:HA	2.01	0.41
6:F:8:GLN:OE1	6:F:232:GLY:HA2	2.21	0.41
6:F:249:SER:HA	6:F:253:GLN:NE2	2.34	0.41
7:G:257:PRO:C	7:G:259:HIS:H	2.28	0.41
7:G:295:ALA:HA	7:G:299:ASP:HB3	2.01	0.41
8:H:52:VAL:N	8:H:103:THR:HB	2.34	0.41
8:H:329:PRO:HD3	11:K:41:ARG:NH2	2.35	0.41
9:I:94:ASN:OD1	9:I:97:ALA:HB2	2.21	0.41
9:I:125:VAL:HG13	9:I:199:ILE:HD12	2.02	0.41
12:L:69:LEU:HD21	19:S:24:ARG:HH21	1.84	0.41
12:L:78:PHE:O	12:L:79:GLN:CB	2.68	0.41
12:L:91:PHE:HA	12:L:94:PHE:HB2	2.03	0.41
12:L:122:LYS:O	12:L:123:GLN:HB3	2.20	0.41
14:N:178:ARG:HB2	14:N:179:PRO:HD3	2.02	0.41
15:O:32:ARG:HG2	15:O:119:SER:O	2.20	0.41
18:R:37:GLU:OE1	18:R:74:ARG:HG3	2.21	0.41
18:R:79:ALA:O	18:R:83:LYS:HB2	2.20	0.41
20:T:34:VAL:HG21	20:T:112:TYR:CD1	2.55	0.41
20:T:58:LEU:HA	20:T:72:HIS:ND1	2.34	0.41
27:AA:45:ARG:HB3	27:AA:48:ARG:HB3	2.02	0.41
28:BA:6:ASP:C	28:BA:8:PHE:H	2.29	0.41
31:EA:6:LYS:HE2	31:EA:6:LYS:HA	2.02	0.41
31:EA:15:ARG:C	31:EA:19:ALA:HB2	2.45	0.41
32:FA:94:ALA:CB	32:FA:121:VAL:HG22	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:31:VAL:O	34:HA:35:ARG:HD3	2.21	0.41
34:HA:41:LEU:O	34:HA:92:ILE:N	2.53	0.41
40:NA:61:ILE:O	40:NA:63:ASN:N	2.53	0.41
46:TA:77:CYS:C	46:TA:78:LYS:HG2	2.46	0.41
49:WA:83:ALA:HA	49:WA:89:LEU:HD23	2.01	0.41
50:XA:6:THR:C	50:XA:8:ASP:H	2.28	0.41
50:XA:27:ARG:HB3	50:XA:28:ASN:H	1.66	0.41
50:XA:120:LEU:HD12	50:XA:121:VAL:H	1.85	0.41
50:XA:143:VAL:HB	50:XA:157:ASP:N	2.32	0.41
52:ZA:54:GLU:O	52:ZA:58:LEU:HG	2.20	0.41
54:BB:67:GLN:HB3	54:BB:69:HIS:NE2	2.35	0.41
55:CB:121:ILE:HD11	55:CB:198:LEU:CD1	2.51	0.41
56:DB:38:GLY:O	56:DB:45:PHE:HB2	2.20	0.41
57:EB:81:LEU:O	57:EB:81:LEU:HD23	2.20	0.41
59:GB:28:LEU:HD13	80:BC:40:TYR:HD2	1.86	0.41
60:HB:82:LEU:HB2	60:HB:86:ILE:CG2	2.37	0.41
63:KB:17:PRO:HG3	77:YB:28:PRO:HD3	2.02	0.41
66:NB:82:ARG:HG3	66:NB:82:ARG:HH11	1.85	0.41
71:SB:16:LYS:HG2	71:SB:23:ILE:HG12	2.01	0.41
72:TB:90:THR:HG21	72:TB:113:HIS:CD2	2.55	0.41
73:UB:76:LEU:HB2	73:UB:80:GLY:N	2.31	0.41
73:UB:76:LEU:HB2	73:UB:81:LYS:H	1.86	0.41
74:VB:7:ILE:HG22	74:VB:8:ARG:N	2.36	0.41
74:VB:21:LYS:HB2	74:VB:75:VAL:HG13	2.01	0.41
75:WB:62:VAL:N	75:WB:80:LEU:HD11	2.35	0.41
82:DC:436:LEU:HD23	82:DC:437:MET:N	2.36	0.41
82:DC:515:ASP:HB3	82:DC:518:VAL:CG1	2.50	0.41
83:EC:6910:A:O5'	83:EC:6910:A:C8	2.70	0.41
1:A:427:C:H5'	1:A:460:A:OP2	2.20	0.41
1:A:542:A:O2'	1:A:543:C:H2'	2.20	0.41
1:A:769:A:H2'	1:A:770:A:H8	1.83	0.41
1:A:1201:G:N2	1:A:1600:A:OP2	2.53	0.41
1:A:1219:A:N6	1:A:1265:G:H1'	2.35	0.41
1:A:1277:G:H21	53:AB:174:HIS:HE1	1.67	0.41
1:A:1279:C:H2'	1:A:1280:C:O4'	2.21	0.41
1:A:1301:U:OP1	52:ZA:88:LYS:HB2	2.20	0.41
1:A:1460:A:N7	83:EC:6915:G:H4'	2.35	0.41
1:A:1527:C:H5'	55:CB:106:LYS:CB	2.50	0.41
1:A:1701:A:C3'	1:A:1702:A:H5"	2.51	0.41
2:B:128:G:H2'	2:B:129:U:C6	2.56	0.41
2:B:721:G:H2'	2:B:721:G:N3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:754:G:H2'	2:B:755:A:H8	1.85	0.41
2:B:1126:G:OP2	14:N:14:ASN:HA	2.21	0.41
2:B:1144:U:O2	2:B:1159:A:C8	2.73	0.41
2:B:1200:A:C5	2:B:2370:G:H5"	2.56	0.41
2:B:1440:G:O2'	2:B:1441:G:H5'	2.21	0.41
2:B:1485:G:H2'	2:B:1486:G:H8	1.81	0.41
2:B:1569:U:H5"	2:B:1570:U:H5	1.86	0.41
2:B:1587:A:O2'	2:B:1588:A:H5"	2.20	0.41
2:B:1709:C:C4'	31:EA:15:ARG:HH12	2.33	0.41
2:B:2198:A:N7	2:B:2270:A:C8	2.89	0.41
2:B:2274:U:H2'	2:B:2275:A:H8	1.86	0.41
2:B:2317:A:H2'	2:B:2318:U:H5'	2.02	0.41
2:B:2355:G:OP1	21:U:141:SER:HA	2.20	0.41
2:B:2358:A:H3'	2:B:2359:C:C6	2.55	0.41
2:B:2797:C:H3'	2:B:2798:C:H5'	2.02	0.41
2:B:2824:G:H2'	2:B:2825:C:C6	2.55	0.41
3:C:97:A:H2'	3:C:98:U:H5'	2.02	0.41
5:E:110:PHE:CD2	5:E:135:PRO:HG3	2.47	0.41
6:F:116:VAL:HG12	6:F:126:LEU:HB2	2.01	0.41
6:F:173:GLY:HA2	6:F:176:ASP:OD1	2.20	0.41
7:G:305:ILE:HG12	7:G:321:PHE:CZ	2.55	0.41
9:I:110:LEU:HB3	9:I:116:ASP:HA	2.03	0.41
10:J:69:PHE:HA	10:J:74:VAL:N	2.35	0.41
11:K:97:PRO:O	11:K:100:ARG:HB3	2.20	0.41
11:K:119:VAL:CG1	25:Y:135:PRO:HG3	2.50	0.41
11:K:201:PHE:CD1	11:K:201:PHE:C	2.98	0.41
12:L:184:ALA:O	12:L:188:THR:HG23	2.20	0.41
13:M:132:VAL:HG21	13:M:146:LEU:HB3	2.03	0.41
16:P:90:ARG:NH1	16:P:139:VAL:HG21	2.36	0.41
18:R:17:VAL:HG12	18:R:72:LEU:HB3	2.02	0.41
18:R:39:ILE:HG22	18:R:40:ASP:N	2.35	0.41
18:R:94:TRP:CE2	18:R:100:ALA:HB2	2.55	0.41
20:T:62:THR:H	20:T:70:PRO:HD3	1.83	0.41
20:T:74:ARG:HG3	20:T:146:GLY:CA	2.49	0.41
21:U:26:PHE:CZ	21:U:121:GLN:HG2	2.56	0.41
21:U:30:ARG:HB3	21:U:30:ARG:NH1	2.36	0.41
23:W:143:ILE:HA	23:W:146:LYS:HB3	2.03	0.41
24:X:11:GLY:HA2	24:X:57:GLU:O	2.21	0.41
26:Z:54:VAL:HG23	26:Z:54:VAL:O	2.20	0.41
28:BA:19:THR:HG22	28:BA:31:PHE:HD2	1.86	0.41
29:CA:63:ILE:HD11	29:CA:84:PHE:CD1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:FA:26:ARG:O	32:FA:28:HIS:N	2.54	0.41
32:FA:27:LYS:HB3	32:FA:28:HIS:CE1	2.56	0.41
41:OA:63:ARG:HB3	41:OA:64:MET:H	1.60	0.41
42:PA:42:LYS:HE2	42:PA:55:VAL:HG21	2.03	0.41
43:QA:10:LYS:C	43:QA:10:LYS:HD3	2.45	0.41
49:WA:16:HIS:HD1	49:WA:43:ILE:HG13	1.86	0.41
49:WA:192:PHE:HB3	49:WA:223:TRP:CD2	2.55	0.41
52:ZA:138:PRO:HG2	52:ZA:222:TYR:CZ	2.55	0.41
53:AB:53:THR:HG21	53:AB:94:ARG:HG2	2.01	0.41
54:BB:122:LYS:CD	54:BB:164:LEU:HD21	2.50	0.41
55:CB:51:VAL:CG1	55:CB:134:VAL:HG21	2.50	0.41
57:EB:64:VAL:HA	57:EB:67:LEU:CD1	2.50	0.41
59:GB:100:LYS:O	59:GB:103:ASP:HB2	2.21	0.41
61:IB:75:VAL:HG21	61:IB:117:VAL:HG11	2.02	0.41
63:KB:66:ILE:HD12	63:KB:66:ILE:HA	1.97	0.41
66:NB:48:VAL:HG13	66:NB:49:TYR:CD1	2.55	0.41
67:OB:9:VAL:HG13	67:OB:50:ILE:HA	2.02	0.41
68:PB:70:VAL:O	68:PB:74:GLN:HG2	2.20	0.41
71:SB:11:LEU:O	71:SB:12:TYR:HB3	2.20	0.41
73:UB:22:ASN:O	73:UB:25:ALA:HB3	2.21	0.41
73:UB:76:LEU:HD12	73:UB:81:LYS:CB	2.44	0.41
74:VB:81:GLU:CA	74:VB:84:LYS:HG2	2.49	0.41
80:BC:14:VAL:HG12	80:BC:18:THR:HG23	2.01	0.41
82:DC:523:SER:HB2	86:DC:903:SO1:C21	2.50	0.41
82:DC:598:SER:HB3	82:DC:682:ARG:NH1	2.35	0.41
1:A:10:G:H1’	52:ZA:89:GLN:HB2	2.02	0.41
1:A:28:A:O2’	1:A:29:U:H5’	2.21	0.41
1:A:30:G:H4’	73:UB:131:SER:HB2	2.01	0.41
1:A:106:U:C2’	1:A:107:C:H5’	2.50	0.41
1:A:157:A:N6	56:DB:59:GLN:HB3	2.34	0.41
1:A:272:U:H2’	1:A:273:G:C8	2.56	0.41
1:A:306:U:H2’	1:A:307:G:C8	2.55	0.41
1:A:344:A:H2’	1:A:345:U:H5’	2.02	0.41
1:A:1316:G:H4’	67:OB:10:LYS:CD	2.50	0.41
1:A:1608:U:H2’	1:A:1609:U:C5	2.55	0.41
1:A:1640:C:H42	83:EC:6952:U:H5”	1.86	0.41
2:B:32:U:H1’	2:B:53:G:N2	2.35	0.41
2:B:90:C:H6	2:B:90:C:O5’	2.04	0.41
2:B:95:A:C5	2:B:96:G:H1’	2.56	0.41
2:B:214:G:H2’	2:B:215:G:C8	2.56	0.41
2:B:367:A:H2’	2:B:368:G:H5’	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:792:G:H2'	2:B:793:C:H6	1.85	0.41
2:B:933:A:C8	8:H:90:PHE:HE2	2.38	0.41
2:B:994:G:C2	2:B:2637:A:H2	2.39	0.41
2:B:1180:A:O2'	2:B:1181:U:H4'	2.21	0.41
2:B:1310:G:H1'	2:B:2380:U:H4'	2.03	0.41
2:B:1470:U:O2'	2:B:1471:U:H5'	2.21	0.41
2:B:1494:U:C3'	2:B:1495:U:H5'	2.51	0.41
2:B:1823:A:H2'	2:B:1824:U:O4'	2.20	0.41
2:B:1904:C:H2'	2:B:1905:G:O4'	2.21	0.41
2:B:2372:A:H5"	2:B:2373:A:H5"	2.02	0.41
2:B:2569:A:H1'	2:B:2570:U:H5	1.85	0.41
2:B:2685:C:H2'	2:B:2686:A:H8	1.86	0.41
2:B:2748:A:C2	9:I:35:ARG:HB2	2.55	0.41
2:B:2754:G:H5"	2:B:2755:C:H5"	2.01	0.41
2:B:2950:G:H4'	2:B:2951:G:C8	2.55	0.41
2:B:3092:C:O3'	2:B:3093:C:H3'	2.20	0.41
3:C:77:A:H2'	3:C:78:G:H8	1.86	0.41
4:D:11:A:H5"	4:D:13:A:C6	2.56	0.41
4:D:118:A:H2'	4:D:119:U:C6	2.55	0.41
7:G:137:TYR:CD2	7:G:144:ILE:HG12	2.56	0.41
8:H:334:PHE:CD1	8:H:339:LEU:HD12	2.55	0.41
9:I:34:LYS:HD3	9:I:35:ARG:HG3	2.02	0.41
9:I:37:VAL:O	9:I:37:VAL:HG12	2.20	0.41
10:J:58:LEU:CD1	10:J:64:LEU:HB2	2.51	0.41
12:L:72:PRO:HG2	12:L:75:ILE:HG13	2.01	0.41
12:L:156:ASP:HB3	12:L:183:LYS:HD3	2.01	0.41
13:M:20:ILE:O	18:R:8:LYS:N	2.53	0.41
13:M:57:VAL:HG23	13:M:68:LEU:HD23	2.03	0.41
13:M:88:TYR:HD2	13:M:158:ALA:CB	2.34	0.41
14:N:43:VAL:CA	14:N:139:ARG:HH22	2.29	0.41
15:O:20:ASN:C	15:O:21:ILE:HG13	2.46	0.41
15:O:116:TYR:HB3	15:O:122:ILE:HD11	2.03	0.41
16:P:127:SER:O	16:P:131:GLU:OE1	2.37	0.41
19:S:30:TYR:HB2	19:S:129:TYR:CE1	2.56	0.41
20:T:15:LEU:HB2	20:T:18:ARG:HG2	2.03	0.41
22:V:54:LEU:HB3	22:V:58:ASN:HB3	2.01	0.41
23:W:24:LEU:HA	23:W:50:ILE:HA	2.01	0.41
24:X:71:LYS:HD3	24:X:71:LYS:C	2.45	0.41
25:Y:80:VAL:HG12	25:Y:83:ARG:HG2	2.02	0.41
28:BA:48:ARG:NH2	28:BA:58:HIS:HE1	2.09	0.41
30:DA:63:LYS:O	30:DA:66:GLN:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:37:PRO:HD2	31:EA:38:PHE:CE1	2.55	0.41
32:FA:79:TRP:HE1	32:FA:118:ILE:CB	2.20	0.41
32:FA:121:VAL:HA	32:FA:122:PRO:HD3	1.89	0.41
32:FA:138:ILE:HG22	32:FA:143:GLY:HA3	2.03	0.41
34:HA:42:ILE:HG22	34:HA:91:SER:CA	2.47	0.41
36:JA:66:LEU:HD22	36:JA:70:GLY:O	2.20	0.41
37:KA:42:GLN:HE21	37:KA:42:GLN:HB3	1.73	0.41
41:OA:87:SER:O	41:OA:88:ALA:HB3	2.21	0.41
43:QA:12:LYS:O	43:QA:16:ALA:HB2	2.20	0.41
48:VA:107:ALA:HA	48:VA:108:PRO:HD2	1.77	0.41
49:WA:47:LEU:HD22	49:WA:54:PHE:CD2	2.55	0.41
49:WA:221:MET:HG2	49:WA:233:THR:HG23	2.02	0.41
50:XA:193:GLN:C	50:XA:195:TRP:H	2.28	0.41
52:ZA:82:ASN:ND2	52:ZA:83:ILE:H	2.17	0.41
52:ZA:218:ILE:C	52:ZA:218:ILE:HD12	2.45	0.41
54:BB:54:TYR:O	74:VB:20:ARG:NH1	2.53	0.41
54:BB:201:HIS:CB	54:BB:206:ASP:HA	2.50	0.41
55:CB:128:ASN:HD22	55:CB:128:ASN:HA	1.72	0.41
57:EB:63:PRO:O	57:EB:64:VAL:CB	2.67	0.41
57:EB:140:VAL:O	72:TB:51:GLU:HA	2.21	0.41
70:RB:69:LYS:HB2	70:RB:78:THR:HB	2.01	0.41
73:UB:117:ILE:HB	73:UB:120:VAL:CG2	2.50	0.41
75:WB:60:VAL:O	75:WB:101:TYR:HB2	2.21	0.41
75:WB:68:ARG:HA	75:WB:68:ARG:HD3	1.87	0.41
82:DC:138:GLN:O	82:DC:142:VAL:HG23	2.20	0.41
82:DC:223:ARG:HG2	82:DC:223:ARG:NH1	2.36	0.41
82:DC:399:ARG:HA	82:DC:453:ILE:HG13	2.03	0.41
1:A:796:A:H2'	1:A:797:G:H8	1.85	0.41
1:A:1025:A:N1	1:A:1789:G:H1'	2.35	0.41
1:A:1762:A:C4	1:A:1782:A:H2'	2.55	0.41
2:B:155:G:H5"	2:B:156:G:H2'	2.03	0.41
2:B:219:A:O2'	2:B:220:G:H5'	2.19	0.41
2:B:336:A:H1'	2:B:691:A:H62	1.82	0.41
2:B:346:C:H5'	8:H:56:ALA:HB2	2.01	0.41
2:B:612:U:O2'	2:B:613:G:H5'	2.21	0.41
2:B:638:C:H5	2:B:647:A:OP1	2.03	0.41
2:B:640:U:OP2	36:JA:37:GLY:HA2	2.20	0.41
2:B:776:U:H3	2:B:2737:C:H42	1.69	0.41
2:B:926:A:H2'	2:B:927:C:H5'	2.03	0.41
2:B:973:A:C5	2:B:974:G:H1'	2.55	0.41
2:B:1212:A:H5'	24:X:113:ARG:NE	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1399:A:N1	3:C:8:C:C4'	2.83	0.41
2:B:1405:U:H5'	36:JA:57:TYR:O	2.21	0.41
2:B:1457:U:O2'	2:B:1458:U:H5'	2.21	0.41
2:B:1548:C:H3'	2:B:1549:U:O4'	2.21	0.41
2:B:2111:G:H1'	28:BA:44:LYS:HD2	2.03	0.41
2:B:2118:C:H2'	2:B:2119:A:O4'	2.20	0.41
2:B:2250:G:O6	2:B:2266:U:O4	2.39	0.41
2:B:2361:A:H2'	2:B:2362:C:H5'	2.02	0.41
2:B:2743:A:H2'	2:B:2744:U:C6	2.56	0.41
2:B:2987:A:H2'	2:B:2988:C:H6	1.83	0.41
2:B:3113:A:H5'	2:B:3117:C:OP2	2.21	0.41
2:B:3335:A:H2'	2:B:3336:A:H8	1.85	0.41
3:C:93:U:O2'	3:C:94:C:H5'	2.20	0.41
4:D:76:A:O2'	24:X:50:LYS:HD3	2.20	0.41
6:F:104:LEU:HD23	6:F:148:VAL:CG1	2.49	0.41
7:G:89:VAL:HG22	7:G:158:VAL:HG11	2.03	0.41
8:H:47:ARG:HD2	8:H:109:TRP:HA	2.02	0.41
8:H:325:LEU:CD2	8:H:331:ALA:HB3	2.51	0.41
9:I:69:ILE:HG12	25:Y:31:LEU:HB2	2.01	0.41
14:N:82:ARG:CB	14:N:82:ARG:HH11	2.33	0.41
14:N:121:LYS:HE2	14:N:121:LYS:HB3	1.92	0.41
15:O:106:ILE:CD1	15:O:125:MET:H	2.33	0.41
16:P:114:ARG:HG2	16:P:129:THR:HG23	2.03	0.41
17:Q:59:ARG:CA	17:Q:69:VAL:HA	2.27	0.41
17:Q:164:GLU:O	17:Q:165:SER:HB3	2.20	0.41
19:S:9:GLU:HA	19:S:12:ARG:NE	2.34	0.41
19:S:71:ARG:O	19:S:92:LEU:HB3	2.21	0.41
19:S:174:ILE:HG12	19:S:183:THR:OG1	2.21	0.41
20:T:122:GLN:HE21	20:T:122:GLN:HB3	1.68	0.41
22:V:122:ILE:CD1	22:V:126:GLN:HB2	2.35	0.41
22:V:126:GLN:HA	22:V:129:VAL:CG2	2.50	0.41
23:W:21:LYS:HA	23:W:53:LYS:HD3	2.03	0.41
23:W:166:ASN:HA	23:W:169:ALA:CB	2.51	0.41
31:EA:20:GLY:HA2	31:EA:136:PHE:HZ	1.85	0.41
31:EA:22:LYS:HD2	31:EA:130:PHE:CA	2.48	0.41
32:FA:100:PRO:HD2	32:FA:123:VAL:HG22	2.02	0.41
38:LA:21:LYS:HB3	38:LA:33:GLN:HB3	2.03	0.41
41:OA:63:ARG:O	41:OA:64:MET:CB	2.68	0.41
44:RA:124:LYS:O	44:RA:125:LYS:C	2.63	0.41
47:UA:24:ARG:NH2	47:UA:28:LYS:HE2	2.35	0.41
49:WA:41:THR:HB	49:WA:61:PHE:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:210:LEU:HD22	49:WA:231:MET:HE1	2.03	0.41
50:XA:130:ALA:HA	50:XA:133:ILE:HD13	2.01	0.41
52:ZA:156:THR:HB	72:TB:95:PRO:HB3	2.02	0.41
55:CB:149:VAL:O	55:CB:155:ALA:HB1	2.21	0.41
55:CB:187:ILE:H	55:CB:187:ILE:CD1	2.10	0.41
56:DB:57:ASP:OD1	56:DB:72:ARG:HD3	2.21	0.41
56:DB:176:GLN:O	56:DB:177:ARG:HB2	2.21	0.41
58:FB:3:ILE:H	58:FB:3:ILE:HG13	1.76	0.41
58:FB:79:ALA:HB3	58:FB:103:GLN:HB3	2.01	0.41
58:FB:137:LYS:H	58:FB:137:LYS:CD	2.13	0.41
59:GB:134:ILE:O	59:GB:140:ILE:HA	2.21	0.41
61:IB:82:ARG:HG2	61:IB:113:PRO:HD3	2.02	0.41
63:KB:21:ASN:O	63:KB:22:ALA:HB3	2.19	0.41
68:PB:16:ARG:HA	68:PB:20:THR:O	2.21	0.41
79:AC:38:ILE:HG22	79:AC:39:CYS:N	2.36	0.41
82:DC:127:VAL:HG23	82:DC:154:VAL:H	1.86	0.41
82:DC:429:LYS:HE2	82:DC:462:PHE:CE1	2.55	0.41
83:EC:6835:U:H4'	83:EC:6874:A:N6	2.35	0.41
1:A:329:G:H5"	58:FB:98:LYS:C	2.46	0.41
1:A:333:A:H5'	58:FB:48:THR:HB	2.02	0.41
1:A:1284:C:OP2	1:A:1623:C:H4'	2.20	0.41
1:A:1416:G:H2'	1:A:1417:A:O4'	2.21	0.41
1:A:1473:U:OP1	55:CB:189:THR:HA	2.20	0.41
1:A:1512:G:O2'	1:A:1513:G:H5'	2.21	0.41
1:A:1557:U:OP1	65:MB:40:ARG:HD3	2.21	0.41
1:A:1673:G:H4'	56:DB:92:ARG:HH22	1.85	0.41
1:A:1685:G:C3'	1:A:1686:C:H5"	2.51	0.41
2:B:160:G:H2'	2:B:161:G:C5'	2.50	0.41
2:B:189:G:H8	2:B:224:C:OP2	2.03	0.41
2:B:595:G:O6	10:J:22:ARG:NH1	2.54	0.41
2:B:786:A:H5'	22:V:147:ARG:CA	2.20	0.41
2:B:926:A:C2'	2:B:927:C:H5'	2.51	0.41
2:B:1097:G:N7	25:Y:112:ASN:HB3	2.36	0.41
2:B:1259:A:N6	48:VA:38:MET:HE2	2.36	0.41
2:B:1362:G:H4'	11:K:160:ARG:H	1.86	0.41
2:B:1554:U:H4'	2:B:1555:U:OP1	2.20	0.41
2:B:1581:C:H2'	2:B:1582:C:H5'	2.03	0.41
2:B:2166:A:H5"	19:S:72:LYS:NZ	2.36	0.41
2:B:2797:C:H3'	2:B:2798:C:C5'	2.51	0.41
2:B:3078:U:OP1	2:B:3080:G:H4'	2.21	0.41
2:B:3190:C:H2'	2:B:3191:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3217:C:O2	2:B:3217:C:H2'	2.20	0.41
2:B:3268:A:N3	10:J:75:PRO:HB3	2.35	0.41
2:B:3334:U:H4'	2:B:3335:A:C5'	2.51	0.41
5:E:118:LYS:HD2	83:EC:6767:G:OP1	2.20	0.41
6:F:227:ARG:HA	6:F:238:ILE:HG23	2.01	0.41
8:H:105:THR:O	17:Q:26:PHE:HZ	2.04	0.41
8:H:309:ARG:HB3	8:H:312:VAL:HG11	2.01	0.41
9:I:207:TYR:O	9:I:211:LEU:HG	2.21	0.41
10:J:71:VAL:HG23	10:J:72:ASN:H	1.85	0.41
13:M:86:TYR:H	13:M:187:ILE:HG13	1.84	0.41
14:N:30:LYS:HB2	14:N:62:SER:C	2.46	0.41
14:N:68:ALA:O	14:N:72:ALA:N	2.54	0.41
15:O:154:THR:HG22	15:O:155:THR:N	2.35	0.41
16:P:114:ARG:HG2	16:P:132:ILE:HD12	2.02	0.41
17:Q:8:PRO:CA	22:V:164:ARG:HG2	2.50	0.41
17:Q:16:LYS:H	17:Q:18:TRP:CD1	2.39	0.41
17:Q:109:PHE:HD2	40:NA:20:MET:HE1	1.80	0.41
27:AA:66:LYS:HA	27:AA:67:PRO:HD3	1.85	0.41
32:FA:105:LEU:C	32:FA:107:ALA:N	2.78	0.41
34:HA:25:LEU:HD22	34:HA:87:VAL:HG21	2.01	0.41
34:HA:42:ILE:HG22	34:HA:91:SER:CB	2.51	0.41
46:TA:52:GLY:O	46:TA:54:THR:HG23	2.20	0.41
48:VA:104:ARG:HB3	48:VA:185:LEU:H	1.86	0.41
50:XA:13:ASP:O	50:XA:17:LEU:HD13	2.20	0.41
50:XA:182:LEU:C	50:XA:188:LEU:HB2	2.45	0.41
53:AB:20:GLU:HA	60:HB:61:TRP:CE2	2.56	0.41
54:BB:44:LEU:CG	54:BB:82:TYR:HB3	2.50	0.41
55:CB:136:ALA:O	55:CB:140:THR:HG23	2.20	0.41
56:DB:74:LYS:HG2	56:DB:96:SER:CA	2.50	0.41
57:EB:17:GLU:HG3	57:EB:43:PHE:HZ	1.86	0.41
58:FB:64:ASN:HD22	58:FB:74:LYS:C	2.28	0.41
58:FB:84:HIS:CE1	58:FB:86:SER:HB2	2.55	0.41
60:HB:63:TYR:O	60:HB:64:TYR:C	2.64	0.41
65:MB:81:ARG:HA	65:MB:116:LEU:HB2	2.03	0.41
66:NB:92:TYR:C	66:NB:94:GLN:H	2.28	0.41
67:OB:29:GLN:H	67:OB:29:GLN:NE2	2.19	0.41
67:OB:116:LYS:O	67:OB:117:LEU:HD13	2.21	0.41
74:VB:81:GLU:O	74:VB:84:LYS:HG2	2.20	0.41
79:AC:33:LYS:HE2	79:AC:34:TYR:CE2	2.56	0.41
82:DC:568:GLU:O	82:DC:569:SER:CB	2.68	0.41
82:DC:694:HIS:CE1	82:DC:699:DDE:HD2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:EC:6766:U:H2'	83:EC:6767:G:H8	1.86	0.41
1:A:79:C:C2'	1:A:80:A:H5'	2.51	0.41
1:A:94:U:O5'	1:A:94:U:H6	2.04	0.41
1:A:177:U:H1'	56:DB:191:ARG:HH11	1.86	0.41
1:A:244:A:H4'	54:BB:129:VAL:CG1	2.51	0.41
1:A:257:A:O2'	1:A:258:C:H5'	2.21	0.41
1:A:388:G:C8	1:A:423:G:C2	3.08	0.41
1:A:400:A:H61	58:FB:29:LEU:HD13	1.86	0.41
1:A:435:C:H2'	1:A:436:A:O4'	2.20	0.41
1:A:549:G:O2'	1:A:550:A:H5'	2.21	0.41
1:A:551:G:H4'	1:A:581:U:C4	2.56	0.41
1:A:606:A:C5'	1:A:607:G:H3'	2.51	0.41
1:A:630:A:H2'	1:A:631:G:O4'	2.20	0.41
1:A:861:U:H3'	1:A:862:A:C8	2.56	0.41
1:A:1026:A:H1'	1:A:1790:A:H1'	2.03	0.41
1:A:1044:U:H2'	1:A:1045:C:H6	1.81	0.41
1:A:1279:C:H2'	1:A:1280:C:H6	1.86	0.41
1:A:1282:U:H2'	1:A:1283:U:C5	2.56	0.41
1:A:1756:A:H2'	1:A:1757:G:O5'	2.21	0.41
2:B:200:C:O3'	2:B:221:A:H5'	2.21	0.41
2:B:262:U:H2'	2:B:263:C:O4'	2.20	0.41
2:B:287:G:H2'	2:B:288:C:O4'	2.21	0.41
2:B:366:A:H5"	8:H:95:ARG:HH12	1.86	0.41
2:B:432:G:H2'	2:B:433:A:C8	2.55	0.41
2:B:491:C:OP1	10:J:110:LYS:HG2	2.21	0.41
2:B:617:G:OP2	10:J:111:LEU:HD11	2.19	0.41
2:B:733:G:H1'	2:B:736:A:H62	1.83	0.41
2:B:763:G:C2	2:B:764:U:H1'	2.56	0.41
2:B:879:U:OP1	2:B:2981:U:H5"	2.21	0.41
2:B:960:U:H4'	2:B:963:G:C2	2.56	0.41
2:B:980:A:N6	2:B:1105:A:C1'	2.84	0.41
2:B:994:G:C2	2:B:2637:A:C2	3.08	0.41
2:B:1146:C:H2'	2:B:1147:G:H8	1.86	0.41
2:B:1224:C:H2'	2:B:1225:A:H8	1.85	0.41
2:B:1352:A:H1'	2:B:1353:U:H5'	2.02	0.41
2:B:1404:G:N2	2:B:1407:A:OP2	2.45	0.41
2:B:1409:G:H2'	2:B:1410:U:H6	1.86	0.41
2:B:1544:G:H2'	2:B:1544:G:N3	2.35	0.41
2:B:1634:G:H2'	2:B:1635:G:H8	1.84	0.41
2:B:1879:A:H3'	2:B:1880:U:C5'	2.51	0.41
2:B:2163:C:O2'	2:B:2164:A:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2202:C:H5”	6:F:225:ILE:C	2.46	0.41
2:B:2210:G:C2	2:B:2236:G:N3	2.88	0.41
2:B:2575:G:N7	31:EA:56:LYS:CE	2.84	0.41
2:B:2735:U:H5”	25:Y:51:GLY:H	1.86	0.41
2:B:2774:C:O2’	32:FA:58:MET:HE1	2.20	0.41
2:B:2783:U:H2’	2:B:2784:G:H5’	2.02	0.41
2:B:2792:A:H4’	46:TA:69:VAL:HG22	2.03	0.41
2:B:2849:C:OP2	2:B:2906:C:H4’	2.20	0.41
2:B:3009:G:H2’	2:B:3010:U:H5’	2.01	0.41
2:B:3229:G:C2’	2:B:3230:G:H5’	2.50	0.41
2:B:3258:U:O2’	2:B:3259:U:H3’	2.21	0.41
3:C:48:A:H2’	3:C:50:C:OP2	2.21	0.41
3:C:49:G:C8	39:MA:42:PRO:HG3	2.56	0.41
3:C:111:A:C8	41:OA:29:VAL:HG11	2.56	0.41
4:D:103:A:H2’	4:D:104:A:H8	1.86	0.41
7:G:164:THR:HG22	7:G:165:GLN:N	2.36	0.41
7:G:187:SER:O	7:G:191:LYS:HG3	2.21	0.41
8:H:60:THR:C	8:H:62:ALA:H	2.29	0.41
9:I:21:ARG:HA	9:I:24:ARG:HG3	2.03	0.41
12:L:42:PRO:HB2	12:L:43:LYS:H	1.64	0.41
12:L:183:LYS:HA	12:L:186:LEU:HG	2.03	0.41
13:M:169:ASN:O	13:M:170:LYS:HE3	2.20	0.41
13:M:170:LYS:HB3	13:M:175:PHE:CD2	2.56	0.41
14:N:184:LYS:O	14:N:190:VAL:HG12	2.20	0.41
15:O:9:MET:HG3	15:O:134:PRO:CB	2.40	0.41
15:O:91:LEU:HD21	15:O:104:PHE:HB3	2.03	0.41
16:P:67:ARG:O	16:P:68:GLN:CB	2.69	0.41
16:P:114:ARG:NH2	16:P:121:PHE:HB3	2.36	0.41
17:Q:76:THR:O	17:Q:80:VAL:HG13	2.20	0.41
17:Q:173:ALA:HA	17:Q:176:GLU:HB2	2.03	0.41
20:T:113:ASP:HA	20:T:117:ARG:NH1	2.35	0.41
21:U:130:TYR:CD1	21:U:130:TYR:N	2.88	0.41
22:V:33:TYR:CD1	22:V:36:LEU:HD12	2.56	0.41
22:V:106:PHE:CB	22:V:111:ARG:HE	2.34	0.41
23:W:23:TRP:HE3	23:W:51:VAL:HG22	1.86	0.41
23:W:24:LEU:HD22	23:W:32:ILE:HG21	2.02	0.41
23:W:85:ARG:C	23:W:87:ALA:H	2.28	0.41
23:W:121:HIS:NE2	23:W:125:LYS:HE2	2.36	0.41
24:X:10:ILE:CG2	25:Y:148:PRO:HB3	2.50	0.41
24:X:10:ILE:O	24:X:59:VAL:N	2.53	0.41
24:X:94:ILE:HD13	24:X:102:ALA:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:38:ILE:HB	26:Z:56:VAL:HB	2.03	0.41
30:DA:39:LEU:HD12	30:DA:106:ILE:O	2.21	0.41
30:DA:87:LYS:O	30:DA:94:SER:HA	2.21	0.41
31:EA:14:VAL:CG1	38:LA:90:ILE:HG13	2.51	0.41
31:EA:72:ILE:CG1	31:EA:111:LYS:HE2	2.51	0.41
32:FA:147:LEU:HD12	40:NA:7:ILE:HG22	2.03	0.41
32:FA:148:ILE:CG2	32:FA:149:ALA:N	2.82	0.41
35:IA:14:ILE:HG23	35:IA:16:LEU:HD11	2.03	0.41
35:IA:17:HIS:C	35:IA:19:ARG:H	2.29	0.41
35:IA:23:VAL:HG21	35:IA:31:ARG:NH1	2.36	0.41
36:JA:96:ILE:CB	36:JA:121:ASN:HD21	2.34	0.41
38:LA:25:THR:HA	38:LA:26:PRO:HD3	1.82	0.41
39:MA:5:LYS:HD3	39:MA:7:TYR:CE2	2.56	0.41
47:UA:46:THR:CB	47:UA:58:SER:H	2.30	0.41
47:UA:83:ILE:HD12	47:UA:83:ILE:N	2.36	0.41
48:VA:64:ARG:C	48:VA:66:PHE:H	2.26	0.41
48:VA:145:ILE:HG13	82:DC:186:ASN:HB3	2.01	0.41
49:WA:61:PHE:HB3	49:WA:92:TRP:CE3	2.56	0.41
49:WA:152:SER:HB2	49:WA:200:ASN:HA	2.02	0.41
52:ZA:44:LEU:HD13	52:ZA:50:ILE:HD11	2.03	0.41
53:AB:41:VAL:O	53:AB:41:VAL:HG13	2.21	0.41
54:BB:43:PRO:HD2	54:BB:46:VAL:HG21	2.03	0.41
54:BB:126:VAL:HG23	54:BB:157:ASN:N	2.34	0.41
54:BB:173:ILE:HG12	54:BB:235:TYR:CE2	2.54	0.41
55:CB:48:PHE:CE1	55:CB:130:ILE:HD12	2.56	0.41
55:CB:59:VAL:O	55:CB:60:ASP:HB2	2.20	0.41
55:CB:213:LYS:O	55:CB:216:GLU:HB3	2.21	0.41
56:DB:64:LYS:HD2	56:DB:81:VAL:HG21	2.02	0.41
56:DB:174:LYS:HD2	56:DB:175:ILE:N	2.35	0.41
57:EB:16:LEU:HD22	57:EB:85:PHE:CZ	2.56	0.41
57:EB:93:LEU:HD21	57:EB:129:LEU:HD23	2.03	0.41
57:EB:94:ALA:HB3	57:EB:96:ARG:NH1	2.35	0.41
58:FB:83:TYR:HD1	58:FB:84:HIS:N	2.18	0.41
58:FB:98:LYS:CD	58:FB:172:ARG:HG2	2.48	0.41
59:GB:152:SER:C	59:GB:154:LYS:H	2.29	0.41
59:GB:163:PRO:C	59:GB:165:GLY:H	2.28	0.41
63:KB:64:ARG:NH2	63:KB:70:LYS:HZ1	2.19	0.41
63:KB:76:LYS:HD2	63:KB:76:LYS:C	2.45	0.41
66:NB:77:GLN:O	66:NB:81:ILE:HG23	2.19	0.41
67:OB:59:LYS:O	67:OB:63:LYS:HG2	2.21	0.41
67:OB:89:SER:O	67:OB:91:LEU:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:58:ALA:HA	69:QB:104:VAL:CG1	2.51	0.41
73:UB:91:GLY:C	73:UB:93:LEU:H	2.29	0.41
75:WB:91:PRO:HA	75:WB:101:TYR:HD1	1.85	0.41
77:YB:33:LEU:HD23	77:YB:80:ARG:C	2.46	0.41
82:DC:129:VAL:HG12	82:DC:139:THR:HG21	2.02	0.41
82:DC:152:LYS:CG	82:DC:200:VAL:HG23	2.48	0.41
82:DC:163:ALA:O	82:DC:169:VAL:HG23	2.21	0.41
82:DC:373:ASP:HB2	82:DC:376:ALA:HB3	2.03	0.41
82:DC:374:PRO:O	82:DC:404:THR:HG23	2.21	0.41
82:DC:426:LEU:HG	82:DC:428:ILE:CD1	2.45	0.41
82:DC:740:VAL:C	82:DC:743:ILE:HG23	2.44	0.41
82:DC:785:ARG:HA	82:DC:789:GLY:O	2.21	0.41
1:A:109:G:H2'	1:A:110:U:C6	2.55	0.41
1:A:654:C:H3'	1:A:655:G:H5"	2.02	0.41
1:A:1113:A:OP1	1:A:1115:U:H1'	2.21	0.41
1:A:1117:U:H2'	1:A:1118:G:O4'	2.21	0.41
1:A:1199:G:O6	79:AC:40:ARG:HB3	2.20	0.41
1:A:1246:C:H2'	1:A:1247:U:O4'	2.21	0.41
1:A:1488:G:H3'	1:A:1515:A:N6	2.35	0.41
2:B:152:U:H2'	2:B:153:U:C6	2.56	0.41
2:B:363:G:N2	8:H:82:THR:HB	2.36	0.41
2:B:528:U:H2'	2:B:529:A:H8	1.81	0.41
2:B:637:C:N4	2:B:647:A:H4'	2.36	0.41
2:B:682:U:H5"	2:B:683:U:H5	1.86	0.41
2:B:896:A:H8	2:B:2134:G:H1'	1.79	0.41
2:B:1230:G:H2'	2:B:1231:A:H5'	2.03	0.41
2:B:1307:G:C5	20:T:60:LYS:HD3	2.56	0.41
2:B:1348:U:H5'	2:B:1355:A:H61	1.84	0.41
2:B:1643:A:P	38:LA:68:THR:HG1	2.44	0.41
2:B:1657:C:C5	2:B:1797:A:H5"	2.56	0.41
2:B:1843:C:H5"	2:B:1844:C:OP2	2.20	0.41
2:B:1920:U:H1'	2:B:1933:A:N7	2.36	0.41
2:B:2215:A:O2'	2:B:2431:C:H5'	2.20	0.41
2:B:2230:C:H2'	2:B:2231:C:H5'	2.02	0.41
2:B:2482:U:C5	5:E:101:LYS:HE2	2.55	0.41
2:B:2635:A:H4'	2:B:2636:A:O5'	2.21	0.41
2:B:2792:A:H2'	2:B:2793:G:C8	2.56	0.41
2:B:2813:A:H2'	2:B:2814:G:O4'	2.20	0.41
2:B:2841:G:H1'	2:B:2847:A:H61	1.85	0.41
2:B:2880:U:O2	7:G:251:CYS:HB2	2.21	0.41
2:B:3010:U:H5'	7:G:14:LEU:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3101:G:N2	2:B:3134:A:H1'	2.36	0.41
2:B:3181:C:OP2	20:T:171:LYS:NZ	2.53	0.41
2:B:3270:U:C4	10:J:46:ARG:HD2	2.55	0.41
2:B:3325:G:C1'	35:IA:105:GLN:HG2	2.49	0.41
3:C:5:U:C2'	3:C:6:U:H5'	2.51	0.41
5:E:100:ILE:HD11	5:E:124:LEU:HD12	2.03	0.41
7:G:196:ARG:HA	7:G:199:PHE:CZ	2.56	0.41
8:H:115:HIS:CE1	8:H:119:ARG:HE	2.39	0.41
9:I:66:SER:HB3	9:I:73:VAL:HB	2.03	0.41
9:I:259:LYS:HG2	9:I:260:PHE:CD2	2.56	0.41
10:J:10:TYR:HB3	36:JA:88:HIS:HE1	1.84	0.41
10:J:47:PHE:HD1	10:J:50:LYS:HD2	1.86	0.41
11:K:196:LYS:O	11:K:200:ASN:HB3	2.21	0.41
12:L:105:LYS:O	12:L:109:LEU:HG	2.21	0.41
14:N:36:LEU:CD1	14:N:87:LEU:HD13	2.50	0.41
17:Q:193:ALA:O	17:Q:194:GLU:HB3	2.21	0.41
18:R:4:ASP:HB3	18:R:5:SER:H	1.74	0.41
18:R:8:LYS:HB3	18:R:9:ALA:H	1.70	0.41
18:R:36:VAL:HG12	18:R:75:GLY:HA2	2.03	0.41
19:S:159:ARG:HH21	19:S:164:LEU:C	2.28	0.41
19:S:199:LEU:HD22	19:S:203:ARG:HD2	2.03	0.41
20:T:64:PHE:CD1	20:T:64:PHE:C	2.99	0.41
21:U:114:VAL:CA	21:U:150:VAL:HA	2.51	0.41
22:V:58:ASN:C	22:V:60:PRO:HD3	2.46	0.41
24:X:13:ARG:HB3	24:X:14:LEU:H	1.64	0.41
24:X:34:GLU:CD	24:X:61:ILE:HG12	2.45	0.41
25:Y:136:ARG:H	25:Y:136:ARG:HD2	1.85	0.41
26:Z:37:LEU:O	26:Z:41:ILE:HG13	2.21	0.41
36:JA:2:ALA:O	36:JA:71:HIS:NE2	2.54	0.41
36:JA:66:LEU:HA	36:JA:71:HIS:C	2.46	0.41
39:MA:16:GLN:O	39:MA:20:GLN:HG2	2.20	0.41
39:MA:27:GLU:O	39:MA:31:LEU:HD13	2.21	0.41
40:NA:41:ARG:O	40:NA:44:VAL:HB	2.21	0.41
41:OA:31:LYS:O	41:OA:32:LYS:HB2	2.20	0.41
44:RA:125:LYS:HA	44:RA:125:LYS:HD3	1.94	0.41
48:VA:91:GLU:CB	48:VA:92:PRO:HD2	2.47	0.41
49:WA:144:LEU:HD22	49:WA:144:LEU:N	2.36	0.41
50:XA:183:ARG:HB2	50:XA:184:LEU:HD12	2.03	0.41
54:BB:180:LEU:HD23	54:BB:194:THR:H	1.86	0.41
54:BB:191:ARG:NH1	54:BB:218:PHE:CD2	2.89	0.41
55:CB:25:LEU:HB2	66:NB:27:GLY:HA3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:42:ARG:HB3	58:FB:58:LEU:O	2.21	0.41
59:GB:112:GLN:HE21	59:GB:112:GLN:HA	1.86	0.41
67:OB:32:LYS:HG3	67:OB:47:ARG:HD3	2.02	0.41
70:RB:55:PRO:HB3	70:RB:91:ILE:HD11	2.03	0.41
72:TB:116:ALA:HB1	72:TB:121:VAL:O	2.21	0.41
75:WB:67:ASP:C	75:WB:69:LEU:N	2.79	0.41
75:WB:77:ARG:NH1	75:WB:77:ARG:HB2	2.35	0.41
82:DC:287:ALA:HA	82:DC:292:LYS:HB2	2.02	0.41
82:DC:325:ARG:HA	82:DC:329:PRO:HG3	2.02	0.41
82:DC:456:LEU:N	82:DC:456:LEU:HD23	2.35	0.41
82:DC:757:GLU:HG2	82:DC:766:PHE:CE1	2.56	0.41
83:EC:6840:A:H2'	83:EC:6841:U:C4'	2.49	0.41
83:EC:6899:C:H2'	83:EC:6900:A:H5'	2.02	0.41
1:A:38:C:H4'	59:GB:6:ARG:NH2	2.36	0.40
1:A:400:A:C5'	58:FB:25:ARG:HD2	2.51	0.40
1:A:461:G:H4'	54:BB:26:CYS:SG	2.61	0.40
1:A:810:G:C2	57:EB:111:LYS:HG3	2.56	0.40
1:A:862:A:N6	63:KB:70:LYS:NZ	2.69	0.40
1:A:1227:A:O5'	1:A:1228:G:H2'	2.21	0.40
1:A:1507:G:H5'	1:A:1551:U:C5'	2.50	0.40
2:B:67:A:H2'	2:B:301:G:H1'	2.03	0.40
2:B:376:G:H22	2:B:401:U:H5"	1.85	0.40
2:B:430:U:O4'	37:KA:90:PRO:HG3	2.20	0.40
2:B:717:C:H3'	2:B:718:G:H8	1.85	0.40
2:B:1117:G:H5'	33:GA:5:LYS:CD	2.51	0.40
2:B:1174:G:C6	2:B:1318:A:C2	3.09	0.40
2:B:1348:U:OP2	22:V:38:ARG:NH2	2.54	0.40
2:B:1504:A:N1	2:B:1516:C:H5'	2.37	0.40
2:B:1568:U:H4'	2:B:1570:U:O4	2.21	0.40
2:B:2482:U:H5	5:E:101:LYS:HE2	1.85	0.40
4:D:9:C:OP1	25:Y:28:SER:N	2.45	0.40
4:D:105:C:H2'	4:D:106:U:C6	2.56	0.40
6:F:181:LYS:HE2	6:F:183:GLY:HA3	2.03	0.40
8:H:150:LEU:HB3	8:H:249:ILE:HG22	2.03	0.40
9:I:294:ALA:CB	14:N:210:ILE:HG12	2.52	0.40
11:K:158:LYS:O	11:K:159:GLN:C	2.64	0.40
13:M:47:LYS:HB2	18:R:7:VAL:HG21	2.02	0.40
18:R:128:ARG:HH11	18:R:132:LYS:HG3	1.87	0.40
19:S:67:ARG:HA	19:S:127:TYR:HA	2.02	0.40
20:T:49:ARG:HH11	20:T:49:ARG:HG2	1.86	0.40
21:U:59:PRO:HG3	21:U:76:PHE:HB2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:179:ARG:CZ	22:V:182:LYS:HG3	2.51	0.40
24:X:82:ASP:CG	24:X:87:THR:HB	2.46	0.40
25:Y:60:LYS:HB3	25:Y:76:ILE:HG21	2.02	0.40
27:AA:85:TRP:CE2	27:AA:93:LEU:HG	2.56	0.40
37:KA:32:ILE:CG1	37:KA:35:VAL:HG13	2.47	0.40
37:KA:46:GLY:N	37:KA:71:VAL:HG12	2.28	0.40
37:KA:49:ILE:O	37:KA:50:ALA:HB2	2.21	0.40
38:LA:25:THR:OG1	38:LA:29:ILE:HG13	2.21	0.40
38:LA:82:ALA:CA	38:LA:85:VAL:HB	2.49	0.40
39:MA:101:THR:C	39:MA:103:LYS:N	2.77	0.40
48:VA:95:GLU:O	48:VA:99:VAL:HG23	2.21	0.40
52:ZA:208:GLU:H	52:ZA:208:GLU:CD	2.29	0.40
55:CB:70:VAL:HG21	66:NB:47:LYS:HB2	2.03	0.40
55:CB:196:GLU:HG2	55:CB:200:ASN:HD21	1.86	0.40
56:DB:92:ARG:O	56:DB:93:LYS:HB2	2.22	0.40
57:EB:126:LEU:HD23	57:EB:126:LEU:O	2.21	0.40
78:ZB:46:GLY:HA3	78:ZB:47:PRO:HD3	1.82	0.40
82:DC:82:SER:HB3	82:DC:85:ASP:OD2	2.21	0.40
82:DC:307:LEU:HA	82:DC:326:LYS:NZ	2.37	0.40
82:DC:387:PRO:HA	82:DC:394:PHE:CB	2.45	0.40
82:DC:515:ASP:HA	82:DC:516:PRO:HD3	1.92	0.40
1:A:219:A:N6	1:A:829:A:C2	2.88	0.40
1:A:249:U:H3'	1:A:250:C:C5'	2.51	0.40
1:A:614:C:H5	73:UB:5:LYS:NZ	2.20	0.40
1:A:750:U:OP1	72:TB:83:ILE:HG21	2.21	0.40
1:A:1617:U:O2'	1:A:1618:C:H5'	2.21	0.40
1:A:1741:U:H2'	1:A:1742:U:C6	2.56	0.40
2:B:153:U:H2'	2:B:154:U:H6	1.86	0.40
2:B:577:C:H2'	2:B:579:G:C5'	2.50	0.40
2:B:684:G:H5"	17:Q:35:ARG:NH2	2.36	0.40
2:B:684:G:H2'	2:B:685:G:H8	1.86	0.40
2:B:822:G:H5'	6:F:194:ASN:CG	2.46	0.40
2:B:897:U:H2'	2:B:898:U:O4'	2.21	0.40
2:B:929:A:H2'	2:B:930:U:C6	2.56	0.40
2:B:1597:C:OP1	38:LA:31:ARG:HG2	2.21	0.40
2:B:1678:G:OP2	26:Z:77:LYS:HD2	2.22	0.40
2:B:2210:G:N1	2:B:2236:G:N3	2.69	0.40
2:B:2322:C:O2'	2:B:2323:G:H5'	2.21	0.40
2:B:2534:G:H2'	2:B:2535:A:C8	2.56	0.40
2:B:2561:A:N1	12:L:32:LYS:HB3	2.36	0.40
2:B:2676:A:H4'	2:B:2677:G:O5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2853:A:H2'	2:B:2854:U:C6	2.56	0.40
2:B:3083:G:H2'	2:B:3084:C:C6	2.56	0.40
2:B:3093:C:H1'	27:AA:83:LYS:NZ	2.36	0.40
2:B:3102:G:O2'	2:B:3103:A:H5'	2.21	0.40
3:C:104:A:O2'	41:OA:42:ALA:HB1	2.21	0.40
5:E:100:ILE:CG1	5:E:128:LEU:HB2	2.49	0.40
5:E:118:LYS:O	5:E:122:ARG:HB2	2.20	0.40
6:F:78:ALA:HB1	6:F:170:ALA:CB	2.36	0.40
7:G:57:VAL:CG2	7:G:358:TRP:HE3	2.31	0.40
7:G:306:THR:HG21	7:G:316:GLU:HA	2.02	0.40
8:H:180:LYS:HZ1	8:H:181:VAL:HG22	1.86	0.40
8:H:181:VAL:HG12	8:H:182:LEU:N	2.36	0.40
9:I:123:GLU:H	9:I:123:GLU:HG2	1.75	0.40
9:I:155:THR:HA	9:I:179:ARG:CA	2.50	0.40
9:I:287:ALA:O	9:I:291:ALA:HB3	2.20	0.40
9:I:296:GLN:O	9:I:296:GLN:HG2	2.20	0.40
12:L:69:LEU:HD12	12:L:69:LEU:N	2.36	0.40
12:L:203:VAL:HG22	12:L:204:ARG:N	2.30	0.40
12:L:219:ASP:O	12:L:223:ALA:HB3	2.21	0.40
16:P:107:ASP:HB3	16:P:108:GLU:H	1.61	0.40
17:Q:18:TRP:C	17:Q:20:GLU:H	2.29	0.40
17:Q:137:GLN:HE21	17:Q:137:GLN:HB2	1.74	0.40
18:R:123:LEU:HD23	20:T:190:VAL:HG23	2.02	0.40
19:S:140:LYS:HB3	19:S:144:ARG:NH2	2.36	0.40
22:V:61:PRO:HA	22:V:86:THR:OG1	2.20	0.40
24:X:27:MET:HE2	24:X:44:PHE:CG	2.56	0.40
30:DA:112:ASP:HB2	30:DA:115:ARG:CB	2.46	0.40
31:EA:74:VAL:HG22	31:EA:101:PHE:CE2	2.56	0.40
38:LA:26:PRO:C	38:LA:28:GLY:N	2.79	0.40
41:OA:21:ARG:HD2	41:OA:37:CYS:SG	2.62	0.40
52:ZA:130:ILE:HD12	52:ZA:130:ILE:N	2.35	0.40
52:ZA:237:VAL:CG1	52:ZA:241:ASP:HB2	2.51	0.40
53:AB:58:VAL:HA	53:AB:65:ARG:CD	2.44	0.40
53:AB:75:LYS:HB3	60:HB:22:VAL:HG21	2.03	0.40
54:BB:10:LYS:HA	54:BB:27:TYR:HA	2.02	0.40
55:CB:88:PRO:HG2	55:CB:91:GLU:CB	2.50	0.40
57:EB:16:LEU:HD13	57:EB:58:LEU:HD22	2.03	0.40
67:OB:28:PHE:CZ	67:OB:32:LYS:HD3	2.56	0.40
67:OB:76:GLU:O	67:OB:77:GLU:C	2.64	0.40
72:TB:32:LYS:O	72:TB:35:ILE:HB	2.21	0.40
72:TB:93:LEU:HD21	72:TB:102:VAL:HG21	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:UB:96:VAL:CG2	73:UB:97:ASP:H	2.31	0.40
73:UB:133:LEU:HD13	73:UB:133:LEU:C	2.47	0.40
78:ZB:19:THR:HB	78:ZB:20:GLY:H	1.69	0.40
82:DC:4:PHE:HB3	82:DC:9:MET:SD	2.61	0.40
82:DC:40:VAL:C	82:DC:42:ARG:N	2.79	0.40
82:DC:119:LEU:HD22	82:DC:151:ILE:HD12	2.03	0.40
82:DC:306:VAL:O	82:DC:326:LYS:HD3	2.22	0.40
82:DC:606:ILE:HG21	82:DC:619:MET:CE	2.48	0.40
82:DC:672:LYS:HA	82:DC:680:GLU:HG2	2.02	0.40
83:EC:6883:A:H2'	83:EC:6884:G:H4'	2.04	0.40
1:A:4:C:H2'	1:A:5:U:C6	2.56	0.40
1:A:119:A:H2'	1:A:120:U:H5'	2.02	0.40
1:A:291:G:H2'	1:A:292:U:H5	1.86	0.40
1:A:294:C:H2'	1:A:295:A:O4'	2.21	0.40
1:A:400:A:OP2	58:FB:27:PHE:HE1	2.05	0.40
1:A:482:U:C2'	1:A:483:A:C8	3.04	0.40
1:A:564:G:O2'	1:A:578:U:H5'	2.21	0.40
1:A:1175:U:H4'	1:A:1196:A:N6	2.37	0.40
1:A:1331:A:H61	53:AB:161:GLY:N	2.19	0.40
1:A:1586:A:H2'	1:A:1587:A:O4'	2.21	0.40
1:A:1609:U:H2'	1:A:1610:G:O4'	2.21	0.40
2:B:501:A:C4'	10:J:28:GLN:HE21	2.34	0.40
2:B:593:C:OP1	10:J:20:LYS:HB2	2.21	0.40
2:B:741:U:H4'	22:V:74:GLU:HB2	2.03	0.40
2:B:787:G:O2'	2:B:788:C:H5'	2.21	0.40
2:B:802:C:C5	32:FA:25:HIS:HB3	2.38	0.40
2:B:1048:A:H4'	2:B:2633:U:H4'	2.04	0.40
2:B:1212:A:H5'	24:X:113:ARG:HE	1.86	0.40
2:B:1602:A:N6	29:CA:70:GLU:HB2	2.37	0.40
2:B:1774:C:H2'	2:B:1775:G:H5"	2.03	0.40
2:B:2132:C:H4'	2:B:2322:C:H1'	2.02	0.40
2:B:2555:G:H21	38:LA:92:ALA:HB1	1.86	0.40
2:B:2649:A:H2'	2:B:2650:U:C5'	2.50	0.40
2:B:3187:A:H2'	2:B:3188:G:O4'	2.22	0.40
2:B:3238:G:C2	2:B:3250:U:H1'	2.56	0.40
3:C:92:A:O5'	30:DA:23:PRO:HG3	2.20	0.40
3:C:97:A:C2'	3:C:98:U:H5'	2.51	0.40
4:D:3:U:H5'	4:D:24:A:C2	2.55	0.40
4:D:9:C:OP1	25:Y:26:HIS:HB2	2.20	0.40
4:D:116:C:N4	4:D:117:A:H62	2.18	0.40
7:G:67:PHE:CE1	27:AA:89:ASP:OD1	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:162:VAL:O	7:G:178:LEU:HD12	2.22	0.40
7:G:299:ASP:C	7:G:300:ARG:HG2	2.47	0.40
7:G:360:ASP:OD2	7:G:371:GLN:NE2	2.50	0.40
8:H:52:VAL:HG21	8:H:99:MET:HE1	2.04	0.40
15:O:50:ALA:H	15:O:63:GLU:H	1.70	0.40
17:Q:56:PRO:HG2	17:Q:72:GLY:C	2.47	0.40
17:Q:108:ILE:H	17:Q:108:ILE:HG12	1.71	0.40
19:S:22:LEU:HD12	19:S:26:ARG:CZ	2.52	0.40
20:T:26:GLN:HG3	24:X:163:PHE:CZ	2.56	0.40
20:T:126:VAL:CG2	24:X:170:THR:HG22	2.51	0.40
21:U:88:VAL:HA	21:U:91:VAL:CG2	2.52	0.40
22:V:52:LEU:HD23	22:V:104:LEU:HD11	2.04	0.40
23:W:123:LEU:O	23:W:127:SER:HB2	2.21	0.40
24:X:13:ARG:HE	24:X:51:VAL:HG22	1.86	0.40
24:X:117:ARG:O	24:X:121:ILE:HG13	2.20	0.40
25:Y:91:LEU:HD23	25:Y:95:HIS:HB3	2.03	0.40
26:Z:29:ASP:HA	26:Z:30:PRO:HD3	1.84	0.40
26:Z:75:TYR:CZ	26:Z:79:LEU:HD11	2.57	0.40
39:MA:76:GLN:HB2	39:MA:77:PRO:CD	2.51	0.40
40:NA:15:LYS:CE	40:NA:17:VAL:HG22	2.50	0.40
46:TA:77:CYS:O	46:TA:79:THR:HG23	2.21	0.40
48:VA:130:PRO:HA	48:VA:150:ILE:CD1	2.51	0.40
48:VA:146:ALA:C	48:VA:148:GLY:N	2.80	0.40
49:WA:158:PRO:HD2	49:WA:208:GLY:HA3	2.03	0.40
50:XA:175:TYR:CE1	50:XA:195:TRP:HE3	2.39	0.40
52:ZA:59:HIS:CD2	52:ZA:238:SER:HA	2.56	0.40
59:GB:60:LEU:CD1	59:GB:93:LEU:HD21	2.43	0.40
63:KB:22:ALA:CB	63:KB:23:PRO:HA	2.37	0.40
65:MB:18:ARG:NH1	68:PB:92:ILE:HA	2.36	0.40
65:MB:24:LYS:O	65:MB:28:MET:HB2	2.21	0.40
65:MB:63:ALA:HB1	65:MB:74:ALA:O	2.20	0.40
67:OB:71:PHE:O	67:OB:72:LYS:CB	2.70	0.40
68:PB:86:LEU:HD23	68:PB:98:TYR:O	2.21	0.40
69:QB:105:LEU:HD22	69:QB:122:ARG:HG2	2.02	0.40
70:RB:83:GLU:HG3	79:AC:55:PHE:HD2	1.87	0.40
82:DC:283:ARG:HB3	82:DC:299:LEU:HD21	2.03	0.40
82:DC:608:PRO:HA	82:DC:636:PHE:CE2	2.56	0.40
82:DC:821:ALA:HA	82:DC:824:LYS:CE	2.51	0.40
1:A:7:G:C2'	1:A:8:U:H5"	2.50	0.40
1:A:332:U:H5	58:FB:175:GLN:NE2	2.20	0.40
1:A:348:U:H2'	1:A:349:U:H5'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:767:U:C2	59:GB:143:ILE:HD11	2.57	0.40
1:A:889:U:H2'	1:A:890:C:C4'	2.44	0.40
1:A:929:A:H1'	64:LB:123:SER:CA	2.51	0.40
1:A:1373:C:H2'	1:A:1374:C:C6	2.56	0.40
1:A:1454:G:H4'	65:MB:122:THR:CG2	2.49	0.40
1:A:1477:G:H2'	1:A:1478:G:C8	2.56	0.40
2:B:118:U:H3'	2:B:119:U:C5	2.56	0.40
2:B:164:A:H2'	2:B:165:A:O4'	2.22	0.40
2:B:611:A:H1'	2:B:612:U:C6	2.56	0.40
2:B:641:C:H42	2:B:645:A:H8	1.66	0.40
2:B:644:G:H1'	2:B:1153:A:C6	2.57	0.40
2:B:664:U:H2'	2:B:665:A:C8	2.56	0.40
2:B:745:C:H2'	2:B:746:A:H8	1.87	0.40
2:B:777:U:O2'	2:B:778:U:H5'	2.21	0.40
2:B:907:G:N2	2:B:925:A:H1'	2.31	0.40
2:B:952:A:C5'	33:GA:15:LYS:HD3	2.51	0.40
2:B:1056:U:O5'	2:B:1056:U:H6	2.04	0.40
2:B:1281:G:H21	48:VA:83:ASN:HD21	1.70	0.40
2:B:1376:C:H2'	2:B:1377:G:H8	1.85	0.40
2:B:1747:G:C4'	42:PA:4:GLU:HG3	2.52	0.40
2:B:1752:A:H8	2:B:1752:A:O5'	2.04	0.40
2:B:1842:A:H3'	2:B:1843:C:C6	2.57	0.40
2:B:2170:U:H2'	2:B:2171:G:C8	2.57	0.40
2:B:2653:C:H1'	2:B:2694:A:C2	2.56	0.40
2:B:2847:A:H2'	2:B:2848:G:O4'	2.22	0.40
2:B:2942:C:H5"	2:B:2943:G:H5"	2.03	0.40
2:B:3216:G:H1	2:B:3258:U:H5"	1.85	0.40
2:B:3305:A:H4'	7:G:272:TYR:CE2	2.54	0.40
3:C:71:A:H5"	30:DA:75:ARG:NH2	2.32	0.40
6:F:150:LEU:HB3	6:F:151:PRO:HD2	2.04	0.40
8:H:34:ILE:HG21	8:H:120:TYR:CD1	2.56	0.40
8:H:110:ASN:HB2	19:S:201:ARG:C	2.45	0.40
8:H:295:ILE:H	8:H:295:ILE:HG13	1.64	0.40
9:I:40:HIS:CG	25:Y:69:LYS:HA	2.56	0.40
9:I:155:THR:HA	9:I:179:ARG:HA	2.03	0.40
10:J:41:ILE:HD12	10:J:85:ILE:HG22	2.03	0.40
11:K:75:TYR:HE2	25:Y:143:THR:CA	2.30	0.40
12:L:136:LEU:HD23	12:L:140:VAL:CG2	2.52	0.40
14:N:87:LEU:HD11	14:N:136:PHE:CD2	2.55	0.40
23:W:61:SER:HA	23:W:64:ARG:HD2	2.02	0.40
24:X:10:ILE:HG22	24:X:24:LEU:HD23	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:24:LEU:C	25:Y:148:PRO:HA	2.46	0.40
25:Y:89:LEU:HD22	25:Y:90:ASN:N	2.36	0.40
32:FA:59:ARG:NH2	32:FA:61:PHE:HZ	2.20	0.40
32:FA:77:LYS:HB3	32:FA:80:THR:CG2	2.51	0.40
33:GA:18:ARG:HA	33:GA:18:ARG:NE	2.36	0.40
38:LA:10:ARG:H	38:LA:10:ARG:HG2	1.76	0.40
40:NA:57:LEU:HD23	40:NA:60:LEU:HG	2.03	0.40
44:RA:99:CYS:SG	44:RA:114:LYS:HE3	2.61	0.40
45:SA:5:TRP:HA	45:SA:5:TRP:CE3	2.57	0.40
48:VA:28:VAL:HG12	48:VA:186:THR:O	2.21	0.40
48:VA:146:ALA:C	48:VA:148:GLY:H	2.29	0.40
49:WA:169:ILE:HD13	49:WA:183:LEU:HD21	2.03	0.40
49:WA:196:ASN:OD1	53:AB:217:ILE:HG12	2.21	0.40
50:XA:141:ILE:HG23	50:XA:142:PRO:HD2	2.04	0.40
54:BB:45:ILE:HD12	54:BB:80:THR:HG21	2.03	0.40
58:FB:196:LEU:O	58:FB:200:LYS:HB2	2.22	0.40
61:IB:33:ARG:NH1	61:IB:53:TYR:O	2.55	0.40
71:SB:30:ALA:O	71:SB:57:GLY:HA2	2.21	0.40
72:TB:32:LYS:HA	72:TB:35:ILE:CG1	2.52	0.40
73:UB:108:GLY:O	73:UB:110:LYS:N	2.51	0.40
76:XB:74:CYS:C	76:XB:76:SER:H	2.29	0.40
82:DC:400:VAL:O	82:DC:450:ALA:HA	2.22	0.40
82:DC:584:ASN:OD1	82:DC:694:HIS:HB2	2.22	0.40
1:A:244:A:H4'	54:BB:129:VAL:HG13	2.02	0.40
1:A:298:C:OP1	54:BB:38:LEU:HB2	2.22	0.40
1:A:322:G:H1'	1:A:323:A:H5"	2.02	0.40
1:A:941:A:H2'	1:A:942:G:C4'	2.52	0.40
1:A:1199:G:N2	79:AC:29:GLY:HA2	2.36	0.40
1:A:1378:U:O2	66:NB:8:GLN:HB3	2.22	0.40
1:A:1481:C:O2'	1:A:1482:C:H5	2.05	0.40
1:A:1733:C:H2'	1:A:1734:U:O4'	2.20	0.40
2:B:122:A:N6	2:B:148:G:H21	2.14	0.40
2:B:415:G:H2'	2:B:416:A:C8	2.57	0.40
2:B:588:G:H21	2:B:611:A:C5'	2.34	0.40
2:B:738:A:N6	2:B:739:G:C6	2.90	0.40
2:B:798:G:H4'	17:Q:15:ARG:HE	1.86	0.40
2:B:946:U:H2'	2:B:947:G:H8	1.86	0.40
2:B:1007:U:O2	2:B:1043:C:N3	2.55	0.40
2:B:1132:C:H4'	2:B:2865:U:O2'	2.21	0.40
2:B:1174:G:C6	2:B:1175:C:C4	3.10	0.40
2:B:1295:G:H2'	2:B:1296:C:H6	1.80	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1449:A:H1'	2:B:2983:C:C4	2.56	0.40
2:B:1521:G:OP1	29:CA:71:THR:HB	2.21	0.40
2:B:1630:U:H2'	2:B:1812:G:N1	2.36	0.40
2:B:1646:G:N2	2:B:1809:A:H62	2.20	0.40
2:B:1747:G:H4'	42:PA:4:GLU:HG3	2.03	0.40
2:B:1784:G:H2'	2:B:1785:U:O4'	2.22	0.40
2:B:1929:G:H3'	2:B:1930:A:H2'	2.03	0.40
2:B:2424:A:H4'	19:S:72:LYS:HE2	2.03	0.40
2:B:2505:U:H2'	2:B:2506:U:C6	2.39	0.40
2:B:2764:C:N4	2:B:2794:G:N1	2.70	0.40
2:B:2908:G:C6	2:B:2909:U:O4	2.74	0.40
2:B:3048:A:N6	2:B:3091:A:OP2	2.45	0.40
2:B:3094:A:H8	2:B:3094:A:O5'	2.04	0.40
3:C:22:U:H5'	30:DA:16:ARG:HD3	2.03	0.40
3:C:95:G:OP1	41:OA:76:ASN:HB2	2.21	0.40
5:E:115:VAL:HG12	83:EC:6769:A:OP1	2.21	0.40
8:H:122:THR:HG21	8:H:262:TRP:CH2	2.57	0.40
9:I:177:GLU:HG3	9:I:183:TRP:CE3	2.57	0.40
11:K:85:PHE:HE2	11:K:115:THR:HA	1.87	0.40
12:L:67:ILE:CG1	12:L:237:ILE:HB	2.51	0.40
15:O:156:LYS:O	15:O:160:VAL:HG23	2.20	0.40
16:P:85:LEU:CD2	16:P:106:LEU:HD13	2.51	0.40
19:S:12:ARG:HD2	19:S:13:LYS:HZ3	1.87	0.40
20:T:14:HIS:CE1	20:T:124:LEU:HD13	2.57	0.40
22:V:17:THR:HA	22:V:53:PHE:CD2	2.56	0.40
23:W:24:LEU:HB3	23:W:50:ILE:HG12	2.04	0.40
25:Y:36:VAL:HG13	25:Y:65:TYR:CA	2.46	0.40
26:Z:33:TYR:C	26:Z:35:LYS:H	2.28	0.40
28:BA:2:LYS:HE2	28:BA:4:GLU:CD	2.47	0.40
30:DA:37:LYS:HA	30:DA:40:ARG:NH1	2.37	0.40
30:DA:40:ARG:O	30:DA:44:GLY:HA2	2.21	0.40
36:JA:15:LYS:O	36:JA:16:LYS:C	2.64	0.40
39:MA:78:LYS:O	39:MA:81:ARG:HB2	2.21	0.40
48:VA:60:ARG:NH1	48:VA:64:ARG:HB2	2.36	0.40
50:XA:31:VAL:O	50:XA:33:GLN:N	2.45	0.40
50:XA:144:ILE:HG12	50:XA:158:VAL:HG12	2.04	0.40
51:YA:26:ARG:O	51:YA:50:LYS:N	2.55	0.40
52:ZA:138:PRO:HB2	52:ZA:222:TYR:OH	2.21	0.40
53:AB:74:GLN:HA	53:AB:79:TYR:CD2	2.56	0.40
53:AB:161:GLY:C	53:AB:163:PRO:CD	2.95	0.40
55:CB:70:VAL:HG11	66:NB:44:LEU:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:93:LEU:HA	55:CB:172:ILE:HG21	2.04	0.40
55:CB:117:THR:HG21	55:CB:194:LEU:HD12	2.03	0.40
55:CB:126:ASP:O	55:CB:128:ASN:N	2.54	0.40
55:CB:162:VAL:HG22	55:CB:166:ARG:HB3	2.03	0.40
57:EB:30:SER:O	57:EB:31:SER:CB	2.68	0.40
57:EB:43:PHE:CD1	57:EB:43:PHE:C	2.98	0.40
57:EB:111:LYS:NZ	57:EB:113:PRO:HA	2.37	0.40
57:EB:132:PRO:HG2	57:EB:162:ILE:HD13	2.04	0.40
58:FB:74:LYS:HD2	58:FB:74:LYS:N	2.36	0.40
61:IB:58:CYS:O	61:IB:64:VAL:HG22	2.20	0.40
61:IB:93:TYR:C	61:IB:94:ILE:HD12	2.46	0.40
63:KB:3:ARG:HG3	63:KB:6:SER:OG	2.21	0.40
66:NB:31:VAL:O	66:NB:32:ASN:HB2	2.21	0.40
66:NB:69:VAL:HG13	66:NB:81:ILE:HG22	2.04	0.40
72:TB:41:MET:O	72:TB:46:TYR:HB2	2.22	0.40
72:TB:74:VAL:O	72:TB:74:VAL:HG13	2.21	0.40
73:UB:49:ALA:O	73:UB:104:LEU:HB2	2.22	0.40
78:ZB:9:LEU:O	78:ZB:32:PHE:HA	2.20	0.40
82:DC:19:VAL:HG11	82:DC:452:ASN:OD1	2.22	0.40
82:DC:222:ILE:HG12	82:DC:223:ARG:N	2.36	0.40
82:DC:413:ILE:HG12	82:DC:459:ILE:HG23	2.02	0.40
82:DC:493:VAL:HG13	82:DC:556:ILE:CD1	2.51	0.40
83:EC:6849:A:H2'	83:EC:6850:C:C6	2.56	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
5	E	165/217 (76%)	129 (78%)	26 (16%)	10 (6%)	1 14
6	F	250/254 (98%)	177 (71%)	56 (22%)	17 (7%)	1 12

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
7	G	384/387 (99%)	293 (76%)	70 (18%)	21 (6%)	1 15
8	H	359/362 (99%)	259 (72%)	77 (21%)	23 (6%)	1 13
9	I	294/297 (99%)	226 (77%)	49 (17%)	19 (6%)	1 13
10	J	173/176 (98%)	125 (72%)	33 (19%)	15 (9%)	0 9
11	K	220/244 (90%)	165 (75%)	39 (18%)	16 (7%)	1 11
12	L	231/256 (90%)	180 (78%)	38 (16%)	13 (6%)	1 15
13	M	189/191 (99%)	150 (79%)	36 (19%)	3 (2%)	7 37
14	N	207/221 (94%)	169 (82%)	28 (14%)	10 (5%)	2 17
15	O	167/174 (96%)	128 (77%)	31 (19%)	8 (5%)	2 17
16	P	92/165 (56%)	62 (67%)	20 (22%)	10 (11%)	0 6
17	Q	191/199 (96%)	144 (75%)	35 (18%)	12 (6%)	1 13
18	R	134/138 (97%)	103 (77%)	23 (17%)	8 (6%)	1 14
19	S	201/204 (98%)	144 (72%)	46 (23%)	11 (6%)	1 15
20	T	195/199 (98%)	160 (82%)	27 (14%)	8 (4%)	2 18
21	U	181/184 (98%)	133 (74%)	35 (19%)	13 (7%)	1 11
22	V	183/186 (98%)	131 (72%)	39 (21%)	13 (7%)	1 11
23	W	186/189 (98%)	162 (87%)	19 (10%)	5 (3%)	4 26
24	X	170/172 (99%)	130 (76%)	31 (18%)	9 (5%)	1 16
25	Y	157/160 (98%)	124 (79%)	25 (16%)	8 (5%)	1 16
26	Z	98/121 (81%)	69 (70%)	23 (24%)	6 (6%)	1 14
27	AA	134/137 (98%)	107 (80%)	24 (18%)	3 (2%)	5 29
28	BA	59/155 (38%)	43 (73%)	11 (19%)	5 (8%)	0 9
29	CA	119/142 (84%)	84 (71%)	29 (24%)	6 (5%)	1 16
30	DA	124/127 (98%)	89 (72%)	28 (23%)	7 (6%)	1 15
31	EA	133/136 (98%)	108 (81%)	19 (14%)	6 (4%)	2 18
32	FA	146/149 (98%)	106 (73%)	31 (21%)	9 (6%)	1 13
33	GA	56/59 (95%)	48 (86%)	8 (14%)	0	100 100
34	HA	95/105 (90%)	80 (84%)	13 (14%)	2 (2%)	5 30
35	IA	107/113 (95%)	87 (81%)	17 (16%)	3 (3%)	4 25
36	JA	125/130 (96%)	95 (76%)	23 (18%)	7 (6%)	1 15
37	KA	104/107 (97%)	81 (78%)	17 (16%)	6 (6%)	1 14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
38	LA	110/121 (91%)	76 (69%)	26 (24%)	8 (7%)	1 11
39	MA	117/120 (98%)	93 (80%)	20 (17%)	4 (3%)	3 21
40	NA	97/100 (97%)	80 (82%)	10 (10%)	7 (7%)	1 11
41	OA	85/88 (97%)	62 (73%)	18 (21%)	5 (6%)	1 14
42	PA	75/78 (96%)	64 (85%)	8 (11%)	3 (4%)	2 19
43	QA	48/51 (94%)	35 (73%)	9 (19%)	4 (8%)	0 9
44	RA	50/128 (39%)	32 (64%)	10 (20%)	8 (16%)	0 2
45	SA	23/25 (92%)	23 (100%)	0	0	100 100
46	TA	103/106 (97%)	75 (73%)	22 (21%)	6 (6%)	1 14
47	UA	89/92 (97%)	63 (71%)	18 (20%)	8 (9%)	0 8
48	VA	187/312 (60%)	132 (71%)	39 (21%)	16 (9%)	0 9
49	WA	316/319 (99%)	247 (78%)	63 (20%)	6 (2%)	6 32
50	XA	204/252 (81%)	146 (72%)	40 (20%)	18 (9%)	0 8
51	YA	212/255 (83%)	159 (75%)	36 (17%)	17 (8%)	1 10
52	ZA	215/254 (85%)	169 (79%)	37 (17%)	9 (4%)	2 18
53	AB	221/240 (92%)	191 (86%)	24 (11%)	6 (3%)	4 26
54	BB	258/261 (99%)	185 (72%)	60 (23%)	13 (5%)	1 16
55	CB	204/225 (91%)	159 (78%)	33 (16%)	12 (6%)	1 14
56	DB	224/236 (95%)	192 (86%)	21 (9%)	11 (5%)	1 16
57	EB	182/190 (96%)	130 (71%)	34 (19%)	18 (10%)	0 7
58	FB	184/200 (92%)	141 (77%)	36 (20%)	7 (4%)	2 20
59	GB	183/197 (93%)	144 (79%)	27 (15%)	12 (7%)	1 12
60	HB	94/105 (90%)	73 (78%)	15 (16%)	6 (6%)	1 13
61	IB	153/156 (98%)	113 (74%)	30 (20%)	10 (6%)	1 13
62	JB	122/143 (85%)	90 (74%)	21 (17%)	11 (9%)	0 8
63	KB	148/151 (98%)	124 (84%)	19 (13%)	5 (3%)	3 21
64	LB	125/137 (91%)	88 (70%)	26 (21%)	11 (9%)	0 8
65	MB	120/142 (84%)	91 (76%)	15 (12%)	14 (12%)	0 4
66	NB	139/143 (97%)	108 (78%)	24 (17%)	7 (5%)	1 16
67	OB	115/136 (85%)	79 (69%)	24 (21%)	12 (10%)	0 6
68	PB	143/146 (98%)	111 (78%)	24 (17%)	8 (6%)	1 15

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
69	QB	141/144 (98%)	122 (86%)	16 (11%)	3 (2%)	5 30
70	RB	105/121 (87%)	85 (81%)	15 (14%)	5 (5%)	2 17
71	SB	85/87 (98%)	63 (74%)	17 (20%)	5 (6%)	1 14
72	TB	127/130 (98%)	99 (78%)	24 (19%)	4 (3%)	3 23
73	UB	142/145 (98%)	108 (76%)	22 (16%)	12 (8%)	0 9
74	VB	132/135 (98%)	105 (80%)	20 (15%)	7 (5%)	1 16
75	WB	68/108 (63%)	47 (69%)	17 (25%)	4 (6%)	1 14
76	XB	95/119 (80%)	54 (57%)	32 (34%)	9 (10%)	0 8
77	YB	79/82 (96%)	59 (75%)	17 (22%)	3 (4%)	2 20
78	ZB	61/67 (91%)	43 (70%)	15 (25%)	3 (5%)	1 16
79	AC	51/56 (91%)	39 (76%)	11 (22%)	1 (2%)	6 32
80	BC	58/63 (92%)	38 (66%)	16 (28%)	4 (7%)	1 12
81	CC	69/152 (45%)	42 (61%)	18 (26%)	9 (13%)	0 3
82	DC	819/842 (97%)	646 (79%)	137 (17%)	36 (4%)	2 18
All	All	12207/13416 (91%)	9316 (76%)	2192 (18%)	699 (6%)	2 15

All (699) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	E	70	ASP
6	F	29	LEU
6	F	34	TYR
6	F	68	LYS
7	G	187	SER
8	H	196	ASN
8	H	263	GLY
8	H	268	ALA
8	H	320	ASN
8	H	341	SER
9	I	124	GLU
9	I	141	PRO
9	I	176	SER
9	I	177	GLU
9	I	251	PRO
10	J	17	ALA
10	J	31	ARG
10	J	129	GLU

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Mol	Chain	Res	Type
11	K	237	ASN
12	L	36	ILE
12	L	42	PRO
12	L	203	VAL
14	N	118	ALA
15	O	8	PRO
15	O	114	ILE
17	Q	28	GLN
17	Q	47	ALA
17	Q	136	GLU
18	R	5	SER
18	R	9	ALA
19	S	187	ARG
20	T	150	GLU
21	U	85	ALA
21	U	117	ILE
22	V	97	PRO
22	V	176	ARG
24	X	130	GLU
25	Y	12	ARG
25	Y	69	LYS
25	Y	159	PHE
26	Z	49	ASN
27	AA	84	SER
28	BA	26	SER
29	CA	88	MET
31	EA	7	ALA
32	FA	27	LYS
32	FA	36	GLY
37	KA	50	ALA
38	LA	37	LYS
40	NA	4	LYS
41	OA	64	MET
43	QA	34	THR
44	RA	100	TYR
46	TA	38	GLN
46	TA	60	LYS
48	VA	30	VAL
48	VA	71	PRO
48	VA	106	ALA
51	YA	40	ASN
51	YA	55	LYS

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Mol	Chain	Res	Type
51	YA	154	SER
51	YA	222	LYS
53	AB	93	ASP
53	AB	211	PRO
53	AB	221	SER
54	BB	76	VAL
54	BB	150	PRO
54	BB	194	THR
54	BB	200	ARG
55	CB	51	VAL
55	CB	63	GLN
55	CB	64	VAL
55	CB	81	ARG
55	CB	100	ASN
57	EB	12	ALA
57	EB	31	SER
57	EB	32	PRO
57	EB	64	VAL
57	EB	97	ARG
57	EB	103	SER
58	FB	31	ARG
59	GB	132	ARG
59	GB	134	ILE
59	GB	138	LYS
61	IB	130	PRO
61	IB	155	LYS
62	JB	91	VAL
64	LB	18	ARG
64	LB	42	VAL
65	MB	17	TYR
65	MB	101	ALA
65	MB	125	PRO
66	NB	41	PRO
67	OB	90	ALA
67	OB	91	LEU
67	OB	95	ARG
68	PB	82	PRO
69	QB	96	ALA
71	SB	44	ARG
73	UB	67	ALA
73	UB	99	ASN
74	VB	50	ALA

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Mol	Chain	Res	Type
75	WB	44	GLN
75	WB	86	GLU
76	XB	11	ASN
76	XB	47	ALA
78	ZB	36	THR
80	BC	43	ARG
80	BC	47	VAL
80	BC	58	PRO
81	CC	146	SER
82	DC	296	ILE
82	DC	330	ALA
82	DC	332	ASP
82	DC	482	LYS
82	DC	483	PHE
82	DC	486	SER
82	DC	569	SER
5	E	22	GLU
6	F	6	ARG
6	F	14	SER
6	F	144	ASN
6	F	212	GLY
6	F	252	THR
7	G	142	ALA
7	G	244	ARG
7	G	258	ALA
7	G	312	VAL
7	G	351	LEU
7	G	357	LYS
8	H	14	GLU
8	H	62	ALA
8	H	81	GLY
8	H	82	THR
8	H	91	GLY
8	H	108	LYS
8	H	188	ARG
8	H	269	SER
9	I	21	ARG
9	I	42	ALA
9	I	117	GLU
9	I	233	ALA
9	I	259	LYS
10	J	67	GLY

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Mol	Chain	Res	Type
10	J	99	GLU
10	J	109	GLU
11	K	92	ILE
11	K	143	THR
11	K	158	LYS
11	K	162	PRO
11	K	202	LEU
12	L	37	GLY
12	L	79	GLN
12	L	120	LYS
12	L	182	GLY
13	M	50	ASN
14	N	164	LYS
14	N	194	GLY
16	P	68	GLN
16	P	69	ALA
16	P	77	ALA
16	P	88	PRO
16	P	107	ASP
16	P	144	ASP
17	Q	25	HIS
17	Q	58	VAL
17	Q	76	THR
17	Q	153	ASP
18	R	6	ILE
19	S	55	ALA
19	S	88	GLY
19	S	125	SER
19	S	145	ASP
21	U	5	GLY
22	V	8	LYS
22	V	24	VAL
22	V	61	PRO
22	V	168	THR
23	W	131	ALA
24	X	62	ASN
24	X	171	PHE
25	Y	136	ARG
25	Y	145	GLY
26	Z	38	ILE
26	Z	71	PHE
26	Z	91	ASP

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Mol	Chain	Res	Type
27	AA	12	ARG
28	BA	50	ALA
28	BA	60	LYS
29	CA	89	LYS
29	CA	126	LEU
30	DA	45	ILE
30	DA	52	ARG
30	DA	105	VAL
31	EA	89	VAL
32	FA	48	TYR
32	FA	117	ARG
32	FA	120	ASN
36	JA	55	ILE
38	LA	53	GLY
38	LA	63	ALA
38	LA	70	LYS
39	MA	93	THR
40	NA	18	THR
40	NA	34	SER
40	NA	62	ARG
40	NA	97	SER
41	OA	37	CYS
42	PA	49	SER
44	RA	124	LYS
46	TA	15	LYS
47	UA	28	LYS
47	UA	52	ALA
47	UA	68	ALA
48	VA	31	ASP
48	VA	111	ALA
48	VA	116	PRO
49	WA	120	SER
50	XA	32	HIS
50	XA	139	VAL
50	XA	157	ASP
50	XA	170	ILE
50	XA	191	ARG
50	XA	192	THR
51	YA	48	VAL
51	YA	180	THR
53	AB	216	PRO
54	BB	32	SER

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Mol	Chain	Res	Type
55	CB	43	PHE
55	CB	79	ASN
55	CB	82	PHE
57	EB	14	THR
57	EB	162	ILE
58	FB	22	ARG
58	FB	59	ARG
59	GB	150	LEU
60	HB	60	SER
60	HB	81	ASN
60	HB	93	GLN
61	IB	75	VAL
61	IB	146	ALA
62	JB	86	VAL
62	JB	106	ILE
62	JB	125	ASN
63	KB	24	ALA
63	KB	66	ILE
66	NB	15	SER
67	OB	74	GLN
67	OB	77	GLU
67	OB	89	SER
67	OB	115	LEU
68	PB	92	ILE
69	QB	69	LYS
71	SB	82	VAL
72	TB	57	ARG
73	UB	60	GLU
75	WB	94	LYS
82	DC	48	ALA
82	DC	108	HIS
82	DC	134	GLY
82	DC	285	PHE
82	DC	354	GLU
82	DC	424	ASP
82	DC	702	GLY
82	DC	789	GLY
82	DC	804	LEU
5	E	69	GLY
7	G	83	PRO
7	G	229	VAL
7	G	279	ASN

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Mol	Chain	Res	Type
7	G	361	THR
7	G	386	ASP
8	H	55	LYS
8	H	90	PHE
8	H	92	ASN
8	H	140	HIS
8	H	146	PRO
9	I	292	ALA
10	J	11	PRO
11	K	81	HIS
11	K	159	GLN
12	L	136	LEU
12	L	206	GLU
13	M	59	ASN
14	N	3	ARG
14	N	84	ALA
14	N	145	LYS
15	O	108	GLU
15	O	165	GLN
16	P	118	ASP
17	Q	150	PRO
18	R	10	SER
18	R	49	PRO
18	R	78	THR
19	S	166	ALA
20	T	12	LYS
20	T	128	ARG
21	U	20	SER
21	U	121	GLN
21	U	134	GLY
21	U	143	PRO
21	U	154	GLU
21	U	164	LYS
22	V	10	HIS
22	V	44	PHE
22	V	125	ASP
23	W	59	SER
24	X	66	GLU
25	Y	126	VAL
25	Y	138	SER
26	Z	45	GLY
29	CA	50	ALA

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Mol	Chain	Res	Type
30	DA	46	LYS
32	FA	56	VAL
34	HA	20	SER
35	IA	102	LYS
36	JA	13	HIS
37	KA	8	TYR
37	KA	16	TYR
38	LA	4	ARG
38	LA	59	PRO
41	OA	51	ALA
43	QA	22	PRO
43	QA	33	ASN
44	RA	125	LYS
46	TA	16	THR
48	VA	47	GLY
48	VA	55	LYS
48	VA	76	LEU
48	VA	183	PHE
49	WA	98	GLU
49	WA	146	GLY
51	YA	82	ARG
51	YA	103	MET
51	YA	206	PRO
51	YA	221	PRO
51	YA	224	ASP
52	ZA	39	THR
52	ZA	109	GLY
54	BB	245	LYS
56	DB	20	ASP
56	DB	154	ARG
57	EB	112	ARG
57	EB	156	SER
57	EB	166	LEU
58	FB	152	ILE
59	GB	98	ALA
59	GB	116	LEU
60	HB	64	TYR
62	JB	84	ASN
62	JB	119	SER
64	LB	22	SER
64	LB	45	GLY
64	LB	127	ARG

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Mol	Chain	Res	Type
65	MB	53	PRO
65	MB	73	PRO
66	NB	39	VAL
66	NB	134	ALA
67	OB	87	GLU
68	PB	37	GLY
68	PB	83	ALA
68	PB	102	ALA
70	RB	17	GLN
72	TB	99	PHE
73	UB	109	ARG
73	UB	112	LYS
74	VB	5	VAL
74	VB	95	GLY
76	XB	8	ASN
76	XB	31	PRO
76	XB	62	TYR
77	YB	75	GLU
77	YB	78	SER
78	ZB	37	SER
78	ZB	51	ASN
80	BC	53	LYS
81	CC	87	THR
81	CC	96	LYS
81	CC	111	GLU
82	DC	331	ALA
82	DC	351	TYR
82	DC	440	ARG
82	DC	549	HIS
5	E	128	LEU
5	E	139	SER
6	F	21	ARG
6	F	80	GLU
6	F	171	GLY
6	F	235	ALA
7	G	5	LYS
7	G	38	SER
7	G	50	LYS
7	G	155	ALA
7	G	171	LEU
7	G	200	GLU
8	H	36	HIS

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Mol	Chain	Res	Type
8	H	233	LEU
8	H	301	PRO
8	H	307	GLN
8	H	338	LYS
10	J	33	SER
10	J	142	ASP
11	K	94	LYS
11	K	97	PRO
11	K	147	LEU
11	K	197	GLN
11	K	226	GLY
12	L	157	VAL
14	N	16	PRO
14	N	24	ARG
14	N	75	TYR
15	O	26	SER
17	Q	132	ALA
17	Q	141	ALA
19	S	74	PRO
19	S	81	TYR
20	T	44	SER
20	T	189	ASP
21	U	3	ARG
21	U	70	THR
22	V	13	SER
22	V	18	ALA
22	V	20	LYS
24	X	2	ALA
24	X	13	ARG
24	X	153	PRO
26	Z	11	ILE
29	CA	90	ALA
30	DA	53	ASP
31	EA	31	GLU
32	FA	15	VAL
32	FA	115	LYS
35	IA	44	MET
35	IA	83	GLU
36	JA	5	PRO
36	JA	16	LYS
38	LA	29	ILE
39	MA	102	GLU

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Mol	Chain	Res	Type
40	NA	3	VAL
41	OA	21	ARG
42	PA	35	GLY
43	QA	32	ASN
44	RA	79	GLU
44	RA	126	LYS
47	UA	6	LYS
48	VA	130	PRO
49	WA	63	GLY
49	WA	185	GLN
50	XA	43	ASP
50	XA	103	THR
50	XA	169	SER
53	AB	196	ARG
53	AB	217	ILE
54	BB	74	GLY
55	CB	45	LYS
55	CB	127	GLN
56	DB	65	GLN
56	DB	118	GLU
57	EB	13	PRO
57	EB	74	GLN
59	GB	5	PRO
59	GB	22	SER
59	GB	71	PHE
60	HB	34	GLU
61	IB	6	THR
61	IB	40	LEU
61	IB	148	LYS
61	IB	153	PHE
62	JB	23	THR
63	KB	22	ALA
65	MB	9	LYS
65	MB	52	LYS
65	MB	69	GLU
66	NB	42	GLU
66	NB	130	GLY
67	OB	85	VAL
68	PB	62	THR
69	QB	29	GLU
70	RB	49	ASN
70	RB	71	PRO

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Mol	Chain	Res	Type
71	SB	12	TYR
72	TB	30	SER
73	UB	5	LYS
73	UB	41	SER
73	UB	97	ASP
74	VB	4	ALA
75	WB	69	LEU
81	CC	145	HIS
82	DC	190	SER
82	DC	346	VAL
82	DC	461	GLN
82	DC	680	GLU
82	DC	721	ASP
82	DC	751	ARG
82	DC	779	GLY
5	E	199	GLN
5	E	210	MET
6	F	217	GLN
6	F	231	SER
6	F	232	GLY
7	G	172	ALA
9	I	119	TYR
9	I	125	VAL
9	I	139	PRO
9	I	260	PHE
10	J	93	VAL
10	J	100	LYS
11	K	178	ILE
12	L	75	ILE
12	L	146	LYS
15	O	135	GLY
15	O	142	LYS
16	P	76	SER
17	Q	56	PRO
19	S	188	ARG
20	T	16	VAL
20	T	83	ALA
21	U	71	ALA
23	W	17	VAL
24	X	129	ILE
28	BA	27	LYS
29	CA	54	TYR

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Mol	Chain	Res	Type
30	DA	17	LYS
31	EA	127	ASN
31	EA	132	SER
32	FA	23	GLY
36	JA	15	LYS
36	JA	21	HIS
37	KA	14	LEU
39	MA	119	LYS
42	PA	70	PRO
44	RA	98	LYS
44	RA	123	PRO
47	UA	36	ARG
47	UA	37	TYR
47	UA	40	SER
47	UA	60	CYS
48	VA	83	ASN
48	VA	87	VAL
48	VA	180	PRO
50	XA	35	PRO
50	XA	83	GLN
50	XA	97	PRO
50	XA	118	PRO
50	XA	189	VAL
50	XA	195	TRP
51	YA	74	GLN
51	YA	207	LEU
51	YA	210	ILE
52	ZA	60	SER
54	BB	77	ARG
54	BB	202	ASP
55	CB	187	ILE
55	CB	188	LYS
56	DB	74	LYS
56	DB	135	PRO
56	DB	148	SER
57	EB	7	LYS
57	EB	98	ILE
58	FB	40	ALA
59	GB	118	LEU
59	GB	165	GLY
61	IB	3	THR
62	JB	131	ASP

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Mol	Chain	Res	Type
64	LB	87	GLY
65	MB	28	MET
66	NB	142	TYR
67	OB	81	LYS
68	PB	60	GLU
68	PB	76	PRO
70	RB	54	GLY
71	SB	46	ILE
71	SB	75	ASN
73	UB	70	LYS
73	UB	131	SER
74	VB	65	GLY
76	XB	45	VAL
76	XB	48	ALA
76	XB	59	TYR
76	XB	89	ARG
81	CC	88	PRO
81	CC	98	VAL
81	CC	102	VAL
82	DC	255	LYS
82	DC	420	PRO
82	DC	476	HIS
82	DC	661	ASP
5	E	30	GLU
7	G	63	PRO
7	G	303	LYS
9	I	112	LYS
9	I	230	ASP
9	I	253	PHE
12	L	47	SER
15	O	134	PRO
17	Q	94	GLY
19	S	68	ARG
22	V	146	SER
23	W	89	LEU
24	X	63	GLN
27	AA	88	ARG
37	KA	59	VAL
39	MA	117	ALA
40	NA	78	GLY
41	OA	32	LYS
44	RA	104	PRO

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Mol	Chain	Res	Type
49	WA	227	ALA
50	XA	39	ASN
50	XA	109	ASN
51	YA	54	LEU
54	BB	49	ARG
54	BB	67	GLN
61	IB	113	PRO
62	JB	93	ASP
64	LB	114	ARG
65	MB	12	PHE
65	MB	84	ILE
67	OB	24	LEU
67	OB	68	GLY
70	RB	107	THR
73	UB	44	GLY
74	VB	11	LYS
79	AC	11	PRO
81	CC	148	TYR
82	DC	811	PRO
5	E	120	VAL
5	E	125	GLY
9	I	290	ILE
10	J	79	VAL
10	J	168	GLY
11	K	96	PRO
18	R	39	ILE
20	T	111	PRO
21	U	78	VAL
25	Y	153	PRO
30	DA	90	VAL
38	LA	48	GLY
54	BB	239	PRO
56	DB	179	VAL
58	FB	3	ILE
58	FB	173	PRO
59	GB	156	ILE
62	JB	82	PRO
63	KB	46	THR
64	LB	130	GLY
11	K	26	VAL
13	M	43	VAL
23	W	90	PRO

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Mol	Chain	Res	Type
34	HA	87	VAL
46	TA	52	GLY
46	TA	101	GLY
51	YA	35	PRO
52	ZA	75	GLY
52	ZA	150	GLN
57	EB	178	GLY
62	JB	115	VAL
72	TB	84	GLY
77	YB	38	PRO
82	DC	445	ILE
6	F	228	GLY
14	N	197	VAL
16	P	87	GLU
19	S	186	GLY
28	BA	10	GLY
31	EA	104	PRO
36	JA	53	PRO
37	KA	81	VAL
51	YA	21	VAL
52	ZA	74	PRO
52	ZA	86	VAL
56	DB	69	LEU
56	DB	70	PRO
57	EB	144	VAL
60	HB	87	VAL
64	LB	88	GLY
65	MB	11	VAL
82	DC	121	VAL
82	DC	706	ILE
10	J	140	VAL
16	P	132	ILE
18	R	30	GLY
48	VA	33	VAL
52	ZA	125	ILE
54	BB	35	PRO
56	DB	153	VAL
64	LB	16	VAL
65	MB	68	PRO
65	MB	90	ILE
73	UB	6	PRO
74	VB	67	GLY

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Mol	Chain	Res	Type
82	DC	444	PRO
6	F	57	PRO
48	VA	121	VAL
50	XA	42	PRO
52	ZA	36	VAL
57	EB	145	GLY
64	LB	95	GLY
63	KB	23	PRO
10	J	123	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	
5	E	157/198 (79%)	134 (85%)	23 (15%)	3	15
6	F	194/196 (99%)	167 (86%)	27 (14%)	3	16
7	G	322/323 (100%)	293 (91%)	29 (9%)	9	29
8	H	288/289 (100%)	247 (86%)	41 (14%)	3	16
9	I	244/245 (100%)	221 (91%)	23 (9%)	8	27
10	J	152/153 (99%)	140 (92%)	12 (8%)	11	33
11	K	186/205 (91%)	165 (89%)	21 (11%)	5	21
12	L	191/208 (92%)	170 (89%)	21 (11%)	6	22
13	M	171/171 (100%)	158 (92%)	13 (8%)	12	33
14	N	180/187 (96%)	162 (90%)	18 (10%)	7	24
15	O	147/150 (98%)	134 (91%)	13 (9%)	9	30
16	P	81/136 (60%)	70 (86%)	11 (14%)	3	16
17	Q	154/159 (97%)	139 (90%)	15 (10%)	8	26
18	R	107/109 (98%)	95 (89%)	12 (11%)	6	21
19	S	175/176 (99%)	149 (85%)	26 (15%)	3	15
20	T	160/162 (99%)	143 (89%)	17 (11%)	6	23
21	U	145/146 (99%)	120 (83%)	25 (17%)	2	12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
22	V	150/151 (99%)	134 (89%)	16 (11%)	6 22
23	W	153/154 (99%)	140 (92%)	13 (8%)	10 30
24	X	156/156 (100%)	142 (91%)	14 (9%)	9 29
25	Y	136/137 (99%)	117 (86%)	19 (14%)	3 16
26	Z	87/107 (81%)	85 (98%)	2 (2%)	44 64
27	AA	104/105 (99%)	95 (91%)	9 (9%)	9 30
28	BA	54/129 (42%)	47 (87%)	7 (13%)	4 17
29	CA	105/118 (89%)	95 (90%)	10 (10%)	8 26
30	DA	109/110 (99%)	96 (88%)	13 (12%)	5 20
31	EA	115/116 (99%)	108 (94%)	7 (6%)	17 40
32	FA	118/119 (99%)	106 (90%)	12 (10%)	7 24
33	GA	46/47 (98%)	44 (96%)	2 (4%)	26 48
34	HA	81/88 (92%)	74 (91%)	7 (9%)	10 30
35	IA	96/97 (99%)	89 (93%)	7 (7%)	13 35
36	JA	109/111 (98%)	96 (88%)	13 (12%)	5 20
37	KA	90/91 (99%)	82 (91%)	8 (9%)	9 29
38	LA	95/103 (92%)	89 (94%)	6 (6%)	16 39
39	MA	104/105 (99%)	95 (91%)	9 (9%)	9 30
40	NA	81/82 (99%)	74 (91%)	7 (9%)	10 30
41	OA	70/71 (99%)	60 (86%)	10 (14%)	3 16
42	PA	68/69 (99%)	62 (91%)	6 (9%)	9 30
43	QA	45/46 (98%)	39 (87%)	6 (13%)	4 17
44	RA	47/116 (40%)	44 (94%)	3 (6%)	16 38
45	SA	23/23 (100%)	20 (87%)	3 (13%)	4 17
46	TA	90/91 (99%)	80 (89%)	10 (11%)	6 21
47	UA	71/72 (99%)	65 (92%)	6 (8%)	10 30
48	VA	160/254 (63%)	145 (91%)	15 (9%)	8 27
49	WA	261/262 (100%)	247 (95%)	14 (5%)	20 43
50	XA	173/210 (82%)	159 (92%)	14 (8%)	11 32
52	ZA	176/205 (86%)	170 (97%)	6 (3%)	32 55
53	AB	182/195 (93%)	168 (92%)	14 (8%)	12 33

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
54	BB	221/222 (100%)	205 (93%)	16 (7%)	13 35
55	CB	173/191 (91%)	161 (93%)	12 (7%)	14 37
56	DB	193/201 (96%)	188 (97%)	5 (3%)	40 61
57	EB	165/170 (97%)	158 (96%)	7 (4%)	26 49
58	FB	150/161 (93%)	141 (94%)	9 (6%)	17 40
59	GB	158/166 (95%)	142 (90%)	16 (10%)	7 24
60	HB	89/98 (91%)	82 (92%)	7 (8%)	11 33
61	IB	136/137 (99%)	127 (93%)	9 (7%)	15 38
63	KB	127/128 (99%)	119 (94%)	8 (6%)	16 39
65	MB	103/118 (87%)	97 (94%)	6 (6%)	18 41
66	NB	117/119 (98%)	109 (93%)	8 (7%)	14 37
67	OB	82/124 (66%)	76 (93%)	6 (7%)	13 35
68	PB	128/129 (99%)	118 (92%)	10 (8%)	11 33
69	QB	115/116 (99%)	106 (92%)	9 (8%)	11 33
70	RB	100/114 (88%)	89 (89%)	11 (11%)	6 22
71	SB	74/74 (100%)	69 (93%)	5 (7%)	14 37
72	TB	110/111 (99%)	98 (89%)	12 (11%)	6 22
73	UB	119/120 (99%)	106 (89%)	13 (11%)	6 22
74	VB	112/113 (99%)	103 (92%)	9 (8%)	11 32
75	WB	61/89 (68%)	56 (92%)	5 (8%)	10 32
77	YB	70/71 (99%)	67 (96%)	3 (4%)	26 48
78	ZB	56/60 (93%)	50 (89%)	6 (11%)	6 22
79	AC	47/49 (96%)	46 (98%)	1 (2%)	47 65
80	BC	51/54 (94%)	46 (90%)	5 (10%)	7 25
82	DC	699/714 (98%)	642 (92%)	57 (8%)	10 32
All	All	9865/10602 (93%)	8975 (91%)	890 (9%)	11 29

All (890) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	E	4	ILE
5	E	16	LEU
5	E	66	CYS

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Mol	Chain	Res	Type
5	E	68	PHE
5	E	72	PHE
5	E	85	MET
5	E	91	LYS
5	E	100	ILE
5	E	103	LEU
5	E	114	GLU
5	E	117	ILE
5	E	122	ARG
5	E	123	LEU
5	E	127	GLN
5	E	133	LYS
5	E	142	ASP
5	E	150	ASP
5	E	180	VAL
5	E	181	ASN
5	E	187	VAL
5	E	194	LEU
5	E	205	VAL
5	E	215	ARG
6	F	22	LEU
6	F	29	LEU
6	F	30	ARG
6	F	60	LYS
6	F	72	ARG
6	F	98	VAL
6	F	102	LEU
6	F	103	PRO
6	F	109	GLU
6	F	117	GLU
6	F	126	LEU
6	F	134	VAL
6	F	135	ILE
6	F	149	ARG
6	F	165	VAL
6	F	191	LEU
6	F	198	LYS
6	F	204	MET
6	F	207	VAL
6	F	216	HIS
6	F	221	LYS
6	F	224	THR

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Mol	Chain	Res	Type
6	F	225	ILE
6	F	227	ARG
6	F	241	ARG
6	F	246	LEU
6	F	253	GLN
7	G	25	ILE
7	G	58	ARG
7	G	74	GLU
7	G	76	VAL
7	G	79	VAL
7	G	83	PRO
7	G	87	VAL
7	G	95	THR
7	G	114	VAL
7	G	120	LYS
7	G	126	LYS
7	G	132	LYS
7	G	144	ILE
7	G	160	VAL
7	G	162	VAL
7	G	168	LYS
7	G	173	GLN
7	G	174	LYS
7	G	210	GLU
7	G	230	THR
7	G	246	LEU
7	G	248	LYS
7	G	264	VAL
7	G	278	ILE
7	G	282	ILE
7	G	311	PHE
7	G	338	LEU
7	G	346	THR
7	G	383	LEU
8	H	18	ASN
8	H	20	LEU
8	H	46	LYS
8	H	59	GLN
8	H	67	THR
8	H	74	ILE
8	H	76	ARG
8	H	90	PHE

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Mol	Chain	Res	Type
8	H	93	MET
8	H	95	ARG
8	H	99	MET
8	H	104	LYS
8	H	105	THR
8	H	109	TRP
8	H	111	VAL
8	H	112	LYS
8	H	114	ASN
8	H	116	ASN
8	H	142	VAL
8	H	152	VAL
8	H	180	LYS
8	H	185	LYS
8	H	193	LYS
8	H	194	TYR
8	H	197	ARG
8	H	206	LEU
8	H	221	ASN
8	H	226	GLU
8	H	244	LEU
8	H	249	ILE
8	H	259	ASP
8	H	267	VAL
8	H	294	GLU
8	H	295	ILE
8	H	301	PRO
8	H	307	GLN
8	H	316	ASN
8	H	322	GLN
8	H	326	ARG
8	H	332	LYS
8	H	349	THR
9	I	3	PHE
9	I	8	LYS
9	I	12	TYR
9	I	22	ARG
9	I	23	ARG
9	I	24	ARG
9	I	25	GLU
9	I	33	ARG
9	I	45	ASN

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Mol	Chain	Res	Type
9	I	48	LYS
9	I	70	THR
9	I	95	TRP
9	I	105	ILE
9	I	110	LEU
9	I	111	GLN
9	I	120	LYS
9	I	155	THR
9	I	194	LEU
9	I	222	LEU
9	I	257	GLU
9	I	259	LYS
9	I	276	LYS
9	I	293	LEU
10	J	5	LYS
10	J	18	LEU
10	J	19	LYS
10	J	20	LYS
10	J	30	LEU
10	J	60	ASP
10	J	72	ASN
10	J	108	LYS
10	J	136	GLU
10	J	155	LEU
10	J	173	MET
10	J	174	LEU
11	K	24	GLU
11	K	25	GLN
11	K	29	GLU
11	K	61	ASN
11	K	80	GLN
11	K	86	VAL
11	K	94	LYS
11	K	96	PRO
11	K	101	LYS
11	K	127	LEU
11	K	145	ARG
11	K	146	GLN
11	K	161	VAL
11	K	179	LEU
11	K	189	ILE
11	K	191	VAL

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Mol	Chain	Res	Type
11	K	202	LEU
11	K	216	VAL
11	K	229	PHE
11	K	239	LEU
11	K	240	VAL
12	L	46	LEU
12	L	48	ARG
12	L	49	TYR
12	L	50	VAL
12	L	58	VAL
12	L	65	LEU
12	L	71	VAL
12	L	77	GLN
12	L	84	ARG
12	L	92	LYS
12	L	118	GLU
12	L	122	LYS
12	L	134	TYR
12	L	150	LEU
12	L	161	GLU
12	L	162	LEU
12	L	163	VAL
12	L	190	VAL
12	L	200	LEU
12	L	201	THR
12	L	246	MET
13	M	36	LYS
13	M	41	ILE
13	M	49	ASN
13	M	50	ASN
13	M	68	LEU
13	M	72	LYS
13	M	73	SER
13	M	86	TYR
13	M	92	TYR
13	M	94	TYR
13	M	170	LYS
13	M	172	ILE
13	M	177	ASP
14	N	32	ARG
14	N	33	ILE
14	N	36	LEU

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Mol	Chain	Res	Type
14	N	40	LYS
14	N	52	LEU
14	N	65	LEU
14	N	82	ARG
14	N	91	VAL
14	N	92	HIS
14	N	128	ARG
14	N	144	ASN
14	N	153	ARG
14	N	157	TYR
14	N	163	GLN
14	N	165	ILE
14	N	169	LYS
14	N	183	LYS
14	N	206	LEU
15	O	10	ARG
15	O	12	LEU
15	O	30	LEU
15	O	60	ARG
15	O	65	ILE
15	O	70	THR
15	O	92	ARG
15	O	101	ASN
15	O	115	LYS
15	O	129	VAL
15	O	138	VAL
15	O	142	LYS
15	O	163	PHE
16	P	57	LYS
16	P	61	GLN
16	P	64	ILE
16	P	66	ASN
16	P	79	SER
16	P	88	PRO
16	P	90	ARG
16	P	92	ARG
16	P	115	GLN
16	P	129	THR
16	P	133	LEU
17	Q	35	ARG
17	Q	46	ILE
17	Q	54	LEU

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Mol	Chain	Res	Type
17	Q	67	ARG
17	Q	76	THR
17	Q	85	LEU
17	Q	86	THR
17	Q	89	TYR
17	Q	98	ASP
17	Q	99	HIS
17	Q	100	ARG
17	Q	108	ILE
17	Q	136	GLU
17	Q	139	LEU
17	Q	169	THR
18	R	21	VAL
18	R	24	LYS
18	R	42	LYS
18	R	50	LYS
18	R	55	ARG
18	R	92	GLU
18	R	94	TRP
18	R	103	ILE
18	R	112	LEU
18	R	121	MET
18	R	123	LEU
18	R	132	LYS
19	S	10	LEU
19	S	13	LYS
19	S	17	ASP
19	S	37	HIS
19	S	43	THR
19	S	50	ARG
19	S	64	VAL
19	S	75	VAL
19	S	77	LYS
19	S	90	ASN
19	S	104	GLU
19	S	113	LEU
19	S	116	LEU
19	S	119	TYR
19	S	133	ILE
19	S	135	VAL
19	S	142	ILE
19	S	147	ARG

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Mol	Chain	Res	Type
19	S	150	TRP
19	S	153	ASP
19	S	155	VAL
19	S	159	ARG
19	S	164	LEU
19	S	172	ARG
19	S	193	ARG
19	S	196	THR
20	T	39	GLU
20	T	49	ARG
20	T	68	ARG
20	T	72	HIS
20	T	74	ARG
20	T	78	ARG
20	T	87	MET
20	T	110	PRO
20	T	117	ARG
20	T	122	GLN
20	T	128	ARG
20	T	148	LYS
20	T	160	ARG
20	T	161	LYS
20	T	167	TYR
20	T	170	LYS
20	T	197	LEU
21	U	3	ARG
21	U	41	LEU
21	U	53	ASP
21	U	72	GLN
21	U	74	LYS
21	U	92	GLN
21	U	94	LEU
21	U	101	ASN
21	U	107	LEU
21	U	111	LYS
21	U	121	GLN
21	U	124	LYS
21	U	125	GLN
21	U	126	ARG
21	U	129	THR
21	U	130	TYR
21	U	131	ARG

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Mol	Chain	Res	Type
21	U	139	TYR
21	U	140	GLU
21	U	145	HIS
21	U	146	ILE
21	U	147	GLU
21	U	159	LYS
21	U	168	LEU
21	U	180	LYS
22	V	9	GLN
22	V	32	LEU
22	V	33	TYR
22	V	66	ARG
22	V	89	ASP
22	V	95	GLU
22	V	99	THR
22	V	107	THR
22	V	120	GLU
22	V	127	LEU
22	V	138	LEU
22	V	141	ARG
22	V	152	HIS
22	V	164	ARG
22	V	178	ARG
22	V	185	LYS
23	W	10	LEU
23	W	24	LEU
23	W	74	ARG
23	W	78	TYR
23	W	89	LEU
23	W	90	PRO
23	W	125	LYS
23	W	133	LYS
23	W	134	HIS
23	W	148	ASP
23	W	152	GLU
23	W	165	LYS
23	W	182	ASP
24	X	14	LEU
24	X	34	GLU
24	X	52	LYS
24	X	78	TRP
24	X	79	VAL

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Mol	Chain	Res	Type
24	X	87	THR
24	X	107	TYR
24	X	110	MET
24	X	119	ARG
24	X	137	ARG
24	X	139	TYR
24	X	152	LEU
24	X	158	LYS
24	X	165	TYR
25	Y	17	ARG
25	Y	20	ARG
25	Y	27	LEU
25	Y	33	VAL
25	Y	52	MET
25	Y	60	LYS
25	Y	64	VAL
25	Y	72	VAL
25	Y	76	ILE
25	Y	79	MET
25	Y	83	ARG
25	Y	84	TYR
25	Y	86	GLU
25	Y	89	LEU
25	Y	91	LEU
25	Y	106	LEU
25	Y	136	ARG
25	Y	137	GLU
25	Y	151	LEU
26	Z	40	HIS
26	Z	88	GLN
27	AA	9	THR
27	AA	12	ARG
27	AA	33	ASN
27	AA	54	LEU
27	AA	68	GLU
27	AA	93	LEU
27	AA	102	ILE
27	AA	104	ASN
27	AA	115	THR
28	BA	1	MET
28	BA	4	GLU
28	BA	17	ARG

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Mol	Chain	Res	Type
28	BA	34	SER
28	BA	41	LYS
28	BA	43	ARG
28	BA	49	ILE
29	CA	38	LEU
29	CA	39	LYS
29	CA	58	ASP
29	CA	60	TYR
29	CA	63	ILE
29	CA	81	ILE
29	CA	86	VAL
29	CA	121	LYS
29	CA	125	ARG
29	CA	142	ILE
30	DA	12	ARG
30	DA	19	TYR
30	DA	28	ARG
30	DA	42	GLN
30	DA	45	ILE
30	DA	50	ILE
30	DA	57	LEU
30	DA	66	GLN
30	DA	74	TYR
30	DA	105	VAL
30	DA	107	THR
30	DA	114	ASP
30	DA	115	ARG
31	EA	5	LEU
31	EA	21	LYS
31	EA	38	PHE
31	EA	74	VAL
31	EA	85	TYR
31	EA	99	GLU
31	EA	134	LEU
32	FA	7	LYS
32	FA	34	MET
32	FA	39	HIS
32	FA	41	HIS
32	FA	46	ASP
32	FA	70	LYS
32	FA	73	LEU
32	FA	77	LYS

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Mol	Chain	Res	Type
32	FA	78	LEU
32	FA	88	ASP
32	FA	92	LYS
32	FA	129	PHE
33	GA	28	LYS
33	GA	59	LYS
34	HA	38	LYS
34	HA	55	GLU
34	HA	62	LEU
34	HA	66	LYS
34	HA	84	LEU
34	HA	86	ARG
34	HA	103	THR
35	IA	8	VAL
35	IA	31	ARG
35	IA	33	VAL
35	IA	59	ILE
35	IA	64	VAL
35	IA	102	LYS
35	IA	112	ASP
36	JA	8	LYS
36	JA	32	TRP
36	JA	33	ARG
36	JA	36	LYS
36	JA	38	ILE
36	JA	41	VAL
36	JA	49	ASN
36	JA	73	THR
36	JA	78	ASN
36	JA	82	LEU
36	JA	85	LEU
36	JA	92	TYR
36	JA	119	VAL
37	KA	42	GLN
37	KA	43	PHE
37	KA	44	TYR
37	KA	57	LYS
37	KA	78	SER
37	KA	80	VAL
37	KA	85	PHE
37	KA	87	ASN
38	LA	18	ASN

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Mol	Chain	Res	Type
38	LA	20	ILE
38	LA	23	VAL
38	LA	59	PRO
38	LA	67	LYS
38	LA	97	GLU
39	MA	38	ARG
39	MA	45	LYS
39	MA	64	GLU
39	MA	71	LYS
39	MA	75	TYR
39	MA	85	THR
39	MA	89	ARG
39	MA	104	GLN
39	MA	119	LYS
40	NA	21	THR
40	NA	26	ILE
40	NA	47	ILE
40	NA	52	PRO
40	NA	53	TYR
40	NA	60	LEU
40	NA	76	ARG
41	OA	10	LYS
41	OA	13	ASN
41	OA	14	LYS
41	OA	17	THR
41	OA	18	LEU
41	OA	37	CYS
41	OA	55	ARG
41	OA	57	HIS
41	OA	58	THR
41	OA	67	LEU
42	PA	26	LYS
42	PA	28	ASN
42	PA	38	PHE
42	PA	63	LYS
42	PA	65	LEU
42	PA	70	PRO
43	QA	15	LYS
43	QA	21	ARG
43	QA	33	ASN
43	QA	35	ILE
43	QA	38	ASN

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Mol	Chain	Res	Type
43	QA	48	LYS
44	RA	79	GLU
44	RA	91	CYS
44	RA	100	TYR
45	SA	5	TRP
45	SA	11	ARG
45	SA	21	ARG
46	TA	17	CYS
46	TA	20	HIS
46	TA	29	LYS
46	TA	43	TYR
46	TA	46	LYS
46	TA	61	LYS
46	TA	78	LYS
46	TA	80	ARG
46	TA	99	GLN
46	TA	106	PHE
47	UA	4	ARG
47	UA	24	ARG
47	UA	28	LYS
47	UA	30	GLU
47	UA	45	LYS
47	UA	59	CYS
48	VA	6	GLU
48	VA	23	LYS
48	VA	45	LEU
48	VA	55	LYS
48	VA	67	LEU
48	VA	70	LEU
48	VA	104	ARG
48	VA	117	GLU
48	VA	120	TRP
48	VA	126	THR
48	VA	135	PHE
48	VA	155	ASP
48	VA	163	ASN
48	VA	172	LEU
48	VA	189	GLN
49	WA	53	LYS
49	WA	59	ARG
49	WA	110	VAL
49	WA	114	ASP

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Mol	Chain	Res	Type
49	WA	117	LYS
49	WA	136	ILE
49	WA	137	LYS
49	WA	147	HIS
49	WA	175	ASP
49	WA	181	TRP
49	WA	207	ASP
49	WA	225	LEU
49	WA	234	LEU
49	WA	268	GLN
50	XA	24	LEU
50	XA	38	PHE
50	XA	62	ARG
50	XA	69	ASN
50	XA	87	LEU
50	XA	92	HIS
50	XA	97	PRO
50	XA	101	ARG
50	XA	113	ARG
50	XA	125	ASP
50	XA	146	LEU
50	XA	188	LEU
50	XA	197	ILE
50	XA	200	ASP
52	ZA	53	ILE
52	ZA	99	LYS
52	ZA	106	ASP
52	ZA	113	LEU
52	ZA	117	THR
52	ZA	227	PRO
53	AB	7	LYS
53	AB	84	ILE
53	AB	92	GLN
53	AB	105	MET
53	AB	107	PHE
53	AB	115	ILE
53	AB	127	MET
53	AB	146	ARG
53	AB	150	MET
53	AB	158	ILE
53	AB	169	ASP
53	AB	212	LYS

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Mol	Chain	Res	Type
53	AB	213	GLU
53	AB	223	LYS
54	BB	6	LYS
54	BB	17	HIS
54	BB	23	LEU
54	BB	30	ARG
54	BB	38	LEU
54	BB	77	ARG
54	BB	92	LEU
54	BB	98	ASN
54	BB	106	LYS
54	BB	108	ARG
54	BB	173	ILE
54	BB	187	ARG
54	BB	215	ASP
54	BB	223	ASN
54	BB	227	VAL
54	BB	248	ILE
55	CB	25	LEU
55	CB	42	LEU
55	CB	84	LYS
55	CB	93	LEU
55	CB	99	MET
55	CB	109	LYS
55	CB	130	ILE
55	CB	156	ARG
55	CB	157	ARG
55	CB	187	ILE
55	CB	194	LEU
55	CB	215	ASP
56	DB	25	ARG
56	DB	77	LEU
56	DB	132	ARG
56	DB	220	LYS
56	DB	223	LYS
57	EB	8	ILE
57	EB	24	PHE
57	EB	114	ARG
57	EB	118	LEU
57	EB	128	ASP
57	EB	162	ILE
57	EB	185	ILE

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Mol	Chain	Res	Type
58	FB	5	ARG
58	FB	8	ARG
58	FB	20	GLN
58	FB	47	ARG
58	FB	74	LYS
58	FB	116	HIS
58	FB	137	LYS
58	FB	179	CYS
58	FB	187	GLU
59	GB	39	LYS
59	GB	58	ASP
59	GB	64	GLU
59	GB	79	ARG
59	GB	92	LYS
59	GB	93	LEU
59	GB	96	VAL
59	GB	99	LEU
59	GB	102	GLU
59	GB	109	LEU
59	GB	120	LYS
59	GB	138	LYS
59	GB	149	ARG
59	GB	161	THR
59	GB	175	ARG
59	GB	182	GLU
60	HB	34	GLU
60	HB	49	LEU
60	HB	59	PHE
60	HB	62	GLN
60	HB	76	LEU
60	HB	82	LEU
60	HB	96	ASN
61	IB	64	VAL
61	IB	67	ARG
61	IB	79	LYS
61	IB	88	ARG
61	IB	100	TYR
61	IB	119	VAL
61	IB	125	VAL
61	IB	130	PRO
61	IB	155	LYS
63	KB	3	ARG

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Mol	Chain	Res	Type
63	KB	25	TRP
63	KB	43	LYS
63	KB	88	LEU
63	KB	108	ASP
63	KB	128	TYR
63	KB	131	THR
63	KB	142	GLU
65	MB	8	LYS
65	MB	43	ARG
65	MB	81	ARG
65	MB	84	ILE
65	MB	110	GLU
65	MB	123	TYR
66	NB	10	PHE
66	NB	41	PRO
66	NB	52	LEU
66	NB	58	ASP
66	NB	69	VAL
66	NB	70	THR
66	NB	117	LEU
66	NB	137	ARG
67	OB	5	ARG
67	OB	8	THR
67	OB	14	LYS
67	OB	29	GLN
67	OB	69	ILE
67	OB	117	LEU
68	PB	3	LEU
68	PB	15	LEU
68	PB	28	ILE
68	PB	51	ASP
68	PB	54	LEU
68	PB	82	PRO
68	PB	87	ASN
68	PB	92	ILE
68	PB	126	ARG
68	PB	136	GLN
69	QB	13	ASP
69	QB	22	LEU
69	QB	28	LEU
69	QB	30	VAL
69	QB	35	ASP

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Mol	Chain	Res	Type
69	QB	38	LYS
69	QB	68	ARG
69	QB	110	LYS
69	QB	131	ASP
70	RB	15	GLN
70	RB	33	GLN
70	RB	34	LEU
70	RB	46	GLU
70	RB	48	HIS
70	RB	57	ARG
70	RB	61	LYS
70	RB	72	ASN
70	RB	77	LYS
70	RB	89	ARG
70	RB	108	ILE
71	SB	3	ASN
71	SB	5	LYS
71	SB	8	LEU
71	SB	11	LEU
71	SB	50	TYR
72	TB	6	VAL
72	TB	9	ASP
72	TB	11	LEU
72	TB	23	ARG
72	TB	24	GLN
72	TB	25	VAL
72	TB	49	GLU
72	TB	65	LEU
72	TB	86	ILE
72	TB	89	TRP
72	TB	104	LEU
72	TB	120	HIS
73	UB	7	ARG
73	UB	9	LEU
73	UB	16	ARG
73	UB	18	HIS
73	UB	19	ARG
73	UB	23	ARG
73	UB	24	TRP
73	UB	52	ILE
73	UB	69	ARG
73	UB	82	LYS

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Mol	Chain	Res	Type
73	UB	101	GLU
73	UB	103	LEU
73	UB	110	LYS
74	VB	17	LEU
74	VB	32	ARG
74	VB	57	VAL
74	VB	72	PHE
74	VB	94	TYR
74	VB	105	ARG
74	VB	123	LYS
74	VB	127	LYS
74	VB	132	ARG
75	WB	42	LEU
75	WB	58	ARG
75	WB	69	LEU
75	WB	98	GLN
75	WB	100	ILE
77	YB	21	LEU
77	YB	29	ARG
77	YB	80	ARG
78	ZB	9	LEU
78	ZB	19	THR
78	ZB	32	PHE
78	ZB	34	GLU
78	ZB	60	GLU
78	ZB	65	ARG
79	AC	19	ARG
80	BC	3	LYS
80	BC	8	LEU
80	BC	20	LYS
80	BC	39	LEU
80	BC	47	VAL
82	DC	12	LEU
82	DC	22	MET
82	DC	32	LYS
82	DC	37	ASP
82	DC	45	ILE
82	DC	70	ILE
82	DC	90	LYS
82	DC	94	ASP
82	DC	102	LEU
82	DC	108	HIS

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Mol	Chain	Res	Type
82	DC	121	VAL
82	DC	132	ILE
82	DC	138	GLN
82	DC	139	THR
82	DC	149	GLU
82	DC	194	ASP
82	DC	202	VAL
82	DC	221	THR
82	DC	222	ILE
82	DC	281	ILE
82	DC	320	LEU
82	DC	388	THR
82	DC	394	PHE
82	DC	437	MET
82	DC	440	ARG
82	DC	446	ASP
82	DC	453	ILE
82	DC	456	LEU
82	DC	490	GLN
82	DC	501	LEU
82	DC	506	GLU
82	DC	568	GLU
82	DC	583	HIS
82	DC	596	GLU
82	DC	598	SER
82	DC	612	PHE
82	DC	629	ASP
82	DC	633	ILE
82	DC	647	ILE
82	DC	654	GLN
82	DC	677	PHE
82	DC	679	GLU
82	DC	681	MET
82	DC	721	ASP
82	DC	723	LYS
82	DC	724	ILE
82	DC	732	GLU
82	DC	743	ILE
82	DC	744	TYR
82	DC	749	LYS
82	DC	766	PHE
82	DC	767	THR

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Mol	Chain	Res	Type
82	DC	796	MET
82	DC	800	HIS
82	DC	804	LEU
82	DC	810	ASP
82	DC	836	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (355) such sidechains are listed below:

Mol	Chain	Res	Type
5	E	8	GLN
5	E	27	ASN
5	E	94	ASN
5	E	108	ASN
5	E	119	GLN
5	E	127	GLN
5	E	197	ASN
6	F	86	GLN
6	F	115	ASN
6	F	132	ASN
6	F	187	HIS
6	F	205	ASN
6	F	215	ASN
6	F	216	HIS
6	F	253	GLN
7	G	3	HIS
7	G	11	HIS
7	G	121	ASN
7	G	163	HIS
7	G	165	GLN
7	G	198	HIS
7	G	211	GLN
7	G	256	HIS
7	G	345	ASN
8	H	5	GLN
8	H	18	ASN
8	H	43	ASN
8	H	45	ASN
8	H	48	GLN
8	H	59	GLN
8	H	114	ASN
8	H	116	ASN
8	H	196	ASN

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Mol	Chain	Res	Type
8	H	229	ASN
8	H	234	ASN
8	H	279	HIS
8	H	291	ASN
8	H	307	GLN
8	H	320	ASN
8	H	322	GLN
9	I	32	GLN
9	I	45	ASN
9	I	57	ASN
9	I	151	GLN
9	I	178	ASN
9	I	244	HIS
9	I	264	GLN
9	I	296	GLN
10	J	4	GLN
10	J	28	GLN
10	J	72	ASN
10	J	125	GLN
10	J	126	GLN
10	J	138	GLN
10	J	172	HIS
11	K	25	GLN
11	K	48	ASN
11	K	52	GLN
11	K	64	GLN
11	K	80	GLN
11	K	93	ASN
11	K	159	GLN
11	K	172	ASN
11	K	231	ASN
12	L	24	ASN
12	L	28	HIS
12	L	137	ASN
12	L	138	HIS
12	L	252	ASN
13	M	9	GLN
13	M	49	ASN
13	M	50	ASN
13	M	64	HIS
13	M	100	ASN
13	M	102	ASN

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Mol	Chain	Res	Type
13	M	125	ASN
13	M	162	GLN
13	M	163	GLN
14	N	12	GLN
14	N	51	HIS
14	N	73	ASN
14	N	144	ASN
14	N	209	ASN
14	N	220	GLN
15	O	68	HIS
15	O	150	ASN
16	P	61	GLN
16	P	65	GLN
16	P	103	ASN
16	P	115	GLN
17	Q	17	HIS
17	Q	105	ASN
17	Q	106	GLN
17	Q	112	ASN
17	Q	120	GLN
17	Q	137	GLN
17	Q	149	GLN
18	R	41	GLN
18	R	62	GLN
18	R	119	GLN
19	S	11	GLN
19	S	15	GLN
19	S	32	GLN
19	S	37	HIS
19	S	57	GLN
19	S	86	ASN
19	S	90	ASN
19	S	138	GLN
19	S	139	HIS
19	S	181	ASN
19	S	194	GLN
19	S	195	ASN
20	T	14	HIS
20	T	90	HIS
21	U	55	GLN
21	U	97	ASN
21	U	145	HIS

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Mol	Chain	Res	Type
21	U	172	GLN
22	V	73	GLN
22	V	152	HIS
23	W	39	ASN
23	W	68	GLN
23	W	134	HIS
24	X	3	HIS
24	X	33	ASN
24	X	62	ASN
24	X	63	GLN
24	X	65	ASN
24	X	89	ASN
24	X	138	GLN
24	X	157	GLN
25	Y	22	HIS
25	Y	134	GLN
25	Y	146	ASN
27	AA	33	ASN
28	BA	32	GLN
28	BA	42	GLN
28	BA	45	ASN
28	BA	58	HIS
29	CA	53	HIS
29	CA	65	GLN
30	DA	66	GLN
30	DA	100	HIS
30	DA	120	GLN
31	EA	29	HIS
31	EA	122	HIS
32	FA	40	HIS
32	FA	44	ASN
32	FA	62	HIS
32	FA	64	GLN
32	FA	74	ASN
32	FA	89	GLN
33	GA	42	ASN
33	GA	43	HIS
35	IA	17	HIS
35	IA	80	ASN
35	IA	105	GLN
36	JA	13	HIS
36	JA	20	HIS

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Mol	Chain	Res	Type
36	JA	26	HIS
36	JA	31	ASN
36	JA	35	GLN
36	JA	52	GLN
36	JA	60	ASN
36	JA	78	ASN
36	JA	88	HIS
36	JA	104	ASN
36	JA	121	ASN
37	KA	13	HIS
37	KA	24	ASN
37	KA	42	GLN
37	KA	77	ASN
37	KA	87	ASN
37	KA	88	ASN
37	KA	106	ASN
38	LA	14	ASN
38	LA	18	ASN
38	LA	33	GLN
38	LA	52	GLN
38	LA	69	HIS
38	LA	83	ASN
39	MA	16	GLN
39	MA	59	ASN
39	MA	104	GLN
40	NA	63	ASN
41	OA	13	ASN
41	OA	16	HIS
41	OA	28	HIS
41	OA	30	GLN
41	OA	69	HIS
41	OA	76	ASN
42	PA	28	ASN
42	PA	40	GLN
42	PA	76	ASN
43	QA	32	ASN
43	QA	33	ASN
43	QA	50	ASN
44	RA	90	ASN
44	RA	117	HIS
46	TA	3	ASN
46	TA	22	GLN

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Mol	Chain	Res	Type
46	TA	47	GLN
46	TA	53	GLN
46	TA	99	GLN
47	UA	25	GLN
48	VA	37	GLN
48	VA	83	ASN
48	VA	103	ASN
48	VA	167	GLN
48	VA	174	ASN
49	WA	4	ASN
49	WA	31	ASN
49	WA	69	GLN
49	WA	174	ASN
49	WA	184	ASN
49	WA	308	ASN
50	XA	15	GLN
50	XA	21	ASN
50	XA	28	ASN
50	XA	46	HIS
50	XA	109	ASN
50	XA	163	ASN
50	XA	164	ASN
50	XA	168	HIS
52	ZA	59	HIS
52	ZA	82	ASN
52	ZA	228	ASN
53	AB	22	ASN
53	AB	56	GLN
53	AB	67	ASN
53	AB	92	GLN
53	AB	174	HIS
54	BB	16	HIS
54	BB	57	ASN
54	BB	67	GLN
54	BB	98	ASN
54	BB	130	GLN
54	BB	216	ASN
54	BB	258	GLN
54	BB	259	GLN
55	CB	79	ASN
55	CB	103	ASN
55	CB	122	ASN

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Mol	Chain	Res	Type
55	CB	128	ASN
55	CB	139	ASN
55	CB	186	ASN
55	CB	200	ASN
56	DB	4	ASN
56	DB	13	GLN
56	DB	139	ASN
56	DB	199	GLN
57	EB	19	GLN
57	EB	22	GLN
57	EB	42	GLN
57	EB	74	GLN
57	EB	89	HIS
57	EB	180	GLN
58	FB	32	GLN
58	FB	35	ASN
58	FB	88	ASN
58	FB	119	GLN
58	FB	175	GLN
59	GB	38	ASN
59	GB	112	GLN
59	GB	131	GLN
59	GB	139	GLN
59	GB	142	ASN
60	HB	28	ASN
60	HB	39	ASN
60	HB	47	GLN
60	HB	85	HIS
60	HB	96	ASN
61	IB	16	GLN
61	IB	18	HIS
61	IB	98	ASN
61	IB	104	HIS
61	IB	106	ASN
61	IB	110	HIS
61	IB	150	ASN
63	KB	49	GLN
63	KB	69	ASN
63	KB	78	ASN
63	KB	105	ASN
65	MB	79	HIS
65	MB	103	ASN

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Mol	Chain	Res	Type
65	MB	104	GLN
65	MB	114	HIS
66	NB	8	GLN
66	NB	77	GLN
66	NB	83	GLN
66	NB	94	GLN
66	NB	139	GLN
67	OB	29	GLN
67	OB	56	HIS
67	OB	104	ASN
68	PB	12	GLN
68	PB	74	GLN
68	PB	75	ASN
68	PB	78	HIS
68	PB	136	GLN
69	QB	16	ASN
69	QB	25	GLN
69	QB	43	ASN
69	QB	77	ASN
69	QB	93	HIS
69	QB	101	ASN
69	QB	138	GLN
70	RB	15	GLN
70	RB	17	GLN
70	RB	40	ASN
70	RB	47	GLN
70	RB	87	HIS
70	RB	98	GLN
71	SB	33	GLN
71	SB	35	ASN
71	SB	70	ASN
71	SB	75	ASN
71	SB	81	ASN
72	TB	24	GLN
72	TB	42	GLN
72	TB	64	GLN
72	TB	98	GLN
72	TB	113	HIS
73	UB	75	GLN
73	UB	79	ASN
73	UB	99	ASN
74	VB	29	HIS

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Mol	Chain	Res	Type
74	VB	77	ASN
74	VB	107	GLN
74	VB	133	ASN
75	WB	38	HIS
75	WB	98	GLN
77	YB	9	HIS
78	ZB	51	ASN
79	AC	20	GLN
79	AC	48	ASN
80	BC	17	GLN
82	DC	91	GLN
82	DC	96	ASN
82	DC	101	ASN
82	DC	186	ASN
82	DC	201	GLN
82	DC	259	ASN
82	DC	414	GLN
82	DC	537	HIS
82	DC	543	GLN
82	DC	583	HIS
82	DC	607	ASN
82	DC	641	ASN
82	DC	644	ASN
82	DC	687	ASN
82	DC	704	GLN
82	DC	748	ASN
82	DC	759	GLN
82	DC	836	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1676/1798 (93%)	310 (18%)	11 (0%)
2	B	3265/3396 (96%)	632 (19%)	27 (0%)
3	C	157/158 (99%)	32 (20%)	0
4	D	120/121 (99%)	12 (10%)	0
83	EC	187/201 (93%)	74 (39%)	2 (1%)
All	All	5405/5674 (95%)	1060 (19%)	40 (0%)

All (1060) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	2	A
1	A	25	C
1	A	26	A
1	A	34	G
1	A	47	A
1	A	57	G
1	A	60	U
1	A	67	A
1	A	68	A
1	A	69	G
1	A	72	A
1	A	73	U
1	A	76	A
1	A	77	U
1	A	100	A
1	A	104	A
1	A	114	C
1	A	116	U
1	A	132	U
1	A	133	U
1	A	134	U
1	A	135	A
1	A	136	C
1	A	137	U
1	A	140	A
1	A	141	U
1	A	145	A
1	A	153	G
1	A	159	U
1	A	166	C
1	A	170	U
1	A	178	U
1	A	186	C
1	A	190	C
1	A	191	C
1	A	192	U
1	A	195	G
1	A	197	A
1	A	200	A
1	A	215	A
1	A	219	A
1	A	228	G
1	A	231	U

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Mol	Chain	Res	Type
1	A	233	C
1	A	237	C
1	A	238	U
1	A	240	U
1	A	241	U
1	A	242	U
1	A	250	C
1	A	261	U
1	A	265	A
1	A	272	U
1	A	277	U
1	A	278	U
1	A	280	U
1	A	281	G
1	A	288	A
1	A	299	A
1	A	302	U
1	A	316	A
1	A	320	U
1	A	321	C
1	A	322	G
1	A	323	A
1	A	337	G
1	A	338	C
1	A	341	A
1	A	352	A
1	A	359	A
1	A	360	A
1	A	361	C
1	A	378	A
1	A	400	A
1	A	402	C
1	A	404	G
1	A	416	A
1	A	418	G
1	A	423	G
1	A	424	C
1	A	425	A
1	A	426	G
1	A	434	G
1	A	439	U
1	A	444	C

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Mol	Chain	Res	Type
1	A	475	A
1	A	477	A
1	A	488	G
1	A	493	U
1	A	495	C
1	A	496	G
1	A	497	G
1	A	500	C
1	A	502	U
1	A	506	A
1	A	510	G
1	A	515	A
1	A	532	U
1	A	539	G
1	A	541	A
1	A	542	A
1	A	544	A
1	A	555	A
1	A	556	A
1	A	557	G
1	A	558	U
1	A	559	C
1	A	565	C
1	A	575	C
1	A	577	G
1	A	578	U
1	A	579	A
1	A	580	A
1	A	581	U
1	A	594	A
1	A	606	A
1	A	619	A
1	A	620	A
1	A	622	A
1	A	623	A
1	A	624	G
1	A	629	U
1	A	639	U
1	A	650	U
1	A	655	G
1	A	656	G
1	A	677	G

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Mol	Chain	Res	Type
1	A	684	A
1	A	694	U
1	A	696	C
1	A	697	C
1	A	703	G
1	A	704	C
1	A	705	U
1	A	707	A
1	A	708	C
1	A	709	C
1	A	710	U
1	A	731	C
1	A	732	G
1	A	734	A
1	A	736	C
1	A	738	G
1	A	741	C
1	A	742	U
1	A	754	A
1	A	755	A
1	A	765	G
1	A	766	U
1	A	771	A
1	A	774	A
1	A	778	G
1	A	783	G
1	A	784	C
1	A	789	A
1	A	794	U
1	A	807	A
1	A	812	A
1	A	815	G
1	A	820	U
1	A	821	U
1	A	822	U
1	A	825	U
1	A	830	U
1	A	831	U
1	A	841	U
1	A	846	G
1	A	850	A
1	A	852	C

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Mol	Chain	Res	Type
1	A	853	G
1	A	854	U
1	A	855	A
1	A	856	A
1	A	860	U
1	A	863	A
1	A	865	A
1	A	876	G
1	A	889	U
1	A	890	C
1	A	928	U
1	A	933	A
1	A	935	U
1	A	942	G
1	A	951	A
1	A	960	U
1	A	966	A
1	A	977	A
1	A	1026	A
1	A	1028	C
1	A	1039	A
1	A	1043	A
1	A	1052	U
1	A	1053	G
1	A	1058	U
1	A	1061	A
1	A	1072	C
1	A	1074	G
1	A	1076	A
1	A	1082	C
1	A	1091	A
1	A	1092	A
1	A	1096	C
1	A	1097	U
1	A	1098	U
1	A	1100	G
1	A	1109	G
1	A	1118	G
1	A	1146	G
1	A	1150	G
1	A	1151	A
1	A	1160	A

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Mol	Chain	Res	Type
1	A	1163	A
1	A	1185	U
1	A	1188	G
1	A	1190	C
1	A	1191	U
1	A	1194	A
1	A	1196	A
1	A	1200	G
1	A	1202	A
1	A	1212	G
1	A	1217	A
1	A	1218	G
1	A	1227	A
1	A	1228	G
1	A	1229	G
1	A	1230	A
1	A	1244	A
1	A	1245	G
1	A	1246	C
1	A	1258	U
1	A	1270	G
1	A	1273	G
1	A	1274	C
1	A	1275	A
1	A	1306	C
1	A	1307	U
1	A	1314	U
1	A	1315	U
1	A	1320	U
1	A	1321	A
1	A	1340	U
1	A	1345	A
1	A	1363	U
1	A	1370	U
1	A	1371	A
1	A	1385	G
1	A	1390	U
1	A	1398	U
1	A	1399	C
1	A	1413	U
1	A	1415	U
1	A	1416	G

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Mol	Chain	Res	Type
1	A	1418	G
1	A	1427	A
1	A	1428	G
1	A	1445	G
1	A	1448	G
1	A	1457	C
1	A	1471	A
1	A	1473	U
1	A	1474	G
1	A	1481	C
1	A	1482	C
1	A	1486	G
1	A	1490	C
1	A	1491	U
1	A	1492	A
1	A	1499	G
1	A	1516	A
1	A	1523	G
1	A	1524	A
1	A	1535	U
1	A	1536	G
1	A	1537	C
1	A	1538	U
1	A	1540	G
1	A	1557	U
1	A	1559	A
1	A	1573	A
1	A	1574	G
1	A	1584	G
1	A	1601	G
1	A	1602	C
1	A	1616	G
1	A	1623	C
1	A	1634	C
1	A	1657	U
1	A	1658	G
1	A	1683	C
1	A	1684	U
1	A	1686	C
1	A	1697	G
1	A	1715	G
1	A	1716	C

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Mol	Chain	Res	Type
1	A	1717	G
1	A	1736	G
1	A	1750	A
1	A	1755	A
1	A	1762	A
1	A	1764	C
1	A	1766	A
1	A	1768	G
1	A	1769	U
1	A	1770	U
1	A	1772	C
1	A	1774	G
1	A	1783	C
1	A	1792	G
1	A	1793	G
2	B	6	A
2	B	11	A
2	B	13	A
2	B	14	U
2	B	22	G
2	B	30	G
2	B	40	A
2	B	49	A
2	B	60	A
2	B	66	A
2	B	68	C
2	B	75	G
2	B	92	G
2	B	93	C
2	B	95	A
2	B	108	A
2	B	110	G
2	B	111	C
2	B	121	A
2	B	122	A
2	B	133	U
2	B	136	G
2	B	148	G
2	B	150	A
2	B	154	U
2	B	156	G
2	B	157	A

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Mol	Chain	Res	Type
2	B	161	G
2	B	169	U
2	B	170	G
2	B	182	U
2	B	187	A
2	B	189	G
2	B	190	U
2	B	191	U
2	B	200	C
2	B	201	A
2	B	210	U
2	B	212	G
2	B	218	G
2	B	219	A
2	B	231	G
2	B	237	G
2	B	243	G
2	B	249	U
2	B	251	G
2	B	252	U
2	B	253	A
2	B	269	G
2	B	280	U
2	B	281	G
2	B	286	U
2	B	295	A
2	B	299	G
2	B	305	U
2	B	311	C
2	B	315	C
2	B	323	A
2	B	329	U
2	B	337	G
2	B	338	A
2	B	339	C
2	B	346	C
2	B	349	A
2	B	350	C
2	B	352	A
2	B	364	G
2	B	370	U
2	B	375	A

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Mol	Chain	Res	Type
2	B	376	G
2	B	390	G
2	B	397	A
2	B	398	A
2	B	401	U
2	B	402	A
2	B	403	C
2	B	406	G
2	B	421	G
2	B	422	A
2	B	429	U
2	B	439	C
2	B	441	U
2	B	442	G
2	B	493	G
2	B	494	G
2	B	495	G
2	B	503	C
2	B	510	G
2	B	515	C
2	B	520	U
2	B	521	A
2	B	523	A
2	B	535	G
2	B	546	C
2	B	548	G
2	B	555	U
2	B	557	A
2	B	559	A
2	B	569	A
2	B	578	A
2	B	579	G
2	B	600	G
2	B	609	G
2	B	620	U
2	B	621	A
2	B	636	C
2	B	637	C
2	B	638	C
2	B	640	U
2	B	647	A
2	B	649	A

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Mol	Chain	Res	Type
2	B	665	A
2	B	667	C
2	B	677	A
2	B	705	A
2	B	706	A
2	B	712	G
2	B	758	C
2	B	763	G
2	B	765	C
2	B	766	U
2	B	767	U
2	B	770	G
2	B	771	A
2	B	775	A
2	B	776	U
2	B	777	U
2	B	780	A
2	B	781	G
2	B	785	G
2	B	786	A
2	B	799	G
2	B	806	A
2	B	808	A
2	B	813	G
2	B	816	A
2	B	817	A
2	B	818	C
2	B	830	A
2	B	837	A
2	B	846	A
2	B	847	A
2	B	861	C
2	B	864	G
2	B	874	U
2	B	875	G
2	B	879	U
2	B	880	G
2	B	890	C
2	B	894	G
2	B	895	A
2	B	896	A
2	B	907	G

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Mol	Chain	Res	Type
2	B	908	G
2	B	914	A
2	B	916	G
2	B	917	A
2	B	920	A
2	B	923	C
2	B	924	G
2	B	926	A
2	B	932	U
2	B	933	A
2	B	934	G
2	B	937	G
2	B	944	C
2	B	959	C
2	B	960	U
2	B	974	G
2	B	979	U
2	B	980	A
2	B	984	G
2	B	991	G
2	B	1001	G
2	B	1002	A
2	B	1010	G
2	B	1016	C
2	B	1018	G
2	B	1024	G
2	B	1025	A
2	B	1047	A
2	B	1049	C
2	B	1053	A
2	B	1064	A
2	B	1075	A
2	B	1081	U
2	B	1082	U
2	B	1093	A
2	B	1095	U
2	B	1096	U
2	B	1097	G
2	B	1098	A
2	B	1103	A
2	B	1104	G
2	B	1116	G

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Mol	Chain	Res	Type
2	B	1117	G
2	B	1131	G
2	B	1140	G
2	B	1143	A
2	B	1150	A
2	B	1155	C
2	B	1159	A
2	B	1160	C
2	B	1168	U
2	B	1178	G
2	B	1180	A
2	B	1181	U
2	B	1182	A
2	B	1190	A
2	B	1191	U
2	B	1193	A
2	B	1199	C
2	B	1201	C
2	B	1208	U
2	B	1209	G
2	B	1218	U
2	B	1219	C
2	B	1220	U
2	B	1221	A
2	B	1222	G
2	B	1223	A
2	B	1230	G
2	B	1236	G
2	B	1239	C
2	B	1241	U
2	B	1242	G
2	B	1245	A
2	B	1246	G
2	B	1254	C
2	B	1256	G
2	B	1263	A
2	B	1265	U
2	B	1287	A
2	B	1288	U
2	B	1292	C
2	B	1305	U
2	B	1306	G

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Mol	Chain	Res	Type
2	B	1307	G
2	B	1308	A
2	B	1309	U
2	B	1315	U
2	B	1318	A
2	B	1319	G
2	B	1325	U
2	B	1330	A
2	B	1332	A
2	B	1348	U
2	B	1351	U
2	B	1352	A
2	B	1353	U
2	B	1355	A
2	B	1357	G
2	B	1386	A
2	B	1399	A
2	B	1400	G
2	B	1408	G
2	B	1417	G
2	B	1419	A
2	B	1425	U
2	B	1434	G
2	B	1437	C
2	B	1447	G
2	B	1450	G
2	B	1452	A
2	B	1455	U
2	B	1456	A
2	B	1457	U
2	B	1470	U
2	B	1481	A
2	B	1482	A
2	B	1488	G
2	B	1495	U
2	B	1496	C
2	B	1507	G
2	B	1508	C
2	B	1511	U
2	B	1523	U
2	B	1525	G
2	B	1526	U

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Mol	Chain	Res	Type
2	B	1527	C
2	B	1536	G
2	B	1549	U
2	B	1556	C
2	B	1557	A
2	B	1558	A
2	B	1562	C
2	B	1563	C
2	B	1567	U
2	B	1569	U
2	B	1572	U
2	B	1576	G
2	B	1580	A
2	B	1583	A
2	B	1589	A
2	B	1591	G
2	B	1593	A
2	B	1595	U
2	B	1607	U
2	B	1629	U
2	B	1639	C
2	B	1642	A
2	B	1643	A
2	B	1644	C
2	B	1645	U
2	B	1646	G
2	B	1658	G
2	B	1683	A
2	B	1694	U
2	B	1717	U
2	B	1724	U
2	B	1730	G
2	B	1741	A
2	B	1742	U
2	B	1749	A
2	B	1750	A
2	B	1751	G
2	B	1765	U
2	B	1766	G
2	B	1769	G
2	B	1775	G
2	B	1780	G

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Mol	Chain	Res	Type
2	B	1795	U
2	B	1797	A
2	B	1810	A
2	B	1816	A
2	B	1819	U
2	B	1820	U
2	B	1821	U
2	B	1822	C
2	B	1834	U
2	B	1835	A
2	B	1839	A
2	B	1841	A
2	B	1842	A
2	B	1845	G
2	B	1846	C
2	B	1847	A
2	B	1849	C
2	B	1850	A
2	B	1864	A
2	B	1876	U
2	B	1879	A
2	B	1884	A
2	B	1886	A
2	B	1895	A
2	B	1906	G
2	B	1931	U
2	B	1933	A
2	B	1952	G
2	B	1954	G
2	B	2059	U
2	B	2078	C
2	B	2082	U
2	B	2083	G
2	B	2086	A
2	B	2094	C
2	B	2102	U
2	B	2107	A
2	B	2111	G
2	B	2112	U
2	B	2115	G
2	B	2117	A
2	B	2121	G

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Mol	Chain	Res	Type
2	B	2122	G
2	B	2131	A
2	B	2138	A
2	B	2139	A
2	B	2140	U
2	B	2141	U
2	B	2144	A
2	B	2145	A
2	B	2157	G
2	B	2158	A
2	B	2160	G
2	B	2169	G
2	B	2187	G
2	B	2188	A
2	B	2198	A
2	B	2201	G
2	B	2205	U
2	B	2206	G
2	B	2208	A
2	B	2210	G
2	B	2223	A
2	B	2231	C
2	B	2232	A
2	B	2244	A
2	B	2246	G
2	B	2247	G
2	B	2250	G
2	B	2251	G
2	B	2252	A
2	B	2256	A
2	B	2262	A
2	B	2269	U
2	B	2270	A
2	B	2271	A
2	B	2272	G
2	B	2273	G
2	B	2279	A
2	B	2281	A
2	B	2288	G
2	B	2289	U
2	B	2303	A
2	B	2307	G

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Mol	Chain	Res	Type
2	B	2308	C
2	B	2310	U
2	B	2313	A
2	B	2314	U
2	B	2315	G
2	B	2324	A
2	B	2335	G
2	B	2336	U
2	B	2339	C
2	B	2362	C
2	B	2365	C
2	B	2372	A
2	B	2373	A
2	B	2374	C
2	B	2375	G
2	B	2376	G
2	B	2391	G
2	B	2395	G
2	B	2397	A
2	B	2398	A
2	B	2402	A
2	B	2403	G
2	B	2405	C
2	B	2411	U
2	B	2418	G
2	B	2434	U
2	B	2435	G
2	B	2437	G
2	B	2443	A
2	B	2452	G
2	B	2455	U
2	B	2458	A
2	B	2459	A
2	B	2462	A
2	B	2472	U
2	B	2473	C
2	B	2474	G
2	B	2490	C
2	B	2495	C
2	B	2496	C
2	B	2497	U
2	B	2498	U

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Mol	Chain	Res	Type
2	B	2499	U
2	B	2500	A
2	B	2502	A
2	B	2503	G
2	B	2507	C
2	B	2511	A
2	B	2514	U
2	B	2515	A
2	B	2522	G
2	B	2523	A
2	B	2526	C
2	B	2537	U
2	B	2538	U
2	B	2540	A
2	B	2541	U
2	B	2542	U
2	B	2549	G
2	B	2553	U
2	B	2554	A
2	B	2555	G
2	B	2561	A
2	B	2562	A
2	B	2569	A
2	B	2571	U
2	B	2572	C
2	B	2573	G
2	B	2576	G
2	B	2585	G
2	B	2587	U
2	B	2589	G
2	B	2593	A
2	B	2606	G
2	B	2607	G
2	B	2614	G
2	B	2626	A
2	B	2628	A
2	B	2629	U
2	B	2638	C
2	B	2645	G
2	B	2651	G
2	B	2652	U
2	B	2656	A

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Mol	Chain	Res	Type
2	B	2657	A
2	B	2674	A
2	B	2677	G
2	B	2689	A
2	B	2694	A
2	B	2696	A
2	B	2699	G
2	B	2703	A
2	B	2714	G
2	B	2728	G
2	B	2729	U
2	B	2734	A
2	B	2742	C
2	B	2747	A
2	B	2753	G
2	B	2755	C
2	B	2758	A
2	B	2772	C
2	B	2777	G
2	B	2778	G
2	B	2779	A
2	B	2794	G
2	B	2796	G
2	B	2799	A
2	B	2800	G
2	B	2801	A
2	B	2802	A
2	B	2803	A
2	B	2808	A
2	B	2810	C
2	B	2816	G
2	B	2817	A
2	B	2828	G
2	B	2834	G
2	B	2842	U
2	B	2844	C
2	B	2845	A
2	B	2856	G
2	B	2859	U
2	B	2861	U
2	B	2867	C
2	B	2871	G

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Mol	Chain	Res	Type
2	B	2872	A
2	B	2887	A
2	B	2898	G
2	B	2899	C
2	B	2910	A
2	B	2914	G
2	B	2918	G
2	B	2923	U
2	B	2928	C
2	B	2935	U
2	B	2936	A
2	B	2938	G
2	B	2945	G
2	B	2947	G
2	B	2950	G
2	B	2951	G
2	B	2955	U
2	B	2971	A
2	B	2980	U
2	B	2983	C
2	B	2990	G
2	B	2997	G
2	B	3012	A
2	B	3046	A
2	B	3054	U
2	B	3057	U
2	B	3059	G
2	B	3074	G
2	B	3078	U
2	B	3080	G
2	B	3086	A
2	B	3092	C
2	B	3094	A
2	B	3101	G
2	B	3104	U
2	B	3109	G
2	B	3116	G
2	B	3122	A
2	B	3129	A
2	B	3130	A
2	B	3131	U
2	B	3134	A

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Mol	Chain	Res	Type
2	B	3139	A
2	B	3142	A
2	B	3143	C
2	B	3155	U
2	B	3165	A
2	B	3173	G
2	B	3174	A
2	B	3176	G
2	B	3179	U
2	B	3181	C
2	B	3187	A
2	B	3197	G
2	B	3198	U
2	B	3205	G
2	B	3206	C
2	B	3207	U
2	B	3210	A
2	B	3217	C
2	B	3218	A
2	B	3219	G
2	B	3220	G
2	B	3229	G
2	B	3242	G
2	B	3243	A
2	B	3244	A
2	B	3245	A
2	B	3246	G
2	B	3259	U
2	B	3263	G
2	B	3270	U
2	B	3271	G
2	B	3272	C
2	B	3273	A
2	B	3276	G
2	B	3279	A
2	B	3281	U
2	B	3287	U
2	B	3289	G
2	B	3294	A
2	B	3304	U
2	B	3313	U
2	B	3316	A

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Mol	Chain	Res	Type
2	B	3318	G
2	B	3319	U
2	B	3335	A
2	B	3341	U
2	B	3343	G
2	B	3347	A
2	B	3352	U
2	B	3353	G
2	B	3355	U
2	B	3368	U
2	B	3369	G
2	B	3375	A
2	B	3376	A
2	B	3377	G
2	B	3378	C
2	B	3382	U
2	B	3389	U
3	C	19	C
3	C	23	U
3	C	34	U
3	C	37	A
3	C	59	A
3	C	62	C
3	C	63	G
3	C	72	A
3	C	80	A
3	C	82	U
3	C	85	G
3	C	86	U
3	C	87	G
3	C	90	U
3	C	95	G
3	C	97	A
3	C	104	A
3	C	105	A
3	C	106	C
3	C	109	A
3	C	111	A
3	C	113	U
3	C	114	G
3	C	116	G
3	C	125	U

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Mol	Chain	Res	Type
3	C	126	A
3	C	131	A
3	C	136	G
3	C	142	C
3	C	151	C
3	C	152	G
3	C	157	U
4	D	11	A
4	D	38	U
4	D	42	A
4	D	54	U
4	D	55	A
4	D	64	A
4	D	65	G
4	D	76	A
4	D	99	G
4	D	102	A
4	D	112	G
4	D	121	U
83	EC	6768	U
83	EC	6770	U
83	EC	6772	G
83	EC	6773	G
83	EC	6774	U
83	EC	6775	U
83	EC	6776	A
83	EC	6777	C
83	EC	6778	C
83	EC	6782	C
83	EC	6788	C
83	EC	6790	A
83	EC	6791	A
83	EC	6792	A
83	EC	6793	A
83	EC	6794	C
83	EC	6795	U
83	EC	6800	G
83	EC	6804	A
83	EC	6805	C
83	EC	6809	G
83	EC	6815	U
83	EC	6816	A

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Mol	Chain	Res	Type
83	EC	6818	G
83	EC	6819	G
83	EC	6822	U
83	EC	6823	U
83	EC	6824	C
83	EC	6831	U
83	EC	6835	U
83	EC	6840	A
83	EC	6841	U
83	EC	6848	U
83	EC	6849	A
83	EC	6854	U
83	EC	6859	U
83	EC	6863	C
83	EC	6865	G
83	EC	6867	C
83	EC	6868	C
83	EC	6870	A
83	EC	6873	A
83	EC	6876	A
83	EC	6879	U
83	EC	6884	G
83	EC	6887	G
83	EC	6890	A
83	EC	6892	U
83	EC	6893	C
83	EC	6895	C
83	EC	6904	U
83	EC	6908	C
83	EC	6910	A
83	EC	6914	A
83	EC	6915	G
83	EC	6916	A
83	EC	6917	C
83	EC	6918	A
83	EC	6920	C
83	EC	6925	C
83	EC	6927	U
83	EC	6928	G
83	EC	6935	G
83	EC	6936	G
83	EC	6940	U

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Mol	Chain	Res	Type
83	EC	6942	A
83	EC	6943	A
83	EC	6944	U
83	EC	6945	U
83	EC	6948	U
83	EC	6950	C
83	EC	6952	U
83	EC	6956	A
83	EC	6958	C

All (40) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	25	C
1	A	139	C
1	A	322	G
1	A	501	U
1	A	555	A
1	A	829	A
1	A	1344	A
1	A	1370	U
1	A	1573	A
1	A	1615	C
1	A	1696	G
2	B	65	A
2	B	169	U
2	B	637	C
2	B	770	G
2	B	835	G
2	B	916	G
2	B	961	C
2	B	1144	U
2	B	1287	A
2	B	1307	G
2	B	1352	A
2	B	1456	A
2	B	1815	U
2	B	2101	C
2	B	2281	A
2	B	2323	G
2	B	2375	G
2	B	2513	U

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Mol	Chain	Res	Type
2	B	2525	G
2	B	2541	U
2	B	2950	G
2	B	3218	A
2	B	3228	C
2	B	3242	G
2	B	3269	U
2	B	3317	U
2	B	3375	A
83	EC	6859	U
83	EC	6876	A

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

1 non-standard protein/DNA/RNA residue is 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	$\#\|Z\| > 2$
82	DDE	DC	699	82	18,20,21	2.87	7 (38%)	17,28,30	2.25	5 (29%)

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
82	DDE	DC	699	82	-	1/20/21/23	0/1/1/1

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	699	DDE	CD2-CG	8.48	1.54	1.36
82	DC	699	DDE	CBW-CBI	4.31	1.60	1.53
82	DC	699	DDE	CB-CG	3.64	1.59	1.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	699	DDE	CAT-CE1	3.25	1.55	1.49
82	DC	699	DDE	CBW-NCB	3.13	1.60	1.54
82	DC	699	DDE	OAG-CBI	2.34	1.28	1.23
82	DC	699	DDE	CB-CA	2.19	1.58	1.53

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
82	DC	699	DDE	CAU-CAT-CE1	6.90	140.11	114.38
82	DC	699	DDE	CD2-NE2-CE1	3.09	110.13	107.55
82	DC	699	DDE	CAU-CBW-CBI	-2.85	105.65	111.22
82	DC	699	DDE	CD2-CG-ND1	-2.37	104.10	108.87
82	DC	699	DDE	OAG-CBI-NAD	2.13	126.80	123.04

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
82	DC	699	DDE	OAG-CBI-CBW-NCB

There are no ring outliers.

1 monomer is involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
82	DC	699	DDE	3	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 3 ligands modelled in this entry, 1 is monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the

expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
84	GDP	DC	901	85	29,30,30	2.07	7 (24%)	45,47,47	1.79	11 (24%)
86	SO1	DC	903	-	34,39,39	2.83	20 (58%)	38,64,64	2.09	8 (21%)

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
84	GDP	DC	901	85	-	3/16/32/32	0/3/3/3
86	SO1	DC	903	-	-	2/21/104/104	0/7/5/5

All (27) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	DC	901	GDP	PA-O3A	6.92	1.67	1.59
86	DC	903	SO1	O17-C52	5.26	1.49	1.40
86	DC	903	SO1	C12-C6	4.69	1.64	1.53
86	DC	903	SO1	C8-C2	4.42	1.61	1.53
86	DC	903	SO1	C55-C56	4.35	1.60	1.52
86	DC	903	SO1	C1-C5	4.34	1.60	1.50
86	DC	903	SO1	C7-C2	3.98	1.60	1.54
86	DC	903	SO1	C10-C6	3.93	1.61	1.53
86	DC	903	SO1	C12-C4	3.90	1.62	1.54
84	DC	901	GDP	PB-O1B	3.76	1.62	1.50
86	DC	903	SO1	O56-C52	-3.67	1.32	1.41
84	DC	901	GDP	PA-O1A	3.62	1.63	1.50
86	DC	903	SO1	C3-C9	3.61	1.64	1.56
86	DC	903	SO1	C4-C13	3.09	1.61	1.54
86	DC	903	SO1	C2-C6	2.97	1.60	1.55
86	DC	903	SO1	O56-C56	2.97	1.51	1.44
84	DC	901	GDP	O4'-C1'	2.95	1.48	1.42
86	DC	903	SO1	C52-C53	2.69	1.60	1.52
84	DC	901	GDP	PB-O3B	2.46	1.63	1.54
86	DC	903	SO1	C53-C54	2.43	1.58	1.52
84	DC	901	GDP	C5-C4	2.19	1.44	1.38
86	DC	903	SO1	C54-C55	2.15	1.58	1.52
86	DC	903	SO1	C7-C16	2.13	1.56	1.53
84	DC	901	GDP	C2-N2	2.11	1.39	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	DC	903	SO1	O64-C55	2.10	1.47	1.42
86	DC	903	SO1	C24-C18	2.08	1.59	1.54
86	DC	903	SO1	C24-C22	2.02	1.59	1.53

All (19) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
86	DC	903	SO1	C12-C6-C10	-7.02	102.42	107.92
84	DC	901	GDP	C2-N3-C4	5.65	122.04	112.30
84	DC	901	GDP	C5-C4-N3	-5.44	119.74	128.39
86	DC	903	SO1	C25-C22-C24	4.97	129.42	113.64
84	DC	901	GDP	N9-C4-N3	4.12	134.20	125.95
86	DC	903	SO1	C10-C6-C2	3.80	108.62	104.12
86	DC	903	SO1	C18-C9-C16	-3.58	98.83	103.72
86	DC	903	SO1	C61-C56-C55	-2.97	108.97	113.39
84	DC	901	GDP	C8-N7-C5	2.96	109.54	104.26
86	DC	903	SO1	C7-C2-C6	2.64	117.09	112.05
86	DC	903	SO1	C65-O64-C55	-2.55	107.92	114.47
84	DC	901	GDP	C6-C5-N7	2.43	134.71	130.29
86	DC	903	SO1	O64-C55-C56	2.34	112.53	107.70
84	DC	901	GDP	C2-N1-C6	-2.30	120.93	125.11
84	DC	901	GDP	O2A-PA-O1A	2.18	122.61	112.44
84	DC	901	GDP	O6-C6-C5	-2.17	120.80	126.53
84	DC	901	GDP	C4-C5-N7	-2.15	107.26	110.67
84	DC	901	GDP	C5-C6-N1	2.06	118.50	113.25
84	DC	901	GDP	C3'-C2'-C1'	2.00	105.25	101.46

There are no chirality outliers.

All (5) torsion outliers are listed below:

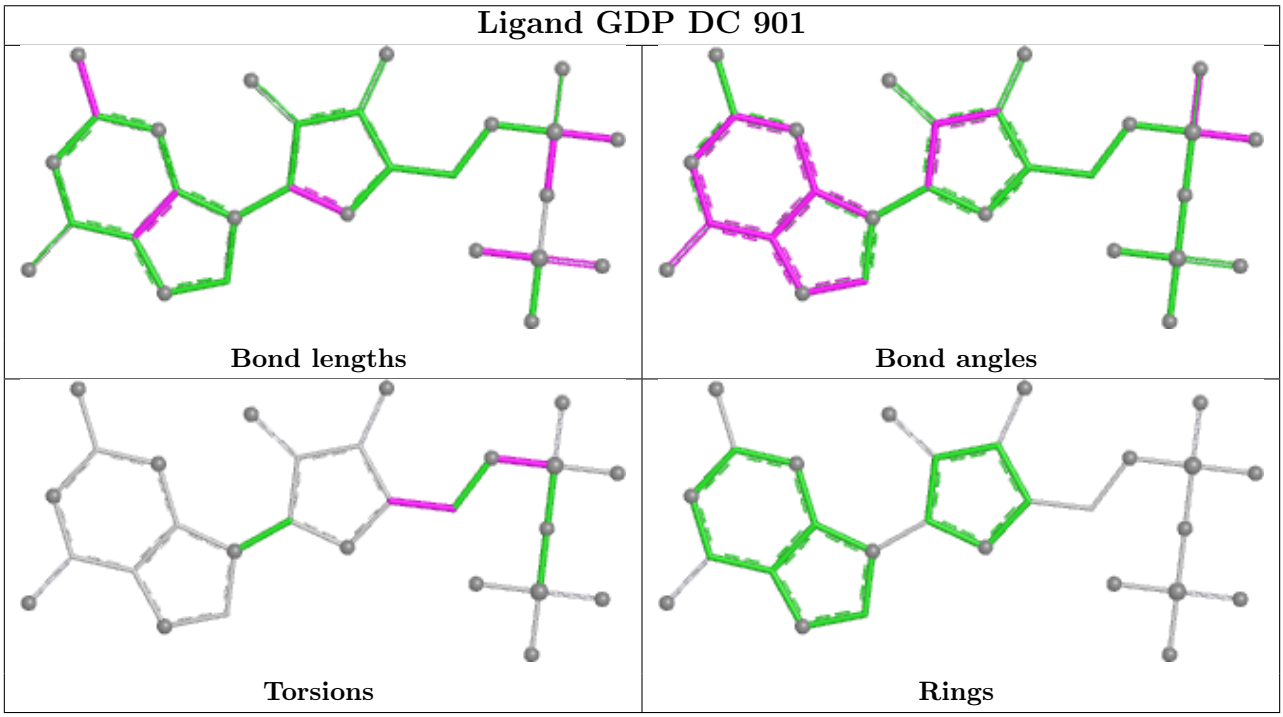
Mol	Chain	Res	Type	Atoms
84	DC	901	GDP	O4'-C4'-C5'-O5'
84	DC	901	GDP	C3'-C4'-C5'-O5'
86	DC	903	SO1	C2-C1-C5-O14
86	DC	903	SO1	C2-C1-C5-O15
84	DC	901	GDP	C5'-O5'-PA-O1A

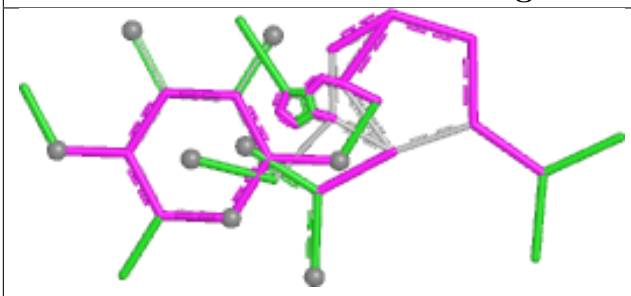
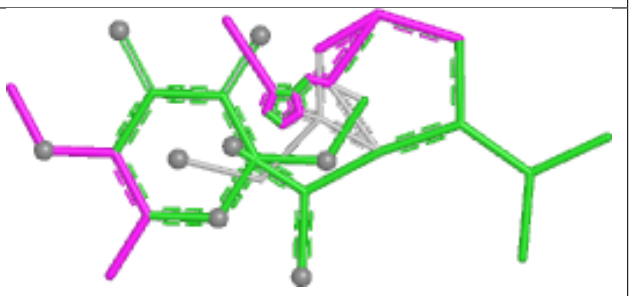
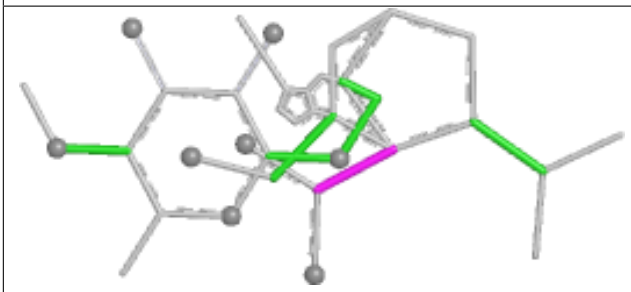
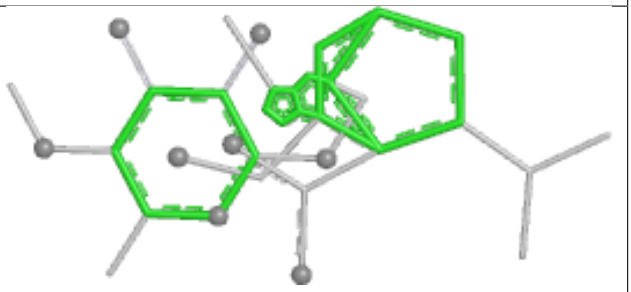
There are no ring outliers.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	DC	901	GDP	2	0
86	DC	903	SO1	2	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 SO1 DC 903	
 Bond lengths	 Bond angles
 Torsions	 Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

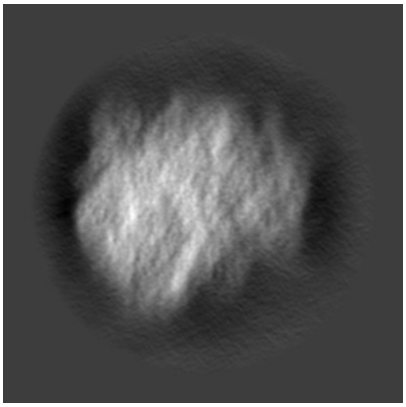
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-6645. These allow visual inspection of the internal detail of the map and identification of artifacts.

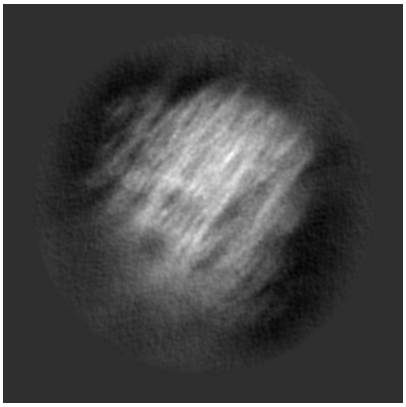
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

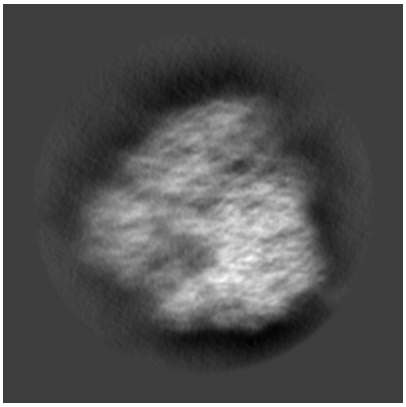
6.1.1 Primary map



X



Y

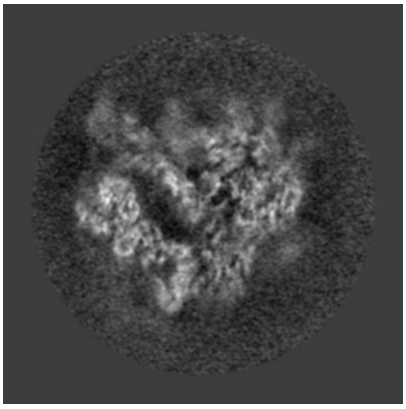


Z

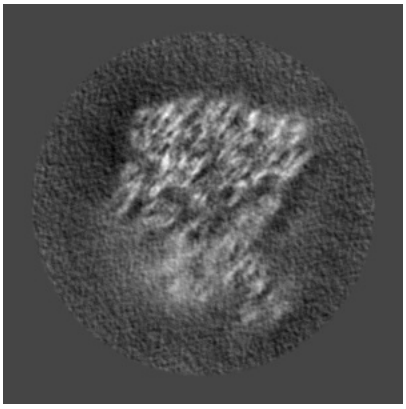
The images above show the map projected in three orthogonal directions.

6.2 Central slices

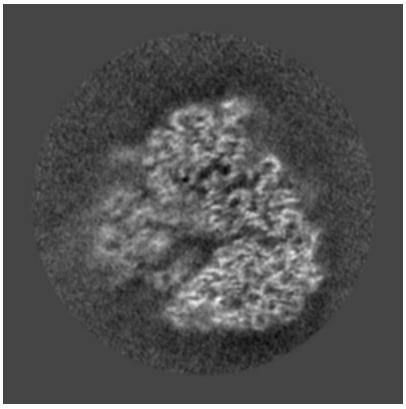
6.2.1 Primary map



X Index: 256



Y Index: 256

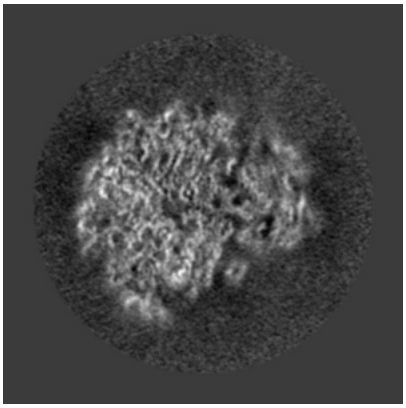


Z Index: 256

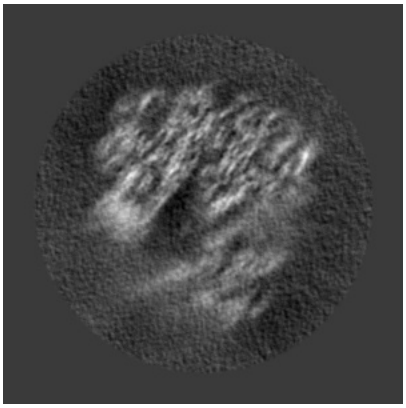
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

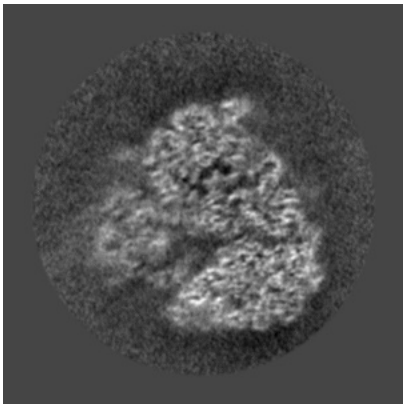
6.3.1 Primary map



X Index: 287



Y Index: 221

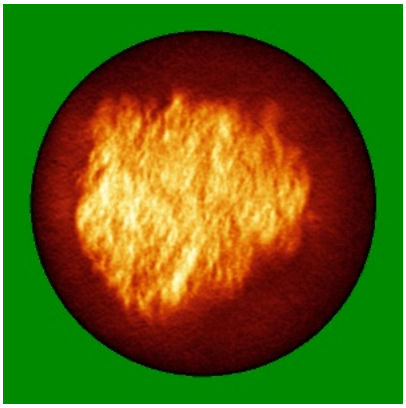


Z Index: 258

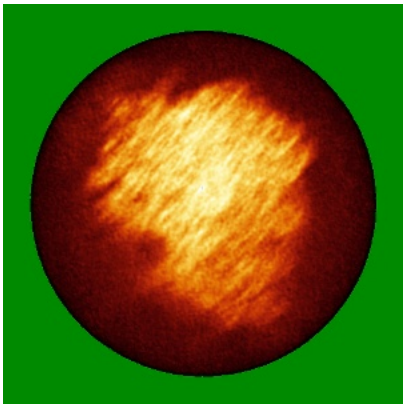
The images above show the largest variance slices of the map in three orthogonal directions.

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

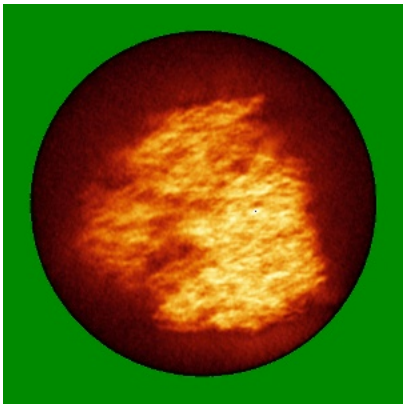
6.4.1 Primary map



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

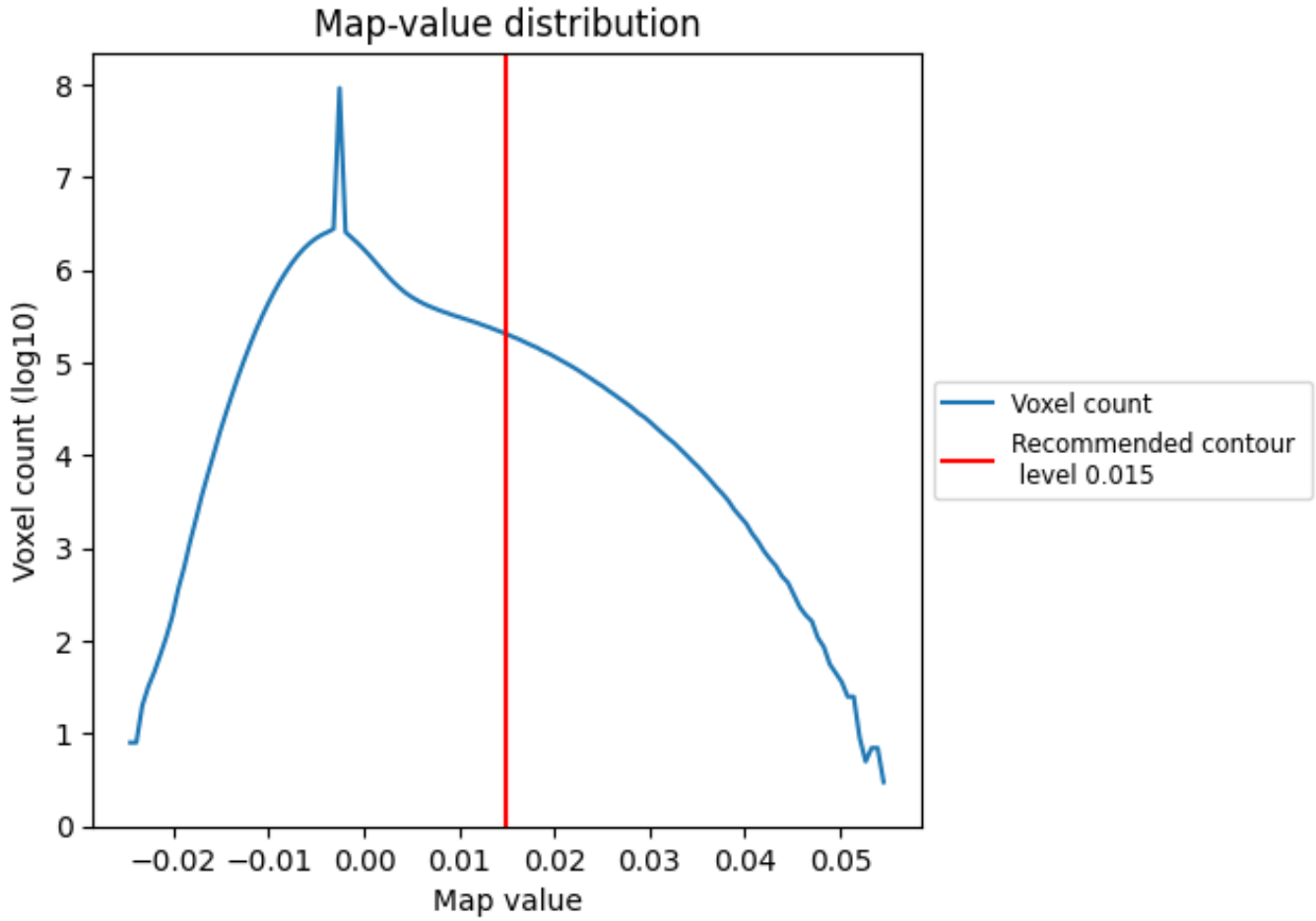
6.6 Mask visualisation (i)

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

7 Map analysis

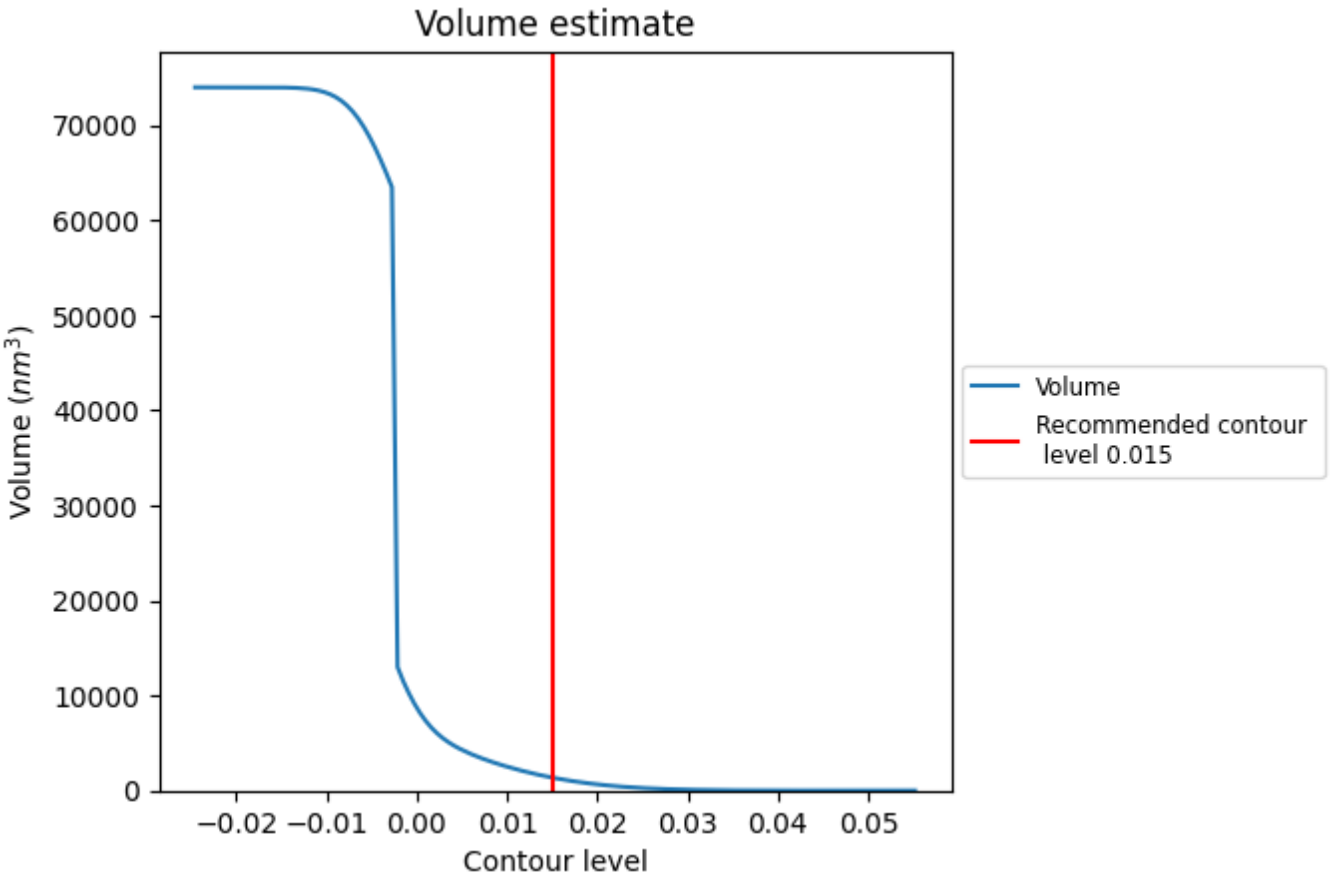
This section contains the results of statistical analysis of the map.

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.

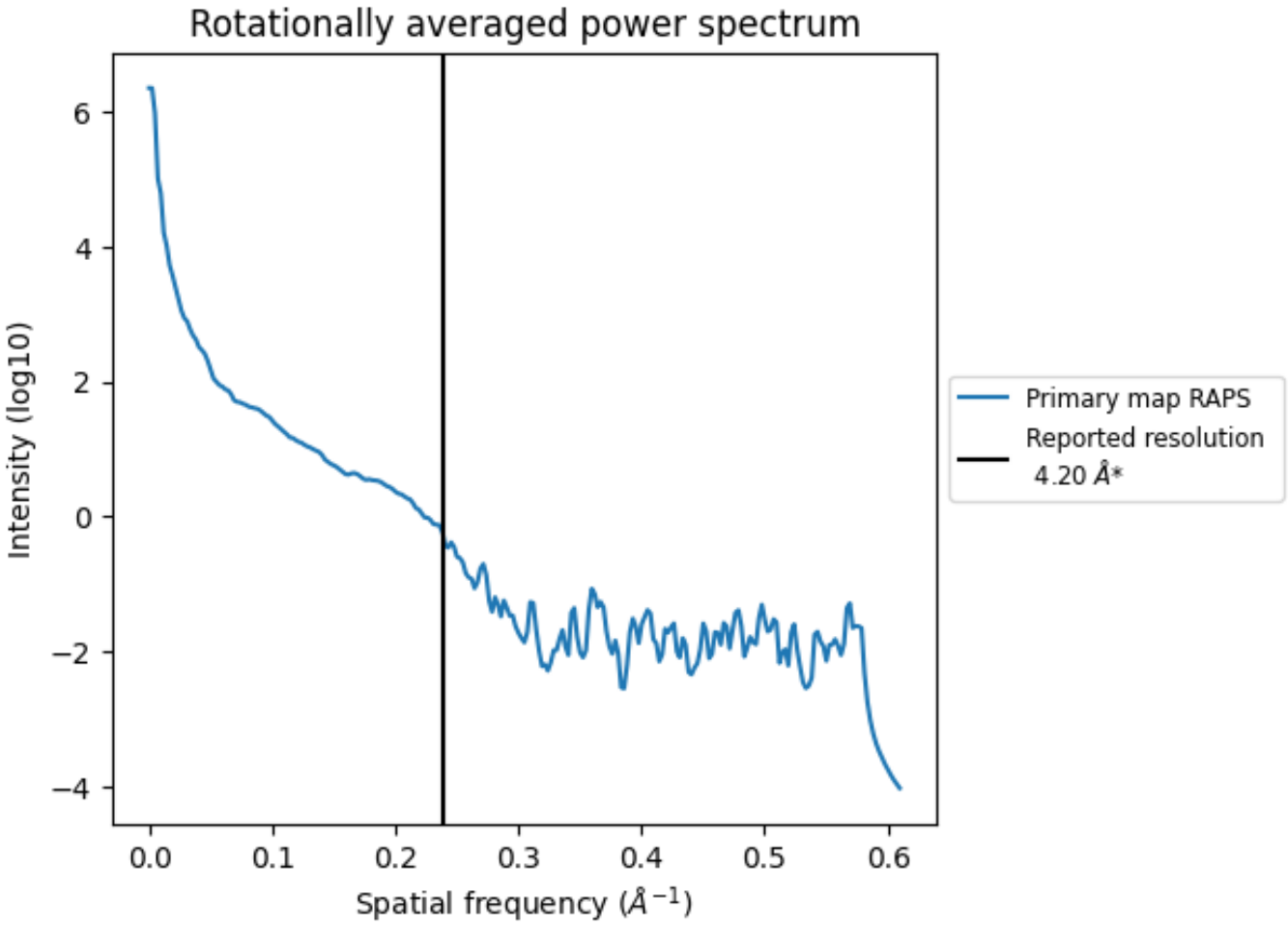
7.2 Volume estimate



The volume at the recommended contour level is 1368 nm^3; this corresponds to an approximate mass of 1236 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 0.238 Å^{-1}

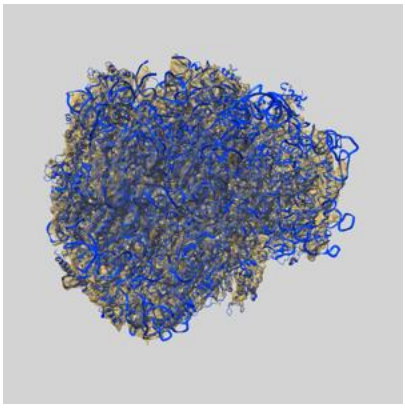
8 Fourier-Shell correlation

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

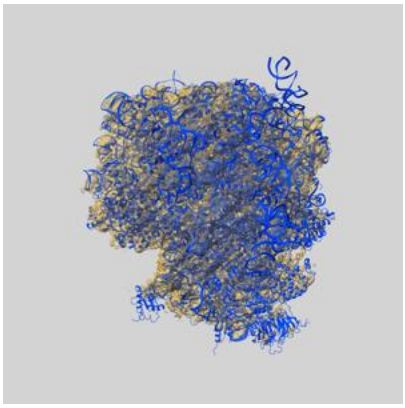
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-6645 and PDB model 5JUS. Per-residue inclusion information can be found in section 3 on page 21.

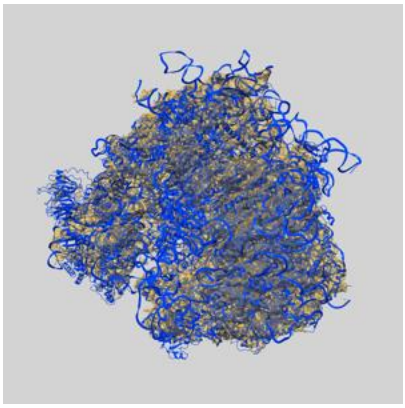
9.1 Map-model overlay



X



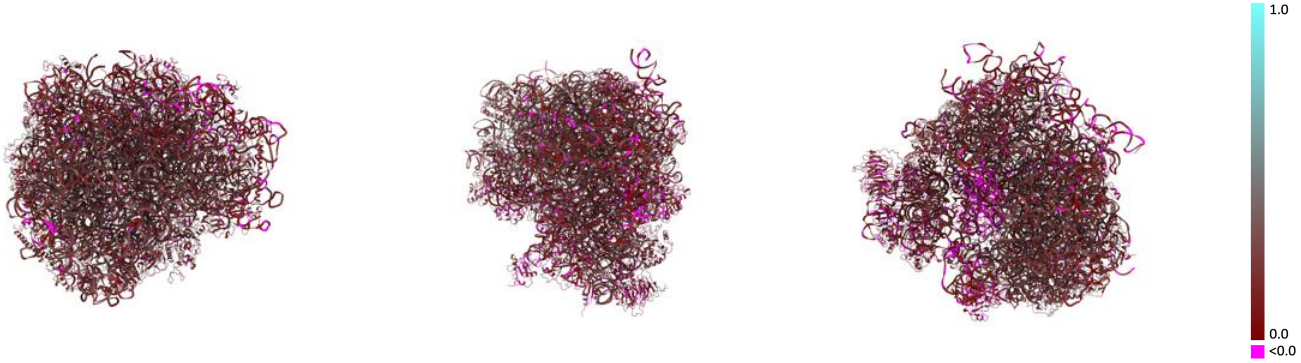
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.015 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.

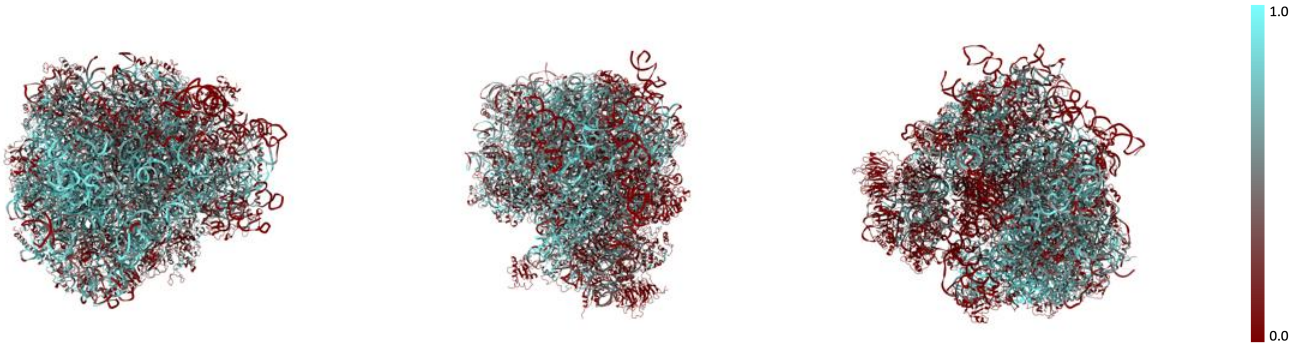
9.2 Q-score mapped to coordinate model



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.

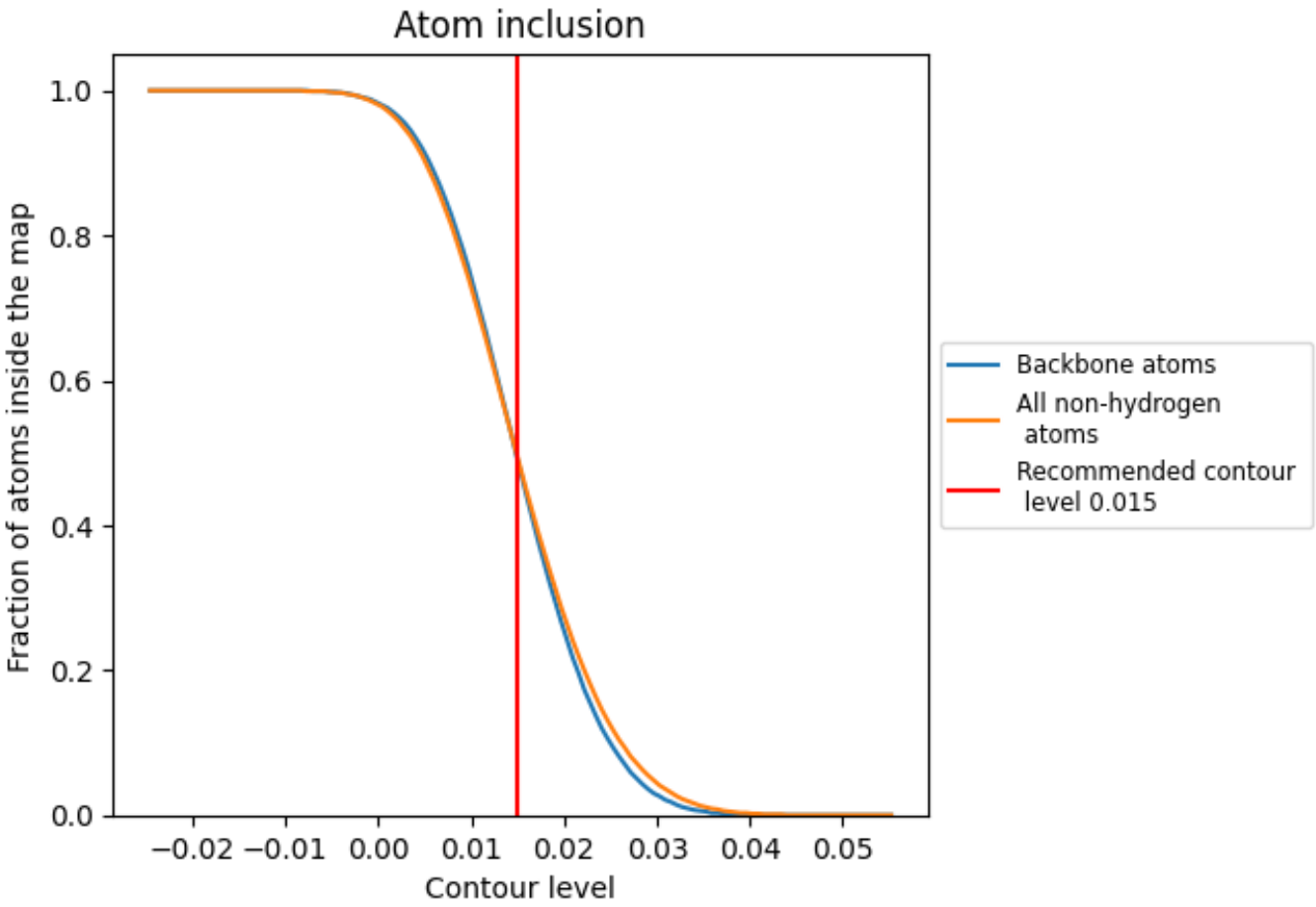
9.3 Atom inclusion mapped to coordinate model



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 (0.015).

9.4 Atom inclusion (i)



At the recommended contour level, 49% of all backbone atoms, 49% 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 (0.015) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4940	0.2100
A	0.4890	0.1870
AA	0.3890	0.2650
AB	0.2650	0.1660
AC	0.2640	0.1450
B	0.6930	0.2430
BA	0.5090	0.2440
BB	0.5820	0.2120
BC	0.2550	0.1610
C	0.6220	0.2320
CA	0.2000	0.2000
CB	0.1550	0.1440
CC	0.0320	0.0500
D	0.8630	0.2350
DA	0.5640	0.2180
DB	0.2030	0.1920
DC	0.3240	0.1850
E	0.0290	0.1090
EA	0.3060	0.1650
EB	0.0790	0.1560
EC	0.1000	0.0830
F	0.4860	0.2290
FA	0.5790	0.2680
FB	0.3700	0.1920
G	0.4470	0.2570
GA	0.5720	0.2360
GB	0.5620	0.1960
H	0.5190	0.2580
HA	0.6100	0.2070
HB	0.4860	0.1050
I	0.5650	0.1950
IA	0.4440	0.2540
IB	0.2370	0.1940
J	0.2930	0.2270
JA	0.6190	0.2830

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Chain	Atom inclusion	Q-score
JB	0.0180	0.0670
K	0.4350	0.2330
KA	0.2970	0.2550
KB	0.2790	0.1800
L	0.2930	0.1840
LA	0.4540	0.2080
LB	0.0080	0.0460
M	0.3220	0.2300
MA	0.2900	0.2020
MB	0.1540	0.1380
N	0.5280	0.2150
NA	0.5190	0.2510
NB	0.1230	0.1430
O	0.4570	0.1960
OA	0.4970	0.2240
OB	0.1350	0.1630
P	0.2850	0.1070
PA	0.0170	0.1330
PB	0.0530	0.1280
Q	0.6110	0.2470
QA	0.4640	0.2600
QB	0.1440	0.1430
R	0.4980	0.2340
RA	0.6660	0.2650
RB	0.1520	0.1520
S	0.4270	0.2240
SA	0.0240	0.0800
SB	0.2130	0.2110
T	0.4000	0.2400
TA	0.7620	0.2350
TB	0.2740	0.2240
U	0.4690	0.2450
UA	0.4280	0.2330
UB	0.1640	0.2150
V	0.5590	0.2570
VA	0.3580	0.1540
VB	0.2890	0.1750
W	0.3160	0.2080
WA	0.0400	0.1300
WB	0.0460	0.1330
X	0.3870	0.2450
XA	0.2230	0.2070

Continued on next page...

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Chain	Atom inclusion	Q-score
XB	0.0210	0.0390
Y	0.5290	0.2540
YA	0.0040	0.0120
YB	0.3650	0.2160
Z	0.2290	0.1920
ZA	0.3090	0.2340
ZB	0.2930	0.2090